BADGER MOUNTAIN SOLAR ENERGY PROJECT

Washington Energy Facility Site Evaluation Council

APPLICATION FOR SITE CERTIFICATION

Submitted by:

Aurora Solar, LLC
1125 NW Couch Street
Portland, OR 97209

September 2021

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Attachment O: Acoustic Assessment Report
Attachment P: Visual and Glare Impact Assessment
Attachment Q: Cultural Resources Survey Report (**CONFIDENTIAL**)

Acronyms and Abbreviations

AC	alternating current
ACEC	Area of Critical Environmental Concern
A-D	Dryland Agriculture
ADT	Average Daily Traffic
amsl	above mean sea level
ANSI	American National Standards Institute
APLIC	Avian Power Line Interaction Committee
Applicant	Aurora Solar, LLC
ASC	Application for Site Certification
ASCE	American Society of Civil Engineers
ASOS	Automated Surface Observing Systems
ASTM	American Society for Testing and Materials
BESS	battery energy storage system
BGEPA	Bald and Golden Eagle Protection Act
bgs	below ground surface
BLM	U.S. Bureau of Land Management
BMP	best management practice
BPA	Bonneville Power Administration
CAA	Clean Air Act
Cadna-A	Computer Aided Noise Abatement
CCT	Colville Confederated Tribes
CFR	Code of Federal Regulations
CO	carbon monoxide
COD	Commercial Operations Date
CRP	Conservation Reserve Program
CSWGP	Construction Stormwater General Permit
CWPP	Community Wildfire Protection Plan
DAHP	Department of Archaeology and Historic Preservation
dBA	A-weighted decibels
DC	direct current
DCC	Douglas County Code
DCCP	Douglas County Comprehensive Plan
DCCWPPSC	Douglas County Community Wildfire Protection Plan Steering Committee
DNR	Washington Department of Natural Resources
Ecology	Washington Department of Ecology
EDNA	Environmental Designation for Noise Abatement

EFSEC	Energy Facility Siting Evaluation Council
EPA	U.S. Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
ESCP	Erosion and Sediment Control Plan
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
gen-tie line	generation-tie transmission line
GHG	greenhouse gas
HCA	habitat concentration area
HPA	Hydraulic Project Approval
HVAC	heating, ventilation, and air conditioning
IF	isolated find
ISO	International Organization for Standardization
KOP	key observation point
kV	kilovolt
L_{eq}	equivalent sound level
LOS	Level of Service
ML	silt/sandy silt
MOVES3	Motor Vehicle Emissions Simulator
MW	megawatt
NAAQS	National Ambien Air Quality Standards
NEMA	National Electrical Manufacturers Association
NESC	National Electrical Safety Code
NFPA	National Fire Protection Association
NO_2	nitrogen dioxide
NOI	Notice of Intent
NRHP	National Register of Historic Places
NSR	noise sensitive receptor
O&M	operations and maintenance
O_3	ozone
PAC	Priority Area for Conservation
PHS	Priority Habitats and Species
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 Interconnect
Project	Badger Mountain Solar Energy Project
PSD	Prevention of Significant Deterioration

PSE	Puget Sound Energy
PUD	Public Utility District
PV	photovoltaic
Q	quarter
RCW	Revised Code of Washington
REGC	Report of Expected Geotechnical Conditions
R-L	Low Residential
RR-20	Rural Resource 20
SCADA	supervisory control and data acquisition
SCSMD	South Coast Air Quality Management District'
SEPA	State Environmental Policy Act
SM	silty sand
SO_2	sulfur dioxide
SPCC Plan	Spill Prevention, Control, and Countermeasure Plan
SR	State Route
SWPPP	Stormwater Pollution Prevention Plan
TBD	To Be Determined
U.S.C.	United States Code
US	U.S. Highway
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WAC	Washington Administrative Code
WAGS	Washington ground squirrel
WDFW	Washington Department of Fish and Wildlife
WHCWG	Wildlife Habitat Connectivity Working Group
WHMMP	Wildlife Habitat Management and Mitigation Plan
WHR	Washington Historic Register
WNHP	Washington Natural Heritage Program
WSDA	Washington State Department of Agriculture
WSDOT	Washington State Department of Transportation

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PART 1 – OVERVIEW/SUMMARY

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A. Basic Information

A.1. Applicant

Name/Contact:
Aurora Solar, LLC[1]
c/o Scott Kringen

Mailing address:
Avangrid Renewables, LLC
1125 NW Couch Street
Portland, OR 97209

Phone: (503) 796-7132
Email: scott.kringen@avangrid.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

The table provided in the Applicant's response to Part 1, Section A.4 identifies property owners of the 23 assessor parcels encompassed by the Project Lease Boundary. The Applicant has executed or is pursuing an Option to Lease with each identified property owner. Two of the 23 assessor parcels are nonprivate and owned by the State of Washington and managed by the

[1] Aurora Solar, LLC is a wholly owned subsidiary of Avangrid Renewables, LLC.

Department of Natural Resources (DNR; Assessor Parcel Numbers 23211630001 and 23211630002).

A.4. Location of Proposed Site

(attach a list of additional properties, if applicable)

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

The following table provides the description of the assessor parcel numbers encompassed by the Project Lease Boundary. The location of these parcels is shown on Figure A-2 in Attachment A.

Assessor Parcel Number[1/]	Property Owner	Address					PLSS	Legal Description
		Street	City	State	Zip	County		
23212710006	Bromiley Brothers	783 Rd V SW	East Wenatchee	WA	98802-0000	Douglas	T23N R21E S27	N 890' OF SW;
23212010000	Bromiley Brothers	783 Rd V SW	East Wenatchee	WA	98802-0000	Douglas	T23N R21E S20	NE; N1/2SE; SESE LESS EASEMENT TO P.U.D.; EX RD R/W;
23212720001	Bromiley Brothers	783 Rd V SW	East Wenatchee	WA	98802-0000	Douglas	T23N R21E S27	S1/2N1/2; N 890' OF SE; 00000000
23212710004	Bromiley Brothers	783 Rd V SW	East Wenatchee	WA	98802-0000	Douglas	T23N R21E S27	SW EX N 890';
23213440002	Bromiley Brothers	783 Rd V SW	East Wenatchee	WA	98802-0000	Douglas	T23N R21E S34	TAX # 1 IN SE1/4;
23213420001	Bromiley Brothers	783 Rd V SW	East Wenatchee	WA	98802-0000	Douglas	T23N R21E S34	NE1/4NW1/4;
23212740001	Bromiley Brothers	783 Rd V SW	East Wenatchee	WA	98802-0000	Douglas	T23N R21E S27	SE EX N 890';
23213410000	Bromiley Brothers	783 Rd V SW	East Wenatchee	WA	98802-0000	Douglas	T23N R21E S34	NE1/4;
23212120000	Bromiley, J Kirk	401 Lower Sunnyslope Rd	Wenatchee	WA	98801-0000	Douglas	T23N R21E S21	NW1/4; S1/2 EX RD.;
22210210001	Bromiley, J Kirk	401 Lower Sunnyslope Rd	Wenatchee	WA	98801-0000	Douglas	T22N R21E S3	LOT 1 & 2 EX WLY 400'; SENE;

Assessor Parcel Number[1/]	Property Owner	Address					PLSS	Legal Description
		Street	City	State	Zip	County		
23211730001	Darling, Noreen Bromiley[2/]	PO Box 691	Waterville	WA	98858-0000	Douglas	T23N R21E S17	ALL EX NE, TAX 1 & 2 IN NW, HOUSE & YARD IN NWSW, RD & DRY PARADISE SP; ALSO EX PTN OF SW LYING SWLY OF DONEEN-RAINEY RD NWLY OF TAX 3;
23212810001	Keane, Dane S & Jeffrey R & Kellen	8061 Keane Grade	Rock Island	WA	98850-0000	Douglas	T23N R21E S28	N1/2NE EX TAX 1; SENE;
23212230000	Keane, Dane S & Jeffrey R & Kellen	8061 Keane Grade	Rock Island	WA	98850-0000	Douglas	T23N R21E S22	SW EX RD;
23211630001	State of Washington	2830 Euclid Avenue Building A.	Wenatchee	WA	98804-5916	Douglas	T23N R21E S16	E1/2; E1/2SW1/4;
23211630002	State of Washington	2830 Euclid Avenue Building A.	Wenatchee	WA	98804-5916	Douglas	T23N R21E S16	W1/2SW;
23213000000	The Badger Mt FLP	602 Daniels Dr	East Wenatchee	WA	98802-0000	Douglas	T23N R21E S30	LOTS 1,2; E1/2NW; NE; EX RD R/W;
23212020002	The Badger Mt FLP	602 Daniels Dr	East Wenatchee	WA	98802-0000	Douglas	T23N R21E S20	W1/2NW; NWSW; SWSW;
23213030000	The Badger Mt FLP	602 Daniels Dr	East Wenatchee	WA	98802-0000	Douglas	T23N R21E S30	LOTS 3,4; E1/2SW; SE; EX RD R/W;
23212900002	The Badger Mt FLP & Kenoyer	602 Daniels Dr	East Wenatchee	WA	98802-0000	Douglas	T23N R21E S29	TAX 2 IN N1/2; EX RD;
22210210008	The Badger Mt FLP & Kenoyer	602 Daniels Dr	East Wenatchee	WA	98802-0000	Douglas	T22N R21E S2	WESTERLY 400' OF LOT 2; LOT 3;
23213530000	The Badger Mt FLP & Kenoyer	602 Daniels Dr	East Wenatchee	WA	98802-0000	Douglas	T23N R21E S35	S1/2 EX RD.;
23211730005	Witten, Donna Marleen	3537 Doneen Rainey Rd #A	East Wenatchee	WA	98802-8600	Douglas	T23N R21E S17	SW LYING SWLY OF CO RD EX TAX 3
23213100001	Witten, Marleen	3537 Doneen Rainey Rd #A	East Wenatchee	WA	98802-8600	Douglas	T23N R21E S31	TAX 1 EX TAX 2 IN SEC 31; EX RD R/W

1/ Assessor parcel information is based on current Douglas County assessment records last updated by the County on August 9, 2021 and prior to submittal of this streamlined solar Application for Site Certification.
2/ The Applicant confirmed that Mr. Zach Zeller is the property owner of record for Assessor Parcel Number 23211730001. This information is not reflected in the current Douglas County assessment records as of August 9, 2021.

B. Project Summary

Aurora Solar, LLC (Applicant), a wholly owned subsidiary of Avangrid Renewables, LLC, proposes to construct and operate the Badger Mountain Solar Energy Project (Project). The Project is a 200-megawatt (MW) solar photovoltaic (PV) generation facility with an optional 200-MW battery energy storage system (BESS) located in unincorporated Douglas County (County), Washington. The Project is generally located approximately 3.5 miles east of the East Wenatchee city limit boundary and south of Badger Mountain Road (Attachment A, Figure A-1). This streamlined solar Application for Site Certification (ASC) uses the following terms to describe areas associated with Project development: Project Lease Boundary, Project area, Solar Array Micrositing Area, and Gen-tie Micrositing Corridor. Each of these terms is defined in Part 2, Section A.2.a of this ASC.

The Project will use solar modules configured in a solar array to convert energy from the sun into electric power. The solar modules are mounted on a tracker system supported by steel posts and will be connected in a series to form rows, which are in turn connected to form the solar array. The solar array will consist of the solar modules, tracker system, posts, cabling, inverters, transformers, and electrical collector lines. The solar array inverters are paired with medium voltage step-up transformers used to convert the generated electricity from direct current (DC) to alternating current (AC) and increase the voltage for distribution. The resulting solar array system (i.e., solar modules, tracker system, posts, cabling, inverters, transformers, and electrical collector lines) is described in Part 2, Section A.2.a.

In addition to the solar array, the Project includes the following supporting components: collector substation, overhead 230-kilovolt (kV) generation-tie transmission line (gen-tie line), two Point of Interconnect (POI) options, two switchyard options, operations and maintenance (O&M) building, associated access and Project service roads, perimeter fencing, and optional BESS. The solar array, collector substation, O&M building, optional BESS, and perimeter fencing will be sited within the approximately 2,274-acre Solar Array Micrositing Area, as shown on Figure A-1 in Attachment A. The overhead 230-kV gen-tie line will be sited within a 200-foot-wide and approximately 116-acre corridor (referred to as the Gen-tie Micrositing Corridor). The overhead 230-kV gen-tie line will transmit the electricity generated by the Project to the electrical grid via one of two POI and switchyard options. The Project will use existing roads to the extent practicable but will also construct approximately 16 miles of new Project service roads within the Project area. Chain-link fencing will be installed around the perimeter of the solar array, collector substation area, O&M building area, optional BESS area, and switchyard area. Project supporting components are further described in Part 2, Section A.2.a.

The Project's Commercial Operations Date (COD) is planned for fourth quarter (Q4) 2024 and Project construction is anticipated to begin in Q1 2023.

C. Site Summary

The Project is located in unincorporated Douglas County, Washington, approximately 3.5 miles east of the East Wenatchee city limit boundary and south of Badger Mountain Road (Attachment A, Figure A-1). The Project Lease Boundary encompasses 21 privately owned assessor parcels and two state-owned assessor parcels listed in Part 1, Section A.4. The Applicant has executed or is pursuing an Option to Lease the underlying property within the Project area for adequate acreage to accommodate the Project.

The Project area is in the Northern Cascade Mountains section of the Cascade-Sierra Mountains Province in the Pacific Mountain System Physiographic Region. The Solar Array Micrositing Area consists predominantly of agricultural land with rolling topography on a plateau and is confined by a ridge and steep slopes to the west. The Gen-tie Micrositing Corridor traverses the ridge into a valley west of and approximately 2,000 feet below the Solar Array Micrositing Area. Surficial soils occur in the western portion of the Project area, and primarily consist of largely silt/sandy silt (ML) and silty sand (SM). The eastern portion of the Project area consists primarily of low-plasticity silt and clay with variable sand and gravel composition. Bedrock in the area consists of Miocene-age basalts. Geology, soils, slope, topography, and potential geological hazards relative to the Project area are evaluated in Part 4, Section 4.1. The potential for surface fault rupture is considered low, liquefaction potential is low, and Project components are adequately set back from or traverse steep slopes. The Project will not materially increase the risk associated with or occurrence of potential geological hazards. In addition, specific measures can be incorporated into Project design that eliminate or reduce the risk of damage due to potential geological hazards (Part 4, Section 4.1).

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 4.2 to limit fugitive emissions. Additional discussion of emissions, climate, and regional air quality is provided in Part 4, Section 4.2.

The wetland and waters delineation conducted for the Project verified that no wetlands, intermittent, or perennial streams occur in the Project area. Non-fish-bearing ephemeral streams occur within the Project area and potential impacts to ephemeral streams are discussed in Part 4, Section 4.3. The Project is not located in a Federal Emergency Management Agency (FEMA) designated flood hazard area or area with a high flood risk. The Project may result in some changes to stormwater drainage as a result of new impervious surfaces. Overall, impervious surfaces are a low percentage (less than 3 percent) of the Project area (Part 2, Section B.2). The Project will be designed and constructed to comply with Washington Department of Ecology (Ecology) requirements for retaining stormwater on-site and maintaining natural drainage patterns for conveyance of upland flow. Additional discussion of stormwater best management practices and design considerations for stormwater runoff are addressed in Part 4, Section 4.5.

Habitat types that occur within the Project area include agriculture, developed, shrub-steppe, dwarf shrub-steppe, non-native grassland and forbland, planted grassland, and talus. Table 4.8-

1 in Part 4, Section 4.8 lists the acres of each habitat type mapped within the Project area. The agriculture and developed habitats are the most prevalent types found in the Project area (approximately 88 percent of total) and consist primarily of dryland wheat fields, typically grown on a 2-year wheat-fallow cycle, associated access roads, structures associated with agricultural production, and gravel/borrow pits. Shrub-steppe and dwarf shrub-steppe habitats are less prevalent within the Project area (approximately 11 percent of the total). Shrub-steppe habitat occurs primarily in the northwest and northeast corners of the Solar Array Micrositing Area and is interspersed with dwarf shrub-steppe habitat on the western perimeter of the Solar Array Micrositing Area around the dominant presence of active agriculture. Shrub-steppe habitat is also interspersed in the Gen-tie Micrositing Corridor between agricultural areas. Non-native grassland, forbland, and planted grassland habitat types are also present, but are less common in the Project area compared to the other habitat types. Talus slopes are found along the western edge of the Solar Array Micrositing Area and eastern portion of the Gen-tie Micrositing Corridor (less than 1 percent of the total).

The Project is designed to avoid and minimize impacts on habitats associated with special status species. Talus slopes will be avoided and impacts to shrub-steppe and dwarf shrub-steppe habitat have been avoided and minimized. Table 4.8-2 in Part 4, Section 4.8 lists the estimated acres of temporary, altered, and permanent impacts to habitat types from Project construction and operation. Up to approximately 3 and 29 acres, respectively, of dwarf shrub-steppe and shrub-steppe habitat will be altered and less than 1 and up to approximately 6 acres, respectively, will be impacted during the operational life of the Project. The majority of temporary impacts will occur to agricultural areas (approximately 58 acres), with less than 1 acre of temporary impacts occurring to dwarf shrub-steppe and approximately 27 acres of impact to shrub-steppe habitat. The estimated impacts are based on the current preliminary Project design (Attachment A, Figure A-1) but the exact location of Project components may be revised during final Project design. The Applicant's habitat avoidance, minimization, and mitigation measures are identified and discussed in Part 4, Section 4.8 and Part 4, Section 4.9.

The Project area crosses the Douglas County Dryland Agriculture (A-D) and Rural Resource 20 (RR-20) zoning districts. Current land uses in the Project area include dryland agriculture, rangeland, undeveloped land, local roads, and existing electrical infrastructure. Adjacent assessor parcels are also currently used and zoned for agricultural purposes. Land within the Solar Array Micrositing Area is dominated by active dryland agricultural use, whereas land uses within the Gen-tie Micrositing Corridor include a mixture of dryland agriculture, rangeland, and undeveloped land. Land use consistency is addressed in Part 4, Section 4.14.

Projected exterior sound levels resulting from full, normal operation of the Project during both daytime and nighttime hours, at nearby noise sensitive receptors (i.e. residences) and property lines, will comply with the applicable daytime and nighttime limits under Washington Administrative Code (WAC) 173-60-040 and 173-60-050. While temporary construction noise is exempt from WAC 173-60-050, the Applicant will implement best management practices to reduce potential off-site construction noise impacts. Noise associated with Project construction and operation is addressed in Part 4, Section 4.16a.

The Project will result in a weak to moderate contrast with the surrounding landscape based on the addition of the Project's structural components and visual impacts are considered minor.

Views from the south and west toward the Project area will typically occur at a distance and below the elevation of the Solar Array Micrositing Area and Gen-tie Micrositing Corridor. The resulting visibility of the Project from the south and west will generally be limited by screening from existing topography and terrain. Views from the north and east toward the Project area will typically occur from local roads and a small number of rural residences with views of the Project components mostly limited to the perimeter or edge of the Project area. Overall, Part 4, Section 4.16b demonstrates that the Project will not result in strong or significant visible contrasts to the existing visual character of the landscape.

The Project is designed to avoid National Register of Historic Places (NRHP)-listed and Washington Heritage Register (WHR)-eligible or unevaluated/potentially eligible archaeological and cultural resources. The Applicant redesigned portions of the Project to avoid cultural sites following completion of cultural surveys for the Project area. Additionally, the Applicant remains in coordination with the Colville Confederated Tribes regarding appropriate buffers for those sites that may hold traditional significance to their Tribal members. If any pre-contact-era archaeological site or any NRHP-eligible or unevaluated/potentially eligible historic-era site is impacted by the Project's final design, the Applicant would obtain an excavation permit and perform necessary archaeological work consistent with Revised Code of Washington (RCW) 27.53. The Applicant will continue to coordinate with the Colville Confederated Tribes regarding final design in relation to Native American cultural resources. Archaeological and historic resources and cultural resources are addressed in Part 4, Section 4.18 and Section 4.19, respectively.

The Applicant addresses standards concerning potential release of hazardous materials and fire prevention and control in Part 4, Section 4.13. The Project will use passive technology for remote operation and will have few permanent employees resulting in little to no traffic impacts during Project operations. Traffic management during Project construction is addressed in Part 4, Section 4.20.

Table A.4 of Part 2 provides a list of figures referenced in this ASC, including the Project preliminary site plan, assessor parcels, soils, topography, habitat types, County zoning districts and interim control buffers, wetlands and waters, wildlife occurrences (confidential and not for distribution), and cultural resources (confidential and not for distribution). A summary of the Applicant's proposed avoidance, minimization, and mitigation measures for resources evaluated in this ASC is provided in Table A.5 of Part 2. A list of Project plans and submittals that will be developed prior to site preparation and construction is provided in Table A.6 of Part 2. Pursuant to WAC 463-60-297, Table A.7-1 in Part 2 lists federal and state statutes, rules, and permits that are potentially applicable to the Project, and where compliance is addressed in this ASC.

Based on the information provided herein, 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	Yes
5. Water Quality – Stormwater Runoff	Yes	Yes	Yes	Yes	Yes
6. Water Quantity – Water Use	No	Yes	Yes	Yes	N/A
7. Water Quantity – Runoff, Stormwater, Point Discharge	No	Yes	Yes	Yes	N/A
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	Yes
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	N/A
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	Yes
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)
1	Earth	Stage1 Report of Expected Geotechnical Conditions (Attachment H-1)	Complete	April 2020
2	Earth	Geotechnical Engineering Report (Attachment H-2)	Complete	March 2021
3	Water Quality	Preliminary Stormwater Analysis (Attachment J)	Complete	February 2020
4	Water Quality	Preliminary Hydrology Report (Attachment K)	Complete	September 2020
5	Wetlands and Surface Waters	Wetland Delineation Report (Attachment I)	Complete	September 2021
6	Wildlife	Raptor Nest Survey Memo 1 (Attachment L)	Complete	July 2019
7	Wildlife	Raptor Nest Survey Memo 2 (Attachment L)	Complete	September 2020
8	Wildlife	Raptor Nest Survey Memo 3 (Attachment L)	Complete	August 2021
9	Wildlife and Vegetation	2021 Wildlife and Habitat Survey Report (Attachment G)	Complete	September 2021
10	Vegetation	2021 Rare Plant Survey Report (Attachment F)	Complete	September 2021
11	Noise	Acoustic Assessment Report (Attachment O)	Complete	September 2021
12	Visual, Glare, and Aesthetics	Visual and Glare Impact Assessment (Attachment P)	Complete	September 2021
13	Archaeological, Historical, and Cultural	Cultural Resources Survey Report (Attachment Q)	Complete	September 2021
14	Socioeconomic	Socioeconomic Review (Attachment N)	Complete	September 2021

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*	Contact (name, program)	Areas of discussion	Status of engagement**
State Government	Washington Department of Fish and Wildlife (WDFW)	Mike Ritter and Eric Pentico	Wildlife, surveys, and general biological resources.	Ongoing
State Government	Washington Energy Facility Siting Evaluation Council (EFSEC)	Sonia Bumpus and Ami Kidder	General, permitting, project description, and application process.	Ongoing
State Government	Ecology	Lori White	Wetland and waters delineation.	Ongoing
State Government	Washington DNR	Chad Unland	Land use license and lease for DNR parcels in the Project area.	Ongoing
State Government	Washington Department of Archaeology and Historic Preservation (DAHP)	Allyson Brooks	Review of Cultural Resource Survey Report.	Anticipated upon submittal
Tribal Government	Colville Confederated Tribes	Guy Moura	Cultural resources, surveys, and general introduction to the Project.	Ongoing
Tribal Government	Spokane Tribe	Randy Abrahamson	Cultural resources, surveys, and general introduction to the Project.	Ongoing
Tribal Government	Confederated Tribes and Bands of the Yakama Nation	Casey Barney	Cultural resources, surveys, and general introduction to the Project.	Ongoing
Local Government	Douglas County Department of Transportation and Land Services	Mark Kulaas and Mark Botello	Coordination on local permitting and land use consistency between 2018 and 2020.	Contacted
Federal Government	U.S. Fish and Wildlife Service	Matthew Stuber	Migratory bird and eagle coordinator.	Ongoing
Property Owners	Property Owners	See Part 1, Section A.4	The Applicant has executed or is pursuing an Option to Lease with each identified property owner within the Project Lease Boundary.	Ongoing

* Entities typically consulted include Ecology, WDFW, 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.
** for example: Intend to contact, contacted, ongoing engagement, engagement complete

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PART 2 – CORE INFORMATION

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A. Project Basics

A.1. Project Name

Badger Mountain Solar Energy Project (Project)

A.2. Project Description

A.2.a Describe Proposal

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

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

- **Project Lease Boundary**: The approximately 4,399-acre area that encompasses assessor parcels that the Applicant has executed or is pursuing an Option to Lease with the underlying property owner. The Project Lease Boundary contains assessor parcels crossed by the Project (Attachment A, Figure A-2). Construction and operation of the Project are limited to the Project area described below and shown on Figure A-1 in Attachment A.

- **Project Area:** The approximately 2,390-acre area that includes both the Solar Array Micrositing Area and the Gen-tie Micrositing Corridor (defined below). The Project 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 Project area so long as the final layout does not exceed the Project area evaluated in this ASC and allowed for in the Site Certification Agreement. The Project area is also the survey area for many of the resource-specific surveys conducted in preparation of this ASC.

- **Solar Array Micrositing Area:** This area is a subset of the "Project area" described above, and includes the approximately 2,274-acre area where the solar array and associated supporting components will be sited during final engineering design. The Applicant is considering various solar array design layouts within the Solar Array Micrositing Area and the final design will not exceed this approximately 2,274-acre area. The Solar Array Micrositing Area is larger than the fenced perimeter of the solar array shown on the Preliminary Site Plan (Attachment A, Figure A-1) to allow for shifts and optimization of the final design anywhere within the Solar Array Micrositing Area.

- **Gen-tie Micrositing Corridor:** This area is a subset of the "Project area" described above. The Project's overhead 230-kV gen-tie line, two POI options, and two switchyard options are within an approximately 3.7-mile-long and approximately 200-foot-wide Gen-tie Micrositing Corridor. The Project will use one of the two POI and switchyard options

along the gen-tie route and the final design will be located within this approximately 116-acre Gen-tie Micrositing Corridor. The two POI options include additional area along the corridor to accommodate siting flexibility for development of the final selected switchyard option. The Gen-tie Micrositing Corridor is larger than the Project's anticipated final developed footprint to allow for minor rerouting and optimization of the final design.

1.0 INTRODUCTION

The Project is a proposed 200-MW solar PV generation facility located in unincorporated Douglas County, Washington, with an optional 200-MW BESS. The Project is generally located approximately 3.5 miles east of the East Wenatchee city limit boundary and south of Badger Mountain Road (Attachment A, Figure A-1).

The Project Lease Boundary encompasses 21 privately owned assessor parcels and two state-owned assessor parcels. Current land uses in the Project area include dryland agriculture, rangeland, undeveloped land, local roads, and existing electrical utility infrastructure. Assessor parcels adjacent to the Project area are also currently used and zoned for agricultural purposes in the County, with an undeveloped area of East Wenatchee's Low Residential zoning district located adjacent to and west of the Gen-Tie Micrositing Corridor. Land within the Solar Array Micrositing Area is dominated by active dryland agricultural use, whereas land uses within the Gen-tie Micrositing Corridor include a mixture of dryland agriculture, rangeland, and undeveloped land.

The Applicant is considering various design layouts within the Solar Array Micrositing Area and Gen-tie Micrositing Corridor (collectively referred to as the Project area). The preliminary layout of the solar array accounts for project size, topography, and other constraints; however, the solar modules, supporting components, and precise layout of the solar array have not yet been finalized and the Applicant seeks to permit a range of technology to preserve design flexibility. Because technology is changing rapidly, this ASC analyzes the largest anticipated Project footprint, or approximately 2,390 acres within the Project area. While final Project design is not anticipated to disturb the entire Project area, the entire Project area is evaluated to allow for design flexibility. For these reasons, the Applicant is requesting flexibility to microsite the Project and its associated supporting components anywhere within the Project area so long as the final layout does not exceed the Project area evaluated in this ASC and allowed for in the Site Certification Agreement.

The Project will have a number of benefits to the local community and Washington state. Construction of the Project will support up to 400 jobs during peak construction and 4 permanent jobs during operations. The Project will also provide Douglas County with additional tax revenue. 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 array and associated supporting components are shown on the Preliminary Site Plan (Attachment A, Figure A-1).

2.1 Solar Array

The solar array will consist of the solar modules, tracker system, posts, cabling, inverters, transformers, and electrical collector lines. 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 array layouts. However, the actual solar array equipment and layouts included in the final design will be selected to ensure that they do not exceed the Project area evaluated in this ASC.

2.1.1 Solar Modules

Solar modules use mono- or poly-crystalline cells to generate electricity by converting sunlight into direct current electrical energy. The electrical generation from a single module varies by module size and the number of cells per module. The crystalline cells are contained within antireflective glass panels and a metal frame and linked together with factory-installed wire connectors. The modules will be connected in series to form long rows. The rows of modules are then connected via combiners, cables, and switchboards. The configuration of multiple rows (referred to as an array) can vary depending on the equipment type and topography.

Figure A-1 in Attachment A depicts the Project's proposed solar array layout for purposes of analyzing impacts. Project impact assumptions in this ASC are based on the use of 628,320 modules; however, the actual number of modules will vary depending on the module technology, energy output, spacing, mounting equipment, and other design criteria, which are subject to change during final design. Any number of modules may be used to achieve the Project's 200-MW generation capacity during the operating life of the Project. For the purposes of illustration, example solar modules are shown on Figure B-1 in Attachment B.

Once operational, solar modules require minimal maintenance. Solar module manufacturers currently do not recommend routine washing of panels and it is unknown if panel washing would be conducted for this Project; however, periodic washing may be needed to optimize performance depending on on-site conditions and future land uses of adjacent unrelated parcels. For panel washing, solar facilities can use up to 0.25 gallon of water per module, per wash; assuming 628,320 solar modules for the Project, this would total approximately 157,000 gallons of water per wash if needed. Potential water sources for Project operations are discussed under Part 2, Section B.8.e.

2.1.2 Tracker Systems

Strings of solar modules will be mounted on single-axis tracker systems that optimize electricity production by rotating the solar modules to follow the path of the sun throughout the day. The

length of each tracker row may vary by topography and the number of modules that the tracker can hold. Project impact assumptions in this ASC are based on the use of 5,610 single-axis tracker systems for the 200-MW solar array. The actual number of tracker systems and modules will depend on the system selected. The drive unit for the tracking system can control a single row or multiple rows of modules through a series of mechanical linkages and gearboxes. As the solar modules tilt throughout the day, the height of their top edges will shift accordingly (i.e., up to 15 feet high). The tracker system, and associated posts, will be specifically designed to withstand wind, snow, and seismic loads anticipated at the Solar Array Micrositing Area. For the purposes of illustration, example tracker system components are shown on Figure B-2 in Attachment B and an example solar tracker system is shown on Figure B-3 in Attachment B.

2.1.3 Posts

Each tracker will be supported by multiple steel posts, which could be round hollow posts or pile-type posts (e.g., H-pile, C-pile, S-pile). Post depth may vary depending on soil conditions, but posts are typically installed 4 to 10 feet below the surface and protrude 4 to 5.5 feet above grade. Posts at the end of the tracker rows are usually installed at a greater depth to help them withstand wind uplift. In some soil conditions, concrete backfill is required for each post. For the purposes of this ASC, the Applicant assumes that approximately 67,320 posts will be installed. The actual number of posts and foundation method may vary depending on the final tracker 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.

2.1.4 Cabling

The electrical current produced by solar modules is in the form of direct current. Cables collect and aggregate the direct current before it is converted to alternating current and sent to the collector substation. Low-voltage cabling will connect the solar modules of each tracker string in series and combine two strings to a single combiner box. Cabling from multiple combiner boxes will connect to a single inverter, which will convert the direct current to alternating current and connect to the buried electrical collection system. Cabling can be mounted to the tracker system, placed in cable trays, or buried. The buried cable associated with the solar array will be located within the Solar Array Micrositing Area and is included in the estimated altered impacts associated with the solar array (i.e., no separate temporary impacts are calculated for buried cable inside the solar array perimeter fence).

2.1.5 Inverters

The direct current collected from the solar modules via combiner boxes must be converted into alternating current before connecting to the collector substation. Inverters serve the function of converting direct current power supply to an alternating current power supply in accordance with electrical regulatory requirements. For the purposes of this ASC, the Applicant assumes that 85 inverter/transformer stations will be needed to convert the direct current from the modules to produce 200-MW of alternating current. The final number of inverters may vary depending on

final design of the solar array. Inverters are typically co-located with transformers on the same concrete slab; however, string inverters may also be used. The inverter specification will comply with the applicable requirements of the National Electric Code and Institute of Electrical and Electronics Engineers standards.

2.1.6 Transformers

The alternating current from the inverters will be routed to transformers that will increase the output voltage from the inverter (i.e., 1,500 volts) to the desired collector substation feed voltage (i.e., 34.5 kV). The transformers could be co-located with the inverters associated with each array, or centrally located. For the purposes of this ASC, the Applicant assumes that 85 inverter/transformer stations will be required for the Project. Transformers will step up the voltage from the inverters.

2.1.7 Electrical Collector Lines

Electrical collector lines will link transformers throughout the solar array to the collector substation. The electrical collector lines will mostly be buried adjacent to Project service roads within the solar array, but also may be used to connect separated fenced solar arrays together within the Solar Array Micrositing Area. Based on the current layout, approximately 34.6 miles of underground 34.5-kV collector lines will be installed at a depth of approximately 3 feet or until the point of refusal (i.e., bedrock is encountered). The amount and specific location of underground 34.5-kV collector lines will be revised consistent with final Project design.

The electrical collector lines will be underground to the extent possible; however, the lines would be constructed overhead where necessary to avoid sensitive environmental areas, minimize ground disturbance when spanning topographical features, or to avoid especially rocky or unstable areas. If needed, overhead sections will be installed on steel or wooden pole structures approximately 60 to 150 feet tall within the Solar Array Micrositing Area.

2.2 Power Collection System

The power collection system will consist of the electrical collector lines discussed above, as well as the Project's collector substation, overhead 230-kV gen-tie line, POI, switchyard, and an optional BESS.

2.2.1 Collector Substation

The collector substation will be constructed on an approximately 5-acre area within the Solar Array Micrositing Area and will be enclosed by a chain-link security fence. The collector substation will be secured by a perimeter fence separate from the solar array perimeter fence. The collector substation will include two transformers to increase the voltage from the 34.5-kV collector lines to 230 kV for transmission to the grid via the gen-tie line.

2.2.2 Overhead 230-kV Gen-Tie Lines and Interconnection Switchyard

The Project collector substation will be connected to the grid via an overhead 230-kV gen-tie line, with two possible POIs to the grid:

- **Option 1 POI**: A 3.7-mile-long overhead gen-tie line that could connect the Project collector substation to the existing Puget Sound Energy (PSE) 230-kV transmission line. The gen-tie line will connect to an existing PSE line through a proposed interconnection switchyard on land currently used for cultivated dryland wheat, located in unincorporated Douglas County east of the East Wenatchee Urban Growth Area boundary and east of undeveloped land near the Canyon Hills subdivision.

- **Option 2 POI**: A 1.0-mile-long gen-tie line that could connect the Project's collector substation to an existing Bonneville Power Administration (BPA) transmission line, closer to the northern end of the Project area west of Badger Mountain Road. The gen-tie line will connect to an existing BPA line through a proposed interconnection switchyard on existing undeveloped rangeland adjacent to multiple existing transmission lines, including three BPA lines ranging from 230 kV to 500 kV. If selected, the Option 2 POI and switchyard to 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.

The Option 2 POI will use a subset of the overall overhead 230-kV gen-tie line length to the Option 1 POI shown on Figure A-1 in Attachment A. As a result, the analysis presented in this ASC assesses the impact of the Option 1 POI and switchyard as this will result in the greatest level of comparable impact. The Applicant is requesting flexibility to select either option during final engineering design. If selected, the Option 2 POI and switchyard to the BPA transmission system will be permitted separately by the BPA.

The final right-of-way for the 230-kV gen-tie lines will be 200 feet wide. The line will be suspended above ground on either single steel monopole structures or wooden H-frame structures that will be approximately 60 to 150 feet tall.

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), Washington Administrative Code (WAC), American National Standards Institute (ANSI), National Electrical Manufacturers Association (NEMA), American Society for Testing and Materials (ASTM), Avian Power Line Interaction Committee (APLIC), as well as other applicable laws and construction codes. Ground clearances for the suspended portion of the line will conform to the NESC standards. The minimum clearance between the line and the ground (including local roadways and land used for agriculture) will be designed consistent with appliable standards identified above and will not preclude or inhibit transportation or agricultural uses under the line.

2.2.3 Optional Battery Energy Storage System

The Project includes an optional BESS on approximately 18 acres within the Solar Array Micrositing Area near the Project collector substation area and O&M area (Attachment A, Figure A-1). The optional BESS would be a supporting component to the Project. The optional BESS would be capable of storing and later deploying up to 200 MW of energy generated by the Project or supplied from the grid.

The optional BESS would use proven storage technologies that are commercially available, including but not limited to lithium-ion and flow batteries. These battery types use a series of self-contained enclosures located on a concrete pad within a fenced area, or within a warehouse-type enclosure of a similar scale and size. Lithium-ion batteries are the most common type of utility-scale technology used for a BESS and would likely be the option used for this Project. Lithium-ion batteries are a type of solid-state rechargeable battery in which lithium ions, suspended in an electrolyte, move from negative to positive electrodes and back when charging and recharging. Lithium-ion batteries have a typical lifespan of 5 to 10 years and would experience a gradual degradation of performance over that time. Flow batteries are an emerging technology for utility-scale BESS. Flow batteries use two electrolyte solutions, one with positive ions and the other with negative ions, that are contained in separate tanks and the migration of electrons from one solution to the other, typically through a membrane, creates electricity. Flow batteries typically have a maximum life-span of 10 to 20 years, but do not degrade over time like conventional batteries. During normal operations, the electrolyte solutions are recovered and reused during the recharging process and are generally not reactive or toxic substances.

The optional BESS, if used, would consist of self-contained, rack-mounted battery storage modules, converters, switchboards, integrated heating, ventilation, and air conditioning (HVAC) units, inverters, transformers, and fire prevention system controls placed in a prefabricated metal container. Battery storage containers are typically 40 feet by 8 feet by 8.5 feet and would be installed on concrete foundations designed for secondary containment. Additional battery storage container designs may be considered such as a warehouse-type enclosure of a similar scale and size, and the dimensions may vary accordingly. If used, the warehouse-type enclosure would be designed generally consistent with the character of similar buildings and painted in a low-reflectivity, neutral color to blend with the surrounding landscape and constructed in compliance with state structural and electrical code requirements. The optional BESS would be secured by a perimeter fence separate from the solar array perimeter fence.

2.3 Operations and Maintenance Building

The Project will require construction of an O&M building within the Solar Array Micrositing Area. The O&M building could be up to 5,000 square feet in size on an approximately 5-acre area including an on-site graveled area for parking and an open staging area. Associated Project service roads and the gravel parking area will have sufficient space for emergency response vehicle access. The O&M building will be surrounded by a security fence separate from the solar array perimeter fence.

Wastewater will be managed using a permitted on-site septic system or a portable restroom (the impact assessment contained in this ASC assumes a permitted on-site septic system is used). Local utilities will provide primary electrical and telephone connections. Two on-site above ground 1,000-gallon fuel tanks and associated liquid petroleum gas generators will provide back-up power during Project operations if needed.

The O&M building 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 building will have basic firefighting equipment for use on-site during maintenance activities including shovels, beaters, portable water for hand sprayers, and personal protective equipment. The equipment used within the O&M building will meet National Electrical Code and Institute of Electrical and Electronics Engineers standards and will not pose a significant fire risk. In addition, the Project's O&M area may include a 10,000-gallon water cistern to store water for fire suppression needs.

Limited lighting is needed for Project security and occasional after-hours work and maintenance. The Applicant will implement down-shield lighting at the Project collector substation, O&M building, and optional BESS as needed. Outdoor lighting will be sited, limited in intensity, shielded, and hooded in a manner that prevents the lighting from projecting onto adjacent properties and roadways.

2.4 Access Roads and Perimeter Fencing

The Project will be accessed primarily on 9 Road SW via Badger Mountain Road and U 75 Road (i.e., Clark Road). U 75 Road continues south from Badger Mountain Road and becomes 9 Road SW. The main access to the Project collector substation and solar array will be located at the northern end of the Solar Array Micrositing Area off 9 Road SW. Additional access points to the solar array will occur on U Road SW and Road T SW. Access to the POI and switchyard options will be off Badger Mountain Road or Rainey Road, depending on the determined Project POI. The Project will use existing roads to the extent practicable, as well as approximately 16 miles of new Project service roads that will be constructed within the Solar Array Micrositing Area. Roads will be constructed of an all-weather road surface, and have a minimum permanent width of 20 feet outside the solar array perimeter fence and 16 feet inside the solar array perimeter fence.

Chain-link fencing will be installed around the perimeter of the solar array, collector substation area, O&M area, optional BESS area, and switchyard area and will include 20-foot-wide vehicle and pedestrian access gates. The fencing will be up to 8-feet-high. Depending on Project security needs, which will be determined prior to construction, the fencing may consist of a 7-foot-high chain-link segment and an additional 1 foot of barbed wire along the top, or it may be a consistent 8-foot-high chain-link segment. The bottom of the fence may also be adjusted above the ground for wildlife considerations.

3.0 CONSTRUCTION

Project construction is estimated to take 18 months. The Project will employ an estimated 400 construction workers during the peak of construction, with the average number of workers during construction ranging from 300 to 350.

The following generally describes the actions and tasks that will be conducted during construction:

- The Project area will be surveyed (i.e., any preconstruction surveys will be finalized) and the limits of construction will be staked.
- Erosion and sediment controls will be installed.
- Staging areas will be graded, and internal service roads will be constructed.
- Security fencing will be erected around the solar array area and associated supporting components.
- Improvements will be made to public roads if needed to facilitate delivery of construction equipment and Project components.
- Foundation posts or piles will be constructed to support the solar arrays.
- The solar array tracker system will be assembled, and the solar modules will be installed.
- Inverter/transformer, electrical components, and the SCADA system will be placed and connected to the solar modules.
- Foundations for associated supporting components (e.g., solar array inverter and transformer pads, O&M building, collector substation, optional BESS, and switchyard) will be graded and constructed.
- The O&M building, collector substation, optional BESS, and other supporting components will be constructed.
- The electrical collector lines and overhead gen-tie line will be constructed/installed and connected to the Project collector substation.
- The optional BESS will be connected to the Project collector substation.
- The Project components/equipment will be tested and commission.
- Field offices and aggregate used at temporary staging areas will be removed.
- The Project and areas of temporary disturbance will be restored and revegetated as applicable, and temporary erosion and sediment controls will be removed.

Construction activities that include the use of major excavating and earth-moving machinery will be conducted during normal weekday hours to the extent feasible. Typical construction equipment that will be used on-site includes bulldozers, front-end loaders, graders, portable generators, mobile cranes, pumps, and trucks. The Project will not include a concrete batch

plant; instead, concrete will be delivered to the Project area from ready mix concrete provided by concrete trucks.

At least 30 days prior to construction, the Applicant will provide EFSEC with a set of construction plans, specifications, drawings, and design documents that demonstrate the Project is in compliance with applicable conditions of the Site Certification Agreement.

4.0 OPERATIONS AND MAINTENANCE

Once constructed, the Project will be primarily unoccupied using passive technology, such as the SCADA system, for remote operation. This means little to no noise, traffic, or other offsite impacts will be generated from Project operations. Normal operation of the Project may not require regular onsite personnel and, therefore, the site may not be manned on a daily basis. Periodic maintenance and inspection of the Project (including supplemental mowing, landscape maintenance, and electrical maintenance) will occur at scheduled intervals. 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, non-hazardous condition. Vegetation will be maintained for the Project in accordance with a Vegetation and Weed Management Plan that will be developed prior to construction (Part 3, Section 3.8 and Part 4, Section 4.8). Mowing of vegetation at the site will likely occur twice a year; however, the Applicant may also consider duel usage of the site and allow grazing in the Project area to maintain vegetation.

As discussed above, periodic washing of the solar panels may occur, with up to 157,000 gallons of water per wash. If needed, water used to wash the solar modules will likely be trucked in via water truck from a commercial source or use an exempt or permitted on-site well source (Part 2, Section B.8.e). 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 Project is expected to employ two to four staff during operations. Staff are anticipated to be on-site as needed.

5.0 SITE RESTORATION / DECOMISSIONING

The expected life of the Project is assumed to be 50 years; however, depending on the commercial market for renewable energy, the Project could be updated with more efficient components over time which could extend its useful life. The Project would 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 summary and estimate (Attachment C). The Initial Site Restoration Plan will address provisions for funding or bonding arrangements to meet the retirement costs identified in Attachment C.

Decommissioning would be conducted in accordance with EFSEC's rules and prior Site Certification Agreements and include dismantling and removing aboveground solar array

components and other aboveground associated supporting components such as the collector substation, O&M building, optional BESS, overhead gen-tie lines, and switchyard. Foundations would be removed to a level of no less than 3 feet below the ground surface unless requested to be maintained by the property owner. In areas where the foundations are removed, the surface would be recontoured reasonably similar to the pre-construction condition, and the area would be reseeded with a seed mixture reasonably acceptable to the property owner. Cables, lines, or conduit that are buried 3 feet below grade or more would not be removed. Any service roads constructed as part of the Project may remain, unless the property owner specifically requests their removal. During decommissioning, the Applicant would adhere to federal, state, and local requirements, including obtaining and adhering to applicable permits and authorizations. The Applicant's Decommissioning Summary and Estimate is provided in Attachment C and will inform the Initial Site Restoration Plan.

6.0 SOCIOECONOMIC REVIEW

The Applicant prepared a Socioeconomic Review (Attachment N) 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 10 to 20 percent of the total construction workforce. Local workers are those who normally reside within daily commuting distance of the Project site and would 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	2023	60 days	30	No
Construction	2023	18 months	On average 300 to 350; with a peak construction workforce of 400.	No
Operation/use	2024	50 years	2 to 4	No
Closure/reclamation	2074	6 months	On average 180 to 210; with a peak construction workforce of 240.	No

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

	The Project will not exceed 200 MW. Pending final commercial arrangements with the energy buyer, this Project may be built in phases up to the maximum Project generation capacity of 200 MW.

A.4. Site Maps and Plans

Map #	Map Name	Purpose and Description	Completed?
Figure A-1 in Attachment A	Preliminary Site Plan	Shows the preliminary Project design in relation to the Project Lease Boundary, Project area, Solar Array Micrositing Area, and Gen-tie Micrositing Corridor	Completed
Figure A-2 in Attachment A	Project Assessor Parcels	Assessor parcels within the Project area	Completed
Figure A-3 in Attachment A	Soils	Underlying soils per Natural Resources Conservation Service Soil Conservation Survey	Completed
Figure A-4 in Attachment A	Topography	Existing grade of the Project area	Completed
Figure A-5 in Attachment A	Habitat Types within the Project Area	Habitat types identified during the Project's general wildlife and habitat surveys	Completed
Figure A-6 in Attachment A	Douglas County Zoning Districts	Zoning districts in and adjacent to the Project area	Completed
Figure A-7 in Attachment A	Interim Control Buffers	Interim Control Buffers established by Douglas County Ordinance Number TLS 21-17-47B	Completed
Figures 5.1 through 5.21 in Attachment I	Delineated Wetlands and Waters	Wetlands and waters identified per the Project's Wetland Delineation Report	Completed
Figure 3 in Attachment G	Special-Status Species and Nest Observations	Location of wildlife resources identified during Project surveys; this figure is provided in the Wildlife and Habitat Assessment Report	Completed

Map #	Map Name	Purpose and Description	Completed?
Figure 6-2 in Attachment Q	Resource Locations Overview (*Confidential due to sensitive information – provided under separate cover*)	Location of cultural resources identified during Project surveys; this confidential figure is provided in the Cultural Resources Survey Report.	Completed

A.5. Mitigation Measures Summary

Mitigation Measure	Description	Expert Agency Participation
Earth		
Implementation of Geotechnical Recommendations	The Applicant will follow geotechnical recommendations provided in the Geotechnical Engineering Report (Attachment H). The subgrade preparation and compaction recommendations in Part 4, Sections 4.2.4 and 4.2.5 of the Geotechnical Engineering Report (Attachment H) will be followed to mitigate the risks associated with corrosive and collapsible soils. Mitigation measures include subgrade over-excavation and fill, compaction, moisture conditioning, and minimizing disturbed areas. The native clay and silt within the Project area may be suitable for backfilling around and above foundations, provided that all compaction requirements are met. It is noted that this fine-grained material is expected to be sensitive to moisture conditioning and may be challenging to work with, especially when wet.	EFSEC
Best Management Practices (BMPs) - Erosion	As further described in Part 4, Section 4.5, the Applicant will implement an ESCP and a Construction Phase 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 Ecology's Stormwater Management Manual for Eastern Washington (Ecology 2019).	Ecology

	Per RCW 17.10.140 and DCC 18.16.320, the Applicant will prepare and submit a Vegetation and Weed Management Plan to 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 Douglas 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 WAC 463-62-020.	Douglas County Building Division and Washington State Building Code Council
Air Quality		
Implementation of BMPs and Standard Construction Practices	Washington Administrative Code 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 would implement BMPs and standard construction practices, including the following: • Vehicles and equipment used during construction would be properly maintained to minimize exhaust emissions. • Operational measures such as limiting engine idling time and shutting down equipment when not in use would be implemented. • Watering or other fugitive dust-abatement measures would 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.	N/A

	• Construction materials that could be a source of fugitive dust would be covered when stored. • Traffic speeds on unpaved roads would be limited to 25 miles per hour to minimize generation of fugitive dust. • Truck beds would be covered when transporting dirt or soil. • Carpooling among construction workers would be encouraged to minimize construction-related traffic and associated emissions. • Erosion-control measures would be implemented to limit deposition of silt to roadways, to minimize a vector for fugitive dust. • Replanting or graveling disturbed areas would be conducted during and after construction to reduce wind-blown dust.	
Water Quality – Wetlands and Surface Waters		
Avoidance	No wetland features exist within the Project area. The Project will not impact wetlands and is consistent with WAC 463-62-050.	N/A
Stream crossing construction best management practices	Minimization of temporary water quality impacts (WAC 220-660-120; Stormwater Management Manual for Eastern Washington [Chapter 173-204 WAC]; Construction Stormwater General Permit [Chapter 90.48 RCW]), will be implemented on site during construction and operations and include the following best management practices: • Staging of materials and equipment to prevent contamination of waters of the state • Development of the SWPPP, ESCP, and Spill Prevention, Control, and Countermeasures Plan (SPCC Plan) • Installation and maintenance of temporary erosion and sediment control measures • Completing work in the dry with no water present	Ecology, WDFW
Stream crossing design	Stream crossing designs will minimize permanent impacts as required in WAC 220-660-190 and DCC 19.18B.060.	Ecology, WDFW

	Design elements include: • Location and alignment of the proposed road crossings to minimize impacts to the stream corridor. • Stream crossing structures (i.e., culverts) will be sized to accommodate ordinary high water or other design flow, sediment, and woody debris. Stream crossings will adhere to the criteria in DCC 19.18B.060. • Site restoration and revegetation of any disturbed areas.	
Hydraulic Project Approval (HPA)	If deemed necessary following discussions with WDFW, the Applicant will obtain HPA permits per WAC 20-660-050.	WDFW
Water Quality – Stormwater Runoff		
Construction Stormwater General Permit (CSWGP)	In compliance with WAC 173-200, the Applicant will obtain a CSWGP from Ecology. The CSWGP requires an ESCP and a SWPPP. Douglas County does not require a separate stormwater permit, but instead refers to the Ecology requirements.	Ecology
BMPs - Stormwater	The ESCP and SWPPPs (both 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 BMPs such as the appropriate use of silt fencing to avoid or eliminate runoff of contaminants. The SWPPPs will include BMPs from Ecology's Stormwater Management Manual for Eastern Washington (Ecology 2019). The Applicant will prepare and submit a Vegetation and Weed Management Plan to EFSEC prior to construction. The plan will be implemented to revegetate temporarily impacted areas and minimize erosion. Temporary basins and erosion control measures will be implemented during construction to protect existing discharge locations. Permanent basins will be provided at each discharge location that has an increase in runoff due to the proposed development and in critical discharge locations. Each basin will have a minimum depth of 3.5 feet, a length to width ratio of 3:1 to 6:1, and a pond riser outlet structure to provide	Ecology

	treatment per the Washington requirements. These basin locations are shown in Figure A-1 (Attachment A).	
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		
Habitat Mitigation Plan	Per WAC 463-60-332(3) and consistent with DCC 19.18C.037, the Applicant will develop and implement a Habitat Mitigation Plan with input from WDFW and EFSEC. This plan will provide details regarding mitigation measures for impacts to dwarf shrub-steppe and shrub-steppe habitat.	WDFW
Revegetation and Noxious Weed Control	Per RCW 17.10.140 and consistent with DCC 18.16.320 the Applicant will develop a Vegetation and Weed Management Plan with input from EFSEC and the Douglas County Weed Management Task Force 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).	EFSEC, Douglas County Weed Management Task Force
BMPs	The Applicant will implement the Project's ESCP, Construction 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 WDFW prior to conducting surveys in 2021, and used the information obtained during this coordination to inform surveys and this assessment of impacts. As described above, the Applicant avoided talus slopes (i.e., a Priority Habitat) by a minimum of 50 feet, in compliance with DCC 19.18C.050(B)(2) and minimized impacts to shrub-steppe habitat to the extent feasible. Additionally, the Project is sited primarily on agricultural land, which minimizes impacts to wildlife and habitat. To minimize impacts to small mammals and other small animals, the Applicant is considering raising the fence 4 inches above grade to allow animals to pass through the fence and use the area inside the Project's perimeter fence. Additionally, during operations, the Applicant will limit mowing during the bird nesting season as feasible, to avoid impacts to nesting birds. The Applicant is also considering allowing alternative methods of vegetation maintenance under solar panels such as sheep grazing, as feasible based on compatibility with final Project design and property owner interest.	WDFW
Construction and Operations BMPs	Unnecessary lighting will be turned off at night to limit attraction of migratory birds. This includes using lights with timed shutoff, downward-directed lighting to minimize horizontal or skyward illumination, and avoidance of steady-burning, high-intensity lights. If construction occurs during the bird nesting season, nest clearance surveys will be conducted prior to site disturbance, as feasible. The Project's gen-tie line will be designed and constructed to minimize avian electrocution, according to guidelines outlined in Avian Power Line Interaction Committee standards (APLIC 2012). Evening and nighttime construction activities will be avoided to the extent practicable, which will limit the impacts of construction noise to wildlife.	WDFW

	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 the resources. Construction personnel will be trained in the following areas when appropriate: awareness of sensitive habitats and bird species, potential bird nesting areas, potential bat roosting/breeding habitat, and general wildlife issues. The Applicant will prepare an ESCP which would include 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 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. Vehicle speeds will be limited to 25 mph 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. Fire hazards from vehicles and human activities will be reduced via use of spark arrestors on power equipment, avoiding driving vehicles off roads, allowing smoking in designated areas only 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 with the Douglas County Fire Marshal. Following decommissioning, reclamation of the Project area will begin as quickly as possible to reduce the likelihood of ecological resource impacts in disturbed areas.	
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 request input from WDFW and EFSEC to determine appropriate compensatory mitigation. The	WDFW

	Applicant has prepared a Draft Wildlife Habitat Management and Mitigation Plan (Attachment M), which provides a framework for determining the compensatory mitigation required to achieve "no net loss." The Applicant plans to begin meeting with WDFW and EFSEC within 15 business days of the submission of this ASC aimed at conclusion of the discussion within 90 days of the first meeting and prior to completion of State Environmental Policy Act (SEPA) review. Once determined, the agreed-upon mitigation will be provided to EFSEC as supplemental information in the form of a Final Wildlife Habitat Management and Mitigation Plan prior to construction.	
Environmental Health – Hazardous Waste		
Emergency Management Plan	Prior to Project construction and operations, the Applicant will develop an Emergency Management Plan to address worker health and safety, standards concerning potential release of hazardous materials, and fire prevention and control. This plan will provide 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. Specifically, the plan will be developed with input from and in coordination with the Douglas County Sheriff's Department Division of Emergency Management and the Douglas County Fire District No. 2. 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 §173.185m which regulates the transportation of lithium-ion batteries. • 49 CFR §173.159, which regulates the transportation of lead-acid batteries. • International Fire Code	Douglas County Sherriff's Department Division of Emergency Management Douglas County Fire District No. 2
BMPs – Fire Prevention	To minimize the risk of fire or explosions, the Project will implement BMPs to be detailed in	Douglas County Fire District No. 2

	the Emergency Management Plan noted above. Typical BMPs will include, but are not limited to: • 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; and • Prevent and control potential fires inside the Project area with trained staff who have 24-hour access to the site.	
Optional BESS design	The optional BESS would 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 would include monitoring equipment and alarm systems with remote shut-off capabilities.	Douglas County Fire District No. 2
CSWGP, SWPPP, and ESCP	As described in Part 4, Section 4.5, 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 assure	Ecology

	compliance with state and federal water quality standards. Applicable laws/codes include: • RCW 90.48, establishes general stormwater permits for Ecology under the Water Pollution Control Act • WAC 173-201A, Water Quality Standards for Surface Waters of the State of Washington • Clean Water Act (33 United States Code [U.S.C.]1251)	
SPCC Plan	The Applicant will prepare an SPCC Plan, consistent with requirements of 40 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 risks to water quality.	Ecology
Use of approved herbicides	In compliance with RCW 17.10.140, the Applicant will only use herbicides that are approved for use in the state of Washington by the EPA.	EPA and the Douglas County Weed Management Task Force
Land Use		
Based on the information provided in Part 4 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 for this resource topic.		
Noise, Light, Glare, and Aesthetics		
BMPs - Noise	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 construction, noise emitted during construction will be mobile and highly variable, making it challenging to control. Project construction will generally occur during the day, Monday through Friday. Furthermore, reasonable efforts will be made to minimize the impact of noise resulting from construction activities, including implementation of standard	EFSEC

	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; • 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, 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; and • Use a complaint resolution procedure to address any noise complaints received from residents.	
BMPs – Light, Glare, and Aesthetics	The Project will implement BMPs including: • Downward-directed lighting to minimize horizontal or skyward illumination, and	N/A

	avoidance of steady-burning, high-intensity lights. • Solar panels will use anti-reflective coating to minimize potential glare. • Use of non-reflective materials and finishes will be used on Project facilities to the greatest extent feasible. • Temporarily disturbed areas will be revegetated.	
Federal Aviation Administration (FAA) Review	The Applicant will file a Form 7460-1 Notice of Construction or Alteration with the FAA at least 45 days prior to construction, to obtain a Determination of No Hazard.	FAA
Archaeological, Historic, and Cultural Resources		
Avoidance of Protected Sites	Given the register-eligibility and/or protection under RCW 27.53 of 45DO00959, 45DO00960, BM-BB-02, BM-BB-03, BM-BB-05, BM-BB-06, BM-BB-10, BM-BB-11, BM-BB-13, BM-BB-14, BM-BB-21, BM-BB-22, and BM-BB-23, these resources are recommended to be avoided by the Project's final layout. A minimum avoidance buffer of 30 meters (100 feet) around the sites has been recommended in confidential Attachment Q and is achieved in the current Project design. If avoidance of these buffers is infeasible, monitoring of construction activities within the buffer may be necessary. If avoidance of the sites themselves is infeasible, evaluation of the unavoided resource(s) and/or coordination with the Colville Confederated Tribes (CCT) will be necessary to determine the register eligibility and if mitigation is necessary.	Department of Archaeology and Historic Preservation (DAHP), CCT, DNR
Avoidance of 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 DAHP excavation permit, if necessary	RCW 27.53.060 (Disturbance of archaeological resource without permit) is addressed through avoidance of direct impacts to pre-contact archaeological resources and NRHP-eligible historic-era archaeological resources or obtainment of an excavation permit. The Project, as currently designed, avoids direct impacts on sites related or possibly related to Native Americans by a minimum of 30 meters. All 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	DAHP; CCT

	additional such resources may be identified in the unsurveyed portions of the Project area. The Preliminary Site Plan on Figure A-1 to Attachment A demonstrates potential impacts based on a Project design that assumes worst-case disturbances to identified resources. As the Project design progresses, the layout would be changed such that impacts to the above resources and areas are avoided through micrositing to the extent feasible. The CCT is also in the progress of completing a traditional use study for the Project, which may identify additional tribal cultural sites that could be impacted. If any pre-contact archaeological site or NRHP-eligible historic-era archaeological site related to Native American activities is impacted by the Project, the Applicant will obtain a DAHP excavation permit and perform necessary archaeological work in order to comply with RCW 27.53. The Applicant will also continue to coordinate with the CCT regarding the archaeological sites and the potential impacts of the Project on these sites as well as any traditional use sites identified through the CCT's forthcoming study (see below).	
Completion of Archaeological and Cultural Resource Survey	The entirety of the Project area has not been surveyed and resources on the DNR parcel have not been shovel probed to confirm their site boundaries. Unsurveyed areas will be surveyed prior to construction. Boundary probing of sites will be conducted on the DNR parcel as well as any additional sites identified in previously unsurveyed areas.	DAHP, CCT, DNR
Archaeological Excavation Permit	Pre-contact archaeological sites, regardless of register eligibility, or National Register of Historic Places (NRHP) eligible or unevaluated historic-era archaeological sites that cannot be avoided in the Project's final layout/design, require an archaeological excavation permit from DAHP under RCW 27.53.060 before they can be disturbed. This requirement is limited to the site boundaries themselves. Based on the register eligibility evaluations in confidential Attachment Q, no such sites will be impacted and no permit is necessary for the current design.	DAHP, CCT, DNR

Unanticipated Discovery Plan	In the event unrecorded archaeological resources are identified during Project construction or operation, work within 30 meters (100 feet) of the find should be halted and directed away from the discovery until it can be assessed in accordance with steps in the Unanticipated Discovery Plan (provided as Appendix G in Attachment Q). This appendix does not contain any confidential information and can be shared with Project personnel and contractors.	DAHP, CCT, DNR
Continued Coordination with Native Americans	Coordination and open communications will continue with the CCT and other interested tribes 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 tribes. As part of those efforts, recommendations made in the CCT's forthcoming traditional use study will be considered in the Project's final design, as appropriate and in coordination with the Tribe. Lines of communication will also remain open to better facilitate any response to unanticipated discoveries during construction.	DAHP, CCT, DNR
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 RCW 46.44 and WAC 468-38	WSDOT
County Special Motor Vehicle Permit (Overweight and Oversized Vehicles)	A permit will be obtained to operate oversize and overweight vehicles on County Roads (Douglas County 2021).	Douglas County Department of Transportation and Land Services
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 within the Project area pursuant to DCC 12.24.	Douglas County Department of Transportation and Land Services
County Work in Right-of-Way Permit	This permit will be required for work in a County road right-of-way (Douglas County 2021). For example, the permit will be required where the Project's underground 34.5-kV collector lines cross beneath a county roadway (e.g.,	Douglas County Department of Transportation and Land Services

	connecting the solar array east of U Rd SW back to the Project substation to the northwest). This permit may also be required if work in the right-of-way to Badger Mountain Road is necessary to construct the 230-kV gen-tie line.	
Traffic Control Plan	A Traffic Control Plan will be prepared in coordination with the Douglas County Department of Transportation and Land Services for traffic management during construction and for construction of access approaches from County right-of-way. The plan will be developed consistent with Douglas County Road Standards for traffic control (DCC 12.56.070).	Douglas County Department of Transportation and Land Services

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 Project Lease Boundary, Project area, Solar Array Micrositing Area, and Gen-tie Micrositing Corridor.	Completed (Attachment A; Figure A-1)	N/A
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	EFSEC with input from Ecology
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 Ecology
Construction Phase SWPPP	The Construction Phase SWPPP will be based on Ecology's SWPPP template and will address stormwater runoff, flooding, and erosion to assure compliance with state and federal water quality standards. The SWPPP will include BMPs from Ecology's Stormwater Management Manual for Eastern Washington.	Prior to site preparation	EFSEC with input from Ecology

Submittal Name	Description	Submittal Timing	Expert Agency Participation
Construction Phase 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 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 Ecology
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. Topics covered will include: 1) medical emergencies, 2) construction emergencies, 3) site evacuation, 4) fire protection and prevention, 5) flooding, 6) extreme weather abnormalities, 7) earthquakes, 8) volcanic eruption, 9) facility blackout, 10) hazardous materials spills, 11) terrorism, sabotage, or vandalism; and 11) bomb threats.	Prior to site preparation	Douglas County Sheriff's Office; Douglas County Fire Districts #1 and #2, as well DNR Wildland Fire Management Division.
Traffic Control Plan	A Traffic Control Plan will be prepared in coordination with the Douglas County Department of Transportation and Land Services for traffic management during construction and for construction of access approaches from County right-of-way. The plan will be developed consistent with Douglas County Road Standards for traffic control under DCC Section 12.56.070.	Prior to site preparation	With input from Douglas County Department of Transportation and Land Services
Construction Management Plan	The detailed Construction Management Plan addressing the primary site preparation and construction phases and based	Prior to site preparation	EFSEC

Submittal Name	Description	Submittal Timing	Expert Agency Participation
	generally on mitigation measures in Part 2, Section A.5.		
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 assure compliance with state and federal water quality standards. The SWPPP will include BMPs from Ecology's Stormwater Management Manual for Eastern Washington.	Prior to commercial operations	EFSEC with input from Ecology
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 Ecology
Wildlife Habitat Management and Mitigation Plan (WHMMP)	The Wildlife Habitat Management and Mitigation Plan 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	The Draft WHMMP is provided with this ASC (Attachment M) The WHMMP will be revised in coordination and with input	EFSEC with input from WDFW

Submittal Name	Description	Submittal Timing	Expert Agency Participation
	guidelines such as WDFW's Mitigation (M-5002) Policy.	from EFSEC and WDFW and completed prior to site preparation	
Vegetation and Weed Management Plan	The Vegetation 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 within input from the Douglas County Weed Management Task Force
Unanticipated 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 (Attachment Q)	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 Estimate (Attachment C). 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 Badger Mountain Solar 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 National Environmental Policy Act, Section 102 (42 U.S.C. § 4332); 40 CFR § 1500 The Option 2 POI and switchyard to 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 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 4.8 and 4.9
Migratory Birds	U.S. Fish and Wildlife Service Migratory Bird Treaty Act (16 U.S.C., 703-711)	Part 4, Sections 4.8 and 4.9
Eagles	U.S. Fish and Wildlife Service Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c) Eagle permit regulations (50 CFR 22)	Part 4, Sections 4.8 and 4.9
Air Quality	U.S. Environmental Protection Agency (EPA) Clean Air Act (42 USC 85, Section 7401, et seq.; 40 CFR 60)	Part 4, Section 4.2
Waters of the United States	U.S. Army Corps of Engineers, Seattle District Clean Water Act of 1972 (40 CFR 230) Section 404	Not Applicable to this Project; Part 4, Section 4.3
Aviation	Federal Aviation Administration Construction or alteration requiring notice (14 CFR 77.9), Form 7460-1.	Part 4, Section 4.16b

Permit or Requirement	Agency Code, Ordinance, Statute, Rule, Regulation, or Permit	ASC Section Reference
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 4.16a
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 4.2
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 3.3, 3.5; Part 4, Sections 4.3 and 4.5
Water Quality Waters of the State	Washington Department of Ecology Section 401 Water Quality Certificate, Joint Aquatic Resource Permit Application (JARPA)	Part 4, Section 4.3
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 (CUP) for fill in wetlands associated with Shorelines of the State	Shoreline Management Act and permitting not applicable to this Project; Part 4, Sections 4.3 and 4.14

Permit or Requirement	**Agency Code, Ordinance, Statute, Rule, Regulation, or Permit**	**ASC Section Reference**
Fish and Wildlife	Washington Department of Fish and Wildlife 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 4.8 and 4.9 (*for WAC 220-610*) Part 4, Section 4.3 (*for RCW 77.55 and HPA*)
SEPA	RCW 43.21C, Washington Environmental Policy Act WAC 197-11, Washington Department of Ecology SEPA Rules, which establish uniform requirements for compliance with SEPA	Parts 3 and 4
Archaeology and Historic Preservation	Washington State Departments of Archaeology and Historic Preservation RCW 27.53, Archaeological Sites and Resources	Part 4, Section 4.18
Energy Site Certification	Energy Facility Site Evaluation Council RCW 80.50 Energy Facilities – Site Locations	Site Certification Agreement, which generally addresses state regulatory requirements and County permits and regulations.
Transportation	Washington State Department of Transportation (WSDOT) Oversize and Overweight Permit, WAC 468-38-075	Part 4, Section 4.20
Authorization to Use State-owned Lands	Washington Department of Natural Resources (DNR) RCW 79.36, Easements Over Public Lands	Part 4, Section 4.14

B. Project and Site Information

B.1. Earth and Ground Disturbance

B.1.a. Soils and Slopes

Soil types	Soils in the Project area are shown on Figure A-3 in Attachment A and listed in Attachment E. The primary soils within the Solar Array Micrositing Area include Broadax-Titchenal complex (26 percent); Broadax-Morrow-Spofford complex (15 percent); Bagdad silt loam cemented (14 percent); Morrow Silt Loam (11 percent); Morrow-Argabak complex (4 percent); Argabak-Morrow complex (7 percent); Van Nostern silt loam (4 percent); and Broadax silt loam (9 percent). The primary soils within the Gen-tie Micrositing Area include Ritzville silt loam, cemented substratum (38 percent); Renslow silt loam, cemented substratum (31 percent); Cheviot-Ralls-Rubble land complex (12 percent); and Alstown-Cheviot complex (8 percent).
Steepest slope	81 percent in the Gen-tie Micrositing Corridor; 90 percent on the western perimeter of the Solar Array Micrositing Area.
Range of Slopes	0.2 to 81 percent in the Gen-tie Micrositing Corridor; 0.02 to 90 percent in the Solar Array Micrositing Area.

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 values provided below are preliminary and will be revised with final Project design. The Applicant will specify the final quantity and source of fill 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.	
	☒ Grading	Cubic yards proposed: Approximately 1,451,955
	☒ Filling (import material to site)	Cubic yards proposed: Approximately 1,851,945
		Source of fill: Unknown
	☐ Excavating (Export material off site)	Cubic yards proposed: N/A
		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** No wetlands or frequently flooded areas occur within the Project area and no fill of surface waters is anticipated; however, some excavation and impacts to ephemeral streams will occur (Part 4, Section 4.3). The extent of this excavation (e.g., cubic yards and the exact locations) is pending final Project design and engineering. The Applicant has sited the Project to avoid wetlands, intermittent, and perennial streams, and is designing the Project to avoid and minimize impacts to ephemeral streams to the extent feasible. 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 WDFW to determine if 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).	
	☐ Fill	Cubic yards: N/A

	☒ Excavation/ Dredging	Cubic yards: To be determined at final design.
	Describe area(s) where this would occur: To be determined at final design.	

B.2. Surface Types and Acreage

		Acreage	
Project Site Areas		**Pre-Construction, within the Project Area [1/]**	**Post-Construction, within the Project Footprint [2/]**
Roads, buildings, and other impervious surfaces [/3]		16	66
Wetlands	**Emergent wetland**	0	0
	Scrub Shrub wetland	0	0
	Forested wetland	0	0
	Open Water *(do not include any area already listed in previous categories)*	0	0
Vegetated Uplands	**Agriculture**	2075	60
	Dwarf Shrub-steppe	16	0.1
	Non-native Grassland and Forbland	13	< 0.01
	Shrub-steppe	247	6
Unvegetated *such as rock, earth, or fill*		0	0
Other	**Ephemeral Streams**	1	< 0.01
	Conservation Reserve Program	12	< 0.01
	Talus slopes	10	0
TOTAL:		**2,390**	**66**

1/ The Area of Extent identified in the original Streamlined Solar ASC Form is the Project area defined in Part 2 Section A.2, which includes the Solar Array Micrositing Area and the Gen-tie Micrositing Corridor. The Applicant is requesting flexibility to microsite the Project and its associated supporting components anywhere within the Project area so long as the final layout does not exceed the Project area evaluated in this ASC and allowed for in the Site Certification Agreement. The Project area is also the survey area for many of the resource-specific surveys conducted in preparation of this ASC.

2/ The Post-Construction area corresponds to the footprint of the area occupied by Project components and structures depicted on Figure A-1 in Appendix A over the life of the Project.

3/ Impervious surfaces listed for Pre-Construction include existing developed areas and existing roads within the Project area. Impervious surfaces listed for Post-Construction include the Project's solar array posts, inverter and transformer pads, Project service roads (20-feet-wide outside the solar array perimeter fence, 16-feet-wide within the solar array perimeter fence), O&M area, collector substation area, switchyard area, optional BESS area, perimeter fence, and overhead 230-kV gen-tie line poles. The Post-Construction sum for impervious surfaces is also distributed among the applicable habitat types below it which is consistent with habitat impacts reported in Part 4, Section 4.8, Table 4.8-2.

B.3. Plants and Habitats

Are there any plants or habitats present on the site?			
☐ **None**	☒ **Yes** See the 2021 Rare Plant Survey Report (Attachment F) and the 2021 Wildlife and Habitat Survey Report (Attachment G) for additional details regarding plants and habitats found within the Project area. Appendix B of the 2021 Rare Plant Survey Report provides a complete list of vascular plants observed within the Project area.		
	Deciduous trees: *such as alder, maple, aspen*		
	☒ **No**	☐ **Yes**	
		Specify:	
	Evergreen trees: *such as fir, cedar, pine:*		
	☐ **No**	☒ **Yes**	
		Specify: One lone ponderosa pine (*Pinus ponderosa*) pine tree was observed in the Project area	
	Shrubs, grass, pasture		
	☐ **No**	☒ **Yes**	
		Specify: Non-native grassland and forbland; the species found in these communities are listed below: • Grass species: bulbous bluegrass (*Poa bulbosa*), cheatgrass (*Bromus tectorum*), smooth brome (*Bromus inermus*) • Forb species: blue mustard (*Chorispora tenella*), clasping pepperweed (*Lepidium perfoliatum*), prickly lettuce (*Lactuca serriola*), tall tumblemustard (*Sisymbrium altissimum*), Russian thistle (*Salsola tragus*)	
	Shrub-steppe: *such as sage brush, native grasses*		
	☐ **No**	☒ **Yes**	

Specify: Dwarf shrub-steppe and shrub-steppe; the species found in these communities are listed below:

- Shrubs and sub-shrub species: Big sagebrush (*Artemisia tridentata*), threetip safebrush (*A. tripartita*), scabland sagebrush (*A. rigida*), rabbitbrush (*Chrysothamnus viscidiflorus, Ericameria nauseosa*), horsebrush (*Tetradymia canescens*), buckwheats (*Eriogonum* spp.), phlox (*Phlox* spp.), narrowleaf goldenweed (*Nestotus stenophyllus*)
- Grass species: Sandberg bluegrass (*Poa secunda*), bluebunch wheatgrass (*Pseudoroegneria spicata*)
- Forb species: balsamroot (*Balsamorhiza sagitatta*), desert yellow daisy (*Erigeron linearis*), Douglas' brodiaea (*Triteleia grandiflora var. grandiflora*), lomatiums (*Lomatium* spp.), lupines (*Lupinus* spp.), penstemons (*Penstemon* spp.), pussytoes (*Antennaria* spp.), Thompson's paintbrush (*Castilleja thompsonii*), and upland larkspur (*Delphinium nuttalianum*).

Additional plant species observed within shrub-steppe habitat types within the Project area are provided in the 2021 Wildlife and Habitat Survey Report (Attachment G). A full list of all vascular plant species observed in the Project area is provided in the 2021 Rare Plant Survey Report (Attachment F).

Wet soil plants: *such as cattail, buttercup, bulrush, skunk cabbage*

☒ No	☐ Yes	

Specify:

Water plants: *such as water lily, eelgrass, milfoil*

☒ No	☐ Yes	

Specify:

Other vegetation types: Planted grassland; Agricultural lands

☐ No	☒ Yes	

Specify: Agricultural lands: wheat and fallow wheat fields; the species found in these communities are listed below:

- Planted grassland: planted grasses and lupine (*Lupinus* spp.); area enrolled in the Conservation Reserve Program. Although some lupine plants were alive, the grasses planted in this area were all dead.

Other habitat types:

☐ No	☒ Yes	

Specify:: Talus, and Developed/Disturbed areas

- Talus slopes: sparsely vegetated steep cliff faces, unstable scree, and talus. Sparse existing vegetation includes the following: serviceberry (*Amelanchier alnifolia*), chokecherry (*Prunus virginiana*), wax currant (*Ribes cereum*), snowberry (*Symphoricarpos albus*), giant hyssop (*Agastache occidentalis*), silverleaf phacelia (*Phacelia hastata*).
- Developed and Disturbed areas: (i.e., roads, gravel/borrow pits and other areas developed/disturbed for agricultural production) primarily unvegetated. Existing vegetation includes smooth brome (*Bromus inermis*), crested wheatgrass (*Agropyron cristatum*), and mullein (*Verbascum thapsus*)

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
N/A	N/A

Name the sources that were checked, or work done to identify the at-risk species:
Surveys conducted within the Project area did not identify any at-risk (i.e., federally listed endangered, threatened, or candidate vascular plant species and vascular plant species listed in the state as endangered, threatened, or sensitive by the and WNHP). vascular plant species within the Project area. Part 4, Section 4.8 of this application and the 2021 Rare Plant Survey Report (Attachment F) provide additional details regarding rare (i.e., at-risk) vascular plant species with potential to occur within the Project area, rare plant survey methods, and results of the rare plant surveys conducted for the Project.

One nonvascular species, naval lichen (*Umbilicaria phaea* var. *coccinea*), listed as endangered in the state by the WNHP is known or believed to occur in Douglas County. This species grows on exposed to somewhat shaded rock outcrops and talus slopes (McCune and Geiser 1997); however, talus slopes would not be affected by the Project (as discussed further in Part 4).

The CCT will be conducting a traditional use and ethnobotanic study of the Project area to evaluate the potential presence of Tribal-specific plant resources. Additional details regarding this coordination are provided in Part 4, Section 4.19.

B.4. Forest Harvest

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

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 2021 Wildlife and Habitat Survey Report (Attachment G) for additional details regarding animals found within the Project area. Appendix A and Appendix B of the 2021 Wildlife and Habitat Survey Report (Attachment G) provide a list of special status wildlife species with potential to occur within the Project area and wildlife species and sign observed during 2021 field surveys, respectively.		**List species that use the site as a travel corridor.**
	Birds: *such as hawk, heron, eagle, songbirds*		
	☐ No	☒ Yes **Specify:** Thirty bird species were observed during wildlife surveys, as described in the 2021 Wildlife and Habitat Survey Report (Attachment G): American crow (*Corvus brachyrhynchos*), American kestrel (*Falco sparverious*), American robin (*Turdus migratorious*), barn swallow (*Hirundo rustica*), black-billed magpie (*Pica hudsonia*), Brewer's sparrow (*Spizella breweri*), California quail (*Callipepla californica*), chukar (*Alectoris chukar*), common raven (*Corvus corax*), ferruginous hawk (*Buteo regalis*), golden eagle (*Aquila chrysaetos*), horned lark (*Eremophila alpestris*), grey partridge (*Perdix perdix*), killdeer (*Charadrius vociferus*), mountain bluebird (*Sialia currucoides*),mourning dove (*Zenaida macroura*), northern harrier (*Circus cyaneus*), prairie falcon (*Falco mexicanus*), red-tailed hawk (*Buteo jamaicensis*), ring-necked pheasant (*Phasianus colchicus*), sage thrasher (*Oreoscoptes montanus*), savannah sparrow (*Passerculus sandwichensis*), Say's phoebe (*Sayornis saya*), Townsend's solitaire (*Myadestes townsendi*), wild turkey (*Meleagris gallopavo*), vesper sparrow (*Pooecetes gramineus*), western bluebird (*Sialia Mexicana*), western kingbird (*Tyrannus verticalis*), western meadowlark (*Sturnella neglecta*), and white-crowned sparrow (*Zonotrichia leucophrys*).	See Part 4, Section 4.9 for a detailed discussion of migration routes. Also, please see the 2021 Wildlife and Habitat Survey Report (Attachment G) for additional information regarding species occurrence in the area.

Mammals: *such as deer, bear, elk, beaver*		
☐ **No**	☒ **Yes** **Specify:** One mammal species (mule deer [*Odocoileus hemionus*]) and sign for three additional mammal species (American badger [*Taxidea taxus*], coyote [*Canis latrans*], Rocky Mountain elk [*Cervus canadensis nelson*]) were observed during wildlife surveys, as described in the 2021 Wildlife and Habitat Survey Report (Attachment G).	See Part 4, Section 4.9 for a detailed discussion of migration routes. Also, please see the 2021 Wildlife and Habitat Survey Report (Attachment G) for additional information regarding species occurrence in the area.
Fish: *such as bass, salmon, trout, herring, shellfish*		
☒ **No**	☐ **Yes** **Specify:** N/A	
Other:		
☐ **No**	☒ **Yes** **Specify:** One reptile species (western rattlesnake [*Crotalus oreganus*]) was observed during wildlife surveys, as described in the 2021 Wildlife and Habitat Survey Report (Attachment G).	See Part 4, Section 4.9 for a detailed discussion of migration routes. Also, please see the 2021 Wildlife and Habitat Survey Report (Attachment G) for additional information regarding species occurrence in the area.

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	
	bald eagle	BGEPA, PS
	burrowing owl	SOC, SC, PS
	chukar	PS
	Columbian sharp-tailed grouse	SOC, SE, PS
	dusky grouse	PS
	ferruginous hawk	SOC, ST, PS
	golden eagle	BGEPA, PS
	greater sage-grouse (Columbia Basin DPS)	SE, PS
	loggerhead shrike	SC, PS
	northern harrier	BCC
	prairie falcon	PS
	ring-necked pheasant	PS
	sagebrush sparrow	SC, PS
	sage thrasher	BCC, SC, PS
	Mammals	
	black-tailed jackrabbit	SC, PS
	elk	PS
	Townsend's big-eared bat	SC, PS
	gray wolf	E, PS
	mule deer	PS
	northwest white-tailed deer	PS
	Washington ground squirrel	SC, PS
	white-tailed jackrabbit	SC, PS
	Reptiles & Amphibians	
	sagebrush lizard	SC, PS
	1. SOC = Federal Species of Concern, BCC = Federal Bird of Conservation Concern, BGEPA = Bald and Golden Eagle Protection Act, SE = State Endangered, ST = State Threatened, SC = State Candidate, PS = Priority Species	

	Name the sources that were checked, or work done to identify at-risk species: As described in the 2021 Wildlife and Habitat Survey Report (Attachment G), a desktop background review followed a wildlife field survey were conducted to identify at-risk animal species on or near the site, and raptor nest surveys were additionally conducted in 2019, 2020, and 2021 to identify nesting raptors (including at-risk species) on or near the site. The Applicant coordinated with WDFW in March 2021 prior to wildlife surveys to identify special status wildlife with potential to occur at the Project, and reviewed the following sources: • Great Northern Landscape Conservation Cooperative Habitat Occupancy and Movements by Greater Sage-Grouse in Washington State (WHCWG 2015); • StreamNet Mapper, fish distribution data for the Pacific Northwest (StreamNet 2021); • U.S. Fish and Wildlife Service (USFWS) federally listed species list for Project location in Douglas County (USFWS 2021a); • USFWS Birds of Conservation Concern (USFWS 2008, 2021b); • Washington State Listed and Candidate Species (WDFW 2020); • Washington Department of Fish and Wildlife (WDFW) Priority Habitats and Species (PHS) List (WDFW 2008); • WDFW PHS on the Web (WDFW 2021a); • WDFW Threatened and Endangered Species Profiles (WDFW 2021b); • WDFW PHS Distribution by County (WDFW 2021c); and • A query of WDFW's PHS database (WDFW 2021d).

B.6. Property/Site Designations

Provide information for these 7 items	
Comprehensive Plan (name, date, pertinent sections):	Douglas County Comprehensive Plan (Douglas County 2019) Pertinent sections include: Chapter 2, The Vision of Douglas County Chapter 3, Population and General Land Use Chapter 4, Rural Lands element Chapter 5, Resource Lands Element Chapter 6, Transportation Element Chapter 8, Utilities Element Chapter 9, Economic Development Element Chapter 10, Critical Areas Element Consistency with the Douglas County Comprehensive Plan is reviewed with Part 4, Section 4.14 and Attachment D.
Current Zoning:	Dryland Agriculture (A-D) and Rural Resource 20 (RR-20)

Planning Area:	Resource Lands and Rural Lands
Shoreline Master Plan:	Douglas County Regional Shoreline Master Program (Douglas County 2021).
Designation:	None in the Project area.
Closest Surface Water:	The closest named stream is Beaver Creek, approximately 1.5 miles from the Project. All surface waters within the Project area are ephemeral streams.
Distance:	See above
WRIA #:	44 - Moses Coulee watershed

Is the site within a mapped FEMA Flood Zone?	
☒ **No**	☐ **Yes**
	Zone name: N/A

Is the site a designated Natural Resource Land? *Designated by the county or city*	
☒ **No** ☐ **Yes**	**Forest land:** N/A
☒ **No** ☐ **Yes**	**Agriculture:** Neither A-D nor RR-20 are designated by Douglas County as agricultural lands of long-term commercial significance, and therefore are not considered designated natural resource lands under RCW 36.70A.030, which is specific to agricultural, forest, and mineral lands of long-term commercial significance.
☒ **No** ☐ **Yes**	**Mineral:** N/A

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:** N/A
☒ **No** ☐ **Yes**	**Frequently flooded:** N/A
☒ **No** ☐ **Yes**	**Aquifer recharge:** N/A
☐ **No** ☒ **Yes**	**Geologic hazard:** See Part 4, Section 4.1 for additional details.
☐ **No** ☒ **Yes**	**Fish/wildlife habitat conservation:** See Part 4, Section 4.8 for additional details.
☒ **No** ☐ **Yes**	**Other** *provide Critical Area name(s):* N/A

On a Local, State, or Federal Historic Register?		
☒ **No**	☐ **Yes**	See Part 4, Section 4.19

	☐ **Listed**	☐ **Proposed**

Identified as a Local, State, or Federal Cultural Site?		
☐ **No**	☒ **Yes**	See Part 4, Section 4.19
	☐ **Listed**	☒ **Proposed**

Are there tribes that may have or claim particular rights to all or part of the project area?		
☐ **None known**	☒ **Yes** The Applicant consulted DAHP's Interactive Tribal Map, which identified three tribes with traditional territories in the Project area.	
	Tribe	**Contact Made or Attempted, Who/When/method of contact** **Outcome of Contact including Right Asserted (*if any*)**
	Colville Confederated Tribes	On March 3, 2021, the Applicant introduced the Project and requested input and comments as part of the data gathering process to inform cultural resource surveys and assessing potential impacts to cultural resources. The Applicant continues to coordinate with the CCT. The CCT will be conducting a traditional use and ethnobotanic study of the Project area, the results of which will inform final cultural avoidance, minimization, and mitigation measures. Additional detail regarding this coordination is provided in Part 4, Section 19.
	Confederated Tribes and Bands of the Yakama Nation	On March 3, 2021, the Applicant introduced the Project and requested input and comments as part of the data gathering process to inform cultural resource surveys and assessing potential impacts to cultural resources. The Applicant has not received additional comment from the Confederated Tribes and Bands of the Yakama Nation.
	Spokane Tribe	On March 3, 2021, the Applicant introduced the Project and requested input and comments as part of the data gathering process to inform cultural resource surveys and assessing potential impacts to cultural resources. The Applicant has not received additional comment from the Spokane Tribe.

Other applicable plans or local/state/federal designations that apply to the site?		
☐ **None known**	☒ **Yes**	
	Names:	DNR State Trust Lands are found in the Project Area.

B.7. Land Uses

Identify the following.

Existing Land Uses	Dryland agriculture (wheat), rangeland, undeveloped areas, local roads, electrical infrastructure (e.g. transmission and distribution lines), scattered unoccupied structures (e.g., agricultural storage)	
Past Known Land Uses	Agriculture, rangeland, undeveloped land, scattered unoccupied structures	
Existing Adjacent Uses	**North:**	Dryland agriculture, local roads
	South:	Dryland agriculture, undeveloped areas, Bureau of Land Management Rock Island Area of Critical Environmental Concern (ACEC; talus slopes)
	West:	Canyon Hills subdivision, Douglas County Public Utility District (PUD) Michael Doneen Substation, undeveloped areas, dryland agriculture, local roads, electrical utility infrastructure
	East:	Dryland agriculture, rangeland, undeveloped areas, local roads, scattered rural development

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?

☐ **No**	☒ **Yes**		
	Source of runoff:	Compacted soils and construction areas. See Part 3, Section 3.5 for additional information.	
	Quantity of runoff:	A Preliminary Stormwater Management Plan is provided in Attachment J. Drainage basins have been incorporated into the Project design at each location estimated to have greater than 10 acres of runoff.	
	Method of collection:	Ground infiltration. In addition, temporary basins and erosion control measures will be implemented during construction to protect existing discharge locations.	
	Drain/ discharge to:	☒ **Onsite**	☐ **Overland flow**
			☒ **Engineered infiltration**
			Describe: Temporary basins and erosion control measures will be implemented during construction to protect existing discharge locations. The locations of these basins are shown on Figure A-1 in Attachment A.

		☐ 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.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, foundations for solar array posts, battery storage container pads, pads for substation components, etc.). However, stormwater will generally infiltrate through the gravel roads. Overall impervious surfaces are anticipated to be a low percentage (approximately 3 percent) of the total Project area (see Part 2, Section B.2). Part 3, Section 3.5 contains additional information regarding potential runoff.		
	Quantity of runoff	A Preliminary Stormwater Management Plan is provided in Attachment J. Permanent drainage basins have been incorporated into the Project design at each location estimated to have greater than 10 acres of runoff.		
	Method of collection	Grading will be minimal and existing drainage patterns will be maintained. Grasses that can grow in this climate will be planted/seeded below the array to provide water quality and water quantity benefits for all discharge locations. Permanent erosion control devises and new permanent drainage basins will be provided at each discharge location that has an increase in runoff due to the proposed development and in critical discharge locations.		
	Drain/ discharge to:	☒ **Onsite**	☐ **Overland flow**	
			☒ **Engineered infiltration**	
			Describe: Permanent basins will be provided at each discharge location that has an increase in runoff due to the proposed development and in critical discharge locations. These locations are shown on Figure A-1 in Attachment A.	
		☐ **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:** Douglas County PUD	
	☐ **Natural gas ⇒ Utility name:**	
	☒ **Fuel ⇒ type:** Two on-site above ground 1,000-gallon fuel tanks and associated liquid petroleum gas generators will provide back-up power during operation if needed.	
	Is a new facility, generator, line, or connection required?	
	☐ **No**	☒ **Yes**
		Describe and locate on site map: Connection to Benton County PUD at the Project collector substation and O&M building. The proposed collector substation and O&M areas are shown on Figure A-1 in Attachment A.
Would there be energy production?		
☐ **No**	☒ **Yes**	
	☒ **Electricity ⇒ Receiving utility name:** Unknown at this time. Commercial discussions for delivery of the power from the Project are in process.	
	Is a new facility, generator, line, or connection required?	
	☐ **No**	☒ **Yes**
		Describe and locate on site map: *length of new line, height of poles* Length of line: Up to 3.7 miles Height of poles: 60 to 150 feet tall

B.8.d Water Use - Construction

Would there be water use during construction?

☐ **No**	☒ **Yes**
	Gallons per day proposed: 45,000 gallons/day Water use during construction will include water used for fugitive dust suppression and concrete mixing. The vast majority of this will be for fugitive dust control, as 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. A small amount of water will be used for drinking water and portable toilet facilities for construction workers; however, it is anticipated that the Applicant's construction contractor will bring bottled potable water to the site for their workers during construction. Minor water usage will also include fire prevention (e.g., stationing a water truck on-site during construction or use of a 10,000-gallon water cistern located at the Project's O&M area). The amount of water required will depend on site and weather conditions, but is anticipated to include approximately 45,000 gallons/day.

	Water source: Water used for Project construction will be trucked in from off-site sources with existing water rights (i.e., a municipal water source or vendor with a valid water right) or through a new, appropriately permitted individual on-site groundwater well. If an on-site well is needed during construction, the Applicant would determine if its use would qualify as a groundwater permit-exempt well under state code, or the Applicant would obtain the applicable individual well approval prior to use for construction. If needed, a combination of the options identified above may be used to obtain water for Project construction. The Applicant or the Applicant's construction contractor will verify the source and availability of water from a permitted source prior to construction.	
	☒ **Utility**	**Name:** Unknown (Yet to be determined)
	☐ **Surface water**	**Name:**
	☐ **Private well**	
	☐ **Private water system**	**Name:**
	Is a new well, diversion, line, or connection required?	
	☐ **No**	☒ **Yes**
	Describe and locate on site map: If a well is needed, the Applicant or the Applicant's construction contractor would verify the well location and availability of water from a permitted source prior to construction.	

B.8.e Water Use - Operation

Would there be water use during operation?

☐ **No**	☒ **Yes**
	Gallons per day: 1,277,500 to 1,825,000 gallons per year Water will be used during operation for domestic uses at the O&M building, and may also be used during operations for potential solar module washing. The Project is expected to use less than the groundwater permit-exempt well threshold of 5,000 gallons a day (RCW 90.44.050 sets a maximum withdrawal of up to 5,000 gallons per day [or 5.6 acre-feet per year] for permit exemption). Using a groundwater permit-exempt well, a maximum of 1,825,000 gallons per year could be used during operation (i.e., if the maximum permitting threshold of 5,000 gallons of water a day are used); however, it is likely that the actual domestic use will be less than 1,277,500 gallons per year. This total includes the water use related to the potential panel washing (i.e., if the panels are washed between one and two times per year and require 157,000 gallons of water per wash, this would result in approximately 315,000 gallons per year used for panel washing) as well as use of a 10,000-gallon water cistern located at the Project's O&M area for fire protection.

	Water source: Water used for Project operations may be trucked in from off-site sources with existing water rights (i.e., a municipal water source or vendor with a valid water right) or through a new, appropriately permitted individual on-site groundwater well. If an individual on-site well is needed during operations, the Applicant will determine if its use would qualify as a groundwater permit-exempt well under state code (RCW 90.44.050) with a maximum withdrawal of up to 5,000 gallons per day (or 5.6 acre-feet/year), or the Applicant would obtain the applicable individual well approval prior to use. If needed a combination of the options identified above may be used to obtain water for Project operations. The Applicant will verify the source and availability of water from a permitted source prior to Project construction. If needed, water used for panel washing will likely be trucked to the Project and procured by the contractor conducting the work; however, for the purposes of evaluation, this water is included in the total annual operations use reported above to provide a conservative estimate of annual water use during Project operations.
	☒ **Utility** — **Name:** Unknown (Yet to be determined)
	☐ **Surface water** — **Name:**
	☐ **Private well**
	☐ **Private water system** — **Name:**
	Is a new well, diversion, line, or connection required?
	☐ **No** / ☒ **Yes**
	Describe and locate on site map: If a well is needed, the Applicant or the Applicant's construction contractor will verify the well location and availability of water from a permitted source prior to construction.

B.8.f. Sanitary Waste Management

Would there be a need for sanitary waste management?

☐ **No**	☒ **Yes**
	Gallons per day: Less than the permitting threshold of 3,500 gallons per day (anticipated to likely be in the range of around 500 gallons a day).
	Discharge to: On-site septic system
	☐ **Utility** — **Name:** N/A
	☒ **Septic system:** The O&M building may contain an onsite septic system that would be permitted through the County.
	☐ **Other**
	Is a new system, line, or connection required?
	☒ **No** / ☐ **Yes**
	Describe and locate on a site map: The O&M building may have a bathroom, kitchen, and utility sink that will drain into a new on-site septic system that will be independent of any existing system or sewage line.

B.9. Emergency Service Providers

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

Police Services:	Douglas County Sheriff's Office
Fire Services:	Douglas County Fire Districts #1 and #2; as well as DNR Wildland Fire Management Division
Other Emergency Services:	Douglas County Department of Emergency Management Wenatchee Valley Hospital Central Washington 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?	It is assumed that most trips to the Project area will originate west of the Project site, in East Wenatchee, or across the Columbia River in Wenatchee and to the west along U.S. Highway 2 in the Wenatchee River Valley. The Project will be accessed primarily via Badger Mountain Road and U 75 Road (i.e., Clark Road).

Vehicular traffic generated by project:				
	Round trips per day		**Peak hour trips/day**	**Timing of peak hours**
During:	**Vehicles**	**Heavy equipment/material deliveries**		
Construction	300 (max) 225 (average)	81	300	6 a.m. to 7 a.m., 5 p.m. to 6 p.m.
Operation/use	2 - 4	Infrequent, as needed	N/A	N/A

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

Are any public road improvements proposed?	
☐ **No**	☒ **Yes**
	Location/description: The approach off Badger Mountain Road and U 75 Road (i.e., Clark Road) may require upgrades to accommodate the Project. The Applicant will identify necessary permits with Douglas County. Additionally, a Traffic Control Plan will be prepared and submitted to EFSEC prior to site preparation.

Parking	**Existing spaces:** N/A
	Spaces after project: Parking will be provided in a gravel lot next to the O&M building.

B.11. References

Douglas County. 2019. Douglas County Countywide Comprehensive Plan. Last Amended February 5, 2019. Available at: http://www.douglascountywa.net/docs/default-source/tls/planning/growth-management/countywide-planning/ruralplan.pdf?sfvrsn=10 (Accessed March 8, 2020).

Douglas County. 2021. Douglas County Regional Shoreline Master Program. Originally in effect August 27, 2009. Last amended by Ordinance TLS 20-07-19C. Effective date January, 26, 2021. Available at: http://www.douglascountywa.net/departments/tls/land-services/advanced-planning-and-growth-management

Ecology (Washington 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

McCune, B., and L. Geiser. 1997. *Macrolichens of the Pacific Northwest.* Oregon State University Press, Corvallis, OR.

StreamNet. 2021. StreamNet Mapper. Fish distribution and abundance data. Available online at: https://psmfc.maps.arcgis.com/apps/webappviewer/ (Accessed April 2021).

USFWS (United States Fish and Wildlife Service). 2008. Birds of Conservation Concern 2008. United States Department of Interior, Fish and Wildlife Service, Division of Migratory Bird Management, Arlington, Virginia. 87 pp. Available online at: https://www.fws.gov/migratorybirds/pdf/grants/birdsofconservationconcern2008.pdf (Accessed March 2021).

USFWS. 2021a. IPaC – Information for Planning and Consultation: Species list for Project location in Douglas County, Washington. Available online at: https://ecos.fws.gov/ipac/location/QPW6C7I3N5EUNOMWM7Z7GWVVKU/resources (Accessed April 6, 2021).

USFWS. 2021b. Birds of Conservation Concern 2021. United States Department of Interior, Fish and Wildlife Service, Division of Migratory Bird Management, Arlington, Virginia. Available online at: https://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php

WDFW (Washington Department of Fish and Wildlife). 2008. Priority Habitats and Species List, Revised February 2021. Available online at: https://wdfw.wa.gov/sites/default/files/publications/00165/wdfw00165.pdf (Accessed April 27, 2021).

WDFW. 2020. State Listed Species and State Candidate Species, Revised February 2020. Available online at: https://wdfw.wa.gov/sites/default/files/2020-02/statelistedcandidatespecies_02272020.pdf (Accessed April 6, 2021).

WDFW. 2021a. Priority Habitats and Species (PHS) on the Web. Available online at: https://wdfw.wa.gov/conservation/phs/ (Accessed March 2021).

WDFW. 2021b. Threatened and endangered species profiles. Available online at: https://wdfw.wa.gov/species-habitats/at-risk/listed (Accessed September 14, 2021).

WDFW.2021c. 2021 PHS Distribution by County Spreadsheet. Available online at: https://wdfw.wa.gov/publications/00165 (Accessed May 2021).

WDFW. 2021d. Priority Habitats and Species database query results. Provided by WDFW April 1, 2021.

WHCWG (Washington Wildlife Habitat Connectivity Working Group). 2015. Final Report. Great Northern Landscape Conservation Cooperative (GNLCC) Habitat Occupancy and Movements by Greater Sage-Grouse in Washington State. Available online at: GNLCCF14AP01042_Final-Report_2015.pdf (waconnected.org)

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PART 3 – SCREENING QUESTIONS

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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:

The Project area generally consists of agricultural land with rolling topography, as well as steep talus slopes on the western side of the Solar Array Micrositing Area. Surficial soils within the western portion of the Project area are largely ML and SM. The eastern portion of the Project area consists primarily of low-plasticity silt and clay with variable sand and gravel composition. Bedrock encountered in the Project area is expected to be Miocene-age basalt. The nearest fault system to the Project is the "Frenchman Hills structure fault (Class A) No. 561," which is located approximately 18 miles southwest of the Project.

Geologic hazards are known to occur within the Project area. The western portion of the Project area contains evidence of relic mass wasting deposits (i.e., landslides). The eastern portion of the Project contains large areas of loess deposits (i.e., wind-deposited silt) which are known to be collapsible. This region of Washington is also known to be seismically active with a mapped site-modified peak ground acceleration of 0.242 for a seismic event with a 2,475-year return period. The soil types in the Project area are moderately corrosive to concrete and steel. The area also contains shallow bedrock, as well as shallow cobbles and boulders. The Stage 1 Report of Expected Geotechnical Conditions (REGC) developed for the Project (see Attachment H-1) recommended an additional geotechnical investigation be conducted to delineate areas of concern within the Project area related to shallow bedrock, collapsible soils, corrosive soils, and other potential geologic hazards. A geotechnical field investigation and pile load testing was subsequently performed over three periods in November 2020, January 2021, and February 2021. This site investigation covered most of the Solar Array Micrositing Area, and the resulting Geotechnical Engineering Report provides

recommendations related to general construction, earthwork, foundations, and access roads (see Attachment H-2).

The analysis in Part 4 describes and details the geological and soil conditions within the Project area, including any geological hazard designated by Douglas County as critical areas, as well as the mitigation strategies that will be implemented to minimize the risks associated with potential geological hazards. The Part 4 analysis also address relevant factors identified in WAC 463-60-265, 463-60-302(1)-(2), and WAC 463-62-020. The information presented in Part 4 is based in part on both the Stage 1 REGC and the Geotechnical Engineering Report (Attachments H-1 and H-2).

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)
- 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)

And considering other relevant factors addressed in:

- 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 use heavy construction equipment, which will result in air pollution emissions related to vehicle emissions as well as generate dust within construction areas and along Project roads. Dust will be mitigated using standard dust control practices, including but not limited to spraying water or a binding agent, and/or applying gravel as necessary.

The analysis in Part 4 addresses the anticipated air pollution emissions generated during construction/operations, as well as the measures that would be implemented to avoid or minimize these impacts. Pursuant to WAC 463-60-225(1), any emissions subject to regulation by local, state, or federal agencies are 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 Project is not located in a FEMA designated flood hazard area. The Project will be designed to avoid the placement of Project components in drainage areas or areas with a high flood risk.

The Project area contains some steep slopes and areas of unstable soils (see response to Section 3.1 above). A geotechnical investigation has been conducted to determine the extent of these areas within most of the Solar Array Micrositing Area (Attachment H-2), as well as identify any applicable mitigation strategies that will be implemented in regard to these unstable areas (e.g., complete avoidance of applicable areas, development of targeted erosion control devises/strategies, or refinement of the Project's engineering design). Additional investigation may be conducted as needed to cover the full Project area.

A wetland delineation was conducted within the Project area from April 19 to 23, 2021 with follow-up visits on June 23 to 24, 2021 to determine the extent of wetlands and waterbodies within the area. Preliminary data (based on the National Wetland Inventory database and the National Hydrography Dataset) indicated that wetlands and waterbodies were likely to occur within the area; however, the Project-specific wetland delineation only identified ephemeral streams but 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 Project service 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 Project area and details the methods used to confirm that there are no wetlands within the Project area (based on the wetland delineation), describes the extent of steep slopes and areas of unstable soils (based on information developed for the Part 4, Section 4.1 analysis), documents that all Project components are outside of 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:

The O&M building will have a bathroom, kitchen, and utility sink that will drain into a new on-site septic system. The on-site septic system will be permitted, installed by a licensed professional, and maintained in compliance with applicable regulations including WAC 246-272A and Chelan-Douglas 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 outside of the constructed septic system. The on-site septic system is estimated to manage wastewater flows of approximately 500 gallons per day.

Pursuant to DCC 15.12.040, the Applicant will obtain approval of the proposed private sewage disposal system by the local health district, the Chelan-Douglas Health District, prior to construction. Approval from the health district will be in the form of an approved on-site septic permit application. The Applicant will provide information for this permit, including but not limited to a design package prepared by a state licensed designer or professional engineer (CDHD 2021). Because the septic system will manage wastewater flows of less than 3,500 gallons per day, it is not considered a large on-site sewage system and will not require a permit from the Department of Health (WAC 246-272B).

The on-site septic system is permittable through the County as a small septic system/on-site sewage system (i.e., for systems involving less than 3,500 gallons per day) and, therefore, does not require a more detailed Part 4 analysis. The required permit for the small septic/on-site sewage system will ensure that septic wastewater will not adversely impact area groundwater or surface water quality.

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 _____	☐ **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., solar array posts, inverter and transformer pads, Project service roads (20-feet-wide outside the solar array perimeter fence, 16-feet-wide within the solar array perimeter fence), O&M building area, collector substation area, switchyard area, optional BESS area, perimeter fence, and overhead 230-kV gen-tie line poles. Although 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 3 percent) of the total Project area (Part 2, Section B.2). The Facility's ESCP, Construction and Operations SWPPP, and Vegetation and Weed Management Plan will include measures to minimize the rate of stormwater that would be discharged due to the Project's impervious surfaces. Drainage basins have been incorporated into the Project design at each location estimated to have greater than 10 acres of runoff (Attachment A, Figure A-1).

Panel washing (which if required may use up to approximately 157,000 gallons of water per wash) would not be expected to generate runoff from the site or cause erosion. Most water used for washing would evaporate from the panels before reaching the ground; however, assuming the most conservative estimate that no evaporation occurs and all panel washing

water reached the ground, the depth of water on the ground would be approximately 0.004 inch across the solar array area. Although the water dripping off panels would be concentrated over smaller areas, the concept demonstrates the relatively small quantity of water involved in this process relative to the size of the site. This amount of water would easily infiltrate into the ground around the panels and is not expected to run off to surface water bodies. Furthermore, washing of solar panels, if required, would be done with water only and no surfactants or other chemicals would be added. Because the panel wash water would not contain added chemicals and water is expected to evaporate with only minimal amounts potential reaching the ground, no mitigation would be required and there would be no impact on the receiving environment if panel washing is conducted.

Runoff also could occur due to rainfall on the site. Because the overall contours of the Project site will not change significantly from current contours, stormwater runoff generally will follow current patterns during operations. Erosion and sediment control during operations and maintenance will consist of revegetating the area following construction to facilitate infiltration of stormwater that may run off of Project infrastructure. There will be ample space between the solar panel rows (generally at least twice the panel height in between rows, to minimize shading of panels when tilted) and infiltration could occur in this space as well as underneath the panels.

The Part 4 analysis provides detailed information regarding the type and extent of impervious surfaces that will be created, the infiltration rates of the soils within the affected areas, as well as 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:

Project water use will include water required during construction for dust control and domestic use, as well as minor water used for fire prevention. Operational water use will include domestic use as well as potential for washing of panels (see Part 2, Sections B.8.d and B.8.e).

Construction Water Use:

- Dust control and concrete mixing: Water trucks will be used to control dust generation in disturbed areas during road construction; foundation and post installation; panel installation; as well as final cleanup, reclamation, and restoration. Water conservation will be implemented to the extent practicable, by use of less water-intensive methods of dust suppression, including use of soil stabilizers, tightly phasing construction activities, and staging grading and other dust-creating activities. Water for dust control will be primarily used during the driest months, with lower or no water usage during wet months. Water will also be used to mix concrete for structural foundations and post concrete backfill where required by soil conditions; however, 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.
- Domestic use: A small amount of water will be used for drinking water and portable toilet facilities provided to construction workers; however, it is anticipated that the construction contractor will bring bottled potable water to the site for their workers during construction.

- Fire prevention: Fire prevention represents a minor water use; this may involve stationing a water truck at the job site to keep the ground and vegetation moist during extreme fire conditions. In the case of fire, the water trucks used for dust control would be available to assist with fire suppression. In addition, a 10,000-gallon water cistern located at the Project's O&M area may be used during construction to store water for fire suppression needs.

The amount of water that will be required during construction will depend on site and weather conditions, but is anticipated to include approximately 45,000 gallons/day (or about 21 million gallons for the entire construction duration).

Operational Water Use:

- Domestic use: Water use during operation is anticipated to be less than 5,000 gallons a day (with the domestic water needs for the O&M building expected to be less than 3,500 gallons per day). Wastewater discharge will come from the O&M building discharging to an on-site septic system.
- Panel washing: If needed, the solar panels may be periodically washed (typically once or twice per year) and require 157,000 gallons of water per wash, resulting in approximately 315,000 gallons per year used for panel washing assuming two washes are needed a year. Water cooling is not a part of operations for solar facilities. Solar panel wash water would not contain additives, would be allowed to infiltrate into the ground surface at and near the point of application, and would not be discharged into nearby water bodies if used. During operations, water use will be minimized by using solar panel wash methods that reduce the required amount of water, such as robotic panel washing equipment if panel washing is needed/conducted. There will be no industrial wastewater stream from the Project.
- Fire prevention: A 10,000-gallon water cistern located at the Project's O&M area may be used during operation to store water for fire suppression needs.

Water that is trucked in and provided from off-site sources (i.e., municipal water source or a vendor with a valid water right) will be stored in tanks. Water for domestic use (i.e., potable water) will be stored in a tank exclusively for domestic use, separated from water used for other Project purposes. The Applicant will verify the source and availability of water from a permitted source prior to Project construction.

Water used for Project construction will be trucked in from off-site sources with existing water rights (i.e., a municipal water source or vendor with a valid water right) or through a new, appropriately permitted individual on-site groundwater well. If an on-site well is needed during construction, the Applicant will determine if its use would qualify as a groundwater permit-exempt well under state code, or the Applicant will obtain the applicable individual well approval prior to use for construction. If needed, a combination of the options identified above may be used to obtain water for Project construction. The Applicant or the Applicant's construction contractor will verify the source and availability of water from a permitted source prior to construction and detailed analysis of water use under Part 4 is not warranted.

If a new well is proposed or needed, Washington law requires users of public waters to obtain a water right from the state prior to use of the water, excluding groundwater withdrawals of less than 5,000 gallons per day for specified uses, which are termed "exempt groundwater withdrawals." If a well were to be proposed for the domestic use at the O&M building, it would likely be a groundwater permit-exempt water use under state code (RCW 90.44.050), with a maximum withdrawal of up to 5,000 gallons per day (or 5.6 acre-feet/year), which is less than

the amount required for Project operations and 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 3.5 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 is not located in a FEMA-designated flood area and Project components will not be located in any drainage areas; therefore, the Project does not pose a flood risk.

The closest named stream is Beaver Creek, approximately 1.5 linear miles from the Project at the nearest point. Beaver Creek is considered perennial by DNR and is listed on StreamNet (2021). Stream ST-329 (which is located within the Project area) drains towards Beaver Creek. Stream ST-329 is ephemeral, is actively farmed in several areas, and does not have bed or banks; it is isolated from Beaver Creek due to a perched culvert. The distance from the Project to Beaver Creek in stream/river miles on ST-329 is approximately 2.75 miles. Beaver Creek is directly east of the Project and runs north to south.

Details regarding potential panel washing and its effects (or lack of effect) to the Project area are addressed above in Part 3, Sections 3.5 and 3.6.

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 best management practices.

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:

The Applicant conducted habitat and rare plants surveys within the Project area from May 2 through 7, 2021. These surveys mapped and characterized the habitat types observed within the Project area. The rare plant surveys focused on federally listed and candidate vascular plant species, as well as state endangered, threatened, and sensitive vascular plant species, as listed by the WNHP (hereafter referred to as rare plants) that may occur in the Project area. Following completion of these surveys, a 2021 Habitat and Wildlife Survey Report (Attachment G) was prepared that documents the extent of habitat types in the Project area and a 2021 Rare Plant Survey Report (Attachment F) was prepared that documents the methods and results of the rare plant surveys. The Applicant mapped seven habitat types (i.e., agricultural land, developed, dwarf shrub-steppe, non-native grassland and forbland, planted grassland, shrub-steppe, talus).

The agriculture and developed habitats are the most prevalent types found in the Project area (approximately 88 percent of total) and consist primarily of dryland wheat fields, typically grown on a 2-year wheat-fallow cycle, associated access roads, structures associated with agricultural production, and gravel/borrow pits. Shrub-steppe and dwarf shrub-steppe habitats are less prevalent within the Project area (approximately 11 percent of the total). Shrub-steppe habitat occurs in the northeast and is interspersed with dwarf shrub-steppe habitat on the western perimeter of the Solar Array Micrositing Area around the dominant presence of active agriculture. Shrub-steppe habitat is also interspersed in the Gen-tie Micrositing Corridor between agricultural areas. Non-native grassland, forbland, and planted grassland habitat types are also present, but are less common in the Project area compared to the other habitat types. Talus slopes are found along the western edge of the Solar Array Micrositing Area and eastern portion of the Gen-tie Micrositing Corridor (less than 1 percent of the total). Three of

these habitat types (i.e., dwarf shrub-steppe, shrub-steppe, and talus) are considered "priority habitats" by the WDFW. The Applicant will avoid impacts to talus habitat and, to the extent feasible, avoid or minimize impacts to dwarf shrub-steppe and shrub-steppe habitat. No rare vascular plants were identified within the Project area during these surveys.

The Applicant has been in contact with WDFW regarding this Project, including a conference call on March 3, 2021 during which the Applicant introduced the Project to WDFW and described planned wildlife, habitat, and rare plant surveys, as well as provided a description of previous surveys and findings (e.g., special status species[2], raptor species, and priority habitats with potential to occur within the Project area).

The Part 4 analysis is based on the information obtained during the habitat and rare plant 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 – 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

[2] "Special status species" in the context of plants refers to federally listed endangered, threatened, or candidate vascular plant species as well as species listed in the state as endangered, threatened, or sensitive by the Washington Natural Heritage Program (WNHP).

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:

Based on a query of the WDFW PHS database, the following "priority habitats and/or species" (as defined by the WDFW) have been documented within the Project area: a Washington ground squirrel (*Urocitellus washingtoni*) colony, mule deer (*Odocoileus hemionus*) winter range, and talus slope. Additionally, a golden eagle (*Aquila chrysaetos*) nest and chukar (*Alectoris chukar*) habitats are located directly adjacent to the Project area.

The Applicant conduct raptor nest surveys for the Project in 2019 and 2020, with a focus on golden eagle and ferruginous hawk nests and conducted additional eagle nest monitoring in 2021. Discussion of the raptor nests observed during raptor nest surveys, figures depicting these nest locations, and nest status definitions are provided in Attachment L. The Applicant also conducted wildlife and habitat surveys within the Project area in May 2021, and prepared a Wildlife and Habitat Survey Report that documents the extent of special status wildlife and habitats identified during these surveys (see Attachment G). The Applicant has been in contact with WDFW regarding this Project, including a conference call on March 3, 2021 during which the Applicant introduced the Project to WDFW and described planned wildlife, habitat, and rare plant surveys, as well as provided a description of previous surveys and findings (e.g., special status species[3] and priority habitats with potential to occur within the Project area). The Applicant met with representatives from USFWS on September 2, 2021, to discuss the Project as well as eagle use of the Project vicinity, including for nesting and

[3] "Special status species" in the context of wildlife refers to federal and state endangered, threatened, proposed, and candidate species; federal species of concern; USFWS birds of conservation concern; or state sensitive or priority species

hunting. Details on habitat and nest survey data was shared and options relating to potential construction impacts and mitigation were discussed.

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 deemed necessary 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:

As a solar PV generation facility with an optional BESS, the Project will provide a new source of clean, renewable electricity. The Project is designed to take advantage of the region's renewable solar energy resources, utilizing a nearby POI to either Puget Sound Energy or BPA transmission lines. 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, such as metals for solar posts, rock for access roads, and silicon for solar panels (see Part 2).

Electricity obtained from the Douglas County PUD will be required at the Project to power construction and operational equipment as well as operational facilities such as the O&M building. Non-renewable fossil fuels will be required to fuel construction vehicles, equipment, and operational vehicles. Quantities consumed will be typical or less than commercial construction facilities of a similar size. Local service providers will be able to accommodate the materials, electricity, and fuel needs of the Project.

No detailed Part 4 analysis is warranted as 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 less than or equal 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.

During Project operations, low volumes of solid waste will be generated at the O&M building, including paper, cardboard, plastic, and food waste. Wastewater will be managed using an on-site septic system or a portable restroom (see Part 3, Section 3.4). Maintenance and replacement of Project components such as solar modules and batteries will also produce low volumes of solid waste during operations.

The optional BESS will generate incidental solid waste from repair or replacement of batteries, which typically require infrequent replacement by a licensed vendor. Batteries have a useful lifetime ranging from 5 to 20 years, depending on the technology selected. 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 will 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.

Because the Project will not generate large quantities of waste during either construction or operations, no mitigation or Part 4 analysis is warranted.

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	N/A	Yes	Yes	Yes

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 2021) and historical aerial photographs found no evidence that the Project area contains potentially hazardous materials, including toxic chemicals, volatile gases, or other poisonous or hazardous substances. However, no direct studies have been conducted to date regarding existing environmental contamination within the Project area.

The Project area contains a mix of dryland agricultural use, rangeland for low-intensity grazing, and undeveloped areas (see Part 4, Section 4.14). Based on available historic aerial imagery, the land use in the Project area has been consistent with current conditions for at least the past 30 years (Google Earth Pro 2021). As a result, historic use of organic and inorganic fertilizers, pesticides, or herbicides has likely occurred in these agricultural production areas.

No irrigation systems are present in the Project area and there is no evidence that fertilizers were applied through irrigation systems or stored in the Project area. If used, 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 dryland wheat agricultural operations. 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. 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 Project 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 may include batteries if a BESS is utilized. If improperly handled or stored, the batteries incorporated into the BESS could be considered hazardous materials. Additionally, batteries may be considered dangerous wastes when they are spent; as most spent batteries meet the definition of dangerous waste, but when they are properly recycled, they are regulated by Washington dangerous waste regulations and many can be managed as universal wastes (Ecology 2021). Furthermore, if improperly stored or disposed of, batteries could leak hazardous substances such as mercury, lead, cadmium, and sulfuric acid (Ecology 2021). However, if utilized for the Project, the BESS would be self-contained and designed to prevent fires and spills. Furthermore, the Project will properly handle, store, and dispose of or recycle batteries at an appropriate facility in order to minimize risks to the public.

Battery systems could overheat and present a low fire risk. In accordance with industry standards, the optional BESS will contain a fire suppression system that meets with International Fire Code and National Fire Protection Association (NFPA) Standards, specifically NFPA 855, "Standard for the Installation of Stationary Energy Storage Systems." Details regarding the optional BESS are provided in Part 2 of this ASC.

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 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	N/A

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 Project area is currently in a mix of dryland agricultural, rangeland, and undeveloped land, with associated local roadway and electrical infrastructure. No residences are located within the Project area. The Project is located within Douglas County's A-D and RR-20 zoning districts. Neither of these zoning districts are designated by Douglas County as agricultural lands of long-term commercial significance (which is limited to the Commercial Agriculture zoning districts), and therefore are not considered designated natural resource lands under RCW 36.70A.030, which is specific to agricultural, forest, and mineral lands of long-term commercial significance. There are no shorelines designated under the Douglas County Regional Shoreline Master Program (Douglas County 2021) within the Project area. Implementation of the Project will result in a change in the type and intensity of the existing land use by providing a new source of renewable energy to the region. However, this change in use will comply with local land use planning and development regulations.

The Part 4 analysis addresses the Project's potential effects to existing and nearby land uses, as well as the Project's compliance with relevant local land use regulations. Outside of complying with landowner lease agreement 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 will not displace existing or future housing, including housing for low- and moderate-income households. According to the designations in the Douglas County Comprehensive Plan, the Project is not within any identified urban growth area and is not in a land use designation intended for housing development other than minimal, rural residential lots (Douglas County 2019). Because the Project is within a reasonable commute distance for workers from the cities of Wenatchee and East Wenatchee (approximately 15 to 30 minutes), as well as from other communities within Douglas and Chelan counties (up to approximately 60 minutes), there will be sufficient temporary housing (e.g., hotels, motels, rental) available if needed to support the non-local Project construction workforce. The Project's Socioeconomic Review (Attachment N) provides additional information regarding the estimated number of construction workers in relation to current evidence of temporary housing opportunities, and finds that existing temporary housing resources in the study area (i.e., Douglas and Chelan counties) that are normally vacant and available for rent exceed the estimated Project construction-related demand.

During operations, the Project will employ two to four staff. There is sufficient housing capacity in the vicinity of the Project to accommodate these permanent workers if any portion of these two to four workers are non-local workers who relocate to the area (see Attachment N). Therefore, operations of the Project will not noticeably affect the availability of housing in the area.

Because the Project is not likely to displace or otherwise affect existing or future housing, particularly housing for low- and moderate-income households, a Part 4 detailed analysis of housing impacts is not warranted. Furthermore, no mitigation is anticipated to be required for

this resource. However, 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, and is provided in Attachment N.

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 (including other solar facilities 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 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 and agricultural fields to a commercial solar facility.

The Applicant has completed a Visual and Glare Impact Assessment, and has incorporated this analysis into the Part 4 assessment. For the Part 4 analysis, maximum Project noise levels were modeled to evaluate compliance with state noise regulations protecting sensitive noise receptors. The Applicant has also identified potential effects associated with this resource and proposed mitigation measures where applicable.

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 Project is on private and state (i.e., DNR) land and does not include designated recreation opportunities (e.g., parks, campgrounds, trails, developed water access, wildlife viewing areas, public or private hunting areas, etc.). There are no designated recreation opportunities directly adjacent to the Project area, and the Project's perimeter fencing would not block access to any public recreational area. The closest developed recreation opportunities to the Project are the Wenatchee Valley Super Oval (i.e., a private racetrack located approximately 0.7 mile west of the Option 1 POI), and two small neighborhood parks both located approximately 1 mile west of the Option 1 POI (i.e., Merrill Park and Pangborn-Herndon Memorial Park). Popular local recreation opportunities along the Columbia River (e.g., the Apple Capital Loop Trail) are over 2 miles from the Gen-tie Micrositing Corridor and over 4 miles from the Solar Array Micrositing Area; furthermore, these recreational opportunities are located at a lower elevation (approximately 1,000 to 3,000 feet) than the Project area, and may be largely or entirely screened from views of the Project.

The two DNR parcels included in the Project area are state trust lands that are currently leased for agriculture, and preclude informal recreation access. However, there may be other limited informal recreation opportunities in the Project vicinity (e.g., on state or federal lands that are open to the public); though these areas are not specifically designated for recreation. These include another DNR state trust land parcel approximately 0.5 mile east of the Project and a U.S. Bureau of Land Management parcel adjacent to the Project that is part of the Rock Island Canyon ACEC. However, neither of these parcels is accessible by public road; the lower elevation portion of the ACEC is crossed by existing transmission lines with private unpaved roads for maintenance access. Furthermore, the ACEC parcel primarily consists of

inaccessible, steep talus slopes, which are identified generally as protected for biodiversity conservation (USGS 2020). If allowed by private landowners, there may also be informal recreation opportunities in the vicinity of the Project area, on other private lands such as undesignated hiking, wildlife viewing, or other day use. The types of limited informal recreation opportunities described above are common throughout Douglas County.

Given the absence of designated or informal recreation opportunities within the Project area, and limited recreation opportunities in the immediate vicinity of the Project, construction and operations of the Project are not anticipated to displace or otherwise 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:

Based on initial desktop analysis and field reconnaissance, several areas have a high potential for archaeological and built environment materials to be present. Preliminary archaeological field investigations were conducted for the Project in March 2019. An updated cultural resource survey, which includes archaeological and historic sites, was conducted for the Project area from April 2 through April 16, 2021. The methods and results of the desktop review and field surveys are presented in the Cultural Resources Survey Report provided as an attachment to the ASC (confidential Attachment Q), as well as in the Part 4 analysis (see below). 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 Unanticipated 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 Attachment Q).

The Part 4 analysis discloses the potential impacts of the Project 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:

As noted above, a cultural resources survey was conducted for the Project area from April 2 through April 16, 2021. The methods and results of the desktop review and field surveys are presented in a Cultural Resources Survey Report provided as an attachment to the ASC (confidential Attachment Q), as well as in the Part 4 analysis (see below).

The Part 4 analysis discloses the potential impacts of the Project to cultural resources as well as the cultural mitigation measures. In addition, the Applicant is conducting ongoing outreach to the CCT, Spokane Tribe, and Yakama Nation, which were all identified by the Washington Governor's Office of Indian Affairs as tribes with traditional interests in the Project area. Concerns and information provided by the tribes to date have been incorporated into the Cultural Resources Survey Report and the Part 4 analysis.

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:

Project construction will induce increased truck traffic to the site as a result of worker transportation, survey crews, Project management staff, materials delivery, and equipment delivery. A peak construction workforce of 400 people is anticipated for the Project. Most Project-related traffic will follow Badger Mountain Road heading east from East Wenatchee, Washington, turning south along Road U 75 SW to access the Project area. During operations, traffic will be limited to worker commutes for two to four workers along with occasional deliveries or supplemental maintenance activities.

The Part 4 assessment provides an analyzes of the existing LOS on transportation routes that will be used during the Project's construction, particularly Badger Mountain Road (Douglas County 2019). The Part 4 analysis also provides an evaluation of potential impacts from Project construction on the existing LOS, as well as safety, for transportation routes to demonstrate that temporary traffic impacts during construction can be managed. Mitigation for temporary traffic impacts during construction is discussed in Part 4, Section 4.20.

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	Yes

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 unlikely to directly or indirectly increase use of public services and facilities during construction or operation, primarily because the Project is a largely self-sufficient solar power generating facility and is located outside the Douglas County urban growth boundary, (i.e., the Project is located in an area where these public services and facilities are unavailable). Potential impacts to public services and facilities will be minor and will primarily occur during the construction period (i.e., which is anticipated to take approximately 18 months) during which up to 400 workers may be employed (with the average number of workers employed during construction ranging from 300 to 350). During operations, the Project will be largely self-sufficient and staffed by two to four personnel. Additionally, the Project will generate significant tax revenue for Douglas County. Considering implementation of the mitigation measures outlined below, the Project will not significantly adversely affect public services and facilities during construction or operation.

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 Douglas County Fire Chief and the Douglas County Fire District to collaboratively develop safety measures that will be incorporated into the Project's design and construction (and for inclusion in the Emergency Management Plan) as well as to convey pertinent information about the Project to the fire district. The Douglas County Fire Department has existing equipment, personnel, and facilities to provide services (Douglas County Fire District 2021). The Applicant will also coordinate with the fire district regarding necessary equipment or training, if any are identified, that may be required for the district to provide fire protection services to the Project. To further mitigate the need for fire protection services, the Project will include its own fire suppression and cooling

systems. Furthermore, the Project's design will incorporate fire breaks, where applicable. See additional fire mitigation measures in Part 4, Section 4.13.

The Douglas County Sheriff's Office has adequate equipment, personnel, and facilities to provide services to the community, as outlined in the Douglas County Capital Facilities Plan (Douglas County 2018). A temporary increase of 400 peak workers during the Project's construction is less than one percent of the Douglas County population and will not effectively reduce the level of service that the Douglas County Sheriff's Office and local law enforcement can provide the community. To mitigate the need for additional law enforcement services, site access will be restricted and Project components will be secured by a perimeter fence. The Project will not require special services from the Douglas County Sherriff's Office. As a result, no adverse impacts to law enforcement services are anticipated as a result of the Project.

No significant adverse impacts to housing, schools, parks, or recreational facilities are anticipated as a result of the Project. Construction of the Project will take about 18 months, during which period a peak of up to 400 workers will be employed. Because the construction period is temporary, little to no adverse impact on housing or schools is anticipated. Temporary school and housing needs would be supported within the purview of Douglas County's current growth trajectory, which plans for significant population increases to Douglas County (Douglas County 2019). Temporary, occasional use of parks and recreational facilities associated with the temporary construction population influx would not significantly adversely affect these facilities. During operations, the Project will employ two to four personnel, which will not create an adverse impact for schools, parks, or recreational facilities.

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 (as discussed in Part 3, Section 3.22). During construction, water will be brought to the Project area by water truck from a source with verified water rights. The Project may use an on-site water storage system or a new well for water during operation, and would require less than 3,500 gallons per day of domestic water use at the O&M building (as discussed in Part 3, Sections 3.4, 3.6, and 3.22); therefore, the Project will not have an adverse effect on public water and sewer services. The Douglas County Wastewater Treatment Plant has a 2.6 million gallons per day capacity, which is adequate to receive septic system waste from the Project, if necessary. Minimal solid waste produced during construction and operation of the Project will be handled by a licensed contractor in accordance with applicable regulations (see Part 3, Section 3.11). At the end of the Project's useful operational life, spent solar panels will be recycled by the manufacturer after decommissioning. The Greater Wenatchee landfill has sufficient capacity to accommodate waste from the Project (Waste Management 2021); therefore, the Project will not adversely impact public solid waste disposal facilities. The Project design will allow stormwater to be captured and returned to groundwater on site; therefore, no municipal stormwater facilities will be utilized or impacted.

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, storm water, 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 outside of City of Wenatchee and the Douglas County urban growth boundaries, where utility services are largely unavailable. Furthermore, no sewer or stormwater facilities are available in the Project area (Douglas County 2018).

During construction, water will be brought to the Project area by water truck from a source with verified water rights. Best management practices will be employed to manage stormwater within the Project area (see further information in Part 4, Section 4.5). Portable toilets will be used for sanitary wastes. A licensed hauler will be used to transport and dispose of construction waste and in accordance with applicable laws. Recycling will be implemented to the extent practicable. Electricity and necessary communications connection for Project SCADA equipment will be provided by Douglas County PUD before the start of operations. An existing fiber optic cable is located along Badger Mountain Road and a single-phase overhead transmission line is located on Road 10; this existing infrastructure will provide access to communications and electricity lines, respectively.

During operations, the Project will utilize a on-site water storage system or a new well, and will require less than 3,500 gallons per day of domestic water use at the O&M building (as discussed in Part 3, Sections 3.4, 3.6, and 3.22). Operational staffing will include two to four personnel. Wastewater from the O&M building or portable toilets will be collected in an on-site septic system that could be disposed of at the Douglas County Wastewater Treatment Plant,

which at a 2.6 million gallon per day capacity has adequate capacity to receive septic system waste from the Project (Douglas County 2018). Domestic waste produced during construction and operation of the Project will be handled by a licensed waste contractor. After the Project is decommissioned, spent solar 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 4, Section 4.5. No municipal stormwater facilities will be utilized. The Project will generate electricity during operations, which will be supplemented with a small amount of power as needed from the Douglas County PUD. Power from Douglas County PUD will primarily be used for the O&M building and SCADA system.

For the above reasons, the Project will not significantly increase demand for public and private utilities; therefore, 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

3.23 References

CDHD (Chelan-Douglas Health District). 2021. Onsite Septic and Water Master Permit Application. Available online at: https://cdhd.wa.gov/wp-content/uploads/2021-OSS-Master-App-1.pdf. Accessed April 1, 2021.

Douglas County. 2018. Douglas County Public Facilities Plan. Last Amended December 12, 2017. Available at: https://www.douglascountywa.net/DocumentCenter/View/535/Capital-Facilities-Plan-PDF. Accessed June, 2021.

Douglas County. 2019. Douglas County Countywide Comprehensive Plan. Last Amended February 5, 2019. Available at: https://www.douglascountywa.net/DocumentCenter/View/528/Countywide-Plan-PDF Accessed June, 2021.

Douglas County. 2021. Douglas County Regional Shoreline Master Program. Originally in effect August 27, 2009. Last amended by Ordinance TLS 20-07-19C. Effective date January, 26, 2021. Available at: https://www.douglascountysmp.com/documents

Douglas County Fire District. 2021. Webpage. Available at: https://www.dcfd.org/about/. Accessed June, 2021.

Ecology (Washington Department of Ecology). 2021. Batteries Dangerous Waste Guidance. Available at: https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Dangerous-waste-guidance/Common-dangerous-waste/Batteries

USGS (U.S. Geological Survey). 2020. Gap Analysis Project, Protected Areas of the United States (PAD-US) 2.1: U.S. Geological Survey data release, available at: https://doi.org/10.5066/P92QM3NT

Waste Management. 2021. Greater Wenatchee Landfill and Recycling Center. Available at: https://www.wmnorthwest.com/landfill/wenatchee.htm

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PART 4 – DETAILED ANALYSIS

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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
Stage1 Report of Expected Geotechnical Conditions (Attachment H-1)	Complete (April 24, 2020)	Prepared by Terracon; geotechnical engineering consultant for the Applicant	Y
Geotechnical Engineering Report (Attachment H-2)	Complete (March 12, 2021)	Prepared by Westwood Professional Services; geotechnical engineering consultant for the Applicant[4]	Y

☒ **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 Conditions: The Project area is located within the Northern Cascade Mountains section within the Cascade-Sierra Mountains Province in the Pacific Mountain System Physiographic Region. The Cascade-Sierra Mountains province stretches from British Columbia to southern California along the west coast of North America. The province is one of the youngest and most tectonically active in North America and is characterized by intrusive and extrusive volcanic rocks. The area is generally a sloping plain broken by some steep basalt ridges. The Solar Array Micrositing Area is located on a plateau with the western edge of the area confined by a steep ridge. The Gen-tie Micrositing Corridor traverses the ridge into a lower valley with drainages westward to a terminus in a relatively flat area. The Solar Array Micrositing Area generally consists of agricultural land with rolling topography and is bounded on the west by a steep cliff. The Gen-tie Micrositing Corridor traverses the cliff westward into the lower valley. Geology: The Project area is mapped within three primary geologic formations: Quaternary non-marine deposits, Miocene volcanic rocks, and Cretaceous nonmarine rocks. The Quaternary non-marine deposits are Pleistocene in age and described as eolian

[4] Meets the requirements of WAC 463-60-302 and YCC 16C.03.18(4)

	(i.e., wind-blown) deposits of silt. The primary lithologic constituent is mapped as silt with minor inclusions of gravel and sand. The Miocene volcanic rocks are middle Miocene in age and described as dark-gray to black, dense basalt flows. The primary lithologic constituent is mapped as basalt with minor units of siltstone, sandstone and other igneous rocks. Bedrock encountered in the Solar Array Micrositing Area is expected to be Miocene-age basalt. The Gen-tie Micrositing Corridor traverses the basalt bedrock and the Cretaceous nonmarine rocks. Publicly available water well construction data reported overburden consisting of clay, sand, gravel, and boulders (Attachment H-2). Soils: Attachment A includes figures of the soils and topography in the Project area (Figures A-3 and A-4, respectively) while Attachment E includes a table listing the soils and related soils information within the Project area. Silt loam soils are the primary underlying soil type within the Project area accounting for over 99 percent of the soil types. The majority of the Solar Array Micrositing Area is mapped as ML, CL, and CL-ML with isolated regions of clayey gravel (GC) and silty gravel (GM) within the proposed solar array, collector substation, and O&M footprint. Primary soils mapped within the Solar Array Micrositing Area include Broadax-Titchenal complex (27 percent); Broadax-Morrow-Spofford complex (15 percent); Bagdad silt loam cemented (14 percent); Morrow Silt Loam (11 percent); Morrow-Argabak complex (4 percent); Argabak-Morrow complex (7 percent); Van Nostern silt loam (4 percent); and Broadax silt loam (9 percent). These units are also primarily mapped as CL and ML derived from loess over basalt and hardpan. Primary soils mapped within the Gen-tie Micrositing Corridor include Ritzville silt loam, cemented substratum (41 percent); Renslow silt loam, cemented substratum (27 percent); Cheviot-Ralls-Rubble land complex (11 percent); and Alstown-Cheviot complex (7 percent). Shallow Bedrock: Shallow bedrock (less than 60 inches in depth) is reported for approximately 16 percent of the soil types within the Project area. Steep Slopes: Soils with slopes greater than 30 percent account for less than 2 percent of the Solar Array Micrositing Area; and soils with slopes greater than 30 percent account for approximately 22 percent of the Gen-tie Micrositing Corridor. Erodibility: Soils mapped within the Project area are rated as low to moderate wind erodibility. Ninety-one percent of soils within the Solar Array Micrositing Area are mapped with a moderate to high potential for water erosion, while 80 percent of soils within the Gen-tie Micrositing Corridor are mapped with a moderate to high potential for water erosion. Rill erosion (as specified in Douglas County's Critical Areas Ordinance Chapter 19.18D) is a type of erosion that occurs when water from rainfall does not soak into the

	soil. This causes rills or small channels to form within the surface soils. Severe rill erosion is not indicated for the Project area based on the existing soil, hydrology, and drainage characteristics. Drainage/Topography: Drainage and topography within the Project area are described in Part 4, Section 4.5. Attachment A, Figure A-4 provides a figure showing the topography in the area of the Project area. Topography in the Solar Array Micrositing Area generally ranges from 3,000 feet above mean sea level (amsl) to 3,320 feet amsl. The cliff/talus slope area along the western boundary of the Solar Array Micrositing Area ranges from approximately 2,100 feet amsl to 3,400 feet amsl. The Gen-tie Micrositing Corridor traverses this cliff/talus slope area. However, most of the Gen-tie Micrositing Corridor is within a drainage-dissected valley area that slopes west/southwest with elevations ranging from approximately 1,600 feet amsl to 2,500 feet amsl.
Geologic hazards	Geological hazards are defined as Critical Areas in Chapter 19.18D of Douglas County's Critical Areas Ordinance. The following are defined as geological hazards under DCC 19.18D.020: 1) "areas identified by the United States Department of Agriculture Natural Resources Conservation Service as having a "severe" rill and inter-rill erosion hazard"; 2) "areas potentially subject to landslides based on a combination of geologic, topographic, and hydrologic factors"; 3) "areas subject to severe risk of damage as a result of earthquake induced ground shaking, slope failure, settlement, soil liquefaction, or surface faulting"; and 4) "volcanic hazard and mine areas." The Geotechnical Engineering Report describes the geology, soils, topography, and existing erosion patterns of the Project area, per the requirements of WAC 463-60-302(1) and (2) (Attachment H-2). The Geotechnical Engineering 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), volcanic activity, slope instability and landslides, flooding, ground subsidence, collapsible soils, corrosive soils, and erosion, per the requirements of WAC 463-60-265 and WAC 463-62-020. Seismic Hazards: According to the U.S. Geological Survey (USGS) earthquake catalog, the nearest and largest event was a 4.3 magnitude earthquake located approximately 5 miles north of the Project, recorded in 1984. The most recent event was a 3.5 magnitude earthquake located approximately 50 miles northeast of the Project, recorded in 2019. The 4.3 magnitude event would have been classified at the Project as a 3.0 to 4.0 on the Modified Mercalli Intensity scale. This classification corresponds to weak to light shaking that would generally be felt indoors with negligible potential for damage to structures in the area. The nearest fault system to the Project is the "Frenchman Hills structure fault (Class A) No. 561," which is located approximately 18 miles southwest of the Project. The Project also sits north and east of several mapped

	fault zones, including the Frenchman Hills structures (30 miles south of the project site), the Kittias Valley faults (35 miles south), and the Saddle Mountains structures (40 miles south), among other smaller mapped fault zones. The potential for surface fault rupture within the Project area is considered low due to the relative distance of the active fault zones and lack of large earthquake events mapped near the Project. Although the seismicity of the region is relatively high, groundwater is expected to be deep and shallow rock was encountered consistently throughout the site. Therefore, the liquefaction potential on site is considered low. Slope Stability and Landslides: The Solar Array Micrositing Area is classified as having a low to medium landslide potential. The cliff area directly west and adjacent to the Solar Array Micrositing Area is prone to slope failure based on the existence of relic mass wasting deposits. This area has a medium to high landslide potential. Risk of a global slope failure within the Project area where Project components will be sited is low but small sloughing and erosion events may occur near the top of the slope along the western boundary of the Solar Array Micrositing Area. The proposed solar array, collector substation, O&M building, and optional BESS are located on relatively flat land and most borings encountered shallow bedrock, which help mitigate the risk of potential landslides. The proposed Project is adequately setback from the top of the slope along the western boundary of the Solar Array Micrositing Area to limit potential impacts from landslides. The Gen-tie Micrositing Corridor traverses the cliff/talus slope, and a few other steep slopes in the central area of the corridor. However, most of the Gen-tie Micrositing Corridor (78 percent) is located in areas with less than 30 percent slope. Volcanic Activity: The nearest mapped volcanic feature to the Project area is the Edgar Rock volcano vent which lies approximately 55 miles southwest of the Project. The DNR does not map the region surrounding the Project area within a volcanic hazard zone. The nearest mapped volcanic hazard zone in Washington is Mount Rainier approximately 85 miles west of the Project. While the Project does not fall within a mapped hazard zone, an eruption could subject the Project to secondary effects, such as the deposition of ash and seismic shaking. Part 3, Section 3.2.2 and Section 4.3.1 of Attachment H-2 provide additional discussion on the impacts of seismicity on the Project. Flooding: Floodplains and flooding for the Project area are addressed in Part 4, Section 4.5. Ground Subsidence and Mines: Field observations, local mine mapping (USGS 2021), and aerial imagery suggest that there is no active mining in the immediate vicinity of the Solar Array Micrositing Area. A few clay pit mines are located in the vicinity of the eastern extent of the Gen-tie Micrositing Corridor. These surface mines are

	not considered a subsidence hazard. Therefore, the potential for mine subsidence is generally considered low. Karst topography is not present in the vicinity of the Project. Collapsible Soils: Soils mapped within the Project area are dominated by silt and loess and are not saturated. In addition, the silty topsoil within agricultural fields in the Project area is typically tilled and loose. Therefore, collapse potential is generally considered moderate to high. Corrosive Soils: Electrical resistivity measurements were used to design the electrical grounding systems and to assess corrosion potential (Attachment H-2). These data indicate subsurface conditions are moderately corrosive in the Project area. Erosion: Soil erosion potential was discussed in the soils discussion above.
Unique physical features	A cliff/talus slope is present along the western boundary of the Solar Array Micrositing Area, while the Gen-tie Micrositing Corridor traverses this area. Slope failure and landslides are possible in this area.

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	The potential for surface fault rupture within the Project area is considered low due to the relative distance of the active fault zones and lack of large earthquake events mapped near the Project area. Soil liquefaction and/or mine subsidence are not concerns for the Project based on the lack of saturated soils and absence of underground mines in the vicinity of the Project. The Project will be designed to meet seismic design and soil characteristic requirements (including collapsible and corrosive soils) documented in the Geotechnical Engineering Report (Attachment H-2). Project components will also be designed with a sufficient setback to avoid cliffs and talus slope habitat located along the western boundary of the Solar Array Micrositing Area (avoidance by the required minimum 50 feet, per DCC 19.18C.050).

		Pile driving or blasting may be necessary to construct Project components in areas of shallow bedrock. Based on the findings of the Geotechnical Engineering Report (Attachment H-2), it appears feasible to successfully drive piles across large portions of the Project area. However, shallow pile refusals in areas of very hard bedrock and/or longer drive times due to hard bedrock are likely to occur throughout the Project area during construction. As described in the Geotechnical Engineering Report, shallow bedrock was more prevalent along the western boundary of the Solar Array Micrositing Area; however, there was notable scatter in the locations of successfully driven piles and shallow bedrock, making zoning of the site challenging without additional field investigations. Access roads will be required during construction to accommodate construction equipment and deliveries. The access roads will also facilitate long-term operation and maintenance of the Project. These roads will be subjected to heavy loads, but only for limited duration and frequency. The suitability of the shallow site soil for use as access roads will depend primarily on the strength and moisture condition of the soil at the time the traffic occurs. The shallow soil on site below the root zone is generally considered adequate subgrade for gravel access roads, although special consideration should be given to the softer/looser surficial soil present in the agricultural fields and moisture sensitivity of silty soil. Access roads will be constructed and maintained to have an aggregate surface to help ensure accessibility during wet conditions. As described above and in the mitigation section below, the Project will either avoid geological hazards (e.g., seismic hazards, unstable slope, landslides, collapsible soils, volcanic areas, mines, high risk flood areas, etc.), or will mitigate the effects of these hazards on the Project (e.g., corrosive soils and erosion). As a result, the Project is in compliance with the County's Critical Area Ordinance in regards to geological hazards.
	Water flow	The majority of the Project area will not 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 scour will be minimized and avoided within existing drainages through Project design and BMPs. Silty and clayey soils that are present in the Project area could contribute to localized ponding during heavy rain events. As discussed in Part 4, Section 4.5, the stormwater design will provide adequate drainage to minimize Project effects.
	Topography	The Project will require minimal grading on-site (i.e., approximately 1,451,955 cubic yards of cut and 1,851,945 cubic yards of fill within the Project area; see Part 2, Section 2.B.1). 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. The Applicant will obtain Building Permits from the Douglas County Building Division if needed. Per RCW 17.10.140 and DCC 18.16.320, the Applicant will prepare and submit a Vegetation and Weed Management Plan to EFSEC for the control of noxious and problem weeds prior to construction.

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 has been designed to avoid the steepest slopes, watercourse drainages, and geo-hazardous areas to minimize risk due to erosion and flash flooding. As previously discussed, the Project will be designed with a 50-foot buffer/setback as required by the DCC to avoid cliff/talus slopes located along the western boundary of the Solar Array Micrositing Area and in the vicinity of the eastern end of the Gen-tie Micrositing Corridor. The specific location of the Project's 230-kV gen-tie line support structures is pending final design. However, the support structures will be sited to span or otherwise avoid placement on cliff/talus slopes to the extent feasible. No development is planned within or in close proximity to incised drainages that might pose a risk from potential flooding events. In addition, 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.

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 follow all geotechnical recommendations provided in the Geotechnical Engineering Report (Attachment H-2). The subgrade preparation and compaction recommendations in Sections 4.2.4 and 4.2.5 of the Geotechnical Engineering Report (Attachment H-2) will be followed to mitigate the risks associated with corrosive and collapsible soils. Mitigation measures include subgrade over-excavation and fill, compaction, moisture conditioning, and minimizing disturbed areas. The native clay and silt within the Project area may be suitable for backfilling around and above foundations, provided that all compaction requirements are met. It is noted that this fine-grained material is expected to be sensitive to moisture conditioning and may be challenging to work with, especially when wet.	EFSEC
	BMPs - Erosion	As further described in Part 4, Section 4.5, the Applicant will implement an ESCP and a Construction Phase 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 Ecology's Stormwater Management	Ecology

		Manual for Eastern Washington (Ecology 2019). Per RCW 17.10.140 and DCC 18.16.320, the Applicant will prepare and submit a Vegetation and Weed Management Plan to 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 Douglas 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 WAC 463-62-020.	Douglas 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 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

USGS (U.S. Geological Survey). 2021. Interactive map of mineral resources and mines across the United States. Available online: https://mrdata.usgs.gov/mrds/map-graded.html. Accessed August 4, 2021.

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
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 U.S. Environmental Protection Agency (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. New sources

	of air emissions in non-attainment areas must undergo more rigorous permitting than equivalently sized sources in attainment areas, in an effort to bring the area back into compliance with air quality standards. However, the Project is not located within a non-attainment area for any criteria pollutants (EPA 2021). 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. An Notice of Construction is not required for the Project because there would 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 would not be required for the Project because the generation of electricity by solar arrays does not produce air emissions. Additionally, there will be two propane-powered generators with associated 1,000-gallon fuel tanks on site to provide back-up power during operation, if needed. The Applicant, in coordination with EFSEC, will obtain any permit approval confirmed by Ecology as applicable prior to installation of these generators. A concrete batch plant will not be required during construction or operation of the Project, and as such, no associated permit 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 federal 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 80.80, which establishes goals for statewide reduction of GHG emissions. The statute aims to reduce overall GHG emissions to 1990 levels by 2020, and to 25 percent below 1990 levels by 2035. By 2050, the state intends to reduce overall emissions to 50 percent below 1990 levels. Goals also include 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. 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 could assist the State in achieving these goals by providing clean renewable energy to the State.
Climate	The Project is located in the Columbia Basin, just east of the foothills of the Cascade Range, near the confluence of the Wenatchee and Columbia Rivers. It is approximately 3.5 miles east of East Wenatchee, atop the slopes of a plateau. 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 nearly 200 days of sunshine). Average annual precipitation at East Wenatchee (i.e., the city closest to the Project) is 8.0 inches. The average seasonal snowfall at East Wenatchee is 33 inches. In winter, temperatures in East Wenatchee average a high of 36.2 degrees Fahrenheit (°F) and a low of 25.4°F, with extreme lows below 10°F. In summer, temperatures average a high of 83.8°F and a low of 59.1°F, with extreme highs above 95°F. Average relative humidity is 80 percent in the winter and 40 percent in the summer (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 Pangborn Memorial Airport in East Wenatchee, Washington (KEAT). Based on data collected over the period from January 1, 1991 to December 31, 2020, the prevailing winds most frequently blew from the northwest (approximately 28 percent of the time), from the west (approximately 24 percent of the time), and from the east (approximately 9 percent of the time), with calm conditions (less than 2.0 miles per hour) occurring approximately 23 percent of the time. The average wind speed for the period was approximately 6.7 miles per hour (3.0 meters per second) (IEM 2021).
Regional Air Quality	While the air quality in Douglas 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 are the main $PM_{2.5}$ sources. Tilling operations, windblown dust, and resuspended road dust sometimes gives rise to elevated levels of PM_{10}. Agricultural land uses and rural residences surround the Project, with the nearest schools and parks located 1.6 miles to the west in the town of East Wenatchee. 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 2017 through 2019, as summarized in the 2020 Ambient Air Monitoring Network Plan. The nearest monitor is located in Malaga, Washington (approximately 7 miles to the south), which measures SO_2. The nearest $PM_{2.5}$ monitor is located in Ellensburg, Washington (approximately 35 miles to the southwest). The

nearest PM_{10} monitor is in Yakima, Washington (approximately 60 miles to the south-southwest). The nearest ozone monitor is in North Bend, Washington (approximately 71 miles to the west). The nearest NO_2 and CO monitors are in Seattle, Washington (approximately 96 miles to the west).

In the summers of 2017 and 2018, Washington experienced extended smoke events from regional wildfires in the Pacific Northwest. These smoke events caused repeated exceedances of the PM standards in these areas. Due to the regional and exceptional nature of these events, EPA issued waivers for the unmet monitoring requirements. Under normal conditions, pollutant concentrations fall well below NAAQS (Ecology 2020a).

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

Pollutant / Averaging	Site	2017	2018	2019	3-year Design Value	NAAQS	Units
CO 1-hr	Seattle Beacon Hill (ID 530330080)	1.3	1	1.1	1.3	**35**	ppm
CO 8-hr		0.9	0.9	0.7	0.9	**9**	ppm
NO_2 1-hr		46.8	44.5	42.8	45	**100**	ppb
NO_2 Annual		17.5	10.7	10.6	18	**53**	ppb
PM_{10}	Yakima 4th Ave. (ID 530770009)	206	129	60	206	**150**	µg/m³
$PM_{2.5}$ 24-hr	Ellensburg – Ruby St. (ID 530370002)	47.8	46.5	18.8	38	**35**	µg/m³
$PM_{2.5}$ Annual		11.0	7.1	7.0	8.3	**12**	µg/m³
SO_2 1-hr	Malaga Hwy. (ID 530070012)	1.1	1.2	1.0	1	**75**	ppb
SO_2 3-hr		1.1	1.1	0.8	1	**500**	ppb
Ozone 8-hr	North Bend Hwy. (ID 530330017)	0.073	0.071	0.053	0.065	**0.07**	ppm

Note: NO_2 data are incomplete at the Seattle Beacon Hill monitor for 2017; therefore, data from 2017 are based on the Tacoma-S 36th St. monitor (ID 530530024).

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 would 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 would 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. The amount of pollutants emitted from these sources would 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 Douglas County. The emissions would 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 would 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 components; and trenching or plowing for underground utility cables.

Construction activities for the Project are scheduled to take approximately 18 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. 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 Douglas County, Project emissions would represent a very minor fraction of total emissions for the county (Ecology 2020b). Given the relatively low magnitude, localized extent, and temporary duration of construction-related emissions, air quality impacts associated with Project construction would 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 California Air Resource Board's URBEMIS2007 model. The Project would implement Best Management Practices 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 would 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	0.73	9.00	3.01	0.49	0.47	0.01
Worker Commuting	0.96	1.15	15.38	0.03	0.03	0.01
Material Delivery and Hauling	0.61	9.83	3.76	0.32	0.30	0.01
Fugitive Dust from Construction	--	--	--	3.90	0.82	--
Project Construction Total	**2.3**	**20.0**	**22.2**	**4.7**	**1.6**	**0.03**
Douglas County 2017 Total Emissions[1]	**5,202**	**1,478**	**12,202**	**17,555**	**3,535**	**2,463**
Project Total as a Percent of Douglas County Total Emissions	***< 0.1%***	***1.4%***	***0.2%***	***< 0.1%***	***< 0.1%***	***< 0.1%***

1. Ecology (2020b)

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 components will be revegetated to prevent the generation of dust. Propane-powered generators may be operated to provide back-up power if needed during operation; this will be limited to times when power is not provided by the grid (e.g., during blackouts) and therefore emissions are expected to be minimal, if any. 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 4.8).

Odors

During Project-related construction activities, exhaust from diesel-powered vehicles and equipment as well as painting of the O&M facilities

		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 odor 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	

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 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 would implement BMPs and standard construction practices, including the following: • Vehicles and equipment used during construction would be properly maintained to minimize exhaust emissions.	N/A

		• Operational measures such as limiting engine idling time and shutting down equipment when not in use would be implemented. • Watering or other fugitive dust-abatement measures would 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 would be covered when stored. • Traffic speeds on unpaved roads would be limited to 25 miles per hour to minimize generation of fugitive dust. • Truck beds would be covered when transporting dirt or soil. • Carpooling among construction workers would be encouraged to minimize construction-related traffic and associated emissions. • Erosion-control measures would be implemented to limit deposition of silt to roadways, to minimize a vector for fugitive dust. • Replanting or graveling disturbed areas would 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

Ecology (Washington State Department of Ecology). 2020a. 2020 Ambient Air Monitoring Plan (Publication 20-02-017). https://apps.ecology.wa.gov/publications/summarypages/2002017.html. Accessed June 28, 2021.

Ecology. 2020b. 2017 Washington Comprehensive Emissions Inventory Technical Support Document, data, and methods. https://apps.ecology.wa.gov/publications/SummaryPages/2002012.html. Accessed June 16, 2021.

EPA (U.S. Environmental Protection Agency). 2021. Green Book, Washington Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants. https://www3.epa.gov/airquality/greenbook/anayo_wa. html. Accessed June 16, 2021.

IEM (Iowa Environmental Mesonet, Iowa State University). 2021. Wenatchee/Pangborn (EAT) ASOS Station Windrose Plot. 2021. https://mesonet.agron.iastate.edu/sites/dyn_windrose.phtml?station=EAT&network=WA_ASOS. Accessed on June 16, 2021.

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

Western Regional Climate Center. 2021. Wenatchee Pangborn AP, Washington Climate Summaries, NCDC 1981-2010 Monthly Normals. https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?wa9082. Accessed on June 16, 2021.

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
Wetland Delineation Report (Attachment I)	Complete (September 2021)	Wetland Specialists at Tetra Tech, Inc. performed field surveys and wrote a wetland and other waters delineation report that meets U.S. Army Corps of Engineers (USACE) and Ecology specifications.	Y

☒ **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	The wetland and other waters delineation found that there are no wetlands within the Project area (Attachment I).
Ephemeral streams within the Project area	The wetland and other waters delineation found that there are 46 ephemeral stream segments within the Project area (Attachment I). Some of these stream segments (ST-160, ST-200, ST-241, ST-249A, ST-300A, ST-329, ST-505, ST-507, ST-510, ST-511, ST-512, ST-513, ST-516, ST-517, ST-518, and ST-519) continue out of the Project Area. With the exception of ST-510 described under Section 4.3.C below, these ephemeral streams lack connectivity to other intermittent, perennial, or fish-bearing streams.
Flood risks	The Project is not located in a FEMA-designated flood hazard area or area with a high flood risk.
Regulatory	The U.S. Environmental Protection Agency (EPA) and the Department of the Army published the Navigable Waters Protection Rule on April 21, 2020, which states that “Ephemeral features that flow only in direct response to precipitation, including ephemeral streams, swales, gullies, rills, and pools” are not considered waters

	of the United States. Thus, the ephemeral streams found within the Project area are not subject to the jurisdiction of the USACE. The State of Washington considers all water bodies to be waters of the state and therefore has jurisdiction over the ephemeral streams found within the Project area. Crossings or other work within the ordinary high water marks of ephemeral streams may require a Hydraulic Project Approval (HPA) permit from the WDFW. The Applicant is designing the Project to avoid and minimize impacts to ephemeral streams to the extent feasible. 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. As described in Section 4.3.C below, because the on-site ephemeral streams are not fish-bearing, the Applicant will engage with WDFW to determine if an HPA is necessary based on final Project design. The ephemeral streams within the Project area would be consisted Fish and wildlife habitat conservation areas, under the Douglas County Code: 19.18C.020 – B. Per Douglas County Code: 19.18C.020 – B., fish and wildlife habitat conservation areas include waters of the state, which may include the ephemeral streams within the Project area pending confirmation of the wetland delineation by Ecology (see Attachment I). Douglas County allows stream crossings within a designated fish and wildlife habitat conservation area, such as ephemeral streams, subject to the following relevant minimum standards in DCC 19.18B.060: 1. Bridges are required for streams which support salmonids. 2. All crossings using culverts shall use superspan or oversize culverts. 3. Crossings shall not occur in salmonid spawning areas unless no other feasible crossing site exists. 4. Bridge piers or abutments shall not be placed in either the floodway or between the ordinary high water marks unless no other feasible alternative placement exists. 5. Crossings shall not diminish flood carrying capacity. 6. Crossings shall serve multiple properties whenever possible.

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**
	Stream crossings: erosion, potential water quality issues, fish presence.	The conceptual design shown on the Project's Preliminary Site Plan (Attachment A, Figure A-1) includes the potential for ephemeral stream crossings or culverts to be installed over ephemeral drainages for Project components such as collector lines and road crossings. While not anticipated, if bridge construction is necessary, the abutments would be placed outside of the ordinary high water mark unless no other feasible alternative placement exists. Temporary impacts could include sediment and dust from the construction of Project components. Specific stream crossing locations are undetermined at this stage in Project design and, upon finalization, will be limited to ephemeral streams within the Project area. Impacts associated with stream crossings could include excavation (removal and fill) within the stream corridor and below the ordinary high water mark, construction of roadway, and placement of culverts or bridges, if needed. The Washington DNR lists all streams within the Project area as non-fish bearing except for a 55-foot segment of stream ST-329, located at the eastern edge of the Project area. See references to ST-329 in the Wetland Delineation Report (Attachment I). The segment of ST-329 within the Project area is disconnected from its downstream channel by active farming of the drainage and is unlikely to contain fish in this reach. ST-510 has potential connectivity to Beaver Creek, which is listed as a fish-bearing stream. However, fish passage to ST-510 is obstructed by a perched culvert under Road U SW making it unlikely for fish to use ST-510 within the Project area. As described above, no other streams within the Project area have downstream

		connectivity to other intermittent, perennial, or fish-bearing streams. Therefore, the Project poses little to no potential for impacts to fish habitat; potential Project related impacts to wildlife/fish habitat are further discussed in Part 4, Section 4.9.

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**
	N/A	N/A

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	No wetland features exist within the Project area. The Project will not impact wetlands and is consistent with WAC 463-62-050.	N/A
	Stream crossing construction best management practices	Minimization of temporary water quality impacts (WAC 220-660-120; Stormwater Management Manual for Eastern Washington [Chapter 173-204 WAC]; Construction Stormwater General Permit [Chapter 90.48 RCW]), will be implemented on site during construction and operations and include the following best management practices: • Staging of materials and equipment to prevent	Ecology, WDFW

		contamination of waters of the state • Development of the SWPPP, ESCP, and SPCC Plan • Installation and maintenance of temporary erosion and sediment control measures • Completing work in the dry with no water present	
	Stream crossing design	Stream crossing designs will minimize permanent impacts as required in WAC 220-660-190 and DCC 19.18B.060. Design elements include: • Location and alignment of the proposed road crossings to minimize impacts to the stream corridor. • Stream crossing structures (i.e., culverts) will be sized to accommodate ordinary high water or other design flow, sediment, and woody debris. Stream crossings will adhere to the criteria in DCC 19.18B.060. • Site restoration and revegetation of any disturbed areas.	Ecology, WDFW
	Hydraulic Project Approval	If deemed necessary following discussions with WDFW, the Applicant will obtain HPA permits per WAC 20-660-050.	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

4.4 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
Stage 1 Report of Expected Geotechnical Conditions (Attachment H-1)	Complete (April 24, 2020)	Prepared by Terracon, geotechnical engineering consultant for the Applicant	Y
Geotechnical Engineering Report (Attachment H-2)	Complete (March 12, 2021)	Prepared by Westwood Professional Services, geotechnical engineering consultant for the Applicant	Y
Preliminary Stormwater Management Plan (Attachment J)	Complete (February 2020)	Prepared by Westwood Professional Services, geotechnical engineering consultant for the Applicant	Y
Preliminary Hydrology Report (Attachment K)	Complete (September 2020)	Prepared by Westwood Professional Services, geotechnical engineering 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[5]	The Project area is located primarily in FEMA Flood Zone C or unmapped areas containing minimal flood hazards. Flood Zone C represents areas located outside of the 500-year flood event and that have a minimal chance of flooding. The Solar Array Micrositing Area has a ridgeline and steep slopes located along its western edge. This ridgeline splits the drainage within the area, with some water going to the west and the rest to the east. However, both west and east drainages eventually flow

[5] Existing conditions related to water quality and wetlands are addressed in Part 4, Section 4.3, while existing conditions related to hazardous materials within the Project area are addressed in Part 3, Section 3.12 as well as Part 4, Section 4.13.

	into the Columbia River in areas west and south of the Project area. Surface water within the Project area does not connect directly to intermittent or perennial streams with the exception of one stream. That stream, named ST-501 in the wetland delineation report in Attachment I, connects to Beaver Creek, approximately 1.75 river miles from the Project area. Surface water in the Solar Array Micrositing Area flows over generally flat terrain (1-5 percent) to steeper slopes (>6 percent) along existing swales that have generally flat slopes (1-5 percent). For the hydrology study (Attachment K), the Solar Array Micrositing Area was divided into 18 drainage areas that represent each discharge location. Offsite drainage enters the Solar Array Micrositing Area via multiple locations as described in the Preliminary Stormwater Management Plan (SWMP; Attachment J). Surface water in the Gen-tie Micrositing Corridor generally flows towards the Columbia River, although there are no direct tributaries to the Columbia River within the Project area. Land use within the Project area is primarily wheat in a chemical fallow crop rotation. Soils within the Project area generally belong to Hydrologic Soil Groups B and C. The Natural Resources Conservation Service Soil Survey shows type B soils over a majority of the site with type C soils in existing swales and type D soils along the west ridgeline. Soil 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. Group D soils have high runoff potential when thoroughly wet. Water movement through the soil is restricted or very restricted. Group D soils typically have greater than 40 percent clay, less than 50 percent sand, and have clayey textures. The main potential hydrologic issue on the Project area is flooding and erosive velocities. The Stage 1 REGC (Attachment H-1) indicates that soils in the Project area have low moisture content, and the clay content is estimated to be between 5.6 and 21.6 percent. However, silty soils generally also have low permeability and may significantly reduce infiltration and lead to ponding in the Project area. Surface soils in the Project area are rated with a moderate to high potential for water erosion (see Part 4, Section 4.1). Boreholes were used during the geotechnical study to determine the presence and level of groundwater in the Project area. A static

	groundwater level was not observed in any of the test borings drilled to approximately 20 feet below ground surface (bgs). However, publicly available groundwater data indicate that groundwater may be encountered as shallow as approximately 140 feet bgs (Attachment H-1). Shallow/perched groundwater fluctuations may occur due to seasonal variations in the amount of rainfall, runoff, and other factors that were not evident at the time the borings were performed; therefore, groundwater levels during construction or at other times in the life of the structure may be higher or lower than those observed during the investigation (Attachment H-1).

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	The Project may result in some changes to the stormwater drainage 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.). Although typically classified as impervious surfaces, stormwater will generally infiltrate through the gravel roads but just at a reduced rate compared to most soils in the area. Overall, impervious surfaces are a low percentage of the total Project area (approximately 3 percent of the Project area; see Part 2, Section B.2). Furthermore, the Project will be designed and constructed to comply with Douglas County and Ecology requirements in retaining stormwater on-site and maintaining natural drainage patterns for conveyance of upland flow. The Project's ESCP, Construction SWPPP, Permanent Stormwater Control Plan, and Vegetation and Weed Management Plan will include measures to minimize the rate of stormwater that will be discharged due to these impervious surfaces. Grading will be minimal and existing drainage patterns will be maintained(see Part 4, Section 4.1). Grasses suitable to this region will be planted/seeded below the array to minimize the risk of runoff occurring below the arrays during storm events. Temporary basins and erosion control measures will be implemented during construction to protect existing discharge locations. Permanent basins will be provided at each discharge location that has an increase in runoff (i.e., greater than 10 acres of runoff) due to the

		proposed development and in critical discharge locations. These basin locations are shown in Figure A-1 to Attachment A. During the Project's construction, the subsoils will be compacted as necessary using typical excavation techniques. During final grade, reapplication of the preserved topsoil will be completed by a wide-pad dozer and other equipment to minimize compaction of the topsoil material. The operator(s) will restrict vehicle and equipment use to avoid soil compaction where feasible; or techniques such as ripping the soil for decompaction would be completed following topsoil placement and prior to reseeding or other restoration activity. If needed, panel washing (which may use up to approximately 157,000 gallons of water per wash; see Part 2) is not expected to generate runoff from the site or cause erosion. Most water used for washing would evaporate from the panels before reaching the ground; however, assuming the most conservative estimate that no evaporation occurs and all panel washing water reached the ground, the depth of water on the ground would be approximately 0.004 inch across the entire fenced solar array area. Although the water dripping off panels would be concentrated over smaller areas, the concept demonstrates the small quantity of water involved in this process relative to the size of the site. This amount of water would easily infiltrate into the ground around the panels and is not expected to run off to surface waterbodies. Furthermore, washing of solar panels would be done with water only and no surfactants or other chemicals would be added. The stormwater modeling analysis (Attachment J) shows low water depths and velocities across the majority of the Project Area. During a 100-year storm, the flood depths across the majority of the Project area are less than 0.5 foot with velocities less than 1 foot/second; however, higher flood depths (up to 2 feet in the Solar Array Micrositing Area and up to 3 feet in the Gen-tie Micrositing Corridor) and velocities (which can reach greater than 4 feet/second) occur in small areas of existing flowpaths (drainages) throughout the site and associated watershed. However, large scour depths are contained within the existing flowpaths/drainages. The Preliminary Hydrology Report (Attachment K) concluded that the bulk of the Project area is suitable for the planned development and hydrologic concerns can be addressed by either avoiding areas of high flood depths or through detailed engineering design. Based on the groundwater level of over 20 feet in depth identified in the Geotechnical Engineering Report (Attachment H-2), the Project is not expected to impact groundwater. The slight increase in impervious surface is not expected to impact recharge to groundwater or stream flows with the implementation of mitigation measures.

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**
	Design considerations of stormwater runoff and erosion.	The existing stormwater runoff and erosion patterns will inform the final design of the Project. The Project's engineer will determine the final appropriate erosion and sediment control and drainage plans based on existing conditions and planned impervious surfaces. The Project will be designed to have the least impact to stormwater drainage patterns and erosion risk as feasible.

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	In compliance with WAC 173-200, the Applicant will obtain a Construction Stormwater General Permit (CSWGP) from Ecology. The CSWGP requires an ESCP and a SWPPP. Douglas County does not require a separate stormwater permit, but instead refers to the Ecology requirements.	Ecology
	Best Management Practices - Stormwater	The ESCP and SWPPPs (both 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 BMPs such as the appropriate use of silt fencing to avoid or eliminate runoff of contaminants. The SWPPPs will include BMPs from Ecology's Stormwater Management Manual for Eastern Washington (Ecology 2019).	Ecology

		The Applicant will prepare and submit a Vegetation and Weed Management Plan to EFSEC prior to construction. The plan will be implemented to revegetate temporarily impacted areas and minimize erosion. Temporary basins and erosion control measures will be implemented during construction to protect existing discharge locations. Permanent basins will be provided at each discharge location that has an increase in runoff due to the proposed development and in critical discharge locations. Each basin will have a minimum depth of 3.5 feet, a length to width ratio of 3:1 to 6:1, and a pond riser outlet structure to provide treatment per the Washington requirements. These basin locations are shown in Figure A-1 (Attachment A).	
	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 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

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 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

4.6 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
2021 Rare Plant Survey Report (Attachment F)	Complete (September 2021)	Prepared by Tetra Tech; environmental consultant for the Applicant. WDFW (Michael Ritter, Eric Pentico); feedback on protocols and special status species at the Project.	Y
2021 Wildlife and Habitat Survey Report (Attachment G)	Complete (September 2021)	Prepared by Tetra Tech; environmental consultant for the Applicant. WDFW (Michael Ritter, Eric Pentico), feedback on protocols and special status species at the Project.	Y

☒ **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
U.S. Fish and Wildlife Service (USFWS) Federally Listed Plant Species	One federally listed threatened plant species, Ute ladies'-tresses (*Spiranthes diluvialis*), is listed by the USFWS as known or potentially occurring within Douglas County (USFWS 2021). However, during the pre-field background review, this species was determined to be unlikely to occur in the Project area based on an anticipated lack of suitable habitat. Rare plant surveys for the Project were conducted in May of 2021; during these surveys, it was confirmed that suitable habitat for Ute ladies'-tresses (i.e., low-elevation wetland complexes, moist to wet meadows, marshes, and riparian areas typically with stable subsurface moisture and low vegetation cover) was not present within the Project area (Attachment F).

Washington Natural Heritage Program (WNHP) Special Status Vascular Plants	Of the 33 special status vascular plant species (i.e., species listed as endangered, threatened, or sensitive in Washington by the WNHP) known to occur or potentially occurring within Douglas County (WNHP 2021a), 17 species were considered to have a potential of occurring within the Project area based on the proximity of known occurrences (per WNHP 2021b) and the anticipated likelihood of suitable habitat for these species to occur in the Project area. The other 16 species were considered unlikely to occur because: 1) the known range of the species does not overlap the Project area; 2) the species is believed to be extirpated in Washington; 3) the known occurrences of the species in Douglas County are historical (i.e., have not been confirmed in over 40 years); and/or 4) suitable habitat for the species is not anticipated to occur in the Project area (see Appendix A to Attachment F). No special status plant species were identified during May 2021 surveys for the Project, and no suitable habitat for later blooming rare species with potential to occur in the Project area was observed during surveys.
WNHP Special Status Nonvascular Species	Per WNHP (2021), one special status nonvascular lichen, navel lichen (*Umbilicaria phaea* var. *coccinea*), is listed as known or potentially occurring in Douglas County. This species is listed as endangered by the WNHP. Navel lichen grows in arid environments on exposed to somewhat shaded basalt rock outcrops and talus (McCune and Geiser 1997; McMullin 2015). In Washington, this species is currently only known from two sites along the Columbia River (McCune and Geiser 1997; McMullin 2015). Although the exact locations of these two records are not publicly available, the Project is located over 3 miles east of the Columbia River; therefore, it is highly unlikely the Project will impact this species.
Vegetation Types / WDFW Priority Habitats	Habitat surveys conducted by Tetra Tech identified seven habitat types within the Project area (Attachment G). 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 Priority Habitats and Species List (WDFW 2008), and the WDFW Wind Power Guidelines (WDFW 2009) These include: • Agriculture • Developed • Dwarf shrub-steppe • Non-native grassland and forbland

	• Planted grassland • Shrub-steppe • Talus Table 4.8-1 lists the acres of each habitat type mapped within the Project area. Three of the habitat types that occur within the Project area (i.e., dwarf shrub-steppe, shrub-steppe, and talus) are listed as Priority Habitats by the WDFW (WDFW 2008). As shown in Table 4.8-1, approximately 16, 247, and 10 acres of dwarf shrub-steppe, shrub-steppe, and talus, respectively, occur within the Project area. As shown in Figure A-5, dwarf shrub-steppe and shrub-steppe habitats are most prevalent in the northeast and western portions of the DNR parcel, as well as along the western edge of the Solar Array Micrositing Area. Talus slopes are found along the western edge of the Solar Array Micrositing Area as well as portions of the Gen-tie Micrositing Corridor. See Part 3, Section 3.2.2 of the Wildlife and Habitat Survey Report (Attachment G) for additional details on habitat types observed within the Project area as well as their distribution in the area.

Table 4.8-1. Habitat Types Mapped within the Project Area

Habitat Type	Acres in Project Area (percent of total area)	Acres in Solar Array Micrositing Area (percent of total area)	Acres in Gen-tie Micrositing Corridor (percent of total area)
Agriculture	2,077 (87%)	2,014 (89%)	62 (54%)
Developed	16 (1%)	15 (1%)	1 (1%)
Dwarf shrub-steppe[1]	16 (1%)	16 (1%)	0 (0%)
Non-native grassland and forbland	13 (1%)	12 (1%)	2 (1%)
Planted grassland	12 (1%)	0 (0%)	12 (11%)
Shrub-steppe[1]	247 (10%)	210 (9%)	37 (32%)
Talus[1]	10 (<1%)	8 (<1%)	2 (2%)
Total[2]	**2,390 (100%)**	**2,275 (100%)**	**116 (100%)**

1. Listed as a Priority Habitats by the WDFW (WDFW 2008).
2. Totals may not sum exactly due to rounding.

Invasive Plant Species	Five state and county-listed noxious weeds were observed in the Project area during rare plant and habitat surveys conducted in May 2021. These include: • Canada thistle (*Cirsium arvense*) • Dalmatian toadflax (*Linaria dalmatica* ssp. *dalmatica*) • Diffuse knapweed (*Centaurea diffusa*) • Field bindweed (*Convolvulus arvensis*) • Hoary cress/whitetop (*Lepidium draba*)

	Diffuse knapweed and Canada thistle were observed in several locations within the Solar Array Micrositing Area, and Dalmatian toadflax was observed in several areas along the Gen-tie Micrositing Corridor. Hoary cress/whitetop was observed in three locations within the Solar Array Micrositing Area and field bindweed was observed in one location in the Solar Array Micrositing Area. In addition to these five species, several other non-native, invasive plant species, including cheatgrass (*Bromus tectorum*), prickly lettuce (*Lactuca serriola*), Russian thistle (*Salsola tragus*), smooth brome (*Bromus inermis*), and tall tumblemustard (*Sisymbrium altissimum*) were observed within the Project area. Although these species were scattered throughout the Project area, they were most abundant in the vicinity of agricultural fields or developed areas. Appendix B of the 2021 Rare Plant Survey Report (Attachment F) provides a list of all vascular plant species observed within the Project area and notes whether each species is native or non-native.

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, habitat for federally listed plant species with potential to occur in the Project area was not observed during rare plant surveys conducted for the Project (Attachment F). Therefore, federally listed plant species will not be affected by the Project.
	WNHP Special Status Vascular Plants	No special status vascular plant species were identified during surveys conducted for the Project in May of 2021 (Attachment F). In addition, suitable habitat for the later-blooming, special status vascular plant species with potential to occur in the Project area (i.e., vernal pools, moist meadows, wet openings in hardwood or coniferous forests, bogs, springs, seeps, riparian areas, and dry rocky washes) was not observed during these surveys. Therefore, a second round (i.e., June/July) of special status vascular plant surveys was not needed.

		Access to approximately 34 acres of the Project area along the Gen-tie Micrositing Corridor was not available during these surveys. However, based on observations during surveys from adjacent accessible parcels and public roads, approximately 29 acres of these 34 acres consist of habitat types that do not provide suitable habitat for special status plant species (i.e., agriculture, developed, non-native grassland, and planted grassland). The remaining areas consist of shrub-steppe habitat that may provide suitable habitat for rare plant species. While these areas of shrub-steppe habitat were not traversed on foot during surveys, they were viewed from adjacent accessible parcels and public roads. Based on this initial assessment, the 6 acres of unsurveyed shrub-steppe habitat are degraded (i.e., contain high cover of non-native species in the understory) and unlikely to provide suitable habitat for rare plant species. Field surveys can be conducted within these areas of shrub-steppe habitat in May of 2022 if required based on final Project design. Because no special status vascular plant species were observed within the Project area during field surveys, and because the unsurveyed areas are unlikely to provide suitable habitat for these species, special status vascular plant species are not anticipated to be affected by the Project.
	WNHP Special Status Nonvascular Species	Species-specific surveys have not been conducted for special status nonvascular species within the Project area. However, suitable habitat (i.e., basalt outcrops and talus) for navel lichen (i.e., the only special status nonvascular species with potential to occur) would be avoided during Project construction and operation.
	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 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 area, collector substation area, switchyard area, poles for overhead gen-tie lines, inverter and transformer pads, permanent fence, optional BESS area, and posts for gen-tie line) and constitute a habitat loss during the life of the Project. Temporary impact areas include the temporary staging areas and work areas located outside the solar array fence that will be

		disturbed during construction and revegetated following construction. 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, minus any areas occupied by permanent Project structures. These areas will be revegetated with low-growing vegetation consisting of native species and/or desirable non-native, non-invasive species (i.e., 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. Table 4.8-2 lists the estimated acres of temporary and permanent impacts to habitat types and acres of altered habitat from construction and operation of the Project. As shown in this table, up to approximately 3 and 29 acres, respectively, of dwarf shrub-steppe and shrub-steppe habitat will be altered and less than 1 and up to approximately 6 acres, respectively, will be impacted by operation of the Project. The majority of temporary impacts will occur to agricultural areas (approximately 58 acres), with less than 1 acre of temporary impacts occurring to dwarf shrub-steppe and approximately 27 acres occurring to shrub-steppe habitat (see Table 4.8-2). The estimated acres of impact on each habitat type provided in Table 4.8-2 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 Solar Array Micrositing Area or Gen-tie Micrositing Corridor up to the Project area acreage identified in Table 4.8-1. Any relocations made to the Project layout within these areas will be designed to avoid or minimize impacts to special status species, Priority Habitats, and streams to the extent practical. The Project has already been designed to avoid talus as well as a 50-foot buffer around talus; therefore, this Priority Habitat will not be affected by the Project, and any subsequent revisions to the Project layout will continue to avoid this habitat type.

		Part 4, Section 4.9 of the ASC contains additional information regarding impacts to habitat including those classified as Priority Habitats by the WDFW.

Table 4.8-2. Impacts to Habitat Types from the Proposed Project

Habitat Type	Temporary Impacts (Acres)[1]	Altered Habitat Impacts (Acres)[2]	Permanent Impacts (Acres)[3]
Agriculture	58	1,239	60
Developed	< 1	0	0
Dwarf shrub-steppe	< 1	3	<1
Non-native grassland and forbland	1	1	<1
Planted grassland	5	0	<1
Shrub-steppe	27	29	6
Talus	0	0	0
Total[4]	**92**	**1,272**	**66**

1. Temporary impacts include:
   - Work area (150-feet-wide, 75 feet either side of center) along the 3.7-mile-long overhead 230-kV gen-tie line with avoidance of talus habitat.
   - Work area (8 feet either side) along the Project service roads within the Project area and outside the solar array perimeter fence.
   - Work area (10 feet from the outside) along the solar array, O&M area, collector substation area, switchyard area, and optional BESS area perimeter fence lines.
   - Temporary staging areas outside the solar array perimeter fence.
2. Altered impacts include lands within the solar array perimeter fence minus the footprint of areas occupied by Project components and structures listed below.
3. Permanent impacts include the footprint of the area occupied by the following Project components and structures: solar array posts, inverter and transformer pads, Project service roads (20-feet-wide outside the solar array perimeter fence, 16-feet-wide within the solar array perimeter fence), O&M building area, collector substation area, switchyard area, optional BESS area, perimeter fence, and overhead 230-kV gen-tie line poles.
4. Totals may not sum exactly due to rounding.

	Invasive Plant Species	Soil disturbance and the subsequent removal of vegetation during construction will increase the potential for the introduction and spread of noxious weeds and invasive species. The movement of construction and operation equipment and personnel also increases the potential for introduction and spread of noxious weed and invasive plant species. However, with the implementation of BMPs, such as flagging the limits of construction to minimize vegetation removal and ground disturbance, and implementing measures in the Vegetation and Weed Management Plan that will be prepared for the Project (see Part 4, Section 4.8.D), the Project is not expected to result in a significant increase in the introduction and spread of noxious weeds and invasive species.

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 is requesting flexibility to microsite the Project and its interconnection components anywhere within the Project area. During final design, the Applicant will minimize impacts to dwarf shrub-steppe and shrub-steppe habitat, where possible. 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**
	Habitat Mitigation Plan	Per WAC 463-60-332(3) and consistent with DCC 19.18C.037, the Applicant will develop and implement a Habitat Mitigation Plan with input from WDFW and EFSEC. This plan will provide details regarding mitigation measures for impacts to dwarf shrub-steppe and shrub-steppe habitat.	WDFW
	Revegetation and Noxious Weed Control	Per RCW 17.10.140 and consistent with DCC 18.16.320 the Applicant will develop a Vegetation and Weed Management Plan with input from EFSEC and the Douglas County Weed Management Task Force 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).	EFSEC, Douglas County Weed Management Task Force

	BMPs	The Applicant will implement the Project's ESCP, Construction SWPPP, 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	N/A

4.8.F References

Johnson, D.H., and T.A., O'Neil. 2001. *Wildlife-Habitat Relationships in Oregon and Washington*. Oregon State University Press. Corvallis, Oregon.

McMullin, Troy. 2015. The Global Fungal Red List Initiative, a proposal on behalf of *Umbilicaria phaea var. coccinea*. Accessed at http://iucn.ekoo.se/iucn/species_view/427890.

McCune, B., and L. Geiser. 1997. *Macrolichens of the Pacific Northwest.* Oregon State University Press, Corvallis, OR.

USFWS (U.S. Fish and Wildlife Service). 2021. IPaC – Information for Planning and Consultation: Species list for Douglas County. Available online at: https://ecos.fws.gov/ipac/location/QPW6C7I3N5EUNOMWM7Z7GWVVKU/resources (Accessed March 2021).

WDFW (Washington Department of Fish and Wildlife). 2008. Priority Habitats and Species List. August 2008, Updated February 2021. Available online at: https://wdfw.wa.gov/species-habitats/at-risk/phs/list (Accessed May 2021).

WDFW. 2009. Washington Department of Fish and Wildlife Wind Power Guidelines. Olympia, WA. 30 pp.

WNHP. 2021a.Washington Natural Heritage Rare Vascular and Nonvascular, Species List by County. Washington Department of Natural Resources, Natural Heritage Program. Available online at: https://www.dnr.wa.gov/NHPdata (Accessed March 2021).

WNHP. 2021b. Washington Natural Heritage Program Element Occurrences – Current. Washington Department of Natural Resources, Natural Heritage Program. Available online at: https://data-wadnr.opendata.arcgis.com/search?groupIds=266f0b3bdc014f5ab2a96ad4ea358a28 (Accessed May 2021).

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
2021 Wildlife and Habitat Survey Report (Attachment G)	Complete (September 2021)	Prepared by Tetra Tech; environmental consultant for the Applicant. WDFW (Michael Ritter, Eric Pentico), feedback on protocols and special status species in the Project vicinity.	Y
2021 Rare Plant Survey Report (Attachment F)	Complete (September 2021)	Prepared by Tetra Tech; environmental consultant for the Applicant. WDFW (Michael Ritter, Eric Pentico), feedback on protocol.	Y
Wetland Delineation Report (Attachment I)	Complete (September 2021)	Prepared by Tetra Tech; environmental consultant for the Applicant. Report was prepared to meet USACE and Department of Ecology specifications.	Y
2019, 2020, and 2021 Raptor Nest Survey and Eagle Nest Monitoring Reports (Attachment L)	Complete (August 2021)	Prepared by WEST; environmental consultant for the Applicant. WDFW (Michael Ritter, Eric Pentico), feedback on protocol. USFWS (Matthew Stuber), review of and feedback on survey data.	Y

☒ **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 Tetra Tech to complete a wildlife and habitat survey in 2021. The Survey Area consisted of the approximately 2,390-acre Project area, which includes an approximately 2,274-acre Solar Array Micrositing Area and 116-acre Gen-tie Micrositing Corridor. Site access was not available to approximately 34 acres of the Project area along the Gen-tie Micrositing Corridor; while these areas were not traversed on foot during surveys, they were viewed from adjacent accessible parcels and public roads. See Section 4.2.1 of the Wildlife and Habitat Survey Report (Attachment G) as well as Table 4.8-1 in Part 4, Section 4.8 (Plants) for a detailed description of the habitat types found within the Project area, and the amount of these habitat types that occur in the Project area. Figure 2 in Attachment G depicts the locations of each habitat type within the Project area. Three of the habitat types that occur within the Project area (i.e., dwarf shrub-steppe, shrub-steppe, and talus) are listed as Priority Habitats by the WDFW (WDFW 2008)[6]. As described in Attachment G, a variety of sources were used to classify habitat within the Project area, including the WDFW 2009 Wind Power Guidelines (WDFW 2009).
Special Status Species	See Appendix A of the Wildlife and Habitat Survey Report (Attachment G) for a list of the 23 special status wildlife species with potential to occur at the Project (for this assessment, the term “special status” includes any federal and state endangered, threatened, proposed, and candidate species; federal species of concern; USFWS birds of conservation concern; or state sensitive or Priority Species[7]; see also Part 2, Section B.5). Of the special status wildlife species potentially present within the Project area, one is state threatened (i.e., ferruginous hawk [*Buteo regalis]*) and three are state

[6] Priority Habitats are habitat types or elements with unique or significant value to a diverse assemblage of species; a Priority Habitat may consist of a unique vegetation type (e.g., shrub-steppe) or dominant plant species (e.g., juniper savannah), a described successional stage (e.g., old-growth forest), or a specific habitat feature (e.g., cliffs)(WDFW 2008). Priority Habitats are identified by WDFW in their Priority Habitats and Species list, which is updated periodically (WDFW 2008, 2021d).

[7] Priority Species include state endangered, threatened, sensitive, and candidate species; animal aggregations (e.g., heron colonies, bat colonies) considered vulnerable; and species of recreational, commercial, or tribal importance that are vulnerable. Priority Species are identified by WDFW in their Priority Habitats and Species list, which is updated periodically (WDFW 2008, 2021d).

	endangered (i.e., greater sage-grouse [*Centrocercus urophasianus*], Columbian sharp-tailed grouse [*Tympanuchus phasianellus columbianus*], and gray wolf [*Canis lupus*]); no state sensitive or federally listed species are anticipated to occur in the Project area. Attachment G and Part 4, Section B.5 list the sources used to identify special status species with a potential to occur in the Project area (e.g., the WDFW PHS database), as well as describes the coordination conducted with the WDFW prior to surveys (e.g., see Appendix B of Attachment G for WDFW meeting notes). During pre-survey coordination with WDFW in March 2021, WDFW noted potential for select special status species to occur in the Project vicinity (see Attachment G), including greater-sage grouse, Washington ground squirrels (WAGS; *Urocitellus washingtoni*), and bats (which are further described below). • **Greater Sage-Grouse**: As described in the 2021 Wildlife and Habitat Survey Report (Attachment G), a query of PHS data and coordination with WDFW identified greater sage-grouse locations within 1 mile of the Project area (personal communication from M. Ritter of WDFW, email to M. DeRuyter of Avangrid, March 8, 2021). No greater sage-grouse activity or sage-grouse pellets were observed during Project surveys. The Project area overlaps with the Moses-Coulee Priority Area for Conservation (PAC); PACs are a network of areas delineated in 11 Western States for prioritizing management of greater sage-grouse (USFWS 2013). The Washington Connected Landscapes Project modeled greater sage-grouse habitat, habitat concentration areas (HCA), and movement corridors (e.g., least-cost pathways) between habitats in an effort to understand habitat connectivity and inform conservation opportunities in the Columbia Plateau Ecoregion (Washington Wildlife Habitat Connectivity Working Group [WHCWG] 2012). HCAs are defined as significant habitat areas that are expected or known to be important for focal species (e.g., greater sage-grouse) based on survey data or habitat association modeling (WHCWG 2012). Least-cost pathways consist of a modeled path between two HCAs that represents the most likely travel corridor the species may use based on habitat connectivity and other inputs (e.g., barriers or mortality risks encountered as animals move outward from habitat blocks) as defined in WHCWG (2012). According to WDFW (personal communication from M. Ritter of WDFW, email to M. DeRuyter of Avangrid, March 8, 2021), the Badger Mountain Lek is approximately 5 miles east of the Project area and is one of the most well-attended leks (highest number of males) in the state. WDFW (2020) recorded 27 males at this lek in 2020 (WDFW 2020). WDFW provided the Applicant

	with a map of 2016-2017 telemetry locations from two collared male sage-grouse that showed recorded occurrences of sage-grouse within 1 mile of the Project area; however, there were no recorded occurrences within the Project area (personal communication from M. Ritter of WDFW, email to M. DeRuyter of Avangrid, March 8, 2021). At its closest location, the Project is approximately 6 miles[8] west of the nearest HCA for greater sage-grouse, and 7 miles west of the nearest least-cost pathway, which connects HCA 2 in Douglas County with HCA 4 in Yakima and Kittitas counties (WHCWG 2012). Therefore, there is some potential for greater sage-grouse to occur within the Project area based on the presence of potentially suitable nesting and wintering habitat and known lek activities 5 miles to the east. However, the Project area does not contain high-quality habitat for this species (i.e., large areas of shrub-steppe), and the Project surveys did not identify any greater sage-grouse activity or pellets in the Project area. • **WAGS**: As described in the Wildlife and Habitat Survey Report (Attachment G), a query of PHS data identified a WAGS colony location within the Project area, but no WAGS activity or signs (e.g., scat or fresh burrow activity) were observed during Project surveys. During surveys, there were very few potential burrows observed, and those identified had no evidence of use or were old and had cobwebs over the entrance. However, suitable habitat was determined to be present for WAGS based on the presence of shrub-steppe habitat and some deep silty loam soils within the Project area. Food availability and soil characteristics are the most important factors in determining where WAGS colonies are located within the habitats currently available (Betts 1990). As described in Attachment G, shrub-steppe habitat mapped within the Project area supports native shrubs, grasses, and forbs, particularly within the Solar Array Micrositing Area, which are generally considered high-quality forage for WAGS. Approximately 210 acres of shrub-steppe were mapped within the Solar Array Micrositing Area, primarily on the western and northern edges of the Solar Array Micrositing Area; approximately 37 acres of shrub-steppe were mapped along the Gen-tie Micrositing Corridor (see Figure 2 in Attachment G). However, soils are rocky and thin in the largest contiguous patch of shrub-steppe and dwarf shrub-steppe habitat on the west side of the Solar Array Micrositing Area, which likely limits burrowing potential. These conditions limit the potential for WAGS to occur. WHCWG (2012) models WAGS habitat as low quality over the vast majority (i.e., 90 percent) of the Project area, primarily

[8] Maps provided by WDFW (personal communication from M. Ritter of WDFW, email to M. DeRuyter of Avangrid, March 8, 2021) depict the Badger Mountain lek site west of (and outside) HCA 2 mapped by WHCWG (2012).

	coinciding with areas associated with agriculture. Small patches of medium- and high-quality habitat are modeled within the Project area primarily on the northwestern portion of the Solar Array Micrositing Area and along the eastern portion of the Gen-tie Micrositing Corridor (i.e., east of the Option 2 POI). High-quality habitat is also modeled in the northeastern portion of the Solar Array Micrositing Area, and interspersed within the Gen-Tie Micrositing Corridor south of the Option 2 POI. A WHCWG (2012) modeled HCA overlaps with the Project area along the northwestern corner of the Solar Array Micrositing Area and eastern portion of the Gen-tie Micrositing Corridor, indicating this area likely provides the highest quality habitat within the Project area. • **Bats**: No state or federal threatened or endangered bat species have potential to occur at the Project. During pre-survey coordination, WDFW noted the potential for Townsend's big-eared bat (*Corynorhinus townsendii*), pallid bat (*Antrozous pallidus*), and spotted bat (*Euderma maculatum*) to occur due to the species' range overlapping the Project area. Townsend's big-eared bat is a state candidate species and the only special status bat species with potential to occur. Townsend's big-eared bat favors roosting in open, subterranean areas like caves and mines for reproduction and hibernation, not cracks and crevices (WDFW 2021b). The Project area and adjacent habitat contains talus and cliff features with cracks and crevices, but does not appear to provide large, open caverns preferred by Townsend's big-eared bat. Two small groups of dilapidated and abandoned wood and stone structures suitable for day and maternity roosts are present within the Project area. The few structures in each group may provide suitable bat habitat; one group is in the southeast portion of the Solar Array Micrositing Area and the other is approximately midway through the Solar Array Micrositing Area. A small stone building was observed in the latter group and provides the best roosting potential in the Project area. The Project is on the western edge of pallid bat range in Washington (WDFW 2004). Pallid bats are more flexible in their habitat use than Townsend's big-eared bat and spotted bat, and could potentially roost in the rocky outcrops and talus within and west of the Solar Array Micrositing Area and forage within the Project area. Spotted bats could also use the Project area for foraging, but spotted bat roosting habitat (i.e., approximately 100-foot tall steep/sheer cliffs; WDFW 2021c) are absent from the Project area. Other bats (e.g., *Myotis* sp.) may roost in the talus slopes primarily west of the Solar Array Micrositing Area. Of the 23 special status species that could potentially occur in the Project area, 9 were observed during wildlife and habitat surveys for the Project in 2021, including 7 bird species and 2 mammal species (see Table 4.9-1 for a list of the special status species observed

during surveys at the Project area). Only one state threatened, endangered, or sensitive species was observed during surveys (i.e., ferruginous hawk).

Table 4.9-1. Special-Status Wildlife Species Observed during 2021 Wildlife and Habitat Surveys

Common Name	Number of Individuals Observed	Status[1]
Brewer's sparrow	5	BCC[2]
chukar	20	PS
ferruginous hawk	2	SOC, BCC[2], ST, PS
golden eagle	1	BGEPA, BCC[2], PS
prairie falcon	2	BCC[2], PS
ring-necked pheasant	3	PS
sage thrasher	3	BCC, SC, PS
Rocky Mountain elk	scat only	PS
mule deer	several groups and scat	PS

1. BCC = Federal Bird of Conservation Concern, BGEPA = Bald and Golden Eagle Protection Act, PS = State Priority Species, SC = State Candidate, SOC = Federal Species of Concern, ST = State Threatened,
2. These species were considered BCC at the time of survey and survey report preparation. An updated version of the BCC was recently released and these species are no longer considered BCC (USFWS 2021a).

Raptor Nests

The Applicant contracted WEST to conduct raptor nest surveys for the Project in 2019 and 2020, with a focus on golden eagle and ferruginous hawk nests. WEST conducted additional eagle nest monitoring in 2021. The Survey Area for raptor nest surveys included the Project boundary at the time of surveys plus a 2-mile buffer, as depicted in Attachment L.

No raptor nests were identified within the Project area during the surveys; however, nine occupied raptor nests were documented during surveys conducted by WEST in 2019, 2020, and 2021 (see Attachment L), including five golden eagle nests in two territories, two red-tailed hawk (*Buteo jamaicensis)* nests, and two great-horned owl (*Bubo virginianus*) nests. Additionally, during the 2021 Wildlife and Habitat Survey, a red-tailed hawk nest not previously identified was documented approximately ¼ mile north of the Project area in a ponderosa pine tree generally northeast of the Solar Array Micrositing Area (see Attachment G). No ferruginous hawk nests were observed during any Project surveys.

See Attachment L for a detailed discussion of the raptor nests observed during raptor nest surveys, figures depicting these nest locations, and nest status definitions. Table 4.9-2 below summarizes the occupied raptor nests observed during these raptor nest surveys.

Table 4.9-2. Occupied Raptor Nests Observed during 2019-2021 Raptor Nest and Eagle Monitoring Surveys

Nest ID	Species	2019 Status	2020 Status	2021 Status
W1-a (W1)	golden eagle	occupied, active	N/A	N/A
W1-b (W1-Alt)	golden eagle	occupied, inactive	occupied, inactive	occupied, inactive
W1-c	golden eagle	N/A	occupied, active	occupied, inactive
W2-a (W2)	golden eagle	occupied, active	occupied, active	occupied, active
W2-b (W2-Alt)	golden eagle	occupied, inactive	occupied, inactive	unoccupied
BM1	red-tailed hawk	N/A	occupied, active	N/A
BM3	great horned owl	N/A	occupied, active	N/A
BM4	great horned owl	N/A	occupied, active	N/A
BM5	red-tailed hawk	N/A	occupied, active	N/A

N/A = Not Applicable because nest was not within survey scope, or nest could not be located (see Attachment L).

Fish	As described in the 2021 Wetland Delineation Report (Attachment I), the Applicant contracted Tetra Tech to conduct surveys for wetlands and other waters within the Project area in April and June of 2021. As part of this survey, stream channels were classified following the DNR interim water typing system (WAC 222-16-031). Water type classifications are based primarily on fish use and flow regime, as well as other values including water supply use. Tetra Tech delineated 44 ephemeral stream segments in the field and two stream segments via desktop due to lack of site access. DNR maps show that all but one of the streams within the Project area have “non-fish” (N) habitat bearing status or “unknown” (U) periodicity and fish-bearing statuses (DNR 2017). One stream is considered to have fish use, although only the headwaters exist within the Project area; the drainage loses all bed and banks where it is farmed through just to the east and downslope from the delineated reach. The closest named stream to the Project area is Beaver Creek, approximately 1.5 linear miles from the Project at the nearest point. Beaver Creek is considered perennial by DNR and is listed on StreamNet (2021) as having migratory rainbow trout (*Oncorhynchus mykiss*) habitat. StreamNet (2021) does not map any fish distribution within the Project area. Also see Part 4, Section 4.3 for more information regarding waterbodies and fish presence in the Project area.
Fish and Wildlife Habitat Conservation Area	According to DCC 19.18C.020(B), fish and wildlife habitat conservation areas include the following: (1) areas in which endangered, threatened, and sensitive species have a primary association; (2) habitats and species of local importance; (3) naturally occurring ponds under 20 acres and their submerged aquatic beds that provide fish or wildlife habitat; (4) waters of the state; (5) lakes, ponds, streams, and rivers planted with game fish by a governmental

	or tribal entity; or (6) state natural area preserves and natural resource conservation areas. Review of the Douglas County Voluntary Stewardship Program Critical Areas Web Map (Douglas County VSP 2021) identified talus slopes as a fish and wildlife habitat conservation area that overlaps with the Project. These talus slopes were also identified in the query of the WDFW PHS database, and mapping of this Priority Habitat was refined during the 2021 wildlife and habitat survey (see Figure 2 in Attachment G for the location of talus mapped within the Project area). Aquatic fish and wildlife habitat conservation areas (i.e., waters of the state) are discussed in Part 4, Section 4.3.
Wildlife Migration Routes	Big game habitat and potential movement corridors in the Columbia Plateau Ecoregion were reviewed to identify big game migration routes in the Project vicinity. Rocky mountain elk (*Cervus canadensis nelsoni*) and mule deer (*Odocoileus hemionus*) are both expected to use the Project area in some manner. Both elk and mule deer scat were identified throughout the Project during wildlife and habitat surveys, with mule deer being more common. Most sign was observed along the western boundary of the Solar Array Micrositing Area (see Figure 3 in Attachment G). Several groups of mule deer were also observed in this area. Elk use of the Project area is expected to be very low, as the northern extension of the nearest elk herd (i.e., Colockum elk herd) is in Chelan County located to the south and west of the Project across the Columbia River (WDFW 2019). Few elk are harvested in Douglas County, as liberal harvest seasons are in place to keep elk from establishing herds in the farming-dominated landscape (WDFW 2019). The Project occurs in the Columbia Plateau mule deer management zone where mule deer are associated with shrub-steppe, channeled scablands, and other undisturbed areas including the bunchgrass covered breaks along the Columbia River (WDFW 2016). The juxtaposition of these habitats within agricultural areas provides a matrix of edge, cover, and forage areas for mule deer, and lands enrolled in the Conservation Reserve Program provide additional refugia (WDFW 2016). The WDFW PHS program identifies the Project area as occurring within mule deer winter range, which is a Priority Area[9] for this Priority Species. The PHS database describes the area (i.e., regular concentration area in the Project vicinity) as a productive mosaic of forests, shrub-steppe including bitterbrush,

[9] Species are often considered a priority only within known limiting habitats (e.g., breeding areas) or within areas that support a relatively high number of individuals (e.g., regular concentrations). These important areas are identified in the PHS List under the heading Priority Area. For example, great blue herons are often found feeding along shorelines, but they are considered a priority only in areas used for breeding. If limiting habitats are not known, or if a species is so rare that any occurrence is important in land use decisions, then the Priority Area is described as any occurrence. Priority Areas include (but are not limited to) areas of "Regular Concentration," defined as areas that are commonly or traditionally used by a group of animals on a seasonal or year-round basis (WDFW 2008).

	riparian zones and winter wheat providing habitat for 200 to 300 mule deer (WDFW 2021a). The most comprehensive data for mule deer habitat and likely movement corridors are available through the Washington Connected Landscapes Project. The Washington Connected Landscapes Project modeled mule deer habitat, HCAs, and movement corridors between habitats in an effort to understand habitat connectivity and inform conservation opportunities in the Columbia Plateau Ecoregion (WHCWG 2012). Mule deer habitat is modeled as low-quality in the northeastern and western portions of the Project area in areas associated with existing roads, as well as in areas associated with agriculture along the eastern portion of the Solar Array Micrositing Area and along the Gen-tie Micrositing Corridor. Mule deer habitat quality then transitions to medium and high-quality habitat in the western portion of the Solar Array Micrositing Area and along the Gen-tie Micrositing Corridor in areas associated with shrub-steppe, talus, and the edges of agricultural fields, with the highest quality habitat associated with shrub-steppe and draws along the Gen-tie Micrositing Corridor and where the Gen-tie Micrositing Corridor meets the Solar Array Micrositing Area (WHCWG 2012). There is an HCA on the eastern portion of Badger Mountain that extends east along the Moses Coulee; this HCA is approximately 6 miles east of the Project at its closest location. The Project is located between this HCA and another HCA to the west, across the Columbia River, in the Entiat Mountains in Chelan County. Modeling shows that the Project is located within an area that generally provides connectivity between these two HCAs, with the most likely movement corridor being approximately 3 miles north of the Project at its closest location (WHCWG 2012). However, the Project does not overlap with this mule deer least-cost pathway, or any other least-cost pathways mapped by WHCWG (2012). Tetra Tech additionally reviewed the Arid Lands Initiative Spatial Conservation Priorities report (ALI 2014) to identify Priority Core Areas (i.e., set of noncontiguous polygons of various sizes selected by modeling where local protection and restoration actions can best contribute to the ALI's overall goals) or WHCWG High Priority Linkages (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]) that overlap with the Project area (ALI 2014). There are no Priority Core Areas or High Priority Linkages that overlap with the Project area (ALI 2014). A Priority Linkage Area with medium-high linkage centrality (i.e., not identified in ALI [2014] as an ALI Priority Area or WHCWG High Priority Linkage) runs northwest-southeast through the western portion of the Solar Array Micrositing Area, associated with the talus slope and shrub-steppe primarily west of the Solar Array Micrositing Area and the eastern end of the Gen-tie Micrositing Corridor (Great Northern Landscape Conservation Cooperative 2015).

	The Project area is within the Pacific Flyway, which is a broad band that runs through a large area of the United States, stretching between the Pacific Ocean and the Rocky Mountains (USFWS 2021b). Most birds that move along the Pacific Flyway during fall migration travel from Alaska and Canada, through the western states, eventually reaching the tropics of South America via Baja California and western Mexico (USFWS 2021b). The Project contains stopover habitat (i.e., habitat where migratory species may stop to rest, drink, and refuel) for raptors, songbirds, waterfowl, and shorebirds in the form of cropland with much smaller areas of shrub-steppe habitat. Riparian, wetland, and forest stopover habitat is absent from the Project 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 4.16a of this ASC, existing ambient sound levels are expected to range between 35 and 55 A-weighted decibels (dBA) equivalent sound level (L_{eq}) during daytime hours and 25 and 45 dBA L_{eq} during nighttime hours at the Project area (Attachment O). The Project area does not currently contain stationary sources of light or glare.

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 4.8, the Project will generally result in three types of impacts to habitat (temporary, altered, and permanent) where Project construction and operations will occur. Table 4.8-2 in Part 4, Section 4.8 lists the estimated acres of temporary, altered, and permanent impacts to habitat types from Project construction and operation based on the current Project design (Attachment A, Figure A-1). 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

		Solar Array Micrositing Area or Gen-tie Micrositing Corridor up to the Project area acreage identified in Table 4.8-1 (see also Attachment G). 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., that is able to pass over, under, or through the perimeter fence), retaining value to wildlife as described in the Draft Wildlife Habitat Management and Mitigation Plan (Attachment M; Beatty et al. 2017, DeVault et al. 2014, H.T. Harvey and Associates 2015, Hassanpour Adeh et al. 2018, Sinha et al. 2018, Visser et al. 2018). The Applicant would consider raising the bottom of the fence 4 inches above the ground to allow small animals (e.g., small mammals) to pass more easily under the fence. The temporary, permanent, and altered habitat impacts and associated Project mitigation needs are identified in Attachment M and may be adjusted in coordination with EFSEC and with input from WDFW. See Part 4, Section 4.9.D and the Draft Wildlife Habitat Management and Mitigation Plan (Attachment M). 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 (i.e., solar array posts, inverter and transformer pads, service roads, O&M building area, collector substation area, switchyard area, optional BESS area, perimeter fence, and overhead 230-kV gen-tie line poles) will create marginal additional habitat loss and fragmentation on the landscape. However, climate change poses a significant, long-term threat to wildlife and habitat in Washington (WDFW 2015), and development of the Project will help Washington state meet its carbon emission reduction goals (e.g., under the 2019 Clean Energy Transformation Act) which will ultimately benefit wildlife and habitat.
	Special Status Species	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. Talus slopes will be avoided by a minimum of 50 feet, and as a result no impacts are expected to this

		Priority Habitat, thus minimizing impacts to special status species associated with this habitat type. Furthermore, impacts to shrub-steppe, including dwarf shrub-steppe, have been avoided and minimized to the extent feasible, thus minimizing impacts to special status species associated with this Priority Habitat type (e.g., ferruginous hawk, greater sage-grouse, Brewer's sparrow, sage thrasher, and mule deer). 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., golden eagle and ferruginous hawk) will experience loss of foraging habitat as a result of the Project. No individuals or sign of greater sage-grouse or Washington ground squirrel were observed during Project surveys and thus potential impacts to these species are likely minimal, limited primarily to the loss and alteration of suitable habitat. That loss and alteration of shrub-steppe habitat as well as open but degraded habitats adjacent to shrub-steppe could result in loss of potentially suitable seasonal habitat for greater sage-grouse. Project service roads could have a negative impact on greater sage-grouse (if present) by causing mortality through collisions with vehicles, and the overhead gen-tie line could cause greater sage-grouse mortality through collisions as well as by providing perch sites for raptors and corvids which prey on grouse and their nests (WHCWG 2012). Additionally, data from Holloran and Anderson (2005) suggest that adverse greater sage-grouse responses to industrial development may be observed between 3.1 miles and 6.2 miles from a lek. Recent state wildlife agency methodologies for calculating indirect effects on sage-grouse from solar developments suggest such adverse effects may be limited to a narrower geographic extent: 0.62 mile in Nevada (State of Nevada 2020) and 2.0 miles in Oregon (State of Oregon 2019). Based on WDFW's indications that a lek is located approximately 5 miles from the Project area, it is possible that some adverse effects may occur as a result of the Project. However, based on the distance from the nearest lek and the fact that the Project is located outside any HCAs, the risk of potential impact to greater sage-grouse is limited. Similarly, the Project will result in the loss and alteration of some suitable WAGS habitat, including loss and alteration of shrub-steppe habitat that has supported WAGS historically, and loss and alteration of habitat within an HCA modeled by

		WHCWG (2012). However, the vast majority of Project impacts will be on agricultural land, which is not suitable habitat for this species. The majority of impacts on higher quality habitat (i.e., based on habitat values and the HCA mapped by WHCWG [2012] and soil suitability observed during surveys) will occur along the Gen-tie Micrositing Corridor. If present, this species may experience slightly increased raptor predation pressure as a result of increased perching and nesting structures provided by the overhead gen-tie line; however, this effect does not appear to be large enough to cause long-term effects resulting in abandonment of ground squirrel colonies as thriving colonies have been found adjacent to and under existing transmission lines (Tetra Tech 2011, 2014; WEST 2020). Therefore, based on the absence of currently occupied WAGS colonies within the Project area and the nature of impacts to the remaining suitable habitat within the Project area, impacts on this state candidate species are expected to be minimal. In the unlikely event that a Townsend's big-eared bat maternity colony is present within one of the abandoned buildings mapped during Project surveys, the bats may experience disturbance (e.g., from noise) during construction and may abandon the site. Similarly, if pallid bats are roosting within the talus slopes west of the Solar Array Micrositing Area, these bats could experience some disturbance during construction. The abandoned buildings and talus slopes will be avoided by Project components and thus these potential roosting habitats will not be removed during Project construction. Vegetation removal during construction may remove potential foraging habitat for Townsend's big-eared bat and other bat species (e.g., pallid bat and spotted bat), but any such reduction is not expected to significantly limit food supply for any bats occurring in the area. Post-construction bat mortality data from utility-scale photovoltaic solar energy sites are limited; however, three publicly available studies from California sites have reported small numbers of bat carcasses found both during fatality searches as well as incidentally (WEST 2017), indicating that direct bat fatalities from the Project are likely to be limited. Federally listed wildlife species are not anticipated to occur within the Project area, and the Project does not contain USFWS-designated critical habitat for any species (Attachment G).
	Raptor Nests	One occupied golden eagle territory with active nests documented during Project surveys occurs within 1.0 mile of the Project area: eagle territory W2 contained active, occupied nests in 2019, 2020, and 2021, located approximately 500 feet

		west of the Solar Array Micrositing Area on the steep basalt cliffs outside the Project area (Attachment L). If this territory is occupied during construction, eagles associated with these nests could experience disturbance, particularly early in the breeding season during courtship, nest building, incubation, and brooding. Given the close proximity of the nest to the Project there is some potential for disturbance as a result of construction activity; however, the fact that the nest location on the cliff below the Solar Array Micrositing Area has no line of sight to the Project may minimize this disturbance. Eagles within this territory could also experience a loss of foraging habitat if prey species are reduced within the home range associated with this territory as a result of the Project (Watson et al. 2014). However, the vast majority of the habitat that will be impacted by the Project is agricultural land, which typically provides limited forage value to golden eagles given the low prey availability in agricultural lands. Additionally, the Project will avoid impacts on the talus slope (associated with the cliff nests) by at least 50 feet, limiting impacts to the ridgeline and shrub-steppe immediately adjacent to the ridge that likely supports prey species. Although eagle use data are not available for this territory, the open, uncultivated habitat south and west of the nests (which will not be impacted by the Project) likely serve as the primary foraging habitat for eagles within this territory. The Applicant will continue to coordinate with the USFWS regarding the need for an eagle take permit under the Bald and Golden Eagle Protection Act, including any applicable avoidance, minimization, and mitigation measures. One active non-eagle raptor nest was documented within 0.5 mile of the Project during surveys: a red-tailed hawk nest located approximately 0.25 mile from the Solar Array Micrositing Area (Attachment G). Even if this nest is occupied during construction, impacts from disturbance are not anticipated given this species' tolerance of human activity (Preston and Beane 2020).
	Fish and Wildlife Habitat Conservation Area	Impacts on terrestrial fish and wildlife habitat conservation areas (i.e., talus slopes) were avoided during Project design. Impacts on aquatic fish and wildlife habitat conservation areas (i.e., waters of the state) are discussed in Part 4, Section 4.3.
	Wildlife Migration Routes	The majority of the Solar Array Micrositing Area (i.e., 89 percent) is sited in agricultural areas that provide limited habitat value to mule deer and contribute moderately to resistance of movement (i.e., similar to a local road [WHCWG 2012]). Development of the Project's perimeter fence will result in the area having no habitat value for mule deer (i.e., excluding them from the fenced area) and creating an impassable barrier to mule deer movement. However, no known high-quality deer migration routes or HCAs will be

		impacted by the Project. Additionally, the Project's avoidance of talus slopes on the west side of the Solar Array Micrositing Area by a minimum of 50 feet will allow deer to continue to use the shrub-steppe in this area and travel around the Project's perimeter fence. Elk will be impacted similarly; further, the lack of elk use and efforts to keep elk from establishing herds in Douglas County indicates these impacts will be even more minimal. The Project will not have impacts on the Priority Core Areas or WHCWG High Priority Linkages mapped by ALI (2014). The Project will impact portions of the Priority Linkage Area with medium-high linkage centrality that runs northwest-southeast through the western portion of the Solar Array Micrositing Area and the eastern end of the Gen-tie Micrositing Corridor (Great Northern Landscape Conservation Cooperative 2015); however, impacts from the Project's perimeter fence will occur primarily east of this general area, thus preserving the linkage along and below (to the west of) the talus slope that will be avoided by the Project. Additionally, Priority Linkages are mapped using coarse-scale 500-acre hexagons intended to be used as tools for additional local-scale evaluation. As the majority of the Solar Array Micrositing Area (i.e., 76 percent) and proposed solar arrays are located outside the Priority Linkage Area mapped by Great Northern Landscape Conservation Cooperative (2015) associated with talus slope, and the solar arrays that do overlap with the Priority Linkage Area do not substantially encroach on the Priority Linkage Area, the solar array fence line will not impede species movement or reduce habitat connectivity within the modeled landscape-scale Linkage Area.
	Noise, Light, and Glare	As described in Part 4, Section 4.16a, the Project is not expected to have significant noise impacts during operations. Human activity and noise will be limited to occasional maintenance activities and is not expected to impact wildlife. 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 O. These noise levels could disturb wildlife, if present in the Project vicinity, within the anticipated 18-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 4.16a and Attachment O). 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 4.16a. Although wildlife species are susceptible to noise disturbances caused by humans and construction equipment, the BMPs listed in Part 4, Section 4.16a will limit these impacts. Evening lighting may be used for periodic work at the O&M building and collector substation during construction and operations. However, lighting at the Project will be generally limited to security lighting; unnecessary lighting would be turned off at night to limit attraction of migratory birds. This includes using lights with timed shutoff, downward-directed lighting to minimize horizontal or skyward illumination, and avoidance of steady-burning, high-intensity lights. 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, Walston et al. 2015). Kosciuch et al. (2020) reviewed bird fatality data from 10 PV solar facilities in the southwestern U.S.; 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 (i.e., there were relatively more) 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., no or relatively few birds in these groups were detected). Notably, for the one study facility located in the same Bird Conservation Region as the Project area, no contribution was 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.

	Risk of collision by avian species	Avian collision with solar modules and associated Project components such as buildings and the gen-tie line located at the Project area is possible, although 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 power tower 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 the Southwestern U.S. 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 during 1 year of standardized searches, consisting of a horned lark and a dark-eyed junco (ODOE 2020). These results are the first for the region and suggest that low numbers of fatalities of common ground-dwelling bird species could occur at PV solar facilities in the region, but that large fatality events are unlikely (ODOE 2020).
	Hazardous or toxic spills	As demonstrated in Part 4, Section 4.13, 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.

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 documented three WDFW Priority Habitats during surveys conducted for the Project in 2021: shrub-steppe, dwarf shrub-steppe, and talus. Based on the results of surveys, the Applicant adjusted the Project to minimize impacts to shrub-steppe and dwarf shrub-steppe, and avoid impacts to talus by a

		minimum of 50 feet. The Applicant will continue to avoid all impacts to talus during final design as well as minimize impacts to shrub-steppe and dwarf shrub-steppe as feasible.
	Raptor Nests	The Applicant documented consistent use of eagle territory W2 during 3 years of Project surveys (2019-2021; see Attachment L). Based on ongoing coordination with USFWS, the Applicant may implement additional avoidance and minimization measures to limit disturbance to nests within this territory, if determined to be occupied during construction, based on the results of pre-construction surveys.

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 WDFW prior to conducting surveys in 2021, and used the feedback obtained during this meeting to inform surveys and this assessment of impacts. As described above, the Applicant avoided talus slopes (i.e., a Priority Habitat) by a minimum of 50 feet, in compliance with DCC 19.18C.050(B)(2) and minimized impacts to shrub-steppe habitat to the extent feasible. Additionally, the Project is sited primarily on agricultural land, which minimizes impacts to wildlife and habitat. To minimize impacts to small mammals and other small animals, the Applicant would consider raising the fence 4 inches above grade to allow animals to pass through the fence and use the area inside the Project's perimeter fence. Additionally, during operations, the Applicant will limit mowing during the bird nesting season as feasible, to avoid impacts to nesting birds. The Applicant is also considering allowing alternative methods of vegetation maintenance under solar modules such as	WDFW

		sheep grazing, as feasible based on compatibility with final Project design and property owner interest.	
	Construction and Operations BMPs	Unnecessary lighting will be turned off at night to limit attraction of migratory birds. This includes using lights with timed shutoff, downward-directed lighting to minimize horizontal or skyward illumination, and avoidance of steady-burning, high-intensity lights. If construction occurs during the bird nesting season, nest clearance surveys will be conducted prior to site disturbance, as feasible. The Project's Gen-tie line will be designed and constructed to minimize avian electrocution, according to guidelines outlined in Avian Power Line Interaction Committee standards (APLIC 2012). 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 the resources. Construction personnel will be trained in the following areas when appropriate: awareness of biological resources, including Priority Habitats and special status bird species, potential bird nesting areas, potential bat roosting/breeding habitat, and general wildlife issues. The Applicant will prepare an ESCP which would include 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 SPCC Plans to be implemented during	WDFW

		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. Vehicle speeds will be limited to 25 mph 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. Fire hazards from vehicles and human activities will be reduced via use of spark arrestors on power equipment, avoiding driving vehicles off roads, allowing smoking in designated areas only 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 with the Douglas County Fire Marshal. Following decommissioning, reclamation of the Project area will begin as quickly as possible to reduce the likelihood of ecological resource impacts in disturbed areas.	
	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 request input from WDFW and EFSEC to determine appropriate compensatory mitigation. The Applicant has prepared a Draft Wildlife Habitat Management and Mitigation Plan (Attachment M), which provides a framework for determining the compensatory mitigation required to achieve “no net loss.” The Applicant plans to begin meeting with WDFW and EFSEC within 15 business days of the submission of this ASC aimed at conclusion of the discussion within 90 days of the first meeting and prior to completion of SEPA review. Once determined, the agreed-upon mitigation will be provided to EFSEC as supplemental information in the form of	WDFW

		a Final Wildlife Habitat Management and Mitigation Plan 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	

4.9.F References

ALI (Arid Lands Initiative). 2014. Spatial Conservation Priorities in the Columbia Plateau Ecoregion: Methods and data used to identify collaborative conservation priority areas for the Arid Lands Initiative. Available at https://www.sciencebase.gov/catalog/folder/52050595e4b0403aa6262c64

APLIC (Avian Power Line Interaction Committee). 2012. Reducing Avian Collisions with Power Lines: The State of the Art in 2012. Edison Electric Institute and APLIC, Washington D.C.

Beatty, B., J. Mcknick, J. McCall, G. Braus, and D. Buckner. 2017. Native Vegetation Performance under a Solar PV Array at the National Wind Technology Center. Technical Report NREL/TP-1900-66218. National Renewable Energy Laboratory. Golden, Colorado.

Betts, B.J. 1990. Geographical distribution and habitat preferences of Washington ground squirrels (*Spermophilus washingtoni*). *Northwestern Naturalist* 71:27-37.

DeVault, T. L., T. W. Seamans, J. A. Schmidt, J. L. Belant, and B. F. Blackwell. 2014. Bird use of solar photovoltaic installations at US airports: Implications for aviation safety. *Landscape and Urban Planning* 122:122–128.

DNR (Washington Department of Natural Resources). 2017. DNR Hydrography Watercourses – Forest Practcies Regulation. Dataset. Updated March 14, 2017. Available online at: https://data-wadnr.opendata.arcgis.com/datasets/816586b10c6c4954883b236f9fff208f_0/explore?location=47.465083%2C-120.179370%2C15.00

Douglas County VSP (Douglas County Voluntary Stewardship Program). 2021. Critical Areas Web Map. Available online at: https://www.arcgis.com/apps/webappviewer/index.html?id=c53b2c99e662425481a95b35ea583871 (Accessed July 2021).

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

Great Northern Landscape Conservation Cooperative. 2015. Priority Core Area (PCA) and Priority Linkage Area (PLA) geodatabase. Available online at: https://www.sciencebase.gov/catalog/item/561fdda8e4b03ee62faa90a0 (Accessed August 10, 2021).

Hassanpour Adeh, E., J. S. Selker, and C. W. Higgins. 2018. Remarkable agrivoltaic influence on soil moisture, micrometeorology and water-use efficiency. *PLOS ONE* 13(11): e0203256. https://doi.org/10.1371/journal.pone.0203256

Holloran, M.J., and S.H. Anderson. 2005. Spatial Distribution of Greater Sage-Grouse Nests in Relatively Contiguous Sagebrush Habitats. *Condor* 107:742–52

H.T. Harvey and Associates. 2015. California Valley Solar Ranch, San Luis Obispo County, California, Avian Activity Surveys Final Report, October 2011-October 2014. Prepared for: HPR II, LLC. February 2015.

Huso M. 2011. An estimator of wildlife fatality from observed carcasses. Environmetrics. 2011; 22: 318–329. https://doi.org/10.1002/env.1052

Kagan, R.A., T.C. Viner, P.W. Trail, and E.O. Espinoza. 2014. Avian Mortality at Solar Energy Facilities in Southern California: A Preliminary Analysis. National Fish and Wildlife Forensics Laboratory (NFWFL).

Kosciuch, K., D. Riser-Espinoza, M. Gerringer, and W. Erickson. 2020. A summary of bird mortality at photovoltaic utility scale solar facilities in the Southwestern U.S. *PLoS ONE* 15(4): e0232034. https://doi.org/10.1371/journal.pone.0232034

ODOE (Oregon Department of Energy). 2020. Montague Wind Power Facility - Final Order on Request for Amendment 5. September 25, 2020.

Preston, C. R. and R. D. Beane. 2020. Red-tailed Hawk (*Buteo jamaicensis*), version 1.0. In *Birds of the World* (A. F. Poole, Editor). Cornell Lab of Ornithology, Ithaca, New York. https://doi.org/10.2173/bow.rethaw.01

Sinha P., B. Hoffman, J. Sakers, and L. Althouse. 2018. Best practices in responsible land use for improving biodiversity at a utility-scale solar facility. *Case Studies in the Environment* 2(1):1–12. https://doi.org/10.1525/cse.2018.001123

State of Oregon. 2019. Oregon Sage-Grouse Habitat Quantification Tool Scientific Rationale Document. Version 2.2. Portland, OR.

State of Nevada. 2020. Department of Conservation and Natural Resources. Sagebrush Ecosystem Program. 2020. Nevada Habitat Quantification Tool Scientific Methods Document v1.6. Prepared by Environmental Incentives, LLC and EcoMetrix Solutions Group, LLC, South Lake Tahoe, CA

StreamNet. 2021. StreamNet Mapper: Fish Data for the Northwest. Available online at: https://www.arcgis.com/apps/webappviewer/index.html?id=3be91b0a32a9488a901c3885bbfc2b0b (Accessed in June 2021).

Tetra Tech (Tetra Tech, Inc.). 2011. Cascade Crossing Transmission Project, 2011 Washington Ground Squirrel Survey Report. Prepared for: Portland General Electric Company. October 2011.

Tetra Tech. 2014. Boardman to Hemingway Transmission Line Project, 2014 Washington Ground Squirrel Surveys. Prepared for: Idaho Power Company. June 2014.

U.S. Census Bureau. 2020. Population and Housing Unit Estimates Datasets. Retrieved from http://www.census.gov/lprograms-suurveys/popest/data/data-sets.html

USFWS (U.S. Fish and Wildlife Service). 2013. Greater Sage-grouse (*Centrocercus urophasianus*) Conservation Objectives: Final Report. U.S. Fish and Wildlife Service, Denver, CO. February 2013.

USFWS. 2021a. Birds of Conservation Concern 2021. United States Department of Interior, Fish and Wildlife Service, Division of Migratory Bird Management, Arlington, Virginia. Available online at: https://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php

USFWS. 2021b. Flyways. USFWS Migratory Bird Program. Flyway Boundaries Map. Available online at: https://www.fws.gov/birds/management/flyways.php (Accessed January 18, 2021).

Visser, E., V. Perlod, S. Ralston-Paton, A.C. Cardenal, and P.G. Ryan. 2018. Assessing the impacts of a utility-scale photovoltaic solar energy facility on birds in the Northern Cape, South Africa. *Renewable Energy* 133:1285-1294.

Walston, L., K. Rollins, K. LaGory, K. Smith, S. Meyers. 2016. A preliminary assessment of avian mortality at utility-scale solar energy facilities in the United States. *Renewable Energy* 92:405-414. https://doi.org/10.1016/j.renene.2016.02.041

Watson, J., A. Duff, and R. Davies. 2014. Home range and resource selection by GPS-monitored adult Golden Eagles in the Columbia Plateau Ecoregion: implications for wind power development. *Journal of Wildlife Management* 78:1012–1021.

WDFW (Washington Department of Fish and Wildlife). 2004. Management Recommendations for Washington's Priority Species, Volume V: Mammals, Interim. Olympia, Washington. 76pp.

WDFW. 2008. Priority Habitats and Species List. August 2008, Updated February 2021. Available online at: https://wdfw.wa.gov/species-habitats/at-risk/phs/list (Accessed May 2021).

WDFW. 2009. Washington Department of Fish and Wildlife Wind Power Guidelines. Olympia, WA. 30 pp.

WDFW. 2015. Washington's State Wildlife Action Plan: 2015 Update. Washington Department of Fish and Wildlife, Olympia, Washington.

WDFW. 2016. Washington State Mule Deer Management Plan, Wildlife Program, Washington Department of Fish and Wildlife, Olympia, WA, USA. 144p.

WDFW. 2019. District 7 Hunting Prospects, Chelan and Douglas counties. Available online at: https://wdfw.wa.gov/sites/default/files/publications/02103/district_7_hunting_prospects_2019.pdf

WDFW. 2020. Wildlife Program – Bi-weekly Report. March 1 to 15, 2020. Available online at: https://wdfw.wa.gov/sites/default/files/2020-04/wildlife-report-march_1-15_2020.pdf

WDFW. 2021a. Priority Habitats and Species database query results. Provided by WDFW April 1, 2021.

WDFW. 2021b. Townsend's big-eared bat (*Corynorhinus townsendii*). Available online at: https://wdfw.wa.gov/species-habitats/species/corynorhinus-townsendii#conservation (Accessed August 6, 2021).

WDFW. 2021c. Spotted Bat (*Euderma maculatum*). Available online at: https://wdfw.wa.gov/species-habitats/species/euderma-maculatum#desc-range (Accessed August 6, 2021).

WDFW.2021d. 2021 PHS Distribution by County Spreadsheet. Available online at: https://wdfw.wa.gov/publications/00165 (Accessed May 2021).

WEST (Western Ecosystems Technology, Inc). 2017. Bird and Bat Conservation Strategy for the Palen Solar Photovoltaic Project, Riverside County, California. Prepared for Palen Solar III, LLC. August 21, 2017.

WEST. 2020. Tier 3 Wildlife Survey Report, Goose Prairie Solar Project, Yakima County, Washington. Final Draft. Prepared for OneEnergy Development LLC, Seattle, Washington. Prepared by WEST, Corvallis, Oregon. September. 21 pages + appendices.

WHCWG (Washington Wildlife Habitat Connectivity Working Group). 2012. Washington Connected Landscapes Project: Analysis of the Columbia Plateau Ecoregion. Washington's Department of Fish and Wildlife, and Department of Transportation, Olympia, WA.

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
No studies have been conducted or are proposed specific to hazardous materials.			

☒ 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 Project area contains a mix of dryland agricultural use, rangeland for low-intensity grazing, and undeveloped areas (see Part 4, Section 4.14). Based on available historical aerial imagery, the land use in the Project area has been consistent with current conditions for at least the past 30 years (Google Earth Pro 2021). As a result, historical use of organic and inorganic fertilizers, pesticides, or herbicides has likely occurred in these agricultural production areas. No irrigation systems are present in the Project area, and there is no evidence that fertilizers were applied through irrigation systems or stored in the Project area. If used, application of fertilizers, pesticides, and herbicides is presumed 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 dryland wheat agricultural operations. 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. 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 Project area.

Existing infrastructure	Four existing aboveground high-voltage electrical transmission lines traverse the Project area from east to west, intersecting with Badger Mountain Road: 1) White River (WA) to Rocky Reach (230 kV), 2) Rocky Reach to Maple Valley (345 kV), 3) Rocky Reach to Columbia (230 kV), and 4) Sickler to Shultz (500 kV). One groundwater well is located within the Solar Array Micrositing Area (Water Right Record G4-137408CL), with an identified purpose for stockwater (Ecology 2021). No irrigated cropland occurs within the Project area and no irrigation infrastructure is present on or serves the Project area. No underground hazardous liquid (e.g., petroleum) or natural gas transmission pipelines are located within the Project area or on surrounding properties (PHMSA 2021).
Risk of Fire or Explosion	The Project area is located predominantly on vacant, undeveloped land that has been used for dryland agricultural production and grazing. No petroleum products or other flammable/explosive substances are stored within the Project area, nor are there any residences located within the Project area. Wildland grass fires are the greatest existing fire risk in the vicinity of the Project area. In July 2021, the Batterman Road fire burned just over 14,000 acres outside East Wenatchee, directly southeast of the Project area (InciWeb 2021; NWCC 2021).
Emergency Plans and Services	In 2013, the Douglas County Community Wildfire Protection Plan Steering Committee (DCCWPPSC) developed a Community Wildfire Protection Plan (CWPP) that identifies strategies and priorities for protecting people, property, and infrastructure such as the Project. The CWPP identifies U.S. Highway 2 and State Route (SR) 28 as primary emergency access routes near the Project area (DCCWPPSC 2013).

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 Project area but will not be stored in the Project 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 Spill Prevention, Control, and Countermeasure Rule issued in 2006 (EPA-550-F-06-008). 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 Project 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, back-up power is planned to be supplied for the Project by two on-site liquid petroleum gas generators that will each include a 1,000-gallon tank. Such back-up generators are a commonly used method to reduce potential power disruptions. The generators will be installed by a licensed contractor and operated in conformance with the Project's SPCC Plan and all applicable regulations, which may include secondary containment to ensure no ground contamination in the event of a leak. Replacement of Project generators or replenishment of fuel will also be handled by a licensed contractor in compliance with all applicable regulations and best practices, which will be detailed in the SPCC Plan. Alternatively, or if needed for redundancy to the back-up generators, additional hazardous materials may be involved during Project operations if lead-acid batteries are used as a backup uninterruptible power supply system (i.e., a small-scale system typically housed in an O&M control room related to general Project power needs, separate from the proposed optional BESS). 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 (EPCRA) report to local emergency service providers. Lead-acid batteries will be replaced at least every 5 years, if not earlier, 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	Two types of fire risks might affect the Project: 1) fires that are caused by Project-related activities, and 2) fires that start outside of the Project area and spread to the Project site. 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 the SPCC Plan, applicable regulations, and best practices during both construction and operation of the Project. Therefore, fuel use and storage associated with the Project will not pose a significant increased risk of fire or explosion. 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 or flow batteries contained in the optional BESS. The Applicant will monitor wildfire activity during Project construction and operations; comply with the CWPP; 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 to 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. The two types of systems being considered for the optional BESS have different types of risk and corresponding control needs. Flow batteries contain an electrolyte solution in tanks, which will be secondarily encased in a steel storage container. The electrolyte solution is not considered an extremely hazardous material or a fire risk, and the secondary steel storage container will contain a leak in the unlikely event a leak were to occur. Lithium-ion batteries contain flammable liquids that can become hot during operation. To ensure safe handling, however, these batteries contain individual, hermetically-sealed cells, which do not have any waste discharges, and will not be opened

		in the Project area for installation or maintenance purposes. In addition, each lithium-ion BESS will contain a fire suppression system that complies with National Fire Protection Association (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 lithium-ion BESS components will be done in compliance with 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.
	Existing Infrastructure	The Project area contains one groundwater well for stock water, which will not be affected by the Project. As 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 a 230-kV gen-tie line, which will connect to existing transmission lines. Proposed subsurface infrastructure will not contain hazardous materials or pose significant fire risk. No changes will occur to existing transmission lines.
	Emergency Plans and Services	The emergency access routes identified by the CWPP on U.S. Highway 2 and SR 28 offer community fire-escape options outside the Project area. Project construction and operations will not obstruct access to these fire-escape routes.

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

Response: The existing agricultural use of the Project 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 Project 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	Prior to Project construction and operations, the Applicant will develop an Emergency Management Plan to address worker health and safety, standards concerning potential release of hazardous materials, and fire prevention and control. This plan will provide 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. Specifically, the plan will be developed with input from and in coordination with the Douglas County Sheriff's Department Division of Emergency Management and the Douglas County Fire District No. 2. 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 §173.185m which regulates the transportation of lithium-ion batteries. • 49 CFR §173.159, which regulates the transportation of lead-acid batteries. • International Fire Code	Douglas County Sherriff's Department Division of Emergency Management Douglas County Fire District No. 2

	BMPs – Fire Prevention	To minimize the risk of fire or explosions, the Project will implement BMPs to be detailed in the Emergency Management Plan noted above. Typical BMPs will include, but are not limited to: • 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; and • Prevent and control potential fires inside the Project area with trained staff who have 24-hour access to the site.	Douglas County Fire District No. 2
	Optional BESS design	The optional BESS would contain a fire suppression and detection system in accordance with fire code and NFPA Standards, specifically NFPA 855 “Standard for the Installation of	Douglas County Fire District No. 2

		Stationary Energy Storage Systems." The system will include monitoring equipment and alarm systems with remote shut-off capabilities.	
	CSWGP, SWPPP, and ESCP	As described in Part 4, Section 4.5, 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 assure compliance with state and federal water quality standards. Applicable laws/codes include: • RCW 90.48, establishes general stormwater permits for Ecology under the Water Pollution Control Act • WAC 173-201A, Water Quality Standards for Surface Waters of the State of Washington • Clean Water Act (33 United States Code 1251)	Ecology
	SPCC Plan	The Applicant will prepare an SPCC Plan, consistent with requirements of 40 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 risks to water quality.	Ecology
	Use of approved herbicides	In compliance with RCW 17.10.140, the Applicant will only use herbicides that are approved for use in the state of Washington by the EPA.	EPA and the Douglas County Weed Management Task Force

Response: 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 Emergency Management Plan. 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

DCCWPPSC (Douglas County Community Wildfire Protection Plan Steering Committee) 2013. Douglas County , WA Community Wildfire Protection Plan. Available online at: https://www.dnr.wa.gov/publications/rp_burn_cwpp_douglascounty.pdf

Ecology (Washington Department of Ecology). 2021. Water Rights Map Search. Available online at: https://appswr.ecology.wa.gov/waterrighttrackingsystem/WaterRights/Map/WaterResourcesExplorer.aspx. Accessed June 2021.

Google Earth Pro. 2021. Historical Imagery 1985 to 2017. Google Earth Pro 7.3.1.4507. Google Inc. Mountain View, CA.

InciWeb. 2021. Incident Information System. Batterman Rd. 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 at: https://inciweb.nwcg.gov/incident/7603/.

NWCC (Northwest Interagency Coordination Center) Northwest Large Fire Interactive Web Map. Available at: https://gacc.nifc.gov/nwcc/information/firemap.aspx. Accessed July 2021.

PHMSA (Pipeline and Hazardous Materials Safety Administration). 2021. Public Map Viewer, National Pipeline Mapping System. U.S. Department of Transportation PHMSA. Available at: https://pvnpms.phmsa.dot.gov/PublicViewer/. Accessed July 2021.

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 Douglas County's applicable land use regulations. The Land Use Consistency Review (see Attachment D) provides cross-references to these studies where applicable for demonstrating 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 Project Lease Boundary includes 23 assessor parcels, 21 of which are in private ownership (see Part 1, Section A.4 for a table identifying Project properties, including legal description). The two non-private parcels are owned by DNR, located in the northernmost portion of the Project area (see Attachment A, Figure A-1). The DNR land represents approximately 20 percent (476 acres) of the Project area.
Existing Land Use	The Project area is currently in a mix of dryland agricultural use, rangeland for low-intensity grazing, and undeveloped Land. Based on spatial data from the Washington State Department of Agriculture (WSDA), the dryland agricultural portion of the Project area includes approximately 965.7 acres of wheat (40 percent of Project area), 1,103.4 acres of fallow wheat (46 percent), and 12.5 acres[10] (0.5 percent) shown as mapped in the U.S. Department of Agriculture Conservation Reserve Program (CRP) (WSDA 2020). Detailed information regarding the identified acres' enrollment in the CRP, including the expiration date, is not known at this time. No irrigated cropland occurs within the Project area and no irrigation

[10] Lands enrolled in the CRP are located near the Option 2 POI.

	infrastructure serves the Project area. One groundwater well is within the Solar Array Micrositing Area (Water Right Record G4-137408CL), with an identified purpose for stockwater (Ecology 2021). Based on available historical aerial imagery, the Project area's land use has been consistent with current conditions for at least the past 30 years (Google Earth Pro 2021). The Project area is crossed by County roads including the paved Badger Mountain Road, a rural major collector, and other unpaved local County roads such as U 75 Road, 9 Road SW, and Road U SW, which occur within the Solar Array Micrositing Area but will not be located within the Project's development footprint. Four regional transmission lines traverse the Project area, including Puget Sound Energy's (PSE) White River to Rocky Reach 230-kV line and three BPA lines: Rocky Reach to Maple Valley 345 kV, Rocky Reach to Columbia 230 kV, and Sickler to Schultz 500 kV. Minimal agricultural-related structures (e.g., storage sheds, etc.) occur interspersed in the Project area. No residences are located within the Project area. Adjacent land uses surrounding the Project area include dryland agriculture, rangeland, undeveloped land, local roads, electrical infrastructure (e.g., transmission and distribution lines, and the Douglas County Public Utility District Michael Doneen Substation), scattered rural residential development, and a residential subdivision (located west of the Gen-tie Micrositing Corridor). In addition, one parcel of an ACEC managed by the U.S. Bureau of Land Management (BLM), the Rock Island Canyon ACEC, is located to the south/west of the Project area and consists primarily of inaccessible talus slopes (see Part 3, Section 3.17). Regarding nearby residential use, the closest developed residential community (i.e., Canyon Hills subdivision) is adjacent to the western end of the Project area (near the Option 1 POI within the Gen-tie Micrositing Corridor) in East Wenatchee. Within the subdivision, the closest residence is approximately 280 feet west of the Project area's edge; however, the subdivision is approximately 2.5 miles or more from the Solar Array Micrositing Area, which is located upslope from the community (approximately 2,000 feet higher elevation). Scattered rural residences occur near the Solar Array Micrositing Area; the closest residence to the Solar Array Micrositing Area is approximately 900 feet north of the Project area (east of Road U SW and south of 9 Road SW).
Electrical generation capacity/service	There is no current electrical generation service within the Project area. As noted above, four existing regional transmission lines (operated by PSE and BPA) traverse the Project area.

Douglas County Comprehensive Plan Designation	Approximately 88 percent (2,111 acres) of the Project area is designated as Resource Lands - Dryland Agriculture, and the remaining 12 percent (279 acres) is designated as Rural Lands - Rural Resource 20, under the Douglas County Comprehensive Plan (DCCP; Douglas County 2019). • The Resource Lands - Dryland Agriculture designation is intended generally for non-irrigated agricultural and other permitted land uses, and the majority of this land is found on the plateau areas of the County (Douglas County 2019). • Rural Lands are unincorporated areas not designated as resource lands. Land in Rural Resource 20 is generally located adjacent to agricultural lands, and has limited opportunities for development due to lack of infrastructure, public services, and other site constraints (Douglas County 2019).
Douglas County Zoning District	Douglas County's zoning districts implement the DCCP land use designations. The Project area is within the A-D and RR-20 zoning districts, outside of the urban growth area boundary (see Attachment A, Figure A-6). The portion of the Project area in each zone corresponds to the DCCP designations: 88 percent (2,111 acres) in the A-D zone and 12 percent (279 acres) in the RR-20 zone. The Douglas County solar energy generation facility development standards have been in a state of flux since the Applicant began efforts to develop the Project. In 2017 when the Applicant began to complete lease agreements with local property owners, and in 2018 when the Applicant first engaged with the County to permit the Project locally, solar energy generation facilities were allowed in the A-D and RR-20 zoning districts as a conditionally permitted use per DCC 18.80.320 (2018), with no specific buffers or other additional overlay requirements. The Applicant submitted its initial Master Land Use Application in May 2020, pursuant to the 2018 DCC. On September 14, 2020, the County sent a Notice of Incomplete Application citing a lack of certain ancillary structure site plans and property owner signatures. The next day on September 15, 2020, the County passed Resolution No. TLS 20-45A and Ordinance No. TLS No. 20-05-45B, establishing a moratorium under which "no application for a land use …[or] other development permit or approval associated with wind and solar energy farms shall be accepted as complete." That moratorium was in effect until July 20, 2021, when the County adopted Ordinance No. TLS 21-17-47B, establishing Interim Controls for the Placement and Permitting of Alternative Energy-Specific to Wind and Solar Energy Farms (referenced here as the

	"Interim Controls"). Under the Interim Controls, energy generation facilities, including solar projects, are allowed as outright *permitted* uses in both A-D and RR-20 zones; see DCC 18.40.020 and 18.31.020 (Douglas County 2021a), respectively. However, such projects are now subject to certain avoidance buffers as set forth in DCC 18.16.355 (Douglas County 2021a). Specifically, energy generation facilities as a primary use cannot be located within: • 7 miles from any urban growth boundary, city or town limit boundary, municipal airport boundary, Pangborn Airport boundary, and Pangborn Airport outer overlay zone boundary; or • 7 miles from "habitat associated with sensitive, candidate, threatened or endangered plants or wildlife as identified on state and federal list" (DCC 18.16.355.B-.C. [Douglas County 2021a]). As illustrated on Attachment A, Figure A-7 and detailed further in the Land Use Consistency Review (see Attachment D), the Interim Controls avoidance buffers cover the entire County and functionally remove all lands from consideration of alternative energy generation facility development. The Interim Controls are slated to be in effect for 12 months, ending July 20, 2022 (Ordinance TLS 21-17-47B, Sec. 3). To permanently effectuate this change, the County still must adopt Comprehensive Plan amendments and formal zoning and complete the SEPA process (see RCW 36.70A and 43.21C). As of the date of Applicant's ASC submittal to EFSEC, the County's zoning code provisions that regulate renewable energy facilities remain uncertain, incomplete and in an "interim" status, without completion of required supporting comprehensive plan revisions, and without the mandatory SEPA process needed to support changes to the zoning code. These developments are discussed further in the Land Use Consistency Review (see Attachment D). .
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."

	Douglas County completed that designation analysis and, in DCCP Section 5.2.5, designated only "irrigated agricultural land" as constituting agricultural land of long-term commercial significance. Specifically, the Commercial Agriculture - 5 and Commercial Agriculture - 10 designations (and corresponding zoning districts) are designed to "protect lands that meet the criteria for agricultural lands of long-term commercial significance and to protect the primary use of the land as agriculture and agricultural related activities" (Douglas County 2019). In contrast, the A-D and RR-20 zoning districts do not include land found to meet those criteria. There are no forest or mineral resource lands within the Project area; therefore, no natural resource lands under RCW 36.70A.030 (and RCW 36.70A.170) occur within the Project area.
Douglas County Critical Areas	As listed in Part 2, Section B.6, the Project area includes critical areas for geological hazards and fish and wildlife habitat conservation. Further details regarding the existing conditions for these critical areas are provided in Part 4, Section 4.1 and Part 4, Section 4.9, respectively.
Shoreline Master Program	There are no shorelines designated under the Douglas County Regional Shoreline Master Program (Douglas County 2021b) within the Project area.
Transportation, Utility, or Service Demands	Existing transportation conditions are discussed in Part 4, Section 4.20. Existing public service and utility conditions are discussed in Part 3, Sections 3.21 and 3.22, respectively. Where relevant for assessment of Douglas 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 Project Lease Boundary will not change as a result of the Project. To construct and operate the Project, the Applicant has executed or is pursuing an Option to Lease with each property owner.

	Changes to Land Use	With respect to functional land use changes for the useful life of the Project, an estimated 1,338 acres of the 2,390-acre Project area will be used for the Project (i.e., the sum of altered and permanent impacts detailed earlier in Part 4, Section 4.8, Table 4.8-2). The life of the Project is estimated to be at least 50 years with possible extension (see Part 2). Of the total land used, only approximately 66 acres will include roads, buildings, or other impervious surfaces (Table 4.8-2). While final Project design is anticipated to be similar to the 1,338-acre total, the Applicant is evaluating land use impacts for the full 2,390-acre Project area and requesting the flexibility to microsite the Project within that extent. 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 a condition that will allow current land uses to resume, including future agricultural use. The change in Project area use from dryland agriculture to energy generation facility will have a negligible impact on adjacent and other agricultural lands in Douglas County. The Project area that supports wheat, fallow wheat, or CRP represents a nominal portion of such lands in Douglas County, approximately 0.6 percent of the wheat, 0.6 percent of fallow wheat, and 0.01 percent of CRP land in Douglas County, per available WSDA data (WSDA 2020). The Applicant will coordinate with the property owner whose land is identified as CRP to confirm enrollment status and what, if any, agreement modifications may be needed to allow the Project prior to construction. Lease payments from the Applicant will provide a stable and increased level of revenue to Project property owners who will have dryland agricultural operations taken out of production for the life of the Project. Landowners will also be able to continue operations on lands elsewhere in the county outside of the Project; for example, the largest participating property owner in the Project will continue to use nearly 6,000 acres in Douglas County for agricultural purposes. In relation to dryland agricultural activity on the state parcels, DNR is seeking to site solar projects on State Trust Lands to generate lease revenue for public schools, with a goal of producing 500 MW of solar power on public lands by 2025 (Franz 2019). The Project's lease agreement with DNR could contribute to meeting that goal. The impact to agriculture is further limited by the fact that the Project area is neither irrigated nor classified as prime or unique farmland in its current condition (NRCS 2020). While a portion (approximately 14 percent) would be prime farmland if irrigated, no irrigation infrastructure currently exists or is planned for development by property owners.

		Per the DCCP, neither the A-D nor RR-20 designations are intended for irrigated agriculture or designated as agricultural land of long-term commercial significance (Douglas County 2019). In addition, the Applicant may also consider dual usage of the site and allow grazing in the Project area to maintain vegetation. The Project will not affect or be affected by land uses on nearby or adjacent properties, including normal business operations of working farmland. No structures will be demolished, no people will reside or work in the completed Project, and no people will be displaced by the completed Project. In summary, while the Project will entail functional land use changes within the Project area for the duration of operations, it will cause little to no functional change to adjacent and other agricultural lands in Douglas County. Also see the Land Use Consistency Review (Attachment D) for additional details regarding local land use consistency and compatibility.
	Electrical generation capacity/service	The Project will be a new source of clean, renewable energy supply for regional customers. The existing PSE and BPA electrical transmission systems for the Option 1 and Option 2 POI, respectively, have sufficient electrical capacity to support the addition of 200 MW of generating capacity without significant or cost-prohibitive upgrades. The Project will strongly support implementation of the Washington Clean Energy Transformation Act (2019), which made it current policy to transition the state's electricity supply to 100 percent carbon-neutral by 2030 and 100 percent carbon-free by 2045 (RCW 19.405.010).
	Douglas County Comprehensive Plan Designation	The Project will be consistent with the DCCP, which balances "between preserving the agricultural economy of the County and allowing for growth and development in the rural areas primarily through innovative, progressive implementation techniques," including that "[c]lean industry is promoted in rural areas that is compatible with and diversifies the economic base" (Douglas County 2019). Moreover, the DCCP maintains a flexible approach to the siting of energy facilities, contemplating that "alternative sources of energy… including wind, solar and petroleum based facilities" have been investigated in the County. The DCCP therefore recognizes that "power generating facilities may locate here in the future," that "[e]nergy facilities may vary in scope, require certain resources, or may be sensitive to land uses and infrastructure needs," and that each "type

		of facility may require different design criteria or placement criteria" (Douglas County 2019). The Land Use Consistency Review (see Attachment D) details the Project's consistency with the applicable goals and policies of the A-D and RR-20 land use designations.
	Douglas County Zoning District	The Project area will occupy a minimal portion of Douglas County's A-D and RR-20 zoning districts, i.e., approximately 0.3 and 0.1 percent of the current countywide extent of these districts, respectively (Douglas County 2021c). Under Douglas County zoning, the primary land use will become an energy generation facility-primary use, under DCC 14.98.277 (under both 2018 and 2021 versions). To aid EFSEC's review based on the recent fluctuations in the Douglas County solar facility zoning standards, this application provides a zoning analysis under each of the recent iterations of the DCC. • **Before September 2020**: The Project was allowable in the A-D and RR-20 zoning districts as a conditionally permitted use per DCC 18.80.320 (2018), with no specific buffers or other additional overlay requirements. • **From September 2020 to July 2021**: The County declined to consider the Project application while the moratorium was in effect. • **From July 2021 to present, and potentially as long as July 2022**: Under the County's Interim Controls, the Project is a permitted use in the A-D and RR-20 zoning districts per DCC 18.40.020(T) and 18.31.020(T) (2021), respectively. However, the Project area lies within 7 miles of a UGA boundary, and portions may lie within 7 miles of "habitat associated with" sensitive, candidate, threatened or endangered species (see Part 4, Section 4.9 and related discussion in Attachment D). Furthermore, DCC 18.16.355(A) now expressly states that primary energy facilities must go through the EFSEC process. Absent a full public process or any scientific data accompanying the County's passage of the Interim Controls, it remains unclear exactly what specific concerns the avoidance boundaries are intended to target or how the associated habitat buffer language is to be interpreted by applicants or by EFSEC. The Project was sited to avoid and minimize land use and environmental effects to the greatest

		extent feasible. The impacts of the Project are being considered in this EFSEC environmental review process in conjunction with appropriate mitigation measures. To the extent the UGA boundaries may be intended to reduce visual or traffic-related development concerns, those issues are addressed in Part 4, Section 4.16 and Section 4.20 of this streamlined solar ASC. Habitat and other wildlife/habitat related issues are discussed in Part 4, Section 4.9 and the 2021 Wildlife and Habitat Survey Report (Attachment G). See the Land Use Consistency Review (Attachment D) for additional details regarding local land use consistency and compatibility.
	Natural Resource Lands under RCW 36.70A.030	As no designated natural resource lands under RCW 36.70A.030 (and RCW 36.70A.170) are present in the Project area, the Project will not change the existing condition for this topic.
	Douglas County Critical Areas	The Land Use Consistency Review (see Attachment D) demonstrates that the Project will comply with Douglas County's applicable critical area regulations. Additional details regarding critical areas are provided in Part 4, Section 4.1 and Part 4, Section 4.9, respectively.
	Shoreline Master Program	As no designated shorelines are present, the Project will not change the existing condition for this topic.
	Transportation, Utility, or Service Demands	Potential impacts to transportation conditions are discussed in Part 4 Section 4.20. Impacts to public services and utilities are discussed in Part 3, Sections 3.21 and 3.22, respectively. Where relevant for assessment of Douglas County code criteria, 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 be managed by a Traffic Control Plan. Operational traffic generated by up to four staff will be negligible. The existing capacity of local public services and utilities will accommodate the limited extent of such services needed for the Project, and no mitigation will be required.

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**
	N/A	N/A

Response: The current land use does not affect the proposed Project; the site was chosen specifically for its qualities uniquely suited to a solar energy generation facility, including abundant solar exposure, compatible topography (i.e., flat or minimal slope for solar array), adequate size of undeveloped land area, and proximity to existing electrical transmission infrastructure. The inconsistency with the proposed Interim Control buffers does not change those important siting considerations nor are future land uses in the area anticipated to affect the proposed Project. Setback requirements and other land use restrictions in the A-D and RR-20 zoning districts will make conflicting land uses, such as those that will block the Project site's solar exposure, 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**
	N/A	N/A	N/A

Response: 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., 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

Douglas County. 2019. Douglas County Countywide Comprehensive Plan. Last Amended February 5, 2019. Available at: https://www.douglascountywa.net/DocumentCenter/View/528/Countywide-Plan-PDF (Accessed June 2021).

Douglas County. 2021a. Douglas County Code. Current through Ordinance TLS 21-18-48B, and legislation passed through July 20, 2021, and Resolution TLS 20-03-16B, passed March 17, 2020. Available at: https://www.codepublishing.com/WA/DouglasCounty/

Douglas County. 2021b. Douglas County Regional Shoreline Master Program. Originally in effect August 27, 2009. Last amended by Ordinance TLS 21-15-45B. Adopted June 29, 2021. Available at: https://www.douglascountysmp.com/documents

Douglas County. 2021c. Geographical Information System (GIS). GIS data download – FTP site. County zoning. Information and instructions available at: https://www.douglascountywa.net/240/Geographical-Information-Systems-GIS Accessed (June 2021).

Ecology (Washington Department of Ecology). 2021. Water Rights Map Search. Available online at: https://appswr.ecology.wa.gov/waterrighttrackingsystem/WaterRights/Map/WaterResourcesExplorer.aspx (Accessed June 2021).

Franz, H.S. 2019. Franz Announces WA's First Solar Farm Lease on State Trust Lands. Hilary S. Franz, Commissioner of Public Lands. Washington State Department of Natural Resources Webpage. https://www.dnr.wa.gov/news/franz-announces-was-first-solar-farm-lease-state-trust-lands-solar-development-klickitat-county (Accessed June 2021).

Google Earth Pro. 2021. Historical Imagery 1985 to 2017. Google Earth Pro 7.3.1.4507. Google Inc. Mountain View, CA.

NRCS (Natural Resources Conservation Service). 2020. Web Soil Survey. Farmland Classification – Douglas County Area, Washington. Survey Area Data Version 19, Jun 4, 2020. Available online at: https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm (Accessed June 2021).

WSDA (Washington State Department of Agriculture). 2020. Agricultural Land Use GIS Data. WSDACrop_2020 and 2020SectionsWithCrops. Data available to download: https://agr.wa.gov/departments/land-and-water/natural-resources/agricultural-land-use (Accessed June 2021).

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 O)	Complete (September 2021)	Tetra Tech Inc. Environmental Consultants, Contractor	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 level with numerical decibel limits applicable to the Project; however, there are regulations at the state and county level. Environmental noise limits are established 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 requisite to determine conformance. The applicable WAC regulatory limits are further described in the Acoustic Assessment Report (Attachment O). Chapter 8.04 of the DCC provides numerical decibel limits consistent with the maximum permissible noise levels established by WAC 173-60.
Existing Conditions	As described above, a baseline noise survey is not needed to demonstrate compliance with the WAC noise regulations. The existing ambient acoustic 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 3.5 miles northeast of the city limits of East Wenatchee, which has a population density of 3,470 per square mile according to the U.S. Census Bureau (2020); however, based on review of aerial imagery and County records the population density within 2 kilometers of the

	Project is much less. Using the FHWA method and Census data for East Wenatchee, ambient sound levels near the Project area are approximately 60 dBA L_{eq} during daytime hours, 55 dBA L_{eq} during evening hours, and 50 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 O 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. Construction was organized in the following work stages: site preparation and grading, trenching and road construction, equipment installation, and commissioning. Expected noise levels generated during each of these work stages are provided in the Acoustic Assessment Report (Attachment O). Project construction may cause short-term, but unavoidable, noise impacts that could be loud enough at times to temporarily interfere with speech communication outdoors and indoors with windows open. 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 O presents modeling results for sound levels that are anticipated to be generated by the Project. Operational sound levels were analyzed using Cadna-A (Computer Aided Noise Abatement), which is an acoustic modeling software program that conforms with the International Organization for Standardization (ISO) 9613, Part 2: "Attenuation of Sound during Propagation Outdoors" (ISO 1989). 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, optional BESS units, and collector substation transformers. The solar array transformers will be co-located with the inverters and will step up the voltage from the inverters. 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. The principal sources of noise from the optional BESS are the cooling fans on the BESS units and associated BESS transformers. 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, and cooling equipment (fans and pumps) are also noise components at the Project collector substation. Modern transmission lines are designed, constructed, and maintained so that the line will generate a minimum of corona-related noise during dry conditions. Corona can be a design concern with transmission lines of 345 kV and higher; however, the gen-tie line associated with the Project will be 230 kV and is therefore not

		expected to be a significant generator of corona noise. An associated switchyard will also be constructed along the overhead 230 kV gen-tie line route at the determined POI option. However, since the switchyard will not have any transformers, it is not expected to generate significant noise levels. Therefore, the overhead 230-kV gen-tie line and associated switchyard were not included in this acoustic analysis. 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 is expected that all sound-producing equipment will operate during both daytime and nighttime periods. 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 O 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., residences) and at nearby property lines. Projected exterior sound levels resulting from full, normal operation of the Project during both daytime and nighttime hours, at nearby NSRs and property lines, will comply with the applicable 60 dBA daytime and 50 dBA nighttime limits under WAC 173-60-040. The Applicant is requesting flexibility to microsite the Project and its supporting components anywhere within the Project area to accommodate the 200-MW layout. The exact locations of Project components may be revised or shifted during final Project design. A preliminary analysis was conducted to estimate potential impacts for the north side of the Solar Array Micrositing Area, which is not part of the Project layout shown on Attachment A, Figure A-1, but may be added in the future if shifts in Project design are needed to accommodate the

		200-MW layout. Potential noise from solar arrays installed and operated in the northernmost areas of the Solar Array Micrositing Area will not cause exceedances of the applicable 60 dBA daytime and 50 dBA nighttime limits at nearby NSRs. For the reasons above and addressed in Attachment O, the Project will comply with applicable standards under WAC 173-60-040 and WAC 173-60-050.

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**
	BMPs - Noise	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 construction, noise emitted during construction will be mobile and highly variable, making it challenging to control. Project construction will generally occur during the day, Monday through Friday. Furthermore, reasonable efforts will be made to minimize the impact of noise resulting from construction	EFSEC

		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; • 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, 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; and • 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

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). 1989. Standard ISO 9613-2 Acoustics – Attenuation of Sound during Propagation Outdoors. Part 2 General Method of Calculation. Geneva, Switzerland.

U.S. Census Bureau. 2020. Population and Housing Unit Estimates Datasets. Retrieved from http://www.census.gov/lprograms-suurveys/popest/data/data-sets.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
Badger Mountain Solar Energy Project Visual Impact Assessment (Attachment P)	Complete (September 2021)	Prepared by Tetra Tech, environmental consultant for the Applicant. Attachment P includes the Project's visual impact assessment, solar glare reports, and FAA Notice Criteria Tool.	Y
Solar Glare Reports (Attachment P, Appendix B)	Complete	Prepared by Tetra Tech, environmental consultant for the Applicant.	Y
Federal Aviation Administration (FAA) Notice Criteria Tool (Attachment P, Appendix C)	Complete	Prepared by Tetra Tech, environmental consultant for the Applicant.	Y
FAA 7460-1 Notice of Construction or Alteration/Determination of No Hazard	Prior to Construction	FAA process for evaluating aviation impacts from new construction. The process includes review by Department of Defense. To be submitted at least 45 days prior to construction.	N

☐ **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 Project area is an approximately 2,390-acre area that includes both the Solar Array Micrositing Area (2,274 acres) and the Gen-tie Micrositing Corridor (116 acres). The Applicant is considering various solar array design layouts within the Solar Array Micrositing Area; however, the final design for these facilities will be located within this 2,274-acre

	area. The Solar Array Micrositing Area is larger than size of the fenced perimeter of the solar array to allow for optimization of the final design. The Project's overhead 230-kV gen-tie line and two POI and switchyard options will be located within an approximately 3.7-mile-long and approximately 200-foot-wide corridor within the Gen-tie Micrositing Corridor. The Project will use one of the two interconnection options and an associated switchyard along the gen-tie route and the final design will be located within this approximately 116-acre area. The Gen-tie Micrositing Corridor is larger than the Project's anticipated final footprint to allow for minor rerouting and optimization of the final design. As noted above, there are two interconnection options: • Option 1 POI is a 3.7-mile-long gen-tie line that could connect the Project collector substation to the existing PSE 230-kV transmission line. The gen-tie line will connect to the PSE line through a proposed interconnection switchyard on land currently used for cultivated dryland wheat, located east of the East Wenatchee Urban Growth Area boundary and Canyon Hills subdivision. • Option 2 POI is a 1.0-mile-long gen-tie line that could connect the Project's collector substation to an existing BPA transmission line, closer to the northern end of the Project area west of Badger Mountain Road. The gen-tie line will connect to the BPA line through a proposed interconnection switchyard on land currently used for grassland/rangeland and multiple existing transmission lines, including three BPA lines ranging from 230 kV to 500 kV. As described in the Visual Impact Assessment (Attachment P), the Project area is currently a mix of dryland agricultural use, rangeland for low-intensity grazing, transmission lines, local roadways, and undeveloped land. County roads that cross portions of the Project area include Badger Mountain Road, U 75 Road, 9 Road SW, and Road U SW. Four regional transmission lines traverse the Project area, including PSE's White River to Rocky Reach 230-kV line and three BPA lines: Rocky Reach to Maple Valley 345 kV, Rocky Reach to Columbia 230 kV, and Sickler to Schultz 500 kV. No residences are located within the Project area. Scattered rural residences occur near the Solar Array Micrositing Area; the closest residence to the Solar Array Micrositing Area is approximately 900 feet north of the Project area (east of Road U

	SW and south of 9 Road SW). The closest developed residential community (i.e., Canyon Hills subdivision) is adjacent to the western end of the Project area (near the Option 1 POI within the Gen-tie Micrositing Corridor) in East Wenatchee. Within the subdivision, the closest residence is approximately 280 feet west of the Project area boundary; however, the subdivision is approximately 2.5 miles or more from the Solar Array Micrositing Area, which is located upslope from the community (approximately 2,000 feet higher elevation). The Project area does not currently contain stationary sources of light or glare.
Visual Resources	The Douglas County Countywide Comprehensive Plan identifies rock bluffs of the Columbia River Valley as scenic resources, which are located outside of the Project area to the west. It also notes that generally natural resource lands provide aesthetic benefits (Douglas County 2019). The Wenatchee area contains significant natural and built features and landmarks such as Saddlerock, the Wenatchee Valley from Skyline Drive, and the Columbia River (City of Wenatchee 2020). The foothills to the west of Wenatchee are generally known as wildlife viewing and recreation areas (City of Wenatchee 2020). The Apple Capital Recreation Loop Trail is a four-mile trail along the Columbia River in East Wenatchee and Douglas County, providing views of the river and the surrounding area. The Loop Trail is a non-motorized corridor between Wenatchee and East Wenatchee for walking, biking, skating and horseback riding (City of East Wenatchee 2021). The nearest National Scenic Byway to the Project area is the Stevens Pass Greenway – U.S. Highway (US) 2 (FHWA 2021). The eastern terminus of this National Scenic Byway is located at the US 2 intersection with SR-285, approximately 6 miles west of the Project area. The closest State Scenic Byway to the Project area is the Cascade Loop Byway (WSDOT 2021). A portion of the Cascade Loop Byway follows US 97 north from Wenatchee along the Columbia River approximately 4 miles west of the Project area.
Visibility of the site	The Visual Impact Assessment (Attachment P) determined that visibility of the Project area varies between directional viewpoints. From viewpoints to the west, north, and south, views of the Project area, where available, tend to be limited to the respective edge of the Project area. From viewpoints to the east, depending on the intervening terrain, views of the Project area vary from extended views of the Solar Array Micrositing Area to being limited to the eastern edge of the Project area.

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 Project area will shift from agricultural fields, local roadways, and existing 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 roadways adjacent to the Solar Array Micrositing Area and/or the Gen-tie Micrositing Corridor, including Badger Mountain Road, U 75 Road, 9 Road SW, and Road U SW. Where visible, varying degrees of visual change will be experienced from: other area roadways, including scenic byways; recreationists, including those using the Apple Capital Recreation Loop Trail; and residents near the Project area. Attachment P identifies 8 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 4 of Attachment P. The 8 selected KOPs provide views of each side of the Project area. Factors considered in the selection of the KOPs included locations with sensitive viewers (e.g., local residences, recreationists, and motorists) and potential for the Project 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 Section 7 of Attachment P). The Project will result in a weak to moderate contrast with the surrounding landscape based on the addition of the Project's structural components, and visual impacts are considered minor. Views from the west toward the Project area will typically occur at a significant distance and below the elevation of the Solar Array Micrositing Area and Gen-tie Micrositing Corridor. The resulting visibility of the Project from the west will generally be limited by screening from existing topography and terrain (see Figures 13, 15, and 16 of Attachment P). Views from the east toward the Project area will typically occur from

		local roads and a small number of rural residences with views of the Project components mostly limited to the perimeter or edge of the Project area (see Figure 14 of Attachment P). When visible, the Project will generally be consistent with other structural elements immediately surrounding the Project area (e.g., roadways, fencing, overhead transmission towers and lines, utility poles and lines, and agricultural-related structures, residences, and other structures). Overall, Attachment P demonstrates that the Project will not result in strong or significant visible contrasts to the existing visual character of the landscape. See Attachment P for a detailed analysis of key observation points, including representative visual simulations of how the Project may appear in the region.
	Visual Resources	As described in Attachment P, the Project will not block views of significant landmarks such as Saddlerock, the Wenatchee Valley from Skyline Drive, or the Columbia River. The Project will not be visible from the Cascade Loop Byway (US 97) or the rock bluffs of the Columbia River Valley adjacent to the Byway. Portions of the Project with potential visibility from Skyline Drive, the foothills to the west of Wenatchee, Apple Capital Recreation Loop Trail, and Stevens Pass Greenway – US 2 National Scenic Byway will not attract attention and will be a subordinate feature in the landscape setting. Because the potential visual contrast from the Project is anticipated to be weak from these scenic viewpoints, the visual impacts associated with the Project are considered minor.
	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, collector substation, switchyard, optional BESS, and O&M building. However, lighting will be designed to provide the minimum illumination needed to achieve safety and security and will be downward-facing and shielded to focus illumination in the immediate area. Therefore, the Project will not introduce a source of light that will significantly impact views in the area.
	Glare	The glare analysis conducted for the Project analyzed potential glare hazards for aircraft as well potential impacts to residents and motorists in the area. No glare impacts were predicted for either of the final 2-mile approach paths of the Pangborn Memorial Airport or for any receptor residences. Glare along travel routes was limited to a negligible amount of glare at one receptor route (i.e., 9 Road SW). See Attachment P 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 aircraft, motorists, residents or views in the area.

	Aviation Impacts	As noted above, no glare impacts were predicted for either of the final 2-mile approach paths of the Pangborn Memorial Airport. However, based on the FAA Notice Criteria Tool result, formal filing of a Form 7460-1 Notice of Construction or Alteration is requested. This filing allows the FAA to confirm the Project will not pose a hazard and will be completed at least 45 days prior to construction, after final Project design is available.

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	

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**
	BMPs – Light, Glare, and Aesthetics	The Project will implement BMPs including: • Downward-directed lighting to minimize horizontal or skyward illumination, and avoidance of steady-burning, high-intensity lights. • Solar panels will use anti-reflective coating to minimize potential glare. • Use of non-reflective materials and finishes will be used on Project components to the greatest extent feasible. • Temporarily disturbed areas will be revegetated.	N/A

	FAA Review	The Applicant will file a Form 7460-1 Notice of Construction or Alteration with the FAA at least 45 days prior to construction, to obtain a Determination of No Hazard.	FAA

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	

4.16b.F References

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

City of East Wenatchee. 2021. Greater East Wenatchee Area Comprehensive Plan. Updated May 4, 2021. Available online at: https://www.eastwenatcheewa.gov/DocumentCenter/View/107/2021-Adopted-GEWA-Comprehensive-Plan-PDF (Accessed August 16, 2021).

City of Wenatchee. 2020. Wenatchee Urban Area Comprehensive Plan. Updated June 2020. Available online at: https://www.wenatcheewa.gov/government/community-development/comprehensive-plan (Accessed August 16, 2021).

FHWA (Federal Highway Administration). 2021. America's Byways. Washington. Available online at: https://www.fhwa.dot.gov/byways/states/WA (Accessed August 6, 2021).

WSDOT (Washington State Department of Transportation). 2021. Scenic Byways. Available online at: https://wsdot.wa.gov/travel/highways-bridges/scenic-byways (Accessed August 6, 2021).

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 Badger Mountain Solar Energy Project (confidential Attachment Q)	Complete (September 2021)	Prepared by Tetra Tech; environmental consultant for the Applicant. The DAHP, CCT, Spokane Tribe, and Yakama Nation to review.	Y
Cultural Resources Survey Addendum	4th Quarter 2021	Prepared by Tetra Tech; environmental consultant for the Applicant. The DAHP, CCT, Spokane Tribe, and Yakama Nation to review.	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	Approximately 2,008 acres of the Project area (i.e., 84 percent of the area) were field surveyed for cultural, archaeological, and historical resources in April 2021 and July 2021 (confidential Attachment Q). Areas not yet field surveyed include inaccessible areas and an agricultural field on state lands (i.e., DNR) that precluded acceptable ground surface visibility for the survey. The desktop study presented in confidential Attachment Q included these areas and did not identify any previously recorded resources in the unsurveyed areas. The unsurveyed areas are primarily within active agricultural fields. Based on observations of distribution patterns of resources identified by the completed survey, the potential for additional significant archaeological resources to be identified in these areas is low. It is known that three unrecorded BPA transmission lines pass through the Gen-tie Micrositing Corridor in a location that was inaccessible. Other sections of the

	lines on adjacent parcels were also inaccessible during the surveys. The BPA's Pacific Northwest Transmission System as a whole is NRHP-listed as a multiple property resource. Individual components of the transmission system are recorded and evaluated for NRHP eligibility on an individual basis to determine their NRHP eligibility as part of the multiple property resource. Until access can be gained to the Gen-tie Micrositing Corridor crossing and the primary structures of the line examined there, the potential impacts to the BPA lines cannot be assessed at this time. The lines will be recorded and evaluated when access to the crossing is gained. Twenty-two archaeological sites, three archaeological/historic property sites (archaeological sites include standing historic buildings and/or structures), and three isolated finds (IFs) were identified within the accessible and field surveyed portions of the Project area. The sites recorded within the Project area include eight historic agricultural caches (one with a cistern), seven historic refuse scatters (one possibly a Native American root gathering campsite), three pre-contact stacked rock features, four sites of undetermined age and possibly with Native American significance, and three abandoned homesteads. The three IFs consist of historic refuse. Additionally, outside of the Project area (i.e., on adjacent parcels where indirect visual impacts could be of concern) three historic property/built environment sites were recorded including an auxiliary farming site, an in-use historic farmstead, and Badger Mountain Road. As used here, the term "historic properties" is used as defined by DAHP (2020:3-4): "…existing elements of the built environment that includes buildings, structures, sites, districts, and objects dating from the contact era will be referred to as 'historic properties.'" These resources may also be referred to as "aboveground resources," referring to standing buildings and structures. The term is *not* used to refer to NRHP-eligible or -listed cultural resources, as it is used in a federal regulatory context. The following provides details regarding NRHP and WHR eligibility recommendations for the identified resources: • Pre-contact stacked rock features and sites of undetermined age identified in Table 6-1 and discussed in Section 7.2 of confidential Attachment Q have been left unevaluated for NRHP and WHR eligibility. As pre-contact archaeological sites, they are protected by RCW 27.53. These sites require coordination with the CCT regarding significance attributed to them by tribal members. • Historic homesteads including the archaeological/historic property sites identified in Table 6-1 and discussed in Section 7.3 of confidential Attachment Q have also been left unevaluated for NRHP and WHR eligibility pending

	additional research and archaeological testing. These historic-era archaeological sites are protected by RCW 27.53 because of their undetermined register eligibility. • The remainder of the sites and the three IFs within the Project area have been recommended as not eligible for listing in the NRHP or WHR (Table 6-1 and Sections 7.2 and 7.4 in confidential Attachment Q). These are primarily historic refuse scatters and agricultural equipment caches with no associated features, do not appear to be associated with other recorded sites, and do not appear to have a Native American association. Pending concurrence by DAHP, these sites are not afforded protections under RCW 27.53. • Confidential Attachment Q identifies historic property sites on adjacent parcels, outside the Project area, and assesses the potential visual effects of the Project on those sites. As described above, three historic property sites were identified: an auxiliary farming site, an in-use farmstead, and Badger Mountain Road. The auxiliary farming site is unevaluated for listing on the NRHP and WHR, though the individual buildings are recommended as not eligible for listing on either register. Badger Mountain Road and the farmstead have been recommended as not eligible for listing in the NRHP or WHR. Historic property sites are not protected under RCW 27.53. Although the NRCS soil survey data indicate deep soils suggestive of a potential for subsurface archaeological deposits, the subsurface shovel probing completed as part of the survey has demonstrated that encountering such resources is unlikely (confidential Attachment Q).

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 to cultural resources that are eligible or unevaluated/potentially eligible for listing on the NRHP or WHR when feasible. As currently designed, the Project has no direct impacts to such resources, which are avoided by a minimum of 30 meters. These resources

		include the following: 45DO00959, 45DO00960, BM-BB-02, BM-BB-03, BM-BB-05, BM-BB-06, BM-BB-10, BM-BB-11, BM-BB-13, BM-BB-14, BM-BB-21, BM-BB-22, and BM-BB-23. The Applicant remains in coordination with the CCT regarding appropriate buffers for those sites that may hold traditional significance to their tribal members. Two archaeological sites are not avoided by the current design: BM-BB-08 and BM-BB-09. Both sites are historic-era refuse scatters that have been recommended in confidential Attachment Q as not eligible for listing on the NRHP or WHR. The sites are not considered significant register-eligible resources and, pending concurrence by DAHP, impacts on them are not considered significant impacts. If any pre-contact-era archaeological site or any NRHP-eligible or unevaluated/potentially eligible historic-era site is impacted by the Project's final design, the Applicant would obtain a DAHP excavation permit and perform all necessary archaeological work in order to comply with RCW 27.53.
	Disturbance within un-surveyed areas.	Unsurveyed portions of the Project area total approximately 382 acres (or 16 percent of the total Project area). These areas may include significant archaeological and historic property sites. If such resources are identified during future planned surveys, the Applicant will avoid those resources through micrositing around a 30-meter buffer of the resource and continuing to coordinate with the CCT regarding impacts to resources with traditional significance. Where avoidance is infeasible, the Applicant will obtain a DAHP excavation permit and perform all necessary archaeological work in order to comply with RCW 27.53.
	Modern development within setting of historic property sites on adjacent parcels	Three historic property sites have been identified on adjacent parcels including an auxiliary farming site, an in-use historic farmstead, and Badger Mountain Road. The auxiliary farming site is unevaluated/potentially eligible for listing on the NRHP and WHR, though the individual buildings are recommended as not eligible for listing on either register. This site is outside of the Project area and will not be directly impacted. Significant indirect impacts to its views are not anticipated due to the limited visibility of the Project area from the location (see Figure 7-53 in confidential Attachment Q as well as Part 4, Section 16b and Attachment P). Badger Mountain Road and the farmstead have been recommended as not eligible for listing in the NRHP or WHR (confidential Attachment Q).

		Pending concurrence by DAHP, any indirect visual impact to the sites would not be significant.

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 to 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. The Applicant re-designed portions of the Project to avoid cultural sites following completion of the survey. Additionally, the Applicant remains in coordination with the CCT regarding appropriate buffers for those sites that may hold traditional significance to their Tribal members. The Preliminary Site Plan on Figure A-1 to Attachment A demonstrates potential impacts based on a Project design that assumes worst-case disturbances to identified resources. If any pre-contact-era archaeological resource or an NRHP-eligible historic-era archaeological resource is impacted by the Project's final design, the Applicant would obtain a DAHP excavation permit and perform all necessary archaeological work in order to comply with RCW 27.53. The Applicant will continue to coordinate with the CCT regarding impacts to resources with traditional significance. The same efforts will be made for any pre-contact sites or NRHP-eligible historic-era archaeological sites that may be identified through future surveys of the remaining approximately 16 percent of the Project 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 register-eligibility and/or protection under RCW 27.53 of 45DO00959, 45DO00960, BM-BB-02, BM-BB-03, BM-BB-05, BM-BB-06, BM-BB-10, BM-BB-11, BM-BB-13, BM-BB-14, BM-BB-21, BM-BB-22, and BM-BB-23, these resources are recommended to be avoided by the Project's final layout. A minimum avoidance buffer of 30 meters (100 feet) around the sites has been recommended in confidential Attachment Q and is achieved in the current Project design. If avoidance of these buffers is infeasible, monitoring of construction activities within the buffer may be necessary. If avoidance of the sites themselves is infeasible, evaluation of the unavoided resource(s) and/or coordination with the CCT will be necessary to determine the register eligibility and if mitigation is necessary.	DAHP, CCT, DNR
	Completion of Archaeological Survey	The entirety of the Project area has not been surveyed and resources on the DNR parcel have not been shovel probed to confirm their site boundaries. Unsurveyed areas will be surveyed prior to construction. Boundary probing of sites will be conducted on the DNR parcel as well as any additional sites identified in previously unsurveyed areas.	DAHP, CCT, DNR
	Archaeological Excavation Permit	Pre-contact archaeological sites, regardless of register eligibility, or NRHP-eligible or unevaluated historic-era archaeological sites that cannot be avoided in the Project's final layout/design, require an archaeological excavation permit from DAHP under RCW 27.53.060 before they can be disturbed. This requirement is limited to the site boundaries themselves. Based on the register eligibility evaluations in	DAHP, CCT, DNR

		confidential Attachment Q, no such sites will be impacted and no permit is necessary for the current design.	
	Unanticipated Discovery Plan	In the event unrecorded archaeological resources are identified during Project construction or operation, work within 30 meters (100 feet) of the find should be halted and directed away from the discovery until it can be assessed in accordance with steps in the Unanticipated Discovery Plan (provided as Appendix G in Attachment Q). This appendix does not contain any confidential information and can be shared with Project personnel and contractors.	DAHP, CCT, DNR
	Continued Coordination with Native Americans	There are no state-level laws requiring consultation with Native American tribes. Only regulatory agencies can formally consult with tribes. Informal communications are included with this ASC as part of resource identification efforts and as due diligence. Coordination and open communications will continue with the CCT and other interested tribes 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 tribes. As part of those efforts, recommendations made in the CCT's forthcoming traditional use study will be considered in the Project's final design, as appropriate and in coordination with the Tribe. Lines of communication will remain open to better facilitate any response to unanticipated discoveries during construction.	DAHP, CCT, DNR

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

DAHP (Washington Department of Archaeology and Historic Preservation). 2020. *Washington State Standards for Cultural Resources Reporting*. Washington State Department of Archaeology and Historic Preservation, Olympia, WA. Electronic document https://dahp.wa.gov/sites/default/files/CR%20Update%20Dec%202019%20.pdf (Accessed July 16, 2021).

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 Badger Mountain Solar Energy Project (confidential Attachment Q)	Complete (September 2021)	Prepared by Tetra Tech; environmental consultant for the Applicant The DAHP, CCT, Spokane Tribe, and Yakama Nation to review	Y
Cultural Resources Survey Addendum	4th Quarter 2021	Prepared by Tetra Tech; environmental consultant for the Applicant The DAHP, CCT, Spokane Tribe, and Yakama Nation to review	N
Traditional Use Study	2nd Quarter 2022	To be prepared by the CCT	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 and state (i.e., DNR) land that is not owned by tribal members. Tribal hunting and fishing do not occur within the portions of the Project area on privately-owned lands but may occur on DNR lands. The majority of the DNR lands are currently leased for agriculture. One site on DNR land, 45DO00960, is a stacked rock feature that may be related to tribal hunting, fishing, or plant gathering.
Existing tribal plant gathering	As stated above, the Project area consists of private land owned by non-tribal members as well as DNR lands. Tribal plant gathering does not occur within the portions of the Project area on privately-owned lands but may occur on DNR lands. The majority of the DNR

	lands are currently leased for agriculture. The CCT has stated that Badger Mountain is a place used by tribal members for plant gathering. One site on DNR land, 45DO00959, has been identified by DNR as a campsite potentially related to historic Native American root crop gathering (see discussion regarding this site in Attachment Q). Another, 45DO00960, is a stacked rock feature that, given its proximity to the potential root crop gathering campsite, may also be related to tribal plant gathering or hunting or fishing.
Tribal cultural sites	At least four of the archaeological sites found during the cultural resources survey of the Project area (Attachment Q) have been identified as sites associated with Native American activities: 45DO00960, BM-BB-21, BM-BB-22, and BM-BB-23. Another previously recorded site, 45DO00959, is recorded as a historic refuse scatter that may be a historic Native American root-gathering campsite. Another three sites (BM-BB-06, BM-BB-11, and BM-BB-13) may also be associated with Native American activities, but that association is undetermined at this time (i.e., it is unclear if the rock features at these sites are pre-contact, historic, or both). Approximately 2,008.3 acres (84 percent) of the 2,390-acre Project area has been surveyed to date. Unsurveyed areas were either inaccessible or included wheat crop that precluded ground surface visibility. It is possible that additional Native American-related sites may be identified when unsurveyed portions of the Project area are surveyed. No tribal cultural sites (i.e., traditional cultural properties) have been identified through the Applicant's communications with the CCT to date. The CCT will conduct a forthcoming traditional use study of the Project area to determine the presence of potentially significant tribal cultural sites.
A usual and accustomed area	The Project area is within the usual and accustomed area of the CCT.
Material culture artifacts	Archaeological sites related to Native Americans (pre-contact and/or historic-era) are representations of Native American material culture that contain artifacts. At least four of the archaeological sites identified by the Project's Cultural Resources Survey Report (Attachment Q) are associated with Native American activities. Potentially four additional archaeological sites that are of undetermined chronology or association at this time may also be related to Native American activities (see above). Additional Native American-related archaeological sites may be identified when unsurveyed portions of the Project area are surveyed.
Activities on the site could impede views of tribal cultural sites	The CCT has not identified specific tribal cultural sites that could be impacted by the Project to date. However, a traditional use study is in the process of being completed by the CCT and may identify such impacts.

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	The forthcoming traditional use study by the CCT may identify tribal hunting or fishing activities within the Project area; however, the Applicant believes it is unlikely such localities will be identified within the Project area given that the majority of the area is privately owned by non-tribal members (which would preclude tribal access to those private areas), and much of the accessible DNR parcel is in agricultural use (thereby limiting the available native habitat on the DNR lands).
	Existing tribal plant gathering	The CCT has indicated that tribal members gather plants on Badger Mountain. However, specific locations for gathering have not been provided nor has the CCT indicated those activities occur within the Project area. The forthcoming traditional use study by the CCT may identify such activities within the Project area; however, the Applicant believes it is unlikely that gathering localities will be identified within the Project area given that the majority of the area is privately owned by non-tribal members (which would preclude tribal access to those private areas), and much of the accessible DNR parcel is in agricultural use (thereby limiting the available native habitat on the DNR lands).
	Tribal cultural sites	The Project has been designed to avoid direct impacts to all cultural resources that are related to Native American activities or potentially related to those activities by a minimum of 30 meters. This includes 45DO00959, 45DO00960, BM-BB-06, BM-BB-11, BM-BB-13, BM-BB-21, BM-BB-22, and BM-BB-23. All are unevaluated for NRHP and WHR eligibility and are protected by RCW 27.53. If avoidance of these buffers is infeasible in the final design, archaeological and/or tribal monitoring of activities within the buffer would be conducted. If avoidance of the sites themselves is infeasible, evaluation of the unavoided resource(s) and coordination with the CCT will be necessary to determine the register eligibility and if mitigation is necessary. However, not all of the Project area was accessible at the time of the cultural resources survey and additional resources may be identified in the unsurveyed portions of the Project area during subsequent surveys. The CCT is also in the process of completing a traditional use study for the Project, which may

		identify additional tribal cultural sites that could be impacted. The Applicant will continue to consult the CCT regarding the cultural sites and the potential impacts of the Project on Native American-related resources that may be impacted (see Section 4.19.D below). 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 Solar Array Micrositing Area or Gen-tie Micrositing Corridor. Any relocations made to the Project layout within these areas will be done in such a way as to avoid or minimize impacts to cultural sites and resources to the extent practical. If any pre-contact archaeological site or NRHP-eligible historic-era archaeological site is impacted by the Project, the Applicant will obtain a DAHP excavation permit and perform necessary archaeological work in order to comply with RCW 27.53.
	A usual and accustomed area	The Project area is within the usual and accustomed area of the CCT, Yakama Nation, and Spokane Tribe. The Project will not affect or change this (i.e., the area will remain within the usual and accustomed area of the CCT, Yakama Nation, and Spokane Tribe).
	Material culture artifacts	Archaeological sites related to Native Americans (pre-contact and/or historic-era) are representations of Native American material culture that contain artifacts. At least four of the archaeological sites identified by the Project's Cultural Resources Survey Report (Attachment Q) are associated with Native American activities. Potentially four additional archaeological sites that are of undetermined chronology or association at this time may also be related to Native American activities. As currently designed, the Project avoids all of these resources by a minimum of 30 meters. It is possible that additional Native American-related sites may be identified when unsurveyed portions of the Project area are surveyed. The Applicant will continue to coordinate with the CCT to understand potential impacts on material culture artifacts, known or identified through the forthcoming surveys, and how to avoid or mitigate them (potentially through micrositing of the Project's layout).
	Activities on the site could impede views of tribal cultural sites	As currently designed, the Project will be constructed within view of six of the archaeological sites related or possibly related to Native American activities identified by the Project: BM-BB-06, BM-BB-11, BM-BB-13, BM-BB-21, BM-BB-22, and BM-BB-23. The presence of additional tribal cultural sites with views of the Project area is unknown at this time and is expected to be identified through the forthcoming traditional use study conducted by the CCT. The Applicant will continue to coordinate with the

		CCT to understand those impacts, and if identified, how to avoid or mitigate these impacts.

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	As currently proposed, the Project will avoid by a minimum of 30 meters 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 CCT to determine their cultural affiliation. This is anticipated to be addressed in the CCT's forthcoming traditional use study. 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 area. It is unknown if additional resources that may be identified by the CCT's forthcoming traditional use study would be impacted. Additionally, the Applicant remains in coordination with the CCT regarding appropriate buffers for those sites that may hold traditional significance to their Tribal members. The Applicant will continue to coordinate with the CCT 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 is impacted by the Project's final design, the Applicant would obtain a DAHP excavation permit and perform all necessary archaeological work in order to comply with RCW 27.53. The same efforts would be made for any additional Native American-related 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**
	Completion of Cultural Resources Survey	RCW 27.53.060 (Disturbance of archaeological resource without permit) is addressed through identification of pre-contact archaeological resources and NRHP-eligible historic-era archaeological resources in portions of the Project area that were inaccessible at the time of the Project's Cultural Resources Survey Report (confidential Attachment Q). The entirety of the Project area was not accessible to the cultural resources survey conducted by Tetra Tech at the time of its completion, nor were shovel probes allowed to be conducted on the portions of the Project area corresponding to the DNR parcels. The Applicant will ensure that any unsurveyed portions of the Project area are surveyed for cultural resources prior to construction and resource boundary probes will be excavated around resources on the DNR parcel to confirm identified surface boundaries. Additional areas of increased potential for buried archaeological resources will also be shovel probed. The additional survey work will continue to be conducted in coordination with the CCT. Additionally, the CCT is in the process of completing a study of the Project area to determine the potential for the Project to impact traditional use areas and traditional cultural properties. The Applicant will avoid cultural resources identified by those surveys to the extent practical. Where it is not feasible to avoid impacts, including indirect impacts on resources outside of the final design, the Applicant will continue to work with the CCT to determine appropriate mitigation that is acceptable to both parties.	DAHP, CCT
	Avoidance of NRHP- and WHR-eligible	RCW 27.53.060 (Disturbance of archaeological resource without permit) is addressed through avoidance of direct impacts to pre-contact	DAHP; CCT

	or unevaluated sites as well as sites protected by RCW 27.53.060 when feasible and obtainment of DAHP excavation permit, if necessary	archaeological resources and NRHP-eligible historic-era archaeological resources or obtainment of an excavation permit. The Project, as currently designed, avoids direct impacts on sites related or possibly related to Native Americans by a minimum of 30 meters. All 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 area. The Preliminary Site Plan on Figure A-1 to Attachment A demonstrates potential impacts based on a Project design that assumes worst-case disturbances to identified resources. As the Project design progresses, the layout would be changed such that impacts to the above resources and areas are avoided through micrositing to the extent feasible. The CCT is also in the progress of completing a traditional use study for the Project, which may identify additional tribal cultural sites that could be impacted. If any pre-contact archaeological site or NRHP-eligible historic-era archaeological site related to Native American activities is impacted by the Project, the Applicant will obtain a DAHP excavation permit and perform all necessary archaeological work in order to comply with RCW 27.53. The Applicant will also continue to coordinate the CCT regarding the archaeological sites and the potential impacts of the Project on these sites as well as any traditional use sites identified through the CCT's forthcoming study (see below).	
	Unanticipated Discovery Plan	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 human remains. The Natural Resources Conservation Service soil survey data and geotechnical	DAHP; CCT

		investigations for the Project suggest a potential for subsurface archaeological deposits, particularly in the solar micrositing area. This is due to the dominant soil unit, Broadax-Titchenal complex, which is a relatively deep silt loam over hard pan (see discussions in confidential Attachment Q). However, the subsurface shovel probing completed as part of the survey has demonstrated that encountering such resources is unlikely, due to the historic and current agricultural activities that dominate the Project area and the thinner nature of soils at the western edge of the Solar Array Micrositing Area, outside of the agricultural fields and at the escarpment edge. As such, no monitoring of construction has been recommended. Different conditions may be identified in unsurveyed portions of the Project area once access to them is granted and they are surveyed; the necessity for monitoring in those areas will be assessed at that time. However, an Unanticipated Discovery Plan will be implemented during construction. Mitigation measures to avoid significant impacts on cultural resources under the State Environmental Policy Act are described below. 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 Unanticipated Discovery Plan provided as Appendix G in Attachment Q. This plan does not contain any confidential information and can be shared with Project personnel and contractors.	
	Continued Coordination with Native Americans	There are no state-level laws requiring consultation with Native American tribes. Only regulatory agencies can formally consult with tribes. Informal communications are included with this ASC as part of resource identification efforts and as due diligence. Coordination and open communications will continue with the CCT and other interested tribes during Project permitting and design to incorporate Tribal input regarding avoidance of potential impacts to cultural resources,	CCT

		including traditional use areas or other areas of significance to tribes. As part of those efforts, recommendations made in the CCT's forthcoming traditional use study will be considered in the Project's final design, as appropriate and in coordination with the Tribe. Lines of communication will remain open to better facilitate any response to unanticipated discoveries during construction.	

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

4.20 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
Road Network	Access to the Project is via Badger Mountain Road to U 75 Road, which continues south and becomes 9 Road SW. Badger Mountain Road is classified by Douglas County as a rural major collector (Douglas County 2019). The Project's 230-kV gen-tie line will span Badger Mountain Road in up to two locations (see Attachment A, Figure A-1). Portions of U 75 Road, 9 Road SW, and U Road SW occur within the Solar Array Micrositing Area but will not be located within the Project's development footprint. SR 28 will be the preferred route for limited oversize deliveries during Project construction, such as support poles for the 230-kV gen-tie line or the power transformers. U 75 Road is paved at its intersection with Badger Mountain Road and becomes a gravel road south of the intersection prior to becoming 9 Road SW. The roads leading to the Project area are paved and include Badger Mountain Road, Eastmont Avenue, and SR 28. The regional highways and local streets that may be used by workers coming from homes or hotels to the Project area are also paved. The intersection with Badger Mountain Road and U 75 Road is a stop-controlled T intersection. Section 4.20.C below provides a summary of anticipated Project construction routes. The assessment provided in this section relies on County data and available aerial imagery from 2017 and street imagery from 2019. Based on a review of this imagery and information provided in the 2020 Chelan-Douglas Regional Transportation Plan Update (CDTC 2020), it is likely that the roads that would be used by the Project are in fair to good condition. Furthermore, the intersection at Eastmont and Badger Mountain Road was redesigned in 2014.

Traffic Volumes	Traffic counts have not been collected in direct association with the Project. However, available data regarding traffic levels from the Washington State Department of Transportation (WSDOT) Traffic GeoPortal and from the Douglas County Transportation Planning Department are as follows: • U.S. Highway 2: 25,000 Average Daily Traffic (ADT) • State Route 28: 20,000 ADT • Eastmont Avenue. North of Eastmont Bridge: 8,295 ADT • Badger Mountain Road Near east Wenatchee: 2,400 ADT • Badger Mountain Road Near Project Location: 581 ADT Traffic data are not available for other roads in the Project area.
Waterborne, Air, and Rail Traffic	There are no shipping ports near the Project area. However, the Port of Seattle and/or the Port of Tacoma are the likely ports to receive solar equipment, which will then be trucked to the Project area. The Port of Seattle is approximately 101 miles west (149 miles driving distance) from the Project area, while the Port of Tacoma is approximately 103 miles west (160 miles driving distance) from the Project area. Air transportation is not anticipated for use in Project construction or operation. The nearest airport is the Pangborn Memorial Airport, which is approximately 2.7 miles southwest of the Project area (13 miles driven distance). The Great Northern Railroad has a rail yard in the city of Wenatchee located west of the Columbia River and approximately 5.5 miles southwest of the Project area (11 miles driven distance). The Applicant does not anticipate using the rail yard to transport materials to the Project area.
Public and Pedestrian Traffic	Pedestrian and bike traffic occurs in the city of East Wenatchee. Badger Mountain Road and roads that cross the Project area are not in areas associated with pedestrian demand or pedestrian-oriented land use (CDTC 2020). Existing bus transit routes (i.e., Route 11 and Route 18) use Eastmont Avenue (Link Transit 2021). Both bus transit routes are generally located south of potential Project construction routes; however, construction routes considered for this Project could cross paths with bus transit route 18 at 15th Street and Baker Street in East Wenatchee.
Parking	No designated parking facilities are located within the Project area.
Movement of People or Goods	The existing conditions related to the movement of people and goods near the Project are described above, under “Road Network,”

	"Waterborne, Air, and Rail Traffic," and "Public and Pedestrian Traffic."
Transportation Hazards	The steep grades and winding nature of Badger Mountain Road make it potentially hazardous for semi-trailer trucks. This is due to the large turn radius of semi-trucks, which reduces maneuverability on winding roads. 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**
	Road Network	The anticipated Project construction routes will bring materials, equipment, and workers from SR 28 or from U.S. Highway 2. Getting to the Project area from SR 28 involves turning onto 15th Street NE, then left on Eastmont Avenue to get to Badger Mountain Road. U.S. Highway 2 becomes Eastmont Avenue at the intersection with Sunset Highway at which point traffic proceeds to the intersection of Eastmont Avenue and Badger Mountain Road to access the Project area. The Project's O&M personnel are likely to live locally and will likely use these or similar routes to access the Project area once construction is complete. There are no anticipated changes or improvements to existing transportation infrastructure except for the proposed access locations on 9 Road SW, U Road SW, and Road T SW. These roads are not present or planned future collectors or arterials as identified in the DCCP (Douglas County 2019). New service roads constructed for the Project will be private and internal to the Project area. These roads will be inside the Project fence line and will not provide any new travel routes for area residents. The Applicant will obtain a County Right-of-Way Access Permit for the proposed Project approaches or other County road right-of-way within the Project area based on final design.
	Traffic Volumes	**Construction** During the 18-month Project construction, an estimated 236 existing peak hour vehicles would utilize Badger Mountain Road

		at its intersection with U 75 Road (i.e., the level without construction vehicles included). Project construction is anticipated to add a peak of 400 workers and an average of 300 to 350 workers. Applying a 25 percent carpooling rate, this amounts to approximately 300 additional vehicles during the peak commuting hour for the peak months of construction, or an average of 225 additional vehicles throughout the construction process. Additionally, there is a maximum anticipated delivery rate of 81 trucks or 162 truck trips per day mostly occurring during off peak hours. The total peak construction traffic is therefore approximately 762 average daily trips (381 round-trips). This results in a total of approximately 536 to 544 total vehicles on Badger Mountain Road at its intersection with U 75 Road during construction. This is within the typical capacity of the intersection, which means the Level of Service (LOS) at the intersection is expected to be LOS D or better. It should be noted that morning commute will result in mostly right turns from Badger Mountain Road to U 75 Road which will result in little to no change in LOS. During the evening peak hour most of the vehicles will be turning left from U 75 Road onto Badger Mountain Road resulting in LOS closer to LOS D. Potential delays at the intersection will almost exclusively impact the construction workers and not local background traffic using Badger Mountain Road. Local signalized intersections along the proposed Project construction route may also be impacted by construction traffic. The intersection at Badger Mountain Road and Eastmont Avenue will also see the approximately 225-300 peak-hour vehicles coming from both directions on Eastmont Avenue. This intersection is likely to experience slight traffic delays, however it was recently redesigned which should bolster its capacity and LOS resulting in acceptable performance even with the extra construction traffic. There is a known intersection with a failing LOS (i.e., letter grade below D) recorded by the County where U.S. Highway 2 becomes Eastmont Avenue at the Intersection with Sunset Highway. This intersection will service some Project construction traffic and the addition of construction vehicles may contribute to delays during peak-hour construction. The other two main intersections along the primary access route to be used by Project vehicles are the intersection of 15th Street NE and Eastmont Avenue, and the intersection of 15th Street NE and Sunset Highway. These intersections are not currently failing, but given the urban location, they probably operate at LOS C or D especially during peak hours. Project traffic could temporarily drop these intersections LOS during the two commuting peak hours for several months of peak construction. These intersections would temporarily drop to a failing LOS if they are already close to their capacity at LOS D particularly if they are currently approaching LOS E.

		Construction vehicles will disseminate out on to U.S. Highway 2 and SR 28 and will have a negligible effect on highway traffic because they will represent a small percentage of the existing 25,000 or 20,000 vehicles per day that these two roads currently experience, respectively. Materials deliveries will occur throughout the day and only occasionally overlap with the peak hours. The majority of materials will arrive via standard 5-axle tractor trailers and container trucks. Smaller concrete, gravel, and water trucks will also be common going to and from the site. **Operations** Operations traffic will be negligible as there will be four or fewer permanent employees. The Project will use passive technology, such as the SCADA system, for remote operation making on-site daily maintenance unlikely. Project operations will not exceed 20 peak hour trips or 200 average daily trips per DCC 20.30.020(A)(1). The limited number of daily trips anticipated during Project operations will be negligible relative to current and projected LOS. If needed, panel washing or other periodic maintenance operations may involve a larger group of workers and trucks. However, these larger operations would be infrequent and expected to occur only 2 to 3 weeks per year.
	Waterborne, Air, and Rail Traffic	No changes will occur to waterborne traffic as a result of Project construction or operation because the Ports of Seattle and Tacoma are of sufficient size to accommodate any solar equipment that may be shipped to these facilities. 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. Furthermore, the glare analysis (see Part 4, Section 4.16b) concluded that no glare hazard will exist for air traffic or roadways as a result of solar panel operations.
	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.
	Parking	During construction, workers will park in the designated temporary staging area within the Project area. Parking will not occur within the public road right-of-way along U 75 Road or other public roads. Parking needs during operations will be limited to occasional use by up to four employees at the O&M building. The Project will

		have a gravel parking area at the O&M building to accommodate these employees. No vehicular backing-up or maneuvering will occur within a public right-of-way.
	Movement of People or Goods	Project construction may result in temporary delays at the intersections identified above (see the "Traffic Volumes" heading above) during peak hours and at the peak of construction. While construction-related traffic may cause short-term traffic delays (because of large, slow moving delivery trucks and increased congestion), the delays will be temporary and can be avoided or minimized by implementing traffic control measures. The Applicant will prepare and implement a Traffic Control Plan in coordination with the Douglas County Department of Transportation and Land Services to avoid or minimize traffic impacts during Project 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 Douglas County requirements to safely haul equipment on highways and County roads. The Applicant will also obtain applicable permits from Douglas County for access to public road right-of-way within the Project area and work in public road right-of-way, if needed for the underground 34.5-kV collector lines or 230-kV gen-tie line. A Traffic Control Plan will be prepared in coordination with the Douglas County Department of Transportation and Land Services for Project construction consistent with Douglas County Road Standards for traffic control (DCC 12.56.070). As described in Part 4, Section 4.13.C.1, the Project's optional BESS components would be delivered to the Project area in compliance with 49 CFR §173.185, which regulates the transportation of lithium-ion batteries. 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**
	WSDOT Oversize and Overweight Permit	A permit will be obtained for heavy or oversized loads in accordance with WSDOT regulations including RCW 46.44 and WAC 468-38	WSDOT
	County Special Motor Vehicle Permit (Overweight and Oversized Vehicles)	A permit will be obtained to operate oversize and overweight vehicles on County Roads (Douglas County 2021).	Douglas County Department of Transportation and Land Services
	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 within the Project area pursuant to DCC 12.24.	Douglas County Department of Transportation and Land Services
	County Work in Right-of-Way Permit	This permit will be required for work in a County road right-of-way (Douglas County 2021). For example, the permit will be required where the Project's underground 34.5-kV collector lines cross beneath a county roadway (e.g., connecting the solar array east of U Rd SW back to the Project collector substation to the northwest). This permit may also be required if work in the right-of-way to Badger Mountain Road is necessary to construct the 230-kV gen-tie line.	Douglas County Department of Transportation and Land Services

	Traffic Control Plan	A Traffic Control Plan will be prepared in coordination with the Douglas County Department of Transportation and Land Services for traffic management during construction and for construction of access approaches from County right-of-way. The plan will be developed consistent with Douglas County Road Standards for traffic control (DCC 12.56.070).	Douglas County Department of Transportation and Land Services

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

CDTC (Chelan-Douglas Transportation Council). 2020. 2020 Chelan-Douglas Regional Transportation Plan Update. Accessed July 2021. Available online at: https://cdtc.squarespace.com/2040-regional-transportation-plan

Douglas County. 2019. Douglas County Countywide Comprehensive Plan. Amended February 5, 2019. Accessed July 2021. Available online at: https://www.douglascountywa.net/DocumentCenter/View/528/Countywide-Plan-PDF

Douglas County. 2021. Development Review – Transportation and Stormwater Development Standards. Accessed July 2021. Available online at: https://www.douglascountywa.net/317/Development-Review.

Link Transit. 2021. Wenatchee/East Wenatchee Area System Map. Accessed July 2021. Available online at: http://www.linktransit.com/routes_and_schedules/wenatchee_east_wenatchee_area_system_map.php

WSDOT (Washington State Department of Transportation). 2021. Traffic GeoPortal. Accessed July 2021. Available online at: https://wwwwsdotwa/gov/data/tools/deoportal/?config=traffic

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.

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