Nolin Hills Wind Power Project: Draft Proposed Order on Application for Site Certificate

To:	Oregon Energy Facility Siting Council
From:	Kathleen Sloan, Senior Siting Analyst
Date:	April 19, 2022
Re:	Draft Proposed Order on Application for Site Certificate for the proposed Nolin Hills Wind Power Project

Applicant:	Nolin Hills Wind, LLC, a wholly-owned subsidiary of Element Power US, LLC. The applicant's parent company is Capital Power Corporation.
Proposed Facility:	A wind and solar photovoltaic power generation facility, along with related or supporting facilities.
Location:	Umatilla County
Staff Recommendation:	Applicant has demonstrated, based on a preponderance of evidence in the application for site certificate, that, with mitigation as applicable, it would comply with applicable requirements.

To issue a site certificate, the Energy Facility Siting Council (EFSC or Council) must find that an application for site certificate (ASC) demonstrates that the applicant can satisfy, or based on compliance with conditions can satisfy, each of the applicable EFSC Siting Standards set forth in Oregon Administrative Rule (OAR) 345 Divisions 22 through 24 as well as all other Oregon statutes and administrative rules identified in the Project Order, as amended, as applicable to the proposed facility.

As staff to EFSC, the Oregon Department of Energy (Department) reviewed the Nolin Hills Wind Power Project ASC, in consultation with state and local reviewing agencies, tribal governments and a third-party environmental consultant. Based upon the coordinated review of the ASC, the Department recommends the Council make findings of compliance for the applicable requirements, as established in the Amended Project Order. The draft proposed order contains the Department's initial analysis of the ASC and includes recommended site certificate conditions necessary to minimize impacts under applicable Council standards and other rules and statutes. The analysis and recommendations contained in this draft proposed order are not a final determination.

A public comment period is now open on the draft proposed order (DPO) and ASC. In addition, the Council will conduct a public hearing for this phase. A public hearing will be held on Thursday, May 26, 2022 at 5:30 PM. This hearing will be held both in person and via remote/WebEx. The in-person public hearing will be held at the Red Lion Hotel in Pendleton. Please note, interested persons must comment on the record during the public hearing, either orally at the public hearing or in writing during the comment period, in order to preserve their right to participate further in the process. The public comment period will close on May 26, 2022, unless extended by Council. Written or oral comments must be received by the Department by the close of the public comment period.

BEFORE THE
ENERGY FACILITY SITING COUNCIL
OF THE STATE OF OREGON

In the Matter of the Application for Site Certificate for the Nolin Hills Wind Power Project	))))	DRAFT PROPOSED ORDER ON APPLICATION FOR SITE CERTIFICATE

April 19, 2022

TABLE OF CONTENTS

I. INTRODUCTION 1
II. PROCEDURAL HISTORY 1
II.A. NOTICE OF INTENT 1
II.B. APPLICATION FOR SITE CERTIFICATE 2
II.C. COUNCIL REVIEW PROCESS 3
III. PROPOSED FACILITY DESCRIPTION, ACTIVITIES AND LOCATION 5
III.A. PROPOSED FACILITY 5
III.A.1. Energy Facility 5
III.A.2. Related or Supporting Facilities 8
III.B. DESCRIPTION OF PROPOSED FACILITY CONSTRUCTION, OPERATION AND RETIREMENT 15
III.B.1. Construction 15
III.B.2. Operations and Maintenance 16
III.B.3. Facility Decommissioning and Site Restoration 16
III.C. PROPOSED LOCATION, SITE BOUNDARY AND MICROSITING AREAS 17
IV. EVALUATION OF COUNCIL STANDARDS 22
IV.A. GENERAL STANDARD OF REVIEW: OAR 345-022-0000 22
IV.B. ORGANIZATIONAL EXPERTISE: OAR 345-022-0010 31
IV.C. STRUCTURAL STANDARD: OAR 345-022-0020 37
IV.D. SOIL PROTECTION: OAR 345-022-0022 49
IV.E. LAND USE: OAR 345-022-0030 53
IV.E.1 Applicable Substantive Criteria 57
IV.E.2 Directly Applicable State Laws and Statutes 120
IV.F. PROTECTED AREAS: OAR 345-022-0040 146
IV.F.1. Potential Noise Impacts at Protected Areas 152
IV.F.2. Potential Traffic Impacts at Protected Areas 156
IV.F.3. Potential Water Use Impacts at Protected Areas 157
IV.F.4. Potential Wastewater Impacts at Protected Areas 158
IV.F.5. Potential Visual Impacts at Protected Areas 159
IV.G. RETIREMENT AND FINANCIAL ASSURANCE: OAR 345-022-0050 161
IV.H. FISH AND WILDLIFE HABITAT: OAR 345-022-0060 172
IV.H.1. Department Evaluation of Applicant's Desktop and Field Surveys 172
IV.H.2. Temporary Habitat Impacts and Mitigation 178
IV.H.3. Permanent Habitat Impacts and Mitigation 180
IV.H.4. Wildlife Impacts and Mitigation 183
IV.I. THREATENED AND ENDANGERED SPECIES: OAR 345-022-0070 185
IV.I.1. Evaluation of Applicant's Methodology 186
IV.I.2. Impacts and Mitigation to State-listed T&E Species 187
IV.J. SCENIC RESOURCES: OAR 345-022-0080 191
IV.K. HISTORIC, CULTURAL, AND ARCHAEOLOGICAL RESOURCES: OAR 345-022-0090 201
IV.K.1. Department Evaluation of Applicant's Discovery Measures 202

IV.K.2. Evaluation, Avoidance, and Mitigation for Impacts to Historic, Cultural, and Archeological Resources 205
IV.L. RECREATION: OAR 345-022-0100 222
IV.L.1. Recreational Opportunity Importance Assessment 223
IV.L.2. Impact Assessment 226
IV.M. PUBLIC SERVICES: OAR 345-022-0110 232
IV.M.1. Sewers and Sewage Treatment 235
IV.M.2. Water Services 236
IV.M.4. Solid Waste Management 240
IV.M.5. Traffic Safety 241
IV.M.6. Air Traffic 251
IV.M.7. Police Protection 258
IV.M.8. Fire Protection 260
IV.M.9. Housing 266
IV.M.10. Healthcare and Schools 270
IV.N. WASTE MINIMIZATION: OAR 345-022-0120 273
IV.O. DIVISION 23 STANDARDS 279
IV.P. DIVISION 24 STANDARDS 279
IV.P.1. Public Health and Safety Standards for Wind Energy Facilities: OAR 345-024-0010 279
IV.P.2. Cumulative Effects Standard for Wind Energy Facilities: OAR 345-024-0015 286
IV.P.3. Siting Standards for Transmission Lines: OAR 345-024-0090 293
IV.Q. OTHER APPLICABLE REGULATORY REQUIREMENTS UNDER COUNCIL JURISDICTION 301
IV.Q.1. Oregon Department of Environmental Quality (DEQ) Noise Control Regulations for Industry and Commerce: OAR 340-035-0035 301
IV.Q.2. Removal-Fill Law 312
IV.Q.3. Water Rights 318
V. PROPOSED CONCLUSIONS AND ORDER 323

LIST OF TABLES

Table 1: Wind Turbine Specifications 5
Table 2: Umatilla County Development Code (UCDC) 57
Table 3: High-Value, Arable and Nonarable Lands in and Around the Site Boundary and Micrositing Corridors 127
Table 4: Farmland Classification at Proposed Solar Micrositing Area 134
Table 5: Protected Areas within the Analysis Area 149
Table 6: Proposed Facility Decommissioning Tasks and Cost Estimate 166
Table 7: Fish and Wildlife Habitat Survey Summary 174
Table 8: Temporary/Temporal Habitat Impacts from Proposed Facility Construction 178
Table 9: Permanent Habitat Impacts from Proposed Facility Construction 181
Table 10: Summary of ODFW Mitigation Goals and Estimated Acreage for Mitigation 181
Table 11: Important Scenic Resources, Distance from Proposed Site Boundary and Potential Visibility of Proposed Facility Components 194
Table 12: Archeological Sites (non-HPRCSIT) within Analysis Area 206
Table 13: Archeological, HPRCSIT Sites within Analysis Area 211
Table 14: Archeological Objects within Analysis Area 215
Table 15: Historic/Built Environment Resources within the Analysis Area 219
Table 16: Recreational Opportunities within the Analysis Area 223
Table 17: Construction Traffic Volumes and Level of Service on Proposed Primary Access Roads 247
Table 18: Proximity of Proposed Facility Site Boundary and Components to Regional Airports 252
Table 19: Glare Analysis Result Summary 256
Table 20: Health Care Providers and Distance from Site Boundary 271
Table 21: Overhead Electric Field Results 296
Table 22: Predicted Maximum Induced Current Factors 300
Table 23: Statistical Noise Limits for Industrial and Commercial Noise Sources 305
Table 24: Proposed Facility Operational Noise Analysis – Acoustic Modeling Results 309
Table 25: Summary of DSL-Concurred Jurisdictional Wetlands and WOS Within the Micrositing Area 314
Table 26:Construction Period and Daily Worst-Case Construction-Related Water Use 320

LIST OF FIGURES

Figure 1: Regional Location of Proposed Facility and Site Boundary 20
Figure 2: Proposed Micrositing Areas 21
Figure 3: Land Use Zoning within Analysis Area 56
Figure 4: Proposed UEC Cottonwood Transmission Line - Proximate Uses 66
Figure 5: Farmland Classification at the Proposed Solar Micrositing Area 133
Figure 6: Location of Protected Areas within the Analysis Area 151
Figure 7: Important or Significant Scenic Resources within the Analysis Area 193
Figure 8: Zone of Visual Impacts of Turbine Visibility within Analysis Area 196
Figure 9: Zone of Visual Impacts of UEC Transmission Line Route 197
Figure 10: Visual Impact Assessment of BPA Transmission Route on Umatilla River, Pendleton 198
Figure 11: Echo Meadows Photographic Simulations 200
Figure 12: Preliminary Construction Transportation Routes 244
Figure 13: UEC Cottonwood 230 kV/115 kV Electrical Field Modelling Output 297
Figure 14: Substation Connector 230 kV Electrical Field Modelling Output 298
Figure 15: BPA Stanfield 230 kV with Existing 230 kV H-Frame Electrical Field Modelling Output 299

ATTACHMENTS

Attachment A: Recommended Draft Site Certificate Conditions (to be replaced in final order with Site Certificate)
Attachment B: Reviewing Agency Comments on pASC and ASC
Attachment C: [Reserved for Draft Proposed Order Comments/Index]
Attachment D: References Cited in Draft Proposed Order
Attachment E: Draft Geotechnical Investigation Protocol (framework)
Attachment G-1: Draft Spill Prevention, Control, and Countermeasures Plan
Attachment K-1: Draft Agricultural Mitigation Plan
Attachment P-1: Draft Habitat Mitigation Plan
Attachment P-2: Draft Revegetation and Noxious Weed Plan
Attachment P-3: Draft Wildlife Monitoring Plan
Attachment P-4: Wildlife Monitoring and Adaptive Management Plan (Construction)
Attachment S-1: Draft Cultural Resources Monitoring and Inadvertent Discovery Plan
Attachment S-2: Historical Resources Mitigation Plan
Attachment S-3: Draft Subsurface Probing Plan
Attachment U-1: Draft Traffic Management Plan
Attachment U-2: Draft Fire Prevention, Suppression and Emergency Management Plan

ACRONYMS AND ABBREVIATIONS

AB	Agri-Business Zone
AC	Alternating Current
ACEC	Area of Critical Environmental Concern
AGL	Above Ground Level
APLIC	Avian Power Line Interaction Committee
Applicant	Nolin Hills Wind, LLC
ASA	Ambulance Service Area
ASC	Application for Site Certificate for the Nolin Hills Wind Power Project
ASCE	American Society of Civil Engineering
AUC	Alberta Utilities Commission
BESS	Battery Energy Storage System
BGEPA	Bold and Golden Eagle Protection Act
BLM	U.S. Bureau of Land Management
BMP	Best Management Practice
BPA	Bonneville Power Administration
CadnaA	DataKustic GmbH's Computer-Aided Noise Abatement program
Capital Power	Capital Power Corporation
CFR	Code of Federal Regulations
CIP	Capital Improvement Program
Council	Oregon Energy Facility Siting Council
Corona3	Corona and Field Effects Program Version 3
CPUSHI	Capital Power US Holdings Inc.
CR	County Road
CRP	Conservation Reserve Program
CTUIR	Confederated Tribes of the Umatilla Indian Reservation
CWA	Clean Water Act
cy	Cubic Yards
dBA	Decibel A Scale
DC	Direct Current
Department	Oregon Department of Energy
DEQ	Oregon Department of Environmental Quality
DLCD	Oregon Department of Land and Conservation
DOGAMI	Oregon Department of Geology and Mineral Industries
DSL	Oregon Department of State Lands
EFSC	Oregon Energy Facility Siting Council
EPA	United States Environmental Protection Agency
EPRI	Electric Power Research Institute
ESCP	Erosion and Sediment Control Plan
EFU	Exclusive Farm Use
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FHWA	Federal Highways Administration
g	gravity
GE	General Electric
GPS	Global Positioning System
GSU	Generator Step-up

GW	Gigawatt
HARC	Hermiston Agricultural Research Center
HMA	Habitat Mitigation Area
HMP	Habitat Mitigation Plan
LCDC	Land Conservation and Development Commission
LI	Light Industrial Zone
LiDar	Light Detection and Ranging
LOS	Level of Service
LUBA	Oregon Land Use Board of Appeals
MET	Meteorological Evaluation Tower
Mgal	Million Gallons
MIDP	Monitoring and Inadvertent Discovery Plan
MTBH	Maximum Blade Tip Height
MVA	Megavolt Ampere
MW	Megawatt(s)
NESC	National Electrical Safety Code
NMT	Nacelle-Mounted Transformer
NOAA	National Oceanic Atmospheric Administration
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NRHP	National Register of Historic Places
NRCS	Natural Resources Conservation Service
NSR	Noise Sensitive Receptor
NWC	Northwest Wildlife Consultants
NWI	National Wetlands Inventory
O&M	Operations and Maintenance Building
OAR	Oregon Administrative Rule
OCTA	Oregon-California Trails Association
ODA	Oregon Department of Agriculture
ODA	Oregon Department of Aviation
ODEQ	Oregon Department of Environmental Quality
ODFW	Oregon Department of Fish and Wildlife
ODOE	Oregon Department of Energy
ODOT	Oregon Department of Transportation
OESA	Oregon Endangered Species Act
OHWL	Ordinary High Water Level
ONHT	Oregon National Historic Trail
OPRD	Oregon Parks and Recreation Department
OR-320	Oregon Trail Road
ORBIC	Oregon Biodiversity Information Center
ORS	Oregon Revised Statutes
OSP	Oregon State Police
OSSC	Oregon Structural Specialty Code
OWRD	Oregon Water Resources Department
pASC	Preliminary Application for Site Certificate
PGA	Peak Ground Acceleration

PMT	Pad Mounted Transformer
Proposed facility	Nolin Hills Wind Power Project under EFSC Site Certificate
PV	Photo Voltaic
RAGAGEP	Recommendations and Recognized and Generally Accepted Good Engineering Practices
RAI	Request for Additional Information
RBC	Royal Bank of Canada
RFPD	Rural Fire Protection District
ROW	Right of Way
RPS	Rangeland Program Summary
RTC	Rural Tourist Commercial Zone
RV	Recreational Vehicle
SAG	Special Advisory Group
SAT	Single-Axis Tracker
SCADA	Supervisory Control Data Acquisition
SGHAT	Solar Glare Hazard Analysis Tool
SHPO	State Historic Preservation Office
SIP	Strategic Investment Program
SPCC	Spill Prevention, Control and Countermeasure
STIP	Statewide Transportation Improvement Program
SWCA	SWCA, Inc.
T&E	Threatened and Endangered
TPR	Transportation Planning Rule
TRP	Tactical Response Procedures
TSP	Transportation System Plan
TUS	Traditional Use Study
UC	Unincorporated Community
UCCP	Umatilla County Comprehensive Plan
UCDC	Umatilla County Development Ordinance or Code
UDFD	Umatilla County Fire District
UEC	Umatilla Electric Cooperative
UGB	Urban Growth Boundary
UPS	Uninterrupted Power Supply
US-395	United States Highway 395
USACE	United States Army Corp of Engineers
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UTM	Universal Transverse Mercator
WGS	Washington Ground Squirrel
WOS	Waters of the State
ZVI	Zone of Visual Impacts

I. INTRODUCTION

The Oregon Department of Energy (Department) issues this draft proposed order (DPO) in accordance with Oregon Revised Statute (ORS) 469.370(1), based on its review of the Application for Site Certificate (ASC) for the proposed Nolin Hills Wind Power Project (proposed facility) and comments and recommendations received by state agencies, local governments, tribal governments and its third-party environmental consultant (Hart-Crowser).

The applicant is Nolin Hills Wind, LLC, a wholly-owned subsidiary of Element Power US, LLC. The applicant's parent company is Capital Power Corporation. The proposed energy facility includes wind and solar energy generating components with a nominal generating capacity of approximately 600 megawatts (MW) (approximately 340 MW from wind and 260 MW from solar), to be located within a proposed site boundary located near the Town of Nolin in Umatilla County, Oregon.

The proposed facility qualifies as an "energy facility" under the definition in ORS 469.300(11)(a)(D)(i) and (ii) and -(J) because it includes proposed solar photovoltaic energy generation components to be located on more than 160 acres of high-value farmland as defined in ORS 195.300 and more than 1,280 acres of land that is predominately cultivated; and includes 50 megawatts (MW) or more of average electric generating capacity (150 MW nominal capacity) of proposed wind energy generation components. Therefore, the proposed facility must receive EFSC approval of a site certificate to construct and operate the proposed facility within an approved site.[1]

II. PROCEDURAL HISTORY

II.A. Notice of Intent

On September 11, 2017, the Department received a Notice of Intent (NOI) to file an ASC for the proposed facility. At the time of the 2017 NOI filing, the facility was proposed as a 350 MW wind facility.[2] The Department issued the NOI Public Notice on October 5, 2017 and published the NOI Public Notice in the East Oregonian newspaper on October 7, 2017.[3] The Department distributed the NOI to state, tribal and local reviewing agencies on October 5, 2017 and requested comments on the NOI no later than November 6, 2017.[4, 5] Comments on the NOI were received by the Department from 7 state, local and tribal reviewing agencies (Oregon Department of State Lands, Department of Land Conservation and Development, City of

[1] ORS 469.320

[2] NHWNOIDoc1 NOI 2017-09-11.

[3] NHWNOIDoc17 NOI Public Notice 2017-10-05. NHWNOINoc17-1 NOI Public Notice Proof of Ad 2017-10-07.

[4] NHWNOIDoc2 Reviewing Agency/Tribal Government NOI Review Request Memos 2021-10-05.

[5] Reviewing agencies as defined in OAR 345-001-0010(51).

Hermiston, Oregon Department of Fish and Wildlife, Nez Perce, Umatilla County of Board of Commissioners, and Oregon State Historic Preservation Office; and three public comments.[6]

Pursuant to ORS 469.480, on October 19, 2017, the Council appointed the Umatilla County Board of Commissioners as the Special Advisory Group (SAG) for the proposed facility.[7,8] As a SAG, the Umatilla County Board of Commissioners is tasked with recommending "applicable substantive criteria" from the acknowledged comprehensive plan and land use regulations that are required by the statewide planning goals and in effect on the data the preliminary ASC is submitted, and any Land Conservation and Development Commission administrative rules and goals and any land use statutes that apply directly to the facility under ORS 197.646.[9,10]

Pursuant to ORS 469.370(10) and OAR 345-015-0160, the Department issued a Project Order on January 10, 2018, which specified the state statutes and administrative rules, and local, state, and tribal laws, regulations, ordinances and other requirements applicable to the siting of the proposed facility.[11] For issuance, the Project Order was posted to the Department's project webpage and provided to the applicant. At the request of the applicant, an NOI extension order was issued on August 23, 2019. [12]

II.B. Application for Site Certificate

The Department received the initial Preliminary Application for Site Certificate (pASC) for the proposed facility on February 27, 2020. At the time of the February 27, 2020 pASC, the facility was proposed as a 350 MW wind facility, as represented in the September 11, 2017 NOI. The Department distributed the pASC to reviewing agencies on March 2, 2020 and requested comments on the pASC no later than April 1, 2020. Additionally, an announcement was posted on the Department's website, notifying the public that the pASC had been received by the Department. Comments on the pASC were received from 8 state agencies, 1 local government, the SAG, 2 Tribal Governments and 1 federal agency. All comments were provided by the Department to the applicant for their review and consideration during the pASC completeness review.

[6] NHWNOIDoc3 and Doc4. Reviewing Agency and Public Comments on the NOI. 2021-10-06 through 2017-11-06.
[7] NHWNOIDoc16 Order Appointing Special Advisory Group 2017-10-19.
[8] ORS 469.480(1) states, "The Energy Facility Siting Council shall designate as a special advisory group the governing body of any local government within whose jurisdiction the facility is proposed to be located.
[9] ORS 469.504(1)(b)(B)
[10] Per OAR 345-022-0030(3), "applicable substantive criteria" are "criteria from the affected local government's acknowledged comprehensive plan *and* land use ordinances that are *required by the statewide planning goals* . . ." (emphasis added). Thus, to constitute applicable substantive criteria, the criteria must typically be in both a comprehensive plan *and* land use ordinances *and* be required by a statewide planning goal.
[11] NHWNOIDoc18 Project Order 2018-01-10.
[12] NHWNOIDoc23 Order Granting an Extension to NOI 2019-08-23.

Pursuant to OAR 345-015-0190(1), on April 27, 2020 the Department determined the pASC to be incomplete and issued a Request for Additional Information (RAI) to the applicant. The applicant responded on November 23, 2020 with additional facts, evidence and analysis.

On November 6, 2020, the applicant submitted a revised pASC including a substantive change to the capacity and generation components of the proposed facility from a 350 MW wind facility to a 600 MW wind and solar facility. The Department posted the revised pASC to its project webpage and notified reviewing agencies of the opportunity to review and comment on the changes. The Department issued an Amended Project Order, based on the November 6, 2020 revised pASC, on August 2, 2021.

The Department issued additional RAI's on December 20, 2020, February 22 and July 27, 2021 which the applicant responded to on April 23, June 24, September 17, October 7 and November 17, 2021. The Department issued a policy memo and RAIs on December 6, 2021, specific to the applicant's request for an exception to the statewide policy embodied in Goal 3, *Agricultural Lands* for the proposed solar photovoltaic energy generation components, as presented in pASC Exhibit K. In response, the applicant provided additional facts and analysis, including two landowner letters, on December 6, 2021, January 14 and 27, 2022.

On January 28, 2022, following review of the responses, revised pASC Exhibits and supplemental facts and evidence submitted by the applicant in response to the Department's RAIs and agency comments throughout the pASC review process, the Department determined the ASC to be complete and notified the applicant.[13] The applicant filed a complete ASC on January 31, 2022.[14]

Public notice of the complete ASC was issued on February 3, 2022, with notice published in the East Oregonian on February 8, 2022. Pursuant to OAR 345-015-0200, the Department distributed electronic copies of the complete ASC to reviewing agencies, along with a request for agency reports on the complete ASC by February 18, 2022. The Department received comments from 2 state and 1 local government agencies. In addition, the Department held a virtual public information meeting on the complete ASC on February 16, 2022 via Webex.[15]

II.C. Council Review Process

On April 19, 2022, the Department issued Public Notice of: issuance of and comment period on the Draft Proposed Order (DPO) and of a public hearing on the DPO. The comment period extends from April 19, 2022 – May 26, 2022. Pursuant to ORS 469.370(2), a public hearing on the draft proposed order (DPO) of an ASC must be held in the affected area of the proposed

[13] NHWAPPDoc1 ASC Determination of Complete ASC. 2022-01-28.

[14] Pursuant to OAR 345-015-0190(5), an ASC is complete when the Department finds that an applicant has submitted information adequate for the Council to make findings or impose conditions on all applicable Council standards.

[15] Informational meeting on the complete ASC was conducted in accordance with OAR 345-015-0190(8)(d).

facility. The public hearing on the DPO will be both an in-person and virtual/remote hearing and will be held at the Red Lion Hotel in Pendleton, Oregon at 5:30 pm on Thursday May 26, 2022.

In addition to accepting written comments during the comment period, Council-appointed hearing officer, Administrative Law Judge Kate Triana, will also accept oral testimony at the public hearings.[16,17] The record of the DPO will close at the conclusion of the public hearing on May 26, 2022, unless an extension is requested and granted by the Hearing Officer, as described in the Public Hearing Notice. The Public Notice was distributed to all persons on the Council's general mailing list, to the special list established for the proposed facility, to an updated list of property owners supplied by the applicant,[18] and to a list of reviewing agencies as defined in OAR 345-001-0010(52). The Department also published the Public Notice in the East Oregonian on April 19, 2022; a newspaper of general circulation in the area of the proposed facility. This information was also posted on the ODOE facility webpage on April 19, 2022.

Following the close of the record of the public hearing and Council's review of the draft proposed order, the Department will issue a Proposed Order, taking into consideration Council comments, any comments received "on the record of the public hearing" (i.e., oral testimony provided at the public hearing and written comments received by the Department after the date of the notice of the public hearing and before the close of the public hearing), and agency consultation. Concurrent with the issuance of the Proposed Order, the Department will issue a notice of contested case and a public notice of the Proposed Order.[19] Only those persons who comment in person or in writing on the record of the public hearing may request to participate as a party or limited party in the contested case proceeding.

To raise an issue in a contested case proceeding, the issue must be within Council jurisdiction, and the person must have raised the issue on the record of the public hearing with "sufficient specificity to afford the Council, the department, and the applicant an adequate opportunity to respond."[20] At the conclusion of a contested case proceeding, the hearing officer will issue a proposed contested case order stating the hearing officer's findings of fact, conclusions of law and recommended site certificate conditions on the issues raised in the contested case. The Council may adopt, modify or reject the hearing officer's proposed contested case order.[21] Based upon Council's direction to adopt, modify or reject the hearing officer's proposed contested case order, the findings of the hearing officer's proposed contested case order, and any modifications requested by Council, are then incorporated into the Council's final order on the ASC. Following the contested case proceeding, the Council will issue a final order either

[16] ORS 469.370(2).

[17] NHWAPPDoc3. Order Appointing Hearing Officer. 2022-01-28.

[18] NHWAPPDoc2-5 ASC Exhibit F. Property Owners. 2022-02-03. As presented in ASC Exhibit F, property owner information was obtained by the applicant from Umatilla County on January 31, 2022.

[19] See ORS 469.370(4) and OAR 345-015-0014.

[20] ORS 469.370(3).

[21] OAR 345-015-0085.

approving or denying the ASC based upon the standards adopted under ORS 469.501, and any additional state statutes, rules, or local government regulations or ordinances determined to be applicable to the facility in the Amended Project Order.[22]

The Council's final order is subject to judicial review by the Oregon Supreme Court. Only a party to the contested case proceeding may request judicial review and the issues on appeal are limited to those raised by the parties to the contested case proceeding. A petition for judicial review must be filed with the Supreme Court within 60 days after the date of service of the Council's final order or within 30 days after the date of a petition for rehearing is denied or deemed denied.[23]

III. PROPOSED FACILITY DESCRIPTION, ACTIVITIES AND LOCATION

III.A. Proposed Facility

III.A.1. Energy Facility

The proposed energy facility includes wind and solar energy generating components with a nominal generating capacity of approximately 600 megawatts (MW) (approximately 340 MW from wind and 260 MW from solar). A description of the proposed energy facility and related or supporting facilities is presented below and is intended to be the description that would be included in the site certificate, if granted by Council, and therefore binding on the applicant.

Wind Energy Generation Components

The proposed wind energy generation components would include up to 112, 3.03 MW wind turbine generators.[24] The maximum turbine specifications and sound power level are presented in Table 1 below.

Table 1: Wind Turbine Specifications

Generating Capacity[25]	Maximum Tower Hub Height (feet)	Maximum Rotor Diameter (feet)	Maximum Blade Tip Height (feet)[1] (above pedestal)	Minimum Blade Tip Clearance (feet)	Maximum Sound Power Level (dBA)[2]
3.03 MW	266	459	496	36.5	108

[22] ORS 469.370(7).

[23] ORS 469.403.

[24] NHWAPPDoc2-1 ASC Exhibit B. Project Desc_2022-01-31, Section 1.0.

[25] Table 1 is intended to represent binding requirements on the applicant; however, if there are technological changes in wind turbine specifications, such as a wind turbine with a higher generating capacity while still within the other specifications, the applicant may seek Department review of an Amendment Determination Request pursuant to OAR 345-027-0357 to verify whether the change could occur without undergoing a site certificate amendment.

Table 1: Wind Turbine Specifications

Generating Capacity[25]	Maximum Tower Hub Height (feet)	Maximum Rotor Diameter (feet)	Maximum Blade Tip Height (feet)[1] (above pedestal)	Minimum Blade Tip Clearance (feet)	Maximum Sound Power Level (dBA)[2]
Notes: 1. Visual impacts from wind turbines with maximum blade tip height up to 496 feet were evaluated in ASC Exhibit R, with a supplemental analysis of turbines up to 656 feet in height (Exhibit R, Attachment R-1). 2. Includes a confidence interval k = 2 dBA. ASC Exhibit X, p.15.					

Proposed wind turbines would include a nacelle, blades, and a tower (see ASC Exhibit B Figure B-1). The nacelle would include a gearbox, generator, and control systems, and may include generator step up transformers, described further below. Turbine blades and tower would be designed with a lightening protection system to electrically ground the entire structure and eliminate the potential for lightening caused fires. Access to the nacelle would be via a ladder inside the wind turbine tower, accessible by a locked steel doorway at the base of the tower. The roof of the nacelle would be removable or opened from within to accommodate major maintenance activities such as gearbox replacement.

The wind turbines would be painted with a grey, white, or off-white, low-reflectivity coating to minimize reflection and contrast with the sky; this reduces the visual impact of the turbines in the skyline and helps make turbines visible to daytime pilots. Lighting on the facility would be minimal except to maintain safety standards and operational needs. Turbine exterior lighting, as required by the FAA, would consist of red flashing lights placed at the end of turbine strings and approximately every 0.5 mile within the site boundary.[26]

Turbine Foundations

Proposed wind turbines would be secured to a foundation, constructed of reinforced concrete, spread-footing, plate foundations, pile or caisson. Typical spread-foot foundations reach a depth of 10 feet below grade and can be as large as 80 to 85 feet in diameter (see ASC Exhibit B Figure B-2). The center of the foundation would be approximately 6 feet thick, tapering to approximately 2 feet thick at the outer edges. From the center of the footing to above ground level, turbine towers would be mounted on an 18-foot-diameter pedestal, which may be up to 24 inches above ground surface.[27] Depending on the pre-construction site-specific geotechnical investigation, bedrock foundations may be installed (see ASC Exhibit B Figure B-3).[28] Constructing bedrock foundations would involve stripping the topsoil and subsoil to the top of the bedrock then mechanically removing bedrock to the design depth of the turbine foundation. Holes would then be drilled to the rock anchor bolt design depth; the concrete pad would then be installed; and the rock anchor bolts would be placed to secure the concrete pad foundation.

[26] NHWAPPDoc2-17 ASC Exhibit R. Scenic_2022-01-31, Section 5.1.

[27] NHWAPPDoc2-1 ASC Exhibit B. Project Desc_2022-01-31, Section 2.4.

[28] NHWAPPDoc2-1 ASC Exhibit B. Project Desc_2022-01-31.

ASC Exhibit B Figure B-4 illustrates that there would be an 82-foot diameter permanent footprint around each turbine, and as stated above, spread footing foundations could be up to 85-feet in dimeter. This permanent footprint diameter includes the turbine foundation and any other vegetation-free or a non-combustible base area which would prevent fires in the areas directly around the turbines.

Nacelle-Mounted (NMT) and Pad-Mounted Generator Step-Up Transformers (PMT)

Wind turbines may be equipped with a nacelle-mounted transformer (NMT) or a pad mounted transformer (PMT), both of which are generator step-up (GSU) transformers that would step up power from 690 volts to 34.5 kV. Within each wind turbine nacelle, the NMT and wind turbine gearbox would contain approximately 549 gallons of mineral oil and 10 gallons of synthetic oil. The PMT would also contain approximately 549 gallons of mineral oil and 10 gallons of synthetic oil, each.[29] The NMT and PMT transformers and gearbox would be classified as "qualified oil-filled operational equipment" under the Environmental Protection Agency's Amended Spill Prevention, Control, and Countermeasure Rule" which requires that, in lieu of using equipment designed with secondary containment, the applicant would prepare an oil spill contingency plan and a develop a written commitment of manpower, equipment, and materials to quickly control and remove discharged oil; the plan must include an inspection or monitoring program for the equipment to detect a failure and/or discharge. Further, for the NMT, the floor of the nacelle would act as a pan to contain any potential spills of gearbox or hydraulic fluid.

If PMTs are selected, they would be enclosed in rectangular structure boxes approximately 8 feet by 11 feet, set on a 2-to-6 foot thick concrete pad or foundation, located adjacent to the base of the turbine tower, see ASC Exhibit B, Figure B-4 for the approximate location of the PMT at the base foundation of the turbines. The equipment would be designed and operated in accordance with federal requirements for "qualified oil-filled operational equipment" or designed with foundations that would provide secondary containment.[30] The pad-mounted transformers would be protected from collisions on the ground with the installation of bollards.[31]

Solar Photovoltaic Energy Generation Components

The proposed facility would include approximately 260 MWs of nominal generating solar photovoltaic components, as described below.[32]

[29] NHWAPPDoc2-30 ASC Additional Information Package Exhbs B, M,O J, U, DD 2022-03-04.

[30] NHWAPPDoc2-1 ASC Exhibit B. Project Desc_2022-01-31, Section 2.5.

[31] NHWAPPDoc2-30 ASC Additional Information Package Exhbs B, M,O J, U, DD 2022-03-04.

[32] The proposed facility description is intended to represent binding requirements on the applicant; however, if there are technological changes in solar photovoltaic energy generation components that would result in increased

Solar Arrays

Proposed solar arrays would include modules placed on racks supported by posts, extending approximately 18 feet in height when tilted (see ASC Exhibit B Figures B-6 and B-7), and related electrical equipment. The proposed facility would include approximately 816,812 modules, 21,495 single-axis tracker (SAT) or fixed-tilt racks and 83,080 posts.

Posts would be steel, round hollow or pile-type (i.e., H-pile, C-pile, S-pile) and would be set in concrete or grouted into a hole drilled into rock, depending on subsurface and soil conditions on site. Post depth may vary depending on soil conditions, but the posts are typically installed 6 to 10 feet below the surface and protrude approximately 4 to 5 feet above grade.

Modules would be placed in linear rows (strings), spaced approximately 12 to 25 feet apart. Each string would contain 27 modules and would be equipped with a pad-mounted combiner box, totaling up to 30,252 combiner boxes. From the combiner boxes, up to 2 miles of low-voltage cabling mounted to the racking system, placed in cable trays, or buried would be installed to collect and aggregate electricity from DC to AC. From the combiner boxes, electric cabling would be installed to interconnect to inverter/transformer stations, totaling up to 98 stations. Each station would include a 4,400-kilowatt inverter that consists of five integrated 880-watt individual units, for a total of 490 units.[33] Each transformer would contain 500 gallons of transformer oil. The dimensions of each inverter and transformer would be approximately 30 feet wide by 8.5 feet in height; inverters may be co-located with modules, strings or centrally located within the proposed facility site.

The solar arrays would be located with the area would be located adjacent to related or supporting facilities including the Battery Energy Storage System (BESS), northern substation, O&M Building, and central construction yard, all enclosed by an 8-foot-tall security fence, with no barbed wire. Vegetation within the solar siting area would be managed and mowed, as needed, to reduce fuels for fire. Outdoor lighting at the solar array site would be kept to a minimum through the use of motion sensors and switches to reduce lighting to the minimum required for safety when not in use, and lighting would be directed downward and inward to prevent off-site glare.[34]

III.A.2. Related or Supporting Facilities

Proposed related or supporting facilities are presented below:

- Up to 14.6 Miles of aboveground 34.5 kV Electrical Collection System;

number of/differences in facility components/type of equipment but that would be located within the proposed site boundary and micrositing areas, the applicant may seek Department review of an Amendment Determination Request pursuant to OAR 345-027-0357 to verify whether the change could occur without undergoing a site certificate amendment.

[33] NHWAPPDoc2-1 ASC Exhibit B. Project Desc_2022-01-31, Section 2.6.5.

[34] NHWAPPDoc2-17 ASC Exhibit R. Scenic_2022-01-31, Section 5.1.

- Up to 144 Miles of underground 34.5 kV Electrical Collection System;
- Two Collector Substations;
- Up to 32.1 miles of 230 kV Transmission Lines (Substation Connector Line, and one of two provided Regional Grid Interconnection Line Route Options);
- 120 MW Battery Energy Storage System (BESS) (lithium-ion or flow);
- Up to three Meteorological (met) towers;
- Communication and Supervisory Control and Data Acquisition (SCADA) System;
- Operations and Maintenance (O&M) Building;
- Up to 80 Miles of Internal/External Access Roads;
- Up to 9.4 miles of 8-foot Chain-Link or Mesh Perimeter Fencing for Solar Micrositing; Areas and southern collector substation;
- Temporary Construction/Staging Areas.

34.5 kV Electrical Collection System/Collector Lines

For the proposed wind energy generation components, the 34.5 kV electrical collection system would include up to 89 miles (up to 239 miles of conductor cable) of underground and up to 9.1 miles of aboveground collector lines. For the proposed solar photovoltaic energy generation components, the 34.5 kV electrical collection system would include up to 55 miles (up to 144 miles of conductor cable) of underground and up to 5.5 miles of aboveground collector lines. Underground cable would be installed in trenches at a minimum 3 feet depth. Aboveground collector lines would be placed on 3-foot wide by 100-foot tall, wooden, pole structures. The wooden support poles would be buried up to approximately 12 feet in the ground and would be spaced approximately 150 to 300 feet apart, depending on specific site conditions.

Collector Substations

The proposed facility includes two collector substations - a northern substation (10.5-acre site) and southern substation (5.9-acre site) (see ASC Exhibit C Figures C -4.16 and C-4.19). Each substation would be enclosed by a security wire mesh fence to prohibit unauthorized access. The southern substation would be enclosed by its own fence and the northern substation may be enclosed by its own fence or be enclosed in the fence line for the solar facility area.

Each collector substation would include a transformer, transmission line termination structures, a bus bar, circuit breakers and fuses, control systems, meters and other equipment; and would be placed on a concrete foundation and located within its own security fence. Each transformer would be 300 megavolt ampere (MVA) and would contain 14,000 gallons of transformer oil, with a design to provide secondary containment. The collector substations would each be powered by up to sixty 300-amp hour lead-acid batteries, placed in sealed containers held in a wall rack located inside the substation power control buildings.[35] The area around both substations would be graveled, with no vegetation present.[36] Outdoor lighting at the proposed

[35] NHWAPPDoc2-1 ASC Exhibit B. Project Desc_2022-01-31, Section 4.0.

[36] NHWAPPDoc2-1 ASC Exhibit B. Project Desc_2022-01-31, Section 5.0.

substations would be kept to a minimum through the use of motion sensors and switches to reduce lighting to the minimum required for safety when not in use, and lighting would be directed downward and inward to prevent off-site glare.[37] Substation structures would be finished in neutral colors to blend with the surrounding landscape.

230 kV Transmission Lines

The proposed facility includes two 230 kV transmission lines. The 230 kV transmission line would be supported by wooden H-frame or steel monopole structures, 100 to 140 feet tall, spaced on average 600 feet apart. Wooden monopole structures would help blend with the poles with the surroundings; if steel structures are selected, they would have a low-reflectivity coating to reduce visual impacts of the structures. One transmission line would interconnect the northern and southern substations, and the other transmission line would interconnect the northern substation to the electrical grid. The proposed 230 kV transmission line that would interconnect the northern substation to the grid includes two proposed route options.

- Proposed Substation Connector Line (6.8 miles)
- Proposed Regional Grid Interconnection Line – Route Options
    - UEC Cottonwood Route (25.3 miles)
    - BPA Stanfield Route (5 miles)

Substation Connector Line

A 6.8 mile, single circuit 230-kV transmission line supported by H-frame or monopole structures (or other form as needed for specialized locations) would extend between the two proposed substations. The proposed 230-kV substation connector line would be designed to maintain a minimum conductor-to-ground clearance of 25 feet (minimum 35 feet over national highways; varies with location per safety codes), and structures would be approximately 100 to 140 feet tall, spaced approximately 600 feet apart depending on the terrain.[38]

UEC Cottonwood Route (alternative)

The proposed UEC Cottonwood route would be approximately 25.3 miles in length, of which:

- approximately 8.4 miles would be a new single-circuit 230-kV transmission line,
- approximately 9.6 miles would replace an existing 12.47-kV distribution line with a 230-kV transmission line and distribution underbuild, and
- approximately 7.3 miles would upgrade an existing 115-kV UEC transmission line to a double-circuit 230/115-kV line with 12.47-kV underbuilt distribution.

For the approximately 7.3-mile 115 kV upgrade, the existing 55- to 85-foot-tall pole 115 kV structures would be replaced with 140 foot tall, steel pole structures. The new 230 kV circuit would be strung on one side of the pole and the existing 115 kV circuit would be strung on the

[37] NHWAPPDoc2-17 ASC Exhibit R. Scenic_2022-01-31, Section 5.1.

[38] NHWAPPDoc2-1 ASC Exhibit B. Project Desc_2022-01-31, Section 7.1.2.

opposite site of the pole, on pole masts with suspension insulators. The proposed 230 kV transmission line would be aboveground, on wooden H-frame or steel monopole structures approximately 100 to 140 feet tall. The new 230 kV structures would also include crossarms for distribution underbuild. For this upgrade, applicant would be required to obtain easements, up to 100-feet, prior to construction.[39]

BPA Stanfield Route (alternative)

The proposed BPA Stanfield route would be approximately 5 miles in length, of which approximately 3 miles would parallel an existing 230-kV transmission line, outside of the existing transmission line's right-of-way.[40] The proposed BPA Stanfield route would require a new overhead 230-kV transmission line that would extend from the proposed northern Project substation to the proposed BPA Stanfield Substation.[41] The proposed 230 kV transmission lines would be aboveground, on wooden H-frame or steel monopole structures approximately 100 to 140 feet tall. If the BPA Stanfield route is selected by the applicant, a new overhead 230-kV transmission line would extend approximately 4.5 miles from the proposed northern substation to the proposed BPA Stanfield Substation.

Battery Energy Storage System (BESS):

The proposed facility would include either lithium-ion or flow batteries to store up to 120 MW of the energy generated by the solar array, located near the O&M Building and northern substation on the western side of the solar array, or in distributed units throughout the solar array. Two battery options may be used: AC- or DC-coupled lithium-ion batteries or AC-coupled flow batteries. Both systems use a series of self-contained containers and would be within the larger solar facility area fence line (and may or may not be separately fenced within the overall footprint).[42] The area around the BESS would be graveled, with no vegetation present.[43] Outdoor lighting at the BESS would be kept to a minimum through the use of motion sensors and switches to reduce lighting to the minimum required for safety when not in use, and lighting would be directed downward and inward to prevent off-site glare.[44]

The battery storage design would include, but not be limited to, the following elements.

- Battery storage equipment, including batteries and racks or containers, inverters, isolation transformers, and switchboards;
- Balance of plant equipment, which may include medium-voltage and low-voltage electrical systems, fire suppression, heating, ventilation, and air-conditioning systems, building auxiliary electrical systems, and network/SCADA systems;

[39] NHWAPPDoc2-1 ASC Exhibit B. Project Desc_2022-01-31, Section 8.5.
[40] NHWAPPDoc2-1 ASC Exhibit B. Project Desc_2022-01-31, Section 8.5.
[41] NHWAPPDoc2-29 ASC Exhibit DD. Specific Standards_2022-01-31, Section 4.2.3.
[42] NHWAPPDoc2-1 ASC Exhibit B. Project Desc_2022-01-31, Section 7.2.
[43] NHWAPPDoc2-1 ASC Exhibit B. Project Desc_2022-01-31, Section 5.0.
[44] NHWAPPDoc2-17 ASC Exhibit R. Scenic_2022-01-31, Section 5.1.

- Cooling system, which may include a separate chiller plant located outside the battery racks with chillers, pumps, and heat exchangers; and
- High-voltage (HV) equipment, including a step-up transformer, HV circuit breaker, HV current transformers and voltage transformers, a packaged control building for the HV breaker and transformer equipment, HV towers, structures, and HV cabling.[45]

Both the lithium-ion and flow battery technologies are often placed in standard-sized shipping containers, on a concrete slab. Each container holds the batteries, a supervisory and power management system, cooling system (typical for lithium-ion), and a fire prevention system. By connecting multiple containers, the battery storage system can be scaled to the desired capacity. Containers may be stacked up to two levels with an estimated maximum height of approximately 20 feet.[46] Both BESS options would be stored in steel modules. The modules would be stored on a concrete pad to capture any leaks that may occur.[47]

The lithium-ion BESS could include up to 240 containers, approximately 22 feet long by 8 feet wide by 9.5 feet tall (4 containers per 2-MW block, in 60 distributed locations. (See ASC Exhibit B, Figure B-9). The representative flow BESS assumes four adjacent 25-MW battery blocks, each consisting of three standard International Organization for Standardization (or ISO) high-cube containers: one 40-foot anolyte container and one 40-foot catholyte container arranged side by side at ground level, with a 20-foot container for battery cell stack and power conversion equipment stacked on top accessible by stairs and platform (See ASC Exhibit B, Figure B-10). The overall flow BESS dimension per block is 40 feet long by 16 feet wide by 19.5 feet tall. The BESS area will be within the permanent solar siting area fence line (though may have its own additional fencing).[48]

Meteorological Towers

The proposed facility would include up to three permanent met towers. The met towers would be either a freestanding, non-guyed design or guyed wire towers, depending on landowner input, with a maximum height of up to approximately 266 feet. The foundation of each permanent met tower would be a square concrete pad approximately 24 feet by 24 feet (See ASC Exhibit B, Figure B-11). In addition, an access road would be constructed to reach each met tower. Federal Aviation Administration (FAA) lighting may be installed on the met towers, depending on the overall lighting scheme for the proposed facility, to be determined prior to

[45] NHWAPPDoc2-1 ASC Exhibit B. Project Desc_2022-01-31, Section 7.2.2.
[46] NHWAPPDoc2-1 ASC Exhibit B. Project Desc_2022-01-31, Section 8.7.
[47] NHWAPPDoc2-1 ASC Exhibit B. Project Desc_2022-01-31, Section 7.2.3
[48] NHWAPPDoc2-1 ASC Exhibit B. Project Desc_2022-01-31, Section 8.7.

operation and in consultation with FAA, which is discussed further in Section I.V.M.6., *Air Traffic*, of this order.[49]

Communication and SCADA System

The proposed facility would include a communication system consisting of fiber optic and copper communication lines that would connect the wind turbines, solar array, BESS, and substations to the O&M Building. These communication lines would run with the collector lines, either buried or overhead, depending on site-specific conditions. Where buried, the communication lines would be placed above the collector lines in a trench, and where overhead, would run alongside the collector lines. The Supervisory Control Data Acquisition (SCADA) system monitors facility components and the met tower data for variables such as meteorological conditions, critical operating parameters, and power output, and allows each component of the system to be monitored and controlled, even remotely, for activity in present time. If an issue occurred with a wind turbine or solar string, it would alert the O&M staff so that the component can be shut down to minimize consequences of failure, fires, and potential safety risks.

Operations and Maintenance Building

The proposed facility would include one, 6,000-square foot Operations and Maintenance (O&M) building, on 7.6 acres adjacent to the northern substation (See Figures 2 and 3).[50] The area around the O&M Building would be graveled, with no vegetation present.[51] The O&M building would consist of a warehouse, maintenance bay, control room, office, break room, kitchen, bathroom with shower, utility room, server room, and storage room. Electricity and telephone service would be provided to the O&M building from local providers using overhead or underground lines. Outdoor lighting at O&M Building would be kept to a minimum through the use of motion sensors and switches to reduce lighting to the minimum required for safety when not in use, and lighting would be directed downward and inward to prevent off-site glare.[52] The O&M Building would be designed and constructed to be generally consistent with the character of agricultural buildings used by farmers or ranchers in the area, and the buildings finished in a neutral color to blend with the surrounding landscape.

A backup Uninterrupted Power Supply (UPS) system would be stored in the control room, to include up to 2 lead-acid batteries (See ASC Exhibit B, Section 4.0). Water would be provided by a permit exempt on-site well. Water use is estimated at 50 to 100 gallons per day per worker, for a total of less than 5,000 gallons per day. The kitchen, toilets, and shower would drain into

[49] NHWAPPDoc2-1 ASC Exhibit B. Project Desc_2022-01-31, Section 7.3.
[50] NHWAPPDoc2-1 ASC Exhibit B. Project Desc_2022-01-31, Section 7.5.
[51] NHWAPPDoc2-1 ASC Exhibit B. Project Desc_2022-01-31, Section 5.0.
[52] NHWAPPDoc2-17 ASC Exhibit R. Scenic_2022-01-31, Section 5.1.

an on-site septic system, also located within the fenced area, to be permitted for the building prior to construction through Umatilla County.

Access Roads

Within the micrositing area for wind facility components, the site would include approximately 43 miles of new permanent access roads and 19 miles of road improvements to existing roads on private property. Temporary access road disturbance would extend 82 feet in width and accounts for the road, crane paths, cut and fill slopes, and any necessary drainage or erosion control features. Permanent access roads would extend 16 feet in width. Gates would be installed on access roads to reduce unauthorized access when requested by property owners and access roads developed or improved for the purposes of operation would be gated and locked when not actively in use in coordination with private landowners.

Within the micrositing area for solar facility components, the site would include 16-20-foot-wide access roads within the perimeter fence line, assumed as a permanent disturbance for the facility footprint. An additional approximately 18 miles of new permanent access roads would be constructed to access the solar array and BESS within the permanent solar siting area fence line.[53]

All newly constructed and improved site access roads would be graded and graveled to meet load requirements for heavy construction equipment, as necessary. Most site access roads would be initially constructed to be wider than needed for operations, to accommodate the large equipment needed for construction. Following turbine construction, the site access roads would be narrowed for use during O&M.[54]

Construction Yards, Staging Areas

The proposed facility would include an approximately 27-acre temporary graveled staging area within the site boundary, located off CR 1350, adjacent to the northern substation. The staging area would contain field construction offices; would be used to store construction equipment when not in use; would be used for storage of construction supplies and materials; may contain up to two temporary concrete batch plants (permitted by a third-party); and may be used for assembly of some facility components. Approximately 500 gallons of diesel fuel and 200 gallons of gasoline would be kept on-site for the refueling of construction equipment and stored at the temporary construction yard. These fuels would be stored in temporary aboveground tanks at the construction yard, within an area that provides for secondary containment. Fuels would be delivered to the construction yard by a licensed specialized tanker vehicle.

In addition to the central temporary staging area, 8 to 11 smaller temporary staging areas (less than 1,000 square feet each) would be distributed throughout the site boundary to support

[53] NHWAPPDoc2-1 ASC Exhibit B. Project Desc_2022-01-31, Section 7.6.

[54] NHWAPPDoc2-29 ASC Exhibit DD. Specific Standards_2022-01-31, Section 4.1.

construction. All together, these areas would entail less than 0.5 acre total of temporary disturbance. [55]

Restoration of temporary staging areas would typically involve removal of gravel surfacing; regrading to pre-construction contours; restoration of topsoil as needed; soil decompaction if necessary; and seeding and/or planting to restore agricultural or habitat lands as appropriate. Revegetation efforts are discussed in detail in Attachment P-2: Draft Revegetation and Noxious Weed Plan and in Section I.V.H., *Fish and Wildlife Habitat*.

III.B. Description of Proposed Facility Construction, Operation and Retirement

III.B.1. Construction

Proposed facility construction may occur in phases and include the following:

- Up to 500 workers, 30 percent hired locally, per day
- Up to 234 one-way delivery truck trips per day during construction, and up to 800 one-way private vehicle trips per day to bring workers to the facility site.

Temporary disturbance per facility components is limited in accordance with the representations presented below:

Proposed Facility – Temporary Disturbance Limits

Project Component	Units	Dimensions per Unit	Number of Units	Temporary Disturbance Acres
Wind Turbines	Acres	6.5	112	713.4
Overhead 34.5-kV Collector Lines	Feet of width per linear foot	35	9.1 (mi)	28.8
Underground 34.5-kV Collector Lines	Feet of width per linear foot	35	89.0 (mi)	250.5
230-kV Project Substation Connector Transmission Line	Feet of width per linear foot	200	6.8 (mi)	160.7
Pulling & Tensioning Areas	Acres	0.75	10	7.5
230-kV UEC Cottonwood Transmission Line Route	Feet of width per linear foot	200	25.3 (mi)	613.6
230-kV BPA Stanfield Transmission Line Route	Feet of width per linear foot	200	5.0 (mi)	122.3
Meteorological Towers	Square feet	154,750	3	10.5

[55] NHWAPPDoc2-1 ASC Exhibit B. Project Desc_2022-01-31, Section 7.7.

Proposed Facility – Temporary Disturbance Limits

Project Component	Units	Dimensions per Unit	Number of Units	Temporary Disturbance Acres
Existing Access Roads to Be Improved	Feet of width per linear foot	66	19 (mi)	151.6
New Access Roads	Feet of width per linear foot	66	42.8 (mi)	342.9
Turning Radius Widening	Acres	--	--	13.5
Crane Paths	Feet of width per linear foot	75	50.9 (mi)	368.5
Substations	Acres	1.5 (N)/ 2.5 (S)	2	3.9
Central Construction Yard	Acres	--	1	n/a
Distributed Staging Areas	Acres	--	11	0.2
O&M Building	Acres	--	1	0.6
Solar Siting Area	Acres	--	1	11.6
			Total Temporary Impact[1] =	2,075.4

Notes:
- Temporary disturbance impacts must be scaled based on the number of facility components.

III.B.2. Operations and Maintenance

Routine operations and maintenance for all facility components would include revegetation, noxious weed control, erosion inspection and maintenance and equipment operability inspection and maintenance.

Annual vegetation management would be implemented along transmission line corridors. Routine O&M would also include wind turbine part replacement, including redisturbance of areas temporarily disturbed during construction, and battery and solar panel replacement.

III.B.3. Facility Decommissioning and Site Restoration

Proposed facility decommissioning and site restoration would be completed in accordance with a Council approved decommissioning plan pursuant to OAR 345-025-0006(9) and OAR 345-027-0410. Nonetheless, consistent with OAR 345-025-0006(3), facility decommissioning and site restoration shall be completed substantially as described in the site certificate, as follows:

- Aboveground structures would be dismantled (such as wind turbines, met towers, solar and battery components, aboveground electrical equipment including collector lines transmission lines and poles, and the O&M building and substations). Components would be removed from the site for recycle, sale or disposal.
    - Electrical components including substations, collector lines, and transmission lines, along with their support structures would be dismantled.
    - Subsurface features including underground collector lines and concrete foundations would be removed to a minimum of 3 feet below ground surface or as agreed with the landowner, to allow continued use of the land for agricultural or other purposes deemed appropriate at the time of decommissioning purposes.
- Access roads would be reclaimed by regrading and removal of road surfaces, and surface soils restored to original conditions, based on landowner consultation. If the landowner prefers to retain roads, they would be left in place. Reclamation procedures would be based on site specific requirements and techniques commonly employed at the time the area is to be reclaimed. As appropriate and based on intended use of the land following decommissioning, the land would be reseeded in accordance with a revegetation plan.
- Fluids would be drained onsite and transported offsite for disposal at a licensed facility, if flow batteries are selected for the proposed BESS. Containers would be recycled or disposed at an approved facility.

III.C. Proposed Location, Site Boundary and Micrositing Areas

The proposed facility would be located within an approximately 48,196 acre site boundary[56] in northwestern Umatilla County, Oregon. The proposed site boundary is located south of I-84, approximately 4 miles south of Echo and 10 miles west of Pendleton.

The site boundary includes a wind facility micrositing area, inclusive of the three 230 kV transmission line corridors[57] and a solar facility micrositing area. The proposed site boundary is presented in Figure 1: *Regional Location of Proposed Facility and Site Boundary.*

Micrositing Areas

[56] OAR 345-001-0010(54) defines "site boundary" as the perimeter of the site of a proposed energy facility and its related or supporting facilities, all temporary laydown and staging areas and all corridors proposed by the applicant; ORS 469.300(25) defines "site" as all land upon which an energy facility and its related or supporting facilities is located or proposed to be located.

[57] OAR 345-001-0010(13) defines "corridor" as a continuous area of land not more than one-half mile in width and running the entire length of a proposed transmission line or pipeline.

Micrositing areas[58], when approved by Council, are intended to allow flexibility in siting of facility components and locations of temporary disturbance. For this ASC, the applicant seeks approval of an approximately 13,767 acre wind micrositing area, which includes each of the proposed 230 kV transmission lines, and an approximately 1,896 acre solar micrositing area. All of the proposed micrositing areas are presented in Figure 2: *Proposed Micrositing Areas* below.

Within the 13,767 acre wind micrositing area, turbine strings would include 1,000 to 1,700-foot wide corridors. Access roads and collector lines would be located in 300 to 360-foot wide corridors. Proposed northern and southern project substations, met towers, the O&M Building, and construction yards would be located in wider corridors.[59]

The 230 kV transmission line corridors would range from 300 to 1,600 feet and would extend the length of the lines. The total length of the proposed 230 kV UEC Cottonwood route, including both the new and upgraded segments, would be approximately 25.3 miles, constructed in segments as follows:

- From the northern facility substation to the corner of White House Road and County Road 1348, the UEC Cottonwood route will consist of approximately 8.4 miles of new transmission corridor and construction.
- From the corner of White House Road and County Road 1348 to the UEC Butter Creek Substation, an approximately 9.6-mile portion of the UEC Cottonwood route would replace an existing 12.47-kV distribution line with the proposed 230-kV transmission line with 12.47-kV underbuilt distribution.
- Continuing from the UEC Butter Creek Substation, an existing 115-kV UEC transmission line would be upgraded to incorporate a 230-kV line to carry power generated by the facility approximately another 7.3 miles north to the UEC Cottonwood Substation. The upgrade would consist of replacing the existing support poles with new structures that can support restringing the existing 115-kV transmission line and adding a 230-kV transmission line (double circuit).
- After the Cottonwood Substation, power from the Project would be transmitted over an existing 230-kV line north to the BPA McNary Substation.[60]

The proposed 230 kV BPA Stanfield route leads north following County Road 1350 from the northern substation, then turns northwest parallel to an existing BPA transmission line (to be sited outside of BPA's existing right-of-way (See ASC Exhibit DD, Section 10.2). Approximately 1.5 miles upriver from the community of Nolin, the transmission line would span the Umatilla River and continue in parallel with the existing transmission line to the Stanfield Substation.

[58] OAR 345-001-0010(32) defines "micrositing corridor" as a continuous area of land within which construction of facility components may occur, subject to site certificate conditions.

[59] NHWAPPDoc2-1 ASC Exhibit B. Project Desc_2022-01-31, Section 1.0.

[60] NHWAPPDoc2-29 ASC Exhibit DD. Specific Standards_2022-01-31, Section 4.2.3.

A proposed 230 kV Substation Connector transmission line would extend 6.8 miles from the proposed southern project substation to the northern project substation.[61]

[61] NHWAPPDoc2-2 ASC Exhibit C. Project Location_2022-01-31, Figure C-4.

Figure 1: Regional Location of Proposed Facility and Site Boundary

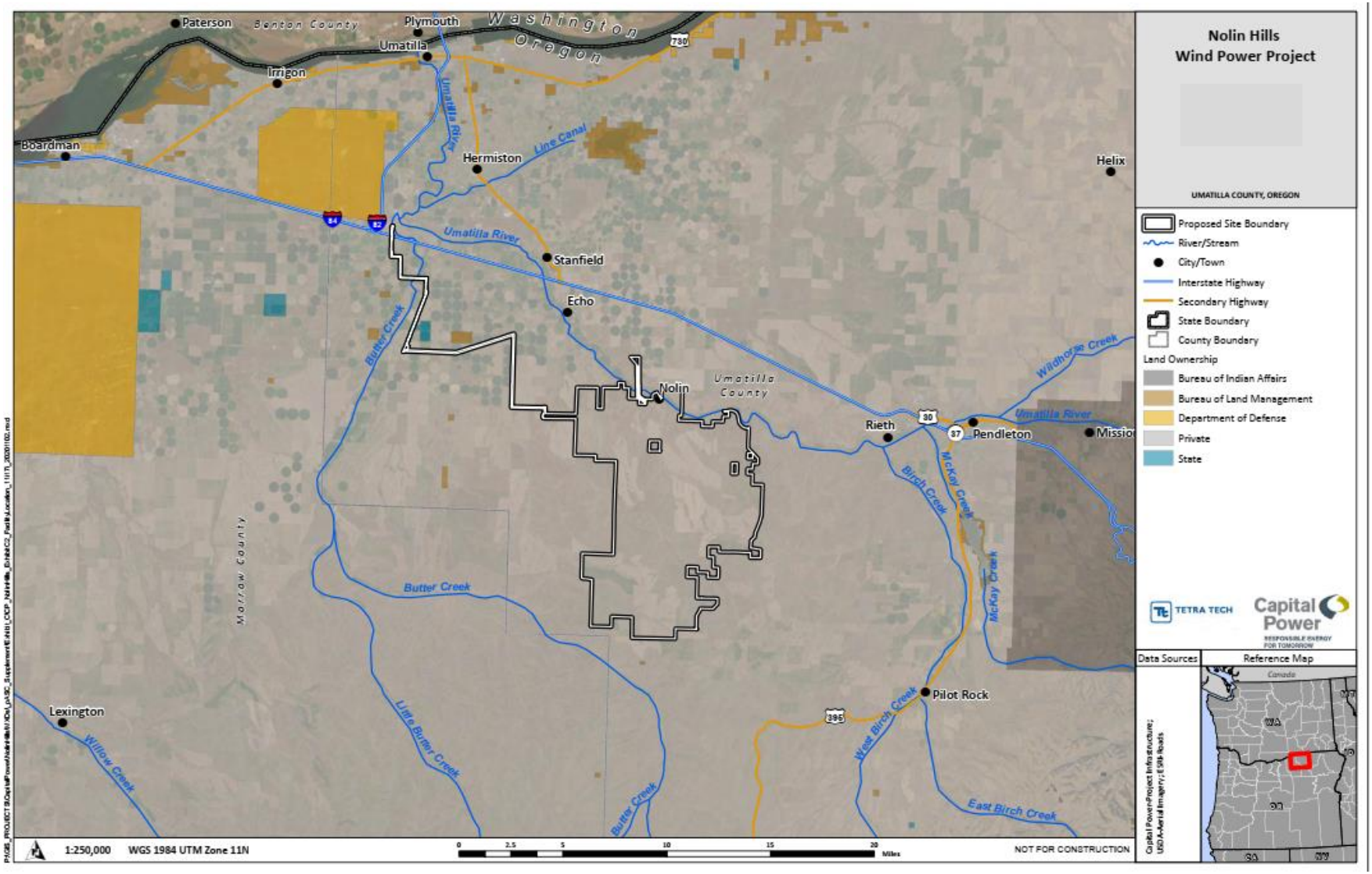
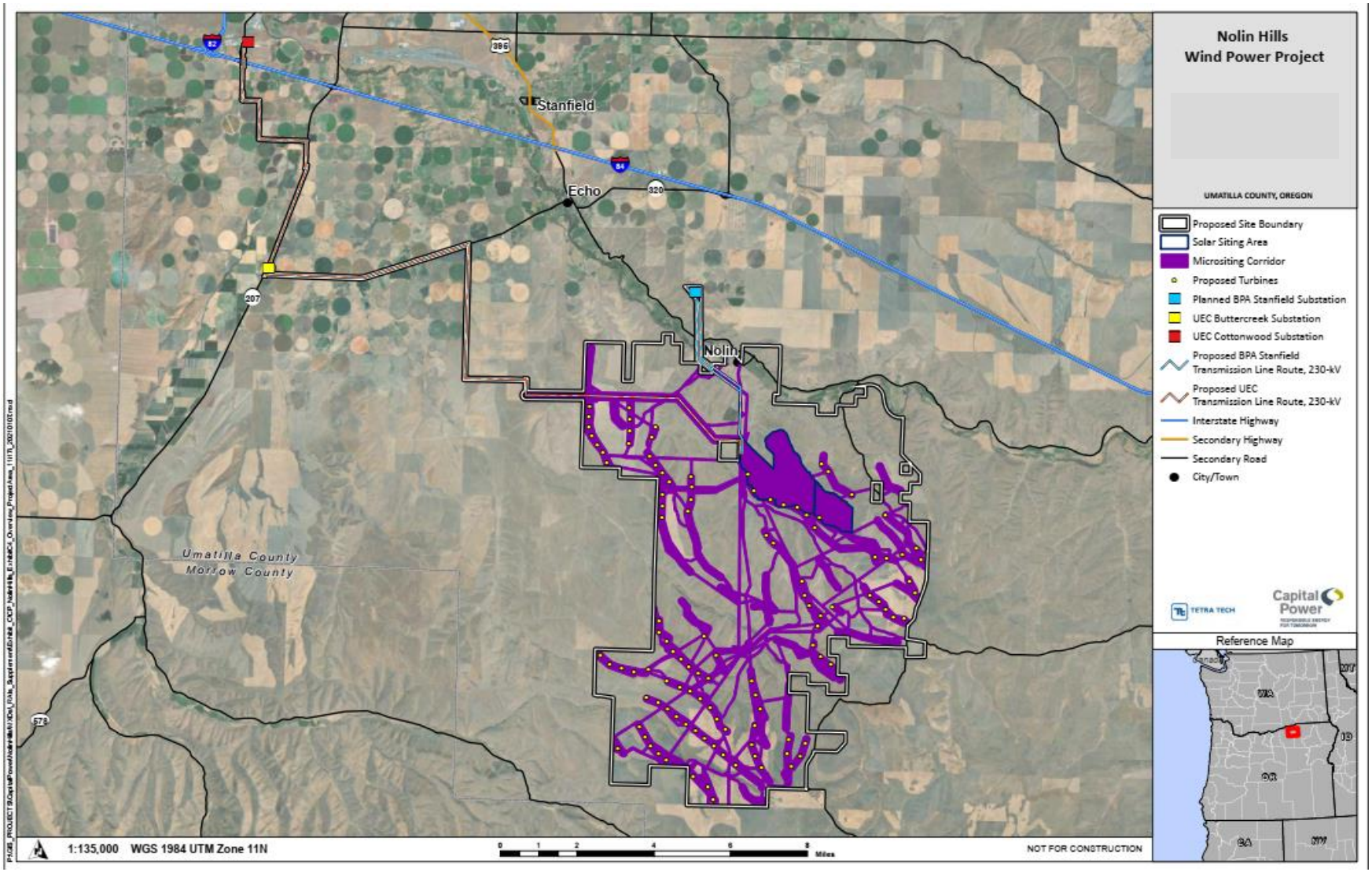


Figure 2: Proposed Micrositing Areas



IV. EVALUATION OF COUNCIL STANDARDS

To issue a site certificate for a proposed facility, the Council must determine that "the facility complies with the applicable standards adopted by the council pursuant to ORS 469.501 or the overall public benefits of the facility outweigh any adverse effects on a resource or interest protected by the applicable standards that the facility does not meet."[62] The Council must also determine that the proposed facility complies with all other applicable Oregon statutes and administrative rules, as identified in the Amended Project Order, excluding requirements governing design or operational issues that do not relate to siting and excluding compliance with requirements of federally-delegated programs. [63,64] Nevertheless, the Council may consider these programs when assessing compliance with its own standards and other applicable rules.[65]

Under ORS 469.310, the Council is charged with ensuring that the "siting, construction and operation of energy facilities shall be accomplished in a manner consistent with protection of the public health and safety." ORS 469.401(2) further provides that the Council must include in the site certificate "conditions for the protection of the public health and safety, for the time for completion of construction, and to ensure compliance with the standards, statutes and rules described in ORS 469.501 and ORS 469.503."[66] The Council implements this statutory framework by adopting findings of fact, conclusions of law, and conditions of approval concerning the proposed facility's compliance with the Council's Standards for Siting Facilities at OAR 345 Divisions 22, 24 and 26.

IV.A. General Standard of Review: OAR 345-022-0000

> *(1) To issue a site certificate for a proposed facility or to amend a site certificate, the Council shall determine that the preponderance of evidence on the record supports the following conclusions:*
>
> > *(a) The facility complies with the requirements of the Oregon Energy Facility Siting statutes, ORS 469.300 to ORS 469.570 and 469.590 to 469.619, and the standards adopted by the Council pursuant to ORS 469.501 or the overall public benefits of the facility outweigh the damage to the resources protected by the standards the facility does not meet as described in section (2);*

[62] ORS 469.503(1).

[63] As stated above, such matters include design-specific construction or operation standards and practices that do not relate to siting, as well as matters relating to employee health and safety, building code compliance, wage and hour or other labor regulations, or local government fees and charges.

[64] ORS 469.401(4); ORS 469.503(3).

[65] The Council does not have jurisdiction over matters that are not included in and governed by the site certificate or amended site certificate. However, the Council may rely on the determinations of compliance and the conditions in the permits issued by these state agencies and local governments in deciding whether the facility meets other standards and requirements under its jurisdiction.

[66] ORS 469.401(2).

(b) Except as provided in OAR 345-022-0030 for land use compliance and except for those statutes and rules for which the decision on compliance has been delegated by the federal government to a state agency other than the Council, the facility complies with all other Oregon statutes and administrative rules identified in the project order, as amended, as applicable to the issuance of a site certificate for the proposed facility. If the Council finds that applicable Oregon statutes and rules, other than those involving federally delegated programs, would impose conflicting requirements, the Council shall resolve the conflict consistent with the public interest. In resolving the conflict, the Council cannot waive any applicable state statute.

*(2) The Council may issue or amend a site certificate for a facility that does not meet one or more of the applicable standards adopted under ORS 469.501 if the Council determines that the overall public benefits of the facility outweigh any adverse effects on a resource or interest protected by the applicable standards the facility does not meet. The Council shall make this balancing determination only when the applicant has shown that the proposed facility cannot meet applicable Council standards or has shown, to the satisfaction of the Council, that there is no reasonable way to meet the applicable Council standards through mitigation or avoidance of any adverse effects on a protected resource or interest. The applicant has the burden to show that the overall public benefits outweigh any adverse effects on a resource or interest, and the burden increases proportionately with the degree of adverse effects on a resource or interest. The Council shall weigh overall public benefits and any adverse effects on a resource or interest * * **

(4) In making determinations regarding compliance with statutes, rules and ordinances normally administered by other agencies or compliance with requirement of the Council statutes if other agencies have special expertise, the Department of Energy shall consult such other agencies during the notice of intent, site certificate application and site certificate amendment processes. Nothing in these rules is intended to interfere with the state's implementation of programs delegated to it by the federal government.

Findings of Fact

OAR 345-022-0000 provides the Council's General Standard of Review and requires the Council to find that a preponderance of evidence on the record supports the conclusion that the proposed facility complies with the requirements of EFSC statutes and the siting standards adopted by the Council and that the proposed facility complies with all other Oregon statutes and administrative rules applicable to the issuance of a site certificate for the proposed facility, as identified in the Amended Project Order.

In this draft proposed order, the Department recommends findings of fact and conclusions of law based on a staff evaluation of the proposed facility's compliance with all statutes, administrative rules and ordinances applicable to the issuance of this site certificate. As discussed above, the Department consulted with other agencies during review of the ASC to aid

in the evaluation of the proposed facility's compliance with statutes, rules and ordinances otherwise administered by other agencies. Additionally, the Department relied upon the reviewing agencies' special expertise in evaluating the proposed facility's compliance with the requirements of the Council's standards.

Balancing Determination [OAR 345-022-0000(2)]

OAR 345-022-0000(2) applies to ASCs where an applicant "has shown that the proposed facility cannot meet Council standards or has shown, to the satisfaction of Council, that there is no reasonable way to meet the applicable Council standards through mitigation or avoidance of any adverse effects on a protected resource or interest."

Therefore, OAR 345-022-0000(2) first establishes one of two criteria that must be met for Council to consider a request to make a balancing determination. Either the applicant must *show* that it *cannot* meet a standard; or, similarly, the applicant must *show* that there is *no reasonable way* to meet the standard through mitigation or avoidance [Emphasis added]. The Department interprets these factors to establish that 1) the Department cannot independently recommend Council make a balancing determination – it must be based on a request by the applicant, and 2) the applicant must support their request with evidence that demonstrates the standard cannot be met at all or through mitigation or avoidance. OAR 345-022-0000(2) also requires the applicant to show "that the overall public benefits outweigh any adverse effects on a resource or interest" and establishes criteria for the Council to consider when evaluating adverse effects and public benefits.

The applicant requests that Council make a balancing determination.[67] The applicant believes ASC Exhibit P contains evidence to support a finding of compliance with the Council's Fish and Wildlife Habitat standard because it has adequately evaluated potential temporary and permanent habitat impacts, and proposed mitigation based on its habitat categorization and associated mitigation goals. However, the applicant requests that Council make a balancing determination in the event that ODFW's interpretation of Category 1 Washington Ground Squirrel (WGS) habitat (785-foot buffer from colonies) is accepted by the Department and Council, which would result in a designation of 84 Category 1 acres within the wind micrositing area. The applicant represents that the Category 1 designation would impair siting flexibility and would eliminate the location of 2 wind turbines (9 temporary and 1 permanent acres of disturbance) and associated facilities such as roads.

The 84 acres are densely vegetated with cheatgrass and tall tumble mustard; they lack later seral stage vegetation characteristics; they may lack the soil stability to support deep burrowing by WGS; and are within fallow wheat fields enrolled in the U.S. Department of Agriculture's Conservation Reserve Program (CRP).[68] Applicant proposes that the habitat is Category 5. ODFW recommends that these acres be considered Category 1 habitat because they are within

[67] NHWAPPDoc2-15 ASC Exhibit P. Fish and Wildlife_2022-01-31, P. 46.

[68] NHWAPPDoc2-15 ASC Exhibit P. Fish and Wildlife_2022-01-31, Section 6.1.1.

785-feet of field-identified WGS colonies and that because there are no habitat breaks (i.e. linear rock rim, outcrop, paved road), the area provides important habitat connectivity for dispersing WGS and provides essential fat, protein, water and nesting materials. ODFW explains that habitat quality is not the determining factor for whether the habitat is irreplaceable and essential – it is the proximity to the colony and the function and value of habitat connectivity for WGS dispersal.

ODFW's recommendation is consistent with its previous recommendations, adopted by Council in the Final Order on Request for Amendment 1 of the Carty Generating Station Site Certificate and Final Order on the Application for Site Certificate for the Montague Wind Power Facility[69] and based upon a 1980 Final Technical Report, *Geographic Range, Habitat Requirements and a Preliminary Population Study of Spermophilus washintoni*.[70] Because the Council's Fish and Wildlife Habitat standard requires the Council to find that the proposed facility would be consistent with ODFW's Fish and Wildlife habitat mitigation goals, and ODFW is specifically recommending areas be designated Category 1 in order to be consistent with its Category 1 habitat definition, the Department recommends Council find that the 84 acres are Category 1 and therefore must be avoided in order to be consistent with the Category 1 habitat mitigation goal, unless balancing is approved.

Whether Applicant Has Demonstrated That it Cannot Meet the Standard

The next question is whether the applicant has provided sufficient information to demonstrate the proposed facility cannot meet the Fish and Wildlife Habitat standard with regards to the 84 acres. The applicant does not evaluate why it cannot meet the standard or why there is no reasonable way to meet the standard through mitigation or avoidance. The applicant focuses instead on seeking to demonstrate why the public benefits of the proposed facility outweigh any adverse effects on WGS habitat.

The facility is proposed to include both wind and solar components and have a total nominal capacity of 600 MW, inclusive of up to 112 wind turbines. Within the 84 Category 1 acres, siting of two wind turbines would be prohibited via the Category 1 mitigation goal, or 1% of the nominal generating capacity of the proposed facility. The applicant has not indicated why the two wind turbines proposed could not be relocated elsewhere or even if they were eliminated, how the viability of the project would be jeopardized due to their loss. The applicant has not provided maps or arguments that suggest avoidance is not possible due to technological or engineering constraints; or that avoidance would result in greater impacts to other resources. Therefore, the Department recommends Council find that the applicant has not provided any

[69] EFSC Final Order on Amendment of Carty Generating Station. December 2018, p.100, line 9-14. EFSC Final Order on Montague Wind Power Facility. September 2010, p.100, lines 19-28.

[70] 1980. Carlson, L. and Geupel, G., Kjelmyr, J. , MacIvor, J., Morton, M. and Shishido, N. Geographic Range, Habitat Requirements and a Preliminary Population Study of *Spermophilus washingtoni*. Final Technical Report. Prepared under a grant from the National Science Foundation, Grant No. SMI 5350.

arguments or evidence to support a conclusion that the proposed facility could not avoid the 84 acres.

Due to the life history and biology of WGS, it is possible that WGS colonies identified during the applicant's 2020 surveys are no longer present within previously identified locations. Recommended Threatened and Endangered Species Condition 1 and Fish and Wildlife Habitat Conditions 1 and 2[71] would require that the applicant conduct preconstruction surveys within WGS suitable habitat, including lands enrolled in CRP, to inform final habitat categorization, avoidance and mitigation requirements. The preconstruction surveys allow for any changes in WGS colony location to be accounted for and would result in either new or different avoidance area requirements, based on a delineation of Category 1 habitat extending 785-feet from identified colonies, or removal of avoidance requirements where previously identified WGS colonies are no longer present.

For these reasons, the Department recommends that Council not grant the requested balancing determination.

Certificate Expiration [OAR 345-027-0000]

Under OAR 345-015-0085(8), the site certificate is effective upon execution by the Council and the applicant. ORS 469.370(12) requires the Council to "specify in the site certificate a date by which construction of the facility must begin." ORS 469.401(2) requires that the site certificate contain a condition "for the time for completion of construction." Under OAR 345-027-0313, in order to avoid expiration of the site certificate, the certificate holder must begin construction of the facility no later than the construction beginning date specified by Council in the site certificate. "Construction" is defined in ORS 469.300(6) to mean "work performed on a site, excluding surveying, exploration or other activities to define or characterize the site, the cost of which exceeds $250,000." OAR 345-010-0010(12) adopts the statutory definition.

The duration of proposed facility construction is estimated at 18 months, and would include phased construction, To allow flexibility to construct in phases or flexibility to accommodate weather delays, the applicant requests a deadline for construction completion of 3 years later than the deadline for beginning construction, or 6 years from issuance of the site certificate.[72] Based on the Department's experience with large energy facilities, a number of unforeseen factors can cause delays to a facility's construction commencement and completion timelines, such as financial, economic, or technological changes, therefore the Department agrees and recommends Council find that an applicant should have some flexibility to secure contracts for

[71] The Revegetation Plan required under recommended Fish and Wildlife Habitat Conditions 1 and 2 would require preconstruction surveys to inform preconstruction noxious weed infestation locations, Laurent's milkvetch population locations and establish monitoring and reference locations for revegetation. Results of these surveys, in combination with the protocol WGS surveys under Threatened and Endangered Species Condition 1, would be used to inform the final mitigation and avoidance obligation under the Council's Fish and Wildlife Habitat standard.
[72] NHWAPPDoc2-1 ASC Exhibit B. Project Desc_2022-01-31, Section 11.

the power as well as complete all necessary pre-construction compliance with applicable site certificate conditions.

The applicant's request is consistent with construction commencement and completion dates that the Council has approved for recent Final Order on ASCs. Therefore, the Department recommends that the Council agree with the applicant's timeframes and set a three-year deadline after the issuance of the site certificate for the applicant to begin construction, and a three-year deadline after construction commencement for the applicant to complete construction. Under OAR 345-015-0085, the site certificate becomes effective upon execution by the Council and by the applicant. However, for purposes of identification, the Department may establish the effective date of a site certificate based on the date of the Council action. Accordingly, and in compliance with OAR 345-027-0020(4), the Department recommends that the Council adopt the following condition:

> **Recommended General Standard Condition 1 (CON):** The certificate holder shall begin and complete construction of the facility by the dates specified in the site certificate.
> a. Construction of the facility shall commence within three years after the date of Council action [DATE TO BE SPECIFIED]. Within 7 days of construction commencement, the certificate holder shall provide the Department written verification of the construction commencement date and that it has met the construction commencement deadline.
> b. Construction of all facility components shall be completed within three years after construction commencement identified in (a) of this condition. Within 7 days of construction completion, the certificate holder shall provide the Department written verification that it has met the construction completion deadline.
> [GEN-GS-01; Mandatory Condition OAR 345-025-0006(4)]

Mandatory and Site-Specific Conditions in Site Certificates [OAR 345-025-0006 and OAR 345-025-0010]

OAR 345-025-0006 lists certain mandatory conditions that the Council must adopt in every site certificate. Mandatory conditions OAR 345-025-0006(7) through (9) and (16) are discussed and applied in Section IV.G., *Retirement and Financial Assurance*, of this order as they relate to the restoration of the site, Council approval of a retirement plan, and bonding requirements of the applicant. Mandatory conditions OAR 345-025-0006(12) through (14) are discussed and applied in Section IV.C., *Structural Standard* because they are associated with the design, construction, and the operation of the proposed facility to avoid dangers of seismic hazards, coordination with and notifications to the Department of Geology and Mineral Industries. In addition, pursuant to OAR 345-025-0006(10), the Council shall include as conditions in the site certificate all representations in the ASC and supporting record the Council deems to be binding commitments made by the applicant, as necessary to avoid or minimize a potential impact. Mandatory conditions under OAR 345-025-0006 that are not otherwise addressed in the evaluation of compliance with specific standards are presented below:

General Standard Condition 2 (OPR): The certificate holder shall submit a legal description of the site to the Oregon Department of Energy within 90 days after beginning operation of the facility. The legal description required by this rule means a description of metes and bounds or a description of the site by reference to a map and geographic data that clearly and specifically identify the outer boundaries that contain all parts of the facility.
[OPR-GS-01; Mandatory Condition OAR 345-025-0006(2)]

Mandatory Condition under OAR 345-025-0006(3) requires that, among other items, the applicant design, construct, operate, and retire the facility substantially as described in the site certificate. If approved, the site certificate provides all approved site certificate conditions as well as a description of the energy facility and its related or supporting facilities including component dimensions and design features, that are derived from Sections III.A.1., *Energy Facility* and Section III.A.2., *Related or Supporting Facilities*, of this order. The site certificate would also include a description of the activities involved with the construction, operation and maintenance and retirement of the proposed facility which would be similar to those described in Section III.B., *Description of Proposed Facility Construction, Operation and Retirement*. Finally, the site certificate would include a description of the approved site boundary and micro-siting corridors, which may include a discussion of avoidance or restricted areas.

General Standard Condition 3 (GEN): The certificate holder shall design, construct, operate, and retire the facility:
a. Substantially as described in the site certificate;
b. In compliance with the requirements of ORS Chapter 469, applicable Council rules, and applicable state and local laws, rules and ordinances in effect at the time the site certificate is issued; and
c. In compliance with all applicable permit requirements of other state agencies.
[GEN-GS-02; Mandatory Condition OAR 345-025-0006(3)]

General Standard Condition 4 (CON): Except as necessary for the initial survey or as otherwise allowed for wind energy facilities, transmission lines or pipelines under this section, the certificate holder shall not begin construction, as defined in OAR 345-001-0010, or create a clearing on any part of the site until the certificate holder has construction rights on all parts of the site. For the purpose of this rule, "construction rights" means the legal right to engage in construction activities. For the transmission line associated with the energy facility, if the certificate holder does not have construction rights on all parts of the site, the certificate holder may nevertheless begin construction, as defined in OAR 345-001-0010, or create a clearing on a part of the site if the certificate holder has construction rights on that part of the site and the certificate holder would construct and operate part of the facility on that part of the site even if a change in the planned route of a transmission line occurs during the certificate holder's negotiations to acquire construction rights on another part of the site.
[PRE-GS-01; Mandatory Condition OAR 345-025-0006(5)]

General Standard Condition 5 (GEN): If the certificate holder becomes aware of a significant environmental change or impact attributable to the facility, the certificate holder shall, as soon as possible, submit a written report to the Department describing the impact on the facility and any affected site certificate conditions.
[GEN-GS-03; Mandatory Condition OAR 345-025-0006(6)]

General Standard Condition 6 (OPR): Upon completion of construction, the certificate holder shall restore vegetation to the extent practicable and shall landscape all areas disturbed by construction in a manner compatible with the surroundings and proposed use. Upon completion of construction, the certificate holder shall remove all temporary structures not required for facility operation and dispose of all timber, brush, refuse and flammable or combustible material resulting from clearing of land and construction of the facility.
[OPR-GS-01; Mandatory Condition OAR 345-025-0006(11)]

In the event there is a change in the ownership, possession or control of the facility or the applicant, a transfer of the site certificate is required subject to the requirements of OAR 345-027-0100. A transfer of the site certificate does not terminate the transferor's duties and obligations under the site certificate until the Council approves a request for amendment to transfer the site certificate and issues an amended site certificate. Mandatory Condition OAR 345-025-0006(15) below is included in each site certificate.

General Standard Condition 7 (GEN): Before any transfer of ownership of the facility or ownership of the site certificate holder, the certificate holder shall inform the Department of the proposed new owners. The requirements of OAR 345-027-0100 apply to any transfer of ownership that requires a transfer of the site certificate.
[GEN-GS-04; Mandatory Condition OAR 345-025-0006(15)]

Site Specific Conditions [OAR 345-025-0010]

In addition to mandatory conditions imposed on all facilities, the Council rules also include "site specific" conditions at OAR 345-025-0010 that the Council may include in the site certificate to address issues specific to certain facility types or proposed features of facilities.[73] The Department provides the below site-specific condition applicable to the proposed facility and the other applicable site-specific condition is provided under Section IV.P.3., *Siting Standards for Transmission Lines*, of this order.

Recommended General Standard Condition 8 (CON): The certificate holder is authorized to construct 230-kV transmission lines anywhere within the approved 200-

[73] Site-Specific Conditions at OAR 345-025-0010(1)-(3), and (6)-(7) do not apply to the proposed facility based on facility energy source/type (solar photovoltaic power generation facility with related and supporting facilities including a proposed 115 kV transmission line).

foot wide corridors, subject to the conditions of the site certificate. The 200-foot wide corridors include:

a. Substation Connector Line: Approximately 6.8 mile, single circuit 230-kV transmission line extending between the two facility substations. As further described in ASC Exhibits B and C and as presented in Figure 1 of the site certificate.
b. UEC Cottonwood Route: Approximately 25.3 mile transmission line extending from the northern substation to the existing UEC Cottonwood Substation. Approximately 8.4 miles would be a new single-circuit 230-kV transmission line, approximately 9.6 miles would replace an existing 12.47-kV distribution line with a 230-kV transmission line and distribution underbuild, and approximately 7.3 miles would upgrade an existing 115-kV UEC transmission line to a double-circuit 230/115-kV line with 12.47-kV underbuilt distribution. As further described in ASC Exhibits B and C and as presented in Figure 1 of the site certificate.
c. BPA Stanfield Route: Approximately 5-mile 230 kV transmission line extending from the northern facility substation to the BPA Stanfield Substation, of which approximately 3 miles would parallel an existing BPA 500-kV transmission line, outside of the existing transmission line's right-of-way. As further described in ASC Exhibits B and C and as presented in Figure 1 of the site certificate.

[GEN-GS-06; Site Specific Condition OAR 345-025-0010(5)]

Construction and Operation Rules for Facilities [OAR Chapter 345, Division 26]

The Council adopted rules at OAR Chapter 345, Division 26 to ensure that construction, operation, and retirement of facilities are accomplished in a manner consistent with the protection of the public health, safety, and welfare and protection of the environment. These rules include requirements for compliance plans, inspections, reporting and notification of incidents prior to and during construction and during operation of the proposed facility. For instance, under OAR 345-026-0080(1)(a), within six months after beginning construction, and every six months thereafter during construction of the proposed facility and related or supporting facilities, the certificate holder must submit a semiannual construction progress report (semiannual report) to the Department. The semiannual report includes construction progress updates, subjects listed in OAR 345-026-0080(2)(a), (d), (f) and (g), and any other reporting requirements detailed in site certificate conditions. Once the proposed facility is operational, between January 1 and April 30 of each year, the applicant must submit an annual report to the Department addressing the subjects listed in OAR 345-026-0080(2). When the reporting date coincides for the semiannual report and the annual report, the applicant may include the construction progress report within the annual report. The certificate holder must construct the facility substantially as described in the site certificate and the certificate holder must construct, operate, and retire the facility in accordance with all applicable rules adopted by the Council in OAR Chapter 345, Division 26.[74]

[74] Applicable rule requirements established in OAR Chapter 345, Division 26 include OAR 345-026-0005 to OAR 345-026-0170.

The Department presents General Standard Condition 9, 10 and 11, as presented below, to support the Department's review of ongoing site certificate compliance, in accordance with OAR Chapter 345, Division 26.

Recommended General Standard Condition 9 (PRE): At least 90 days prior to beginning construction of the facility (unless otherwise agreed to by the Department), the certificate holder shall submit to the Department a compliance plan documenting and demonstrating actions completed or to be completed to satisfy the requirements of all site certificate terms and conditions and applicable statutes and rules. The plan shall be provided to the Department for review and compliance determination for each requirement. The Department may request additional information or evaluation deemed necessary to demonstrate compliance.
[PRE-GS-02; OAR 345-026-0048]

Recommended General Standard Condition 10 (GEN): Any matter of non-compliance under the site certificate is the responsibility of the certificate holder. Any notice of violation issued under the site certificate will be issued to the certificate holder. Any civil penalties under the site certificate will be levied on the certificate holder.

Recommended General Standard Condition 11 (GEN): In addition to the requirements of OAR 345-026-0170, within 72 hours after discovery of incidents or circumstances that violate the terms or conditions of the site certificate, the certificate holder must report the conditions or circumstances to the Department.

Conclusions of Law

Based on the foregoing recommended findings of fact, conclusions of law, and subject to the recommended conditions, mandatory conditions, and site-specific conditions, the Department recommends Council finds that the proposed facility would satisfy the requirements of OAR 345-022-0000.

IV.B. Organizational Expertise: OAR 345-022-0010

(1) To issue a site certificate, the Council must find that the applicant has the organizational expertise to construct, operate and retire the proposed facility in compliance with Council standards and conditions of the site certificate. To conclude that the applicant has this expertise, the Council must find that the applicant has demonstrated the ability to design, construct and operate the proposed facility in compliance with site certificate conditions and in a manner that protects public health and safety and has demonstrated the ability to restore the site to a useful, non-hazardous condition. The Council may consider the applicant's experience, the applicant's access to technical expertise and the applicant's past performance in constructing, operating and retiring other facilities, including, but not limited to, the number and severity of regulatory citations issued to the applicant.

(2) The Council may base its findings under section (1) on a rebuttable presumption that an applicant has organizational, managerial and technical expertise, if the applicant has an ISO 9000 or ISO 14000 certified program and proposes to design, construct and operate the facility according to that program.

(3) If the applicant does not itself obtain a state or local government permit or approval for which the Council would ordinarily determine compliance but instead relies on a permit or approval issued to a third party, the Council, to issue a site certificate, must find that the third party has, or has a reasonable likelihood of obtaining, the necessary permit or approval, and that the applicant has, or has a reasonable likelihood of entering into, a contractual or other arrangement with the third party for access to the resource or service secured by that permit or approval.

(4) If the applicant relies on a permit or approval issued to a third party and the third party does not have the necessary permit or approval at the time the Council issues the site certificate, the Council may issue the site certificate subject to the condition that the certificate holder shall not commence construction or operation as appropriate until the third party has obtained the necessary permit or approval and the applicant has a contract or other arrangement for access to the resource or service secured by that permit or approval.

To demonstrate compliance with the Council's Organizational Expertise standard, the applicant provides evidence regarding its experience and organizational expertise to construct, operate and retire the proposed facility in ASC Exhibit D (Applicant's Organizational Expertise), Exhibit M (Financial Capability) and Exhibit W (Facility Retirement and Site Restoration. ASC Exhibit E (Permits Required for Construction and Operation) identify permits that may be required for construction and operation, to be secured by either the applicant or its third-party (e.g., contractor, landowner, etc). These exhibits are relied upon in the recommended findings of fact and analysis presented below.

Findings of Fact

Applicant's Relevant Experience in Design, Construction, Operation and Successful Mitigation

Nolin Hills Wind, LLC is a project-specific LLC without prior experience. The applicant's parent company, Capital Power, owns 12 operational, wind and solar energy projects in North America (eight in the United States, and seven in Canada), ranging from 15 MW – 201.6 MW, totaling 1,441.6 MWs).[75] The applicant has not yet selected an architect, engineer, prime contractor, or a major component vendor for construction of the proposed facility.

Most individual projects previously developed by the applicant's parent company are significantly smaller than the proposed facility. Capital Power facilities of comparable size to the proposed facility include, when considered together, Whitla Wind 1, 2 and 3. Whitla Wind 1, 2 and 3 are adjacent, operational wind facilities with a combined capacity of 344.6 MW, under

[75] NHWAPPDoc2-3 ASC Exhibit D. Org Expertise_2022-01-31, Section 2.0, Table D-1.

the jurisdiction of the Alberta Utilities Commission (AUC). AUC and EFSC have similar regulatory requirements. AUC imposes Environmental Protection Guidelines requiring adherence to: construction scheduling/timing to minimize environmental impacts and interference with landowners' activities; minimization of soil loss and degradation; minimization of aesthetic impacts from facility components; soil salvage and storage; minimization of water-course crossings and water quality impacts; revegetation and reclamation; and decommissioning requirements.[76] These requirements are substantively similar to the Council's Soil Protection, Land Use, and Retirement and Financial Assurance standards; and Removal-Fill Law and Water Rights.

Capital Power's mitigation experience includes a wind facility curtailment protocol for whooping cranes and bird and bat fatality studies.[77] Capital Power does not have specific experience implementing revegetation, habitat restoration, or in-kind mitigation projects in Oregon and will retain and rely on the expertise of experienced contractors such as Tetra Tech and Northwest Wildlife Consultants (NWC) to implement mitigation projects.[78] As such, the Department recommends Council rely upon the qualifications of the applicant's key management personnel and its selection process and experience for hiring qualified contractors to complete successful mitigation, as presented below.

Management personnel include 3 individuals employed with Capital Power for over 7 years. Wind and solar energy and business development personnel include 4 individuals each with over 10 years of experience in renewable energy facility permitting and development and have Bachelor's or Master's degrees of Science and Business Administration. Construction and engineering personnel include 5 individuals each with over 15 years of experience in renewable energy facility construction and have Bachelors of Science or Engineering degrees. [79] Permitting personnel include 2 individuals with over 20 years of experience in energy facility permitting and compliance and have Bachelor's or Master's degrees of Science and Environmental Science. Regulatory and government personnel include 2 individuals with Bachelor's degrees in political science and law. Based on these facts, the Department recommends that Council find that Capital Power employs qualified individuals, with relevant educational and professional experience.

The Department recommends Council impose the following conditions:

> **Recommended Organizational Expertise Condition 1 (PRE):** Prior to construction of the facility, facility component or phase, as applicable, the certificate holder shall notify the Department of the identity, telephone number, email address and qualifications of the full-time, on-site construction manager. Qualifications shall demonstrate that the

[76] Alberta Utilities Commission (https://www.auc.ab.ca/environment-wildlife-and-noise/ Accessed by the Department on March 17, 2022.
[77] NHWAPPDoc2-3 ASC Exhibit D. Org Expertise_2022-01-31, Section 8.0
[78] *Id.*
[79] NHWAPPDoc2-3 ASC Exhibit D. Org Expertise 2022-01-31, Section 2.0, Table D-1.

construction manager has experience in managing permit and regulatory compliance requirements and is qualified to manage a utility-scale energy facility construction project. The notification shall include the construction manager's onsite schedule and shall demonstrate presence onsite during primary (major ground disturbance or activities) construction phases.

Recommended Organizational Expertise Condition 2 (PRE): Prior to construction of the facility, facility component or phase, as applicable, the certificate holder shall provide to the Department the identity and qualifications of the major design, engineering and construction contractor(s). The certificate holder shall select contractors that have substantial experience in the design, engineering and construction of similar facilities and a demonstrated low rate of job incidence and injury rates. The certificate holder shall report to the Department any changes of major contractors.

Recommended Organizational Expertise Condition 3 (CON): During construction, the on-site construction manager must be onsite or have identified an equivalent representative to be onsite during primary (major ground disturbance or activities) construction phases. The certificate holder shall notify the Department within 72-hours upon any change in personnel or contact information for onsite managers.

Recommended Organizational Expertise Condition 4 (PRO): Before operation, the certificate holder shall notify the Department of the identity, telephone number, e-mail address and qualifications of the facility manager(s). Qualifications shall demonstrate that the operations manager has experience in managing permit and regulatory compliance requirements and is qualified to manage operation of a utility-scale energy facility.

Recommended Organizational Expertise Condition 5 (OPR): During operation, the facility manager(s) must be onsite or have identified an equivalent representative to be onsite, as is necessary to safely operate the facility.

Capital Power has not received any citations during operation of its U.S-based wind energy facilities; for projects it has constructed, none of its contractors received any regulatory citations. The Department evaluated the AUC website for compliance and enforcement actions against Capital Power, and affirms that there are no cited or pending actions. Based on the applicant's parent company experience and regulatory compliance history, and compliance with the above-recommended conditions, the Department recommends Council find that the applicant has demonstrated an ability to design, construct, operate and retire the proposed facility in compliance with site certificate conditions and applicable requirements.

Ability to Restore the Site to a Useful, Non-Hazardous Condition

The applicant's ability to restore the site to a useful, non-hazardous condition following cessions of construction or operation is evaluated in Section IV.G, *Retirement and Financial*

Assurance of this order, which is incorporated by reference to this section. As presented in Section IV.G, the Department recommends Council find that the applicant has the ability to restore the site to a useful, non-hazardous condition because it has adequately identified the tasks and actions necessary, and evaluated a cost for decommissioning and restoration that the Department recommends Council find to be satisfactory, and has provided evidence of a reasonable likelihood of obtaining a bond or letter of credit in that amount.

Design, Construct and Operate the Proposed Facility in a Manner that Would Protect Public Health and Safety

Public health and safety impacts from the proposed facility include unanticipated fire and electrical hazards. The Department's recommended findings of fact, reasoning and analysis related to fire is presented in Section IV.M.8. *Public Services - Fire Protection* of this order, which is incorporated by reference to this section.

Specific risks from the proposed battery energy storage system (BESS) include transportation of the lithium-ion batteries and any associated battery waste, and onsite handling and storage of battery related materials and waste. The transportation of lithium-ion batteries is subject to 49 Code of Federal Regulations (CFR) 173.185 – Department of Transportation Pipeline and Hazardous Material Administration which is discussed which is further discussed in Sections IV.M. *Public Services – Fire Protection* and IV.N. *Waste Minimization* of this order.

The proposed wind turbine components could result in health and safety risks from blade failure, structural and reliability concerns, ice throw, proximity to turbine blades by public and private providers of air transportation including aerial sprayers, and risks to public providers of fire service during tower rescue events. The Department's recommended findings of fact, reasoning and analysis for these issues are presented in Section IV.M.8. *Public Services* and Section IV.P.3. *Public Health and Safety Standards for Wind Facilities,* which are incorporated by reference to this section.

Based on the recommended findings of fact, reasoning and analysis, and compliance with recommended conditions, as presented in IV.M.4. *Public Services – Solid Waste Management*, Section IV.M.8. *Public Services - Fire Protection*, IV.N. *Waste Minimization* and Section IV.P.3. *Public Health and Safety Standards for Wind Facilities* of this order, the Department recommends Council find that the applicant has the ability to design, construct and operate the proposed facility in a manner that would protect public health and safety.

ISO 9000 or ISO 14000 Certified Program

OAR 345-022-0010(2) is not applicable to the evaluation because the applicant has not proposed to design, construct or operate the proposed facility according to an International Organization for Standardization (ISO) 9000 or ISO 14000 certified program.[80]

[80] NHWAPPDoc2-3 ASC Exhibit D. Org Expertise_2022-01-31, Section 7.0

Third-Party Permits

OAR 345-022-0010(3) addresses requirements for potential third-party permits. The standard requires that prior to issuing a site certificate, the Council must find that, for any third-party permits or approval for which Council would ordinarily determine compliance, the applicant has, or has a reasonable likelihood of entering into, a contractual or other arrangement with any third parties.

The applicant would rely on the applicable construction contractor to obtain the following permits and approvals:

- Onsite mobile batch plants: DEQ-issued Air Contaminant Discharge Permit, NPDES 1200-A, WPCF-1000
- Onsite rock quarry: Umatilla County land use approval, zoning permit and comprehensive plan amendment; DOGAMI permit and WPCF-1000
- Crane and construction materials movement: ODOT Oversize Load Movement Permit and Umatilla County Road Access Permit
- O&M building onsite sewage disposal: DEQ-issued onsite sewage disposal construction-installation permit

The recommended facts presented above, including those related to Capital Power's experience in constructing and operating renewable energy facilities, its contractor selection process and experience and qualifications of key personnel, provide evidence to support Council's findings that the applicant and its potential third-party contractors have a reasonable likelihood of obtaining the above-referenced permits. Based on the above reasoning and pursuant to OAR 345-022-0010(4), the Department recommends Council impose the following condition:

> **Recommended Organizational Expertise Condition 6 (PRE)**: Prior to construction of the facility, facility component or phase as applicable, the certificate holder shall:
> a. Obtain and provide copies of all third-party permits needed.
> b. Provide proof of agreements between the certificate holder and the third-party regarding access to the resources or services secured by the permits or approvals identified per sub(a) above.

As discussed in section III.A.1. *Energy Facility* of this order, the applicant proposes a 230 kV transmission line to interconnect the proposed facility to the regional electric grid, and has requested approval by EFSC for two potential transmission line routes - the UEC Cottonwood Route or the BPA Stanfield Route. If the UEC Cottonwood Route is selected, applicant identifies that the transmission line would be built, owned and operated by a third-party (UEC). The applicant has not proposed to rely on any third-party permits for the construction and operation of the UEC Cottonwood Route; however, because the applicant has identified a third-party as sharing construction and ownership responsibility for a related or supporting facility of

an EFSC-jurisdictional facility, the Department recommends Council impose the following condition to require that, prior to construction, the applicant demonstrate that a contractual agreement of shared responsibility for compliance with all applicable site certificate requirements is secured:

> **Recommended Organizational Expertise Condition 7 (PRE):** Before beginning construction of the 230 kV UEC Cottonwood Transmission Line, if selected at final design, the certificate holder must provide evidence to the Department that an executed contract with UEC has been obtained, which binds the certificate holder and UEC to the terms and conditions of the site certificate, as applicable to the transmission line, for the life of the transmission line.

Conclusions of Law

Based on the recommended findings of fact, reasoning and analysis, and compliance with recommended conditions, the Department recommends that the Council find that the applicant would satisfy the requirements of the Council's Organizational Expertise standard.

IV.C. Structural Standard: OAR 345-022-0020

> *(1) Except for facilities described in sections (2) and (3), to issue a site certificate, the Council must find that:*
>
> > *(a) The applicant, through appropriate site-specific study, has adequately characterized the seismic hazard risk of the site;*
> >
> > *(b) The applicant can design, engineer, and construct the facility to avoid dangers to human safety and the environment presented by seismic hazards affecting the site, as identified in subsection (1)(a);*
> >
> > *(c) The applicant, through appropriate site-specific study, has adequately characterized the potential geological and soils hazards of the site and its vicinity that could, in the absence of a seismic event, adversely affect, or be aggravated by, the construction and operation of the proposed facility; and*
> >
> > *(d) The applicant can design, engineer and construct the facility to avoid dangers to human safety and the environment presented by the hazards identified in subsection (c).*
>
> *(2) The Council may not impose the Structural Standard in section (1) to approve or deny an application for an energy facility that would produce power from wind, solar or geothermal energy. However, the Council may, to the extent it determines appropriate,*

apply the requirements of section (1) to impose conditions on a site certificate issued for such a facility.

(3) The Council may not impose the Structural Standard in section (1) to deny an application for a special criteria facility under OAR 345-015-0310. However, the Council may, to the extent it determines appropriate, apply the requirements of section (1) to impose conditions on a site certificate issued for such a facility.

As provided in section (1) above, the Structural Standard generally requires the Council to evaluate whether the applicant has adequately characterized the potential seismic, geological and soil hazards of the site, and whether the applicant can design, engineer and construct the facility to avoid dangers to human safety and the environment from these hazards.[81] Pursuant to OAR 345-022-0020(2), the Council may not impose the Structural Standard in OAR 345-022-0020(1) to approve or deny application for a solar energy facility; however, the Council may apply the requirements of the standard to impose site certificate conditions. Under the mandatory condition in OAR 345-027-0020(12), the certificate holder must design, engineer and construct the facility to avoid dangers to human safety and the environment presented by seismic hazards affecting the site that are expected to result from all maximum probable seismic events.[82]

As established in the Amended Project Order, the analysis area for the Structural Standard is the area within the site boundary. "Site boundary," as defined in OAR 345-001-0010(55), is the area within the perimeter of the proposed facility, its related or supporting facilities, all temporary laydown and staging areas, and all micrositing corridors proposed by the applicant."

Findings of Fact

Potential seismic hazards at the proposed facility site include seismic shaking or ground motion, fault rupture, liquefaction, seismically induced landslides, and subsidence. The methods used to evaluate these potential hazards included review of topographic and geologic maps, aerial photographs, existing geologic reports, and data provided by Department of Geology and Mineral Industries (DOGAMI), and the U.S. Geological Survey (USGS).[83] Additionally, the seismic hazards evaluation incorporated code-based seismic parameters from the International Building Code (IBC) 2015, the Oregon Structural Specialty Code (OSSC), and American Society of Civil Engineering (ASCE) 7-10 were used to evaluate potential hazards. Using code-based seismic parameters to inform the seismic hazard analysis was discussed with DOGAMI Geotechnical Engineer Yumei Wang on August 24, 2018. Because the methods were discussed with DOGAMI, they apply requirements of established building and design codes, and are from

[81] OAR 345-022-0020(3) does not apply to this proposed facility because the facility is not a special criteria facility under OAR 345-015-0310.

[82] The Council does not preempt the jurisdiction of any state or local government over matters related to building code compliance.

[83] NHWAPPDoc2-7 ASC Exhibit H Geological Soil Stability. 2022-01-31, p. 8. Predicted ground motions were obtained from a probabilistic seismic hazard analysis from the USGS Seismic Hazard Mapping project.

reasonably available sources, the Department recommends Council find that they are adequate for evaluating seismic hazards at the site.[84] As described throughout this section, the applicant represents that it would conduct a preconstruction, site-specific geotechnical assessment to inform final design and siting – and affirms that they would rely on the most current codes at the time for the assessment.[85]

Potential Seismic Risks

Seismic Shaking or Ground Motion

There are four sources of earthquakes and seismic activity within the region of the proposed facility. These earthquake sources could result in seismic shaking or ground motion at the site – and include the crustal, intraplate, volcanic, and the deep subduction zone. There are no known or active faults within the site boundary, although there are active faults near the site boundary. Based on the earthquake sources and using USGS's Seismic Hazard Mapping project, the site boundary has a 2 percent probability of exceedance in 50 years (or a 2,475-year return period), with peak ground acceleration of 0.0898 acceleration from gravity (g) at the bedrock surface.[86] These results were used to inform preliminary foundation design requirements of proposed facility structures.

Seismic design parameters were developed for the proposed facility in accordance with the International Building Code (IBC 2015) (ASC Exhibit H Table H-1). The proposed facility would be designed, engineered, and constructed in accordance with the current version of the IBC, OSSC, buildings codes and ASCE-7 standard adopted by the State of Oregon at the time of construction. The proposed facility would be designed for a Site Class D (stiff soil Profile); although shallow bedrock may exist at certain locations where a Site Class C would apply. A preconstruction site-specific analysis would be conducted to provide the structural engineer with site-specific foundation loads and requirements, which would address the potential for seismic shaking or ground motion, prior to construction.

The Department's consultant, a Professional Engineer from Hart-Crowser, DOGAMI and the applicant[87] identified that the preconstruction, site-specific geotechnical investigation should be designed to provide suitable subsurface information for determining Site Class; ensure that current code and design standards are used; and that Quaternary faults be considered active and included in the site-specific hazard analysis. Therefore, the Department recommends Council impose the following condition, requiring that the applicant complete a preconstruction, site-specific geotechnical investigation at the site. The investigation should be based on a protocol reviewed by the Department, in consultation with a third-party consultant

[84] NHWAPPDoc2-7 ASC Exhibit H Geological Soil Stability. 2022-01-31, Attachment H-1.

[85] OAR 345-021-0010(1)(h) requires that ASC Exhibit H rely on "reasonably available sources" regarding the geological and soil stability within the analysis area.

[86] NHWAPPDoc2-7 ASC Exhibit H Geological Soil Stability. 2022-01-31, p. 8.

[87] NHWAPPDoc2-7 ASC Exhibit H Geological Soil Stability. 2022-01-31, Attachment H-1, p. 2.

or DOGAMI. A draft protocol, referenced in the below-condition, with the specific recommendations is included in Attachment E of this order.

> **Recommended Structural Standard Condition 1 (PRE):** Prior to construction of the facility, facility component or phase, as applicable, the certificate holder shall:
> a. Submit a protocol for the site-specific geotechnical investigation of the analysis area to the Department, for review in consultation with a third-party consultant or DOGAMI. The protocol shall, at a minimum, be consistent with Attachment E of the Final Order on the ASC.
> b. Employ a certified Professional Engineer or Geologist to conduct a site-specific geotechnical investigation and prepare a report consistent with the Oregon State Board of Geologist Examiners Guideline for Preparing Engineering Geologic Reports, or newer guidelines if available to be submitted to the Department, for review in consultation with a third-party consultant or DOGAMI.
> c. Submit a copy of a final site-specific Geotechnical Investigation Report addressing (a)-(c) to the Department, for review and approval, consultation with a third-party consultant or DOGAMI.

Based on review of the hazards and compliance with the above-recommended condition, the Department recommends Council find that the proposed facility could be designed, constructed and operated to minimize risk to public health and safety from seismic shaking and ground motion.

Fault Rupture

Fault rupture is a potential seismic hazard to proposed facility structures. However, ASC Exhibit H Figure H-2 "Historical Seismicity and Potentially Active Faults" includes mapping of "Undifferentiated Quaternary Faults" and demonstrates that there are no mapped Undifferentiated Quaternary Faults within the proposed site boundary. A desktop review of topographic and geologic maps, aerial photographs, and existing geologic reports identified that there are no apparent faults in the site boundary. The applicant states that if they identify any faults during their site-specific geotechnical investigation, these identified faults would inform the final design and layout of the proposed facility. Faults would be evaluated using high-resolution imagery, Light Detecting and Ranging (LiDAR), or best available data, consistent with DOGAMI special papers #42, #45 and #48.[88] The Department recommends that Council require that the applicant's preconstruction, site-specific geotechnical investigation be consistent with these representations. A draft protocol with this recommendation is included in Attachment E of this order. This protocol would be finalized and adhered to by the applicant under the requirements of recommended Structural Standard Condition 1.

Based on review of the hazards and compliance with recommended Structural Standard Condition 1, the Department recommends Council find that the proposed facility could be

[88] NHWAPPDoc2-7 ASC Exhibit H Geological Soil Stability. 2022-01-31, Attachment H-1, p. 2.

designed, constructed, and operated to minimize risk to public health and safety from fault rupture.

Liquefaction

Liquefaction is a potential seismic hazard to proposed facility structures. When liquefaction occurs, cohesionless soils may experience strength loss, which may lead to ground settlement and deformation. The applicant states that the soils within the microanalysis area are not saturated due to deep groundwater depth. The applicant discussed groundwater depth in ASC Exhibit H Section 3.2, describing that no data were available for the majority of the analysis area, but that groundwater ranged from 9 to 61 feet below the ground surface in the northern part of the site boundary and 230 to 612 feet below ground surface in the southernmost part of the site boundary. Additionally, the applicant states that the soils within the analysis area appear to "be generally cohesive in nature." However, in ASC Exhibit I, the applicant presents soil data and then in ASC Exhibit H Section 8.5, "Shrinking and Swelling Soils," the applicant explains that clayey soils are not anticipated along the majority of the micrositing corridor. The applicant states that the liquefaction of soils within the analysis area is very unlikely and do not include a discussion for addressing liquefaction during the site-specific geotechnical investigation.

The applicant's descriptions of groundwater and soil conditions are not consistent with their conclusions. There are also mapped Waters of the State throughout the analysis area where isolated higher groundwater may be present. The Department, therefore, recommends that Council require that the protocol (Attachment E of this order) for the applicant's preconstruction, site-specific geotechnical investigation address liquefaction hazards, including characterizing site-specific groundwater and soil conditions that may indicate a liquefaction hazard, as well as a discussion of how they plan to minimize the liquefaction hazard, if a liquefaction hazard is present.

Based on review of the hazards and compliance with recommended Structural Standard Condition 1, the Department recommends Council find that the proposed facility could be designed, constructed and operated to minimize risk to public health and safety from liquefaction.

Seismically Induced Landslides

Seismically induced landslides are a potential seismic hazard to proposed facility structures. Through desktop review of landslides and geologic reconnaissance of the site, there are no apparent landslides in the analysis area ASC Figure H-1 "Geological Map" which includes mapping of existing landslides and demonstrates that there are no mapped landslides in the analysis area. Major topographic features are controlled by the structure of the Columbia River basalt. If landslide or slope stability issues are identified during the preconstruction, site-specific geotechnical investigation, final design and layout of the facility would be designed to avoid these areas, or slope stability remediation would be completed. To ensure that slope

instability hazards are adequately addressed and used to inform final design and structure foundations, the Department recommends that the Council require that the protocol under recommended Structural Standard Condition 1 require that the preconstruction, site-specific geotechnical investigation identify and describe current topographic features; identify and refine the topographic conditions that may be relevant for slope instability; and address seismically induced landslide hazard.

Based on review of the hazards and compliance with recommended Structural Standard Condition 1, the Department recommends Council find that the proposed facility could be designed, constructed, and operated to minimize risk to public health and safety from seismically induced landslides.

Subsidence

Subsidence is a potential seismic hazard to proposed facility structures. Subsidence is the sudden sinking or the gradual downward settling of the land surface. Various factors may contribute to subsidence, including tectonic movements. Subsidence is identified as a potential seismic hazard but the non-seismic related causes for subsidence has not been provided in the ASC. Therefore, the Department recommends that the Council require that the protocol under recommended Structural Standard Condition 1 require that the preconstruction, site specific geotechnical investigation require an evaluation of risks from seismically induced subsidence.

Based on review of the hazards and compliance with recommended Structural Standard Condition 1, the Department recommends Council find that the proposed facility could be designed, constructed, and operated to minimize risk to public health and safety from subsidence.

Potential Non-Seismic Risks

Non-seismic hazards within the analysis area include landslides, volcanic activity, erosion, flooding, shrinking and swelling soils, and collapsing soils. Non-seismic hazards were evaluated by the applicant by review of topographic and geologic maps, aerial photographs, existing geologic reports, and data provided by DOGAMI, the Oregon Water Resources Department, the U.S. Geological Survey (USGS), the Natural Resources Conservation Service (NRCS) web-based soil survey, and Federal Emergency Management Agency (FEMA) mapping. These methods were discussed with DOGAMI and are from reasonably available sources; therefore, the Department recommends Council find that they are adequate for evaluating non-seismic hazards at the site.[89]

Landslides

[89] NHWAPPDoc2-7 ASC Exhibit H Geological Soil Stability. 2022-01-31, Attachment H-1.

Landslides are a potential non-seismic hazard to proposed facility structures. ASC Exhibit H Figure H-1 "Geological Map" maps existing landslides, where none are present within the analysis area. Major features are controlled by the structure of the Columbia River basalt. The applicant states that if they identify any landslides during their site-specific geotechnical investigation, these identified landslides would inform the final design and layout of the proposed facility. Landslides would be evaluated using high-resolution imagery, LiDAR or best available data, consistent with DOGAMI special papers #42, #45 and #48.[90] Therefore, the Department recommends that the Council require that the protocol under recommended Structural Standard Condition 1 require that the applicant's preconstruction, site-specific geotechnical investigation be consistent with these representations.

Based on review of the hazards and compliance with recommended Structural Standard Condition 1, the Department recommends Council find that the proposed facility could be designed, constructed, and operated to minimize risk to public health and safety from non-seismic landslides.

Volcanic Activity

Volcanic activity is a potential non-seismic hazard to proposed facility structures, however, the closest volcano is Mt. Adams. Volcanic activity is present in the Cascade Range; the closest volcano is Mt. Adams is approximately 120 miles northwest of the proposed site boundary. The analysis area is outside of a 50-mile radius of potentially erupting volcanoes and not near any streams likely to be subject to pyroclastic flows. Volcanic ash fallout is the main volcanic activity that could impact the proposed site boundary. If a volcanic eruption were to occur, construction activities could be temporarily shut down or, if during operation, the turbines would be shut down until safe operating conditions return. Based on the distance from the nearest volcano, and the safety measures that would be implemented in the event of a volcanic eruption that could impact the site, the Department recommends Council find that the proposed facility could be designed, constructed, and operated to minimize risk to public health and safety from volcanic activity.

Erosion

Wind and water erosion are potential non-seismic hazards within the analysis area. Wind and water erosion present hazards including site instability, excessive dust and run-off to adjacent lands outside the proposed site boundary. ASC Exhibit I presents the major soil types within the site boundary, based on 2016 Natural Resources Conservation Service's (NRCS) web-based soil survey. The results of the NRCS web-based soil survey are presented in ASC Exhibit I Table I-1 and Figure I-1 and demonstrate that soil erosion potential within the proposed facility site boundary range from slight to severe. Based on review of ASC Exhibit I Table I-1 and Figure I-1, wind and water erosion, if uncontrolled, could result in a significant adverse impact.

[90] NHWAPPDoc2-7 ASC Exhibit H Geological Soil Stability. 2022-01-31, Attachment H-1, p. 2.

To minimize potential wind and water erosion at the site during construction, best management practices (BMPs) and requirements of a DEQ-issued 1200-C National Pollutant Discharge Elimination System Permit (NPDES) would be adhered. ASC Exhibit I includes an Erosion Sediment Control Plan (ESCP) which gives a variety of example BMPs intended to minimize the potential for wind or water erosion as well as sedimentation of any disturbed soils. The ESCP would be updated for the specific design conditions at individual turbine sites and additional BMPs should be added as necessary, upon issuance of a permit from DEQ.

To minimize wind and water erosion at the site during operation, confining operations to gravel-surfaced areas is important. However, on-going maintenance of erosion-control surfaces and structures is required for their continued performance. Additionally, if any soil disturbance is planned in the future, an ESCP may need to be prepared and NPDES 1200-C construction permit obtained along with any necessary BMPs to minimize soil erosion.

Erosion control and minimization at the proposed facility is further discussed in Section IV.D. *Soil Protection* including recommended conditions. Based on compliance with these recommended conditions, the Department recommends that Council find that the proposed facility could be designed, constructed, and operated to minimize risk to public health and safety from erosion.

Flooding

Flooding is a potential non-seismic hazard at the proposed facility site. ASC Exhibit H Figure H-3 "Special Flood Hazard Area," includes mapping of FEMA Floodways and 500-year flood zones. The ASC Exhibit H Figure H-3 map shows that the planned transmission line to the BPA Stanfield Substation would cross both a FEMA floodway and 500-year flood zone. The applicant states that this transmission line would span these zones, thus avoiding any flooding impacts.

Seasonal thunderstorms could result in localized runoff and flooding. Potential areas where localized runoff or flooding may occur were not identified. Therefore, the Department recommends that the Council require that the protocol under recommended Structural Standard Condition 1, require that the preconstruction, site-specific geotechnical investigation include an evaluation of flood risk, based on topography and Oregon's Statewide Wetlands Inventory, to inform civil design (e.g., grading plans).

Based on review of the hazards and compliance with recommended Structural Standard Condition 1, the Department recommends Council find that the proposed facility could be designed, constructed, and operated to minimize risk to public health and safety from flooding.

Shrinking and Swelling Soils

Shrinking and swelling soils are a potential non-seismic hazard within the analysis area. Hazards from shrinking and swelling soils include damage from settlement or subsidence and from heave or uplift, especially where there is differential ground movement. Shrinking and swelling

soils are generally indicative of clayey soils. The applicant explains that clayey soils are not anticipated within the majority of disturbance area. ASC Exhibit I presents the major soil types within the site boundary, based on 2016 Natural Resources Conservation Service's (NRCS) web-based soil survey. The results of the NRCS web-based soil survey are presented in ASC Exhibit I and Figure I-1 and demonstrate that the majority of soil units are silt loam. Additionally, some soil units are identified as sandy loam, stony loam, loamy fine sand, gravelly substratum, and rock outcrop. Based on review of ASC Exhibit I Table I-1 and Figure I-1, the Department agrees that these soil units are generally not considered to be clayey soils.

To minimize shrinking and swelling soils, shrink-swell potential of the soils would be evaluated during the site-specific geotechnical investigations and laboratory testing and analysis. The applicant does not describe what site-specific investigation technique they intend to use or if there are portions of the site that might have more potential for shrinking or swelling soils. Additionally, the applicant does not describe what kind of laboratory testing and analysis would be used to identify the potential for shrinking or swelling soils. Therefore, the Department recommends that the Council require that the protocol under recommended Structural Standard Condition 1, require that the preconstruction, site-specific geotechnical investigation specify and include laboratory testing and analysis to address shrink-swell potential of soils.

If shrinking and swelling soils are identified, soil improvement methods would be utilized, such as reworking and compacting onsite soils, over-excavating soils with shrink-swell potential and replacing with compacted structural fill, constructing an impermeable barrier to prevent saturation, or mixing with other soils. The Department recommends that Council require that these methods be identified in the protocol, under recommended Structural Standard Condition 1, and find that these methods are suitable for minimizing the hazard for shrinking and swelling soils.

Collapsing Soils

Collapsing soils are a potential non-seismic hazard at the proposed facility site. Subsurface soil conditions, including presence of loess or collapsing soils, would be identified during the site-specific geotechnical investigation, and evaluated through laboratory testing and analysis. The applicant does not describe what site-specific investigation technique they intend to use or if there are portions of the site that might have more potential for collapsing soils. Additionally, the applicant does not describe what kind of laboratory testing and analysis would be used to identify the potential for collapsing soils. Therefore, the Department recommends that the Council require that protocol for the preconstruction, site-specific geotechnical investigation under recommended Structural Standard Condition 1 specify the technique to be used to evaluate collapsing soils and identify laboratory testing and analysis

If those soils are present, the applicant describes construction techniques to address the collapse potential, such as over-excavating and replacing with structural fill, wetting, and compacting. The Department recommends that Council require that these methods be

identified in the protocol, under recommended Structural Standard Condition 1, and find that these methods are suitable for minimizing the hazard for collapsing soils.

Based on the recommended findings of fact, reasoning and analysis presented above for both seismic and non-seismic hazards at the proposed facility site, the Department recommends Council impose Structural Standard Condition 1 to require that, prior to construction, the applicant finalize a geotechnical investigation protocol, consistent with the draft outline provided in Attachment E of this order, to be reviewed by the Department in consultation with a third-party consultant or DOGAMI and complete a site-specific geotechnical investigation in accordance with the protocol.

In addition, the Council's Mandatory Conditions at OAR 345-025-0006(12) – (14) provide structural related design requirements for which the applicant would be required to comply:

> **Structural Standard Condition 2 (GEN):** The certificate holder shall design, engineer and construct the facility to avoid dangers to human safety and the environment presented by seismic hazards affecting the site that are expected to result from all maximum probable seismic events. As used in this rule "seismic hazard" includes ground shaking, ground failure, landslide, liquefaction triggering and consequences (including flow failure, settlement buoyancy, and lateral spreading), cyclic softening of clays and silts, fault rupture, directivity effects and soil-structure interaction.
> [Mandatory Condition OAR 345-025-0006(12)]
>
> **Structural Standard Condition 3 (GEN):** The certificate holder shall notify the Department, the State Building Codes Division and the Department of Geology and Mineral Industries promptly if site investigations or trenching reveal that conditions in the foundation rocks differ significantly from those described in the application for a site certificate. After the Department receives the notice, the Council may require the certificate holder to consult with the Department of Geology and Mineral Industries and the Building Codes Division to propose and implement corrective or mitigation actions.
> [Mandatory Condition OAR 345-025-0006(13)]
>
> **Structural Standard Condition 4 (GEN):** The certificate holder shall notify the Department, the State Building Codes Division and the Department of Geology and Mineral Industries promptly if shear zones, artesian aquifers, deformations or clastic dikes are found at or in the vicinity of the site. After the Department receives notice, the Council may require the certificate holder to consult with the Department of Geology and Mineral Industries and the Building Codes Division to propose and implement corrective or mitigation actions.
> [Mandatory Condition OAR 345-025-0006(14)]

Disaster Resiliency

To evaluate disaster resiliency, the applicant referenced their experience with current codes and standards, as well as experience with both building energy facilities and designing projects

to withstand non-seismic geologic hazards. They note that addressing the seismic and non-seismic hazards in the previous sections supports disaster resiliency. In addition to the referenced code standard, the applicant also references several other standards and protocols, including:

- The structures exceeding specific height limits have lighting according to FAA standards.
- Earth turbine and substation and the solar array will be monitored by a Supervisory Control and Data Acquisition system such that the facility will go offline in the event of a disaster.
- Facility components and elements, such as access roads, that may be damaged during a major storm event will be assessed and repairs made quickly.

The applicant is a member of the North American Electrical Reliability Corporation and thus follows its standards.

The applicant has confirmed with Bonneville Power Administration (BPA) that they have system recovery plans for the Stanfield Substation and its associated transmission lines.

The applicant has confirmed with Umatilla Electric Cooperative (UEC) that they have system recovery plans for the Cottonwood Substation and its associated transmission lines.

For these reasons, the Department recommends Council find that the applicant include steps to increase facility resiliency to a range of natural disasters in facility planning documents including wildfire preparedness, emergency management, emergency response, and emergency communications.

Climate Change

The applicant's evaluation of climate change is based on a University of Washington study that concluded that for the analysis area the future projection includes greater annual average and summer temperatures, as well as more severe storm events and wildfires. This general assessment of regional climate change impacts is supported by similar conclusions from state and federal agencies, including the Oregon Department of Environmental Quality (ODEQ) and the U.S. Environmental Protection Agency. The US EPA has projected that "over the last century, the average annual temperature in the Northwest has risen by about 1.3°F. Temperatures are projected to increase by approximately 3°F to 10°F by the end of the century, with the largest increases expected in the summer. Precipitation in the region has seen a decline in both the amount of total snowfall and the proportion of precipitation falling as snow. Declines in snowpack and streamflows have been observed in the Cascades in recent decades Higher temperatures, changing streamflows, and increases in pests and disease threaten forests, agriculture, and fish populations in the Northwest.[91] Changes in precipitation within

[91] U.S. EPA. Climate Change Impacts in the Northwest. Available: https://19january2017snapshot.epa.gov/climate-impacts/climate-impacts-northwest_.html Date Accessed: 2022-04-12.

the region are resulting in increased drought and wildfire risks. Fire seasons in Oregon are roughly 100 days longer than they were in the 1970s. Longer seasons mean more smoke in Oregon communities. The lengthening of the fire season is largely due to declining mountain snowpack and earlier spring snowmelt.[92] Although humans start most fires, climate-related factors such as hotter temperatures and increasingly severe droughts exacerbate fire risk and severity.

For example, Oregon Department of Environmental Quality is implementing in 2022 the Climate Protection Program for Oregon. The Climate Protection Program aims to:

- Reduce greenhouse gas emissions to address the worsening effects of climate change
- Achieve co-benefits from reductions in other air contaminants
- Enhance public welfare for Oregon communities, particularly environmental justice communities including communities of color, tribal communities, communities experiencing lower incomes, rural communities and coastal communities
- Accelerate the transition from fossil fuels to lower carbon energy sources.[93]

The applicant refers to ASC Exhibit H Section 8.0, Disaster Resiliency, as reference for resiliency of the facility against these climate change effects.

As a result of climate change impacts, the power lines in the region are expected to experience more stress, thus the applicant states that the construction and operation of the facility itself provides resilience to the overall energy grid in this part of Oregon. The Department reviewed the information submitted by the applicant, and other sources on climate change impacts and resiliency and concludes that the applicant has accurately described potential climate impacts, that could impact the facility, and has designed the proposed facility to achieve the state's goals on building resiliency in energy resources for the future. Further, the construction of renewable energy facilities in Oregon will assist the state in meeting its objectives of reducing greenhouse emissions and transitioning into a sustainable renewable energy future. For these reasons, the Department recommends that Council find that the proposed facility will be able to meet the Council's standard for climate change and resiliency.

Conclusions of Law

Based on the foregoing analysis, and in compliance with OAR 345-022-0020, the Department recommends that Council find, with the recommended conditions, that the proposed facility can be constructed and operated in compliance with the requirements of the Structural Standard.

[92] Oregon Health Authority. Climate and Health in Oregon. 2020.

[93] Oregon Department of Environmental Quality. Available: https://www.oregon.gov/deq/ghgp/Pages/Climate-Protection.aspx Date Accessed: 2022-04-12

IV.D. Soil Protection: OAR 345-022-0022

To issue a site certificate, the Council must find that the design, construction and operation of the facility, taking into account mitigation, are not likely to result in a significant adverse impact to soils including, but not limited to, erosion and chemical factors such as salt deposition from cooling towers, land application of liquid effluent, and chemical spills.

Findings of Fact

The analysis area for the soil protection standard, as established in the Amended Project Order, is the area within the site boundary.

Existing Soil Conditions and Land Use

Major soil types in the analysis area were identified and mapped using the Natural Resources Conservation Service (NRCS) web-based soil survey, accessed in 2016. There are 52 different soil types within the analysis area and 10 different soil types within the proposed site boundary.

Soil types within the proposed site boundary include: Burke silt loam in the northwest portion of the proposed site boundary; Ritzville silt loam and Shano silt loam in the northern portion of the proposed site boundary; Cantala silt loam, Condon-Bakeoven complex, Morrow silt loam, and Morrow-Bakeoven complex in the southern portion of the proposed site boundary; Condon silt loam in the eastern and southern portion of the proposed site boundary; and Lickskillet very stony loam and Mikkalo silt loam throughout the proposed site boundary. Eight of these 10 soil types are silt loams with depths ranging from 0.5 feet deep to greater than 7 feet deep with moderate to high permeability on slopes ranging from 1 to 40 percent with erosion hazard ratings from slight to severe.[94] Based on review of the NRCS web-based soil survey, accessed in 2022[95], the Department affirms that the identified soils types with the proposed site boundary and analysis area are accurate.

Current land use within the analysis area is predominately agriculture.

Potential Adverse Impacts to Soil

Construction

Proposed facility construction could result in adverse impacts to soils from temporary and permanent disturbance, including erosion and compaction, and soil contamination from spills.

[94] NHWAPPDoc2-8 ASC Exhibit I. Soil Conditions_2022-01-31, Section 3.0.

[95] US Department of Agriculture, Natural Resources Conservation Service, Web Soil Survey. Accessed: https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx . Date Accessed: 2022-04-14.

Erosion impacts could occur due to soil disturbance, loss of vegetation, compaction, and changes to surface drainage patterns. To minimize construction-related erosion impacts, the applicant would obtain a National Pollutant Discharge Elimination System (NPDES) 1200-C construction permit and would implement an Erosion and Sediment Control Plan (ESCP). A draft ESCP is provided in ASC Exhibit I Attachment I-1 and would be updated based on final facility design, prior to and during construction. Based on the severity of erosion potential during construction-related activities, the Department recommends Council require that the final ESCP require:

- Placement of mulch and stabilized construction roadways (aka gravel covered roads). Covering large areas with mulch may not always be feasible; alternatively, the Department recommends the applicant be required to apply soil tackifiers for large areas and erosion control blankets or mulch for small areas.
- Installation of swales and check dams for areas along slopes.
- Grading plan that minimizes unnecessary disturbance and preserves existing vegetation and is conducted only at time when there is adequate dust control at the site. Adequate dust control shall be informed based on DEQ's Fugitive Dust Control Regulation.[96]

The Department recommends Council impose the following condition to ensure the soil erosion impacts are minimized during construction activities:

Recommended Soil Protection Condition 1 (PRE): The certificate holder shall:

a. Prior to construction of roads within the wind facility micrositing area, consult with the Umatilla County Soil and Water Conservation District, Umatilla County Planning Department and Department on layout and design methods that would minimize impacts to agricultural lands.
b. Prior to construction, consult with the Department and Oregon Department of Environmental Quality on the Erosion and Sediment Control Plans (ESCP) to be included in the application for the National Pollutant Discharge Elimination System

[96] OAR 340-208-0210(1) No person may cause or permit any materials to be handled, transported, or stored; or a building, its appurtenances, or a road to be used, constructed, altered, repaired or demolished; or any equipment to be operated, without taking reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions may include, but not be limited to the following:

(a) Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land;
(b) Application of water or other suitable chemicals on unpaved roads, materials stockpiles, and other surfaces which can create airborne dusts;
(c) Full or partial enclosure of materials stockpiles in cases where application of water or other suitable chemicals are not sufficient to prevent particulate matter from becoming airborne;
(d) Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials;
(e) Adequate containment during sandblasting or other similar operations;
(f) Covering, at all times when in motion, open bodied trucks transporting materials likely to become airborne;
(g) The prompt removal from paved streets of earth or other material that does or may become airborne.

Construction Stormwater Discharge (NPDES) General Permit 1200-C. Consultation shall address erosion control measures and identify Best Management Practices (BMPs) such as mulch, soil tackier, erosion control blankets, gravel, and swales and check dam installation based on site-specific information obtained during the preconstruction, geotechnical investigation, final facility design limits of disturbance, grading plan (see requirements in the Revegetation and Noxious Weed Plan) and seasonal conditions at the time of disturbance.

Recommended Soil Protection Condition 2 (CON): The certificate holder shall:

a. During construction, conduct all work in compliance with the NPDES General Permit 1200-C, including the monitoring and maintenance of all BMPs.
b. Following completion of construction, provide evidence to the Department that the NPDES General Permit 1200-C permit was terminated by DEQ.

Proposed facility construction may cause localized soil compaction, which can cause a loss of agricultural productivity, increased erosion, and increased difficulty in revegetation. Applicant asserts that compaction would be minimized through avoiding soil disturbance in wet weather and winter months. However, the Department recommends Council neither rely on this representation nor require avoidance of construction activities in winter months. Rather, compaction may have significant impacts during construction. To minimize these potential impacts, the Department recommends that the applicant be required to consult with landowners prior to and post construction to ensure that ground disturbing activities consider any site-specific concerns from landowners of actively cultivated land, and that decompaction extend a minimum of 12 to 18 inches, or at the depth requested by the landowners, to provide adequate restoration. Restoration and decompaction actions would be implemented under the Revegetation and Noxious Weed Plan, Attachment P-2 of this order (see recommended Fish and Wildlife Condition 1).

The construction schedule and seasonal conditions are uncertain. Therefore, long-term impacts to temporarily disturbed agriculturally productive soils is unknown. The applicant explains that temporarily impacted agriculturally productive soils would be restored to pre-disturbance conditions.[97] To ensure that the applicant can adhere to their own representation, to the extent agreed upon by the affected landowner, the Department recommends Council require that the applicant implement a long-term soil monitoring plan, in accordance with ORS 469.410(4), to evaluate and mitigate for topsoil loss and wind/water erosion.

Recommended Soil Protection Condition 3 (PRO): Prior to operation, the certificate holder shall develop a Soil Monitoring Plan to evaluate impacts of topsoil loss and erosion during construction activities. The Soil Monitoring Plan shall identify the testing

[97] In ASC Exhibit P Attachment P-4, the applicant states that the goals of the revegetation plan, which apply to croplands, are to "restore temporarily disturbed areas to pre-disturbance conditions." NHWAPPDoc2-15 ASC Exhibit P Fish and Wildlife 2022-01-31.

method, evaluative criteria and best management practices/corrective actions to be implemented if the results identify a significant impact to soil productivity.

Proposed facility construction could result in soil contamination hazards from onsite use of chemicals. One potential source is from any leakage or spillage of stored oils, fuels or other contaminants; up to 500 gallons of diesel fuel and 200 gallons of gasoline may be kept onsite for fueling of construction equipment. The applicant plans to prepare a draft Spill Prevention, Control, and Countermeasures Plan (SPCC Plan), based on the draft plan included in ASC Exhibit G Attachment G-1, that would outline fueling activity procedures, spill prevention measures, as well as best practices if a release were to occur. The Department recommends Council require that the applicant develop and maintain an SPCC during proposed facility construction.

Recommended Soil Protection Condition 4 (PRE): Prior to construction, the certificate holder shall submit to the Department a final copy of a Construction Spill Prevention Control and Countermeasures Plan (SPCC Plan), based on the draft SPCC Plan included in Attachment G-1 of the Final Order on the ASC.

Recommended Soil Protection Condition 5 (CON): During construction, the certificate holder shall conduct all work in compliance with the final SPCC Plan.

Operations

Proposed facility operations could result in erosion and contamination impacts to soils. Erosion impacts would be minimal given that O&M activities would largely occur on permanent access roads. Routine O&M of wind turbines could result in crane walking or new temporary disturbance that could contribute to erosion impacts. The Department recommends Council require that an erosion inspection and maintenance program be implemented throughout facility operations, as needed, given the extent of ground disturbance planned for any given year.

Recommended Soil Protection Condition 6 (OPR): During operational activities that include ground disturbance, the certificate holder shall ensure that the activities are planned with BMPs and erosion control materials in place, as necessary, and inspected and mitigated until site stabilization is achieved.

Proposed facility operations include oil-containing transformers with more than 25,000-gallon capacity. Given the oil-containment capacity of the transformers, secondary containment and an SPCC are required. The Department recommends Council impose a condition to ensure that an operational SPCC is developed and implemented to address potential spill-related incidents during operations.

Recommended Soil Protection Condition 7 (PRO): Prior to operation, the certificate holder shall submit to the Department a final copy of an Operational Spill Prevention Control and Countermeasures Plan (SPCC Plan).

Recommended Soil Protection Condition 8 (OPR): During operations, the certificate holder shall conduct all work in compliance with the final SPCC Plan.

Conclusions of Law

Based on the foregoing recommended findings of fact and conclusions of law, and subject to compliance with the recommended site certificate conditions, the Department recommends that the Council find that the proposed facility would comply with the Council's Soil Protection standard.

IV.E. Land Use: OAR 345-022-0030

(1) To issue a site certificate, the Council must find that the proposed facility complies with the statewide planning goals adopted by the Land Conservation and Development Commission.

(2) The Council shall find that a proposed facility complies with section (1) if:

(a) The applicant elects to obtain local land use approvals under ORS 469.504(1)(a) and the Council finds that the facility has received local land use approval under the acknowledged comprehensive plan and land use regulations of the affected local government; or

(b) The applicant elects to obtain a Council determination under ORS 469.504(1)(b) and the Council determines that:

(A) The proposed facility complies with applicable substantive criteria as described in section (3) and the facility complies with any Land Conservation and Development Commission administrative rules and goals and any land use statutes directly applicable to the facility under ORS 197.646(3);

(B) For a proposed facility that does not comply with one or more of the applicable substantive criteria as described in section (3), the facility otherwise complies with the statewide planning goals or an exception to any applicable statewide planning goal is justified under section (4); or

(C) For a proposed facility that the Council decides, under sections (3) or (6), to evaluate against the statewide planning goals, the proposed facility complies with the applicable statewide planning goals or that an exception to any applicable statewide planning goal is justified under section (4).

(3) As used in this rule, the "applicable substantive criteria" are criteria from the affected local government's acknowledged comprehensive plan and land use ordinances that are

required by the statewide planning goals and that are in effect on the date the applicant submits the application. If the special advisory group recommends applicable substantive criteria, as described under OAR 345-021-0050, the Council shall apply them. If the special advisory group does not recommend applicable substantive criteria, the Council shall decide either to make its own determination of the applicable substantive criteria and apply them or to evaluate the proposed facility against the statewide planning goals.

(4) The Council may find goal compliance for a proposed facility that does not otherwise comply with one or more statewide planning goals by taking an exception to the applicable goal. Notwithstanding the requirements of ORS 197.732, the statewide planning goal pertaining to the exception process or any rules of the Land Conservation and Development Commission pertaining to the exception process, the Council may take an exception to a goal if the Council finds:

(a) The land subject to the exception is physically developed to the extent that the land is no longer available for uses allowed by the applicable goal;

(b) The land subject to the exception is irrevocably committed as described by the rules of the Land Conservation and Development Commission to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable; or

(c) The following standards are met:

(A) Reasons justify why the state policy embodied in the applicable goal should not apply;

(B) The significant environmental, economic, social and energy consequences anticipated as a result of the proposed facility have been identified and adverse impacts will be mitigated in accordance with rules of the Council applicable to the siting of the proposed facility; and

(C) The proposed facility is compatible with other adjacent uses or will be made compatible through measures designed to reduce adverse impacts.
*****

Findings of Fact

The applicant elected Council determination of compliance with land use rather than Umatilla County. The Land Use standard therefore requires the Council to find that the proposed facility complies with local applicable substantive criteria and statewide planning goals adopted by the

Land Conservation and Development Commission (LCDC).[98] Compliance with applicable substantive criteria must be demonstrated for proposed facility components based on the appropriate land use category and zone. The proposed facility includes the following land uses and zones:

- Commercial wind power generation facility, Exclusive Farm Use (EFU) zone
  - Up to 112 wind turbines, electrical collection system, O&M building, substation
- Photovoltaic solar power generation facility, EFU zone
  - Up to 1,896 acres of solar PV energy generation components, BESS, and associated roads
- Utility facilities necessary for public service
  - 25.3 mile 230 kV UEC Cottonwood transmission line[99], EFU, Rural tourist commercial zone (RTC), Agri-Business Zone (AB), Light industrial (LI) zones
  - 5-mile 230 kV BPA Stanfield transmission line[100], EFU zones
  - 6.8-mile 230 kV Substation connector line, EFU zones

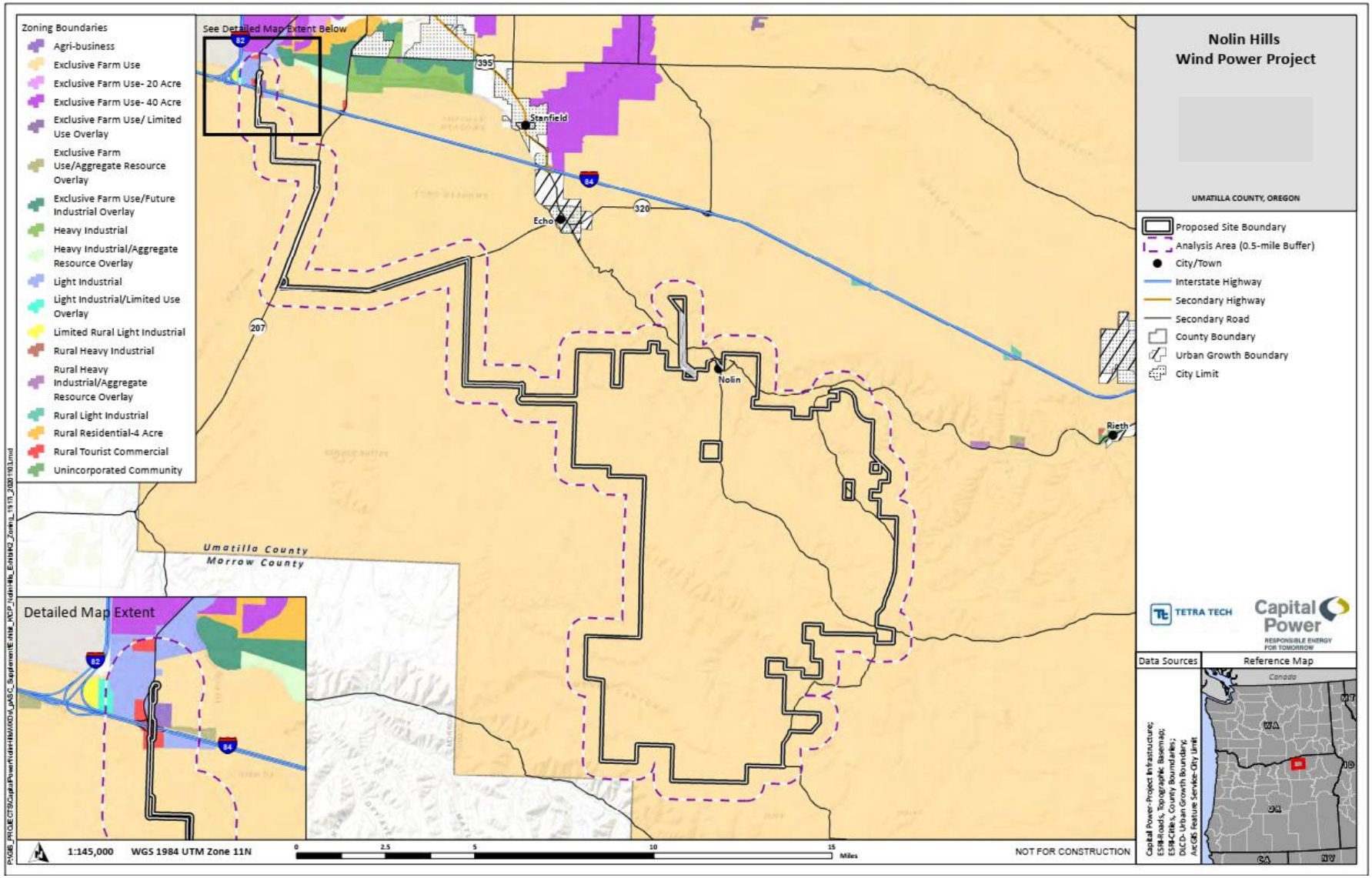
Figure 3: *Land Use Zoning within Analysis Area* are presented below.

[98] The Council must apply the Land Use standard in conformance with the requirements of ORS 469.504.

[99] The proposed 230 kV UEC Cottonwood transmission line is also evaluated as an "associated transmission line" under ORS 215.274.

[100] The proposed 230 kV BPA Stanfield transmission line is also evaluated as an "associated transmission line" under ORS 215.274.

Figure 3: Land Use Zoning within Analysis Area



IV.E.1 Applicable Substantive Criteria

Applicable substantive criteria are criteria from the affected local government's (Umatilla County) acknowledged comprehensive plan and land use ordinance that are required by the statewide planning goals identified as applicable to the proposed facility based on facility type or facility component and land use zone, and that are in effect on the date the applicant submits the preliminary application for site certificate (pASC), which in this instance occurred on February 27, 2020.[101] The affected local governments include the governing bodies of the jurisdictions for which proposed facility components would be located, which in this instance includes the governing bodies of Umatilla County – Umatilla Board of County Commissioners, appointed as a special advisory group on October 19, 2017.[102]

Table 2 below provides the applicable substantive criteria.

Table 2: Umatilla County Development Code (UCDC)

Code Section	**Title**
Exclusive Farm Use (EFU) Zone Requirements	
Section 152.025	Zoning Permit
Section 152.059	Land use decisions
Section 152.060	Conditional uses permitted
Section 152.061	Standards for all conditional uses
Section 152.615	Additional conditional use permit restrictions
Section 152.616(CCC)	Conditional use criteria for utility facility
Section 152.616(HHH)[1]	Conditional use criteria for commercial wind power generation facility
Section 152.617(II)(7)	Standards for review: EFU and GF zone land use decisions [Utility facility necessary for public service]
Other Zones	
Section 152.283	Conditional uses permitted [in a RTC zone]
Section 152.292	Conditional uses permitted [in an AB zone]
Section 152.303	Conditional uses permitted [in a LI zone]; General criteria
Umatilla County Comprehensive Plan (UCCP)[2]	
Chapter 6: Agriculture Policies 1, 8 and 17	
Chapter 5: Citizen Involvement Policies 1 and 5	
Chapter 8: Open Space, Scenic and Historic Areas, and Natural Areas Policies 1(a), 5(a & b), 6(a), 8(a), 9(a), 10(c, d & e), 20 (a), 20(b)(1-8), 22, 23(a), 24(a), 26, 37 & 38(a-c), 39(a) and 42(a)	
Chapter 9: Air, Land, and Water Quality Policies 1, 7 and 8	
Chapter 10: Natural Hazards Policies 1 and 4	
Chapter 11: Recreational Needs Policy 1	

[101] OAR 345-022-0030(3)

[102] NHWNOIDoc16 Order Appointing Special Advisory Group 2017-10-19.

Table 2: Umatilla County Development Code (UCDC)

Chapter 12: Economy of the County Policies 1, 4 and 8(a-f)
Chapter 14: Public Facilities and Services Policies 1(a-d), 2, 9 and 19
Chapter 15: Transportation Policies 18 and 20
Chapter 16: Energy Conservation Policy 1
Notes: 1. In ASC Exhibit K, the applicant asserts that UCDC 152.616(HHH)(6)(a)(3), a two-mile setback between wind turbines and rural residences in EFU-zoned land, is not "applicable substantive criteria", or in the alternative, request that the Council apply the land use goals directly. This is evaluated in the subsection below. 2. Rather than recommend findings on the broad policies and goals articulated in the Comprehensive plan that are not specific to locations, activity or use, the Department recommends Council makes findings on compliance with the land use ordinance provisions that implement the relevant sections of the Comprehensive Plan. See ORS 197.175(2) and 197.015(11).

IV.E.1.a Umatilla County Development Code

UCDC Section 152.025 Zoning Permit

(A) Prior to the construction, reconstruction, addition to or change of use of a structure, or the change of use of a lot, or the installation or replacement of a mobile home on a lot, a zoning permit shall be obtained from the County Planning Department. An amended zoning permit must be obtained when changes to an approved zoning permit occur. Changes include, but are not limited to, the size of the proposed structure, relocation of a structure or changes in the model year of a proposed manufactured home, etc.

As presented in the subsections below, the land use decision criteria for the 230 kV UEC Cottonwood transmission line, 230 kV BPA Stanfield transmission line, and 230 kV Substation Collector transmission line require that a zoning permit, per tax lot, be obtained from Umatilla County prior to construction of structures. Similarly, the conditional use criteria for the proposed wind and solar facility components require that zoning permits, per tax lot, be obtained from Umatilla County.

As presented in this section, several wind turbines associated with the proposed wind facility would not comply with the 2-mile rural residential requirements under UCDC Section 152.616(HHH)(6)(a)(3) and the proposed solar facility components would not comply with the 12-acre and 20-acre high-value and arable land threshold under OAR 660-033-0130(38)(g). Pursuant to ORS 469.504(1), non-compliance with these requirements is allowable for EFSC-jurisdictional facilities if Council finds that the proposed facility "otherwise complies with the statewide planning goals, or that an exception to any applicable statewide planning goal is justified.." both of which apply to this proposed facility, as evaluated in this section. To ensure that zoning permits are obtained prior to construction of all applicable structures the Department recommends Council impose the following condition:

Recommended Land Use Condition 1 (PRE): Subject to the Council's jurisdiction and authority pursuant to ORS 469.504(1), prior to construction of facility structures, as applicable, the certificate holder shall obtain zoning permits issued by the Planning Director, per affected tax lot, from Umatilla County Planning Department; copies of permits shall be provided to the Department.

UCDC Section 152.059 Land Use Decisions

In an EFU zone the following uses may be permitted through a land use decision via administrative review (§ 152.769) and subject to the applicable criteria found in §152.617. Once approval is obtained a zoning permit (§152.025) is necessary to finalize the decision.

(C) Utility facilities necessary for public service, including wetland waste treatment systems but not including commercial facilities for the purpose of generating electrical power for public use by sale or transmission or communication towers over 200 feet in height. A utility facility necessary for public service may be established as provided in ORS 215.275 and in § 152.617 (II)(7).

UCDC 152.059(C) establishes that "utility facilities necessary for public service" in EFU zoned land may be permitted through a land use decision, subject to UCDC 152.769 administrative review; and subject to compliance with applicable criteria in ORS 215.275 and UCDC 152.617(II)(7).[103] UCDC 152.059 also specifies that a zoning permit under UCDC 152.025 is necessary for uses permitted in EFU zoned land.

The county's land use decision via administrative review process would not apply because it includes procedural review requirements[104] which are superseded by the EFSC process when an applicant selects land use review under OAR 345-022-0030(2)(b), as is the case for this ASC.

Proposed facility components considered a "utility facility necessary for public service" within EFU-zoned land include the: proposed 230 kV BPA Stanfield transmission line, portions of the 230 kV UEC Cottonwood transmission line, and the 230 kV substation connector line. The Department's evaluation of applicable substantive criteria is presented below (see evaluation of UCDC 152.617(II)(7), ORS 215.275 and ORS 215.274). The evaluation of UCDC 152.025, including

[103] Notwithstanding the language in the County's code, the requirements beyond those that are consistent with ORS 215.275 are not applicable to the proposed facility because, as a utility facility necessary for public service under ORS 215.283(1), the use is permitted subject only to the requirements of ORS 215.275 and the County cannot impose additional approval criteria. Therefore, any requirements of UCDC 152.617 that do not mirror ORS 215.275 do not apply.

[104] UCDC 152.769 identifies a future review and approval, based on evaluation and findings of compliance with applicable criteria, by the Planning Department; public notice; and an opportunity for members of the public to request a public hearing. Unless the county has a modified administrative review process, without the procedural requirements under UCDC 152.769, requiring that the applicant obtain a land use decision via Umatilla County's administrative review process would be inconsistent with OAR 469.401(3), which requires local jurisdictions to issue any permits or approvals, subject only to the conditions set forth in the site certificate, without hearings or other proceedings.

a proposed condition requiring that the applicant obtain zoning permits, is presented in the preceding subsection.

UCDC Section 152.060 Conditional Uses Permitted

> *In an EFU zone the following uses may be permitted conditionally via administrative review (§ 152.769), subject to the requirements of this section, the applicable criteria in § 152.061, §§ 152.610 through 152.615, 152.617 and §§ 152.545 through 152.562. A zoning permit is required following the approval of a conditional use pursuant to § 152.025. Existing uses classified as conditional uses and listed in this section may be expanded subject to administrative review and subject to the requirements listed in OAR 660, Division 033.*
> *****
> *(F) Commercial utility facilities for the purpose of generating power for public use by sale as provided in § 152.617 (I)(C). (For specific criteria for Wind Power Generation see § 152.617 (I)(W))*
> *****
> *(FF) Photovoltaic solar power generation facility as provided in OAR 660-033-0130(38).*

UCDC Section 152.060 establishes conditional use requirements for permissible land used within EFU-zoned land, including land uses meeting the definition of a "commercial utility facility for the purpose of generating power for public use by sale" and "photovoltaic solar power generation facility," both land use categories applicable to the proposed facility. The land uses are subject to the requirements of UCDC 152.060, UCDC 152.061 and 152.615. A zoning permit, per taxlot, is also required for these uses – zoning permits are addressed above and would be required per recommended Land Use Condition 1.

Specific criteria for wind power generation are at UCDC 152.617(I)(W); UCDC 152.617(I)(W) in turn simply refers to UCDC 152.616(HHH), which is addressed later in the Department's recommended findings of fact. UCDC 152.616(HHH)(k) requires compliance with OAR 660-033-0130(37). The evaluation of compliance with OAR 660-033-0130(37) is presented in Section IV.E.2.a *Directly Applicable State Laws and Statutes*.

Under UCDC Section 152.060(F), a solar PV facility may be permitted conditionally in the EFU zone as provided in OAR 660-033-0130(38). The evaluation of compliance with OAR 660-033-0130(38) is presented in Section IV.E.2.b *Directly Applicable State Laws and Statutes*.

UCDC Section 152.061 Conditional Uses Permitted

> *The following limitations shall apply to all conditional uses in an EFU zone. Uses may be approved only where such uses:*
>
> *(A) Will not force a significant change in accepted farm or forest practices on surrounding lands devoted to farm or forest use; and*

(B) Will not significantly increase the cost of accepted farm or forest practices on lands devoted to farm or forest use.

As described above, the proposed facility includes two land uses, "wind power generation" and "photovoltaic solar power generation facility," that require compliance with UCDC 152.061.[105] Because the impacts to accepted farm and forest practices differ between a wind facility and solar facility, the evaluation is presented separately below.

UCDC 152.061 requires that, in order for a proposed wind and solar PV facility to be sited in EFU zoned land, there be a demonstration that the proposed use would not force a significant change in accepted farm or forest practices, or the cost thereof, on surrounding lands devoted to farm or forest use. ASC Exhibit K Figure K-2 Zoning demonstrates that the proposed wind and solar PV facility components would be located in EFU zoned land within Umatilla County. None of the surrounding lands are devoted to forest use; therefore, the evaluation of the UCDC 152.061 focuses on potential impacts to accepted farm practices, and the cost thereof, on surrounding lands.

The Oregon Land Use Board of Appeals (LUBA) has held that findings related to approval standards that require an analysis of the impact of the proposed use on surrounding properties must identify the relevant area, the decision must identify the uses within the study area that might be affected by the proposed use, and the decision must explain why the proposed use will not force a significant change.[106] Consistent with this outcome, the Department provides the framework of the evaluation of the criteria.

- Surrounding lands: defined as properties that are adjacent and nearby to the proposed micrositing areas.
- Uses within the study area that might be affected: Any acceptable farm practices identified by the applicant
- Evaluation of whether proposed use would force a significant change: based on facts and evidence in the record.

Surrounding Lands

Non-participating landowners on surrounding lands include Vicky and Joseph Cadby (0-feet); James Kirkham/Janey Jensen (0-feet); Homer Peterson (approx. 1-mile); Margaret Skillman (approx. 1-mile); and Kent Beebe (approx. 2.5 miles). Participating landowners on surrounding lands include: Pendleton Ranches Inc; Cunningham Sheep Co; Mud Springs Ranches; Buttke Ranch LLC; Buttle Ranch Partnership; and Hoke Ranches.[107]

Accepted Farm Practices

[105] UCDC 152.061(A) & (B) are a direct application of ORS 215.296.

[106] *Oregon Natural Desert Association v. Grant County*, 42 Or LUBA 9 (2002).

[107] NHWAPPDoc2-10 ASC Exhibit K Land Use 2022-01-31. Figure K-10.

On surrounding lands, accepted farm practices include irrigated agriculture, wheat cultivation, livestock grazing and non-cultivated lands (see ASC Exhibit K Figures K-3 and K-5). Practices for dryland wheat farming include terracing or contour plowing, weed control, field preparation, herbicide application, seed bed preparation, fertilization, and seeding or planting of the crop. Of the non-participating landowners on surrounding lands, the Cadby/Kirkham/Jensen property is cultivated for dryland wheat and at time enrolled in Conservation Recovery Program (CRP). The Peterson and Skillman properties are not cultivated.[108]

Potential Impacts to Accepted Farm Practices on Surrounding Lands

Potential impacts to accepted farm practices on surrounding lands include erosion impacts, dust, noxious weeds, traffic congestion, water use and impacts to emergency service providers. In ASC Exhibit K, the applicant represents that it would consult with landowners on facility design and construction methods; and, would ensure that landowners are compensated for loss of agriculturally productive lands. The Department incorporated the applicant's representations into a draft Agricultural Mitigation Plan, provided in Attachment K-1 of this order. The Department recommends Council require that the Agricultural Mitigation Plan be finalized, based on final facility design and landowner consultation, and implemented during construction and operation, based on the following condition:

> **Recommended Land Use Condition 2 (PRE):** Prior to construction, the certificate holder shall finalize the Agricultural Mitigation Plan, based upon the preconstruction landowner consultation requirements provided in Attachment K-1 of the Final Order on the ASC. A copy of the final Agricultural Mitigation Plan shall be provided to the Department.
>
> **Recommended Land Use Condition 3 (CON):** During construction, the certificate holder shall implement the design and construction methods, as established in the Agricultural Mitigation Plan, as finalized in Land Use Condition 2.

The following conditions are based on applicant representations and Department recommendations to minimize the identified potential impacts:

- Recommended Soil Protection Condition 1 and 2 would require consultation with the Umatilla County Soil and Water Conservation District, prior to construction, and would require implementation of best management practices to minimize and monitor for offsite erosion impacts
- Recommended Soil Protection Condition 3 would require that, during operations, the applicant implement a Soil Monitoring Plan that would evaluate and mitigate for topsoil loss and erosion impacts resulting from construction

[108] NHWAPPDoc2-10 ASC Exhibit K Land Use 2022-01-31. Figure K-10, and Attachment K-1 Landowner letter from Mr. Kirkham.

- Recommended Soil Protection Condition 4, 5 and 7 would require that the applicant adhere to the requirements of an SPCC during construction and operation, to minimize any potential impacts from soil contamination
- Recommended Fish and Wildlife Condition 1 would require that the applicant implement and adhere to the requirements of a Revegetation and Noxious Weed Plan, prior to and during construction and operation, including long-term revegetation and noxious weed control.
- Recommended Public Services Condition 1 would require implementation of a Traffic Management Plan and execution of a Road Use Agreement with Umatilla County Public Works Department, which would minimize potential traffic and dust-related impacts.
- Recommended Land Use Conditions 2 and 3 would require implementation of an Agricultural Mitigation Plan that would require that the applicant demonstrate completion of landowner consultation on facility design and construction methods, and that the applicant follow-through with any commitments on siting facility components to minimize agricultural impacts and provide adequate compensation for loss of agriculturally productive lands.
- Recommended Land Use Condition 15 would require that the applicant record a "Covenant Not to Sue" with Umatilla County

Steven H. Corey of Cunningham Sheep Company provided numerous statements the Department recommends Council weigh and consider as substantially supportive evidence that the proposed facility would not result in significant impacts to accepted farm practices, or the cost thereof. He stated:

- We are confident the project's location in this area will not negatively impact our existing use of our land surrounding the solar project boundary or overall success of our ranching and farming operations
- The project will enable us to support and improve our farming and ranching operations in the surrounding areas by providing valuable lease payments we can invest in ongoing activities on more active land elsewhere on our property
- We intend to devote lease revenues in part to improve housing for our sheep herders as well as farm employees in the cattle and farming departments. The lease payments projected exceed the potential revenues from the current dryland wheat production on the project boundary today. With board approval we may also acquire, clean up and refurbish a contiguous agriculture-related business to strengthen the diversity base of our legacy team. The lease payments exceed the potential revenues from the current dryland wheat production on the project boundary today.
- The project will not result in any loss of employees from our operations. To the contrary, we expect to add agricultural jobs to our payroll based on the lease payments. Specifically, we may add to our team up to 6 new employees with anticipated wages of $225,00 per year
- We also expect, or more likely, increase our operational spending with local agricultural suppliers and service providers, given our projected increased investments in operations

on the land remaining in agricultural and ranching use and in the new agricultural-related business.

- Net revenues per acre from land that will be used for wind or solar development by the project will substantially exceed revenues from the present dry land wheat farming.[109]

In addition, an adjacent non-participating owner, Mr. James Kirkham, provider a letter dated January 14, 2022, stating that the proposed project would not hinder his ability to farm, or increase the cost of farming on their property. [110]

Based on the above facts and compliance with the recommended conditions, the Department recommends Council find that the proposed facility, including wind, solar and transmission line components, would satisfy UCDE Section 152.061(A) and (B).

UCDC Section 152.615 Additional Conditional Use Permit Restrictions

> *In addition to the requirements and criteria listed in this subchapter, the Hearings Officer, Planning Director or the appropriate planning authority may impose the following conditions upon a finding that circumstances warrant such additional restrictions: [list of conditions omitted for brevity]*

The Council has the authority to impose additional conditions under UCDO 152.615. The County, however, has not recommended any additional conditions under this provision, and the Department does not recommend the Council impose any additional conditions under this provision.

UCDC Section 152.616(CCC) Conditional Use Criteria for a Utility Facility

The criteria associated with UCDC 152.616(CCC) apply to transmission lines outside of the EFU zone.

The proposed facility includes an approximately 25.3-mile 230 kV UEC Cottonwood transmission line, of which:

- approximately 8.4 miles would be a new single-circuit 230-kV transmission line,
- approximately 9.6 miles would replace an existing 12.47-kV distribution line with a 230-kV transmission line and distribution underbuild, and
- approximately 7.3 miles would upgrade an existing 115-kV UEC transmission line to a double-circuit 230/115-kV line with 12.47-kV underbuilt distribution.

The proposed 230 kV transmission line would be aboveground, on wooden H-frame or steel monopole structures approximately 100 to 140 feet tall. The new 230 kV structures would also include crossarms for distribution underbuild. This proposed transmission line would cross four

[109] NHWAPPDoc2-10 ASC Exhibit K Land Use 2022-01-31. Attachment K-1.
[110] Id.

zones including EFU, RTC, AB, and LI. Approximately 23 miles of the proposed transmission line would be located in within EFU-zoned land; applicable criteria are evaluated under UCDC Section 152.617(II)(7); the remaining approximately 2.4 miles would be located within RTC, AB, and LI zones; applicable requirements within these zones are established in UCDC Section 152.616(CCC), as evaluated below.

UCDC 152.616(CCC) criteria are presented below.

(1) The facility is designed to minimize conflicts with scenic values and adjacent recreational residential, forest, grazing and farm uses as outlined in policies of the Comprehensive Plan;

Portions of the proposed UEC Cottonwood transmission line within the RTC, AB, and LI zones are presented in Figure 4 below.

Figure 4: Proposed UEC Cottonwood Transmission Line - Proximate Uses

As presented in Figure 4 above, the proposed UEC Cottonwood transmission line would parallel Colonel Jordan Road, span I-84, to then parallel a service road, crossing Westland Canal to the UEC Cottonwood Substation. For the portion of the line extending from Colonel Jordan Road to the Westland Canal, the line would be located within UEC's existing right-of-way, where there is an existing UEC transmission line that would be replaced by the proposed line. Where the line would cross the Westland Canal, the line would replace or be parallel to an existing line. The placement of the transmission line within an existing utility corridor and or rights-of-way minimizes conflicts with adjacent uses be siting infrastructure in locations where there is an existing impact or existing infrastructure.

Important scenic values and recreational opportunities in proximity to the proposed UEC Cottonwood transmission line are evaluated in Sections IV.J. *Scenic Resources* and IV.L. and *Recreation* of this order. As presented in those sections, the closest resource to the proposed UEC Cottonwood transmission line is the Echo Meadows ACEC site. Photo simulations of potential visual impacts of the line at the Echo Meadows site were provided in ASC Exhibit R Figure R-6. While these photo simulations were of the portions of the line within EFU-zoned land, the results are used to inform the associated visual impact within the adjacent portions of the RTC, AB, and LI zones where the line would be located.

The photo simulations demonstrate the existing viewshed as inclusive of wind turbines (from other facilities), existing UEC and other power lines, agricultural structures, and multiple center-pivot agricultural irrigation systems. The photo simulation also demonstrates that the proposed 230 kV UEC transmission line route would not be visible when visitors are oriented toward the remnant Oregon Trail ruts. However, where not screened by topography, the proposed transmission line would introduce new, moderately contrasting middle-ground and background features in the viewshed of Echo Meadows. BLM's Outdoor Recreation Planner Brian Woolf stated the that proposed transmission line would be in "conformance with the BLM's visual resource zoning for that viewshed." For these reasons, the Department recommends Council find that the proposed UEC Cottonwood transmission line would not conflict with scenic values within the applicable zones.

For the above-reasons, the Department recommends Council find that the proposed UEC Cottonwood transmission line would satisfy 152.616(CCC)(1).

(2) The facility be of a size and design to help reduce noise or other detrimental effects when located adjacent to recreational residential dwellings;

There are no recreational-residential dwellings within 0.5-mile of the portions of the proposed UEC Cottonwood transmission line within the RTC, AB, and LI zones. Noise levels extending 200-feet of the transmission line right-of-way are predicted to be 36 dBA or below. As presented in Section IV.Q.1 *Oregon Department of Environmental Quality (DEQ) Noise Control Regulations for Industry and Commerce: OAR 340-035-0035* of this order, predicted noise levels for the proposed transmission line would be below the 50 dBA maximum allowable noise level;

therefore, the Department recommends Council find that the proposed UEC Cottonwood transmission line would satisfy 152.616(CCC)(2).

(3) The facility may be required to be fenced, landscaped or screened;

This criteria allows there to be a requirement for fencing, landscaping or screening. Temporary disturbance associated with the transmission line would be required to be restored, consistent with the existing vegetation per recommended Fish and Wildlife Habitat Condition 1. The applicant is not proposing to fence or otherwise screen the transmission line. The Department recommends Council rely on recommended Fish and Wildlife Habitat Condition 1 and otherwise find it is not necessary to require fencing or screening.

(4) The facility does not materially alter the stability of the overall land use pattern of the area;

As presented in Figures 3 and 4 above, the proposed UEC Cottonwood transmission line would parallel Colonel Jordan Road, span I-84, to then parallel a service road, crossing Westland Canal to the UEC Cottonwood Substation. For the portion of the line extending from Colonel Jordan Road to the Westland Canal, the line would located adjacent to an existing road right-of-way, where there is an existing UEC transmission line that would be replaced by the proposed line. Where the line would cross the Westland Canal, the line would replace or be parallel to an existing line. The placement of the transmission line adjacent to an existing utility corridor and or rights-of-way minimizes impacts to the stability of the overall land use pattern in the area. Therefore, the Department recommends Council find that the proposed UEC Cottonwood transmission line would satisfy 152.616(CCC)(4).

(5) The facility does not constitute an unnecessary fire hazard, and consideration be made for minimum fire safety measures which can include, but are not limited to:
(a) The site be maintained free of litter and debris;
(b) Using non-combustible or fire retardant treated materials for structures and fencing;
(c) Clearing site of all combustible materials within 30 feet of structures;

Applicant commits to using steel structures, conducting annual vegetation management and safety checks to ensure that the proposed UEC Cottonwood transmission line would not constitute an unnecessary fire hazard. To ensure that these representations are implemented, the Department recommends Council impose the following condition:

Recommended Land Use Condition 4 (PRE): Prior to construction of the UEC Cottonwood Transmission Line, if selected as the transmission line route during final facility design, the certificate holder shall demonstrate to the Department that steel structures would be used within the portions of the route with the RTC, AB, and LI zones.

Recommended Public Services Condition 7 and 8 require implementation of fire prevention and response measures, as presented in Attachment U-2 of this order, that would apply during construction and operation, including annual vegetation management.

Based on compliance with the above-referenced recommended conditions, the Department recommends Council find that the proposed UEC Cottonwood transmission line would satisfy 152.616(CCC)(5).

(6) Major transmission tower, poles and similar gear shall consider locations within or adjacent to existing rights of way in order to take the least amount of timberland out of production and maintain the overall stability and land use patterns of the area, and construction methods consider minimum soil disturbance to maintain water quality;

As presented in Figure 4 above, the proposed UEC Cottonwood transmission line would parallel Colonel Jordan Road, span I-84, to then parallel a service road, crossing Westland Canal to the UEC Cottonwood Substation – there is no existing timberland within these areas. For the portion of the line extending from Colonel Jordan Road to the Westland Canal, the line would located adjacent to an existing road right-of-way, where there is an existing UEC transmission line that would be replaced by the proposed line. Where the line would cross the Westland Canal, the line would replace or be parallel to an existing line. The placement of the transmission line within an existing utility corridor and or rights-of-way minimizes impacts to the stability of the overall land use pattern in the area.

Recommended Soil Protection Conditions 1 and 2 would require implementation of best management practices and adherence to the requirements of a DEQ-issued NPDES 1200-C permit would support soil protection via site stabilization, erosion control and monitoring requirements.

For these reasons, the Department recommends Council find that the proposed UEC Cottonwood transmission line would satisfy 152.616(CCC)(6).

(7) The facility shall adequately protect fish and wildlife resources by meeting minimum Oregon State Department of Forestry regulations;

The proposed UEC Cottonwood transmission line would not be located on forest lands or impact timber resources. Therefore, there are no applicable Oregon State Department of Forestry regulations.

(8) Access roads or easements be improved to a standard and follow grades recommended by the Public Works Director;

Recommended Public Services Conditions 1 and 2 would require that the applicant obtain a Road Use Agreement with Umatilla County, where any road or easement improvement would be agreed upon. Based on compliance with these conditions, the Department recommends

Council find that the proposed UEC Cottonwood transmission line would satisfy 152.616(CCC)(8).

(9) Road construction be consistent with the intent and purposes set forth in the Oregon Forest Practices Act or the 208 Water Quality Program to minimize soil disturbance and help maintain water quality;

The proposed UEC Cottonwood transmission line would not be located on forest lands or impact timber resources. Therefore, the Oregon Forest Practices Act would not apply.

Recommended Soil Protection Conditions 1 and 2 would require implementation of best management practices and adherence to the requirements of a DEQ-issued NPDES 1200-C permit would support water quality protection via site stabilization, erosion control and monitoring requirements.

For these reasons, the Department recommends Council find that the proposed UEC Cottonwood transmission line would satisfy 152.616(CCC)(9).

(10) Land or construction clearing shall be kept to a minimum to minimize soil disturbances and help maintain water quality;

Construction of the proposed UEC Cottonwood transmission line within the RTC, AB, and LI zones would not result in significant ground disturbance/clearing activities. Nonetheless, the Department recommends in the draft Revegetation and Noxious Weed Plan, as part of plan finalization prior to construction, that the applicant identify its grading plan and demonstrate that adequate materials would be available to minimize disturbance and potential water quality impacts. The finalization and adherence to the requirements of the Revegetation and Noxious Plan would be required under recommended Fish and Wildlife Habitat Condition 1, as presented in Section IV.H. *Fish and Wildlife Habitat* of this order.

For these reasons, the Department recommends Council find that the proposed UEC Cottonwood transmission line would satisfy 152.616(CCC)(10).

(11) Complies with other conditions as deemed necessary provided in §152.615

Neither the Department nor Umatilla County recommended Council adopt additional conditions under UCDC 152.615 for the portions of the proposed UEC Cottonwood transmission line within the RTC, AB, and LI zones.

<u>UCDC Section 152.616(HHH) Conditional Use Criteria for Commercial Wind Power Generation Facility</u>

(1) County Permit Procedure

The procedure for taking action on the siting of a Wind Power Generation Facility is a request for a conditional use. The County procedural requirements set forth in Section 152.616(HHH) (1)-(5), including the requirement for a hearing, will not apply to proposed Wind Power Generation facilities for which Energy Facility Siting Council is making the land use decision.

UCDC 152.616(HHH)(1) provides that the procedural requirements of 152.616(HHH)(1) through (5) do not apply to a wind power generation facilities if the Council is making the land use decision. In this case, the Council is making the land use decision, and therefore, under the plain language of UCDO 152.626(HHH)(1), the procedural requirements of 152.616(HHH)(5) do not apply to this proposed facility.

(6) Standards/Criteria of Approval

The following requirements and restrictions apply to the siting of a Wind Power Generation Facility:

(a) Setbacks. The minimum setback shall be a distance of not less than the following:

(1) From a turbine tower to a city urban growth boundary (UGB) shall be two miles. The measurement of the setback is from the centerline of a turbine tower to the edge of the UGB that was adopted by the city as of the date the application was deemed complete.
(2) From turbine tower to land zoned Unincorporated Community (UC) shall be 1 mile.

The requirements of UCDC 152.616(HHH)(6)(a)(1) and (2) establish a 2-mile buffer for siting turbine towers from a city Urban Growth Boundary (UGB) and a 1-mile buffer between turbine towers and land that is zoned Unincorporated Community (UC), respectively.

There are no cities within the 0.5-mile land use analysis area, nor cities within 2-mile of the proposed wind micrositing area. City UGBs within 5-miles of the proposed wind micrositing area include Echo, Rieth and Pendleton.[111] Given the distance between these city UGBs and the wind micrositing area, as represented in ASC Exhibit K Figure K-2, all turbines would comply with the 2-mile city UGB setback.

There are no UC-zoned lands within the land use analysis area, nor UC-zoned lands within 1-mile of the proposed wind micrositing area. The closest UC-zoned lands are located more than 2-miles northeast of the proposed 230 kV UEC Cottonwood transmission line.[112] Given the distance between UC-zoned land and the wind micrositing area, as represented in ASC Exhibit K Figure K-2, all turbines would comply with the 1-mile UC setback.

[111] NHWAPPDoc2-10 ASC Exhibit K. Land Use 2022-01-31.
[112] *Id.*

(3) From a turbine tower to a rural residence shall be 2 miles. For purposes of this section, "rural residence" is defined as a legal, existing single family dwelling meeting the standards of §152.058 (F)(1)-(4), or a rural residence not yet in existence but for which a zoning permit has been issued, on a unit of land not a part of the Wind Power Generation Facility, on the date a Wind Power Generation Facility application is submitted. For purposes of this section, the setback does not apply to residences located on properties within the Wind Power Generation Facility project application. The measurement of the setback is from the centerline of the turbine tower to the center point of the rural residence.

Criterion (3) establishes a 2-mile setback from a turbine tower to rural residences, but does not apply to residences located on properties within the Wind Power Generating Facility project. On November 6, 2017, the special advisory group commented on the Notice of Intent and provided a list of relevant criteria from the Umatilla County Development Code (UCDC) and County Comprehensive Plan, which included criterion (3). On April 15, 2020, the SAG commented on the initial pASC and reaffirmed the inclusion of criterion (3) as part of the applicable substantive criteria and stated that the proposed facility would not comply with criterion (3).[113] After the applicant submitted a revised application on November 6, 2020 adding solar photovoltaic generation and battery storage to their proposal, the SAG commented on January 20, 2021 that the revised pASC Exhibit K appeared to have provided a comprehensive list of the County's applicable substantive criteria, but noted again that the proposed facility would not comply with criterion (3).[114]

In ASC Exhibit K, the applicant states that "Although the turbine locations have not been finalized, some of the final locations may not ultimately meet the above setback standard for rural residences outside of the Project lease area (see Figure K-9). This may be the case for up to approximately eight rural residences."[115] Although the Department concurs with the applicant's count of rural residences within 2 miles of proposed turbine locations (at eight), due to the intent and nature of a micrositing corridor, within which the turbines could be sited anywhere, the Department estimates there could be as many as 16 rural residences within 2 miles of the proposed micrositing corridor for wind turbines, equating to the potential of 16 residences that may be within 2 miles of a turbine location. The Department's evaluation, using the Google Earth measurement feature found that the nearest rural residence to the proposed micrositing corridor could be approximately .33 miles away.

In ASC Exhibit K, the applicant asserts that although some of the proposed turbine locations may not meet the 2-mile setback from rural residences, criterion (3) is not required by any of the Statewide Planning Goals, particularly Goal 3 (Agriculture) and Goal 14 (Urbanization). The applicant therefore requests that the Council find that criterion (3) is not part of the applicable

[113] NHWAPPDoc3-9 pASC Umatilla County comment 2020-04-15.

[114] NHWAPPDoc3-9 pASC Umatilla County Comment 2021-01-20.

[115] NHWAPPDoc2-10 ASC Exhibit K. Land Use_2022-01-31, Section 4.3.1.5, p. 14.

substantive criteria, or, in the alternative, that the Council find that the proposed facility would nevertheless comply with the applicable statewide planning goals[116], as allowed by ORS 469.504(1)(b)(B).

Question 1

The question of whether or not criterion (3) is part of Umatilla County's applicable substantive criteria is addressed first. While there is no specific definition for "applicable substantive criteria", ORS 469.504(1)(b)(A)[117], which relates to Council's land use review, states:

> *The facility complies with applicable substantive criteria from the affected local government's acknowledged comprehensive plan and land use regulations that are required by the statewide planning goals and in effect on the date the application is submitted, and with any Land Conservation and Development Commission administrative rules and goals and any land use statutes that apply directly to the facility under ORS 197.646;*

In most applications, applicants meet all of the requirements set forth in the acknowledged comprehensive plan and land use regulations that counties provide, therefore an assessment of whether or not they all constitute applicable substantive criteria is not typically done. Only when an applicant states that their proposed facility would not meet a specific comprehensive plan provision or land use regulation does the Council evaluate whether or not it constitutes applicable substantive criteria. The two clarifying provisions related to such an assessment in the statute above are whether the local comprehensive plan and land use regulations are "required by the statewide planning goals" and whether they were "in effect on the date the application was submitted."

In their January 20, 2021 letter on the pASC, the SAG stated:

> *The county's two-mile setback for rural residences was adopted by Umatilla County through Ordinance 2012-13. The original intent of the standard was to mitigate noise and visual impacts to rural residences caused by wind towers.*

The preliminary application was submitted on February 27, 2020, so criterion (3) was in effect on that date. That leaves whether or not it is "required by the statewide planning goals." Oregon's statewide program for land use planning consists of 19 goals. Each county comprehensive plan and land use regulation that is approved must be consistent with all applicable statewide planning goals and they are reviewed by the Land Conservation and Development Commission (LCDC) for consistency. LCDC had the opportunity to evaluate criterion (3) and did not challenge its consistency with applicable statewide planning goals. However, being consistent with applicable statewide planning goals is not the same as being

[116] NHWAPPDoc2-10 ASC Exhibit K. Land Use_2022-01-31. Discussion of compliance with UCDC 152.616(HHH)(6)(a)(3).

[117] Similar language is also included in OAR 345-021-0010(k) & OAR 345-022-0030.

"required" by them. Therefore, an evaluation of criterion (3) against applicable statewide planning goals is necessary to determine whether or not it is required.

The first goal listed by the applicant is Goal 3 (Agriculture), because the project is primarily proposed in the Exclusive Farm Use zone. In Exhibit K the applicant states "The 2-mile residential setback does not in any way relate to or impact the preservation or protection of agricultural lands or agricultural practices." [118] Consistent with the purpose of Goal 3, to project agricultural lands, the legislature has prescribed which uses are allowed in all Exclusive Farm Use zones[119] and what are the requirements for those uses. Counties must include the same uses allowed in statute and must include the same review criteria in their land use regulations. UCDC 152.060 is consistent with this statutory requirement in that it lists "commercial utility facilities for the purpose of generating power for public use by sale…" as a conditional use. Further, ORS 215.283(2) specifically states that all conditional uses in Exclusive Farm Use zones must also meet ORS 215.296 - *Standards for approval of certain uses in exclusive farm use zones; violation of standards; complaint; penalties; exceptions to standards.*

> *(1) A use allowed under ORS 215.213 (2) or (11) or 215.283 (2) or (4) may be approved only where the local governing body or its designee finds that the use will not:*
> *(a) Force a significant change in accepted farm or forest practices on surrounding lands devoted to farm or forest use; or*
> *(b) Significantly increase the cost of accepted farm or forest practices on surrounding lands devoted to farm or forest use.*
> ***

This statute is an example of an applicable substantive criterion that is required by Goal 3 because every county is obligated to apply it to every conditional use in their respective Exclusive Farm Use zones. This statute is included verbatim in UCDC 152.061.

Similar to the legislature, LCDC has the authority to adopt Exclusive Farm Use rules that every county must apply consistent with Goal 3. An example of this is OAR 660-033-0130 – *Minimum Standards Applicable to the Schedule of Permitted and Conditional Use.* This rule sets out the applicable requirements associated with each conditional use allowed in the Exclusive Farm Use zone. The preamble language at the beginning of this rule states:

> *The following requirements apply to uses specified, and as listed in the table adopted by OAR 660-033-0120. For each section of this rule, the corresponding section number is shown in the table. Where no numerical reference is indicated on the table, this rule does not specify any minimum review or approval criteria.* ***Counties may include procedures and conditions in addition to those listed in the table, as authorized by law (emphasis added)****.*

Subsection (37) of this rule provides specific requirements for wind power generation facilities which must be applied by each county. Below is an excerpt from the table in OAR 660-033-0120

[118] NHWAPPDoc2-10 ASC Exhibit K. Land Use_2022-01-31, Section 4.3.1.5, p. 15
[119] ORS 215.213 & 215.283

– Uses Authorized on Agricultural Lands, referenced in the preamble language above related to subsection (37).

HV Farmland	All Other	Uses
R5, 37	R5, 37	Wind power generation facilities as commercial utility facilities for the purpose of generating power for public use by sale.

The "R" in the table above is further described in OAR 660-033-0120:

> *Use may be allowed, after required review. The use requires notice and the opportunity for a hearing. Minimum standards for uses in the table that include numerical reference are specified in OAR 660-033-0130.* ***Counties may prescribe additional limitations and requirements to meet local concerns (emphasis added).***

The "5" in the table above refers to OAR 660-033-0130(5) which reiterates the requirements of ORS 215.296 already described above.

The "37" in the table above refers to OAR 660-033-0130(37) which, as already described above, establishes the mandatory requirements associated with wind power generation facilities.

Criterion (3) was adopted by Umatilla County to meet "local concerns", as allowed by OAR 660-033-0120 and 0130 which is consistent with Goal 3. This is further evidenced by the fact that the Department is unaware of any other county that has adopted a similar setback requirement between wind turbines and residence. The Department therefore recommends Council conclude that while criterion (3) is both allowed by and consistent with Goal 3, it is nevertheless not "required" by Goal 3.

This leaves one question regarding that statutory description of "applicable substantive criteria" as it applies to Goal 3.

> *The facility complies with applicable substantive criteria from the affected local government's acknowledged comprehensive plan and land use regulations that are required by the statewide planning goals and in effect on the date the application is submitted,* ***and with any Land Conservation and Development Commission administrative rules and goals and any land use statutes that apply directly to the facility under ORS 197.646 (emphasis added)****.*

The emphasized language above ensures that if a county's comprehensive plan and/or land use regulations have not been amended to include all "required" rules, goals and statutes, the Council must nevertheless apply them directly per ORS 197.646 - *Implementation of New requirement in goal, rule or statute; rules*. This means that if a county has adopted all statutes and rules "required" by Goal 3, such as those described above, EFSC will not have to apply any rules, goals or statutes directly. However, if they haven't, the Council must apply those rules, goals or statutes directly, which is the circumstances for this application. UCDC Section

152.616(HHH) Commercial Wind Power Generation Facility does not specifically include the requirements of OAR 660-033-0130(37). Instead, UCDC, Section 152.616(HHH)(7)(k) makes a specific reference to an applicant having to meet the requirements of subsection (37). Therefore, those rule requirements are being evaluated under the Directly Applicable State Laws and Statutes section below.

In Exhibit K[120] the applicant states:

> "Where Goal 3 protects agricultural land, Goal 14 provides for an orderly and efficient transition from rural to urban land use. Commercial wind energy facilities are generally not permitted within UGBs or unincorporated community areas that may include more concentrated rural residences but also other community supporting land uses such as commercial development and public uses (including but not limited to schools, churches, grange halls, post offices). As stated above, there will be no turbine towers within 2 miles of a UGB and 1 mile of an unincorporated community, consistent with those setback standards. Interestingly, the setback for rural residences in this standard, which defers to the definition of a rural residence in the EFU zone (UCDC §152.058 (F)(1)-(4)), requires a larger setback (2 miles) than for an unincorporated community (1 mile) which also contains residences, and often a greater density of residences".

LCDC has adopted numerous rules to implement Goal 14 (Urbanization), which are listed below:

OAR 660-011 – Public Facilities Planning
OAR 660-012 – Transportation Planning
OAR 660-014 – Newly Incorporated Cities, Annexations, Urban Development on Rural Lands
OAR 660-021 – Urban Reserves (applies statewide except the Portland Metro area)
OAR 660-022 – Unincorporated Communities
OAR 660-024 – Urban Growth Boundaries
OAR 660-025 – Periodic Review
OAR 660-027 – Urban and Rural Reserves in the Portland Metro Area
OAR 660-032 – Population Forecasts
OAR 660-038 – Simplified Urban Growth Boundary Method

None of these rules "require" specific setback distances between wind turbines and rural residences. The Department therefore recommends Council agree with the applicant's conclusion that criterion (3) is also not "required" by Goal 14.

The Department has evaluated the other 17 Statewide Planning Goals and concludes the specific setback distances between wind turbines and rural residences is not "required" by any of them either. The Department therefore recommends that Council agree with the applicant and conclude that criterion (3) is not "required" by any of the 19 statewide planning goals, therefore it does not constitute applicable substantive criteria.

[120] NHWAPPDoc2-10 ASC Exhibit K. Land Use_2022-01-31, Section 4.3.1.5, p. 17

In Exhibit K[121] the applicant requests Council impose a .5 mile setback between wind turbines and rural residences in place of the 2 mile setback in criterion (3). The Department recommends Council conclude that their authority to evaluate land use is established in in ORS 469.504(1)(b), which does not include the authority to alter applicable comprehensive plan and land use regulations, unless specifically described.

Question 2

Next is the applicant's alternative request to determine compliance with applicable Statewide Planning Goals, if Council disagrees with the applicant's and staff's conclusion that criterion (3) does not constitute applicable substantive criteria.

ORS 469.504(1)(b)(B)[122] states that the Council may determine that:

> *For an energy facility or a related or supporting facility that must be evaluated against the applicable substantive criteria pursuant to subsection (5) of this section, that the proposed facility does not comply with one or more of the applicable substantive criteria but does otherwise comply with the applicable statewide planning goals, or that an exception to any applicable statewide planning goal is justified under subsection (2) of this section.*

Because the application is not in compliance with criterion (3), in Exhibit K[123] the applicant evaluates the project for compliance with all 19 Statewide Planning Goals consistent with ORS 469.504(1)(b)(B). The Department is in agreement with some but not all of the Goal Compliance evaluations provided by the applicant. Below are the Department's recommendations which are inclusive of the evaluations from the applicant that the Department does agree with:

Goal 1, Citizen Involvement:

"To develop a citizen involvement program that insures the opportunity for citizens to be involved in all phases of the planning process."

Goal Compliance: This Goal governs public participation in the land-use process. The Council's application for site certificate rules provide sufficient notice and comment periods to satisfy Goal 1 as it applies to the project.

Goal 2, Land Use Planning:

"To establish a land use planning process and policy framework as a basis for all decision and actions related to use of land and to assure an adequate factual base for such decisions and actions."

Goal Compliance: This Goal governs the land-use planning process. Goal 2 is not applicable to the project because the applicant is proceeding under a specific, statutorily created land-use

[121] NHWAPPDoc2-10 ASC Exhibit K. Land Use_2022-01-31, Section 4.3.1.5, p. 17

[122] Similar language is also included in OAR 345-021-0010(k)(C)

[123] NHWAPPDoc2-10 ASC Exhibit K. Land Use_2022-01-31, Section 6.0, p. 70

option, ORS 469.504(1)(b)(B).

Goal 3, Agricultural Lands:
"To preserve and maintain agricultural lands."
Goal Compliance: This Goal is designed for the maintenance and protection of agricultural lands by limiting uses which can have significant adverse effects on accepted farm and forest practices[124]. All of the uses requested by the applicant are allowed in the Exclusive Farm Use zone, which is where most of the project is proposed. All of the statutory and rule requirements associated with Goal 3 either applied directly or through the UCDC, if they have been adopted by Umatilla County, in this Draft Proposed Order. In all cases, the Department has recommended Council determine the applicant has met the burden of proof for all.

With regards to criterion (3), the setback between wind turbines and rural residences does not affect the impact of the project on agricultural lands. That is, locating a few of the turbines closer to the rural residences will not increase any impacts to agricultural lands.

Goal 4, Forest Lands:
"To conserve forest lands by maintaining the forest land base and to protect the state's forest economy by making possible economically efficient forest practices that assure the continuous growing and harvesting of forest tree species as the leading use on forest land consistent with sound management of soil, air, water,
Goal Compliance: This Goal is designed for the protection of forest lands. The project will not disturb any forest lands as there are none in this vicinity of the project. Therefore, the project is consistent with this Goal.

Goal 5, Open Spaces, Scenic, Historic and Natural Resources:
"To conserve open space and protect natural and scenic resources."
Goal Compliance: Goal 5 requires local governments to adopt programs to implement the goal. The Umatilla County Comprehensive Plan (UCCP) Chapter 8 lists all of the Goal 5 resources inventoried by Umatilla County. These inventoried resources are conserved and protected through the establishment of overlay zones in the UCDC. None of these overlay zones were identified by the SAG as applicable to the project. However, the following Council standards related to resources identified in Goal 5 and ensure those resources are evaluated and protected:

- Protected Areas
- Fish and Wildlife Habitat
- Threatened and Endangered Species
- Scenic Resources
- Historic, Cultural and Archaeological Resources

[124] Oregon Statewide Planning Goals and Guidelines 2019, Goal 3, p. 16

For each of these standards the Department has recommended Council determine the applicant has met the burden of proof. Therefore, the project complies with Goal 5.

Goal 6, Air, Water and Land Resources:
"To maintain and improve the quality of the air, water and land resources of the state."
Goal Compliance: This Goal is primarily concerned with waste and process discharges to the land, water, and air of the state. At a federal level, the elements within Goal 6 correspond broadly to the Clean Air Act and Clean Water Act. At a state level, Goal 6 covers many areas regulated by the Oregon Department of Environmental Quality (DEQ) through its permitting actions. In addition to air, water and land resources Chapter 9 of the UCCP also lists noise impacts as part of Goal 6. In addition to these resources being protected through other land use regulations that are applicable substantive criteria in the UCDC, the Council also implements the following standards which also protect these resources:

- Soil Protection
- Water
    - Soil Protection Standard
    - Fish and Wildlife Habitat
    - Threatened and Endangered Species
    - Oregon Water Resources Water Rights (ORS 537 and 540 and OAR Chapter 690)
- DEQ's Noise Regulations (OAR 340—035-0035)
- Department of State Land's Removal Fill Law (ORS 196.795 through 196.990) and (OAR

For each of these standards the Department has recommended Council determine the applicant has met the burden of proof. Therefore, the project complies with Goal 6.

***Goal 7, Areas Subject to Natural Disasters and Hazards**:*
"To protect life and property from natural disasters and hazards."
Goal Compliance: This Goal is intended to ensure that developments which could be damaged by natural disasters with the potential for resultant injury to persons or property are approved only where appropriate safeguards are in place. The Council's Structural standard ensures the application complies with this goal and the Department has recommended Council determine the applicant has met the burden of proof for that standard. The project therefore complies with Goal 7.

***Goal 8, Recreational Needs**:*
"To satisfy the recreational needs of the citizens of the state and visitors and, where appropriate, to provide for the siting of necessary recreational facilities including destination resorts."
Goal Compliance: The Council's Recreation standard ensures the application complies with this goal and the Department has recommended Council determine the applicant has met the burden of proof for that standard. The project therefore complies with Goal 8.

***Goal 9, Economic Development**:*
"To provide adequate opportunities throughout the state for a variety of economic activities

vital to the health, welfare, and prosperity of Oregon's citizens.
Goal Compliance: This Goal provides certain guidelines for local governments to follow to stimulate economic growth. While this goal is largely oriented toward urban areas and major industrial and commercial development, it also states that "…plans shall be based on inventories of areas suitable for economic growth…"[125] The project is largely located in the Exclusive Farm Use zone which allows for a commercial utility facility for the purpose of generating for public use by sale, subject to conditional use review. The legislature therefore has determined that this zoning designation is appropriate for this type of project and any associated economic development as a result of it as long as it meets all applicable Goal 3 statutes and rules required by the conditional use review. The applicant indicates the economic value will include: 1) lease payments to each landowner which will more than compensate for the loss of agricultural revenue; 2) short term temporary construction jobs and the associated dollars spent locally; 3) long term operational jobs; and 4) tax revenue for the county. Based on the economic development value indicated by the applicant as well as the Department's recommendation that the applicant has met the burden of proof for all required statutes and rules associated with Goal 3, the project complies with Goal 9.

***Goal 10, Housing**:*
"To provide for the housing needs of citizens of the state."
Goal Compliance: This goal is intended to assist local governments in developing plans to provide adequate housing. In particular, Goal 10 requires local governments to inventory their buildable lands and to decide which lands must be used for residential development to meet projected housing needs. Except for the UEC Cottonwood transmission line, which is in commercial and industrial zones, the Project is within the Exclusive Farm Use zone which limits the development of non-farm housing by statute. The Project will be at least 2 miles from a UGB and 1 mile from UC–designated areas of the Country that include zoning that permits residential development. The Project will not prevent residential development on these lands and will not result in any land being removed from the county's inventory of buildable land. The project will not interfere with the county's ability to provide needed housing for its citizens. Therefore, the project complies with Goal 10.

***Goal 11, Public Facilities and Services**:*
"To plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban and rural development."
Goal Compliance: This goal requires local governments to coordinate their land-use planning with an analysis of the availability of public facilities and services such as water, sewer, and roads. The Council's Public Services standard evaluates impacts of the project on public facilities and services and the Department has recommended Council determine the applicant has met the burden of proof for that standard. The project therefore complies with Goal 11.

***Goal 12, Transportation**:*
"To provide and encourage a safe, convenient and economic transportation system."

[125] Oregon Statewide Planning Goals and Guidelines 2019, Goal 9, p. 40

Goal Compliance: This goal governs local government decisions regarding transportation facilities. Umatilla adopted their Transportation System Plan in 2002. Below is the description of the plan in Chapter 1: Introduction.

> *The Umatilla County Transportation System Plan (TSP) guides the management of existing transportation facilities and the design and implementation of future facilities in Umatilla County for the next 20 years. This Transportation System Plan constitutes the transportation element of the County's Comprehensive Plan and satisfies the requirements of the Oregon Transportation Planning Rule (TPR) (OAR 660-12-045) established by the Department of Land Conservation and Development. It identifies transportation projects for implementation under a Umatilla County Capital Improvement Program (CIP) and inclusion in the Oregon Department of Transportation (ODOT) Statewide Transportation Improvement Program (STIP).*

In addition to this plan being implemented through the UCDC, all applicable parts of the plan are used to evaluate the application against the transportation element in Council's Public Services standard and the Department has recommended Council determine the applicant has met the burden of proof for that standard. Therefore, the project complies with Goal 12.

***Goal 13, Energy Conservation**:*
"To conserve energy."
Goal Compliance: In several site certificates the Council has concluded that Goal 13 does not call for renewable energy facilities nor does it address where such facilities should be located. This Goal is therefore not applicable to the project.

***Goal 14, Urbanization**:*
"To provide for an orderly and efficient transition from rural to urban land use."
Goal Compliance: Goal 14 governs the transition from rural to urban land use in areas outside of established Urban Growth Boundaries (UGB's). It provides for the establishment of UGBs to ensure the efficient and compatible use of land to provide for livable communities and limits urban development outside of UGB's. The rule implementing Goal 14 for rural residential areas specifies the level of development a county may allow without the area becoming urbanized. The project is primarily located in the Exclusive Farm Use zone and entirely outside of UGBs. While utility scale wind and solar development are industrial uses, they are also allowed in the Exclusive Farm Use zone, subject to conditional use review. The required statutes and rules associated with that conditional use review ensure that if approved, it will be compatible with surrounding agricultural practices and therefore does not reach the level of an urban use. Based on the Department's recommendation that the applicant has met the burden of proof for all required statutes and rules associated with Goal 3, the proposed wind facility components would comply with Goal 14.

Goal 15 Willamette River Greenway:
"To protect, conserve, enhance and maintain the natural, scenic, historical, agricultural,

economic and recreational qualities of lands along the Willamette River as the Willamette River Greenway."
Goal Compliance: This goal is not applicable to the project because it is not located in any of the geographical areas covered by the goal.

Goal 16 Estuarine Resources:
"To recognize and protect the unique environmental, economic and social values of each estuary and associated wetlands; and To protect, maintain, where appropriate develop, and where appropriate restore the long-term environmental, economic, and social values, diversity and benefits of Oregon's estuaries."
Goal Compliance: This goal is not applicable to the project because it is not located in the geographical areas covered by the goal.

Goal 17 Coastal Shorelands:
"To conserve, protect, where appropriate, develop and where appropriate restore the resources and benefits of all coastal shorelands, recognizing their value for protection and maintenance of water quality, fish and wildlife habitat, water dependent uses, economic resources and recreation and aesthetics. The management of these shoreland areas shall be compatible with the characteristics of the adjacent coastal waters; and To reduce the hazard to human life and property, and the adverse effects upon water quality and fish and wildlife habitat, resulting from the use and enjoyment of Oregon's coastal shorelands."
Goal Compliance: This goal is not applicable to the project because it is not located in the geographical areas covered by the goal.

Goal 18 Beaches and Dunes:
"To conserve, protect, where appropriate develop, and where appropriate restore the resources and benefits of coastal beach and dune areas; and to reduce the hazard to human life and property from natural or man-induced actions associated with these areas."
Goal Compliance: This goal is not applicable to the project because it is not located in the geographical areas covered by the goal.

Goal 19 Ocean Resources:
"To conserve marine resources and ecological functions for the purpose of providing long-term ecological, economic, and social value and benefits to future generations."
Goal Compliance: This goal is not applicable to the project because it is not located in the geographical areas covered by the goal.

Based on the above findings, the Department recommends Council conclude that while some wind turbine locations will not comply with criterion (3), the entire project nevertheless complies with applicable Statewide Planning Goals.

(4) From a turbine tower to the boundary right-of-way of County Roads, state and interstate highways, 110% of the overall tower-to-blade tip height. Note: The

overall tower-to-blade tip height is the vertical distance measured from grade to the highest vertical point of the blade tip.

Wind turbines would be designed within the micrositing area to comply with this setback. The Department recommends Council impose the following condition to ensure compliance with UCDC 152.616(HHH)(6)(a)(4):

> **Recommended Land Use Condition 5 (PRE):** Prior to construction of wind facility components, the certificate holder shall provide final site maps with turbine locations and boundary right-of-way of County roads, state and interstate highways. The maps shall be accompanied by a table with distance (in feet) from turbines to road boundary rights-of-way and shall demonstrate that turbines have been sited based on a minimum setback of 110% of the overall tower-to-blade tip height.

Based on compliance with the recommended condition, the Department recommends Council find that the proposed wind facility components would comply with UCDC 152.616(HHH)(6)(a)(4).

> *(5) From tower and project components, including transmission lines, underground conduits and access roads, to known archeological, historical or cultural sites shall be on a case by case basis, and for any known archeological, historical or cultural site of the Confederated Tribes of the Umatilla Indian Reservations the setback shall be no less than 164 feet (50 meters)*

UCDC 152.616(HHH)(6)(a)(5) establishes a 50-meter minimum setback requirement from wind facility components to known CTUIR archeological, historical or cultural sites; and a setback, based on a case-by-case basis for other known archeological, historical or cultural sites. As presented in Table 13 in Section IV.K *Historic, Cultural and Archeological Resources* of this order, all identified CTUIR resources would be avoided by a minimum distance of 50 meters. All other identified resources would be avoided or if not avoided, based on likely ineligibility for listing on the NRHP, have been mitigated through recordation of the site and NRHP criteria through SHPO's OARRA database. Based on the avoidance measures required under recommended Historic, Cultural and Archeological Resources Condition 2, the Department recommends Council find that the wind facility components would comply with the setbacks under UCDC 152.616(HHH)(6)(a)(5).

> *(6) New electrical transmission lines associated with the wind project shall not be constructed closer than 500 feet to an existing residence without prior written approval of the homeowner, said written approval to be recorded with county deed records. Exceptions to the 500 feet setback include transmission lines placed in a public right of way.*

There are no residences within the site boundary; there are residences within 1-mile of the site boundary. To ensure that any new electrical transmission lines are constructed in accordance

with the 500-foot setback, or based on written landowner approval, the Department recommends Council impose the following condition to comply with UCDC 152.616(HHH)(6)(a)(6):

> **Recommended Land Use Condition 6 (PRE):** Prior to construction of wind facility components, the certificate holder shall:
> a. Identify all electrical transmission lines to be included in the final design.
> b. Demonstrate via maps presenting wind facility components and dwelling locations, obtained from Umatilla County, that all electrical transmission lines meet a minimum 500-foot setback from dwellings, unless located within a public right-of-way or landowner approval and deed recordation has been obtained and completed.

Subject to compliance with the recommended condition, the Department recommends Council find that the proposed wind facility components would comply with UCDC 152.616(HHH)(6)(a)(6).

> *(7) The turbine/towers shall be of a size and design to help reduce noise or other detrimental effects. At a minimum, the Wind Power Generation Facility shall be designed and operated within the limits of noise standard(s) established by the State of Oregon. A credible noise study may be required to verify that noise impacts in all wind directions are in compliance with the State noise standard.*

UCDC 152.616(HHH)(6)(a)(7) requires that wind turbines be designed and operated within the noise standard limits of the State of Oregon. An acoustic noise analysis is included in ASC Exhibit X and evaluated in Section IV.Q.1. *Noise Control Regulations* of this order. Based on the acoustic noise analysis, the proposed facility would exceed the ambient noise degradation standard at several noise sensitive receptors; however, the Department recommends Council impose Noise Control Condition 1 requiring that the applicant submit, prior to construction, a final acoustic noise analysis that demonstrates that the facility, at final design, complies with the standard or provides evidence of a deed recorded waiver of the standard from the landowner, as is allowable for wind facilities pursuant to OAR 340-035-0035(1)(b)(B)(iii)(III). Based on compliance with the recommended Noise Control conditions, the Department recommends Council find that the proposed facility would comply with UCDC 152.616(HHH)(6)(a)(7).

> *(b) Reasonable efforts shall be made to blend the wind turbine/towers with the natural surrounding area in order to minimize impacts upon open space and the natural landscape.*

Umatilla County's Comprehensive Plan states that "pasture, range, forest, and crop lands provide most of the open space in the county."[126] Proposed wind turbines would be painted

[126] Umatilla County Comprehensive Plan, Revision Date: March 28, 2022, page 8-1.

standard white per Federal Aviation Administration (FAA) guidelines and would be sited at the edge of farm fields and along existing natural and developed site contours, minimizing the need for grading and cut-and-fill slopes. The Department recommends Council find that these two design features represent reasonable efforts to blend the turbine towers with the natural surrounding area, consistent with UCDC 152.616(HHH)(6)(b). Compliance with FAA turbine painting and lighting requirements is covered under recommended Public Services Condition 3 (see Section IV.M.6 *Public Services - Air Traffic* of this order). The Department recommends Council impose a condition, consistent with the applicant's representation[127], that wind turbines would be sited in a manner that utilizes existing natural and developed contours and minimized grading and cut-and-fill slopes to the maximum extent practicable, to minimize impact to the natural landscape.

> **Recommended Land Use Condition 7 (PRE):** Prior to construction of wind facility components, certificate holder shall demonstrate to the Department that its contractor(s) have developed a grading and cut-and-fill plan that utilizes existing site contours and demonstrates engineering measures to minimize grading and cut-and-fill to the maximum extent feasible.

Based upon the applicant's representations and compliance with the recommended conditions, the Department recommends Council find that the proposed wind facility components would comply with UCDC 152.616(HHH)(6)(b).

(c) The development and operation of the Wind Power Generation Facility will include reasonable efforts to protect and preserve existing trees, vegetation, water resources, wildlife, wildlife habitat, fish, avian, resources, historical, cultural and archaeological site.

Recommended conditions that ensure the existing trees, vegetation, water resources, wildlife, avian and historic resources would be protected are as follows, and are presented in in this order and in Attachment A:

- Fish and Wildlife Habitat Conditions 1-5: (trees and veg)
- Water Rights Condition 3 (Water Resources)
- Fish and Wildlife Habitat Conditions 6-8 (wildlife/avian)
- Fish and Wildlife Habitat Conditions 1-5 (wildlife habitat)
- Historic, Cultural and Archeological Conditions 1-6 (Historic, cultural and archeological sites)

Subject to compliance with the recommended condition, which include numerous applicant representations intended to minimize impacts to the listed resources, the proposed wind facility would comply with the applicable requirements, the Department recommends that the Council find that the proposed facility would satisfy UCDC 152.616(HHH)(6)(c).

[127] OAR 345-025-0006(10).

(d) The turbine towers shall be designed and constructed to discourage bird nesting and wildlife attraction.

UCDC 152.616(HHH)(6)(d) requires that turbine towers be designed and constructed to discourage bird nesting and wildlife attraction. The proposed wind turbines would include a smooth finish with hollow turbine towers, which do not provide suitable nesting habitat for birds. To minimize wildlife attraction, the applicant proposes to:

- Adhere to a 0.25-mile setback from active ferruginous hawk and Swainson's hawk nests
- Adhere to a 200-meter setback along Alkali Canyon and all contour lines containing topographical high points and distinct canyon edges
- Utilize the ASC avian and eagle use survey results to site turbines away from high-raptor use areas

These representations are recommended to be incorporated into a condition, under Fish and Wildlife Habitat Condition 7. Based on compliance with the referenced condition, the Department recommends Council find that the proposed wind turbines would satisfy UCDC 152.616(HHH)(6)(d).

(e) Private access roads established and controlled by the Wind Power Facility shall be gated and signed to protect the Wind Power Generation Facility and property owners from illegal or unwarranted trespass, illegal dumping and hunting and for emergency response.

Subject to compliance with the recommended conditions, the Department recommends that the Council find that the proposed facility would satisfy UCDC 152.616(HHH)(6)(e):

> **Recommended Land Use Condition 8 (PRE)**: Prior to construction of wind facility components, the certificate holder shall provide to the Department final facility design maps, presenting all existing, new or substantially modified private roads for which it will have control during construction and operation. The maps shall identify the location of gates and facility signage that both prohibits illegal access and allows for emergency access.
>
> **Recommended Land Use Condition 9 (CON)**: During construction and operation, the certificate holder shall ensure gates and no trespassing signs are in place and maintained to prohibit illegal access and allow for emergency response.

Subject to compliance with the recommended condition, the Department recommends that the Council find that the proposed facility would satisfy UCDC 152.616(HHH)(6)(e).

(f) Where practicable the electrical cable collector system shall be installed underground, at a minimum depth of 3 feet; elsewhere the cable collector system shall be installed to prevent adverse impacts on agriculture operations.

Subject to compliance with the recommended conditions, the Department recommends that the Council find that the proposed facility would satisfy UCDC 152.616(HHH)(6)(f):

> **Recommended Land Use Condition 10 (PRE)**: Prior to construction of underground collection lines associated with wind facility components, the certificate holder shall provide to the Department evidence that underground trenches for the underground electric collection system have been designed to extend a minimum depth of 3-feet below ground surface, unless technological or engineering feasibility are clearly identified.

Subject to compliance with the recommended condition, the Department recommends that the Council find that the proposed facility would satisfy UCDC 152.616(HHH)(6)(f).

(g) Required permanent maintenance/operations buildings shall be located off site in one of Umatilla County's appropriately zoned areas, except that such a building may be constructed on site if:

(1) The building is designed and constructed generally consistent with the character of similar buildings used by commercial farmers or ranchers, and
(2) The building will be removed or converted to farm use upon decommissioning of the Wind Power Generation Facility consistent with the provisions of §152.616 (HHH) (7).

The proposed (O&M) building would consist of a 6,000-square foot warehouse with maintenance bay, control room, office, break room, kitchen, bathroom with shower, utility room, server room, and storage room. Outdoor lighting at the O&M building would be kept to a minimum through the use of motion sensors and switches to reduce lighting to the minimum required for safety when not in use, and lighting would be directed downward and inward to prevent off-site glare.[128] The O&M Building would be designed and constructed to be generally consistent with the character of agricultural buildings used by farmers or ranchers in the area, and the buildings finished in a neutral color to blend with the surrounding landscape. The Department recommends Council impose the following condition to ensure that the final design and exterior finishes of the proposed O&M building comply with this criterion:

> **Recommended Land Use Condition 11 (PRE)**: Prior to construction of the O&M building, the certificate holder shall provide to the Department evidence that the O&M design and construction materials are consistent with the characters of similar agricultural buildings used by commercial farmers or ranchers in Umatilla County.

[128] NHWAPPDoc2-17 ASC Exhibit R. Scenic_2022-01-31, Section 5.1.

Consistent with UCDC 152.616(HHH)(6)(g)(2), Council's Retirement and Financial Assurance standard requires that, upon cessation of construction or operation of the facility, the applicant decommission all facility components, including the O&M building unless requested to remain by the landowner, in a manner that restores the site to a useful, nonhazardous condition. Therefore, the county would be protected against decommissioning costs pursuant to the bond required by proposed Retirement and Financial Assurance Condition 4. The Department recommends Council rely on recommended Retirement and Financial Assurance Conditions 1 through 4 for this criterion.

Based on the evaluation provided above, and subject to compliance with the recommended condition and identified conditions in other sections, the Department recommends that the Council find that the proposed facility would satisfy UCDC 152.616(HHH)(6)(g).

(h) A Wind Power Generation Facility shall comply with the Specific Safety Standards for Wind Energy Facilities delineated in OAR 345 024 0010 (as adopted at time of application).

Compliance with OAR 345-024-0010, the Public Health and Safety Standards for Wind Energy Facilities, is discussed in Section IV.P.1, *Public Health and Safety Standards for Wind Facilities* of this order. The Department recommends that the Council find that subject to compliance with the conditions recommended in that section, the proposed facility would comply with the specific safety standards set forth at OAR 345-024-0010 and therefore would also comply with UCDC 152.616 (HHH)(6)(h)

(i) A Covenant Not to Sue with regard to generally accepted farming practices shall be recorded with the County. Generally accepted farming practices shall be consistent with the definition of Farming Practices under ORS 30.930. The Wind Power Generation Facility owner/operator shall covenant not to sue owners, operators, contractors, employees, or invitees of property zoned for farm use for generally accepted farming practices.

Subject to compliance with the recommended condition, the Department recommends that the Council find that the proposed facility would satisfy UCDC 152.616 (HHH)(6)(i):

Recommended Land Use Condition 12 (PRE): Prior to construction of wind facility components, the certificate holder, and underlying landowners on whose property the wind facility components are located, shall record in the real property records of Umatilla County a Covenant Not to Sue with regard to generally accepted farming practices on adjacent farmland.

(j) Roads.

(1) County Roads. A Road Use Agreement with Umatilla County regarding the impacts and mitigation on county roads shall be required as a condition of approval.

(2) Project Roads. Layout and design of the project roads shall use best management practices in consultation with the Soil Water Conservation District. The project road design shall be reviewed and certified by a civil engineer. Prior to road construction the applicant shall contact the State Department of Environmental Quality and if necessary, obtain a storm water permit (National Pollution Discharge Elimination System).

UCDC 152.616 (HHH)(6)(j)(1) requires that the applicant execute a Road Use Agreement with Umatilla County prior to beginning construction. In Section IV.M.5. *Public Services - Traffic Safety*, the Department recommends Council impose recommended Public Services Condition 1 requiring, in part, that the applicant execute a Road Use Agreement with Umatilla County Public Works Department. Based on compliance with the recommended condition, the Department recommends Council find that the applicant would comply with this criterion.

UCDC 152.616 (HHH)(6)(j)(2) requires that the applicant develop the layout and design of roads in consultation with the Umatilla County Soil Water Conservation District, to be certified by a civil engineer and in compliance with a DEQ-issued NPDES 1200-C permit. In Section IV.D. *Soil Protection*, the Department recommends Council impose recommended Soil Protection Condition 1, where these requirements are included. Based on compliance with the recommended condition, the Department recommends Council find that the applicant would comply with this criterion.

(k) Demonstrate compliance with the standards found in OAR 660-033-0130(37).

This evaluation is presented in Section IV.E.2. of this order. Therefore, the Department recommends Council find that the applicant satisfies this criterion.

(l) Submit a plan for dismantling of uncompleted construction and/or decommissioning and/or re-powering of the Wind Power Generation Facility as described in §152.616 (HHH)(7).

The tasks and actions associated the facility decommissioning are included in ASC Exhibit W and evaluated in Section IV.G *Retirement and Financial Assurance* of this order. Under the EFSC process, there are also mandatory conditions and rules for facility decommissioning that apply to the proposed facility.[129] Therefore, the Department recommends Council find that the applicant satisfies this criterion.

(m) A surety bond shall be established to cover the cost of dismantling uncompleted construction and/or decommissioning of the Wind Power Generation Facility, and site rehabilitation pursuant to §152.616 (HHH) (7) and (8). The intent of this requirement is to guarantee performance (not just provide financial insurance) to protect the public interest and the county budget from unanticipated, unwarranted burden to

[129] OAR 345-025-0006(9) & (16); and OAR 345-027-0110(4)

decommission wind projects. For projects sited by the State of Oregon's Energy Facility Siting Council (EFSC), the bond or letter of credit required by EFSC will be deemed to meet this requirement.

As presented in Section IV.G *Retirement and Financial Assurance* of this order, the Department recommends Council adopt recommended Retirement and Financial Assurance Condition 4 requiring that, prior to construction, the applicant obtain a bond or letter of credit, based on the decommissioning cost of the final design facility, using a Council approved bond or letter of credit template and entity. Based on compliance with the recommended condition, the Department recommends Council find that the applicant satisfies this criterion.

(n) The actual latitude and longitude location or Stateplane NAD 83(91) (suitable for GPS mapping) coordinates of each turbine tower, connecting lines, O & M building, substation, project roads and transmission lines, shall be provided to Umatilla County on or before starting electrical production.

Subject to compliance with the recommended condition, the Department recommends that the Council find that the proposed facility would satisfy UCDC 152.616 (HHH)(6)(n):

Recommended Land Use Condition 13 (PRO): Prior to operation of wind facility components, the certificate hold shall provide the final location of each wind turbine, electrical collection system, O&M building, substation, access roads and transmission lines, as applicable to final design, to the Umatilla County Planning Department and Department in a format suitable for GPS mapping.

(o) An Operating and Facility Maintenance Plan shall be submitted and subject to County review and approval.

As an EFSC-jurisdictional facility, unless the O&M Plan review and approval is a ministerial process, a subsequent approval by the county would be inconsistent with ORS 469.401(3). If a site certificate is approved by EFSC, the applicant would be required to submit a Compliance Plan that demonstrates compliance with all operational conditions, OAR 345-026-0048 – Compliance Plan. The Department recommends Council find that its Compliance Plan would provide the applicable components of an O&M Plan that could be subject to review by the Department, in consultation with the County, as applicable. Submission of a compliance plan would be required under recommended General Standard Condition 9, as presented in Section IV.A. *General Standard of Review* of this order.

Based on compliance with recommended General Standard Condition 9, the Department recommends Council find that the applicant would satisfy this criterion.

(p) A summary of as built changes to the original plan, if any, shall be provided by the Wind Power Generation Facility owner/operator 90 days of starting electrical production.

Council's reporting requirements for energy facilities under OAR 345-026-0080 require that the applicant submit a summary of changes to that the facility that may have occurred within the reporting year. And, under Council's mandatory condition at OAR 345-025-0006(2), imposed in General Standard Condition 2, the applicant is required to submit a legal description of the site within 90-days of commercial operation.

Therefore, the Department recommends Council find that a legal description and a summary of changes of the facility, at final facility design, compared to the preliminary design facility, would be provided under the rule and condition, consistent with this criterion.

(q) Submit a Socioeconomic Assessment of the Wind Power Generation Facility.

As assessment of potential temporary and permanent impacts to public and private service providers is provided in ASC Exhibit U. The Department recommends Council find that this criterion is satisfied.

(7) Dismantling/Decommissioning.

A plan for dismantling and/or decommissioning that provides for completion of dismantling or decommissioning of the Wind Power Generation Facility without significant delay and protects public health, safety and the environment in compliance with the restoration requirements of this section.

(a) A description of actions the Wind Power Generation Facility owner/operator proposes to take to restore the site to a useful, non-hazardous condition, including options for post dismantle or decommission land use, information on how impacts on fish, wildlife, avian populations and the environment would be minimized during the dismantling or decommissioning process, and measures to protect the public against risk or danger resulting from post decommissioning site conditions in compliance with the requirements of this section.

These requirements are mirrored in the Council's site certificate termination requirements under OAR 345-027-0110. Therefore, the Department recommends Council find that the proposed facility would comply with this criterion through compliance with Council rules.

(b) A current detailed cost estimate, a comparison of that estimate with present funds, the bond for dismantling or decommissioning, and a plan for the availability of adequate funds for completion of dismantling or decommissioning. The cost estimate will be reviewed and be updated by the Wind Power Generation Facility owner/operator on a 3-year basis, unless material changes have been made in the overall Wind Power Generation Facility that would materially increase or decrease these costs. If so, the report must be revised within 120 days of completion of such changes.

UCDO 152.616(HHH)(7)(b) establishes various wind facility decommissioning plan requirements. First, the detailed cost estimate is included in ASC Exhibit W; this estimate was

reviewed, revised and recommended satisfactory for Council consideration under the Retirement and Financial Assurance standard (see Section IV.G of this order) – this detailed cost estimate is presented in Table 6 of this order.

Second, a comparison of the estimate to available funds is assured via the RBC Bank Letter provided by the applicant on March 2, 2022 which stated that "Capital Power US Holdings Inc. (CPUSHI) is a valued client of Royal Bank of Canada (RBC)…[and that it's their] understanding that CPUSHI (as parent of the Applicant, Nolin Hills Wind LLC) may be asked to provide a letter of credit and that the potential liability of the letter of credit could total an amount of up to thirty-two million dollars ($39,000,000.00)." Furthermore, the letter clarifies that RBC "has an ongoing relationship with CPUSHI which includes providing credit facilities and from time to time, issuing letters of credit. As of today [(3/2/2022)], CPUSHI has sufficient capacity on its credit facility to issue the letter of credit."[130] RBC has been evaluated by Council and is included on the 2022 pre-approved financial institution list.

Third, recommended Retirement and Financial Assurance Condition 4 would require that, prior to construction, the applicant obtain and submit, to the Department, a bond or letter of credit based on the approved decommissioning amount, adjusted based on final design. This condition requires that the bond or letter of credit be maintained with the Department, adjusted annually for inflation, for the life of the facility.

The Department recommends that the facts, evidence and recommended conditions described above address the requirement under UCDO 152.616(HHH)(7)(b) for a detailed cost estimate, a comparison of that estimate with present funds, a bond, and a plan for the availability of adequate funds.

The 3-year re-evaluation of the decommissioning estimate offers a distinct element, which the Department recommends Council adopt as a requirement applicable to the wind facility components, as follows:

> **Recommended Land Use Condition 14 (OPR):** Within each 3-year annual report to the Department, the certificate holder shall revise the decommissioning estimate for wind facility components based on evaluation of the assumptions of the costs of tasks and actions. Certificate holder shall confirm whether the bond or letter of credit maintained with the Department under Retirement and Financial Assurance Condition 4 needs to be updated to reflect revisions; or shall confirm that there are no revisions necessary.

Based on the above described facts and compliance with recommended conditions, the Department recommends Council find that the proposed facility would comply with this criterion.

(c) Restoration of the site shall consist of the following:

[130] NHWAPPDoc2-30 ASC Additional Information Package Exhbs B, M, O, J, U, DD 2022-03-04.

(1) Dismantle turbines, towers, pad mounted transformers, meteorological towers and related aboveground equipment. All concrete turbine pads shall be removed to a depth of at least three feet below the surface grade.

(2) The underground collection and communication cables need not be removed if at a depth of three feet or greater. These cables at a depth of three feet or greater can be abandoned in place if they are deemed not a hazard or interfering with agricultural use or other resource uses of the land.

(3) Gravel shall be removed from areas surrounding turbine pads.

(4) Private access road areas shall be restored by removing gravel and restoring the surface grade and soil, unless the landowner directs otherwise.

(5) After removal of the structures and roads, the area shall be graded as close as is reasonably possible to its original contours and the soils shall be restored to a condition compatible with farm uses or consistent with other resource uses. Re vegetation shall include planting by Wind Power Generation Facility owner/operator of native plant seed mixes, planting by Wind Power Generation Facility owner/operator of plant species suited to the area, or planting by landowner of agricultural crops, as appropriate, and shall be consistent with the weed control plan approved by Umatilla County.

(6) Roads, cleared pads, fences, gates, and improvements may be left in place if a letter from the land owner is submitted to Umatilla County indicating said land owner will be responsible for, and will maintain said roads and/or facilities for farm or other purposes as permitted under applicable zoning.

The restoration required by county code is consistent with the restoration activities the applicant identified in ASC Exhibit W. Based on the tasks and actions proposed for wind facility decommissioning, the Department recommends Council find that the proposed facility would comply with criterion.

(8) Decommissioning Fund. The Wind Power Generation Facility owner/operator shall submit to Umatilla County a bond acceptable to the County, in the amount of the decommissioning fund naming Umatilla County beneficiary or payee.

(a) The calculation of present year dollars shall be made using the U. S. Gross Domestic Product Implicit Price Deflator as published by the U. S. Department of Commerce, Bureau of Economic Analysis, or any successor agency (the "index"). The amount of the bond account shall be changed up or down if the change in the Index moves by more than 10 percent from the last change, and then the amount shall be increased or decreased by the cumulative percentage change. If at any time the Index is no longer published, Umatilla County and the Wind Power Generation Facility owner/operator shall select a comparable calculation of present year dollars.

(b) The bond shall not be subject to revocation or unjustified reduction before decommissioning of the Wind Power Generation Facility and rehabilitation of the site/s.

(c) The Wind Power Generation Facility owner/operator shall describe the status of the bond in the annual report submitted to the Umatilla County.

As provided at UCDC 152.616(HHH)(7)(m), the bond or letter of credit required by the Council for an energy facility under Council jurisdiction would satisfy the county's bond requirement.

Recommended Retirement and Financial Assurance Condition 4 would require the applicant to submit to the Council before beginning construction, a bond or letter of credit in a form and amount satisfactory to restore the site to a useful nonhazardous condition upon retirement of the facility. Recommended Retirement and Financial Assurance Condition 4 allows the Council to draw on the bond or letter of credit to restore the site to a useful, nonhazardous condition in the event the applicant does not comply with its retirement and decommissioning obligations.

Subject to compliance with the recommended conditions, the Department recommends that the Council find that the proposed facility would satisfy this criterion.

(9) Annual Reporting. Within 120 days after the end of each calendar year the Wind Power Generation Facility owner/operator shall provide Umatilla County a written and oral annual report including the following information:

(a) Energy production by month and year.

(b) Non-proprietary information about wind conditions, (e. g., monthly averages, high wind events, bursts).

(c) A summary of changes to the Wind Power Generation Facility that do not require amendments.

(d) A summary of the fish, wildlife and avian monitoring program – bird injuries, casualties, positive impacts on area wildlife and any recommendations for changes in the monitoring program.

(e) Employment impacts to the community and Umatilla County during and after construction.

(f) Success or failures of weed control practices.

(g) Status of the bond.

(h) Summary of erosion control activities and its effectiveness.

(i) Summary comments

(1) Problems with the projects, any adjustments needed, or any suggestions.

(2) The annual report requirement may be modified by the County as warranted by project conditions, circumstances and compliance. The reporting requirement and/or reporting schedule shall be reviewed, and possibly altered, at the request of the Wind Power Generation Facility owner/operator. For Wind Power Generation Facilities under EFSC jurisdiction and for which an annual report is required, the annual report to EFSC satisfies this requirement.

UCDO 152.616(HHH)(9) states that "[f]or Wind Power Generation Facilities under EFSC jurisdiction and for which an annual report is required, the annual report to EFSC satisfies this requirement." Pursuant to OAR 345-026-0080, an energy facility certificate holder must submit a semiannual construction progress report to the Department during construction and annual

reports during every year of operations. As provided, this annual reporting requirement satisfies UCDO 152.616(HHH)(9). Therefore, the Department recommends Council find that this criterion is satisfied through compliance with Council's rule at OAR 345-026-0080.

Section 152.617(II)(7) Utility Facility Necessary for Public Service

UCDC Section 152.059 establishes that a "utility facility necessary for public service" is a use permitted in EFU-zoned land subject to compliance with ORS 215.275 and UCDC 152.617(II)(7), where UCDC 152.617(II)(7)(A) mirrors ORS 215.275. As described throughout this order, the proposed facility includes three 230 kV transmission lines: the Substation Connector, UEC Cottonwood, and BPA to Stanfield transmission lines. This criterion applies to the proposed 230 kV Substation Connection Transmission Line and the proposed UEC Cottonwood transmission line; the proposed UEC Cottonwood is also evaluated with the BPA Stanfield transmission line under as an "associated transmission line" under UCDC 152.617(II)(7)(B), which mirrors ORS 215.274 below.

The UCDC Section 152.617(II)(7)(A) evaluation is presented separately per proposed 230 kV transmission line.

Proposed 230 kV Substation Connector Line

(A) A utility facility established under ORS 215.283(1)(c) is necessary for public service if the facility must be sited in an exclusive farm use zone in order to provide the service. To demonstrate that a utility facility is necessary, an applicant must:
(1) Demonstrate that reasonable alternatives have been considered and that the facility must be sited in an exclusive farm use zone due to one or more of the following factors:

UCDC 152.617(II)(7)(A)(1) first requires an evaluation of reasonable alternatives to determine whether the utility facility may be sited on land other than EFU-zoned land. Then, following an evaluation of reasonable alternatives on non-EFU zoned land, UCDC 152.617(II)(7) establishes a list of factors, of which at least one must be satisfied, that must be considered to determine whether a utility facility is necessary for public service, and includes standards related to mitigating the impact of the utility facility on farm uses and farm land.

The proposed 230 kV Substation Connector transmission line would extend approximately 6.8 miles from the proposed southern project substation to the northern project substation, as presented in ASC Exhibit K Figure C-5. The applicant does not directly address whether there are reasonable alternatives for the proposed 230 kV Substation Connector transmission line that would be located on non-EFU zoned land. However, it is reasonable to evaluate the availability of alternative transmission routes based on proposed the location of wind turbines and electrical generating components. ASC Exhibit K Figure K-2 Zoning demonstrates that there are non-EFU zoned lands approximately 25 miles from the wind micrositing area. Because there are no non-EFU zoned lands within a reasonable distance from the proposed wind micrositing

area, the Department recommends Council find that there are no reasonable alternatives for the proposed 230 kV Substation Connector transmission line that would be located on non-EFU zoned lands.

(a) Information provided in the technical and engineering feasibility;

The Department interprets this factor as requiring a demonstration that technical or engineering constraints, such as extreme topographic features, cannot be overcome but for facility engineering through EFU-zoned land.

Any feasible Substation Connector transmission line route would be located within EFU zoned lands, as evaluated above; non EFU zoned land does not exist within or surrounding the proposed site boundary. Therefore, the Department recommends that Council find that technical or engineering constraints, such as extreme topographic features, that could not be overcome but for siting the proposed 230 kV Substation Connector transmission line through EFU zoned land were not the primary drivers for siting on EFU zoned land. The Department recommends Council find that UCDC 152.617(II)(7)(A)(1)(a) would not be satisfied.

(b) The proposed facility is locationally dependent. (It must cross land in one or more areas zoned for exclusive farm use in order to achieve a reasonably direct route or to meet unique geographical needs that cannot be satisfied on other lands.)

As presented in ASC Exhibit K Figure K-2 Zoning, the majority of the land use analysis area is EFU-zoned land. There is no reasonable way to build a transmission line between the proposed southern project substation and northern project substation without crossing EFU-zoned land while still achieving a reasonably direct route. Therefore, the Department recommends Council find that the proposed 230 kV Substation Connector transmission line is "locationally dependent" and satisfies UCDC 152.617(II)(7)(A)(1)(b)

(c) Show a lack of available urban and non-resource lands;

As presented in ASC Exhibit K Figure K-2 Zoning, the entirety of the land use analysis area is EFU-zoned land. Therefore, there are no available urban or non-resource lands between the proposed southern project substation and northern project substation. Therefore, the Department recommends Council find that the proposed 230 kV Substation Connector transmission line satisfies UCDC 152.617(II)(7)(A)(1)(c).

(d) Due to availability of existing rights of way.

There are no public rights-of-way within the wind micrositing corridor. Therefore, the proposed 230 kV Substation Connector transmission line does not have to be sited on EFU-zoned land in order to utilize existing rights of way. The Department recommends Council find that the

proposed 230 kV Substation Connector transmission line would not satisfy UCDC 152.617(II)(7)(A)(1)(d).

(e) Due to public health and safety concerns; and

While the applicant states that the proposed transmission line would not be located near any residences or occupied structures, it does not address how or why the line would need to be sited on EFU-zoned land to avoid public health and safety concerns otherwise present. The Department therefore recommends Council find that the proposed 230 kV Substation Connector transmission line would not satisfy UCDC 152.617(II)(7)(A)(1)(e).

(f) Show it must meet other requirements of state and federal agencies.

While the applicant explains that the facility would comply with other requirements of state and federal agencies, it does not address the criterion. Therefore, the Department recommends Council find that the proposed 230 kV Substation Connector transmission line would not satisfy UCDC 152.617(II)(7)(A)(1)(f).

(2) Costs associated with any of the factors listed in subsection (A) above may be considered, but cost alone, including the cost of land, may not be the only consideration in determining that a utility facility is necessary for public service. Land costs shall not be included when considering alternative locations for substantially similar utility facilities and the siting of utility facilities that are not substantially similar.

The applicant does not rely on this factor. Therefore, the Department recommends Council find that the proposed 230 kV Substation Connector transmission line would not satisfy UCDC 152.617(II)(7)(A)(2).

(3) The owner of a utility facility approved under this section shall be responsible for restoring, as nearly as possible, to its former condition any agricultural land and associated improvements that are damaged or otherwise disturbed by the siting, maintenance, repair or reconstruction of the facility. Nothing in this paragraph shall prevent the owner of the utility facility from requiring a bond or other security from a contractor or otherwise imposing on a contractor the responsibility for restoration.

The applicant would be responsible for all areas temporarily disturbed during construction, maintenance or repair of the proposed wind facility, including the components that would be located on EFU-zoned land. As evaluated in Section IV.H. *Fish and Wildlife Habitat* and IV.G. *Retirement and Financial Assurance* of this order, recommended Fish and Wildlife Habitat Conditions 1, 2 and 3 would require that temporarily disturbed vegetation is restored to its pre-disturbance condition; and recommended Retirement and Financial Assurance Condition 4 would ensure that, prior to construction, the applicant obtain and submit to the Department a

bond or letter of credit based on an amount recommended be considered by Council as satisfactory for facility decommissioning. The bond or letter of credit would remain in effect until the facility is decommissioned to provide assurance to the State, in the event the applicant is unable to fulfil its decommissioning obligations. Then, upon facility decommissioning, the applicant would be required to decommission the facility in accordance with a Council approved decommissioning plan. Based on compliance with the above-described conditions, the Department recommends Council find that the proposed 230 kV Substation Connector transmission line would satisfy this criterion.

> *(4) The governing body of the county or its designee shall impose clear and objective conditions on an application for utility facility siting to mitigate and minimize the impacts of the proposed facility, if any, on surrounding lands devoted to farm use in order to prevent a significant change in accepted farm practices or a significant increase in the cost of farm practices on surrounding farmlands.*

The Department recommends Council impose the following conditions that would ensure minimization of potential impacts from proposed transmission construction and operation to accepted farm practices:

- Recommended Soil Protection Conditions 1 and 2 would require consultation with the Umatilla County Soil and Water Conservation District, prior to construction, and would require implementation of best management practices to minimize and monitor for offsite erosion impacts
- Recommended Soil Protection Condition 3 would require that, during operations, the applicant implement a Soil Monitoring Plan that would evaluate and mitigate for topsoil loss and erosion impacts resulting from construction
- Recommended Soil Protection Conditions 4, 5 and 7 would require that the applicant adhere to the requirements of an SPCC during construction and operation, to minimize any potential impacts from soil contamination
- Recommended Fish and Wildlife Conditions 1, 2 and 3 would require that the applicant implement and adhere to the requirements of a Revegetation and Noxious Weed Plan, prior to and during construction and operation, including long-term revegetation and noxious weed control.
- Recommended Public Services Condition 1 would require implementation of a Traffic Management Plan and execution of a Road Use Agreement with Umatilla County Public Works Department, which would minimize potential traffic and dust-related impacts.
- Recommended Land Use Conditions 2 and 3 would require implementation of an Agricultural Mitigation Plan that would require that the applicant demonstrate completion of landowner consultation on facility design and construction methods, and that the applicant follow-through with any commitments on siting facility components to minimize agricultural impacts and provide adequate compensation for loss of agriculturally productive lands.

Based on the above recommended findings of facts and reasoning, and compliance with the recommended conditions, the Department recommends that the Council find that the applicant has provided sufficient analysis required under UCDC Section 152.617(II)(7)(A)(1)(b) and (c) that the proposed 230 kV Substation Connector transmission line must be sited on EFU-zoned land because it is locationally dependent and due to a lack of available urban and nonresource lands. As such, the Department recommends that the Council find that the transmission line is "necessary for public service."

Proposed 230 kV UEC Cottonwood Transmission Line

(A) A utility facility established under ORS 215.283(1)(c) is necessary for public service if the facility must be sited in an exclusive farm use zone in order to provide the service. To demonstrate that a utility facility is necessary, an applicant must:

(1) Demonstrate that reasonable alternatives have been considered and that the facility must be sited in an exclusive farm use zone due to one or more of the following factors:

The proposed 230 kV UEC Cottonwood transmission line would extend approximately 25.3 miles from the proposed northern project substation to the existing UEC Cottonwood Substation. The line would include 8.4 miles of new line, 9.6 miles of replacement line, and 7.3 miles of upgraded line. Approximately 23 miles of the proposed transmission line would be located within EFU-zoned land; the remaining northern portion of the route would be located within RTC, LI and AB zoned lands.

The route of the proposed UEC Cottonwood transmission line allows for interconnection of the proposed northern project substation to two existing structures – UEC Transmission Network Junction (located on the corner of White House Road and County Road 1348) and the UEC Cottonwood Substation (north of the I-84 crossing location). The proposed northern project substation and UEC Transmission Network Junction are located within EFU-zoned lands; the existing UEC Cottonwood Substation is located in the LI zone. ASC Exhibit K Figure K-2 Zoning demonstrates that there are no non-EFU zoned lands between the wind, solar and transmission line site boundary area or within ½-mile of these areas, except for the northern 2-miles of the transmission line route which is over 23 miles from the location of proposed energy generation equipment. Because there are no non-EFU zoned lands within ½-mile of the portions of the site boundary containing the wind and solar micrositing areas or for the majority (approximately 23 miles) of the transmission line site boundary, the Department recommends Council find that there are no reasonable alternatives for the proposed 230 kV UEC Cottonwood transmission line that would be located on non-EFU zoned lands.

(a) Information provided in the technical and engineering feasibility;

The Department interprets this factor as requiring a demonstration that technical or engineering constraints, such as extreme topographic features, cannot be overcome but for facility engineering through EFU-zoned land.

Any feasible UEC Cottonwood transmission line route would be located within EFU zoned lands, as evaluated above; non EFU zoned land does not exist within or surrounding the proposed site boundary, except for the northern most portion of the proposed UEC Cottonwood transmission line route located over 23 miles from the site of the proposed energy generation components. Therefore, the Department recommends that Council find that technical or engineering constraints, such as extreme topographic features, that could not be overcome but for siting the proposed 230 kV UEC Cottonwood transmission line through EFU zoned land were not the primary drivers for siting on EFU zoned land. The Department recommends Council find that UCDC 152.617(II)(7)(A)(1)(a) would not be satisfied.

(b) The proposed facility is locationally dependent. (It must cross land in one or more areas zoned for exclusive farm use in order to achieve a reasonably direct route or to meet unique geographical needs that cannot be satisfied on other lands.)

As presented in ASC Exhibit K Figure K-2 Zoning, with the exception of a short 2-mile segment over 23 miles from the proposed site boundary, the entirety of the land use analysis area is EFU-zoned land. There is no reasonable way to build a transmission line between the proposed northern project substation and UEC Cottonwood Substation without crossing EFU-zoned land while still achieving a reasonably direct route. Therefore, the Department recommends Council find that the proposed UEC Cottonwood transmission line is "locationally dependent" and satisfies UCDC 152.617(II)(7)(A)(1)(b)

(c) Show a lack of available urban and non-resource lands;

As presented in ASC Exhibit K Figure K-2 Zoning, the majority of the land use analysis area is EFU-zoned land. There are no available urban or non-resource lands between or in reasonable proximity to the proposed northern project substation to the existing UEC Cottonwood Substation. Therefore, the Department recommends Council find that the proposed UEC Cottonwood transmission line satisfies UCDC 152.617(II)(7)(A)(1)(c).

(d) Due to availability of existing rights of way.

The proposed UEC Cottonwood transmission line would require new or expanded rights-of-way. There are no existing, available rights-of-way identified that could be used by the proposed transmission line. Therefore, the proposed UEC Cottonwood transmission line does not have to be sited on EFU-zoned land in order to utilize existing rights of way. The Department recommends Council find that the proposed UEC Cottonwood transmission line would not satisfy UCDC 152.617(II)(7)(A)(1)(d).

(e) Due to public health and safety concerns; and

The applicant does not rely on this factor. The Department therefore recommends Council find that the proposed UEC Cottonwood transmission line would not satisfy UCDC 152.617(II)(7)(A)(1)(e).

(f) Show it must meet other requirements of state and federal agencies.

While the applicant explains that the proposed UEC Cottonwood transmission line would comply with other requirements of state and federal agencies, it does not address the criterion. The Department therefore recommends that Council find that the proposed UEC Cottonwood transmission line would not satisfy UCDC 152.617(II)(7)(A)(1)(f).

(2) Costs associated with any of the factors listed in subsection (A) above may be considered, but cost alone, including the cost of land, may not be the only consideration in determining that a utility facility is necessary for public service. Land costs shall not be included when considering alternative locations for substantially similar utility facilities and the siting of utility facilities that are not substantially similar.

The applicant does not rely on this factor. The Department therefore recommends that Council find that the proposed UEC Cottonwood transmission line would not satisfy UCDC 152.617(II)(7)(A)(2).

(3) The owner of a utility facility approved under this section shall be responsible for restoring, as nearly as possible, to its former condition any agricultural land and associated improvements that are damaged or otherwise disturbed by the siting, maintenance, repair or reconstruction of the facility. Nothing in this paragraph shall prevent the owner of the utility facility from requiring a bond or other security from a contractor or otherwise imposing on a contractor the responsibility for restoration.

The applicant would be responsible for all areas temporarily disturbed during construction, maintenance or repair of the proposed wind facility, including the components that would be located on EFU-zoned land. As evaluated in Section IV.H. *Fish and Wildlife Habitat* and IV.G. *Retirement and Financial Assurance* of this order, recommended Fish and Wildlife Habitat Condition 1 would require that temporarily disturbed vegetation is restored to its pre-disturbance condition; and recommended Retirement and Financial Assurance Condition 4 would ensure that, prior to construction, the applicant obtain and submit to the Department a bond or letter of credit based on an amount recommended be considered by Council as satisfactory for facility decommissioning. The bond or letter of credit would remain in effect until the facility is decommissioned to provide assurance to the State, in the event the applicant is unable to fulfil its decommissioning obligations. Then, upon facility decommissioning, the applicant would be required to decommission the facility in accordance with a Council approved decommissioning plan.

In addition, the Department recommends Council impose a condition requiring that all applicant representations that would minimize and mitigate temporary and permanent impacts to agricultural lands be incorporated into an Agricultural Mitigation Plan and required to be implemented under Land Use Conditions 2 and 3.

Based on compliance with the above-described conditions, the Department recommends Council find that the proposed UEC Cottonwood transmission line would satisfy this criterion.

> *(4) The governing body of the county or its designee shall impose clear and objective conditions on an application for utility facility siting to mitigate and minimize the impacts of the proposed facility, if any, on surrounding lands devoted to farm use in order to prevent a significant change in accepted farm practices or a significant increase in the cost of farm practices on surrounding farmlands.*

The Department recommends Council impose the following conditions that would ensure minimization of potential impacts from proposed transmission construction and operation to accepted farm practices:

- Recommended Soil Protection Conditions 1 and 2 would require consultation with the Umatilla County Soil and Water Conservation District, prior to construction, and would require implementation of best management practices to minimize and monitor for offsite erosion impacts
- Recommended Soil Protection Condition 3 would require that, during operations, the applicant implement a Soil Monitoring Plan that would evaluate and mitigate for topsoil loss and erosion impacts resulting from construction
- Recommended Soil Protection Conditions 4, 5 and 7 would require that the applicant adhere to the requirements of an SPCC during construction and operation, to minimize any potential impacts from soil contamination
- Recommended Fish and Wildlife Conditions 1, 2 and 3 would require that the applicant implement and adhere to the requirements of a Revegetation and Noxious Weed Plan, prior to and during construction and operation, including long-term revegetation and noxious weed control.
- Recommended Public Services Condition 1 would require implementation of a Traffic Management Plan and execution of a Road Use Agreement with Umatilla County Public Works Department, which would minimize potential traffic and dust-related impacts.
- Recommended Land Use Conditions 2 and 3 would require implementation of an Agricultural Mitigation Plan that would require that the applicant demonstrate completion of landowner consultation on facility design and construction methods, and that the applicant follow-through with any commitments on siting facility components to minimize agricultural impacts and provide adequate compensation for loss of agriculturally productive lands.

Based on the above recommended findings of facts and reasoning, and compliance with the recommended conditions, the Department recommends that the Council find that the applicant has provided sufficient analysis required under UCDC Section 152.617(II)(7)(A)(1)(b) and (c) that the proposed UEC Cottonwood transmission line must be sited on EFU-zoned land because it is locationally dependent and due to a lack of available urban and nonresource lands. As such, the Department recommends that the Council find that the transmission line is "necessary for public service."

UCDC Section 152.617(II)(7)(B)

> *(B) An associated transmission line is necessary for public service and shall be approved by the governing body of a county or its designee if an applicant for approval under ORS 215.283(1)(c) demonstrates to the governing body of the county or its designee that the associated transmission line meets either the requirements of paragraph (1) of this subsection or the requirements of paragraph (2) of this subsection.*

Transmission lines that meet the definition of an "associated transmission line" must consider the requirements of ORS 215.274. If a utility facility necessary for public service is an "associated transmission line" as defined in ORS 215.274 and ORS 469.300, the use may be established in EFU-zoned land pursuant to ORS 215.283(c). ORS 469.300(3) defines "associated transmission lines" as "new transmission lines constructed to connect an energy facility to the first point of junction of such transmission line or lines with either a power distribution system or an interconnected primary transmission system or both or to the Northwest Power Grid," and that definition is incorporated by reference in ORS 215.274. Associated transmission lines reviewed under ORS 215.274 are a subset of the transmission lines that could be evaluated as utility facilities necessary for public service under ORS 215.283(1)(c). In ASC Exhibit K, the applicant explains that the proposed UEC Cottonwood and BPA Stanfield transmission lines, connecting the proposed facility to a UEC and BPA substation, respectively, meets the definition of "associated transmissions lines" because it would ultimately connect to the Northwest power grid. The Department concurs and recommend Council evaluate the proposed transmission line segment is an "associated transmission line."

The UCDC Section 152.617(II)(7)(B) evaluation is presented separately per proposed 230 kV transmission line.

Proposed 230 kV UEC Cottonwood Transmission Line

> *(1) An applicant demonstrates that the entire route of the associated transmission line meets at least one of the following requirements:*
> *(a) The associated transmission line is not located on highvalue farmland, as defined in ORS 195.300, or on arable land;*
> *(b) The associated transmission line is co-located with an existing transmission line;*

(c) The associated transmission line parallels an existing transmission line corridor with the minimum separation necessary for safety; or

(d) The associated transmission line is located within an existing right of way for a linear facility, such as a transmission line, road or railroad that is located above the surface of the ground.

The proposed 230 kV UEC Cottonwood transmission line would not satisfy any of the criteria under UCDC Section 152.617(II)(7)(B)(1). UCDC Section 152.617(II)(7)(B) allows for consideration of requirements under (1) or (2). The evaluation under (2) is presented below.

(2) After an evaluation of reasonable alternatives, an applicant demonstrates that the entire route of the associated transmission line meets, subject to paragraphs (3) and (4) of this subsection, two or more of the following criteria:

The proposed 230 kV UEC Cottonwood transmission line would extend approximately 25.3 miles from the proposed northern project substation to the existing UEC Cottonwood Substation. The line would include 8.4 miles of new line, 9.6 miles of replacement line, and 7.3 miles of upgraded line. Approximately 23 miles of the proposed transmission line would be located within high-value farmland in EFU-zoned land; the remaining northern portion of the route would also be located in high-value farmland, as well as within RTC, LI and AB zoned lands.

The route of the proposed UEC Cottonwood transmission line allows for interconnection of the proposed northern project substation to two existing structures – UEC Transmission Network Junction (located on the corner of White House Road and County Road 1348) and the UEC Cottonwood Substation (north of the I-84 crossing location). The proposed northern project substation and UEC Transmission Network Junction are located within EFU-zoned lands; the existing UEC Cottonwood Substation is located in the LI zone. ASC Exhibit K Figure K-2 Zoning demonstrates that there are no non-EFU zoned lands between the wind, solar and transmission line site boundary area or within ½-mile of these areas, except for the northern 2-miles of the transmission line route which is over 23 miles from the location of proposed energy generation equipment. Because there are no non-EFU zoned lands within ½-mile of the portions of the site boundary containing the wind and solar micrositing areas or for the majority (approximately 23 miles) of the transmission line site boundary, the Department recommends Council find that there are no reasonable alternatives for the proposed 230 kV UEC Cottonwood transmission line that would be located on non high-value farmland or non EFU zoned lands.

(a) Technical and engineering feasibility;

The Department interprets this factor as requiring a demonstration that technical or engineering constraints, such as extreme topographic features, cannot be overcome but for facility engineering through high value farmland.

Any feasible UEC Cottonwood transmission line route would be located within high value farmland, as evaluated above; non high value farmland does not exist within or surrounding the proposed site boundary, except for the northern most portion of the proposed UEC Cottonwood Transmission Line route located over 23 miles from the site of the proposed energy generation components. Therefore, the Department recommends that Council find that technical or engineering constraints, such as extreme topographic features, that could not be overcome but for siting the proposed 230 kV UEC Cottonwood transmission line through high value farmland were not the primary drivers for siting. The Department recommends Council find that UCDC 152.617(II)(7)(B)(2)(a) would not be satisfied.

(b) The associated transmission line is locationally dependent because the associated transmission line must cross high-value farmland, as defined in ORS 195.300, or arable land to achieve a reasonably direct route or to meet unique geographical needs that cannot be satisfied on other lands;

As presented in ASC Exhibit K Figures K-5 through K-5.12, the entirety of the proposed UEC Cottonwood Transmission Line corridor and area extending ½-mile from the corridor is significantly interspersed with high-value farmland. Given the extent of high-value farmland within ½-mile of the transmission line corridor, there is no reasonable way to build the line between the proposed northern project substation and UEC Cottonwood Substation without crossing high-value farmland while still achieving a reasonably direct route. Therefore, the Department recommends Council find that the proposed UEC Cottonwood Transmission Line is "locationally dependent" and satisfies UCDC 152.617(II)(7)(B)(2)(b).

(c) Lack of an available existing right of way for a linear facility, such as a transmission line, road or railroad, that is located above the surface of the ground;

ASC Exhibit C Figures C-4.1 through C-4.10 and ASC Exhibit K Figures K-5.1 through K-5.10, in combination, present the proposed UEC Cottonwood transmission line route and existing Umatilla County Road ROW. The applicant asserts that there is limited existing rights-of-way within the site boundary and surrounding lands, and that the existing road right-of-way along the transmission line route follows gullies and canyons associated with streams and does not provide a feasible transmission line route. In ASC Exhibit B, the applicant affirms that right-of-way acquisition would be required in order to site the line within the existing right-of-way. Therefore, the Department recommends Council find that there is a lack of available existing rights-of-way for siting of the proposed 230 kV UEC Cottonwood transmission line; UCDC 152.617(II)(7)(B)(2)(c) is satisfied.

(d) Public health and safety; or
(e) Other requirements of state or federal agencies.

The applicant does not rely on UCDC 152.617(II)(7)(B)(2)(d) or (e).

(3) As pertains to paragraph (2), the applicant shall present findings to the governing body of the county or its designee on how the applicant will mitigate and minimize the impacts, if any, of the associated transmission line on surrounding lands devoted to farm use in order to prevent a significant change in accepted farm practices or a significant increase in the cost Umatilla County Development Code, Revision Date May 5, 2021, Page 386 of 467 of farm practices on the surrounding farmland.

Applicant commits to designing the proposed UEC Cottonwood transmission line route to run along the edge of existing fields and would ensure that underlying landowners would continue to have access to agricultural lands.

The Department recommends Council impose the following conditions that would ensure minimization of potential impacts from proposed transmission construction and operation to accepted farm practices:

- Recommended Soil Protection Conditions 1 and 2 would require consultation with the Umatilla County Soil and Water Conservation District, prior to construction, and would require implementation of best management practices to minimize and monitor for offsite erosion impacts
- Recommended Soil Protection Condition 3 would require that, during operations, the applicant implement a Soil Monitoring Plan that would evaluate and mitigate for topsoil loss and erosion impacts resulting from construction
- Recommended Soil Protection Conditions 4, 5 and 7 would require that the applicant adhere to the requirements of an SPCC during construction and operation, to minimize any potential impacts from soil contamination
- Recommended Fish and Wildlife Condition 1, 2 and 3 would require that the applicant implement and adhere to the requirements of a Revegetation and Noxious Weed Plan, prior to and during construction and operation, including long-term revegetation and noxious weed control.
- Recommended Public Services Condition 1 would require implementation of a Traffic Management Plan and execution of a Road Use Agreement with Umatilla County Public Works Department, which would minimize potential traffic and dust-related impacts.
- Recommended Land Use Conditions 2 and 3 would require implementation of an Agricultural Mitigation Plan that would require that the applicant demonstrate completion of landowner consultation on facility design and construction methods, and that the applicant follow-through with any commitments on siting facility components to minimize agricultural impacts and provide adequate compensation for loss of agriculturally productive lands.

Based on the above representations and compliance with recommended conditions, the Department recommends Council find that the proposed 230 kV UEC Cottonwood transmission line would not result in a significant change in accepted farm practices or a significant increase in cost of farm practices on surrounding land. Therefore, the Department recommends Council

find that the proposed 230 kV UEC Cottonwood transmission line would satisfy UCDC 152.617(II)(7)(B)(3).

(4) The governing body of a county or its designee may consider costs associated with any of the factors listed in paragraph (B) of this subsection, but consideration of cost may not be the only consideration in determining whether the associated transmission line is necessary for public service.

Costs were not a consideration in determining the location of the proposed UEC Cottonwood transmission line route.

For the above stated reasons, the Department recommends that the Council find that the applicant has provided sufficient analysis required under UCDC 152.617(II)(7)(B) that the proposed UEC Cottonwood transmission line, as an associated transmission line, must be sited on high value farmland because it is "locationally dependent" and due to a lack of available existing rights-of-way. As such, the Department recommends that the Council find that the associated transmission line is "an associated transmission line."

Proposed 230 kV BPA Stanfield Transmission Line

(1) An applicant demonstrates that the entire route of the associated transmission line meets at least one of the following requirements:
(a) The associated transmission line is not located on highvalue farmland, as defined in ORS 195.300, or on arable land;
(b) The associated transmission line is co-located with an existing transmission line;
(c) The associated transmission line parallels an existing transmission line corridor with the minimum separation necessary for safety; or
(d) The associated transmission line is located within an existing right of way for a linear facility, such as a transmission line, road or railroad that is located above the surface of the ground.

The proposed 230 kV BPA Stanfield transmission line would not satisfy any of the criteria under UCDC Section 152.617(II)(7)(B)(1). UCDC Section 152.617(II)(7)(B) allows for consideration of requirements under (1) or (2). The evaluation under (2) is presented below.

(2) After an evaluation of reasonable alternatives, an applicant demonstrates that the entire route of the associated transmission line meets, subject to paragraphs (3) and (4) of this subsection, two or more of the following criteria:

The proposed 230 kV BPA Stanfield transmission line would extend approximately 5 miles from the proposed northern project substation to the proposed BPA Stanfield Substation. The transmission line route and high value farmland are presented in ASC Exhibit K Figures K-5.11

through K-5.14. Based on these figures, the entirety of the transmission line corridor and surrounding analysis area is within, or significantly interspersed with, high-value farmland.

The route of the proposed 230 kV BPA Stanfield transmission line allows for interconnection of the facility to a BPA substation, which the applicant represents is a fixed location. Because there are no non-high-value farmlands within ½-mile of the portions of the site boundary containing the wind and solar micrositing areas or for the proposed 230 kV BPA Stanfield transmission line site boundary, the Department recommends Council find that there are no reasonable alternatives for the proposed 230 kV BPA Stanfield transmission line that would be located on non highvalue farmlands.

(a) Technical and engineering feasibility;

The Department interprets this factor as requiring a demonstration that technical or engineering constraints, such as extreme topographic features, cannot be overcome but for facility engineering through high value farmland.

Any feasible 230 kV BPA Stanfield transmission line would be located within high value farmland, as evaluated above; non high value farmland does not exist within or surrounding the proposed site boundary, except for the northern most portion of the proposed UEC Cottonwood Transmission Line route located over 23 miles from the site of the proposed energy generation components. Therefore, the Department recommends that Council find that technical or engineering constraints, such as extreme topographic features, that could not be overcome but for siting the proposed 230 kV BPA Stanfield transmission line through high value farmland were not the primary drivers for siting. The Department recommends Council find that UCDC 152.617(II)(7)(B)(2)(a) would not be satisfied.

(b) The associated transmission line is locationally dependent because the associated transmission line must cross high-value farmland, as defined in ORS 195.300, or arable land to achieve a reasonably direct route or to meet unique geographical needs that cannot be satisfied on other lands;

As presented in ASC Exhibit K Figures K-5.11 through K-5.14, the entirety of the proposed 230 kV BPA Stanfield transmission line and area extending ½-mile from the corridor is significantly interspersed with high-value farmland. Given the extent of high-value farmland within ½-mile of the transmission line corridor, there is no reasonable way to build the line between the proposed northern project substation and proposed BPA Substation without crossing high-value farmland while still achieving a reasonably direct route. Therefore, the Department recommends Council find that the proposed 230 kV BPA Stanfield transmission line is "locationally dependent" and satisfies UCDC 152.617(II)(7)(B)(2)(b).

(c) Lack of an available existing right of way for a linear facility, such as a transmission line, road or railroad, that is located above the surface of the ground;

The proposed 230 kV BPA Stanfield transmission line has been designed to parallel existing BPA transmission and road rights-of-way, but the size of the existing rights-of-way is not sufficient to provide for minimum separation distance and would be required to be expanded, if this route is selected at final design. Because the applicant is minimizing impacts by paralleling existing corridors, but those corridors do not contain available rights-of-way for siting of the line, the Department recommends Council find that there is a lack of available existing rights-of-way for siting of the proposed 230 kV BPA Stanfield transmission line; UCDC 152.617(II)(7)(B)(2)(c) is satisfied.

(d) Public health and safety; or
(e) Other requirements of state or federal agencies.

The applicant does not rely on UCDC 152.617(II)(7)(B)(2)(d) or (e).

(3) As pertains to paragraph (2), the applicant shall present findings to the governing body of the county or its designee on how the applicant will mitigate and minimize the impacts, if any, of the associated transmission line on surrounding lands devoted to farm use in order to prevent a significant change in accepted farm practices or a significant increase in the cost Umatilla County Development Code, Revision Date May 5, 2021, Page 386 of 467 of farm practices on the surrounding farmland.

Applicant commits to designing the proposed BPA Stanfield transmission line by siting the line adjacent to existing rights-of-way. The applicant commits to compensating landowners for any loss of land used for agricultural production.

The Department recommends Council impose the following conditions that would ensure minimization of potential impacts from proposed transmission construction and operation to accepted farm practices:

- Recommended Soil Protection Condition 1 and 2 would require consultation with the Umatilla County Soil and Water Conservation District, prior to construction, and would require implementation of best management practices to minimize and monitor for offsite erosion impacts
- Recommended Soil Protection Condition 3 would require that, during operations, the applicant implement a Soil Monitoring Plan that would evaluate and mitigate for topsoil loss and erosion impacts resulting from construction
- Recommended Soil Protection Condition 4, 5 and 7 would require that the applicant adhere to the requirements of an SPCC during construction and operation, to minimize any potential impacts from soil contamination
- Recommended Fish and Wildlife Condition 1 would require that the applicant implement and adhere to the requirements of a Revegetation and Noxious Weed Plan, prior to and during construction and operation, including long-term revegetation and noxious weed control.

- Recommended Public Services Condition 1 would require implementation of a Traffic Management Plan and execution of a Road Use Agreement with Umatilla County Public Works Department, which would minimize potential traffic and dust-related impacts.
- Recommended Land Use Conditions 2 and 3 would require implementation of an Agricultural Mitigation Plan that would require that the applicant demonstrate completion of landowner consultation on facility design and construction methods, and that the applicant follow-through with any commitments on siting facility components to minimize agricultural impacts and provide adequate compensation for loss of agriculturally productive lands.

Based on the above representations and compliance with recommended conditions, the Department recommends Council find that the proposed 230 kV BPA Stanfield transmission line would not result in a significant change in accepted farm practices or a significant increase in cost of farm practices on surrounding land. Therefore, the Department recommends Council find that the proposed 230 kV BPA Stanfield transmission line would satisfy UCDC 152.617(II)(7)(B)(3).

(4) The governing body of a county or its designee may consider costs associated with any of the factors listed in paragraph (B) of this subsection, but consideration of cost may not be the only consideration in determining whether the associated transmission line is necessary for public service.

Costs were not a significant consideration in determining the location of the proposed UEC Cottonwood transmission line route.

For the above stated reasons, the Department recommends that the Council find that the applicant has provided sufficient analysis required under UCDC 152.617(II)(7)(B) that the proposed UEC BPA Stanfield transmission line, as an associated transmission line, must be sited on high value farmland because it is "locationally dependent". As such, the Department recommends that the Council find that the associated transmission line is "an associated transmission line."

IV.E.1.b Goal 3 Exception

The proposed solar facility components would use, occupy or cover approximately 242 acres of high-value farmland[131] and 1,840 acres of arable land. Therefore, the proposed solar facility components would not comply with OAR 660-033-0130(38)(g) and (i), which prohibit a photovoltaic solar power generation facility from using, occupying or covering more than 12 acres of high-value farmland or 20 acres of arable land, respectively. Pursuant to OAR 345-022-0030(2)(b)(B), if a proposed facility does not comply with an applicable substantive criteria, the proposed facility must otherwise comply with the applicable statewide planning goal (here, Goal 3 Agricultural Lands) or seek an exception to the statewide planning goal. Pursuant to ORS

[131] High-value farmland per ORS 195.300(10)(f)

469.504(1)(b)(B), non-compliance with a statewide planning goal requires a determination by the Council that an exception to the goal is warranted under ORS 469.504(2).

The Council's Land Use standard at OAR 345-022-0030(4), repeats the language of ORS 469.504(2), stating:

> *(4) The Council may find goal compliance for a facility that does not otherwise comply with one or more statewide planning goals by taking an exception to the applicable goal. Notwithstanding the requirements of ORS 197.732, the statewide planning goal pertaining to the exception process or any rules of the Land Conservation and Development Commission pertaining to the exception process goal, the Council may take an exception to a goal if the Council finds:*
>
> *(a) The land subject to the exception is physically developed to the extent that the land is no longer available for uses allowed by the applicable goal;*
>
> *(b) The land subject to the exception is irrevocably committed as described by the rules of the Land Conservation and Development Commission to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable; or*
>
> *(c) The following standards are met:*
>
> *(A) Reasons justify why the state policy embodied in the applicable goal should not apply;*
>
> *(B) The significant environmental, economic, social and energy consequences anticipated as a result of the facility have been identified and adverse impacts will be mitigated in accordance with rules of the Council applicable to the siting of the facility; and*
>
> *(C) The facility is compatible with other adjacent uses or will be made compatible through measures designed to reduce adverse impacts.*

The applicant has not sought an exception under OAR 345-022-0030(4)(a) or (b). In ASC Exhibit K, the applicant provides an assessment as to why a goal exception is appropriate for the proposed solar facility under OAR 345- 022-0030(4)(c). Based on the evaluation presented below, the Department recommends that Council find that a goal exception under OAR 345-022-0030(4)(c) is appropriate.

Reasons Supporting an Exception

Under OAR 345-022-0030(4)(c)(A) (and ORS 469.504(2)(c)(A)), for the Council to determine whether to grant an exception to a statewide planning goal, the applicant must provide reasons justifying why the state policy embodied in the applicable goal should not apply. The state policy embodied in Goal 3 is the preservation and maintenance of agricultural land for farm use. The applicant's arguments relating to "reasons supporting an exception" are discussed below. The reasons recommended as justified for taking a "reasons" exception are evaluated in combination, but are first evaluated individually. See the conclusion under the heading "Summary of Reasons Recommended as Justifiable."

Minimal Impacts to Agriculture

The applicant asserts that the proposed solar facility would have minimal impacts to agriculture based on: minimal direct loss of agricultural lands within Umatilla County, minimal impacts on remaining farm operations within the subject tracts, minimal impacts on surrounding agricultural lands, and lack of water availability. The Department presents an evaluation of the applicant's facts and reasoning below.

Minimal Direct Loss of Agricultural Land in Umatilla County

The proposed solar micrositing area would remove up to 1,896 acres of actively cultivated dryland winter wheat from production in Umatilla County. Based on U.S. Department of Agriculture Census data and Oregon Department of Agriculture data, this acreage represents the following in terms of percentage of lands in Umatilla County:

- 1,896 of 227,300 acres of dryland wheat harvested in 2019 = 0.8%
- 1,896 of 406,088 acres of harvested crops in 2017 = 0.5%
- 1,896 of 815,962 acres of cropland in 2017 = 0.2%
- 1,896 of 1,352,241 acres of land in Exclusive Farm Use zoned land in 2017 = 0.1%

The Department reviewed the sources of the data and validated that the acreages referenced for Umatilla County are accurate. The Department recommends Council find that a percentage conversion of lands ranging from 0.1 to 0.8% is low and supports, in part, a basis that impacts of using 1,896 acres of EFU-zoned land used for dryland winter wheat in Umatilla County would represent a minimal impact to agriculture.

Minimal Direct Impacts within Subject Tracts

On a tract-level, the removal of 1,896 acres from cultivation represents the following percentages:

- 1,896 of 28,138 acres on Tracts 3, 8, 11 and 14 = 6.7%
- 1,896 acres = 37.8% of dryland winter wheat on subject tracts

Applicant argues that the above percentages are minimal. The Department agrees that the percentages are less than 50% of the lands on the subject tracts, but does not agree that percentages alone are sufficient to evaluate the extent of the impact on the subject tracts. The Department does not have information on yields or cultivation history of the subject tracts which would support an evaluation of whether 6.7% or 37.8% represents a significant impact on the subject tracts. For these reasons, the Department recommends Council not rely on this information for the "minimal impacts to agriculture" reason.

Minimal Impact on Remaining Farm Operation

The underlying landowner of the proposed solar micrositing area is the Cunningham Sheep Company/Pendleton Ranches. On an individual landowner level, based on land ownership within the county, the removal of 1,896 acres from cultivation represents the following percentage:

- 1,896 of 73,000 acres = 2.5%

Steven H. Corey of Cunningham Sheep Company affirmed that the proposed solar facility would result in valuable lease payments that would allow his family to intensify agricultural practices on land surrounding the project boundary. Mr. Corey provided numerous statements the Department recommends Council weigh and consider as substantially supportive evidence in the evaluation of this reason. He stated:

- We are confident the project's location in this area will not negatively impact our existing use of our land surrounding the solar project boundary or overall success of our ranching and farming operations
- The project will enable us to support and improve our farming and ranching operations in the surrounding areas by providing valuable lease payments we can invest in ongoing activities on more active land elsewhere on our property
- We intend to devote lease revenues in part to improve housing for our sheep herders as well as farm employees in the cattle and farming departments. The lease payments projected exceed the potential revenues from the current dryland wheat production on the project boundary today. With board approval we may also acquire, clean up and refurbish a contiguous agriculture-related business to strengthen the diversity base of our legacy team. The lease payments exceed the potential revenues from the current dryland wheat production on the project boundary today.
- The project will not result in any loss of employees from our operations. To the contrary, we expect to add agricultural jobs to our payroll based on the lease payments. Specifically, we may add to our team up to 6 new employees with anticipated wages of $225,00 per year
- We also expect, or more likely, increase our operational spending with local agricultural suppliers and service providers, given our projected increased investments in operations on the land remaining in agricultural and ranching use and in the new agricultural-related business.
- Net revenues per acre from land that will be used for wind or solar development by the project will substantially exceed revenues from the present dry land wheat farming.[132]

In addition, an adjacent non-participating owner, Mr. James Kirkham, provider a letter dated January 14, 2022, stating that the proposed project would not hinder his ability to farm, or increase the cost of farming on their property. [133]

[132] NHWAPPDoc2-10 ASC Exhibit K Land Use 2022-01-31. Attachment K-1.
[133] Id.

The relatively low percentage of overall land owned by the Cunningham Sheep Company that would be converted from cultivation to energy infrastructure, combined with the substantial evidence provided in the form of signed letters from both participating and non-participating landowners indicating that the proposed facility and removal of agriculturally productive lands would not significantly impact agricultural operations and that the lease payments would be more than current revenue streams and be used to support new agricultural-related jobs and agricultural operations to a level exceeding current practices represent that the proposed solar micrositing area would have a minimal impact to agriculture. Based on these facts, evidence and reasons, the Department recommends Council find that using 1,896 acres of EFU-zoned land used for dryland winter wheat in Umatilla County would represent a minimal impact to agriculture.

Minimal Impact on Surrounding Lands

As evaluated under the conditional use requirements of UCDC 152.061, the Department recommends Council find that the proposed solar facility would have minimal impacts to accepted farm practices, and the cost thereof, on surrounding agricultural lands. The applicant's facts and evidence for this argument are not distinct and do not expand upon the evaluation under the conditional use requirements. Because the proposed solar facility must demonstrate that the proposed use has minimal impacts on surrounding lands used for agricultural purposes and the evaluation presented for the "reasons" exception offered the same information, the Department recommends Council find that this information does not support a basis that impacts of using 1,896 acres on EFU-zoned land used for dryland winter wheat in Umatilla County would represent a minimal impact to agriculture.

Lack of Water Availability

There are no active or historic water rights within, or adjacent to, the proposed solar micrositing area. Therefore, use of the lands within the solar micrositing area for energy infrastructure would not impact potential future use as irrigated agriculture. Applicant suggests that if the lands were irrigated or had a water right, that the impacts would be greater than what are realized under non-irrigated lands. Because the lands within the solar micrositing area are actively used for cultivation of dryland winter wheat, the Department recommends Council find that whether the site has a water right or not is irrelevant and does not support the evaluation of whether the proposed solar facility would result in minimal impacts to agriculture.

Reason Recommended as Justified for a Goal 3 Exception?

Based on the reasoning and analysis presented above, the Department recommends Council find that "minimal impacts to agriculture" is a reason that, in part, would justify taking an exception to Goal 3. Specifically, this reason is recommended as justified because the proposed solar micrositing area represents less than 1% of agricultural and cultivated dryland winter wheat within Umatilla County and less than 2% of the underlying landowner, Cunningham Sheep Company's, total lands in Umatilla County; and the agricultural loss in acreage would be

offset by revenue from lease payments redirected back into intensified agricultural operations within Umatilla County.

Local Economic Benefits

The applicant asserts that the proposed solar facility would result in local economic benefits as follows:

- Lease payments to participating landowners would provide a net benefit in revenue and investment in agriculture and local ventures compared to the value of dryland wheat cultivation, which fluctuates ($8.04 per bushel in 2012 to $4.44 per bushel in 2016)[134] in a manner where the land may otherwise, at times, be operated at a loss. This is supported by letters provided by the participating landowners (ASC Exhibit K Attachment K-1).
- Proposed facility construction would result in up to 150 local jobs and approximately 345 secondary jobs. No evidence is provided to support this representation; the Department refrains from recommending that Council impose the representation as a condition in the event of local work force limitations at the time of construction.
- Property tax payments to Umatilla County ($49.9 million over 25-year period) or deferred property tax payment under a Strategic Investment Program (up to $39 million over 25-year period, which includes a $7,000/MW fee and onetime $2.5 million community investment fee) or Fee In Lieu of property taxes for solar projects ($45.5 million over 25-year period). Applicant anticipates entering into a SIP agreement with Umatilla County, but has not yet executed such agreement. Property taxes for the proposed solar micrositing area without the project are represented as $0.35 million for a 25-year period.

For information purposes only, the Department refers Council to a decision by the Oregon Land Use Board of Appeals (LUBA) that concluded that a general desire to diversify or boost the local economy is an insufficient basis to justify an exception to a resource goal.[135] Therefore, the Department recommends that the underlying intent of Goal 3, preservation of agricultural lands in large blocks for working farm operations, apply to the evaluation of whether the reason "local economic benefit" justifies taking a goal exception. To meet this intent, the Department recommends that the applicant be required to demonstrate that, through its SIP negotiations with Umatilla County, the fee payment amount and programs *considered* for funding through the community investment fee benefit and preserve agricultural practices [Emphasis added]. The Department recommends that Council acknowledge that the County is in the best position to direct SIP investments any may not have programs that are designed to

[134] Oregon Department of Agriculture 2021. Oregon Agricultural Statistics & Directory, p.15. Available: https://www.oregon.gov/oda/shared/Documents/Publications/Administration/AgStatsDirectory.pdf

[135] Oregon Shores Conservation Coalition v. Coos County (2021) WL 2336704, VinCEP v. Yamhill County, 55 Or LUBA 433 (2007), Morgan v. Douglas County, 42 Or LUBA 46 (2002), and Middleton v. Josephine County, 31 Or LUBA 423 (1996)

benefit agricultural practices. The Department recommends Council impose the following condition:

> **Recommended Land Use Condition (PRE) 15**: Prior to construction of the solar facility, the certificate holder shall provide evidence to the Department that it has executed a Strategic Investment Program (SIP) agreement with Umatilla County. In the SIP agreement or other documentation, the certificate holder shall demonstrate that negotiations with the county evaluated an investment fee amount and program, if available, that would benefit or preserve agriculture. If a SIP agreement is not executed with the county, certificate holder shall provide evidence to the Department of the alternative property tax payment option selected and shall identify any programs implemented by the county that would receive tax revenue with an agricultural benefit.

Based on the evidence provided in the letter from Cunningham Sheep Company, as provided in ASC Exhibit K Attachment K-1, affirming that lease payments would be used to intensify agricultural activities within the remaining operating agricultural lands; and, the benefit to the local economy from property taxes, based on compliance with the above-recommended condition, the Department recommends Council find that "local economic benefit" is a reason that justifies taking an exception to the statewide policy embodied in Goal 3.

Reason Recommended as Justified for a Goal 3 Exception?

Based on the reasoning and analysis presented above, the Department recommends Council find that "local economic benefit" is a reason that, in part, would justify taking an exception to Goal 3. Specifically, that the underlying landowner would receive sufficient lease payments to reinvest and intensify agricultural practices compared to present state and that Umatilla County would receive property tax payments in excess of $39 million compared to present state, supported by a recommended condition.

Locational Dependency

The applicant asserts that the proposed solar facility site is locationally dependent because: it is located in proximity to an existing transportation network; there are no other alternatives within the subject tracts that would provide the same footprint with a lesser impact to cultivated land; it would not impact irrigated agriculture; and it provides a site that allows for integration of a wind facility.

Evidence to support some of these facts is provided in the ASC. The solar siting area is located directly off of Speare Canyon Road/Coombs Canyon Road (County Road 1350), which connects to US-395, as presented in ASC Exhibit U Figure U-1 Transportation Routes. This road is identified as a primary transportation route for proposed facility construction and would minimize excessive vehicle miles travelled and associated air quality emissions if the site were not served by an existing road. While proximity to existing transportation systems is important

to minimize traffic impacts, the Department recommends Council only consider this argument supportive in combination with other factors, if there are other factors determined reasonable.

The applicant's evaluation of the suitability of siting the solar facility within other areas of the subject tracts is not a justifiable reason – as it only evaluates whether there are alternative sites that would have fewer impacts to agriculture within the tracts of the landowners that have already signed on to the project. All of the land within the subject tracts is within EFU and includes high-value and arable land. Whether any other location within the subject tracts would result in fewer total acres of high-value or arable land is irrelevant, as a Goal exception would still be required. The evaluation of alternatives is overly narrow and would be more suitable for Council consideration if, at a minimum, it evaluated reasonable alternatives within the analysis area. Similarly, the argument that the proposed solar facility is locationally dependent to the site, because the site does not contain irrigated agriculture is also not a justifiable reason. The Department therefore disagrees that the proposed facility is locationally dependent because the site does not include irrigated agriculture.

Lastly, because the Council no longer has a Need standard for generation facilities, there is no guarantee there will ever be a market need for the wind facility components, and the applicant has provided no assurance that the wind facility components would actually be constructed. If the wind facility components are not constructed, the argument that the proposed solar facility site is locationally dependent because it provides a site for both wind and solar may not be realized. The Department does not consider it appropriate to require that the facility include wind and solar technology to ensure that this argument can still be applied following approval. Therefore, this argument is recommended not to be considered.

Reason Recommended as Justified for a Goal 3 Exception?

Based on the above reasoning and analysis, the Department recommends Council find that the applicant's reason of "locational dependency" is not a reason that would justify taking an exception to the statewide policy embodied in Goal 3.

Minimal Impacts to Other Environmental Resources

The applicant asserts that the proposed solar facility would have minimal impacts to other environmental resources because it avoids: Washington ground squirrel habitat, waters of the state per ORS 196.800, FEMA 100-year floodplains, USFWS-designated critical habitat, and ODFW-designated big game winter ranges.

Evidence to support these facts are included in ASC Exhibit P, Attachment P-2 2017-2019 Wildlife and Habitat Categorization Survey Report Figures 1 and 2. These figures demonstrate that habitat within the solar micrositing area is Category 6 and therefore does not include WGS habitat, although there is suitable habitat within 1,000 of the edges of the solar micrositing area that could result in Category 1 or 2 habitat within the solar micrositing area, based on preconstruction surveys. ASC Exhibit J Attachment J-3 provides the applicant's analysis of

potential impacts from construction and operation of proposed solar facility components on regulated Waters of the State (WOS) as defined under ORS 196.800(15). Based on the applicant's wetland delineation surveys, there are no WOS under ORS 196.800(15) identified with the solar micrositing area, which was reviewed and concurred with by DSL.[136] Ephemeral streams are protected as WOS under the Clean Water Act (CWA) and are protected resources under the Council's Soil Protection standard, as ephemeral streams act as drainages, that if impacted, could contribute to erosion impacts to surrounding agricultural practices.

Reason Recommended as Justified for a Goal 3 Exception?

The proposed solar facility is not devoid of environmental impacts, including construction-related impacts to public services from traffic, dust, housing, hospitals, water and fire. Similarly, operational impacts could result in noxious weeds and public-service related fire impacts. These impacts would be minimized through compliance with recommended site certificate conditions, nonetheless, the proposed solar facility would have environmental impacts. The Department recommends Council maintain this type of reason for a facility proposed to be sited in a location that is substantially devoid of resources that could be impacted, which is not the case for this proposed solar facility.

Summary of Reasons Recommended as Justifiable

The Department recommends Council find that 1) minimal impacts to agriculture and 2) local economic benefits are the two reasons justified for taking an exception to the statewide policy embodied in Goal 3.

Environmental, Economic, Social and Energy Consequences

Under OAR 345-022-0030(4)(c)(B) and ORS 469.504(2)(c)(B), in order for the Council to determine whether to grant an exception to a statewide planning goal, the applicant must show that "the significant environmental, economic, social and energy consequences" of the proposed solar facility have been identified and mitigated in accordance with Council standards.

Environmental Consequences

The proposed solar facility must satisfy the requirements of all applicable EFSC standards, rules and statutes. Applicable environmental EFSC standards include: General Standard of Review; Soil Protection standard; Protected Areas standard; Recreation Standard; Scenic Resources standard; Fish and Wildlife Habitat standard; and the Threatened and Endangered Species standard, as evaluated in this order. Based on the recommended findings of fact, conclusions of law, and conditions of approval presented in this order related to environmental EFSC

[136] NHWAPPDoc2-9b ASC Exhibit J DSL Concurrence Solar Components (WD #2020-0613) 2021-04-07.

standards, the Department recommends Council find that the proposed solar facility, including mitigation, would not cause significant adverse environmental consequences or impacts.

Economic Consequences

The proposed solar facility would create jobs during construction and operation; it would result in lease payments to participating landowners[137], providing a more stable source of income compared to dryland winter wheat or CRP payments; and would result in property taxes to Umatilla County. The proposed solar facility is not anticipated to create negative economic impacts to public services, based on letters from water service and fire protection service providers in ASC Exhibit U.

Based on these facts, the Department recommends Council find that the proposed solar facility, including mitigation, would have a beneficial economic impact.

Social Consequences

Social consequences are evaluated within the context of impacts on a community from a proposed facility, such as impacts from facility visibility, noise, traffic, or demand on providers of public services. As presented in this order, the proposed solar facility components would not be expected to result in significant adverse visual or noise impacts on any scenic resource, protected areas, or important recreational opportunity within the analysis areas; or to public services.

As discussed in Section IV.K., *Historic, Cultural and Archaeological Resources*, the Department recommends Council impose conditions to ensure that avoidance and management measures are implemented during construction and operation to protect cultural or archaeological resources identified as eligible or potentially eligible for NRHP listing. As described further in Section IV.K. of this order, the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) and the applicant have reached a mutual agreement on the effects the facility may have on historic properties of religious and cultural significance to the CTUIR.

Based on the recommended findings of fact and conclusions of law, and conditions of compliance as presented in this order under the Council's Scenic Resources standard; Historic, Cultural and Archeological standard; Public Services standard; and Recreation standard, the Department recommends Council find that the proposed solar facility would not cause significant adverse social consequences.

Energy Consequences

The proposed solar facility would produce up to 260 MW of renewable, emissions-free energy. Therefore, the Department recommends that the Council concludes that the proposed solar

[137] NHWAPPDoc2-10 ASC Exhibit K Land Use 2022-01-31. Attachment K-1 Landowner Letters

facility would not cause significant adverse energy consequences and would provide a positive energy consequence by producing clean, renewable electricity.

Compatibility with Adjacent Land Use

Under OAR 345-022-0030(4)(c)(C) (and ORS 469.504(2)(c)(C)), in order for the Council to determine whether to grant an exception to a statewide planning goal, the applicant must show that the proposed solar facility is compatible with other adjacent land uses or will be made compatible through mitigation measures.

The proposed solar micrositing area is surrounded by EFU-zoned land. Adjacent land uses include livestock grazing and dryland wheat cultivation (see ASC Exhibit K Figure K-10). To support compatibility of the proposed energy infrastructure within lands zoned for agricultural use, numerous measures would be required including:

- Consultation with area landowners during construction and operation to identify site specific concerns and measures to minimize adverse impacts to agricultural practices (see recommended Land Use Conditions 2 and 3)
- Recordation of a "Covenant Not to Sue" with Umatilla County (see recommended Land Use Condition 15)
- Implementation of a Revegetation and Noxious Weed Control Plan during construction and operation (see recommended Fish and Wildlife Habitat Conditions 2 and 3)
- Adherence to the requirements of a 1200-C NPDES permit; and, additional dust control management measures during construction (see Soil Protection Conditions 1 and 2)
- Implementation of erosion control and site stabilization measures during operations (see Soil Protection Condition 4, 5 and 7)
- Implementation of a Traffic Management Plan and execution of a Road Use Agreement with Umatilla County to minimize potential construction-related traffic impacts on local roads (see recommended Public Services Condition 1)

Based upon the zone and type of adjacent land uses, and compliance with the above-referenced conditions, the Department recommends Council find that the proposed solar facility would be compatible with adjacent land uses.

The Department, therefore, recommends the Council find an exception to Goal 3 is justified under OAR 345-022-0030(4)(c) and ORS 469.504(2)(c);

IV.E.2 Directly Applicable State Laws and Statutes

Land use rules and statutes that would apply to the proposed facility include LCDC OAR 660-033-0130(37) and (38); ORS 215.274 and ORS 215.275.

IV.E.2.a LCDC Minimum Conditional Use Requirements for Wind Facility at OAR 660-033-0130(37)

As relevant to the proposed wind facility, OAR 660-033-0130(37) provides that:

> ** * * A proposal for a wind power generation facility shall be subject to the following provisions:*
>
> *(a) For high-value farmland soils described at ORS 195.300(10), the governing body or its designate must find that all of the following are satisfied:*

The proposed wind micrositing area is interspersed with high value farmland soils per ORS 195.300(10), as presented in ASC Exhibit K Figure K-6; therefore compliance with OAR 660-033-0130(37)(a) is required.

> *(A) Reasonable alternative have been considered to show that siting the wind power generation facility or component thereof on high-value farmland soils is necessary for the facility or component to function properly or if a road system or turbine string must be placed on such soils to achieve a reasonably direct route considering the following factors:*
> *(i) Technical and engineering feasibility;*
> *(ii) Availability of existing rights of way; and*
> *(iii) The long term environmental economic, social and energy consequences of siting the facility of component on alternative sites, as determined under paragraph (B);*

OAR 660-033-0130(37)(a)(A) requires the applicant to consider "reasonable alternatives" to locating the facility, or components of the facility, on high-value farmland. The applicant must "show that siting the wind power generation facility or component thereof on high-value farmland soils is necessary for the facility or component to function properly." In the case of access roads and turbine strings, the applicant must show that these components must be placed on high-value farmland soils "to achieve a reasonably direct route." To demonstrate the necessity of using high-value farmland for the facility to "function properly" or for a road or turbine string to "achieve a reasonably direct route," the applicant must consider technical and engineering feasibility and the availability of existing rights-of-way. The applicant must also consider the long term environmental, economic, social and energy consequences of siting the facility or component on alternative sites, as determined under OAR 660-033-0130(37)(a)(B), discussed below.

(i) Technical and Engineering Feasibility

The proposed wind micrositing area includes high-value farmland under ORS 195.300(10)(f)(C), which includes lands within EFU-zoned land that are no more than 3,000 feet above mean sea level, with an aspect between 67.5 and 292.5 degrees and a slope between zero and 15 percent, and that is located in the portion of the Columbia Valley viticultural area. The nature of lands meeting this specific criterion is patchy and interspersed, resulting in significant

limitations in designing wind facility components to avoid patches. The extent of high value farmland soils within the wind micrositing area are presented in ASC Exhibit K Figure K-6.1 and K-6.2.

The applicant affirms that turbine strings and associated roads have been designed in a manner that maximizes renewable energy generation, where the site provides favorable wind conditions and areas of high elevation. As demonstrated in ASC Exhibit K Figure K-6.1 and K-6.2, it would not be possible to avoid or substantially reduce impacts on high value farmland soils without compromising the technical feasibility of the proposed wind facility components. Siting proposed wind facility components to avoid high value farmland soils is not feasible due to what the applicant describes as the 'patchy' nature of the high value farmland soil, the unusual routes high value farmland soil avoidance would require, and the impacts to existing farmland that the realignment would require. Therefore, the Department recommends Council find that the proposed wind facility micrositing area must be sited on high value farmland soils due to technological and engineering feasibility limitations to avoidance.

(ii) Availability of Existing Rights-of-Way

This factor applies primarily to access roads and transmission lines associated with a wind power facility, which can sometimes take advantage of existing utility and road rights-of-way to reduce overall project impacts to farmland. The location of access roads is generally dictated by the location of the proposed wind turbines. The applicant asserts that there are few if any rights-of-way within the wind micrositing area or surrounding analysis area. Rights-of-way within the analysis area are also interspersed with high value farmland pursuant to ORS 195.300(10)(f)(C). Therefore, the Department recommends Council find that the proposed wind facility micrositing area must be sited on high value farmland soils due to a lack of existing rights-of-way that would avoid high value farmland soils.

(iii) Long-Term Environmental, Economic, Social, and Energy Consequences

(B) The long-term environmental, economic, social and energy consequences resulting from the wind power generation facility or any components thereof at the proposed site with measures designed to reduce adverse impacts are not significantly more adverse than would typically result from the same proposal being located on other agricultural lands that do not include high-value farmland soils;

Environmental consequences of siting the proposed wind facility micrositing area on high value farmland soils pursuant to ORS 195.300(10)(f)(C) would not be significantly more adverse than siting on other agricultural lands for several reasons. First, the soils are designated as high value farmland soils for its potential value to viticulture. However, the wind micrositing area has never been used for viticulture; therefore, direct impacts to viticulture would not occur. Second, given the extent of high value soils pursuant to ORS 195.300(10)(f)(C), wind facility components could not be sited in any other location within the analysis area without a comparable impact, in terms of acres, to high value farmland soils. Lastly, total permanent and

temporary impacts to high value soils from proposed wind facility components is insignificant given the remaining available acres for cultivation within the subject tracts.

Economic, social and energy consequences include temporary construction-related jobs, revenue for landowners and the community from property taxes and road improvement requirements. Construction and operation of the proposed facility would have minimal social impacts based on the evaluation of impacts to fire, police, housing, traffic and emergency services public and private service providers provided in Section IV.M. *Public Services* of this order.

Energy benefits include approximately 340 MWs of renewable energy generation, if all 112 proposed wind turbines are constructed.

Given the specific benefits of the proposed wind micrositing area from topography and high wind areas, and the limitations in siting facility components anywhere in proximity that would avoid high value farmland while still being sited in a sensical manner (and not unnecessarily spread out and interspersed to avoid high value farmland), the Department recommends that Council find that siting of the proposed wind facility components on high value farmland would have limited long-term environmental impacts and beneficial economic, social and economic consequences.

> *(C) Costs associated with any of the factors listed in paragraph (A) may be considered, but costs alone may not be the only consideration in determining that siting any component of a wind power generation facility on high-value farmland soils is necessary;*

Cost was not a determinative factor in siting the proposed wind facility micrositing corridor.

> *(D) The owner of a wind power generation facility approved under subsection (a) shall be responsible for restoring, as nearly as possible, to its former condition any agricultural land and associated improvements that are damaged or otherwise disturbed by the siting, maintenance, repair or reconstruction of the facility. Nothing in this subsection shall prevent the owner of the facility from requiring a bond or other security from a contractor or otherwise imposing on a contractor the responsibility for restoration; and*

The applicant would be responsible for all areas temporarily disturbed during construction, maintenance or repair of the proposed wind facility, including the components that would be located on EFU-zoned land. As evaluated in Section IV.H. *Fish and Wildlife Habitat* and IV.G. *Retirement and Financial Assurance* of this order, recommended Fish and Wildlife Habitat Condition 1 would require that temporarily disturbed vegetation is restored to its pre-disturbance condition; and recommended Retirement and Financial Assurance Condition 4 would ensure that, prior to construction, the applicant obtain and submit to the Department a bond or letter of credit based on an amount recommended be considered by Council as

satisfactory for facility decommissioning. The bond or letter of credit would remain in effect until the facility is decommissioned to provide assurance to the State, in the event the applicant is unable to fulfil its decommissioning obligations. Then, upon facility decommissioning, the applicant would be required to decommission the facility in accordance with a Council approved decommissioning plan.

In addition, the Department recommends Council impose a condition requiring that all applicant representations that would minimize and mitigate temporary and permanent impacts to agricultural lands be incorporated into an Agricultural Mitigation Plan and required to be implemented under Land Use Conditions 2 and 3.

(E) The criteria of subsection (b) are satisfied

(b) For arable lands, meaning lands that are cultivated or suitable for cultivation, including high-value farmland soils described at ORS 195.300 (Definitions for ORS 195.300 to 195.336)(10), the governing body or its designate must find that:

(A) The proposed wind power facility will not create unnecessary negative impacts on agricultural operations conducted on the subject property. Negative impacts could include, but are not limited to, the unnecessary construction of roads, dividing a field or multiple fields in such a way that creates small or isolated pieces of property that are more difficult to farm, and placing wind farm components such as meteorological towers on lands in a manner that could disrupt common and accepted farming practices;

The applicant provides numerous commitments to ensure that the design and construction of the proposed wind facility would not create unnecessary negative impacts on agricultural operations. Commitments include landowner consultation on design and construction methods; implementation of a long-term noxious weed control plan; recordation of a Covenant Not to Sue; and erosion and compaction minimization measures. All of the applicant's representations are represented as site certificate conditions recommended by the Department to be imposed by Council.

- Recommended Soil Protection Conditions 1 and 2 would require consultation with the Umatilla County Soil and Water Conservation District, prior to construction, and would require implementation of best management practices to minimize and monitor for offsite erosion impacts
- Recommended Soil Protection Condition 3 would require that, during operations, the applicant implement a Soil Monitoring Plan that would evaluate and mitigate for topsoil loss and erosion impacts resulting from construction
- Recommended Soil Protection Conditions 4, 5 and 7 would require that the applicant adhere to the requirements of an SPCC during construction and operation, to minimize any potential impacts from soil contamination
- Recommended Fish and Wildlife Conditions 1,2 and 3 would require that the applicant implement and adhere to the requirements of a Revegetation and Noxious Weed Plan,

prior to and during construction and operation, including long-term revegetation and noxious weed control.

- Recommended Public Services Condition 1 would require implementation of a Traffic Management Plan and execution of a Road Use Agreement with Umatilla County Public Works Department, which would minimize potential traffic and dust-related impacts.
- Recommended Land Use Conditions 2 and 3 would require implementation of an Agricultural Mitigation Plan that would require that the applicant demonstrate completion of landowner consultation on facility design and construction methods, and that the applicant follow-through with any commitments on siting facility components to minimize agricultural impacts and provide adequate compensation for loss of agriculturally productive lands.
- Recommended Land Use Condition 15 would require that the applicant record a "Covenant Not to Sue" with Umatilla County.

The Department recommends Council find that the potential impacts to agricultural operations would be minimized through compliance with the recommended conditions consistent with OAR 660-033-0130(37)(b)(A).

(B) The presence of a proposed wind power facility will not result in unnecessary soil erosion or loss that could limit agricultural productivity on the subject property. This provision may be satisfied by the submittal and county approval of a soil and erosion control plan prepared by an adequately qualified individual, showing how unnecessary soil erosion will be avoided or remedied and how topsoil will be stripped, stockpiled and clearly marked. The approved plan shall be attached to the decision as a condition of approval;

This provision is consistent with Council's Soil Protection standard, where the Department recommends Council impose a condition requiring that, during facility construction, the applicant be required to adhere to the requirements of a DEQ-approved Erosion and Sediment Control Plan during construction (see recommended Soil Protection Conditions 1 and 2) and implementation of a Revegetation and Noxious Weed Plan, prior to and during construction and operation (see recommended Fish and Wildlife Conditions 1, 2 and 3). This plan includes best management practices to be implemented during construction and operation designed to reduce and minimize unnecessary soil erosion or loss that could limit agricultural productivity within the proposed facility site and on adjacent EFU zoned land.

Based upon compliance with the recommended conditions, the Department recommends Council conclude that the proposed wind facility components would satisfy the requirements under OAR 660-033-0130(37)(b)(B).

(C) Construction or maintenance activities will not result in unnecessary soil compaction that reduces the productivity of soil for crop production. This provision may be satisfied by the submittal and county approval of a plan prepared by an adequately qualified individual, showing how unnecessary soil compaction will be avoided or

remedied in a timely manner through deep soil decompaction or other appropriate practices. The approved plan shall be attached to the decision as a condition of approval; and

This provision is consistent with Council's Soil Protection standard, where the Department recommends Council impose a condition requiring that the applicant minimize compaction during construction, reclaim and restore temporarily impacted soils including decompaction to a depth of 12 to 18", and implement a monitoring and mitigation plan to address any long-term compaction related soil impacts (see recommended Soil Protection Conditions 1, 2, and 3). In addition, the Department recommends Council require implementation of a Revegetation and Noxious Weed Plan, prior to and during construction and operation (see recommended Fish and Wildlife Conditions 1, 2 and 3). This plan include best management practices to be implemented during construction and operation designed to reduce, minimize and mitigate for unnecessary soil compaction that could limit agricultural productivity within the proposed solar facility site and on adjacent EFU zoned land.

Based upon compliance with the recommended conditions, the Department recommends Council conclude that the proposed wind facility components would satisfy the requirements under OAR 660-033-0130(37)(b)(C).

(D) Construction or maintenance activities will not result in the unabated introduction or spread of noxious weeds and other undesirable weeds species. This provision may be satisfied by the submittal and county approval of a weed control plan prepared by an adequately qualified individual that includes a long-term maintenance agreement. The approved plan shall be attached to the decision as a condition of approval.

Noxious weed control is required to ensure the impacts to adjacent agricultural lands are minimized and that revegetation and site stabilization within areas of disturbance are achieved.

Recommended Fish and Wildlife Habitat Conditions 1, 2 and 3 require that the applicant implement a Revegetation and Noxious Weed Plan, which includes requirements for noxious weed control, prior to and during construction and operation. Elements of the noxious weed control requirements include preconstruction identification and treatment of infestation locations; flagging, avoiding and monitoring of infestation areas during construction; and long-term monitoring and treatment during operations. All of these requirements would be reported to the Department and Umatilla County Weed Department and allow for the Department to require additional treatment and monitoring given reported results. Based upon compliance with the condition, the Department recommends Council conclude that the proposed wind facility components would not result in unabated introduction or spread of noxious weeds and other undesirable weed species and would satisfy the requirements under OAR 660-033-0130(37)(b)(D).

(c) For nonarable lands, meaning lands that are not suitable for cultivation, the governing body or its designate must find that the requirements of OAR 660-033-0130 (Minimum Standards Applicable to the Schedule of Permitted and Conditional Uses)(37)(b)(D) are satisfied.

The applicant would be required to implement noxious weed control under the Revegetation and Noxious Weed Plan, per recommended Fish and Wildlife Habitat Conditions 1, 2, and 3, consistent with OAR 660-033-0130(37)(b)(D), as required for impacts to nonarable lands.

IV.E.2.b LCDC Minimum Conditional Use Requirements for Solar Facility at OAR 660-033-0130(38)

As shown in Table 3: *High-Value, Arable and Nonarable Lands in and Around the Site Boundary and Micrositing Corridors*, the proposed solar facility components would use, occupy, or cover 242 acres of high-value farmland per ORS 195.300(10).

Table 3: High-Value, Arable and Nonarable Lands in and Around the Site Boundary and Micrositing Corridors

Land Type	Acres/Percent in Analysis Area	Acres/Percent in Site Boundary	Acres/Percent in Micrositing Corridors	Acres/Percent in Solar Siting Area
High-value farmland	28,420/36%	11,634/24%	4,553/29%	242 (13%)
Arable	64,155/81%	37,761/78%	13,939/88%	1,840 (97%)
Nonarable	14,893/19%	10,412/22%	1,786/11%	56 (3%)

Source: NHWAPPDoc2-10 ASC Exhibit L Land Use 2022-01-31. Table K-1
[1] High-value farmland designations per ORS 195.300(10)(a), (c), and (f).
[2] Arable includes Class I-IV soils, cultivated land regardless of soil class, and high-value lands and soils.

OAR 660-033-0130 – Minimum Standards Applicable to the Schedule of Permitted and Conditional Uses

(38) A proposal to site a photovoltaic solar power generation facility shall be subject to the following definitions and provisions:

****[138]*

(g) For high-value farmland described at ORS 195.300(10), a photovoltaic solar power generation facility shall not use, occupy, or cover more than 12 acres unless:

(B) The provisions of paragraph (h)(H) are satisfied; or

[138] OAR 660-033-0130(38)(a)-(e) contain definitions. The provisions begin at (g).

(C) A county adopts, and an applicant satisfies, land use provisions authorizing projects subject to a dual-use development plan. Land use provisions adopted by a county pursuant to this paragraph may not allow a project in excess of 20 acres. Land use provisions adopted by the county must require sufficient assurances that the farm use element of the dual-use development plan is established and maintained so long as the photovoltaic solar power generation facility is operational or components of the facility remain on site. The provisions of this subsection are repealed on January 1, 2022.

OAR 660-033-0130(38)(g) restricts a photovoltaic solar power generation facility from using, occupying, or covering more than 12 acres of high value farmland unless the provisions of OAR 660-033-0130(38)(h)(H) are satisfied or the County adopts (and the applicant satisfies) land use provisions authorizing projects subject to a dual-use development plan.[139] The applicant acknowledges,[140] and the Department agrees, that the proposed solar facility components would not meet either one of these exemptions. As provided under OAR 660-033-0130(38)(k), a solar PV facility that exceeds the threshold established by OAR 660-033-0130(38)(g) requires a goal exception.

Because the proposed solar facility components would use, occupy, or cover more than 12 acres of high value farmland, and does not meet either exemption specified under OAR 660-033-0130(38)(g), the applicant requests an exception to Statewide Planning Goal 3. The Department's analysis of the exception request is provided in Section IV.E.1.b. *Goal 3 Exception* of this order. The remainder of the OAR 660-033-0130(38) criteria are evaluated here.

(h) The following criteria must be satisfied in order to approve a photovoltaic solar power generation facility on high value farmland described at ORS 195.300(10):

OAR 660-033-0130(38)(h)(A) – (D) requires a demonstration that the proposed solar facility components would not create unnecessary negative impacts to agricultural operations, soil erosion or loss, soil compaction, or the unabated introduction or spread of noxious weeds.

(A) The proposed photovoltaic solar power generation facility will not create unnecessary negative impacts on agricultural operations conducted on any portion of the subject property not occupied by project components. Negative impacts could include, but are not limited to, the unnecessary construction of roads dividing a field or multiple fields in such a way that creates small or isolated pieces of property that are more difficult to farm, and placing

[139] Land use provisions adopted by a county pursuant to this paragraph may not allow a project in excess of 20 acres. OAR 660-033-0130(38)(g)(B).
[140] NHWAPPDoc2-10 ASC Exhibit K. Land Use_2022-01-31, Section 5.1.

photovoltaic solar power generation facility project components on lands in a manner that could disrupt common and accepted farming practices;

OAR 660-033-0130(38)(h)(A) requires a demonstration that the proposed solar facility would not create unnecessary negative impacts to agricultural operations, such as dividing a field or multiple fields or placing facility components on lands in a manner that could disrupt accepted farming practices.

ASC Exhibit K Figure K-10 demonstrates that the proposed solar facility components would be located entirely on currently cultivated lands owned by Pendleton Ranches Inc; Cunningham Sheep Co; Mud Springs Ranches; Buttke Ranch LLC; Buttle Ranch Partnership; and Hoke Ranches, where the proposed solar micrositing area is the surrounded by uncultivated areas.

Steven H. Corey of Cunningham Sheep Company affirmed that the proposed solar facility would result in valuable lease payments that would allow his family to intensify agricultural practices on land surrounding the project boundary. Mr. Corey provided numerous statements the Department recommends Council weigh and consider as substantially supportive evidence in the evaluation of this reason. He stated:

- We are confident the project's location in this area will not negatively impact our existing use of our land surrounding the solar project boundary or overall success of our ranching and farming operations
- The project will enable us to support and improve our farming and ranching operations in the surrounding areas by providing valuable lease payments we can invest in ongoing activities on more active land elsewhere on our property
- We intend to devote lease revenues in part to improve housing for our sheep herders as well as farm employees in the cattle and farming departments. The lease payments projected exceed the potential revenues from the current dryland wheat production on the project boundary today. With board approval we may also acquire, clean up and refurbish a contiguous agriculture-related business to strengthen the diversity base of our legacy team. The lease payments exceed the potential revenues from the current dryland wheat production on the project boundary today.
- The project will not result in any loss of employees from our operations. To the contrary, we expect to add agricultural jobs to our payroll based on the lease payments. Specifically, we may add to our team up to 6 new employees with anticipated wages of $225,00 per year
- We also expect, or more likely, increase our operational spending with local agricultural suppliers and service providers, given our projected increased investments in operations on the land remaining in agricultural and ranching use and in the new agricultural-related business.
- Net revenues per acre from land that will be used for wind or solar development by the project will substantially exceed revenues from the present dry land wheat farming.[141]

[141] NHWAPPDoc2-10 ASC Exhibit K Land Use 2022-01-31. Attachment K-1.

In addition, an adjacent non-participating owner, Mr. James Kirkham, provider a letter dated January 14, 2022, stating that the proposed project would not hinder his ability to farm, or increase the cost of farming on their property. [142]
The applicant affirms that there would not be roads or other solar facility components outside of the perimeter fenceline, minimizing unnecessary negative impacts.

The Department recommends Council impose the following condition to ensure that the final design of the facility continues to minimize unnecessary impacts to agriculture:

> **Recommended Land Use Condition 16 (PRE):** Prior to construction of solar facility components, the certificate holder shall submit to the Department final solar facility component layout maps. The layout shall demonstrate that the perimeter fenceline is placed at the edge of existing agricultural fields or along property lines and is designed to minimize impacts, based on landowner consultation, to any remaining agricultural activities adjacent to the perimeter fenceline. The layout maps shall also demonstrate that any other solar facility components outside of the perimeter fenceline have been designed in a manner that minimize unnecessary agricultural impacts (e.g. isolation of property or access impacts).

Based on compliance with the above-recommended condition and confirmation from landowners, the Department recommends Council find that the proposed solar facility would not create unnecessary negative impacts on agricultural operations conducted on any portion of the subject property not occupied by facility components and therefore would satisfy the requirements under OAR 660-033-0130(38)(h)(A).

> *(B) The presence of a photovoltaic solar power generation facility will not result in unnecessary soil erosion or loss that could limit agricultural productivity on the subject property. This provision may be satisfied by the submittal and county approval of a soil and erosion control plan prepared by an adequately qualified individual, showing how unnecessary soil erosion will be avoided or remedied. The approved plan shall be attached to the decision as a condition of approval;*

This provision is consistent with Council's Soil Protection standard, where the Department recommends Council impose a condition requiring that, during facility construction, the applicant be required to adhere to the requirements of a DEQ-approved Erosion and Sediment Control Plan during construction (see recommended Soil Protection Conditions 1 and 2) and implementation of a Revegetation and Noxious Weed Plan, prior to and during construction and operation (see recommended Fish and Wildlife Conditions 1, 2 and 3). This plan includes best management practices to be implemented during construction and operation designed to

[142] Id.

reduce and minimize unnecessary soil erosion or loss that could limit agricultural productivity within the proposed facility site and on adjacent EFU zoned land.

Based upon compliance with the recommended conditions, the Department recommends Council conclude that the proposed solar facility components would satisfy the requirements under OAR 660-033-0130(38)(h)(B).

> *(C) Construction or maintenance activities will not result in unnecessary soil compaction that reduces the productivity of soil for crop production. This provision may be satisfied by the submittal and county approval of a plan prepared by an adequately qualified individual, showing how unnecessary soil compaction will be avoided or remedied in a timely manner through deep soil decompaction or other appropriate practices. The approved plan shall be attached to the decision as a condition of approval;*

This provision is consistent with Council's Soil Protection standard, where the Department recommends Council impose a condition requiring that the applicant minimize compaction during construction, reclaim and restore temporarily impacted soils including decompaction to a depth of 12 to 18", and implement a monitoring and mitigation plan to address any long-term compaction related soil impacts (see recommended Soil Protection Condition 3). In addition, the Department recommends Council require implementation of a Revegetation and Noxious Weed Control Plan, prior to and during construction and operation (see recommended Fish and Wildlife Conditions Condition 1, 2, and 3). This plan include best management practices to be implemented during construction and operation designed to reduce, minimize and mitigate for unnecessary soil compaction that could limit agricultural productivity within the proposed solar facility site and on adjacent EFU zoned land.

Based upon compliance with the recommended conditions, the Department recommends Council conclude that the proposed solar facility components would satisfy the requirements under OAR 660-033-0130(38)(h)(C).

> *(D) Construction or maintenance activities will not result in the unabated introduction or spread of noxious weeds and other undesirable weed species. This provision may be satisfied by the submittal and county approval of a weed control plan prepared by an adequately qualified individual that includes a long-term maintenance agreement. The approved plan shall be attached to the decision as a condition of approval;*

Noxious weed control is required to ensure the impacts to adjacent agricultural lands are minimized and that revegetation and site stabilization within areas of disturbance are achieved.

Recommended Fish and Wildlife Habitat Conditions 1, 2 and 3 require that the applicant implement a Revegetation and Noxious Weed Plan, which includes requirements for noxious weed control, prior to and during construction and operation. Elements of the noxious weed

control requirements include preconstruction identification and treatment of infestation locations; flagging, avoiding and monitoring of infestation areas during construction; and long-term monitoring and treatment during operations. All of these requirements would be reported to the Department and Umatilla County Weed Department and allow for the Department to require additional treatment and monitoring given reported results. Based upon compliance with the condition, the Department recommends Council conclude that the proposed solar facility components would not result in unabated introduction or spread of noxious weeds and other undesirable weed species and would satisfy the requirements under OAR 660-033-0130(38)(h)(D).

> *(E) Except for electrical cable collection systems connecting the photovoltaic solar generation facility to a transmission line, the project is not located on those high-value farmland soils listed in OAR 660-033-0020(8)(a);*

As defined in OAR 660-033-0020(8)(a), high value farmland means land in a tract composed predominately of soils that are either irrigated and classified prime, unique, Class I or II soils; or, not irrigated and classified prime, unique, Class I or Class II soils.

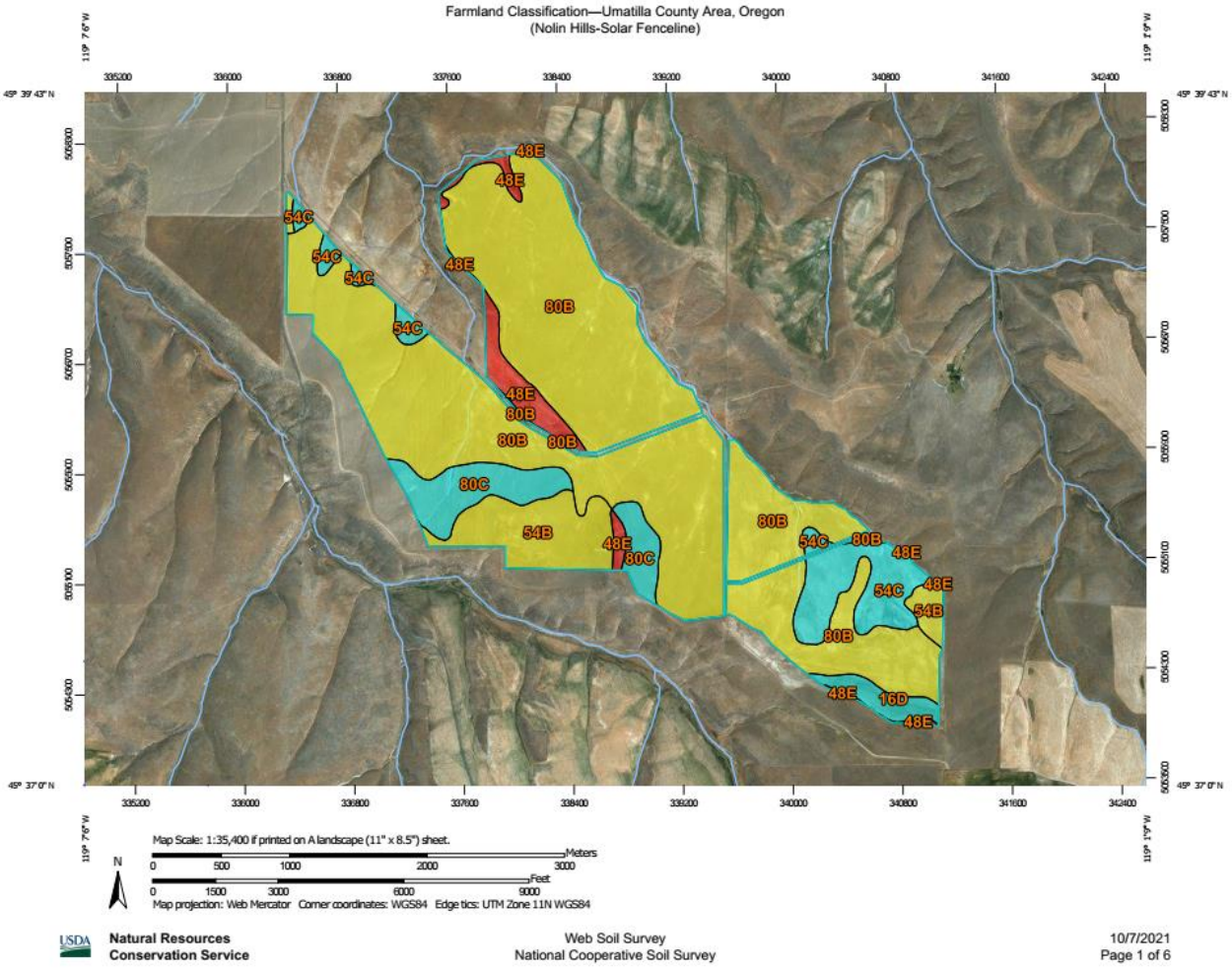
As shown in ASC Exhibit K, Figures K-4 and K-6.1, the proposed solar micrositing area is not located on Class I or II soils and is not located within an irrigation district. The proposed solar micrositing area is not irrigated and has no water rights.[143] As shown in Figure 5: *Farmland Classification at the Proposed Solar Micrositing Area* below and Table 4: *Farmland Classification at Proposed Solar Micrositing Area* below, the proposed solar micrositing area is comprised of areas designated "not prime farmland" (shown in red in the figure), "prime farmland if irrigated" (shown in yellow in the figure), and "farmland of statewide importance"(shown in blue in the figure). Figure 5: *Farmland Classification at the Proposed Solar Micrositing Area* below and Table 4: *Farmland Classification at Proposed Solar Micrositing Area* below, which are based on Natural Resources Conservation Service (NRCS) data, also show that no unique farmland is present within the proposed solar micrositing area. While the site contains "prime farmland if irrigated," because the subject tract is not irrigated and is not located within an irrigation district, it is not considered irrigated farmland and is therefore not prime farmland.[144]

Based upon the evidence in the record, the Department recommends the Council find that, with the exception of electrical cable collection systems connecting the solar PV facility to a transmission line, the proposed solar micrositing area would not be located on high-value farmland soils listed in OAR 660-033-0020(8)(a), consistent with OAR 660-033-0130(38)(h)(E).

[143] NHWAPPDoc2-10 ASC Exhibit K. Land Use_2022-01-31, Applicant's response to OAR 660-033-0130(38)(h)(E) and Section 7.1.

[144] NHWAPPDoc40 pASC NRCS Farmland Classification at Solar Site and No Goal 5 Resources 2021-10-07.

Figure 5: Farmland Classification at the Proposed Solar Micrositing Area



Source: NHWAPPDoc40 pASC NRCS Farmland Classification at Solar Site and No Goal 5 Resources 2021-10-07.

Table 4: Farmland Classification at Proposed Solar Micrositing Area

Map Unit Symbol	Map Unit Name	Rating	Acres in Area of Interest	Percent of Area of Interest	Color of Area shown in 5
16D	Cantala silt loam, 12 to 20 percent slopes	Farmland of statewide importance	34.5	1.8%	Blue
48E	Lickskillet very stony loam, 7 to 40 percent slopes	Not prime farmland	70.3	3.7%	Red
54B	Mikkalo silt loam, 2 to 7 percent slopes	Prime farmland if irrigated	155.0	8.2%	Yellow
54C	Mikkalo silt loam, 7 to 12 percent slopes	Farmland of statewide importance	144.1	7.6%	Blue
80B	Ritzville silt loam, 2 to 7 percent slopes	Prime farmland if irrigated	1,364.6	72.0%	Yellow
80C	Ritzville silt loam, 7 to 12 percent slopes	Farmland of statewide importance	127.6	6.7%	Blue
Source: NHWAPPDoc40 pASC NRCS Farmland Classification at Solar Site and No Goal 5 Resources 2021-10-07.					

(F) The project is not located on those high-value farmland soils listed in OAR 660-033-0020(8)(b)-(e) or arable soils unless it can be demonstrated that:

(i) Non high-value farmland soils are not available on the subject tract;

(ii) Siting the project on non high-value farmland soils present on the subject tract would significantly reduce the project's ability to operate successfully; or

(iii) The proposed site is better suited to allow continuation of an existing commercial farm or ranching operation on the subject tract than other possible sites also located on the subject tract, including those comprised of non high value farmland soils; and

The proposed solar micrositing area would not be located on high-value farmland soils listed in OAR 660-033-0020(8)(b)-(e), which include certain high-value farmland tracts[145] outside the Willamette Valley growing specified perennials, and certain soils located in other areas that are far from the site boundary (specifically, within the Willamette Valley, west of the Coast Range, and west of U.S. Highway 101). The proposed solar micrositing area would, however, be located

[145] As defined in OAR 660-033-0020, "tract" means one or more contiguous lots or parcels under the same ownership. The Department highlights that because OAR 660-033-0130(38)(g)(A) requires an evaluation of soil conditions on the "subject tract," that such an evaluation may require the review of areas outside of the proposed site boundary area.

on arable soils, so the applicant must demonstrate that the proposed solar facility can meet one of the factors listed in (i) through (iii).

Because the proposed solar site does not contain high-value farmland soils listed in OAR 660-033-0020(8)(b)-(e), the Department recommends the Council find that factors (i) and (ii) do not apply. The applicant provides evidence to demonstrate compliance with OAR 660-033-0130(38)(h)(F) through factor (iii).

While the proposed solar micrositing area does not contain any high-value farmland soils as defined by OAR 660-033-0020(8)(b)-(e), which is cited by OAR 660-033-0130(38)(h)(F), it does contain high-value farmland described at ORS 195.300(10) as well as arable soils. The applicant therefore considered these siting factors, as well as slope, in its evaluation of why the proposed site is better suited to allow continuation of an existing commercial farm or ranching operation on the subject tract than other possible sites also located on the subject tract.

The applicant states that the solar array needs to be sited on a grade of 10 percent or less.[146] The applicant evaluated the subject tract and concluded that the solar siting area is the only contiguous area (i.e., consolidated without large non-buildable gaps) on the subject tract of sufficient size for a 260-MW solar facility (i.e., at least 1,896 acres as proposed) with a grade of less than 10 percent.[147]

In addition, the applicant argues that it is not possible to site the solar arrays completely avoiding the high-value farmland described at ORS 195.300(10) due to the patchy and irregular nature of this high-value farmland on the subject tract. ASC Exhibit K, Figure K-6 shows that high-value farmland described at ORS 195.300(10) at the proposed solar micrositing area and within the subject tract[148] is patchy, irregular, and distributed throughout the subject tract, and therefore avoiding these areas would reduce the number of solar arrays that could be sited contiguous to one another.

As explained in the analysis under OAR 660-033-0130(38)(i), the applicant argues,[149] and the Department agrees, that siting the solar components solely on nonarable soils present on the subject tract would significantly reduce the project's ability to operate successfully, in part because these areas largely consist of steeper slopes not conducive to siting solar arrays. In addition, because the nonarable soils within the subject tract are patchy and relatively narrow, the solar arrays would need to be spread out across many smaller sites, rather than one contiguous site. Disperse solar arrays would also require substantially more infrastructure to connect the facility components (such as more access roads, collector lines, and potentially additional internal transmission lines).

[146] NHWAPPDoc2-10 ASC Exhibit K. Land Use_2022-01-31, Section 7.1.

[147] NHWAPPDoc40 pASC NRCS Farmland Classification at Solar Site and No Goal 5 Resources 2021-10-07.

[148] The subject tract consists of tracts 3, 8, 11, and 14.

[149] NHWAPPDoc2-10 ASC Exhibit K. Land Use_2022-01-31, Applicant response to OAR 660-033-0130(38)(h)(F) and OAR 660-033-0130(38)(i)(B).

As previously explained, disperse solar arrays would require substantially more infrastructure to connect the facility components. By consolidating the solar components, the applicant would avoid developing additional infrastructure that would have the potential to impact the farming and ranching operation. For example, as currently proposed, the proposed solar micrositing area would be adjacent to the northern substation, which would eliminate the need for an additional internal transmission line, thereby resulting in less impacts to farmland and potential division of farm fields. Based upon this information, the Department recommends that the Council find that the proposed solar micrositing area is better suited to allow continuation of the existing commercial farm and ranching operation on the subject tract than other possible sites also located on the subject tract, consistent with factor (F)(iii).

> *(G) A study area consisting of lands zoned for exclusive farm use located within one mile measured from the center of the proposed project shall be established and:*
> *(i) If fewer than 48 acres of photovoltaic solar power generation facilities have been constructed or received land use approvals and obtained building permits within the study area, no further action is necessary.*
> *(ii) When at least 48 acres of photovoltaic solar power generation facilities have been constructed or received land use approvals and obtained building permits, either as a single project or as multiple facilities within the study area, the local government or its designate must find that the photovoltaic solar power generation facility will not materially alter the stability of the overall land use pattern of the area. The stability of the land use pattern will be materially altered if the overall effect of existing and potential photovoltaic solar power generation facilities will make it more difficult for the existing farms and ranches in the area to continue operation due to diminished opportunities to expand, purchase or lease farmland, acquire water rights, or diminish the number of tracts or acreage in farm use in a manner that will destabilize the overall character of the study area.*

OAR 660-033-0130(38)(h)(G) requires an evaluation of photovoltaic solar power generation facility development within 1-mile of the proposed solar micrositing area. The applicant asserts that no photovoltaic solar power generation facilities have been constructed or received land use approvals and obtained building permits within the 1-mile study area.[150] Figure G-10 in the applicant's 2017 Notice of Intent shows energy facilities within 10 miles of the site boundary, all of which are farther than 1 mile away. Based on a review of aerial imagery, the Department confirms that there are fewer than 48 acres of other solar PV facilities within 1-mile of the proposed solar micrositing area. The Department therefore recommends that the Council find that no further action is necessary, consistent with OAR 660-033-0130(38)(h)(G)(i).

> *(i) For arable lands, a photovoltaic solar power generation facility shall not use, occupy, or cover more than 20 acres. The governing body or its designate must find that the*

[150] NHWAPPDoc2-10 ASC Exhibit K. Land Use_2022-01-31, Applicant's response to OAR 660-033-0130(38)(h)(G).

following criteria are satisfied in order to approve a photovoltaic solar power generation facility on arable land.

(A) The project is not located on those high-value farmland soils listed in OAR 660-033-0020(8)(a);

(B) The project is not located on those high-value farmland soils listed in OAR 660-033-0020(8)(b)-(e) or arable soils unless it can be demonstrated that:

i. Nonarable soils are not available on the subject tract;

ii. Siting the project on nonarable soils present on the subject tract would significantly reduce the project's ability to operate successfully; or

iii. The proposed site is better suited to allow continuation of an existing commercial farm or ranching operation on the subject tract than other possible sites also located on the subject tract, including those comprised of nonarable soils;

(C) No more than 12 acres of the project will be sited on high-value farmland soils described at ORS 195.300(10);

As shown in Table 3: *High-Value, Arable and Nonarable Lands in and Around the Site Boundary and Micrositing Corridors* above, the proposed solar micrositing area would use, occupy, and cover 1,840 acres of arable lands, well over the 20-acre threshold established by OAR 660-033-0130(38)(i). As provided under OAR 660-033-0130(38)(k), a solar PV facility that exceeds the threshold established by OAR 660-033-0130(38)(i) requires a goal exception. Therefore, the proposed solar facility components require an exception to Statewide Planning Goal 3. The Department's analysis of the exception request is provided in Section IV.E.1.b *Goal 3 Exception* of this order. The remainder of the OAR 660-033-0130(38) criteria are evaluated here.

To satisfy OAR 660-033-0130(38)(i)(A), the proposed solar micrositing area must not be located on those high-value farmland soils listed in OAR 660-033-0020(8)(a). As discussed under OAR 660-033-0130(38)(h)(D), the proposed solar micrositing area would not be located on high-value farmland soils listed in OAR 660-033-0020(8)(a), consistent with OAR 660-033-0130(38)(i)(A).

OAR 660-033-0130(38)(i)(B) pertains to high-value farmland soils listed in OAR 660-033-0020(8)(b)-(e) or arable soils. As described under OAR 660-033-0130(38)(h)(F), the proposed solar micrositing area does not contain high-value farmland soils listed in OAR 660-033-0020(8)(b)-(e). It does, however, contain arable soils; therefore, one of the three factors under OAR 660-033-0130(38)(i)(B) must be met.

As defined in OAR 660-033-0130(38)(b), "arable soils" means soils that are suitable for cultivation as determined by the governing body or its designate based on substantial evidence in the record of a local land use application, but "arable soils" does not include high-value farmland soils described at ORS 195.300(10) unless otherwise stated. While the applicant does not quantify the amount of arable soils at the site, the applicant does provide the amount of arable land. "Arable land," which includes predominantly cultivated land, is defined separately

under OAR 660-033-0130(38) (and is addressed by the Department under OAR 660-033-0130(38)(i)) but is useful here to help determine the approximate amount and extent of arable soils within the proposed solar micrositing area. As shown in Table 3: *High-Value, Arable and Nonarable Lands in and Around the Site Boundary and Micrositing Corridors* above, the vast majority (97 percent, or 1,840 acres) of the *High-Value, Arable and Nonarable Lands in and Around the Site Boundary and Micrositing Corridors* above *High-Value, Arable and Nonarable Lands in and Around the Site Boundary and Micrositing Corridors* above consists of arable land. The definition of arable soils – in contrast with arable lands – excludes high-value farmland soils described at ORS 195.300(10) unless otherwise stated. Even excluding the entirety of the 242 acres of high-value farmland soils described at ORS 195.300(10) within the proposed solar micrositing area to reach the minimum amount of arable soils, there are a minimum of 1,598 acres of arable soils. Because the proposed solar micrositing area would encompass 1,896 acres, a minimum of 84 percent (1,598 divided by 1,896) of the site is comprised of arable soils. Therefore, only a small portion of the proposed 1,896-acre solar site is comprised of nonarable soils.

Because nonarable soils are available on the subject tract, factor (B)(i) does not apply.

The Department next evaluates factor (B)(ii). ASC Exhibit K Figures K-7 and K-8 show arable land and nonarable land in the proposed solar micrositing area and in the subject tract. As shown on Figure K-8, nonarable land generally follows drainages or steep slopes in relatively narrow corridors. Nonarable soils would cover a somewhat larger extent than shown for nonarable lands in Figures K-7 and K-8, because as previously explained "arable soils" does not include high-value farmland soils described at ORS 195.300(10) unless otherwise stated. However, even excluding the high-value farmland soils shown in Figure K-6 from the area shown as arable lands in Figure K-8 to yield the area of nonarable soils would not provide concentrated areas of nonarable soils upon which to develop the proposed 1,896 acre solar facility. The applicant argues,[151] and the Department agrees, that siting the solar components solely on nonarable soils present on the subject tract would significantly reduce the project's ability to operate successfully, in part because these areas largely consist of steeper slopes not conducive to siting solar arrays. In addition, because the nonarable soils within the subject tract are patchy and relatively narrow, the solar arrays would need to be spread out across many smaller sites, rather than one contiguous site. Disperse solar arrays would also require substantially more infrastructure to connect the facility components (such as more access roads, collector lines, and potentially additional internal transmission lines). Based upon this reasoning, the Department recommends that the Council find that siting the proposed solar micrositing area on nonarable soils present on the subject tract would significantly reduce the project's ability to operate successfully, consistent with factor (B)(ii).

As previously explained, disperse solar arrays would require substantially more infrastructure to connect the facility components. By consolidating the solar components, the applicant would

[151] NHWAPPDoc2-10 ASC Exhibit K. Land Use_2022-01-31. Applicant response to OAR 660-033-0130(38)(h)(F) and OAR 660-033-0130(38)(i)(B).

avoid developing additional infrastructure that would have the potential to impact the farming and ranching operation. For example, as currently proposed, the solar site would be adjacent to the northern substation, which would eliminate the need for an additional internal transmission line, thereby resulting in less impacts to farmland and potential division of farm fields. For these reasons, the Department recommends that the Council find that the proposed site is better suited to allow continuation of the existing commercial farm and ranching operation on the subject tract than other possible sites also located on the subject tract (including those comprised of nonarable soils), consistent with factor (B)(iii).

Factor (C) requires that no more than 12 acres of the proposed solar micrositing area be sited on high-value farmland soils described at ORS 195.300(10). As discussed in the evaluation under OAR 660-033-0130(38)(g), the proposed solar micrositing area would be sited on more than 12 acres of high-value farmland described at ORS 195.300(10). The applicant therefore requests an exception to Statewide Planning Goal 3. The Department's analysis of the exception request is provided in Section IV.E.1.b. *Goal 3 Exception* of this order.

> *(D) A study area consisting of lands zoned for exclusive farm use located within one mile measured from the center of the proposed project shall be established and:*
>
> *i. If fewer than 80 acres of photovoltaic solar power generation facilities have been constructed or received land use approvals and obtained building permits within the study area no further action is necessary.*
>
> *ii. When at least 80 acres of photovoltaic solar power generation facilities have been constructed or received land use approvals and obtained building permits either as a single project or as multiple facilities, within the study area the local government or its designate must find that the photovoltaic solar power generation facility will not materially alter the stability of the overall land use pattern of the area. The stability of the land use pattern will be materially altered if the overall effect of existing and potential photovoltaic solar power generation facilities will make it more difficult for the existing farms and ranches in the area to continue operation due to diminished opportunities to expand, purchase or lease farmland, acquire water rights or diminish the number of tracts or acreage in farm use in a manner that will destabilize the overall character of the study area; and*

OAR 660-033-0130(38)(i)(D) requires an evaluation of photovoltaic solar power generation facility development within 1-mile of the proposed solar micrositing area. The applicant asserts that no photovoltaic solar power generation facilities have been constructed or received land use approvals and obtained building permits within the 1-mile study area.[152] Figure G-10 in the applicant's 2017 Notice of Intent shows energy facilities within 10 miles of the site boundary, all of which are farther than 1 mile away. Based on a review of aerial imagery, the Department confirms that there are fewer than 48 acres of other solar PV facilities within 1-mile of the

[152] NHWAPPDoc2-10 ASC Exhibit K. Land Use_2022-01-31. Applicant's response to OAR 660-033-0130(38)(i)(D).

proposed solar micrositing area. The Department therefore recommends that the Council find that no further action is necessary, consistent with OAR 660-033-0130(38)(i)(D)(i).

(E) The requirements of OAR 660-033-0130(38)(h)(A), (B), (C) and (D) are satisfied.

As presented above, the Department recommends the Council find that the requirements of (A), (B), and (D) are satisfied. Factor (C) requires that no more than 12 acres of the proposed solar micrositing area be sited on high-value farmland soils described at ORS 195.300(10). Because the proposed solar micrositing area would be sited on more than 12 acres of high-value farmland described at ORS 195.300(10), the applicant requests an exception to Statewide Planning Goal 3. The Department's analysis of the exception request is provided in Section IV.E.1.b. *Goal 3 Exception* of this order.

(j) For nonarable lands, a photovoltaic solar power generation facility shall not use, occupy, or cover more than 320 acres. The governing body or its designate must find that the following criteria are satisfied in order to approve a photovoltaic solar power generation facility on nonarable land:

As shown in Table 3: *High-Value, Arable and Nonarable Lands in and Around the Site Boundary and Micrositing Corridors* above, the proposed solar micrositing siting area would use, occupy, or cover 56 acres of nonarable lands, far less than the 320-acre threshold established by OAR 660-033-0130(38)(j).

(A) Except for electrical cable collection systems connecting the photovoltaic solar generation facility to a transmission line, the project is not located on those high-value farmland soils listed in OAR 660-033-0020(8)(a);

This factor is identical to OAR 660-033-0130(38)(h)(E), which was previously analyzed in this section. As explained under that factor, the Department recommends the Council find that, with the exception of electrical cable collection systems connecting the solar PV facility to a transmission line, the proposed solar micrositing siting area would not be located on high-value farmland soils listed in OAR 660-033-0020(8)(a). The Department therefore recommends the Council make the same finding under OAR 660-033-0130(38)(j)(A).

(B) The project is not located on those high-value farmland soils listed in OAR 660-033-0020(8)(b)-(e) or arable soils unless it can be demonstrated that:

(i) Siting the project on nonarable soils present on the subject tract would significantly reduce the project's ability to operate successfully; or

(ii) The proposed site is better suited to allow continuation of an existing commercial farm or ranching operation on the subject tract as compared to other possible sites also located on the subject tract, including sites that are comprised of nonarable soils;

This factor is identical to factors (ii) and (iii) from OAR 660-033-0130(38)(i)(B), which was previously analyzed in this section. As previously explained, the Department recommends the Council find that siting the proposed solar micrositing area on nonarable soils present on the subject tract would significantly reduce the ability to operate successfully, and that the proposed site is better suited to allow continuation of the existing commercial farm and ranching operation on the subject tract than other possible sites also located on the subject tract (including those comprised of nonarable soils). The Department recommends the Council make the same findings under OAR 660-033-0130(38)(j)(B).

(C) No more than 12 acres of the project will be sited on high-value farmland soils described at ORS 195.300(10);

As discussed in the evaluation under OAR 660-033-0130(38)(g), the proposed solar micrositing area would be sited on more than 12 acres of high-value farmland described at ORS 195.300(10). The applicant therefore requests an exception to Statewide Planning Goal 3. The Department's analysis of the exception request is provided in Section IV.E.1.b *Goal 3 Exception* of this order.

(D) No more than 20 acres of the project will be sited on arable soils;

As discussed in the evaluation under OAR 660-033-0130(38)(i), the proposed solar micrositing area would be located on a minimum of 1,598 acres of arable soils. The proposed solar micrositing area would therefore not meet factor (D) and requires an exception to Statewide Planning Goal 3. The Department's analysis of the exception request is provided in Section IV.E.1.b *Goal 3 Exception* of this order.

(E) The requirements of OAR 660-033-0130(38)(h)(D) are satisfied;

OAR 660-033-0130(38)(h)(D) requires the applicant to demonstrate that the proposed solar facility would not result in the "unabated introduction or spread of noxious weeds and other undesirable weed species." For the reasons discussed under that criterion, the Department recommends the Council find that the proposed solar micrositing area would not result in the unabated introduction or spread of noxious weeds and other undesirable weed species. The Department therefore recommends that OAR 660-033-0130(38)(j)(E) would also be satisfied.

(F) If a photovoltaic solar power generation facility is proposed to be developed on lands that contain a Goal 5 resource protected under the county's comprehensive plan, and the plan does not address conflicts between energy facility development and the resource, the applicant and the county, together with any state or federal agency responsible for protecting the resource or habitat supporting the resource, will cooperatively develop a specific resource management plan to mitigate potential development conflicts. If there is no program present to protect the listed Goal 5 resource(s) present in the local

comprehensive plan or implementing ordinances and the applicant and the appropriate resource management agency(ies) cannot successfully agree on a cooperative resource management plan, the county is responsible for determining appropriate mitigation measures; and

OAR 660-033-0130(38)(j)(F) first requires a determination of whether the photovoltaic solar power generation facility is proposed to be developed on lands that contain a Goal 5 resource protected under the County's comprehensive plan; if so, additional requirements apply. Based on review of the Umatilla County Comprehensive Plan (last updated in 2017) and Section D of the accompanying Comprehensive Plan Technical Report, last amended in 1984, the applicant concluded that there are no Goal 5 resources in the proposed solar siting area.[153] Figure K-2 of ASC Exhibit K shows that the proposed solar site is not within any overlay zoning districts (e.g., Aggregate Resource Overlay).

On page D-63 of the Comprehensive Plan Technical Report there is a map that includes a portion of the site boundary, including the proposed solar micrositing area. The map is part of the County's inventory of Habitats of Rare, Threatened, and Endangered Species, and is labeled "Importance: Prairie Falcon nesting area/Curlews." The area specifically called out on the map and in the corresponding Table D-XII, however, is Alkali Canyon, which is outside the proposed solar micrositing area.

Based on the information provided by the applicant and the Department's own review of Section D of the Comprehensive Plan Technical Report, the Department recommends the Council find that the photovoltaic solar power generation facility is proposed to be developed on lands that do <u>not</u> contain a Goal 5 resource protected under the County's comprehensive plan and that the proposed solar micrositing area would be consistent with OAR 660-033-0130(38)(j)(F).

(G) If a proposed photovoltaic solar power generation facility is located on lands where, after site specific consultation with an Oregon Department of Fish and Wildlife biologist, it is determined that the potential exists for adverse effects to state or federal special status species (threatened, endangered, candidate, or sensitive) or habitat or to big game winter range or migration corridors, golden eagle or prairie falcon nest sites or pigeon springs, the applicant shall conduct a site-specific assessment of the subject property in consultation with all appropriate state, federal, and tribal wildlife management agencies. A professional biologist shall conduct the site-specific assessment by using methodologies accepted by the appropriate wildlife management agency and shall determine whether adverse effects to special status species or wildlife habitats are anticipated. Based on the results of the biologist's report, the site shall be designed to avoid adverse effects to state or federal special status

[153] NHWAPPDoc2-10 ASC Exhibit K. Land Use_2022-01-31. Applicant's response to OAR 660-033-0130(38)(j)(F), and NHWAPPDoc40 pASC NRCS Farmland Classification at Solar Site and No Goal 5 Resources 2021-10-07.

species or to wildlife habitats as described above. If the applicant's site-specific assessment shows that adverse effects cannot be avoided, the applicant and the appropriate wildlife management agency will cooperatively develop an agreement for project-specific mitigation to offset the potential adverse effects of the facility. Where the applicant and the resource management agency cannot agree on what mitigation will be carried out, the county is responsible for determining appropriate mitigation, if any, required for the facility.

ASC Exhibits P and Q and Sections IV.H., *Fish and Wildlife Habitat* and IV.I, *Threatened and Endangered Species* of this order provide information relevant to this criterion. The applicant consulted with ODFW's district biologist and ODOE on the appropriate field survey protocols and performed a site-specific assessment of potential adverse impacts to special status species and fish and wildlife habitat. As presented in Section IV.H., *Fish and Wildlife Habitat* and IV.I, *Threatened and Endangered Species* of this order, the Department recommends Council find that based on the evidence provided in ASC Exhibits P and Q, and compliance with recommended conditions, that the site would be designed to mitigate adverse impacts to special status wildlife species and associated wildlife habitat, consistent with OAR 660-033-0130(38)(j)(G).

(k) An exception to the acreage and soil thresholds in subsections (g), (h), (i), and (j) of this section may be taken pursuant to ORS 197.732 and OAR chapter 660, division 4.

As previously discussed, the proposed solar micrositing area would exceed the 12-acre threshold established at OAR 660-033-0130(38)(g) for high-value farmland described at ORS 195.300(10) because it would use, occupy, or cover 242 acres of high-value farmland. In addition, the proposed solar micrositing area would exceed the 20-acre threshold established by OAR 660-033-0130(38)(i) for arable lands, because the facility would use, occupy, and cover 1,840 acres of arable lands.

The proposed solar micrositing area therefore triggers the need for a goal exception through both the OAR 660-033-0130(38)(g) threshold exceedance and the OAR 660-033-0130(38)(i) threshold exceedance.

The Department's evaluation of the applicant's Goal 3 exception request is provided below, in Section IV.E.1.b. *Goal 3 Exception* of this order, and recommends the Council find that an exception to Goal 3 is justified.

(l) The county governing body or its designate shall require as a condition of approval for a photovoltaic solar power generation facility, that the project owner sign and record in the deed records for the county a document binding the project owner and the project owner's successors in interest, prohibiting them from pursuing a claim for relief or cause of action alleging injury from farming or forest practices as defined in ORS 30.930(2) and (4).

Subject to compliance with the recommended condition, the Department recommends that the Council find that the proposed facility would comply with OAR 660-033-0130(38)(l):

> **Recommended Land Use Condition 17 (PRE):** Prior to construction of solar facility components, the certificate holder, and underlying landowners on whose property the solar facility components are located, shall record in the real property records of Umatilla County a Covenant Not to Sue with regard to generally accepted farming practices on adjacent farmland.

(m) Nothing in this section shall prevent a county from requiring a bond or other security from a developer or otherwise imposing on a developer the responsibility for retiring the photovoltaic solar power generation facility.

OAR 660-033-0130(38)(m) allows for the governing body to require a bond or letter of credit for the amount necessary to retire the facility during decommissioning. Recommended Retirement and Financial Assurance Condition 4 would require that, prior to construction, the applicant obtain and provide to the Department a bond or letter of credit in the specified amount recommended by considered by Council as satisfactory for facility decommissioning. Based upon compliance with this condition, the Department recommends Council conclude that the requirements under OAR 660-033-0130(38)(m) would be satisfied.

As discussed above, the proposed solar micrositing area would not comply with OAR 660-033-0130(38)(g) because it would use, occupy, or cover more than 12 acres of high-value farmland (and does not meet either of the exemptions specified in OAR 660-033-0130(38)(g)) and would not comply with OAR 660-033-0130(38)(i) because it would use, occupy, or cover more than 20 acres of arable land. Because the proposed solar micrositing area would not comply with OAR 660-033-0130, it would also not comply with UCDC Section 152.060(FF). As discussed in Section IV.E.1.a. of this order, the Department recommends the Council follow the process under ORS 469.504(1)(B) and find that the proposed facility does not comply with UCDC Section 152.060(FF), but that an exception to the applicable statewide planning goal is justified under ORS 469.504(2).

IV.E.2.c. ORS 215.276 (High Value Farmland Requirements)

ORS 215.276 states:

(1) As used in this section:
- *(a) "Consult" means to make an effort to contact for purpose of notifying the record owner of the opportunity to meet.*
- *(b) "High-value farmland" has the meaning given that term in ORS 195.300.*
- *(c) "Transmission line" means a linear utility facility by which a utility provider transfers the utility product in bulk from a point of origin or generation, or between transfer stations, to the point at which the utility product is transferred to distribution lines for delivery to end users.*

(2) If the criteria described in ORS 215.275 for siting a utility facility on land zoned for exclusive farm use are met for a utility facility that is a transmission line, or if the criteria described in ORS 215.274 for siting an associated transmission line are met, the utility provider shall, after the route is approved by the siting authorities and before construction of the transmission line begins, consult the record owner of high-value farmland in the planned route for the purpose of locating and constructing the transmission line in a manner that minimizes the impact on farming operations on high-value farmland. If the record owner does not respond within two weeks after the first documented effort to consult the record owner, the utility provider shall notify the record owner by certified mail of the opportunity to consult. If the record owner does not respond within two weeks after the certified mail is sent, the utility provider has satisfied the provider's obligation to consult.

(3) The requirement to consult under this section is in addition to and not in lieu of any other legally required consultation process.

ORS 215.276 requires that, for transmission lines considered a utility facility necessary for public service under ORS 215.275, the utility provider (or certificate holder) consult with record-owners of high value farmland prior to construction to locate and construct the transmission line in a manner that minimizes impacts on high-value farmland operations. In ASC Exhibit K the applicant represents that it would consult landowners landowners in effort to minimize and mitigate potential agricultural impacts.

ORS 215.276 is specific to landowners of high value farmland agriculture and requires that the utility provider issue a notification of an opportunity to consult via certified mail, if after two weeks of the initial notification, the landowner has not responded. The Department recommends specific language be incorporated into the recommended Agricultural Mitigation Plan recommended in Land Use Conditions 2 and 3, as presented below:

- Prior to construction, the applicant shall provide notification to the record owner of any agricultural lands containing high-value farmland, as defined in ORS 195.300(10), of the opportunity to consult with IPC for the purpose of locating and constructing the transmission line in a manner that minimizes impacts to high-value farmland farming operations.
    - The initial notification to the record owner shall allow two weeks to respond to the opportunity to consult with applicant. If the record owner does not respond to applicant within two weeks of the initial notification, applicant shall provide a second notification of the opportunity to consult with applicant via certified mail. If the record owner does not respond within two weeks of the second notification, applicant will have satisfied its obligation to consult pursuant to ORS 215.276(2).

The Department recommends Council find that based upon inclusion of the above-referenced process as a requirement in the draft Agricultural Mitigation Plan (Attachment K-1 of this order, imposed in recommended Land Use Conditions 2 and 3), the applicant would satisfy the requirements of ORS 215.276.

Conclusions of Law

Based on the foregoing findings and the evidence in the record, and subject to compliance with the recommended conditions, the Department recommends the Council find an exception to Goal 3 is justified under OAR 345-022-0030(4)(c) and ORS 469.504(2)(c); therefore, the Council finds that the proposed facility complies with OAR 660-033-0130(38)(f) and complies with the applicable statewide planning goal (Goal 3). As such, subject to the recommended conditions, the Department recommends the Council find that the proposed facility complies with the Council's Land Use standard.

IV.F. Protected Areas: OAR 345-022-0040

(1) Except as provided in sections (2) and (3), the Council shall not issue a site certificate for a proposed facility located in the areas listed below. To issue a site certificate for a proposed facility located outside the areas listed below, the Council must find that, taking into account mitigation, the design, construction and operation of the facility are not likely to result in significant adverse impact to the areas listed below. References in this rule to protected areas designated under federal or state statutes or regulations are to the designations in effect as of May 11, 2007:

(a) National parks, including but not limited to Crater Lake National Park and Fort Clatsop National Memorial;

(b) National monuments, including but not limited to John Day Fossil Bed National Monument, Newberry National Volcanic Monument and Oregon Caves National Monument;

(c) Wilderness areas established pursuant to The Wilderness Act, 16 U.S.C. 1131 et seq. and areas recommended for designation as wilderness areas pursuant to 43 U.S.C. 1782;

(d) National and state wildlife refuges, including but not limited to Ankeny, Bandon Marsh, Baskett Slough, Bear Valley, Cape Meares, Cold Springs, Deer Flat, Hart Mountain, Julia Butler Hansen, Klamath Forest, Lewis and Clark, Lower Klamath, Malheur, McKay Creek, Oregon Islands, Sheldon, Three Arch Rocks, Umatilla, Upper Klamath, and William L. Finley;

(e) National coordination areas, including but not limited to Government Island, Ochoco and Summer Lake;

(f) National and state fish hatcheries, including but not limited to Eagle Creek and Warm Springs;

(g) National recreation and scenic areas, including but not limited to Oregon Dunes National Recreation Area, Hell's Canyon National Recreation Area, and the Oregon Cascades Recreation Area, and Columbia River Gorge National Scenic Area;

(h) State parks and waysides as listed by the Oregon Department of Parks and Recreation and the Willamette River Greenway;

(i) State natural heritage areas listed in the Oregon Register of Natural Heritage Areas pursuant to ORS 273.581;

(j) State estuarine sanctuaries, including but not limited to South Slough Estuarine Sanctuary, OAR Chapter 142;

(k) Scenic waterways designated pursuant to ORS 390.826, wild or scenic rivers designated pursuant to 16 U.S.C. 1271 et seq., and those waterways and rivers listed as potentials for designation;

(l) Experimental areas established by the Rangeland Resources Program, College of Agriculture, Oregon State University: the Prineville site, the Burns (Squaw Butte) site, the Starkey site and the Union site;

(m) Agricultural experimental stations established by the College of Agriculture, Oregon State University, including but not limited to: Coastal Oregon Marine Experiment Station, Astoria Mid-Columbia Agriculture Research and Extension Center, Hood River Agriculture Research and Extension Center, Hermiston Columbia Basin Agriculture Research Center, Pendleton Columbia Basin Agriculture Research Center, Moro North Willamette Research and Extension Center, Aurora East Oregon Agriculture Research Center, Union Malheur Experiment Station, Ontario Eastern Oregon Agriculture Research Center, Burns Eastern Oregon Agriculture Research Center, Squaw Butte Central Oregon Experiment Station, Madras Central Oregon Experiment Station, Powell Butte Central Oregon Experiment Station, Redmond Central Station, Corvallis Coastal Oregon Marine Experiment Station, Newport Southern Oregon Experiment Station, Medford Klamath Experiment Station, Klamath Falls;

(n) Research forests established by the College of Forestry, Oregon State University, including but not limited to McDonald Forest, Paul M. Dunn Forest, the Blodgett Tract in Columbia County, the Spaulding Tract in the Mary's Peak area and the Marchel Tract;

(o) Bureau of Land Management areas of critical environmental concern, outstanding natural areas and research natural areas;

(p) *State wildlife areas and management areas identified in OAR chapter 635, Division 8. ****

(3) The provisions of section (1) do not apply to transmission lines or natural gas pipelines routed within 500 feet of an existing utility right-of-way containing at least one transmission line with a voltage rating of 115 kilovolts or higher or containing at least one natural gas pipeline of 8 inches or greater diameter that is operated at a pressure of 125 psig.

Findings of Fact

As required under OAR 345-021-0010(1)(L), the applicant identifies the protected areas within the analysis area and evaluates the following potential impacts during proposed facility

construction and operation: excessive noise, increased traffic, water use, wastewater disposal, visual impacts of facility structures.[154]

As established in the Amended Project Order, the protected areas analysis area includes the area within and extending 20-miles from the proposed site boundary. The applicant's evaluation of protected areas within the analysis area, and potential impacts from construction and operation of the proposed facility to the identified protected areas are provided in ASC Exhibit L.

Evaluation of Applicant's Discovery Measures and Results

As presented in ASC Exhibit L, the applicant identifies protected areas within the analysis area based on review of the BLM's 1989 Baker Resource Management Plan Record of Decision, OSU's extension service website, GIS data and other data available via website searches for the types of protected areas listed in OAR 345-022-0040(1)(a)–(p).[155] Based on review of the applicant's references and mapping sources, the Department recommends Council find that the applicant has adequately evaluated the potential protected areas located within the 20-mile analysis area. As established in the Amended Project Order, if significant adverse impacts from the proposed facility could occur to protected areas beyond the analysis area or to resources identified after issuance of the draft proposed order, the applicant is obligated to assess those impacts.

As presented in ASC Exhibit L, the applicant identifies 18 protected areas within the analysis area, including:

- 4 state wildlife refuges (OAR 345-022-0040(1)(d))
- 5 state fish hatcheries (OAR 345-022-0040(1)(f))
- 2 state parks (OAR 345-022-0040(1)(h))
- 1 state heritage area (OAR 345-022-0040(1)(i))
- 2 agricultural experimental stations (OAR 345-022-0040(1)(m))
- 1 Bureau of Land Management (BLM) Area of Critical Environmental Concern (ACEC) (OAR 345-022-0040(1)(o))
- 3 state wildlife areas (OAR 345-022-0020(1)(p))

Each of the 18 identified protected areas within the analysis area are presented in Table 5 below, in order based on those that are closest to proposed facility infrastructure.

[154] The proposed facility would not generate any emission plumes and therefore would not result in visual impacts from air emissions. Therefore, visual impacts from air emissions resulting from proposed facility construction or operation, including but not limited to impacts on Class I Areas as described in OAR 340-204-0050, is not applicable and therefore not addressed in this order.

[155] NHWAPPDoc2-11 ASC Exhibit L. Protected Areas_2022-01-31, Section 3.0 and Section 6.

Table 5: Protected Areas within the Analysis Area

Protected Area	340-022-0040(1) Category	Distance from Closest Facility Component (miles)	Facility Component	Direction
Echo Meadows Site, Oregon Trail ACEC	(o)	0.2	Trans. Line	North
		6.4	Turbines	
Oregon State University Agriculture Research and Extension Center	(m)	4.4	Trans. Line	North
		12.4	Turbines	
Three Mile Adult Holding (Umatilla Fish Hatchery Satellite Facility)	(f)	6.2	Trans. Line	North
		16.4	Turbines	
Columbia Basin Agricultural Research Center, Pendleton	(m)	6.4	Turbines	East
		19.6	Trans. Line	
Power City Wildlife Area	(p)	7.5	Trans. Line	North
		16.6	Turbines	
Irrigon Wildlife Area	(p)	7.9	Trans. Line	Northwest
		19.2	Turbines	
Cold Springs National Wildlife Refuge	(d)	9.2	Trans. Line	North
		12	Turbines	
Umatilla National Wildlife Refuge	(d)	9.5	Trans. Line	Northwest
		22.4	Turbines	
McKay Creek Wildlife Refuge	(d)	14.9	Trans. Line	East
		9.7	Turbines	
Irrigon Fish Hatchery	(f)	9.6	Trans. Line	Northwest
		22.6	Turbines	
Hat Rock State Park	(h)	12.2	Trans. Line	North
		16.6	Turbines	
Umatilla Fish Hatchery	(f)	12.9	Trans. Line	Northwest
		25.9	Turbines	

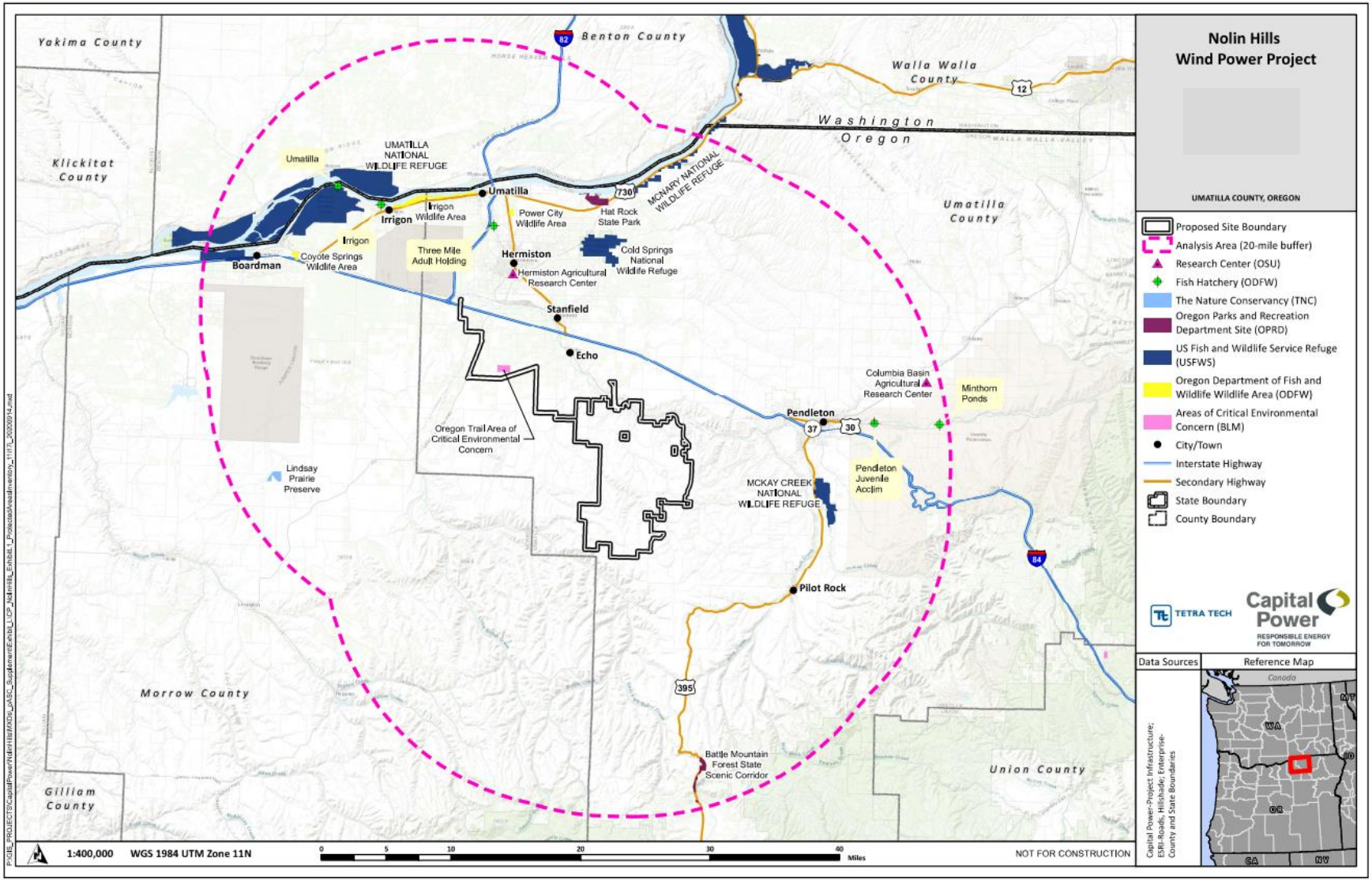
Table 5: Protected Areas within the Analysis Area

Protected Area	340-022-0040(1) Category	Distance from Closest Facility Component (miles)	Facility Component	Direction
Coyote Springs Wildlife Area	(p)	12.9	Trans. Line	Northwest
		24.8	Turbines	
McNary National Wildlife Refuge	(d)	14.7	Trans. Line	North
		17.6	Turbines	
Pendleton Juvenile Acclimation (Umatilla Fish Hatchery Satellite Facility)	(f)	14.8	Turbines	East
		18.9	Trans. Line	
Lindsay Prairie Preserve	(i)	16.1	Trans. Line	West
		23.1	Turbines	
Battle Mountain Forest State Scenic Corridor	(h)	16.4	Turbines	Southeast
		25.6	Trans. Line	
Minthorn Ponds (Umatilla Fish Hatchery Satellite Facility)	(f)	19.7	Turbines	East
		24.0	Trans. Line	

As presented in Table 5: *Protected Areas within the Analysis Area*, the nearest protected area (Echo Meadows site) would be located approximately 0.2 miles north of the proposed 230 kV UEC transmission line route.[156] From proposed wind turbine locations, the nearest protected area is over 6 miles away. From proposed solar photovoltaic energy generation components, protected areas would be at greater distances than from wind turbine components. The proposed facility site boundary and protected areas within the analysis area are presented in Figure 6 below.

[156] NHWAPPDoc2-11 ASC Exhibit L. Protected Areas_2022-01-31, Section 3.0.

Figure 6: Location of Protected Areas within the Analysis Area



OAR 345-022-0040(1) requires the Council to find that the proposed facility would not be likely to result in significant adverse impacts from construction and operation, including but not limited to, noise, traffic, water use, wastewater disposal, visual impacts form facility structures, and visual impacts from air emissions to a designated protected area.[157] The Department evaluates the applicant's facts and impact assessment and presents recommended findings of fact and reasoning below to support Council's conclusions of whether the applicant has demonstrated compliance with the standard.

IV.F.1. Potential Noise Impacts at Protected Areas

Summary and Evaluation of Applicant's Noise Impact Methodology

The applicant's evaluation of proposed facility construction-noise impacts is based on the following:

- 12 construction vehicles/equipment
- Noise levels per equipment, ranging from 73 to 88 dBA and usage rates of 16 to 50% obtained from or consistent with the Federal Highway Administration's (FHWA) 2006 Roadway Construction Noise Model
- Composite L_{eq} noise level[158] estimated based on 12 pieces of equipment, applied usage rates for an 8-hr day, at 2,000 feet

The Department recommends Council find that the applicant's methods for evaluating construction noise impacts are acceptable for the following reasons. The Department reviewed the 2006 Federal Highways Administration (FHWA) Roadway Construction Noise Model and affirms that the equipment noise levels and usage rates used by the applicant are accurate or more conservative than is used in the noise model. The assumed daily use of 12 vehicles in any one area is reasonably conservative, given the pace at which activity can occur and represented maximum size of temporary disturbance work areas. The composite noise level was generated by employing the construction noise calculation methodology described in the U.S. Federal Highway Administration Construction Noise Handbook. This approach is reliable as a noise estimator because it uses computations and sourced inputs (i.e. equipment noise levels and usage rates from the FWHA Roadway Construction Noise Model).

[157] OAR 345-001-0010(53) defines "Significant" as "…having an important consequence, either alone or in combination with other factors, based upon the magnitude and likelihood of the impact on the affected human population or natural resources, or on the importance of the natural resource affected, considering the context of the action or impact, its intensity and the degree to which possible impacts are caused by the proposed action. Nothing in this definition is intended to require a statistical analysis of the magnitude or likelihood of a particular impact."

[158] The Department recommends Council find that estimating noise in Leq is the most appropriate metric because of the intermittent nature of construction equipment operation and allows for the prediction to be based on a compilation of varying noise levels throughout an 8-hr day.

The applicant's evaluation of proposed facility operational-noise impacts is based on an assumed ambient noise level of 26 dBA and the following noise levels from facility components:

- 112 wind turbines (GE 3.0 – 140), each at 108 dBA (includes confidence interval of k = 2 dBA)[159]
- 2 substation GSU transformers (222 MVA), each at 105 dBA
- 97 solar inverter blocks at 97 dBA, including 5 solar panel inverters and distribution transformer; solar DC converter at 96 dBA; and BESS at 98 dBA (represented in ASC Exhibit X Figure X-2 as "DC BESS Inverter Block")
- 1 substation GSU transformer (300 MVA) at 103 dBA
- 230 kV transmission line, during fair and foul weather events

Based on the above-referenced noise levels, the applicant utilized two programs to analyze potential noise impacts – the DataKustic GmbH's computer-aided noise abatement program (CadnaA) v 2020 MR1 and the Corona and Field Effects Program Version 3 (Corona 3). The CadnaA is a comprehensive three-dimensional acoustic software model that conforms to the International Organization for Standardization (ISO) standard ISO 9613-2 "Attenuation of Sound during Propagation Outdoors."[160] The Corona 3 is a DOS-based computer model developed by the BPA and produces estimates of electric and magnetic fields, and audible noise, based on line voltage, load flow, physical dimensions of the line, and site elevation.[161]

The Department recommends Council find that the applicant's methods for evaluating operational noise impacts are acceptable for the following reasons. CadnaA is an established model that has been relied upon for the evaluation of noise impacts for numerous EFSC decisions on site certificates[162] and represents statistical-computations with sourced inputs. The Corona 3 model has been developed by BPA. In this model, Corona performance is calculated using empirical equations that have been developed by BPA over several years from the results of measurements on numerous high-voltage lines. The validity of this approach for corona-generated audible noise has been demonstrated through comparisons with measurements on other lines all over the United States.[163]

Construction

[159] NWHAPPDoc2-23 ASC Exhibit X Noise 2022-01-31, Section 4.2.6.1.

[160] NWHAPPDoc2-23 ASC Exhibit X. Noise 2022-01-31, Section 4.2.5.1.

[161] *Id.*

[162] EFSC Final Order on ASC for Madras Solar Energy Facility, June 2021. Available: https://www.oregon.gov/energy/facilities-safety/facilities/Pages/MSE.aspx. EFSC Final Order on ASC for Bakeoven Solar Project, April 2020. Available: https://www.oregon.gov/energy/facilities-safety/facilities/Pages/BSP.aspx

[163] Bonneville Power Administration. Klondike III/Biglow Canyon Wind Integration Project, Appendix C: Electrical Effects, Page 1. 2006. Accessed online: https://legacy.bpa.gov/efw/Analysis/NEPADocuments/nepa/Klondike/AppendixC-EMF.pdf Date Accessed: 2022-03-09.

The nearest protected area is the Echo Meadows Interpretive Site, 0.2-miles from the site boundary of the proposed 230 kV UEC transmission line. Echo Meadows is 320-acre, BLM-managed Area of Critical Environmental Concern (ACEC). It is protected for preservation and enjoyment of the remaining evidence of the Oregon Trail. The National Park Service (NPS) has designated the site as significant on the Oregon National Historic Trail (ONHT) as the primary route of the Oregon trail which passes directly through the Echo Meadows site. Visitors can hike along a paved trail to see nearly one mile of intact wagon ruts and read interpretive signs about the area and its history. The site receives fairly low levels of public use, up to an estimated maximum of about 850 visitors per year.[164]

Based on the Department's review of Google Earth, the parking lot area and first set of interpretive signs are less than 1,000 feet away. The applicant estimated a daily average noise level, in L_{eq}, of 48 dBA at 2,000 feet. Because the parking lot and first set of interpretive signs appear to be half the distance used by the applicant to assess the L_{eq} composite noise level for construction, the Department estimates the L_{eq} based on half the distance, using the accepted 3-dBA increase per halving of distance, at 51 dBA. Based on ASC Exhibit X Table X-1, a noise level of 51 dBA would be similar to a quiet rural residence or light auto traffic at a distance of 100-feet.

Proposed facility construction noise of 51 dBA could impact the quality of visitor experience at the Echo Meadows site. Therefore, the Department recommends Council impose a condition requiring that, prior to construction of the 230 kV UEC Cottonwood Route, if selected, that the applicant notify the BLM land manager of the construction schedule and potential noise impacts in efforts to alert potential visitors and minimize potential noise disturbance impacts at the Echo Meadows site (see recommended Protected Areas Condition 1 below).

> **Recommended Protected Areas Condition 1 (PRE):** Prior to construction of the 230 kV UEC Cottonwood transmission line, if selected as the final design transmission line option, the certificate holder shall provide notice to the Department and BLM land manager for the Echo Meadows site of the 230 kV UEC Cottonwood transmission line construction schedule, potential construction-related noise impacts, and contact information to report noise complaints.
>
> **Recommended Protected Areas Condition 2 (CON):** During construction of the 230 kV UEC Cottonwood transmission line, if selected as the final design transmission line option, the certificate holder shall, require contractors to have noise complaint and response signage on or near their equipment in a manner accessible to users of the Echo Meadows site. If noise complaints are received, contractors must attempt to reduce equipment-related noise levels, to the extent practicable.

[164] NHWAPPDoc2-11 ASC Exhibit L. Protected Areas_2022-01-31, Section 4.1. Personal communication cited: Rachael Katz, Tetra Tech, and Brian Woolf, BLM Vale District, Baker Office, August 6, 2018.

Based upon compliance with the recommended condition, the Department recommends Council find that proposed facility construction noise would not be likely to result in significant adverse impacts at the Echo Meadows site.[165]

If the proposed 230 kV UEC Cottonwood transmission line route is not selected, the next closest protected area to construction related noise impacts would be over 6-miles away. Based on a distance of 6-miles and noise attenuation of 3 dBA per doubling of distance, noise from proposed facility construction would not be audible at any other protected areas within the analysis area. For these reasons, the Department recommends Council find that proposed facility construction noise would not be likely to result in significant, adverse impacts at any other protected areas within the analysis area.

Operations

As presented in Table 5 above, the nearest protected area to proposed facility infrastructure would be the BLM's Echo Meadows site[166], approximately 1,056 feet (0.2 miles) from the proposed 230 kV UEC transmission line. Therefore, the potential for proposed facility noise impacts would occur from corona noise generating from the proposed 230 kV transmission line during rainy conditions. Based on ASC Exhibit X Figure X-1, corona noise impacts are estimated at 35 dBA at 200 feet. At a distance of 1,000-feet, based on noise attenuation of 3 dBA per doubling of distance, noise levels are expected to range from 27 to 30 dBA during rainy conditions, and below 26 dBA (accepted ambient noise levels) during fair conditions. As presented in ASC Exhibit X Table X-1, noise levels ranging from 25-30 dBA are considered extremely quiet, similar to a quiet library at 15 feet. The Department recommends Council find that corona noise impacts at a distance of over 1,000-feet, which are considered extremely quiet, would not be likely to result in significant adverse impacts at the Echo Meadows site.

Acoustic modeling results for all facility components identify a maximum noise level of 38 dBA within 200-feet. Using this noise level, the distance of the next closest protected area of 6-miles and noise attenuation of 3 dBA per doubling of distance, noise from proposed facility operation would not be audible at any other protected areas within the analysis area. For these reasons, the Department recommends Council find that proposed facility operational noise would not be

[165] In ASC Exhibit L, the applicant presents that noise levels from proposed facility construction, of 48 dBA, at the parking lot area/interpretive signs of the Echo Meadows site would not result in significant adverse impacts because: this level of noise is below industrial limits; it would be short-term and temporary (approximately 3-weeks); and noise levels would be similar to O&M noise levels of the existing distribution line. The Department disagrees with this reasoning – industrial noise limits are not the standard to evaluate potential significance of construction-related noise impacts at protected areas (i.e. sets a very high standard for a potential adverse impacts to protected areas and are not in the same units – L_{eq} compared to L_1, L_{10} and L_{50}); construction noise is by nature short-term and temporary and therefore this argument would apply to all construction noise evaluated under the standard (i.e. sets a very low standard for potential adverse impacts to protected areas); and the applicant has not provided any evidence to substantiate an understanding of routine O&M noise for the existing distribution line.

[166] The Echo Meadows site is a 320 acre site managed for the preservation and enjoyment of the remaining evidence of the Oregon Trail.

likely to result in significant, adverse impacts at any other protected areas within the analysis area.

IV.F.2. Potential Traffic Impacts at Protected Areas

Summary of Applicant's Traffic Impact Methodology

The applicant estimated maximum number of daily worker and truck trips and primary haul routes in ASC Exhibit U. Maximum number of daily one-way trips from proposed facility construction is estimated at 1,034. Proposed facility construction traffic would utilize I-84, I-82, US Highway 395 (US395), County Road (CR) 1350 from US-395, and CR-1361, CR-1362, CR-1363, and CR-1394.[167] Maximum number of trips per day from proposed facility operation is estimated at 30 one-way trips.

Construction

The applicant identifies that, based on the access roads to the protected areas identified in Table 5 above, construction-related traffic would use haul routes that provide access to the access roads for the Echo Meadows site and the McKay Wildlife Refuge, including US-395 and Oregon Trail Road (OR-320). Traffic impacts to the Echo Meadows site include temporary (15 minutes) closure of the gravel road going north from OR-320; temporary closure of OR-320 for 1-2 days; and, congestion from helicopter use for the I-84 crossing. Traffic impacts to the McKay Wildlife Refuge include creased traffic congestion and delayed access to the site.

To minimize these traffic-related impacts, the applicant represents that it would require contractors to implement numerous best management practices (BMPs), including:

- Coordinating the timing and locations of road closures or oversize load movements in advance with emergency services such as fire, paramedics, and essential services such as mail delivery and school buses.
- Maintaining emergency vehicle access to private property.
- Posting signs on county- and state-maintained roads, where appropriate, to alert motorists of construction and warn them of slow, merging, or oversize traffic.
- Using traffic control measures such as traffic control flaggers, warning signs, lights, and barriers during construction to ensure safety and to minimize localized traffic congestion. These measures would be required at locations and during times when trucks would be entering or exiting highways frequently.
- Notifying landowners prior to the start of construction near residences, including helicopter use within one mile of residences.
- Restoring residential areas as soon as possible, and fencing construction areas near residences at the end of the construction day.

[167] NHWAPPDoc2-20 ASC Exhibit U. Public Services_2022-01-31, Section 3.2.2.6.

These BMPs have been incorporated into a draft Construction Traffic Management Plan and are recommended by the Department to be finalized, based on final facility design, construction methods and haul routes, and imposed in recommended Public Services Conditions 1 and 2. Based on compliance with the requirements of Public Services Conditions 1 and 2, the Department recommends Council find that construction-related traffic impacts would not be likely to result in significant, adverse impacts at the Echo Meadows site or McKay Wildlife Refuge. Because the applicant did not identify any other access roads serving protected areas within the analysis area that would be impacted by construction-related traffic and use of haul routes, the Department recommends Council find that proposed facility construction traffic would not be likely to result in significant, adverse impacts at any other protected area within the analysis area.

Operation

Routine O&M of the proposed facility could include equipment deliveries with oversized haul trucks, but generally is anticipated to result in a maximum of 30 daily, one-way light-duty vehicle trips. The Department recommends Council find that this level of traffic increase would not be likely to result in significant, adverse impacts at any protected area within the analysis area because the primary routes have sufficient capacity to accept this increase in volume without impacting the quality of traffic service.[168]

IV.F.3. Potential Water Use Impacts at Protected Areas

Construction

Proposed facility construction would use approximately 100 million gallons (Mgal) of water per year primarily for dust suppression, concrete mixing for foundations, road construction and site preparation. None of the construction-water would be obtained or withdrawn from a protected area. Protected areas may be supplied water from service providers that would also supply water for proposed facility construction. ASC Exhibit O Attachment O-1 includes letters from 2020 from the cities of Pendleton, Hermiston, and Echo Water Departments. The City of Hermiston confirmed that it can provide up to 125,000 gallons per day up to 68 million gallons for facility construction. The City of Echo also provided a letter stating they could provide up to 125,000 gallons per day (with no limit stated) for the construction of the facility. The City of Pendleton's 2020 letter confirmed the ability to provide 134,000 gallons per day up to 71,000,000 gallons for construction. This was re-affirmed by the City of Pendleton in the response received by ODOE in 2022.[169]

The Department recommends Council find that because proposed facility construction water would not be obtained or withdrawn from any protected area within the analysis area and service providers have affirmed on the record of the ASC that they have the legal ability and

[168] NHWAPPDoc2-20 ASC Exhibit U. Public Services_2022-01-31, Table U-5.

[169] NHWAPPDoc5 ASC Reviewing Agency Comment_City of Pendleton_Water_Tarter 2022-02-02.

capacity to serve the proposed facility's construction water needs, that proposed facility construction water use would not be likely to result in significant, adverse impacts at any protected area within the analysis area.

Operations

Proposed facility operations would use approximately 1.12 million gallons of water per year for solar panel washing[170] with this water to be purchased from City of Hermiston, City of Pendleton, or the City of Echo.[171] In addition, the proposed O&M building would be served by a groundwater well that would be limited to 5,000-gallons per day. None of the operational-water would be obtained or withdrawn from a protected area. Protected areas may rely upon shared groundwater. However, a withdrawal of 5,000-gallons per day is a level determined exempt from Oregon Department of Water Resources permit requirements, which the Department therefore recommends be considered by Council as a de minimus impact level. For these reasons, the Department recommends Council find that proposed facility operational water use would not be likely to result in significant, adverse impacts at any protected area within the analysis area.

IV.F.4. Potential Wastewater Impacts at Protected Areas

Construction

Proposed facility construction is anticipated to produce wastewater from concrete washout, including soil berms and concrete solids; vehicle cleaning; dewatering discharge; and sanitary wastewater. The applicant quantified the potential wastewater from concrete washout at up to 1,018 gallons per day or 549,905 gallons per year (based on 25% of total water used during foundation construction). The applicant's proposed management of construction wastewater includes burying the concrete washout water as part of backfilling foundations. Concrete pouring can contribute suspended solids and heavy metals to stormwater runoff and cause pH increases in receiving waters.[172] For this reason, any on-site concrete or washout disposal must be conducted in accordance with OAR 340-093-0080 which requires DEQ approval of a permit exemption for materials substantially similar to clean fill; and infiltration and evaporation in accordance with a DEQ-issued NPDES 1200-C permit. DEQ recommends the use of an infiltration pit or tank to capture and hold concrete washout as a method for capturing and neutralizing high pH materials to prior to any disposal.[173] Sanitary wastewater would be managed by a licensed subcontractor. Applicant affirms that wastewater generated onsite would not affect streams, wetlands or groundwater supplies.

[170] NHWAPPDoc2-14 ASC Exhibit O. Water Req_2022-01-31, Section 3.2.

[171] NHWAPPDoc2-14 ASC Exhibit O. Water Req_2022-01-31, Attachment O-1

[172] Oregon Department of Environmental Quality. Construction Stormwater Best Management Practices Manual. 1200-C NPDES General Permit. Water Quality Permitting Department. 2021-02-01, p. 50.

[173] Oregon Department of Environmental Quality. Construction Stormwater Best Management Practices Manual. 1200-C NPDES General Permit. Water Quality Permitting Department. 2021-02-01, p. 50.

As presented in Section IV.N. *Waste Minimization*, the Department recommends Council impose Waste Minimization Condition 3, which would require that any washwater disposed onsite be appropriately evaluated to minimize any potential groundwater contamination issues. Based on compliance with recommended Waste Minimization Condition 3, the Department recommends Council find that proposed facility construction wastewater would not be likely to result in significant, adverse impacts at any protected area within the analysis area.

Operation

Proposed facility operations would produce wastewater from solar panel washing and nontoxic ionized solution (if flow battery technology is selected for the proposed BESS). Water for washing solar panels will require an estimated one gallon per solar module, for a total of approximately 1,120,000 gallons per year during operations.[174] The applicant represents that the solar panel washwater would not contain solvents and would be discharged via evaporation and seepage into the ground. The nontoxic ionized solution would be hauled offsite by a licensed hauler and disposed of offsite at a licensed facility.

As presented in Section IV.N. *Waste Minimization*, the Department recommends Council impose Waste Minimization Condition 7 which would require that any washwater disposed onsite be appropriately evaluated to minimize any potential groundwater contamination issues. Based on compliance with recommended Waste Minimization Condition 7, the Department recommends Council find that proposed facility operational wastewater would not be likely to result in significant, adverse impacts at any protected area within the analysis area.

IV.F.5. Potential Visual Impacts at Protected Areas

Summary and Evaluation of Applicant's Visual Impact Methodology

In ASC Exhibit L, the applicant provides a zone of visual influence (ZVI) analysis (also known as a viewshed or visibility analysis), using Environmental Systems Research Institute ArcGIS software, to identify the areas from which the proposed facility wind turbines might be visible. The ZVI "bare-earth" modeling approach is based only on the effects of terrain (topography) on visibility. The model does not account for the effects of distance, lighting, weather, and atmospheric attenuation factors that diminish visibility under actual field conditions. A bare-earth analysis also does not account for the effects of vegetation or buildings, which can in practice block or screen views in some places.

To assess the potential visibility of the structures, the applicant conducted a ZVI analysis for the turbine layout assuming 100 percent maximum blade tip height (MBTH), which is 496 feet (See Exhibit L, Figure L-2). The ZVI analysis also addressed potential visibility of the 230-kV transmission lines. ASC Exhibit L Figures L-3, L-4, and L-5 show the range of visibility for the UEC Cottonwood, BPA Stanfield, and internal transmission line routes, respectively.

[174] NHWAPPDoc2-14 ASC Exhibit O. Water Req_2022-01-31, Section 3.2.

Potential Visual Impacts of Proposed Facility Structures

Based on the results of the ZVI analysis, some portions of the proposed facility would be visible from 15 of the 18 protected areas in the analysis area (see Exhibit L, Table L-1). In some of these protected areas, visibility is characterized as limited, meaning that there will be no views of the facility from a substantial portion of the protected area.[175] The ZVI shows that the proposed facility would be visible from all but the Irrigon State Wildlife Area, the Umatilla and Pendleton Juvenile Acclimation Fish Hatcheries.

Based upon the ZVI analysis, the applicant identifies two protected areas that would have foreground to middle-ground views of proposed facility components (from a distance of up to 0.5 mile for foreground, and 0.5 to 5 miles for middle-ground). In both cases, the foreground to middle-ground viewing distance is the view from the protected area to the proposed 230 kV UEC Cottonwood transmission line. Views of facility wind turbines from either of these protected areas would be at a background distance of over 6 miles.[176] Potential impacts of proposed facility visibility is presented below.

<u>Echo Meadows ACEC</u>

The ZVI analysis demonstrates that, at the Echo Meadows ACEC, the proposed 230 kV UEC Cottonwood Transmission line route (0.2 mile) would be visible at a foreground viewing distance and wind turbines would be visible at a variable visibility at a background viewing distance (6.4 miles or more). In ASC Exhibit R Figure R-6, the applicant provides photo simulations of the proposed 230 kV UEC transmission line route from the Echo Meadows site. These simulations demonstrate the existing viewshed as inclusive of wind turbines (from other facilities), existing UEC and other power lines, agricultural structures, and multiple center-pivot agricultural irrigation systems. The photo simulation also demonstrates that the proposed 230 kV UEC transmission line route would not be visible when visitors are oriented toward the remnant Oregon Trail ruts. However, where not screened by topography, the proposed transmission line would introduce new, moderately contrasting middle-ground and background features in the viewshed of Echo Meadows.

Based on review of the applicant's ZVI analysis and photo simulation, consideration of the existing viewshed, and BLM comments affirming that visibility of the transmission line would not be expected to impact user experience[177], the Department recommends Council find that proposed facility visibility would not impact the use or enjoyment of the resource by the public

[175] NHWAPPDoc2-11 ASC Exhibit L. Protected Areas_2022-01-31, Section 4.4.

[176] NHWAPPDoc2-11 ASC Exhibit L. Protected Areas_2022-01-31, Section 4.4.

[177] NHWAPPDoc3-12 pASC BLM comment Protected Areas impacts Echo Meadows Woolf 2021-04-30. BLM's Outdoor Recreation Planner Brian Woolf stated the that proposed transmission line would be in "conformance with the BLM's visual resource zoning for that viewshed."

and therefore would not be likely to result in a significant adverse impacts to the Echo Meadows site.

Hermiston Agricultural Research Center

The ZVI indicates potential visibility of the proposed 230 kV UEC Cottonwood transmission line route, at a distance of 4.4 miles, and unlikely visibility of facility wind turbines from the Hermiston Agricultural Research Center (HARC). The HARC is located just outside of a more urbanized area (Hermiston) and among industrial agriculture. Users of the center are engaged in focused agricultural activities. There are no management goals or other research objectives applicable to viewshed or scenic values for the HARC.

The applicant represents that views of the proposed facility from the HARC would be in context of the current viewshed with existing urban/industrial development, nearby highways, transmission lines, and existing wind turbines. Based on review of ASC Exhibit L Figure L-2 and the description of the existing viewshed, the Department agrees. Based on review of the ZVI, the description of the existing viewshed, and use and values of the HARC, the Department recommends Council find that the proposed 230 kV UEC Cottonwood transmission line and wind turbines, while visible, would not be prominent features and would therefore not be likely to result in significant, adverse visual impacts at HARC.

Conclusions of Law

Based on the foregoing recommended findings of facts, reasoning, and conditions, the Department recommends the Council conclude that, taking into account mitigation, the design, construction and operation of the proposed facility would not be likely to result in significant adverse impacts to any protected areas, in compliance with the Council's Protected Area standard.

IV.G. Retirement and Financial Assurance: OAR 345-022-0050

To issue a site certificate, the Council must find that:

(1) The site, taking into account mitigation, can be restored adequately to a useful, non-hazardous condition following permanent cessation of construction or operation of the facility.

(2) The applicant has a reasonable likelihood of obtaining a bond or letter of credit in a form and amount satisfactory to the Council to restore the site to a useful, non-hazardous condition.

Findings of Fact

Restoration of the Site Following Cessation of Construction or Operation

OAR 345-022-0050(1) requires the Council to find that the proposed facility site can be restored to a useful non-hazardous condition at the end of the proposed facility's useful life, or if construction of the proposed facility were to be halted prior to completion. In ASC Exhibit W, the applicant estimates the proposed facility's useful life to be "at least 30 years".[178]

The Department's recommended findings of fact are based on: 1) the potential risks and hazards associated with proposed facility construction and operation that could impact site restoration, and the adequacy of minimizing those risks from the applicant's proposed mitigation, Department recommended conditions and Council mandatory conditions; 2) the adequacy of the applicant's identified tasks and actions for decommissioning and site restoration based on inclusion of all proposed facility components and tasks; and 3) the adequacy of the applicant's decommissioning cost estimate based on methods, assumptions and justification.

Evaluation of Potential Construction and Operational Risks to Site Restoration

Proposed facility construction and operation include risks that could impact the applicant's ability to restore the site to a useful, nonhazardous condition. Potential risks to site restoration include erosion, compaction, soil contamination, invasion of noxious weeds and failed revegetation of temporary impacts. As evaluated in Section IV.D., *Soil Protection* of this order, potential impacts to soils include erosion, compaction, restoration and contamination from unintentional spills. To minimize these potential risks, the Department recommends Council impose Soil Protection Conditions 2 and 5 requiring that, during construction, the applicant adhere to the requirements of a DEQ-issued 1200-C NPDES permit; and that, prior to construction or operation, it would finalize and implement a Spill Prevention, Control, and Countermeasures (SPCC) and Hazardous Materials Spill Prevention Program.

As evaluated in Section IV.H., *Fish and Wildlife Habitat* of this order, potential impacts to lands include temporary habitat loss. To minimize these risks, the Department recommends Council impose Fish and Wildlife Habitat Condition 1 requiring that, prior to construction, the applicant finalize the Revegetation and Noxious Weed Plan, to be implemented during and post-construction. The Revegetation and Noxious Weed Plan (Attachment P-2) includes requirements to revegetate temporarily impacted habitat and to pre-treat, control and monitor noxious weeds within disturbance areas.

As evaluated in Section IV.B., *Organizational Expertise* and Section IV.M., *Public Services* of this order, proposed facility construction and operation could result in fire risk hazards. To minimize these risks, the Department recommends Council require that the applicant implement and adhere to the requirements of a Fire Prevention, Suppression and Emergency Management

[178] NHWAPPDoc2-22 ASC Exhibit W. Retirement_2022-01-31, Section 3.0.

Plan or contractor provided Emergency Management Plan that includes the provisions identified in Attachments U-2.

The Council's rules include several mandatory site certificate conditions relating to the obligation of an applicant (certificate holder) to prevent the development of conditions on the site that would preclude restoration of the site and requiring the applicant (certificate holder) to obtain Council approval of a retirement plan in the event that the facility ceases construction or operation, which are as follows:

Retirement and Financial Assurance Condition 1 (GEN): The certificate holder shall prevent the development of any conditions on the site that would preclude restoration of the site to a useful, non-hazardous condition to the extent that prevention of such site conditions is within the control of the certificate holder.
[Mandatory Condition OAR 345-025-0006(7)]

Retirement and Financial Assurance Condition 2 (RET): The certificate holder shall retire the facility if the certificate holder permanently ceases construction or operation of the facility. The certificate holder shall retire the facility according to a final retirement plan approved by the Council, as described in OAR 345-027-0110. The certificate holder shall pay the actual cost to restore the site to a useful, nonhazardous condition at the time of retirement, notwithstanding the Council's approval in the site certificate of an estimated amount required to restore the site.
[Mandatory Condition OAR 345-025-0006(9)]

Retirement and Financial Assurance Condition 3 (RET): If the Council finds that the certificate holder has permanently ceased construction or operation of the facility without retiring the facility according to a final retirement plan approved by the Council, as described in OAR 345-027-0110, the Council shall notify the certificate holder and request that the certificate holder submit a proposed final retirement plan to the Department within a reasonable time not to exceed 90 days. If the certificate holder does not submit a proposed final retirement plan by the specified date, the Council may direct the Department to prepare a proposed final retirement plan for the Council's approval.

Upon the Council's approval of the final retirement plan, the Council may draw on the bond or letter of credit described in OAR 345-025-0006(8) to restore the site to a useful, nonhazardous condition according to the final retirement plan, in addition to any penalties the Council may impose under OAR Chapter 345, Division 29. If the amount of the bond or letter of credit is insufficient to pay the actual cost of retirement, the certificate holder shall pay any additional cost necessary to restore the site to a useful, nonhazardous condition. After completion of site restoration, the Council shall issue an order to terminate the site certificate if the Council finds that the facility has been retired according to the approved final retirement plan.
[Mandatory Condition OAR 345-025-0006(16)]

Based on the recommended findings of fact presented above, and compliance with the Council's mandatory site certificate conditions and the Department's recommended conditions, the Department recommends Council find that potential risks to site restoration from proposed facility construction and operation would be minimized and would not impact the applicant's ability to restore the site to a useful, nonhazardous condition at the end of the facility's useful life or upon cessation of construction or operation.

Evaluation of Applicant's Tasks and Actions for Decommissioning and Site Restoration

The applicant presents tasks and actions necessary for facility decommissioning and site restoration in ASC Exhibit W. A summary of high-level tasks and actions is presented in Table 6: *Proposed Facility Decommissioning Tasks and Cost Estimate* below and generally includes the following:

- Dismantle aboveground structures (such as wind turbines, met towers, solar and battery components, aboveground electrical equipment including collector lines transmission lines and poles, and the O&M building and substations). Remove components from site for recycle, sale or disposal.
    - Electrical components including substations, collector lines, and transmission lines, along with their support structures would be dismantled.
    - Subsurface features including underground collector lines and concrete foundations would be removed to a minimum of 3 feet below ground surface or as agreed with the landowner, to allow continued use of the land for agricultural or other purposes deemed appropriate at the time of decommissioning purposes.
- Access roads would be reclaimed by regrading and removal of road surfaces, and surface soils restored to original conditions, based on landowner consultation. If the landowner prefers to retain roads, they would be left in place. Reclamation procedures would be based on site specific requirements and techniques commonly employed at the time the area is to be reclaimed. As appropriate and based on intended use of the land following decommissioning, the land would be reseeded in accordance with a Revegetation and Noxious Weed Plan.
- Fluids would be drained onsite and transported offsite for disposal at a licensed facility, if flow batteries are selected for the proposed BESS. Containers would be recycled or disposed at an approved facility.

The Department reviewed the above-summarized tasks and actions with the more-detailed line-item breakdown presented in ASC Exhibit W-1 and compared those details against the information presented in ASC Exhibit B (Project Description), C (Project Location – Disturbance) and G (Materials Inventory). Based on review of these materials, the Department affirms that the information is consistent across relevant exhibits. For this reason, the Department recommends Council find that the tasks and actions accurately represent facility decommissioning and site restoration.

Evaluation of Applicant's Decommissioning Cost Estimate - Methods and Assumptions

The applicant's retirement cost estimate includes the removal of wind turbines, pad transformers, met towers, solar arrays, battery energy storage system components, collector substations, O&M Building, fencing, and aboveground collector and transmission lines; excavation of foundations and underground collector lines down to a depth of 3 feet; and return of soils to preconstruction grade, including the removal and restoration of roadways for the proposed facility. The methods and assumptions used to estimate the site restoration costs are described in ASC Exhibit W Section 5.0, and include the following methods and assumptions:

- Labor costs are based on U.S. Department of Labor wage determinations and rates published by RS Means. Rates include base wage, fringe, and payroll tax liability, as well as an estimated 10 hours per week at overtime rates.
- Equipment rates are based on RS Means and historical vendor quotes and include fuel and maintenance. Rental equipment, which is typically more expensive than contractor-owned equipment, is assumed.
- Mobilization and demobilization costs were estimated to reflect the cost of equipment and crew mobilization. Temporary facilities would be placed on site to include office trailer, storage units, port a toilet, first aid supplies, and utilities.
- Restoration includes labor, equipment, and production rates required for each individual task.
- For purposes of estimating costs, it is assumed that roads would be decompacted and reseeded to match the surrounding area and in such a way that they are no longer usable as a road. At the time of facility retirement, the landowner may elect to leave some roads in place, which would be a reduction to the estimated cost.
- Home Office, Project Management, Overhead, and Fees can vary significantly by contractor. This estimate includes average costs as a percentage of total cost and consists of 5 percent for Home Office and Project Management, and 13 percent for Overhead and Fees. Contractor Contingency in the amount of 3 percent of total cost also is included.[179]
- Miscellaneous costs such as permits, engineering, signage, fencing, traffic control, utility disconnects, etc. are included as incidental costs.

The facility decommissioning estimate was developed by Tetra Tech. The Department reviewed the applicant's methods, assumptions and data sources (e.g., prevailing labor rates, and facility design of up to 112 General Electric 3.03-MW turbines along with up to 820,000 solar panels and related facilities) and found that the information is reasonably accurate and consistent with

[179] ASC Exhibit W, Attachment W-1, Section 1.1 includes a line item for ODOE Management Fee (Pass Through Cost) for a lump sum amounting in $533,000. The Department did not include this amount in Table 6: *Proposed Facility Decommissioning Tasks and Cost Estimate*, because the Department adds its own contingencies which are based on an adjusted total of the applicant's total costs and discussed further in this section.

decommissioning estimates approved by Council for other energy facilities. The amount totals $31.5 million. This estimate is presented in Table 6: *Proposed Facility Decommissioning Tasks and Cost Estimate* below and includes Department corrections and adjustments (see footnotes and section below).

Table 6: Proposed Facility Decommissioning Tasks and Cost Estimate

Task or Component	Quantity	Unit Cost ($)	Unit	Estimate ($)
Mobilization / Demobilization				
Equipment Mob	1	101,500.00	Lump Sum	$101,500.00
Site Facilities	1	2,200.00	Lump Sum	$2,200.00
Crew Mob & Site Setup	3	15,703.57	Day	$47,110.71
Crew Demob & Site Cleanup	2	15,703.57	Day	$31,407.14
Mob-Erection Sub	1	725,000.00	Lump Sum	$725,000.00
			[1.2] Subtotal =	***$907,217.85***
Site Facilities	12	2,155.00	Month	***$25,860.00***
Field Management	52	30,245.91	Week	***$1,572,787.32***
Substation & Switchyard Removal				
Fence Removal	2	1,286.19	Day	$2,572.38
Transformer & Switchyard Equip Removal	2	129,881.96	Each	$259,763.92
Remove Control Building	2	2,604.41	Each	$5,208.82
UG Utility & Ground Removal	4	1,286.19	Day	$5,144.76
Remove Foundations to Subgrade	784	34.84	Cubic Yd.	$27,314.56
Misc. Material Disposal	2	1,675.00	Each	$3,350.00
Restore Yard	2	17,159.73	Each	$34,319.46
			Subtotal =	***$337,673.90***
Construct & Remove Temporary Crane Pads				
Crane Pad 4" Stone 8" depth	11,200.00	34.9	Ton	$390,880.00
Crane Pad 2" Stone 6" depth	8,400.00	38.2	Ton	$320,880.00
Remove stone after erection	112	1,238.61	Each	$138,724.32
			Subtotal =	***$850,484.32***
Wind Turbine Generation Removal				
Remove Top, Nacelle, Rotor	112	20,000	Each	$2,240,000.00
Remove Base & Mid	112	10,000	Each	$1,120,000
			Subtotal =	***$3,360,000.00***
Wind Turbine Generation Sizing & Loadout				
Oil Removal & Disposal	112	262.13	Each	$29,358.56
Demo & Prepare for Shipment Offsite	32,032.00	32.49	Ton	$1,040,719.68
Blade T&D	4,256.00	95	Ton	$404,320.00
Scrap Trucking Cost	32,032.00	65	Ton	$2,082,080.00

Table 6: Proposed Facility Decommissioning Tasks and Cost Estimate

Task or Component	Quantity	Unit Cost ($)	Unit	Estimate ($)
			Subtotal =	***$3,556,478.24***
Wind Turbine Generation Foundation Removal				
Remove Cylindrical Pedestal	2,240.00	45.91	Cubic Yd.	$102,838.40
Remove Top 2' of Octagonal Base	16,800.00	47.16	Cubic Yd.	$792,288.00
Concrete Transport Offsite	19,040.00	11.96	Cubic Yd.	$227,718.40
			Subtotal =	***$1,122,844.80***
Pad Mount Transformer Removal				
Oil Removal & Disposal	112	981.33	Each	$109,908.96
Remove & Loadout Transformer	112	109.96	Each	$12,315.52
Scrap Trucking Cost	896	65	Ton	$58,240.00
Remove Foundations to Subgrade	112	34.84	Each	$3,902.08
			Subtotal =	***$184,366.56***
MET Tower Removal				
Structure Demo	3	2,503.99	Each	$7,511.97
Remove Foundation	45	47.16	Cubic Yd.	$2,122.20
Concrete Transport Offsite	45	11.96	Cubic Yd.	$538.20
Scrap Trucking Cost	24	45	Ton	$1,080.00
			Subtotal =	***$11,252.37***
Solar Array Removal				
Fence Removal	260	260.18	MW	$67,646.80
Inverter / Transformer Removal	260	2,816.88	MW	$732,388.80
Remove Foundations to Subgrade	260	1,313.24	MW	$341,442.40
Solar Panel Removal	260	15,508.04	MW	$4,032,090.40
Solar Rack (Trackers) & Post Removal	260	22,726.70	MW	$5,908,942.00
			Subtotal =	***$11,082,510.40***
DC Storage System Removal				
Battery Removal & Disposal	120	2,655.68	MW	$318,681.60
Structure & Components Removal	120	955.28	MW	$114,633.60
Remove Foundations to Subgrade [1]	120	1,313.24	MW	$157,588.80
			Subtotal =	***$590,904.00***
Collector Line Removal (OH, 34.5 KV)				
Transmission Line – Wind	1	114,361.97	Lump Sum	$114,361.97
Transmission Line – Solar	1	69,125.21	Lump Sum	$69,125.21
Remove Wood Monopoles [2]	*39*	*235.91*	*Each*	$9,200.49
			Subtotal =	***$192,687.67***
Transmission Line Removal (OH, 230 KV)				

Table 6: Proposed Facility Decommissioning Tasks and Cost Estimate

Task or Component	Quantity	Unit Cost ($)	Unit	Estimate ($)
Conductor Removal	32	7592.69	Mile	$242,966.08
Remove Wood Monopoles	282	913.98	Each	$257,742.36
			Subtotal =	***$500,708.44***
O&M Building Removal				
Structure Demo	40	250.4	Ton	$10,016.00
Remove Foundations to Subgrade	320	34.84	Cubic Yd.	$11,148.80
			Subtotal =	***$21,164.80***
Private Access Road Removal (New Roads)				
Private Access Road Removal (New Roads) – Wind	43	5,676.59	Mile	$244,093.37
Private Access Road Removal (New Roads) – Solar	18	5,676.59	Mile	$102,178.62
			Subtotal =	***$346,271.99***
Spot Grade Disturbed Areas – Solar Array	380	548.41	Acre	***$208,395.80***
Re-Seed with Native Vegetation – Roads & Areas Disturbed by Construction				
Re-Seed with Native Vegetation – Roads & Areas Disturbed by Construction – Wind	1	209,610.00	Lump Sum	$209,610.00
Re-Seed with Native Vegetation – Roads & Areas Disturbed by Construction – Solar	1	306,765.00	Lump Sum	$306,765.00
			Subtotal =	***$516,375.00***
Nolin Hills Wind Facility Max Potential Decommissioning Cost **(Cost)** *Subtotal =*				***$25,387,983.46***
Decommissioning Subtotal for Wind and Solar (98% of Total Cost)				***$24,797,079.46***
Decommissioning Total for Battery (BESS) (2% of Total Cost				***$590,904.00***
Applicant Applied Contingencies				
Home Office, Project Management (5% Of Cost)	5		Percent	$1,269,399.17
Contractor Contingency (3% Of Cost)	3		Percent	$761,639.50
Contractor OH & Fee (13% Of Cost)	13		Percent	$3,300,437.85
			Applicant **Contingency** *Subtotal =*	***$5,331,476.53***
Total Applicant Contingencies for Wind and Solar (98% of total contingencies)				***$5,224,847.00***
Total Applicant Contingencies for Battery (BESS) (2% of total contingencies)				***$106,629.53***
Subtotal of Cost and Applicant Contingencies (Q4 2020 Dollars)[3] - *Rounded to nearest $1*				**$30,719,460**
Total Applicant Contingencies for Wind and Solar (98% of total contingencies)				**$30,021,926**
Total Applicant Contingencies for Battery (BESS) (2% of total contingencies)				**$697,534**

Table 6: Proposed Facility Decommissioning Tasks and Cost Estimate

Task or Component	Quantity	Unit Cost ($)	Unit	Estimate ($)
Subtotal of Cost and Applicant Contingencies (Q1 2022 Dollars)[4]				**$32,654,785.97**
Performance Bond	1		Percent	**$326,547.86**
Adjusted Gross Cost				**$32,981,333.83**
Department Applied Contingencies				
Department Administration and Project Management	10		Percent	$3,298,133.38
Future Development Contingency	10		percent	$3,232,170.71
	20 (BESS)		percent	$131,925.34
	subtotal			$3,364,096.05
ODOE **Contingency** *Subtotal* =				***$6,662,229.43***
Total Site Restoration Cost with Department Adjusted Contingencies (Q1 2022 Dollars) *Rounded to nearest $1*				**$39,643,563**

Notes:

1. Department added line item to address the removal of the foundations for the BESS. Department used the unit costs (1,313.24/MW), from solar invertor/transformer foundation removal.
2. ASC Exhibit W Attachment W-1, line item 1.14.1.2 identifies 192 wooden poles for the wind collector line and line item 1.14.2.2 identifies the removal of 116 wooden poles, this line item combines the total for 308 wooden poles removed. ASC Exhibit G identifies a tot of 347 wooden poles, therefore the remaining 39 poles is added as this line item.
3. All unit costs are in Q4 2020 Dollars.
4. Adjustment factor from Q4 2020 Dollars to Q1 2022 Dollars is 1.063.

Source: See NHWAPPDoc2-22 ASC Exhibit W. Retirement_2022-01-31, Attachment W-1 for detailed breakdown of tasks, actions and unit costs for the sum total costs presented in this table.

As presented in Table 6: *Proposed Facility Decommissioning Tasks and Cost Estimate*, the Department recommends Council add a 10 percent contingency cost for both the administrative and project management expenses, and a future development contingency (less the decommissioning estimate of the BESS/DC Storage System, which the Department recommends have a 20 percent contingency be applied). A performance bond of 1 percent is also recommended to be applied. For all types of energy facilities, the subtotal of line-item costs, including contractor's overhead, profit and insurance costs, and specialty contract costs is increased by one percent to account for the cost of a performance bond that would be posted by the contractor as assurance that the work would be completed as agreed, if the proposed facility needed to be retired absent the applicant.

The 10 percent contingency for administrative and management expenses is recommended to cover the anticipated direct costs borne by the State in the course of managing site restoration and would include the preparation and approval of a final retirement plan, obtaining legal permission to proceed with demolition of the facility, legal expenses for protecting the State's

interest, preparing specification bid documents and contracts for demolition work, managing the bidding process, negotiations of contracts, and other tasks.

The 10 percent future development contingency the Department recommends Council apply to all tasks, actions and applicant contingencies, with the exception of the cost of the BESS conclude that a 20 percent future development contingent is necessary to be applied to account for uncertainty in the decommissioning estimate of the BESS/DC Storage System because, if site restoration becomes necessary, it might be many years in the future where there is uncertainty of continued adequacy of the retirement cost estimate. For all types of energy facilities, the subtotal of line-item costs, including contractor's overhead, profit and insurance costs, and specialty contract costs is increased by one percent to account for the cost of a performance bond that would be posted by the contractor as assurance that the work will be completed as agreed.

Therefore, the Department recommends that Council find that $39 million (Q1 2022 dollars) is a reasonable estimate of an amount satisfactory to restore the site to a useful, nonhazardous condition.

Alternative requests made by the applicant include Council consideration of a reduced decommissioning amount based on the value of scrap and different contingencies for the Department's project management costs, if it were required to manage decommissioning on the applicant's behalf. These facts are presented in ASC Exhibit W. These requests have been made by previous applicants where Council has consistently taken the policy position that such requests be dealt with via rulemaking.[180] Therefore, these facts are not relied upon by the Department to make its recommendations to Council and are omitted from this section. The Department will seek Council's input on the record of the draft proposed order to determine if Council agrees to consider the facts and evidence submitted by the applicant for this ASC.

Ability of the Applicant to Obtain a Bond or Letter of Credit

Royal Bank of Canada (RBC) issued a letter on March 2, 2022 stating that "Capital Power US Holdings Inc. (CPUSHI) is a valued client of Royal Bank of Canada…[and that it's their] understanding that CPUSHI (as parent of the Applicant, Nolin Hills Wind LLC) may be asked to provide a letter of credit and that the potential liability of the letter of credit could total an amount of up to thirty-two million dollars ($39,000,000.00)." Furthermore, the letter clarifies that RBC "has an ongoing relationship with CPUSHI which includes providing credit facilities and from time to time, issuing letters of credit. As of today [(3/2/2022)], CPUSHI has sufficient

[180] BSPAPPDoc2 Final Order 2020-04-24, Section IV.G. *Retirement and Financial Assurance* and OSCAPPDoc2 Final Order on ASC 2022-02-25, Section IV.G. *Retirement and Financial Assurance*.

capacity on its credit facility to issue the letter of credit." RBC has been evaluated by Council and is included on the 2022 pre-approved financial institution list.[181]

An Opinion of Senior Legal Counsel of Capital Power Corporation, dated October 13, 2020 indicates that the applicant has the legal authority to construct and operate the proposed facility, without violating its articles of incorporation covenants, or similar agreements.

Based on review of the legal opinion and financial assurance letter, which are largely consistent with similar letters historically reviewed by Council under the standard, the Department recommends that Council find that the applicant has demonstrated a reasonable ability to obtain a bond or letter of credit in a form and amount recommended be considered satisfactory by Council.

OAR 345-025-0006(8) establishes a mandatory condition that must be imposed in all site certificates.

> Before beginning construction of the facility, the certificate holder must submit to the State of Oregon, through the Council, a bond or letter of credit in a form and amount satisfactory to the Council to restore the site to a useful, non-hazardous condition. The certificate holder must maintain a bond or letter of credit in effect at all times until the facility has been retired. The Council may specify different amounts for the bond or letter of credit during construction and during operation of the facility.

This condition is imposed, based on the decommissioning amount recommended by the Department to be considered satisfactory by Council, per below:

> **Recommended Retirement and Financial Assurance Condition 4 (PRE):** Before beginning construction of the facility or a facility component, the certificate holder shall submit to the State of Oregon, through the Council, a bond or letter of credit naming the State of Oregon, acting by and through the Council, as beneficiary or payee. The total bond or letter of credit amount for the facility is $39.643 million dollars (Q1 2022 dollars), to be adjusted to the effective date, and adjusted on an annual basis thereafter, as described in sub-paragraph (b) of this condition:
>
> a. The certificate holder may adjust the amount of the bond or letter of credit based on the design configuration of the facility, or any phase of the facility, by applying the unit costs presented in Table X of the Final Order on the ASC, and the contingencies illustrated in Table X of the Final Order on the ASC and may further make adjustments based on unit costs for task and actions presented in ASC Exhibit W Attachment W-1 and W-2. Any revision to the restoration costs should be adjusted to the effective date as described in (b). Any modification to the unit costs

[181] NHWAPPDoc2-30 ASC Additional Information Package Exhbs B, M, O, J, U, DD 2022-03-04.

presented in Table X of the Final Order on the ASC are subject to review and approval by the Council.

b. The certificate holder shall adjust the amount of the bond or letter of credit using the following calculation:
    i. Adjust the amount of the bond or letter of credit (expressed in Q1 2022 dollars) to present value, using the U.S. Gross Domestic Product Implicit Price Deflator, Chain Weight, as published in the Oregon Department of Administrative Services' "Oregon Economic and Revenue Forecast" or by any successor agency and using the first quarter 2022 index value and the quarterly index value for the date of issuance of the new bond or letter of credit. If at any time the index is no longer published, the Council shall select a comparable calculation to adjust first quarter 2022 dollars to present value.
    ii. Round the result total to the nearest $1,000 to determine the financial assurance amount.

c. The certificate holder shall use an issuer of the bond or letter of credit and a bond or letter of credit form approved by the Council, based on the Council's pre-approved financial institution list and form.

[Mandatory Condition OAR 345-025-0006(8)]

Conclusions of Law

Based on the foregoing recommended findings of fact, and subject to compliance with the recommended conditions, the Department recommends that Council find that the applicant would comply with the Council's Retirement and Financial Assurance standard.

IV.H. Fish and Wildlife Habitat: OAR 345-022-0060

To issue a site certificate, the Council must find that the design, construction and operation of the facility, taking into account mitigation, are consistent with the fish and wildlife habitat mitigation goals and standards of OAR 635-415-0025 in effect as of September 1, 2000.

Findings of Fact

As established in the Amended Project Order, the fish and wildlife habitat analysis area includes the area within and extending 0.5-miles from the proposed site boundary. Information related to fish and wildlife habitat within the analysis area is provided in ASC Exhibit P.

IV.H.1. Department Evaluation of Applicant's Desktop and Field Surveys

Literature review and field studies were conducted, based on consultation with the Department, ODFW and U.S. Fish and Wildlife Service (USFWS), to inform the evaluation for the

Council's Fish and Wildlife Habitat standard. Records of agency consultation are provided in ASC Exhibit P Attachment P-1, and Attachment B of this order.[182]

Sources of literature evaluated include:

- Oregon Biodiversity Information Center's 2017 and 2019 Element Occurrence Record Digital Data Set for rare, threatened or endangered species for the state of Oregon
- Csuti's 2001 Atlas of Oregon wildlife, 2nd edition
- Marshall's 2003 Birds of Oregon: a general reference
- NatureServe's 2017 A online encyclopedia of life
- ODFW's 2016 and 2019 Sensitive Species List
- StreamNet's 2018 Fish distribution and critical habitat map data for Oregon
- Historic raptor nest survey reports from the 2009 Montague Wind Power Facility ASC
- Eagle nest surveys results form 2017-2019 from Oregon Eagle Foundation
- SWCA Environmental Consultant's 2010 Critical Issues Analysis, Cunningham Wind Resource Area
- Western Bat Working Group's 2020 Western Bat Species profiles
- USFWS's 2012 Land-Based Wind Energy Guidelines

Numerous wildlife, habitat and botanical surveys were conducted from 2017 through 2020 to inform the evaluation under the standard, which are summarized below:

- Washington ground squirrel surveys
- Eagle nest surveys
- Raptor nest surveys
- Eagle use surveys
- Avian use surveys
- Pedestrian wildlife surveys
- Habitat categorization surveys
- Bat surveys
- Botanical surveys

The survey timing and area covered is presented in Table 7: *Fish and Wildlife Habitat Survey Summary* below and will be used to inform whether additional preconstruction surveys would be needed, based on unsurveyed areas, modified protocol or need for preconstruction validation of current conditions given potential for change due to species characteristics.

[182] ASC Exhibit P Attachment P-1 includes records of 14 separate consultation inquiries between applicant and ORBIC, ODFW, NOAA Fisheries, USFWS and the Department between 2017 through 2020. NHWAPPDOc2-15 ASC Exhibit P Fish and Wildlife 2022-01-31.

Table 7: Fish and Wildlife Habitat Survey Summary

Survey Type	Years Conducted	Acreage Covered (Entirety of suitable habitat within micrositing corridor, yes or no?)	Preconstruction Surveys Required?
Washington ground squirrel/wildlife surveys	2017-2020	27,760 acres; no, not all areas surveyed	Yes
Habitat categorization surveys	2017-2020	~48,159 acres, using 1-acre mapping units; no, not all areas surveyed	Yes
Botanical surveys	2017-2020	4,466 acres; no, not all areas surveyed	Yes[1]
Eagle nest surveys	2011, 2017-2018	10-mile buffer of site boundary; yes, covered all area	No
Raptor nest surveys	2011, 2017-2019	2-mile buffer of site boundary; yes, covered all area	Yes
Avian use surveys	2010, 2017-2018	16 800-meter radius plots distributed throughout turbine string area; yes, covered all area	No
Eagle use surveys	2017-2019	24 800-meter radius plots distributed throughout turbine string area; yes, covered all area	No
Wetlands and waters survey	2017-2020	14,928 acres surveyed; no, not all areas surveyed	Yes[2]
Bat acoustic surveys	2017	3 ground-based bat detectors throughout site boundary; yes, covered reasonable area	No

Notes:
1. Preconstruction botanical surveys within suitable habitat for rare plants are required under the Threatened and Endangered Species standard and could be used to inform preconstruction noxious weed infestation locations and vegetation characteristics of monitoring and reference locations to then be used to inform the revegetation plan.
2. Preconstruction wetlands/waters of the state survey are required within unsurveyed areas under Removal Fill Law and will be used to inform final habitat mapping.

The surveys summarized in the above table were based on protocols reviewed by ODFW, ODA, DSL and the Department. Survey protocols and survey reports are provided in ASC Exhibit P Attachment P-1. Based on evidence of consultation on survey protocols included in ASC Exhibit P, the Department recommends Council find that the surveys adequately inform the evaluation of potential impacts to State-sensitive species and habitat categorization.

Habitat Categories within the Analysis Area

This standard creates requirements for mitigating impacts to fish and wildlife habitat, based on the functional quantity and quality of the habitat impacted as well as the nature, extent, and duration of the impact. Functional quality is presented using a habitat classification system

based on the function and value of the habitat it would provide to a species or group of species likely to use it. ODFW policy identifies six habitat categories, with Category 1 being the most valuable, and Category 6 the least valuable.

> *"Habitat Category 1" is irreplaceable, essential habitat for a fish or wildlife species, population, or a unique assemblage of species and is limited on either a physiographic province or site-specific basis, depending on the individual species, population or unique assemblage.*

The mitigation goal for Category 1 habitat is no loss of either habitat quantity or quality. This goal requires avoidance of impacts.

> *"Habitat Category 2" is essential habitat for a fish or wildlife species, population, or unique assemblage of species and is limited either on a physiographic province or site-specific basis depending on the individual species, population or unique assemblage.*

If impacts are unavoidable, the mitigation goal for Category 2 habitat is no net loss of either habitat quantity or quality and provision of a net benefit of habitat quantity or quality. The Council interprets this to mean that both habitat quantity and quality must be preserved and both habitat quantity or habitat quality must be improved. To achieve this goal, impacts must be avoided or unavoidable impacts must be mitigated through reliable "in-kind, in-proximity" habitat mitigation to achieve no net loss of either pre-development habitat quantity or quality. In addition, a net benefit of habitat quantity and quality must be provided.

> *"Habitat Category 3" is essential habitat for fish and wildlife, or important habitat for fish and wildlife that is limited either on a physiographic province or site-specific basis, depending on the individual species or population.*

The mitigation goal for Category 3 habitat is no net loss of either habitat quantity or quality. The Council interprets this to mean that both habitat quantity and quality must be preserved. The goal is achieved by avoidance of impacts or by mitigation of unavoidable impacts through reliable "in-kind, in-proximity" habitat mitigation to achieve no net loss in either pre-development habitat quantity or quality.

> *"Habitat Category 4" is important habitat for fish and wildlife species.*

Like Category 3, the mitigation goal for Category 4 habitat is no net loss in either existing habitat quantity or quality. The Council interprets this to mean that both existing habitat quantity and quality must be preserved. The goal is achieved by avoidance of impacts or by mitigation of unavoidable impacts. In contrast to Category 3, mitigation options are less constrained and may involve reliable "in-kind or out-of-kind, in-proximity or off-proximity" habitat mitigation to achieve no net loss in either pre-development habitat quantity or quality.

"Habitat Category 5" is habitat for fish and wildlife having high potential to become either essential or important habitat.

If impacts are unavoidable, the mitigation goal for Category 5 habitat is to provide a net benefit in habitat quantity or quality. The Council has previously interpreted this to mean that there must be some improvement in either habitat quality or quantity. To clarify the "net benefit" goal, ODFW has advised: "The improvement in habitat quantity or quality achieved need not rise to the level of improvement required to meet a goal of 'no net loss' (i.e. the level required or recommended in the Mitigation Policy for Habitat Categories 2, 3, and 4)." The goal is achieved by avoidance of impacts or by mitigation of unavoidable impacts through "actions that contribute to essential or important habitat."

"Habitat Category 6" is habitat that has low potential to become essential or important habitat for fish and wildlife.

Impacts to Category 6 habitat does not require mitigation under the standard.

ASC Exhibit P Figures P-4 and P-5 present habitat mapping within the analysis area. Habitat categorization, based on habitat type, within the analysis area includes the following:

- Category 1 habitat: 785-feet from active Washington ground squirrel (WGS) colonies, unless there is a habitat break; these areas apply to Eastside Grasslands, Shrub-Steppe, Irrigated Pastures and Hay Meadows, and Planted Grasslands, including recently converted wheat fields.[183]

- Category 2 habitat:
    - 4,136 feet from Category 1 WGS habitat buffer, unless there is a habitat break
    - Mule deer winter range
    - Seasonal ponds with high quality, mostly native vegetation
    - Fish-bearing natural streams
    - Scrub-shrub wetlands
    - Eastside riparian

- Category 3 habitat:
    - Open water areas
    - Seasonal ponds

[183] Applicant excludes planted grasslands recently converted from wheat cultivation from it's Category 1 and 2 habitat because they consider that this habitat type is not irreplaceable, essential or limited. This argument is inconsistent with ODFW's recommendation and prior Council action. The argument focuses solely on the quality of planted grassland and ignores the "essential" quality of area surrounding an active colony, where the area is relied upon for WGS movement, which is essential for their life history and genetic interchange among colonies. Category 1 habitat shall be based on 785-feet from an active colony and Category 2 habitat shall be based on 4,136 feet from the delineated Category 2 habitat buffer, unless there is a documented habitat break, such as a road. See Final Order on Request for Amendment 1 of the Carty Generating Station Site Certificate. 2018-12-14.

- Fish bearing and non-fish bearing natural stream channels (marginal spawning or rearing habitat due to gravel present in pockets/30% embedded)
- Emergent wetlands (mixture of native and non-native species)
- Scrub-shrub wetlands (mixture of native and non-native species)
- Forested wetlands (mixture of native and non-native species)
- Eastside riparian
- Eastside grasslands (moderate to highly disturbed, 15-75% native ground cover)
- Shrub-steppe (moderate cover by weeds)
- Planted grasslands[184]
- Cliffs, caves and Talus (without bat colonies)

- Category 4 habitat:
  - Eastside riparian
  - Eastside grasslands (highly disturbed, 15-50% native ground cover)
  - Shrub-steppe (heavily degraded, weedy)
  - Planted grasslands[185]

- Category 5 habitat:
  - Seasonal ponds (almost completely dominated by non-native plant species)
  - Intermittent or ephemeral streams
  - Farmed or previously filled wetlands
  - Eastside grasslands (highly disturbed, less than 15% native ground cover)
  - Shrub-steppe (low quality, dominated by non-native species)
  - Planted grasslands (highly disturbed, degraded) [186]
  - Irrigated pasture and hay meadows

- Category 6 habitat:
  - Active agriculture
  - Developed areas

The habitat categorization is based on habitat quality and function, informed through literature review, field surveys and ODFW input. These methods are appropriate for informing habitat categorization under ODFW's Fish and Wildlife Habitat Mitigation Policy. For these reasons, the Department recommends Council find that the habitat categorization may be relied upon to establish the applicable mitigation goals under the standard.

As described above, the analysis area includes the area within and extending 0.5-miles from the site boundary. Proposed facility components would be located within a micrositing area that represents substantially less area than the analysis area. The extent of the micrositing area

[184] Planted grasslands within 785-feet of an active WGS colony, or within 4,136 of the delineated Category 1 habitat buffer, are considered Category 2 habitat and shall not be included in this category.
[185] Id.
[186] Id.

within the analysis area is presented in ASC Exhibit P Figure P-1. When an analysis area extends beyond the area that could be directly impacted, as is the case under the Fish and Wildlife Habitat standard, the purpose is to identify whether there are adjacent sensitive habitat areas, such as WGS Category 1 habitat, that would inform habitat categorization within the area of potential impact. Other than the potential for WGS habitat outside of the micrositing area, there is not sensitive habitat outside the micrositing area that should be considered in the evaluation of habitat categorization within the micrositing area.

IV.H.2. Temporary Habitat Impacts and Mitigation

Proposed facility construction and operations would result in temporary and temporal[187] habitat impacts. Construction-related temporary/temporal habitat disturbance impacts are estimated at 1,245 acres. This would include temporary impacts to 286 acres of Category 2, 264 acres of Category 3, 212 acres of Category 4, and 483 acres of Category 5, as presented in Table 8 below. Temporal impacts include 2 acres of Category 2, 2 acres of Category 3, 1 acre of Category 4 and 17 acres of Category 5 shrub-steppe habitat, which are also addressed in the evaluation of permanent habitat impacts.

Table 8: Temporary/Temporal Habitat Impacts from Proposed Facility Construction

Habitat Subtype	Habitat Category (acres)				
	2	**3**	**4**	**5**	**6**
Irrigated Pastures and Hay Meadows	1	-	-	1	-
Planted Grasslands	21	92	44	215	-
Cliffs, Caves and Talus	-	1	-	-	-
Intermittent or Ephemeral Streams	1	1	2	1	-
Permanent Ponds/Lakes	-	1	-	-	-
Perennial Streams	2	-	-	-	-
Eastside Riparian	1	-	1	-	-
Eastside Grasslands	258	167	164	249	-
Shrub-steppe[1]	2	2	1	17	-
Orchards, Vineyards, Wheat Fields, Other Row Crops	-	-	-	-	820
Urban and Mixed Environs	-	-	-	-	82
Total Estimated Temporary Impacts =	286	264	212	483	902
Total Estimated Temporary Impacts to Habitat Categories 1-5 =	**1,245**				

[187] Temporal loss refers to loss of habitat function and values from the time an impact occurs to the time when the restored habitat provides a pre-impact level of habitat function. Habitat subtypes identified within the site boundary including shrub-steppe are reasonably expected to require a longer restoration timeframe (5+ years) and therefore would be expected to result in temporal loss requiring compensatory mitigation beyond revegetation.

Table 8: Temporary/Temporal Habitat Impacts from Proposed Facility Construction

Habitat Subtype	Habitat Category (acres)				
	2	3	4	5	6

Notes:
1. Shrub-steppe is expected to require a longer restoration timeframe (5+ years) and therefore would require additional mitigation beyond revegetation to address the loss of habitat function and values during the restoration period.

Proposed facility operations could also result in additional temporary disturbance from vehicle and equipment use along the transmission right-of-way, where permanent roads have not been constructed, or during crane walking associated with wind turbine maintenance activities, that result in vegetation crushing or disturbance within Category 2 WGS habitat (redisturbance of up to 286 acres). Vehicle and equipment used during construction and operation could also result in spreading of noxious weeds.

To achieve the habitat mitigation goals for temporary impacts to Category 2, 3, 4 and 5 habitat, successful noxious weed control and revegetation within a 5-year timeframe are required. From 2017-2020, the applicant, ODFW and the Department developed a draft Revegetation and Noxious Weed Plan to demonstrate consistency with the applicable habitat mitigation goals for each category. This draft Revegetation and Noxious Weed Plan is included in Attachment P-2 of this order. Applicant representations and elements of the plan are described below:

- Applicant proposes to conduct preconstruction habitat and botanical surveys within potential ground disturbance areas to identify changes in habitat categorization; botanical surveys would also be used to identify presence of noxious weeds.
- These surveys would be used to inform final habitat categorization and weed infestation areas to be treated and/or avoided.
- Paired monitoring and reference sites for each habitat category, to be reviewed and approved by the Department in consultation with ODFW, will be selected and used to evaluate the success of revegetation.
- A vegetation monitoring procedure, reviewed and approved by the Department in consultation with ODFW, will be implemented to track the success of revegetation actions.
- Monitoring will be conducted annually, for 5-years, with results submitted to the Department and ODFW within 60-days of revegetation inspection.
- Revegetation success will be based on: vegetation density, relative proportion of desirable vegetation, species diversity of desirable vegetation, and presence and density of noxious weeds of the monitoring sites compared to reference sites.

The Department recommends several revisions within the draft Revegetation and Noxious Weed Plan, including that the plan, as a draft plan, include a clear scope of the components to

be finalized prior to construction[188]; and, that, in order to support achievement of successful revegetation in wildlife habitat areas, that noxious weed control be implemented throughout the life of the facility. The Department recommends Council impose a condition requiring that, prior to construction, the applicant conduct habitat categorization surveys, and based on those surveys, submit to the Department and ODFW, a Revegetation and Noxious Weed Plan, substantially similar to the plan included in Attachment P-2 of this order, finalized based on the tasks listed in Section 3.1 of the plan:

> **Recommended Fish and Wildlife Condition 1 (PRE)**: Prior to construction, the certificate holder shall finalize and submit to the Department, for review and approval, the Revegetation and Noxious Weed Plan, as provided in Attachment P-2 of the Final Order on the ASC.
>
> **Recommended Fish and Wildlife Condition 2 (CON)**: During construction, the certificate holder shall implement and adhere to the requirements of the final Revegetation and Noxious Weed Plan.
>
> **Recommended Fish and Wildlife Condition 3 (OPR)**: During operation, the certificate holder shall implement and adhere to the applicable requirements of the final Revegetation and Noxious Weed Plan.

Based on the evaluation of habitat, habitat categorization and applicable mitigation goals, and compliance with the above-proposed condition, the Department recommends Council find that the applicant has demonstrated that temporarily impacted wildlife habitat would be mitigated in a manner consistent with ODFW's fish and wildlife habitat mitigation policy.

IV.H.3. Permanent Habitat Impacts and Mitigation

Proposed facility operations would result in permanent habitat impacts. Permanent habitat impacts are estimated at 181 acres. This would include permanent impacts to 15 acres of Category 2, 41 acres of Category 3, 46 acres of Category 4, and 79 acres of Category 5, as presented in Table 9 below.

[188] The scope of plan finalization is presented in Section 3.1 of the plan and is based on preconstruction components as proposed by the applicant and the Department. Components of plan finalization recommended by the Department include requiring that the preconstruction botanical or habitat surveys be designed to: evaluate noxious weeds; collect information to inform selection of monitoring and reference sites; and, develop a reporting format to ensure that adequate information is collected to inform predisturbance baseline conditions and allow for long-term evaluation of the success criteria. The Department recommends several additional changes related to restoration of temporarily disturbed croplands, unrelated to the Fish and Wildlife Habitat standard which are addressed under the Land Use section of this order.

Table 9: Permanent Habitat Impacts from Proposed Facility Construction

Habitat Subtype	Habitat Category (acres)				
	2	**3**	**4**	**5**	**6**
Irrigated Pastures and Hay Meadows	-	-	-	1	-
Planted Grasslands	2	8	4	63	-
Cliffs, Caves and Talus	-	-	-	-	-
Intermittent or Ephemeral Streams		1	1	-	-
Permanent Ponds/Lakes	-	-	-	-	-
Perennial Streams	1	-	-	-	-
Eastside Riparian	-	-	-	-	-
Eastside Grasslands	11	31	41	14	-
Shrub-steppe	1	1	-	1	-
Orchards, Vineyards, Wheat Fields, Other Row Crops	-	-	-	-	1,852
Urban and Mixed Environs	-	-	-	-	7
Total Estimated Permanent Impacts =	15	41	46	79	1,859
Total Estimated Permanent Impacts to Habitat Categories 1-5 =	181				

To achieve the habitat mitigation goals for permanent impacts to Category 2, 3, 4 and 5 habitat, the applicant proposes to implement a Habitat Mitigation Plan (HMP). In the Draft HMP (See Attachment P-1 of this order), the applicant proposes to demonstrate consistency with ODFW's mitigation goals for each applicable habitat category based on obtaining a habitat mitigation area (HMA) of sufficient size and quality to provide a no net loss in habitat quantity for the approximately 181 acres permanently impacted; and to implement a suite of enhancement actions sufficient to achieve a no net loss and net benefit, as applicable to Category 2 habitat, in habitat quality.

Table 10: Summary of ODFW Mitigation Goals and Estimated Acreage for Mitigation

Habitat Category	ODFW Mitigation Goal	Mitigation Ratio (Acres in HMA: Acres Impacted)	Estimated Mitigation Acreage*
2	No net Loss of habitat quantity or quality and to provide a net benefit of habitat quantity or quality	2:1	30
3	No Net Loss of habitat quantity or quality	1:1	41
4		1:1	46
5		0.1-0.5:1	40
		Total Acreage =	179.3[1]
Notes:			

1. As presented in Table XX above, there are approximately 22 acres of temporal impacts to shrub-steppe habitat. This total includes approximately 22.3 acres based on the same mitigation ratios presented in this table.

Based on the applicant's proposed mitigation ratios per habitat category for permanent and temporal habitat impacts, the maximum size of the HMA would be approximately 179 acres. The enhancement actions proposed to achieve a no net loss in habitat quality for Categories 3, 4 and 5, and a net benefit in quality for Category 2 habitat impacts, include: shrub planting; weed control; seeding; fire control; and restricted grazing.

Two potential HMAs have been identified: Olex Conservation Opportunity Area (COA) and Ione COA. The Olex COA has 139 available acres, and the Ione COA has 105 available acres; totaling 244 available mitigation acres. The proposed enhancement of weed control, fire control and restricted grazing would ensure a no net loss in habitat quality, but given the current habitat quality, would not, on its own, provide a net benefit in habitat quality.

Based on landowner interview, within the Olex COA, 95 acres could benefit from shrub planting and seeding; and, 70 acres within the Ione HMA could benefit from shrub-planting and seeding. This level of available enhancement was reviewed by the Department, in consultation with ODFW, and was determined to demonstrate an ability to achieve a net benefit in habitat quality, consistent with the mitigation goal for Category 2 habitat. Based on the combined size of the proposed potential HMAs and enhancement potential, the Department recommends Council find that the applicant has provided sufficient evidence to make findings of compliance under the standard.

The Department recommends Council impose a condition requiring that, prior to construction, the applicant finalize the Draft Habitat Mitigation Plan, including selection of an HMA, substantially similar to or with similar habitat enhancement potential as that currently under review, based on a preconstruction habitat assessment, and execution of a legally binding agreement to conserve, enhance and maintain the HMA for the life of the proposed facility:

Recommended Fish and Wildlife Condition 4 (PRE): Prior to construction, the certificate holder shall:

a. Calculate the size of the habitat mitigation area (HMA) for permanent and temporal habitat impacts, based on final facility design. The calculation must be based on the ratios and methods presented in the Final Order on the ASC and provided to the Department for review and approval.
b. Provide evidence to the Department demonstrating that an agreement of outright purchase, conservation easement or similar conveyance has been executed for the enhancement and protection of the HMA under the requirements of the Habitat Mitigation Plan, to extend for the life of the facility.
c. Submit a final Habitat Mitigation Plan to the Department for review and approval, substantially similar to the draft plan provided in Attachment P-1 of the Final Order on the ASC.

Recommended Fish and Wildlife Condition 5 (OPR): During operation, the certificate holder shall implement and adhere to the requirements of the Habitat Mitigation Plan, as approved per Fish and Wildlife Condition 4.

Based on the evaluation of habitat, habitat categorization and applicable mitigation goals, and compliance with the above-proposed conditions, the Department recommends Council find that the applicant has demonstrated that permanent and temporally impacted wildlife habitat would be mitigated in a manner consistent with ODFW's fish and wildlife habitat mitigation policy.

IV.H.4. Wildlife Impacts and Mitigation

The proposed site boundary contains suitable habitat for 24 state sensitive species (birds, mammals, reptiles and fish) and two eagle species.[189] Potential impacts to state-sensitive species from proposed facility construction include injury to or loss (fatality) due to collision with or crushing from construction equipment vehicles; and, general disturbance (noise and visual), which can interrupt wildlife behavior. In addition, there are risks to wildlife species during proposed facility operations from turbine collision, potential nesting and breeding disturbance, electrocution, powerline collision, structure collision, vehicle collisions, disturbance related to artificial lighting and introduction or spread of noxious weeds. To minimize impacts to wildlife species, the applicant proposes to implement numerous design measures, construction restrictions and a long-term wildlife monitoring plan. Some of these design measures and construction restrictions include:

- Avoiding Category 1 habitat
- Avoiding Category 2 habitat impacts to the maximum extent feasible
- Designing transmission lines in accordance with APLIC recommendations
- Implementing setbacks from ground-disturbing activities to active raptor nests during the sensitive nesting and breeding seasons
- Implementing a 200-meter setback from facility infrastructure to Alkali Canyon and a 140-foot setback from contour lines containing topographical high points and distinct canyon edges identified as areas with high raptor use
- Utilizing construction monitors to ensure avoidance of raptor nest buffers, WGS habitat, and wetlands
- Eliminating use of a Mud Springs Road as a transportation route due to its proximity to active raptor nests
- Implementing an onsite speed limit to reduce potential for wildlife-vehicle collision

[189] The applicant clarifies in Exhibit P that while the two eagle species identified are not state sensitive species, "bald eagles (Haliaeetus leucocephalus) and golden eagles (Aquila chrysaetos) are … species of concern protected under the Bald and Golden Eagle Protection Act (BGEPA)." NHWAPPDoc2-15 ASC Exhibit P Fish and Wildlife 2022-01-31. Section 4.1.

All of the applicant's proposed measures are presented in ASC Exhibit P Section 7.1.1 and 7.1.2, which have been converted into measures that can be verified by the Department and included in a Wildlife Monitoring and Adaptive Management Plan provided as Attachment P-4 of this order. To ensure that the applicant adheres to its representations and to allow the Department the ability to monitor and evaluate implementation of the design and construction-related avoidance measures, the Department recommends Council impose the following conditions:

> **Recommended Fish and Wildlife Condition 6 (PRE)**: Prior to construction, the certificate holder shall provide evidence to the Department that the design measures included in the Wildlife Monitoring and Adaptive Management Plan have been included in the final facility design and construction contractor contracts, as applicable.
>
> **Recommended Fish and Wildlife Condition 7 (CON)**: During construction, the certificate holder shall adhere to the requirements of the Wildlife Monitoring and Adaptive Management Plan. Monitoring records shall be maintained throughout construction and included in the semi-annual report submitted to the Department pursuant to OAR 345-026-0080.

During facility operation, the applicant proposes to adhere to the requirements of a Wildlife Monitoring Plan (WMP), as provided in Attachment P-3 of this order. The WMP predominately identifies long-term monitoring applicable to proposed wind facility components, including a 2-year post construction bird and bat fatality monitoring program; long term raptor nest surveys; and long-term WGS surveys. The WMP also include an injured wildlife handling and reporting program, which would apply to the facility regardless of final technology (wind, solar or both).

The fatality monitoring program will inform the estimated number of bird and bat fatalities attributable to wind facility components. After completion of the first and second year of monitoring, the applicant would provide the Department and ODFW a report containing annual fatality rate estimates based on the raw data collected. The reporting requirement for the second year of monitoring would be comprehensive, including analysis of both monitoring years (individually and combined), and a comparison to other wind energy facilities in the region. If the applicant's reporting indicates fatality rates for either year of monitoring exceed thresholds of concern, or the range of fatality rates found at the other wind energy facilities evaluated within the region, the applicant would be required to consult the Department and ODFW on additional mitigation, and commitment to performing an additional year of fatality monitoring in the fifth year of operation. Furthermore, if the Department determines that mitigation is needed, the applicant will propose appropriate mitigation actions approved by the Department, to then be reviewed by Council.

The short-term raptor nest surveying described in the draft WMP would commence the first full raptor nesting season following facility operation. As proposed, the raptor nest surveying would require the applicant to quantify raptor nests on the ground or aboveground in the vicinity of the proposed facility, and determine whether facility operation noticeably impacts localized nesting activity or nesting success of the Swainson's hawk, golden eagle, and ferruginous hawk

populations. As proposed, the raptor nest surveying would require the applicant to quantify raptor nests on the ground or aboveground in the vicinity of the proposed wind facility components, and determine whether facility operation noticeably impacts localized nesting activity or nesting success of the Swainson's hawk, golden eagle, and ferruginous hawk populations. Short-term monitoring would be conducted in two monitoring seasons, each season requiring monitoring reports be provided to the Department as described in Section 6 of the draft WMP. The applicant has committed to conducting long-term raptor nest surveys in 5-year intervals for the life of the facility, beginning five years after the second short-term monitoring season concludes.

The WMP also represents monitoring and reporting measures for post-construction WGS surveys, to be conducted every 5-years for the life of the facility. The results of the surveys would be used to inform potential avoidance areas during facility O&M activities that result in ground disturbance (see recommended Threatened and Endangered Species Condition 2).

To ensure the applicant abides by the elements and representations of the WMP provided as Attachment P-3 of this order, the Department recommends Council impose the following condition:

> **Recommended Fish and Wildlife Condition 8 (OPR):** During operation, the certificate holder shall implement and adhere to the Wildlife Monitoring Plan, as provided in Attachment P-3 of this order.

Conclusions of Law

Based on the foregoing findings of fact and conclusions, and subject to compliance with the recommended site certificate conditions, the Department recommends the Council find that proposed facility complies with the Council's Fish and Wildlife Habitat standard.

IV.I. Threatened and Endangered Species: OAR 345-022-0070

> *To issue a site certificate, the Council, after consultation with appropriate state agencies, must find that:*
>
> > *(1) For plant species that the Oregon Department of Agriculture has listed as threatened or endangered under ORS 564.105(2), the design, construction and operation of the proposed facility, taking into account mitigation:*
> >
> > > *(a) Are consistent with the protection and conservation program, if any, that the Oregon Department of Agriculture has adopted under ORS 564.105(3); or*
> > >
> > > *(b) If the Oregon Department of Agriculture has not adopted a protection and conservation program, are not likely to cause a significant reduction in the likelihood of survival or recovery of the species; and*

(2) For wildlife species that the Oregon Fish and Wildlife Commission has listed as threatened or endangered under ORS 496.172(2), the design, construction and operation of the proposed facility, taking into account mitigation, are not likely to cause a significant reduction in the likelihood of survival or recovery of the species.

Findings of Fact

The analysis area for threatened or endangered plant and wildlife species is established in the Amended Project Order as the area within and extending five miles from the site boundary, except for the proposed 230 kV transmission lines, where the analysis area is the area within the site boundary.

IV.I.1. Evaluation of Applicant's Methodology

To evaluate the potential for state-listed T&E plant and wildlife species to occur within the analysis area, agency consultation, literature review and field surveys were conducted. Agency consultation occurred in 2017 through 2020 between the Department and Oregon Department of Agriculture (ODA); and between the applicant, Oregon Department of Fish and Wildlife (ODFW) and United States Fish and Wildlife Service (USFWS). Evidence of agency consultation between the applicant, ODFW and USFWS is provided in ASC Exhibit P Attachment P-1 and Attachment B of this order (see ODA comments, April 2020). Evidence of agency consultation between the Department and ODA, and the Department and ODFW is provided in Attachment B of this order.

The literature review evaluated the following sources and databases:

- 2001 United States Geologic Survey (USGS) National Hydrology Dataset
- 2011 USGS Northwest Regional Gap Analysis Project data, National Land Cover data
- 2011 Field Guide to Rare Plants of Washington from Washington Department of Natural Resources
- 2017 United States Fish and Wildlife Service (USFWS) National Wetland Inventory
- 2017 Species information, maps and GIS data queries from USFWS
- 2017, 2019 Rare Plant Guide - Oregon Flora Project, Oregon State University
- 2017 and 2019 Fish distribution and critical habitat map date from StreamNet
- 2017 Species information, maps and GIS data from National Oceanic Atmospheric Administration (NOAA) Fisheries
- 2017 and 2019 Element Occurrence Record Digital Data Set for rare, threatened or endangered species for the state of Oregon from Oregon Biodiversity Information Center (ORBIC)
- 2017, 2019 Species maps and GIS data from Oregon Department of Fish and Wildlife (ODFW)
- 2017 Species Information from Oregon Department of Agriculture's Plant Conservation Website

- 2017 aerial photography using Esri
- 2019 Herbarium and Image Collection from the Burke Museum of Natural History and Culture, University of Washington.

The literature review of ORBIC identified four state-listed T&E species, two mammal and two vascular plants, as having the potential to occur within the analysis area: Washington ground squirrel (WGS), Wolverine, Laurence's milkvetch and Northern wormwood. Based on specific review of the habitat within the analysis area and suitable habitat of these species, Wolverine and Northern wormwood were determined not to be likely to occur within the analysis area. Therefore, this section addresses WGS and Laurence's milkvetch.

Field surveys were conducted for WGS and rare plants, including state-listed T&E and candidate plant species. Because candidate species are not covered under the standard, this section evaluates the methods and results for the state-listed T&E plant species, Laurence's milkvetch.

IV.I.2. Impacts and Mitigation to State-listed T&E Species

Washington Ground Squirrel

Surveys within suitable WGS habitat were conducted from 2017-2020. Based on these surveys, there are approximately 9,165 acres of suitable WGS habitat within the wind portion of the 15,726 micrositing area; there is suitable WGS habitat within 1,000 feet of the proposed solar micrositing corridor.[190] During the field surveys conducted to inform the ASC, twenty-nine active WGS colonies covering approximately 50 acres were identified. ODFW considers the extent of irreplaceable, essential WGS habitat (Category 1 habitat) to extend 785-feet from active colonies, and the extent of habitat used by the species for dispersal and foraging (Category 2 habitat) to extent another 4,136 feet from the edge of the 785-foot buffer.[191] Impacts to irreplaceable, essential habitat (Category 1 habitat) are precluded under the Council's Fish and Wildlife Habitat standard (see Section IV.H. *Fish and Wildlife Habitat* of this order). The applicant commits to avoiding any physical, direct impacts to Category 1 habitat, and mitigating temporary and permanent impacts to Category 2 habitat, where the Category 2 mitigation goal would apply to acres extending 4,136 feet from the delineated Category 1 habitat.

Based on WGS dispersal patterns, ODFW acknowledges results of WGS surveys for a 3-year period. While the 2017-2020 survey data may be relied upon for this evaluation, preconstruction surveys are necessary to ensure the impacts of the final facility are consistent with the impacts currently under review. Preconstruction protocol-level surveys covering

[190] NHWAPPDoc2-15 ASC Exhibit P Fish and Wildlife 2022-01-31. Attachment P-2, 2020 Washington Ground Squirrel Survey Report, Figures 1 and 2.

[191] Consultation between ODOE and ODFW affirmed ODFW's recommendation on the 875-foot buffer distance considered irreplaceable, essential WGS habitat, where impacts must be avoided, and Category 2, where habitat impacts may be mitigated in accordance with the Category 2 mitigation goal. NHWAPPDoc5-2 ASC Reviewing Agency Comment ODFW_Rimbach_2022-02-18.

suitable habitat within 1,000 feet of ground disturbing activities, including areas extending from colonies into lands enrolled in Conservation Reserve Program, are necessary to verify WGS colonies and habitat and to ensure avoidance and minimize impacts to the survivability of the species. The Department recommends Council impose the following preconstruction conditions to ensure that WGS species and their habitat are avoided based on final design and protocol level surveys not older than 3-years from the date of construction:

Recommended Threatened and Endangered Species Condition 1 (PRE): Prior to construction of facility components, the certificate holder shall:

a. Submit a protocol-level survey plan for surveys to be conducted within suitable habitat for Washington ground squirrel (WGS), for review and approval by the Department in consultation with ODFW. At a minimum, the survey plan shall specify the survey area (all areas of suitable habitat within 1,000 feet of ground disturbing activities except where there is a habitat barrier (e.g., a paved road)); survey timing (February 15 to May 31, unless otherwise approved by ODFW); and, land access restrictions and any justification for modified survey methods.
b. Complete protocol-level WGS surveys based on the protocol approved per (a).
c. Submit survey reports to the Department and ODFW. The certificate holder shall not begin construction within 1,000 feet of Category 1 or Category 2 WGS habitat until the identified boundaries of Category 1 WGS habitat have been approved by the Department, in consultation with ODFW. Category 1 habitat includes a 785-foot buffer from an identified active burrow, and also the area within the perimeter of multiple active burrows. Category 2 WGS habitat consists of a 4,136 foot buffer from the exterior boundary of all Category 1 WGS habitat. The survey results are valid for 3-years.
d. Develop maps and worker training materials to inform of sensitive Category 1 and Category 2 habitat. Submit to the Department final facility design maps demonstrating that Category 1 habitat, including 785-buffer from any colonies identified per (b), is avoided.
e. Install flagging or other demarcation, as appropriate, to inform workers of sensitive WGS habitat and of avoidance requirement.

Applicant commits to monitoring previously identified burrows and flagging during construction. These measures would support minimizing direct impacts during construction and are therefore recommended to be imposed by Council as conditions in the site certificate:

Recommended Threatened and Endangered Species Condition 2 (CON): In years 1, 2 or 3 following the preconstruction protocol-level WGS surveys, in areas of ground disturbance within 1,000-feet of previously identified WGS colonies, the certificate holder shall:

a. Install and monitor flagging/temporary fencing to ensure avoidance of sensitive WGS habitat.

b. Perform WGS surveys (non-protocol, spot check) and update maps and flagging. Provide updated maps to the Department and ODFW and identify any significant change in previously identified WGS habitat.

The applicant commits to conducting long-term WGS surveys following construction, every 5-years for the life of the facility. To ensure that the long-term WGS survey data is utilized to inform work area restrictions within suitable WGS habitat and minimize potential direct impacts to the species, the Department recommends Council impose the following condition:

> **Recommended Threatened and Endangered Species Condition 3 (OPR):** During operation and maintenance, results of the most recent survey year of the long-term WGS monitoring conducted under the Wildlife Monitoring Plan (Attachment P-3 of the Final Order on the ASC), must be used to inform work area restrictions (785-foot avoidance buffer) within 1,000-feet of suitable WGS habitat.

Potential indirect impacts to WGS include mortality from vehicle and equipment collision; temporary and permanent loss and modification of unoccupied habitat resulting in decreased cover, food availability and dispersal opportunities; habitat fragmentation from siting of the solar facility components; and, increased predation from perching opportunities afforded via the new transmission lines. Applicant represents measures to minimize these impacts including adherence to speed limits; implementation of revegetation and habitat mitigation (see recommended Fish and Wildlife Habitat Conditions 1, 2 and 3); and long-term WGS monitoring of colonies identified during preconstruction surveys. These measures are identified and recommended as site certificate conditions in Section IV.H. *Fish and Wildlife Habitat* of this order.

Based on compliance with the above-recommended conditions, the Department recommends Council find that the design, construction and operation of the proposed facility would not be likely to significantly reduce the likelihood of survivability or recovery of WGS.

Laurence's milkvetch

There are 9,174 acres of suitable habitat (Perennial grassland, scattered rabbitbrush) for Laurence's milkvetch within the micrositing area. Surveys were conducted within 8,664 acres using intuitive controlled transect methodology from 2017-2020. Twelve populations, with fruits present, totaling approximately 111 acres were identified within the analysis area.[192] Based on consultation with Oregon Department of Agriculture's Plant Conservation Division, establishment of new plants in populations is sporadic and limited.[193] This means the likelihood of new populations in previously surveyed areas of suitable habitat is unlikely.

[192] NHWAPPDoc2-15 ASC Exhibit P Fish and Wildlife 2022-01-31. Table 2.

[193] NHWAPPDoc5-7 ASC ODOE and Dept of Agriculture Consultation 2022-04-02.

The applicant commits to avoiding all previously identified populations and conducting preconstruction rare-plant surveys within suitable habitat. Based on consultation with Oregon Department of Agriculture's Plant Conservation Division, the Department recommends that Council impose the following condition, requiring preconstruction surveys, avoidance and additional measures if avoidance is not practicable:

> **Recommended Threatened or Endangered Species Condition 4 (PRE):** Prior to construction of the facility, the certificate holder shall:
>
> a. Submit a botanical survey protocol to the Department for review in consultation with the Oregon Department of Agriculture. The protocol shall apply to areas of suitable habitat for Laurence's milkvetch using current habitat classification data and areas of ground disturbance. Previous survey results may be relied upon if determined appropriate during review and approval of the protocol.
> b. Conduct botanical surveys to confirm the presence or absence of Laurence's milkvetch, within suitable habitat in areas of permanent or temporary disturbance.
> c. Survey results must be submitted to the Department and Oregon Department of Agriculture's Native Plant Conservation Division. If the pre-construction surveys identify these or any other state threatened or endangered plant species, the certificate holder shall complete an impact assessment to determine whether temporary or permanent impacts would significantly reduce the likelihood of survivability or recovery of the impacted species, and shall propose mitigation, as determined appropriate by the Department, in consultation with the Oregon Department of Agriculture or its third-party consultant, as necessary. These measures may include avoidance, or if avoidance is not possible, other measures such as seed collection may be considered. If rare plants are identified within a public right-of-way and cannot be avoided by construction, then in accordance with ORS 564, written permission from the landowner or lease holder must be obtained. If seed collection is determined to be feasible and warranted, a permit from the Oregon Department of Agriculture must be obtained in accordance with OAR 603-073-0100 (3).

Proposed facility ground-disturbing activities could result in indirect impacts to Laurence's milkvetch from dust and noxious weeds. Oregon Department of Agriculture recommends that identified populations of Laurence's milkvetch be flagged to ensure avoidance using a 20-foot buffer (record of consultation provided in Attachment B of this order). The Department recommends Council impose the following condition to ensure that all identified populations are flagged and avoided during proximate ground disturbing activities in accordance with ODA's recommendation.

> **Recommended Threatened or Endangered Species Condition 5 (GEN):** Certificate holder shall maintain a map of previously identified Laurence's milkvetch populations within the micrositing area. The map shall be used to inform flagging or other avoidance mechanism to ensure avoidance of ground disturbance within 20-feet of the

populations. The avoidance flagging areas may be updated at any time based on more current survey results, if completed.

Applicant identifies that speed limits and worker training would ensure dust impacts are minimized. Applicant also describes that it would adhere to the requirements of a Revegetation Plan including revegetation, noxious weed control, topsoil salvage and soil stabilization that would minimize potential indirect impacts to Laurence's milkvetch. The Department recommends Council require that the applicant adhere to the components of a Revegetation and Noxious Weed Plan (See Attachment P-2), to be finalized prior to construction, through recommended Fish and Wildlife Habitat Conditions 1, 2 and 3 (see Section IV.H. *Fish and Wildlife Habitat* of this order).

Conclusions of Law

Based on the foregoing recommended findings of fact and conclusions, and subject to compliance with the recommended site certificate conditions, the Department recommends that the Council find that the proposed facility would comply with the Council's Threatened and Endangered Species standard.

IV.J. Scenic Resources: OAR 345-022-0080

i. Except for facilities described in section (2), to issue a site certificate, the Council must find that the design, construction and operation of the facility, taking into account mitigation, are not likely to result in significant adverse impact to scenic resources and values identified as significant or important in local land use plans, tribal land management plans and federal land management plans for any lands located within the analysis area described in the project order.

In applying the standard set forth in OAR 345-022-0080(1), the Council assesses the impact of a proposed facility by evaluating the visibility of vegetation loss, structures, plumes and visible emissions at significant or important scenic resources described in "local land use plans, tribal land management plans and federal land management plans for any lands located within the analysis area described in the project order." For purposes of this rule, "local land use plans" includes applicable state land use and management plans.

As established in the Amended Project Order, the analysis area for the Scenic Resources standard is the area within and extending 10-miles from the proposed site boundary. The applicant's evaluation of scenic resources within the analysis area, and potential impacts from construction and operation of the proposed facility to the identified scenic resource are provided in ASC Exhibit R.

Findings of Fact

The analysis area includes land governed or managed by Umatilla and Morrow counties; cities of Hermiston, Stanfield, Echo, Irrigon, and Pilot Rock; ODFW; BLM; USACE, and USFWS. Local, state and federal land management plans reviewed by the applicant to determine the presence of an important or significant scenic resource within the analysis area are presented below:

Local (Counties and Cities)

- Morrow County Comprehensive Plan (2013)
- Umatilla County Comprehensive Plan (1984; 2017)
- City of Irrigon Comprehensive Plan Technical Report (2005), Development Code (2017)
- City of Umatilla Comprehensive Land Use Plan (2013)
- City of Hermiston Comprehensive Plan and Development Code (2018)
- City of Stanfield Comprehensive Plan (2001), Development Code (2003)
- City of Echo Comprehensive Plan (2005), Zoning Administrative Regulations (2015)
- City of Pendleton Comprehensive Plan (2013), Unified Development Code (2017)
- City of Pilot Rock Comprehensive Plan (1979), Ordinance 489 (2001)

State

- Oregon Department of Fish and Wildlife (ODFW) – Columbia Basin Wildlife Areas Management Plan (2008)

Federal

- Bureau of Land Management (BLM) – Baker Resource Management Plan (1989)
- US Fish and Wildlife (USFWS) – Umatilla National Wildlife Refuge Comprehensive Conservation Plan (2007)
- US Army Corps of Engineers (USACE) - Lake Umatilla and Lake Wallula Recreation Management Areas – John Day Lock and Dam Master Plan (1976), McNary Shoreline Management Plan (2012)

Based on review of the applicant's list of plans and counties and cities identified in ASC Exhibit R Figure R-1, the Department recommends Council find that the applicant has adequately identified local, state and federal land management plans that would apply to lands within the scenic resources analysis area, to evaluate potential scenic resources that could be impacted by the proposed facility. As established in the Amended Project Order, if significant adverse impacts from the proposed facility could occur to scenic resources beyond the analysis area or to resources identified after issuance of the draft proposed order, the applicant is obligated to assess those impacts.

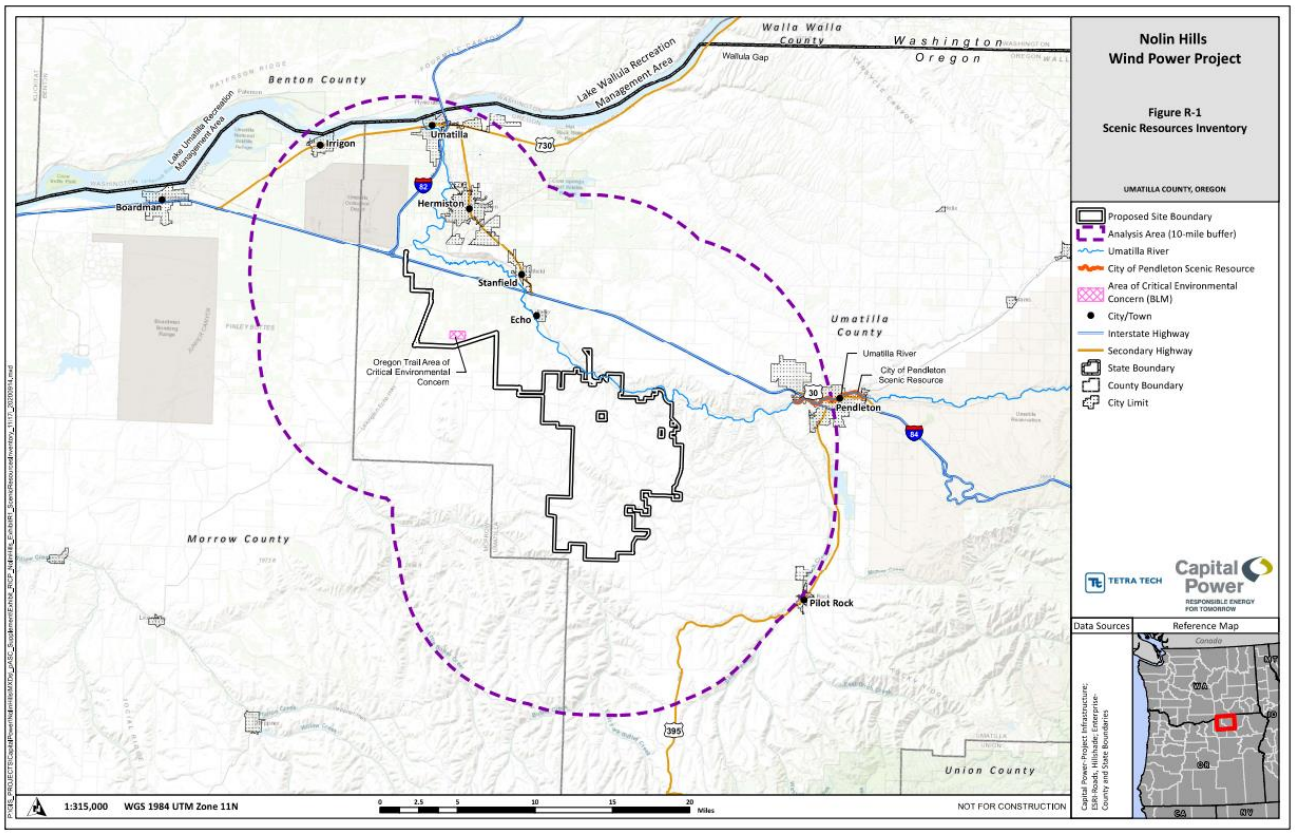
From the above-referenced plans, two scenic resources were identified as "significant" or "important" within the analysis area including portions of the Umatilla River within the City of Pendleton and BLM's Echo Meadows site. The location of these two protected scenic resources are presented in Figure 7: *Important or Significant Scenic Resources within the Analysis Area.*

Portions of the Umatilla River and its tributaries (within the City of Pendleton) are identified in the City of Pendleton's Comprehensive Plan as the most significant scenic area in the city, and

that any urban use that intrudes into the vegetation or alters the banks of the levee may conflict with the scenic beauty of the waterway.

Echo Meadows is a federally designated 320-acre Area of Critical Environmental Concern (ACEC), managed by the U.S. Bureau of Land Management (BLM) for the preservation and enjoyment of the remaining evidence of the Oregon Trail. The National Park Service (NPS) has designated the site as significant on the Oregon National Historic Trail (ONHT). Visitors can hike along a paved trail to see nearly one mile of intact wagon ruts and read interpretive signs about the area and its history. The site receives about 850 visitors per year.[194]

Figure 7: Important or Significant Scenic Resources within the Analysis Area



[194] NHWAPPDoc2-11 ASC Exhibit L._Protected Areas_2022-01.31, Section 4.1. Personal communication cited: Rachael Katz, Tetra Tech, and Brian Woolf, BLM Vale District, Baker Office, August 6, 2018.

The distance from the closest micrositing corridor area of proposed facility components to the identified scenic resources are presented in Table 11 below.

Table 11: Important Scenic Resources, Distance from Proposed Site Boundary and Potential Visibility of Proposed Facility Components

Important Scenic Resource	Distance from Proposed Site Boundary	Visibility Assessment of Proposed Facility Components
Umatilla River (City of Pendleton)	Distance to Turbines: 7.6 miles Distance to BPA Transmission Line: > 10 miles	Turbines: 0-60 visible BPA Transmission Line: barely visible
Echo Meadows ACEC-ONHT (BLM)	Distance to Turbines: 6.4 miles Distance to UEC Transmission Line: 0.2 miles	Turbines: 0-112 visible UEC Transmission Line: visible

The closest facility component to the portions of the Umatilla River within the City of Pendleton would be wind turbines at a distance of 7.6 miles. While the proposed 230 kV BPA Stanfield transmission line would cross the Umatilla River, the crossing would occur in Umatilla County, over a segment that is not designated as a scenic resource. The closest facility component to the Echo Meadows site is the proposed 230 kV UEC Cottonwood transmission line at a distance of 0.2 miles. The assessment of proposed facility visibility and impacts to these two resources is presented below.

Visual Impact Assessment

Visibility impacts from vegetation loss and facility structures were evaluated. The proposed facility does not include combustion or thermal heat sources; therefore, the proposed facility would not result in plumes or visible air emissions.

Visibility impacts from vegetation loss are based on amount of disturbance and distance from disturbance. The proposed facility would result vegetation loss including approximately 2,035 acres of permanent disturbance and 2,079 acres of temporary disturbance. The most substantial vegetation loss would be from construction of the wind and solar facility components. Based on a distance greater than 5 miles from proposed wind and solar facility components to the Echo Meadows site and portions of the Umatilla River (within City of Pendleton) considered a scenic resource, vegetation loss would not be discernable. The vegetation loss from construction and operation of the proposed UEC Cottonwood transmission line at the Echo Meadows site would not be distinguishable given the limited amount of disturbance that would occur for placement of structures, combined with the existing viewshed which includes cropland, grassland, shrubs and an existing transmission line. Based on these facts, the Department recommends Council find that vegetation loss from the proposed facility would not be likely to result in a significant adverse impact to the scenic resources identified within the analysis area.

Visibility impacts from structures were evaluated using a zone of visual influence (ZVI) analysis (also known as a viewshed or visibility analysis), characteristics of the existing viewshed, and for the proposed 230 kV UEC Cottonwood transmission line – photo simulations. A ZVI analysis uses Environmental Systems Research Institute ArcGIS software to identify areas from which proposed facility wind turbines, at a maximum blade-tip height of 496 feet, and transmission line towers, at a height of 100 and 140 feet (I-84 crossing), might be visible.[195] The results of the ZVI-visibility analysis are presented in Figures 8, 9 and 10 below. Photo simulations of the proposed 230 kV UEC Cottonwood transmission line at key points of the Echo Meadows site are presented in Figure 11 below.

[195] The ZVI "bare-earth" modeling approach considers effects of terrain (topography) on visibility and does not consider the effects of distance, lighting, weather, and atmospheric attenuation factors that diminish visibility under actual field conditions. A bare-earth analysis also does not account for the effects of vegetation or buildings, which can in practice block or screen views in some places.

Figure 8: Zone of Visual Impacts of Turbine Visibility within Analysis Area

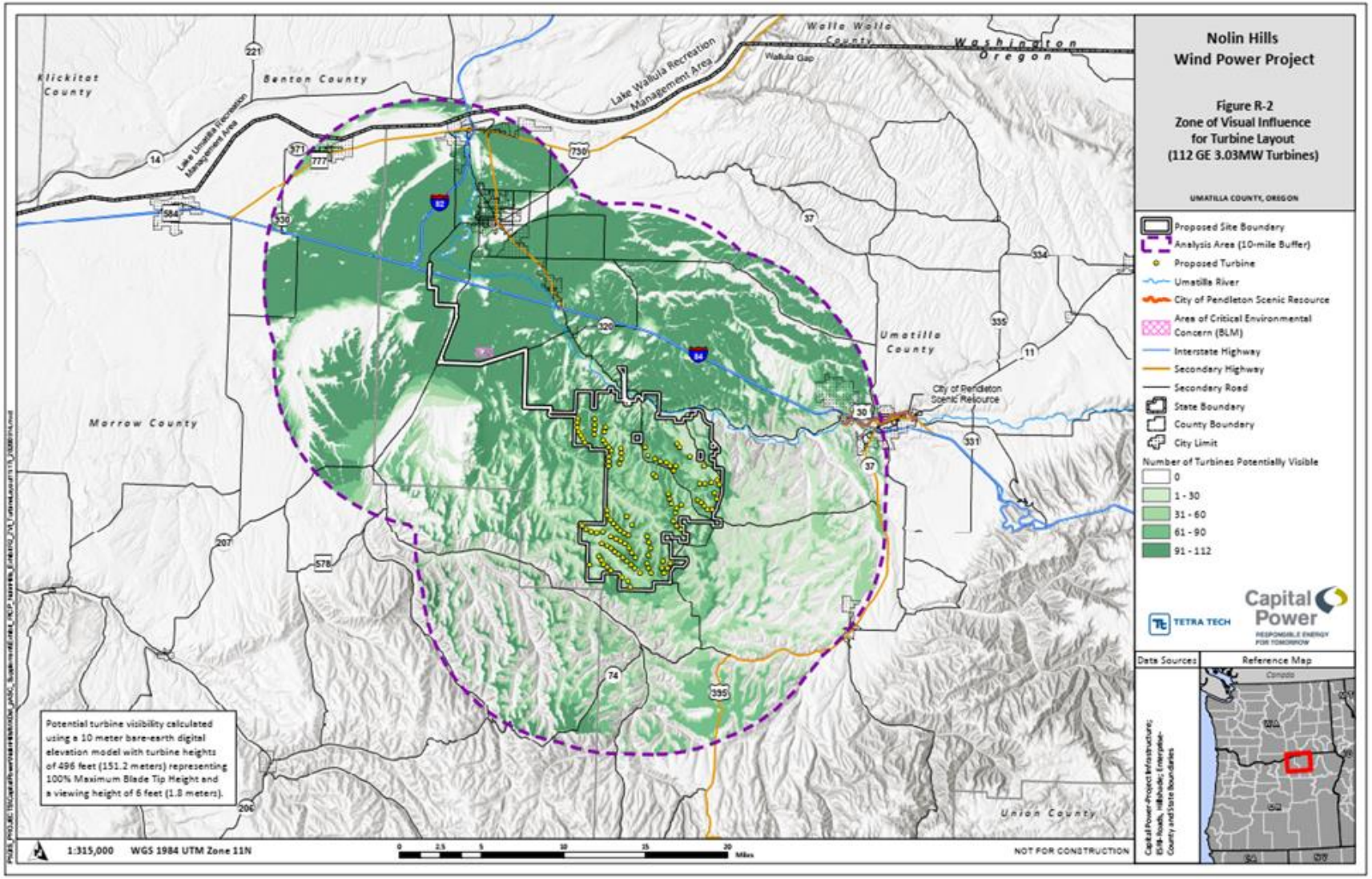


Figure 9: Zone of Visual Impacts of UEC Transmission Line Route

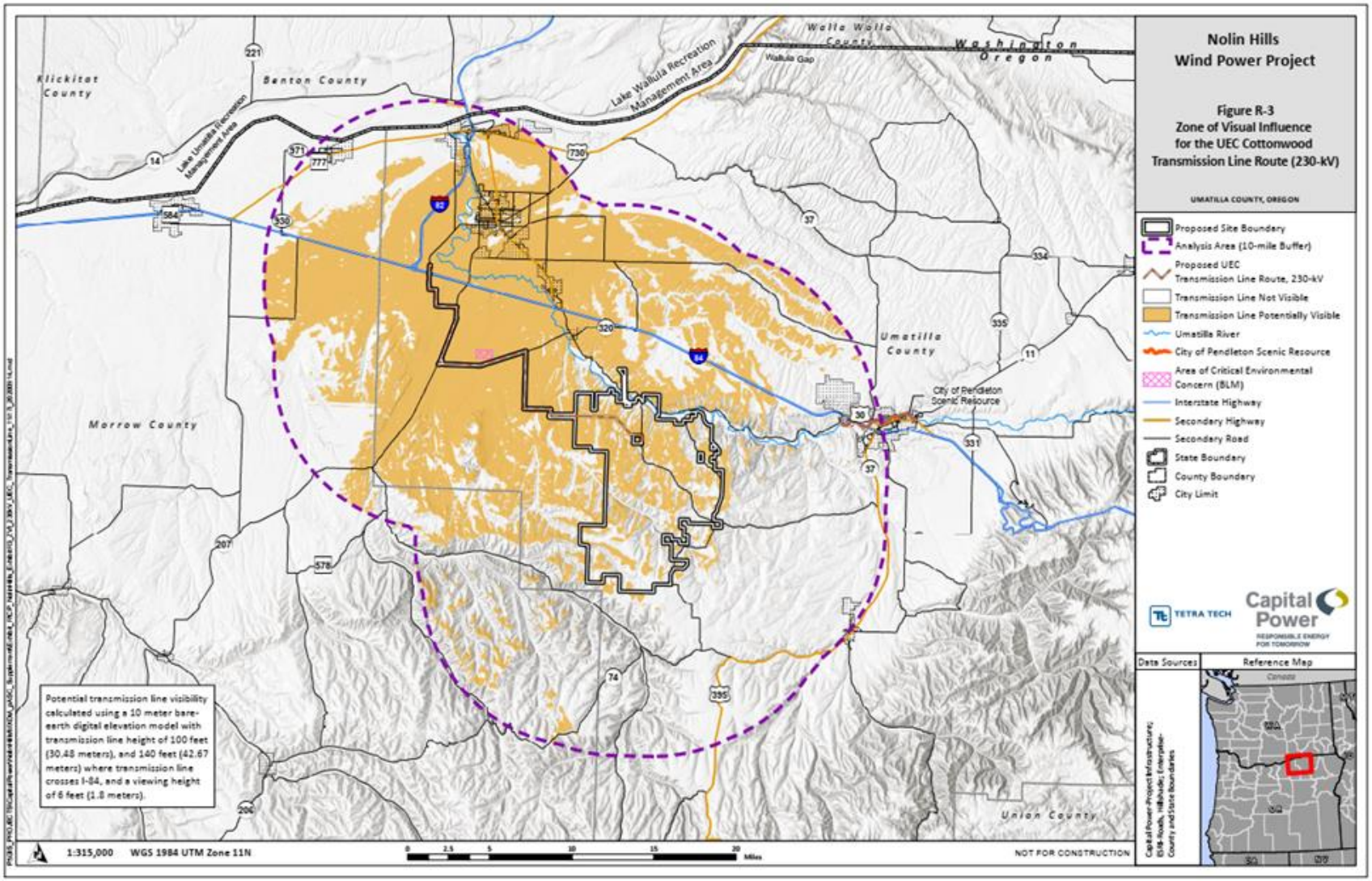
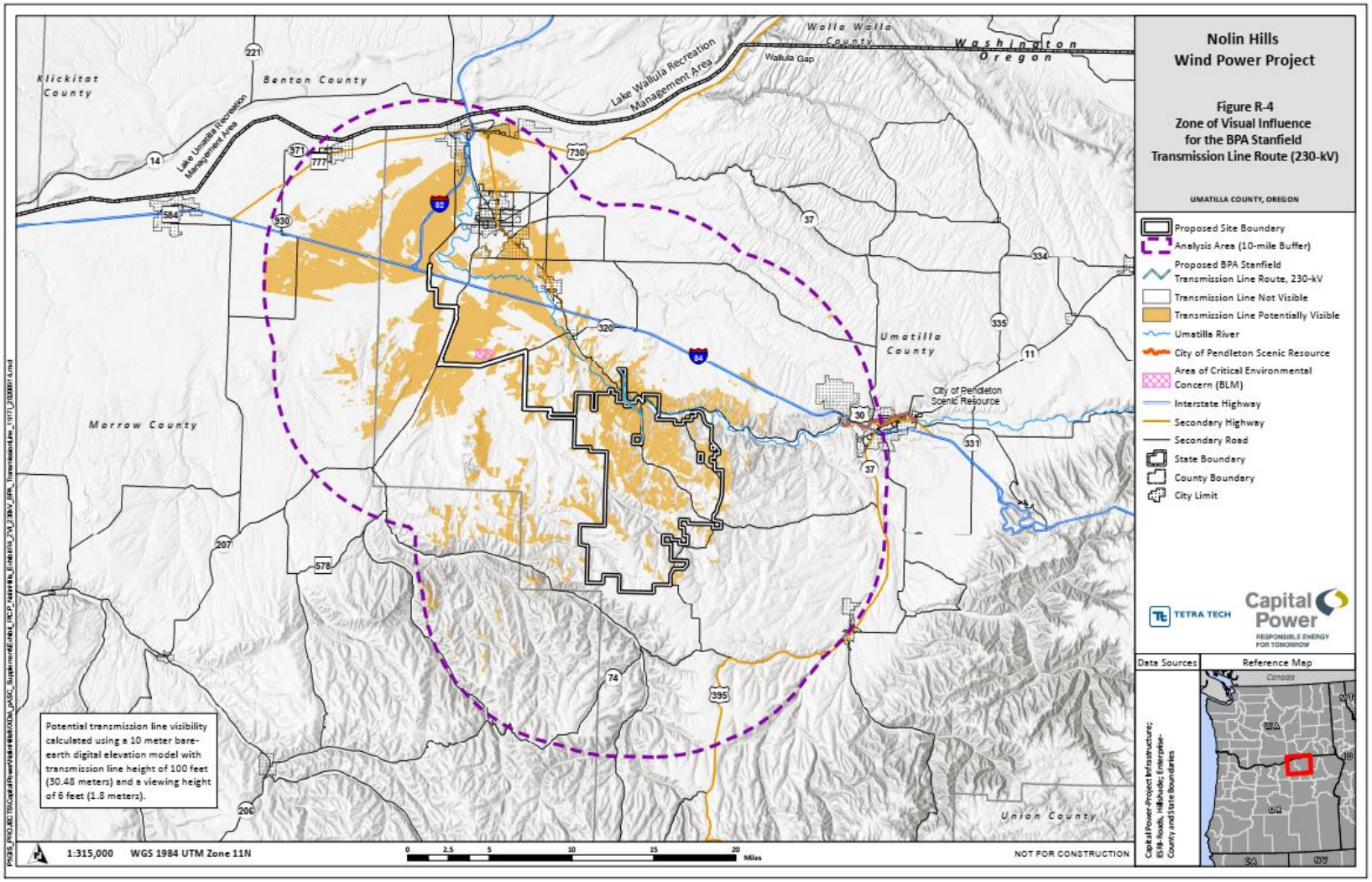


Figure 10: Visual Impact Assessment of BPA Transmission Route on Umatilla River, Pendleton



Potential Impacts of Proposed Facility Visibility at Echo Meadows Site ACEC

The ZVI analysis demonstrates that, at the Echo Meadows ACEC, the proposed 230 kV UEC Cottonwood transmission line (0.2 mile) would be visible at a foreground viewing distance and wind turbines would be visible at a highly variable visibility at a background viewing distance (6.4 miles or more). Based on the distance and variability, the Department recommends Council find that the impact of wind turbine visibility at the Echo Meadows site would be moderate.

Based on the proximity of the proposed 230 UEC Cottonwood transmission line to the Echo Meadows site, photo simulations are relied upon to further evaluate the significance of potential visibility impacts. Photo simulations of existing conditions, and future conditions with the proposed 230 kV UEC transmission line route, from the Echo Meadows site are presented in Figure 11 below. As presented, the photo simulations demonstrate the existing viewshed includes wind turbines (from other facilities), existing UEC and other power lines, agricultural structures, and multiple center-pivot agricultural irrigation systems. The photo simulation also demonstrates that the proposed 230 kV UEC transmission line route would not be visible when visitors are oriented toward the remnant Oregon Trail ruts. However, where not screened by topography, the proposed transmission line would introduce new, moderately contrasting middle-ground and background features in the viewshed of Echo Meadows.

Figure 11: Echo Meadows Photographic Simulations

BLM, the managing agency of the Echo Meadows site, affirmed that visibility of the proposed transmission line would conform with BLM's visual resource zone for the viewshed.[196] Based on review of the applicant's ZVI analysis and photo simulation, consideration of the existing viewshed and BLM's comments on conformance, the Department recommends Council find that visibility of the proposed 230 kV UEC Cottonwood transmission line would not impact the use or enjoyment of the resource by the public and therefore would not be likely to result in significant adverse visual impacts to the Echo Meadows site.

Potential Impacts of Proposed Facility Visibility at Umatilla River

The ZVI analysis presented in Figure 8 above demonstrates that viewers from the portions of the Umatilla River considered a scenic resource, within the City of Pendleton, could see 0 to 60 wind turbines on the horizon, depending on their location along the river within the city. Trees and other vegetation adjacent to the river, and structures in the urbanized setting, would limit potential viewpoints of wind turbines. From the river looking toward the proposed facility, the existing viewshed includes roadways, bridges and existing transmission line crossings, residential and commercial buildings, and agricultural fields. Based on the distance (over 5-miles), occasional views of wind turbines would not feature prominently in the viewshed.

The ZVI analysis presented in Figure 10 presents visibility impacts from the proposed 230 kV BPA Stanfield transmission line at the Umatilla River. Because the transmission line would be 400 feet lower than wind turbines and located at greater distances that wind turbines from the portion of the Umatilla River considered a scenic resource, views of the transmission line would be lesser than that of the proposed wind turbines.

Based on the results of the ZVI, distance and characteristics of the existing viewshed, as described above, the Department recommends Council find that the proposed facility would not be likely to result in significant adverse visual impacts to the portions of the Umatilla River within City of Pendleton considered a scenic resource.

Conclusion of Law

Based on the recommended findings of fact, reasoning and analysis, the Department recommends that the Council find that the proposed facility would satisfy the Council's Scenic Resources standard.

IV.K. Historic, Cultural, and Archaeological Resources: OAR 345-022-0090

(1) Except for facilities described in sections (2) and (3), to issue a site certificate, the Council must find that the construction and operation of the facility, taking into account mitigation, are not likely to result in significant adverse impacts to:

[196] BLM's Outdoor Recreation Planner Brian Woolf stated the that proposed transmission line would be in "conformance with the BLM's visual resource zoning for that viewshed." NHWAPPDoc3-12 pASC BLM comment Protected Areas impacts Echo Meadows Woolf 2021-04-30.

(a) Historic, cultural or archaeological resources that have been listed on, or would likely be listed on the National Register of Historic Places;
(b) For a facility on private land, archaeological objects, as defined in ORS 358.905(1)(a), or archaeological sites, as defined in ORS 358.905(1)(c); and
(c) For a facility on public land, archaeological sites, as defined in ORS 358.905(1)(c).

(2) The Council may issue a site certificate for a facility that would produce power from wind, solar or geothermal energy without making the findings described in section (1). However, the Council may apply the requirements of section (1) to impose conditions on a site certificate issued for such a facility.

*****

Findings of Fact

The analysis area for the Historic, Cultural and Archaeological Resources standard, as established in the Amended Project Order, is the area within the site boundary; if potentially affected resources, including but not limited to Traditional Cultural Properties or Historic Properties of Religious and Cultural Significance to Indian Tribes (HPRCSITs), are identified (e.g., through coordination with the State Historic Preservation Office (SHPO) and/or coordination with potentially affected tribes as identified by the Legislative Commission on Indian Services), the analysis area shall be expanded to include those resources, if determined warranted by the Department.[197]

Resources protected under the standard include archeological sites (ORS 358.905(1)(c)), archeological objects (ORS 358.905(1)(a)) and any historic, cultural or archeological resource listed or likely eligible for listing on the National Register of Historic Places (NRHP).

IV.K.1. Department Evaluation of Applicant's Discovery Measures

Discovery measures to evaluate the presence of protected resources within the analysis area may include surveys, inventories and limited subsurface testing. An applicant's discovery measures must be based on recommendations from SHPO or the National Park Service (NPS) of the U.S. Department of Interior (OAR 345-021-0010(1)(s)(D)(i)); if the discovery measures are not based on the recommendations of SHPO or NPS, an applicant must provide an explanation (OAR 345-021-0010(1)(s)(D)(ii)). SHPO recommendations on discovery measures are provided in its *2011 Guidelines for Historic Resources Surveys in Oregon* and *2016 Guidelines for Conducting Field Archeology in Oregon*.[198] If applicant's discovery measures follow SHPO's published guidelines, it can be applied that their discovery measures for historic and archaeological resources are based on SHPO recommendations, unless applicant seeks, or SHPO provides, more specific recommendations through the EFSC process. The applicant has engaged SHPO and tribes in the discovery efforts undertaken for the facility under this standard.

[197] NHWAPPDoc8 Amended Project Order. 2021-08-02.
[198] NHWAPPDoc2-18 ASC Exhibit S Cultural 2022-01-31. Page 34.

Different discovery measures apply to the investigation for archeological sites, archeological objects, aboveground historic resources and tribal resources. The applicant's discovery measures represent a phased approach, where identification and field study have been conducted for most of the micrositing area as part of the first phase in the ASC; additional identification, field study and evaluation would be completed in the second phase at preconstruction. The phased approach could result in review of impacts and mitigation, following Council approval of the site certificate, which is allowable under ORS 469.402, if the circumstances are warranted. This is further evaluated below.

For all of these resource types, an initial inventory was completed through literature/database review. The following databases and resources were reviewed to identify previous surveys and recorded resources within the analysis area:

- SHPO's Oregon Archeological Records Remote Access
- SHPO's Oregon Historic Sites Database
- Oregon Historic Trails website
- Historic maps and aerial photographs (including 1860 U.S. General Land Office plats for Umatilla County)
- Review of records on Ancestry.com
- Oregon's Historic Oregon Newspapers database

Traditional use surveys (TUS)/oral history interviews were completed for tribal resources. The above-referenced databases, sources and completion of oral history interview/TUS are consistent with SHPO's guidance for background research, per its *2016 Guidelines for Conducting Field Archeology in Oregon*.[199]

Non-collection pedestrian surveys were completed for archeological sites, objects and historic buildings and structures. Of the 15,726 acres, 15,467 acres were surveyed via "Non-collection" pedestrian surveys between July 5 and 26, 2017; May 15 and 22, 2018; August 7 and 8, 2018; July 8 and 13, 2019; May 1 and May 4, 2020, and August 31, 2020. Pedestrian surveys were conducted in 20-meter transects, using 1:24,000 scale maps and Global Positioning System units with sub-meter accuracy to maintain special control. This survey design is consistent with the *2016 Guidelines for Conducting Field Archeology in Oregon - Standard Field Methodology for Surface Surveys*.[200]

Pedestrian surveys to date have covered micrositing corridors for the facility components and most of the transmission line alternatives. The surveyed areas included a 500-foot buffer on the

[199] SHPO's guidelines establish that background research should include a search of the Oregon Archeological Resources, relevant past relevant past archaeological study reports, Oregon Historic Sites and Structures Survey, National Register files, relevant historic contexts, historic maps and photographs (including General Land Office Survey maps and notes and Sanborn insurance maps) and any other pertinent publications, documents, records, and files. Accessed on March 31, 2022 by the Department: https://www.oregon.gov/oprd/OH/Documents/FieldGuidelines_January2016.pdf

[200] *Ibid.* Page 32.

centerline of turbine strings (1,000-foot-wide corridor) and a 150-foot buffer on all other linear components (300-foot-wide corridor) within the main area of the wind facility. Widths of the survey corridors along the transmission line alternatives varied. No buffer was placed on the substations. Except for portions where access was not yet available at the time of survey, all portions of the micrositing corridors have been surveyed. Shovel probing has not occurred in areas of poor ground surface visibility or in areas with high probability for buried archaeological resources. If these areas fall within temporary or permanent impact areas for the final design of the facility, they will be re-surveyed with better ground surface visibility and/or shovel probed prior to construction per the proposed Subsurface Probing Plan.

As non-collection surveys, no subsurface probing of archeological site boundaries, archeological object localities, areas of high probability for buried archeological resources, or areas of poor ground surface visibility was conducted. Applicant's explanation is that "Project design schedule allowed for conducted surveys first and micrositing to avoid resources. Re-examination of areas of high probability and/or poor ground surface visibility during survey will occur after Project design is finalized and limited to construction corridors." SHPO's guidance states "It is normally not possible to establish the significance of an individual site without testing to determine the nature of subsurface deposits." Therefore, the lack of subsurface probing is not consistent with SHPO's guidelines, but because the applicant commits to avoiding all resources and conducting further sub-surface probing during preconstruction surveys (see Subsurface Probing Plan, Attachment S-3 of this order), the Department recommends that the survey methods would be consistent with SHPO's guidelines. The results of the future subsurface probing are a future review and approval.

Unsurveyed areas include 486 acres within transmission line areas; and 259 acres within the micrositing area. The 486 acres within the transmission line analysis area were unsurveyed due to lack of landowner permissions and safety issues. Applicant commits to surveying any unsurveyed areas, prior to construction, in the locations of potential ground disturbance

The Department recommends that Council impose a preconstruction condition that would require that the applicant conduct field investigations of all unsurveyed areas and resurvey previously surveyed areas that had low visibility within areas of potential ground disturbance, based on final facility design, and conduct subsurface probing in areas of high probability, low visibility and in locations where ground disturbance could occur within 50-meters of identified archeological objects. The Department also recommends that, if significant resources, impacts and additional management measures are recommended by the applicant, that the condition require the applicant to evaluate the results through the Amendment Determination Request process (OAR 345-027-0357) to determine whether a new resource or site certificate condition under a site certificate amendment is required.

> **Recommended Historic, Cultural and Archeological Resources Condition 1 (PRE):** Prior to construction, the certificate holder shall:

a. Submit to the Department and SHPO a research design consistent with SHPO's archeological guidelines and recommendations for unsurveyed areas, and the Subsurface Probing Plan included as Attachment S-3 of the Final Order on the ASC,
b. Complete archeological field investigations and subsurface probing in accordance with the research design and Subsurface Probing Plan under (a). Submit survey reports to the Department and SHPO. Any new resources and management recommendations identified must be evaluated under OAR 345-027-0357 to determine whether a site certificate amendment is required. Resources and management recommendations, shall be reviewed by the Department in consultation with SHPO or a third-party consultant within 60-days. Once approved, the management recommendations shall be incorporated into the Monitoring and Inadvertent Discovery Plan, per Historic, Cultural and Archeological Resources Condition 2.

For aboveground, historic resources, a historic and cultural resources inventory was conducted on specific historic properties within the analysis area identified by SHPO during review of the preliminary ASC.[201]

IV.K.2. Evaluation, Avoidance, and Mitigation for Impacts to Historic, Cultural, and Archeological Resources

Results of the applicant's discovery measures identified 43 archeological sites, 20 archeological objects and 4 aboveground, historic resources within the analysis area. The NRHP listing status, or likely eligibility for listing, potential impacts from proposed facility construction and operation to likely or listed NRHP resources and proposed avoidance measures are presented in the subsections below.

IV.K.2.a. Archeological Sites

Forty-three (43) archeological sites were identified within the analysis area, twenty-nine (29) were identified as HPRCSITs by the Confederated Tribes of the Umatilla Indian Reservation (CTUIR). Of the forty-three archeological sites, fourteen (14) non-HPRCSIT archeological sites are presented in Table 12 below; and the twenty-nine (29) HPRCSIT archeological sites are presented in Table 13 below.

As presented in Table 12, of the fourteen non-HPRCSIT archeological sites, 1 is NRHP-listed, 9 are recommended by the applicant as not-likely eligible and 4 are recommended as unevaluated (treated as likely-NRHP eligible). The Department's evaluation of potential direct and indirect impacts, and applicant's proposed avoidance and mitigation, is presented below.

[201] NHWAPPDoc3-6 pASC SHPO comment_Allen 2020-12-22.

Table 12: Archeological Sites (non-HPRCSIT) within Analysis Area

Resource ID or Trinomial	General Description	Applicant's Recommended NRHP Determination	Distance to Nearest Temporary Disturbance (meters)	Potential Impacts/Avoidance and Mitigation Measure	Resource Type (a, b)[1]
Oregon National Historic Trail (NHT)	Trail	Listed	0	No direct impacts; indirect impacts from transmission line; mitigation through recordation.	(a); (b)
NH-BB-01	Survey Marker	Not-likely	57	No direct impacts. Applicant commits to avoidance.	(b)
NH-BB-02	Refuse Scatter	Not-likely	229	No direct impacts. Applicant commits to avoidance.	(b)
NH-BB-03	Structural Remains	Unevaluated (likely)	57	No direct impacts. Applicant commits to flag and monitor within 61-meters.	(a); (b)
NH-BB-04	Road	Not-likely	146	No direct impacts. Applicant commits to avoidance.	(b)
35UM 00538	Road	Not-likely	0	Direct impacts. Mitigation of recording.	(b)
35UM 00539	Structure/Foundation	Unevaluated (likely)	120	No direct impacts. Applicant commits to 50-meter avoidance buffer.	(a); (b)
35UM 00545	Utility Line	Unevaluated (likely)	260	No direct impacts. Applicant commits to 50-meter avoidance buffer.	(b)
35UM 00546	Historic Agricultural Refuse	Unevaluated (likely)	264	No direct impacts. Applicant commits to 50-meter avoidance buffer.	(b)

Table 12: Archeological Sites (non-HPRCSIT) within Analysis Area

Resource ID or Trinomial	General Description	Applicant's Recommended NRHP Determination	Distance to Nearest Temporary Disturbance (meters)	Potential Impacts/Avoidance and Mitigation Measure	Resource Type (a, b)[1]
35UM 00554	Rock Pile	Not-likely	62	No direct impacts. Applicant commits to avoidance.	(b)
35UM 00558	Road	Not-likely	174	No direct impacts. Applicant commits to avoidance.	(b)
35UM 00570	Road	Not-likely	0	Direct impacts. Mitigation of recording.	(b)
35UM 00572	Road	Not-likely	613	No direct impacts. Applicant commits to avoidance.	(b)
35UM 00573	Road	Not-likely	650	No direct impacts. Applicant commits to avoidance.	(b)

Notes:
Resource definition:
(a) Historic, cultural or archaeological resources that have been listed on, or would likely be listed on the National Register of Historic Places;
(b) For a facility on private land, archaeological objects, as defined in ORS 358.905(1)(a), or archaeological sites, as defined in ORS 358.905(1)(c).

NRHP eligibility determination shaded in "grey" represents determinations agreed upon by the Department's third-party consultant, Historical Research Associates, Inc. These determinations were sought by the Department because the applicant identified potential impacts to the resources NHWAPPDoc6 pASC HRA Exhibit S Review_2021-05-21

Listed NRHP Resource

One NRHP listed archeological site was identified in the analysis area - Oregon National Historic Trail (ONHT). The proposed 230 kV UEC Cottonwood transmission line or the BPA Stanfield transmission line, whichever is selected as the grid-interconnection transmission line at final design, would span overhead the ONHT. There would be no direct impacts, but overhead spanning of the historic trail route would result in indirect impacts. Applicant's mitigation for direct impacts includes preservation through recordation of any visible ruts identified during preconstruction surveys. The applicant also executed a mitigation agreement with the Oregon-California Trails Association (OCTA), a non-profit organization dedicated to preserving and protecting overland emigrant trails and the emigrant experience. OCTA stated that the mitigation agreement "comprise the full extent of our requests for mitigation of facility-related impacts."[202] Recordation of any visible ruts is mitigation through preservation of the history of the resource setting, and is a measure that Council is authorized to consider, consistent and/or in accordance with OAR 345-001-0010(33)(d) and (f).[203] Applicant will ensure that discussion of the ONHT and the significance of intact trail ruts are included in any construction environmental training program for the facility.

Likely-NRHP Eligible Resources

Thirty-three (33) archeological sites considered likely NRHP eligible were identified within the analysis area. Twenty-nine (29) of the thirty-three (33) archeological sites were identified as HPRCSITs by CTUIR. Because the applicant and CTUIR agreed to evaluate impacts and mitigation to tribal resources outside of the EFSC process, the twenty-nine archeological resources identified as HPRCSITs are described separately below.

The 4 non-HPRCSIT likely-NRHP eligible archeological sites identified within the analysis area include: NH-BB-03 (structural remains); 35UM 00539 (structure); 35UM 00545 (utility line); and 35UM 00546 (agriculture). Applicant commits to avoiding direct impacts via adherence to a 50-meter buffer from the resource boundary. The applicant commits to identifying and avoiding these resources under its Draft Monitoring and Inadvertent Discovery Plan, provided as Attachment S-1 of this order. To ensure that these resources are identified prior to any ground-disturbing activities associated with construction, operations and maintenance or retirement, the Department recommends Council impose the following condition:

> **Recommended Historic, Cultural, and Archeological Resources Condition 2 (PRE):** Prior to construction, the certificate holder shall finalize the Draft Monitoring and Inadvertent

[202] NHWAPPDoc3-13 pASC OCTA Oregon Trails comment 2020-11-04.

[203] OAR 345-001-0010(33)(d) states that "mitigation" means taking one or more of the following actions listed in order of priority: reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action my monitoring and taking appropriate corrective measures; and (f) states that mitigation means: implementing other measures approved by the Council.

Discovery Plan (MIDP), based on Attachment S-1 of the Final Order on the ASC, based on review and approval by the Department. The final plan shall include:

a. Tables 12, 13 and 14 of the Final Order on the ASC and maps of the final facility layout, resource location and established 50-meter avoidance buffer. Any additional resources identified in the preconstruction surveys per Historic, Cultural and Archeological Resources Condition 1 must also be included.
b. Avoidance method (e.g. worker training, flagging) and monitoring protocol for ground-disturbing activities within 50-meters of previously identified precontact sites.
c. Flagging and monitoring protocol for any ground-disturbing activities within 200-feet of NH-BB-03, 35UM 00536, 35UM 00543 35UM 00550, 35UM 00560 and 35UM 00571.

Recommended Historic, Cultural, and Archeological Resources Condition 3 (GEN): During any ground-disturbing activities, the certificate holder shall adhere to the requirements of the MIDP. Any failures to adhere to the MIDP must be reported to the Department and SHPO; impacts must be addressed and mitigation measures must be proposed and implemented for any listed or likely-NRHP eligible resources; worker training may be used to address impacts to resources identified as not-likely NRHP eligible.

Recommended Historic, Cultural, and Archeological Resources Condition 4 (GEN): Results of monitoring and any efforts conducted as a result of the inadvertent discovery protocols under the MIDP shall be documented in a Monitoring Report submitted to the Department in the semi-annual or annual report, or as soon as practical in circumstances of a discovery or monitoring issue.

Based on compliance with the above-recommended conditions, the Department recommends Council find that the design, construction, operation, and retirement of the proposed facility would not be likely to result in significant adverse impacts to the identified NRHP-listed and likely-NRHP eligible resources.

Not-likely NRHP Eligible

There are 9 non-HPRCSIT archeological sites recommended by the applicant as not-likely NRHP eligible within the analysis area. The recommendation of not-likely NRHP eligible is based on the applicant's preliminary recommendations by a qualified archeologist who conducted the survey, which was submitted to both the Department and SHPO for review. The Department's third-party consultant, Historical Research Associates (HRA) agreed with the applicant's recommendation of not-likely NRHP eligible for two archeological sites – 35UM 00538 and 35UM 00570.[204] If based upon final facility design, these resources cannot be avoided by the 50 meter buffer, additional NRHP evaluation may be required in order for SHPO to concur with the

[204] NHWAPPDoc6 pASC HRA Exhibit S Review_2021-05-21.

NRHP eligibility recommendation. Regardless of the likelihood of NRHP-eligibility, the applicant commits to avoiding any direct impacts to these resources by adhering to a 50-meter avoidance buffer from the resource boundary. Based on these representations, the Department recommends that these resources similarly be identified within the MIDP, per recommended Historic, Cultural and Archeological Resources Condition 2, and protected from any direct, physical impacts. Because these resources are recommended as not-likely eligible, worker training improvements may be used to address failure to comply with the buffers as mitigation for a non-likely NRHP eligible resource is unnecessary.

Likely-NRHP Eligible Tribal Resources

There are twenty-nine archeological sites recommended by the applicant as unevaluated (considered likely NHRP eligible) and identified by CTUIR as HPRCSITs, as presented in Table 13 below. These HPRCSITs include rock cairns, Mud Springs, a network of trails and travel corridors, and First Foods procurement areas. Informants also described the turbine area as possibly containing unmarked burials. The applicant commits to avoiding direct impacts to these 29 archaeological HPRCSIT resources by adhering to a flagged 50-meter avoidance area and monitoring if disturbance will occur within 61 meters (200 feet) of the resource. The applicant also proposes to mitigate potential impacts through the terms and conditions of a confidential agreement with the CTUIR and its MIDP, which includes employing a CTUIR cultural monitor during subsurface probing and ground disturbing construction activities within 200-feet of a protected resource. CTUIR confirmed that their concerns regarding potential effects of the proposed facility are addressed through the confidential mitigation agreement.[205] Based on CTUIR's acknowledgement of satisfaction with the external mitigation agreement and the applicant's commitment to avoid, monitor and flag resources, the Department recommends Council find that the design, construction and operation of the proposed facility would not be likely to result in significant adverse impacts to the identified unevaluated (likely-NHRP eligible) archeological HPRCSIT resources.

[205] NHWAPPDoc3-4 pASC CTUIR comment received 2020-11-10.

Table 13: Archeological, HPRCSIT Sites within Analysis Area

Resource	General Description	Applicant's Recommended NRHP Determination	Distance to Nearest Temporary Disturbance (meters)	Potential Impacts/Avoidance Measure	Resource Type (a, b)[1]
35UM 00536	Lithic Scatter/HPRCSIT	Unevaluated	51	No direct impacts. Flag and monitor within 61 meters.	(a); (b)
35UM 00537	Lithic Scatter/HPRCSIT	Unevaluated	986	No direct impacts. Applicant commits to 50-meter avoidance buffer.	(a); (b)
35UM 00540	Cairn(s)/HPRCSIT	Unevaluated	579	No direct impacts. Applicant commits to 50-meter avoidance buffer.	(a); (b)
35UM 00541	Cairn(s)/HPRCSIT	Unevaluated	243	No direct impacts. Applicant commits to 50-meter avoidance buffer.	(a); (b)
35UM 00542	Cairn(s)/HPRCSIT	Unevaluated	172	No direct impacts. Applicant commits to 50-meter avoidance buffer.	(a); (b)
35UM 00543	Rock Alignment(s)/HPRCSIT	Unevaluated	51	No direct impacts. Flag and monitor within 61 meters.	(a); (b)
35UM 00544	Rock Alignment(s)/HPRCSIT	Unevaluated	194	No direct impacts. Applicant commits to 50-meter avoidance buffer.	(a); (b)
35UM 00547	Cairn(s)/HPRCSIT	Unevaluated	420	No direct impacts. Applicant commits to 50-meter avoidance buffer.	(a); (b)

Table 13: Archeological, HPRCSIT Sites within Analysis Area

Resource	General Description	Applicant's Recommended NRHP Determination	Distance to Nearest Temporary Disturbance (meters)	Potential Impacts/Avoidance Measure	Resource Type (a, b)[1]
35UM 00548	Lithic Scatter/HPRCSIT	Unevaluated	397	No direct impacts. Applicant commits to 50-meter avoidance buffer.	(a); (b)
35UM 00549	Lithic Scatter/HPRCSIT	Unevaluated	131	No direct impacts. Applicant commits to 50-meter avoidance buffer.	(a); (b)
35UM 00550	Rock Alignment(s)/HPRCSIT	Unevaluated	54	No direct impacts. Flag and monitor within 61 meters.	(a); (b)
35UM 00551	Rock Pile/HPRCSIT	Unevaluated	1,092	No direct impacts. Applicant commits to 50-meter avoidance buffer.	(a); (b)
35UM 00552	Cairn(s)/HPRCSIT	Unevaluated	108	No direct impacts. Applicant commits to 50-meter avoidance buffer.	(a); (b)
35UM 00553	Cairn(s)/HPRCSIT	Unevaluated	85	No direct impacts. Applicant commits to 50-meter avoidance buffer.	(a); (b)
35UM 00555	Cairn(s)/HPRCSIT	Unevaluated	99	No direct impacts. Applicant commits to 50-meter avoidance buffer.	(a); (b)
35UM 00556	Cairn(s)/HPRCSIT	Unevaluated	91	No direct impacts. Applicant commits to 50-meter avoidance buffer.	(a); (b)

Table 13: Archeological, HPRCSIT Sites within Analysis Area

Resource	General Description	Applicant's Recommended NRHP Determination	Distance to Nearest Temporary Disturbance (meters)	Potential Impacts/Avoidance Measure	Resource Type (a, b)[1]
35UM 00557	Cairn(s)/HPRCSIT	Unevaluated	173	No direct impacts. Applicant commits to 50-meter avoidance buffer.	(a); (b)
35UM 00559	Cairn(s)/HPRCSIT	Unevaluated	599	No direct impacts. Applicant commits to 50-meter avoidance buffer.	(a); (b)
35UM 00560	Cairn(s) & Rock Alignment/HPRCSIT	Unevaluated	15	No direct impacts. Flag and monitor within 61 meters.	(a); (b)
35UM 00561	Hunting Blind(s)/HPRCSIT	Unevaluated	141	No direct impacts. Applicant commits to 50-meter avoidance buffer.	(a); (b)
35UM 00562	Rock Pile/HPRCSIT	Unevaluated	328	No direct impacts. Applicant commits to 50-meter avoidance buffer.	(a); (b)
35UM 00563	Cairn(s)/HPRCSIT	Unevaluated	223	No direct impacts. Applicant commits to 50-meter avoidance buffer.	(a); (b)
35UM 00564	Cairn(s), Hunting Blind, Rock Concentration/HPRCSIT	Unevaluated	503	No direct impacts. Applicant commits to 50-meter avoidance buffer.	(a); (b)
35UM 00565	Rock Pile/HPRCSIT	Unevaluated	1,130	No direct impacts. Applicant commits to 50-meter avoidance buffer.	(a); (b)

Table 13: Archeological, HPRCSIT Sites within Analysis Area

Resource	General Description	Applicant's Recommended NRHP Determination	Distance to Nearest Temporary Disturbance (meters)	Potential Impacts/Avoidance Measure	Resource Type (a, b)[1]
35UM 00566	Cairn(s)/HPRCSIT	Unevaluated	308	No direct impacts. Applicant commits to 50-meter avoidance buffer.	(a); (b)
35UM 00567	Cairn(s)/HPRCSIT	Unevaluated	349	No direct impacts. Applicant commits to 50-meter avoidance buffer.	(a); (b)
35UM 00568	Cairn(s) & Rock Alignment/HPRCSIT	Unevaluated	279	No direct impacts. Applicant commits to 50-meter avoidance buffer.	(a); (b)
35UM 00569	Cairn(s)/HPRCSIT	Unevaluated	123	No direct impacts. Applicant commits to 50-meter avoidance buffer.	(a); (b)
35UM 00571	Cairn(s)/HPRCSIT	Unevaluated	43	No direct impacts. Flag and monitor within 61 meters.	(a); (b)

Notes:
Resource definition:
(a) Historic, cultural or archaeological resources that have been listed on, or would likely be listed on the National Register of Historic Places;
(b) For a facility on private land, archaeological objects, as defined in ORS 358.905(1)(a), or archaeological sites, as defined in ORS 358.905(1)(c).

IV.K.2.b. Archeological Objects

There are twenty (20) archeological objects recommended by the applicant as not-likely NRHP eligible, as presented in Table 14. Regardless of the NRHP-eligibility, the applicant commits to avoiding direct, physical impacts or further evaluation through shovel-probing for any archeological object located within 50 meters of potential ground disturbing activities. The Draft Subsurface Probing Plan (Attachment S-3) submitted by the applicant was prepared in consultation with the SHPO and follows the 2016 SHPO Guidelines for Conducting Field Archaeology in Oregon.

Table 14: Archeological Objects within Analysis Area

Resource	General Description	Applicant's Recommended NRHP Determination	Distance to Nearest Temporary Disturbance (meters)	Potential Impacts/Avoidance Measure
NH-BB-ISO-01	Refuse	Not-likely	29	Direct impacts; shovel probing and supplemental survey report with management recommendations, for ODOE, SHPO and tribal review.
NH-DM-ISO-01	Debitage	Not-likely	91	No direct impacts. Applicant commits to avoiding resource.
NH-DM-ISO-02	Refuse	Not-likely	117	No direct impacts. Applicant commits to avoiding resource.
NH-DM-ISO-03	Groundstone	Not-likely	19	Direct impacts; shovel probing and supplemental survey report with management recommendations, for ODOE, SHPO and tribal review.
NH-DM-ISO-04	Refuse	Not-likely	12	Direct impacts; shovel probing and supplemental survey report with management recommendations, for ODOE, SHPO and tribal review.
NH-DM-ISO-05	Agriculture	Not-likely	365	No direct impacts. Applicant commits to avoiding resource.
NH-DM-ISO-06	Refuse	Not-likely	285	No direct impacts. Applicant commits to avoiding resource.

Table 14: Archeological Objects within Analysis Area

Resource	General Description	Applicant's Recommended NRHP Determination	Distance to Nearest Temporary Disturbance (meters)	Potential Impacts/Avoidance Measure
NH-DM-ISO-07	Debitage	Not-likely	992	No direct impacts. Applicant commits to avoiding resource.
NH-DM-ISO-08	Debitage	Not-likely	157	No direct impacts. Applicant commits to avoiding resource.
NH-MC-ISO-01	Refuse	Not-likely	176	No direct impacts. Applicant commits to avoiding resource.
NH-MC-ISO-02	Core	Not-likely	24	Direct impacts; shovel probing and supplemental survey report with management recommendations, for ODOE, SHPO and tribal review.
NH-MC-ISO-03	Debitage	Not-likely	49	Direct impacts; shovel probing and supplemental survey report with management recommendations, for ODOE, SHPO and tribal review.
NH-MC-ISO-04	Debitage	Not-likely	29	Direct impacts; shovel probing and supplemental survey report with management recommendations, for ODOE, SHPO and tribal review.
NH-MC-ISO-05	Refuse	Not-likely	1,505	No direct impacts. Applicant commits to avoiding resource.
NH-MC-ISO-06	Refuse	Not-likely	677	No direct impacts. Applicant commits to avoiding resource.
NH-MC-ISO-07	Refuse	Not-likely	147	No direct impacts. Applicant commits to avoiding resource.
NH-MC-ISO-08	Core	Not-likely	378	No direct impacts. Applicant commits to avoiding resource.
NH-MC-ISO-09	Debitage	Not-likely	332	No direct impacts. Applicant commits to avoiding resource.

Table 14: Archeological Objects within Analysis Area

Resource	General Description	Applicant's Recommended NRHP Determination	Distance to Nearest Temporary Disturbance (meters)	Potential Impacts/Avoidance Measure
NHS-BB-ISO-01	Refuse	Not-likely	3	Direct impacts; shovel probing and supplemental survey report with management recommendations, for ODOE, SHPO and tribal review.
NHS-BB-ISO-02	Refuse	Not-likely	0	Direct impacts; shovel probing and supplemental survey report with management recommendations, for ODOE, SHPO and tribal review.

The applicant's draft Subsurface Probing Plan was developed in consultation with SHPO and the Department and is included as Attachment S-3 of this order and recommended to be required under Historic, Cultural and Archeological Condition 1.

IV.K.2.c. Historic Aboveground Resources

Four (4) aboveground, historic sites were identified within the analysis area and are likely NRHP-eligible because of their association with the agricultural history of the area. These resources include: Property on T2N/R30E - Barn, Foundation and Associated structures; Property on T2N/R29E - Residence, barn, and windmill; Pendleton Ranches Sheep Camp/Bunk House; and the Town of Nolin, as presented in Table 15: *Historic/Built Environment Resources within the Analysis Area* below.

Table 15: Historic/Built Environment Resources within the Analysis Area

Resource	General Description	Applicant's Recommended NRHP Determination	Distance to Nearest Temporary Disturbance (meters)	Potential Impacts/Avoidance Measure
Property on T2N/R30E	Large barn, smaller shed, foundation of a residence	Likely-eligible	244	Visual impacts to setting/HRMP
Property on T2N/R29E	Residence, barn, windmill	Likely-eligible	366	
Pendleton Ranches Sheep Camp/Bunk House	Bunkhouse	Likely-eligible	86	
Town of Nolin	Sheep Ranch Headquarters	Likely-eligible	701	No impacts
Acronyms: HRMP = Historical Resources Mitigation Plan; NRHP = National Register of Historic Places				

Based on the distance from wind turbines/disturbance to these resources, the setting of three of the four resources could be significantly impacted as a result of indirect visual effects of proposed wind turbines. At a distance of 701 meters, and downhill from the proposed facility, impacts from proposed facility visibility to the Town of Nolin are recommended as not likely to be potentially significant. The other three aboveground resources, potential impacts from proposed facility visibility and mitigation are described below.

Property at T2N/R30E, Property at T2N/R29E and Pendleton Ranches Sheep Camp/Bunk House

- The property at T2N/R30E is presented in Photograph 3 of ASC Exhibit S Attachment S-6.[206]It includes an unused and dilapidated wooden barn, a smaller storage shed, and a stone foundation that included steps down into a basement with no remaining aboveground features. Blades of 34 wind turbines and towers + blades of 12 wind turbines would be visible at this resource.
- The property at T2N/R29E is presented in Photograph 4 of ASC Exhibit S Attachment S-6.[207] It includes a residence, barn, and one windmill. Blades of 5 wind turbines and towers + blades of 21 wind turbines would be visible at this resource.
- Pendleton Ranches Sheep Camp/Bunk House is presented in Photograph 2 of ASC Exhibit S Attachment S-6.[208] The Pendleton Ranches Sheep Camp was used in the 1950s and 1960s by agricultural field crews and consists of a historic sheep ranching camp with two standing buildings – a bunkhouse and cistern. Blades of 9 wind turbines and towers + blades of 5 wind turbines would be visible at this resource.

Applicant asserts that it cannot avoid or minimize the impacts of wind turbine visibility at any of the above-referenced historic resources because "in order to achieve the full projected wind energy generating capacity, no turbine locations can be changed to avoid these effects."[209] Therefore, the setting of these resources would be impacted by converting the viewshed from existing rural, agricultural to energy infrastructure. To mitigate the potential significant, adverse impacts, the applicant proposes to conduct an intensive level survey of: the stone foundation and barns on the T2N/R30E property; the barn and residence on the T2N/R29E property; and context of moveable ranching properties and bunkhouse for the Pendleton Ranches Sheep Camp. The intensive level survey is proposed in the Historical Resource Mitigation Plan (HRMP) in ASC Exhibit S Attachment S-6 and is included as Attachment S-2 of this order.

The intensive level survey in the HRMP would be conducted in accordance with *SHPO's 2011 Guidelines for Historic Resources Surveys in Oregon* and include research, fieldwork and reporting. The intensive level survey would mitigate the impact through preservation of the history of the resource setting, and is a measure that Council is authorized to consider,

[206] NHWAPPDoc2-18 ASC Exhibit S Cultural 2022-01-31. Attachment S-6, Page 4.

[207] *Id*.

[208] NHWAPPDoc2-18 ASC Exhibit S Cultural 2022-01-31. Attachment S-6, Page 3.

[209] OAR 345-001-0010(33)(d) states that ""mitigation" means taking one or more of the following actions listed in order of priority.." The definition includes (a) through (f). Based on the impact, an indirect impact, and the applicant's assertion that no turbine could be moved to avoid or minimize the impact, mitigation options start at (d). Mitigation (a) through (c) are as followed: (a) avoiding the impact altogether by not taking a certain action or parts of an action; (b) minimizing impacts by limiting the degree or magnitude of the action and its implementation; (c) partially or completely rectifying the impact by repairing, rehabilitating or restoring the affected environment.

consistent and/or in accordance with OAR 345-001-0010(33)(d) and (f).[210] SHPO's Historic Preservation Specialist Jason Allen confirmed that the language and content of the HRMP were appropriately scaled and address the effects of the proposed facility on the resources.[211] For these reasons, the Department recommends Council find that, with mitigation, the design, construction and operation of the proposed facility would not be likely to result in significant, adverse impacts to the Property on T2N/R30E; Property at T2N/R29E or Pendleton Ranches Sheep Camp/Bunk House.

The Department recommends Council impose the following condition requiring that the applicant adhere to the requirements of the HRMP.

Recommended Historic, Cultural and Archeological Condition 5 (PRE): Prior to construction of wind turbine components, the certificate holder shall:

a. Evaluate whether if, based on final facility design, the setting of any of the 3 likely NRHP eligible aboveground, historic properties referenced in Table 15 of the Final Order on the ASC would no longer be impacted by wind turbine visibility. If any of these property settings would not be impacted, the mitigation requirements for un impacted resources would not apply.
b. Based on (a), submit a protocol or design of the Intensive Level Survey, consistent with SHPO's 2011 Guidelines for Historic Resources Surveys in Oregon, for review and approval by the Department, in consultation with SHPO;
c. Complete photo documentation of the setting of the properties at T2N/R30E and T2N/R29E; and the Pendleton Ranches Sheep Camp/Bunk House, unless any of these property settings would not be impacted per (a);
d. Initiate work detailed in the Historic Resources Mitigation Plan (HRMP), provided in Attachment S-6 of the Final Order on the ASC, included as Attachment S-2 of this order.

Recommended Historic, Cultural and Archeological Condition 6 (CON): Within three years of construction of wind turbine components, the certificate holder shall submit draft reports documenting the results of the Intensive Level Surveys, of the HRMP under Historic, Cultural and Archeological Condition 5, concurrently to the Department and SHPO. Report cover pages to SHPO shall include a Department contact name and specify that the report is submitted as mitigation for an EFSC facility. Any comments received from the Department and SHPO within 30-days of the draft reports must be addressed within final reports.

Conclusions of Law

[210] OAR 345-001-0010(33)(d) states that "mitigation" means taking one or more of the following actions listed in order of priority: reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action my monitoring and taking appropriate corrective measures; and (f) states that mitigation means: implementing other measures approved by the Council.

[211] NHWAPPDoc3-6 pASC SHPO Comment_Allen 2022-01-18.

Based on the foregoing analysis, and in accordance with OAR 345-022-0090(2), the Department recommends that the Council impose conditions to address the protection of historic, cultural, and archaeological resources at the proposed facility site.

IV.L. Recreation: OAR 345-022-0100

(1) Except for facilities described in section (2), to issue a site certificate, the Council must find that the design, construction and operation of a facility, taking into account mitigation, are not likely to result in a significant adverse impact to important recreational opportunities in the analysis area as described in the project order. The Council shall consider the following factors in judging the importance of a recreational opportunity:

(a) Any special designation or management of the location;
(b) The degree of demand;
(c) Outstanding or unusual qualities;
(d) Availability or rareness;
(e) Irreplaceability or irretrievability of the opportunity.

*****[212]

Findings of Fact

The analysis area for impacts to recreational opportunities is the area within and extending 5 miles from the proposed site boundary, except for the proposed 230 kV transmission lines where the analysis area is only the area within the site boundary.

Applicant's Methods for Identifying Recreational Opportunities within Analysis Area

Jurisdictions within the analysis area include cities of Echo, Hermiston and Stanfield; and Morrow and Umatilla counties. As presented in ASC Exhibit T, the following federal, state and local sources were reviewed to identify potential recreational opportunities within the analysis area:

- Bureau of Land Management's (BLM) 2018 Explore Your Public Lands, BLM Recreation Web Map
- BLM's 1989 Baker Resource Management Plan Record of Decision, Rangeland Program Summary (RPS)
- Oregon Department of Fish and Wildlife's (ODFW) 2018 Oregon Hunting Map website
- National Park Service's Management and Use Plan Update and Final Environmental Impact Statement, Oregon National Historic Trail and Mormon Pioneer National Historic Trail

[212] OAR 345-022-0100(2) applies to facilities that qualify as a special criteria facility under OAR 345-0015-0310; the proposed facility does not qualify and therefore OAR 345-022-0100(2) is not applicable.

- Oregon Parks and Recreation Department's (OPRD) 2018 Find a State Park interactive mapper
- Oregon Department of Transportation's 2018 Scenic Byway webpage
- City of Echo's government website for local attractions
- Pendleton, Oregon's Horseshoe Curve Hunt Club website

As established in the Amended Project Order, if significant adverse impacts from the proposed facility could occur to important recreational opportunities beyond the analysis area or to resources identified after issuance of the draft proposed order, the applicant is obligated to assess those impacts.

IV.L.1. Recreational Opportunity Importance Assessment

ASC Exhibit T identifies seven recreational opportunities within the analysis area, as presented in Table 16: *Recreational Opportunities within the Analysis Area and Distance from Proposed Micrositing Area.* The applicant considers one recreational opportunity, Fort Henrietta Park, to be important. Based on the evaluation presented below, the Department recommends findings of fact to support Council consideration that three total recreational opportunities be considered important – Echo Meadows Interpretive Site, Corral Springs ONHT viewing site and Fort Henrietta Park.

Table 16: Recreational Opportunities within the Analysis Area and Distance from Proposed Micrositing Area

Recreational Opportunity	Distance from Micrositing Area (miles)[1]			Department Recommendation of Whether Recreational Opportunity is "Important"[2]
	Transmission Line	Wind	Solar	
Echo Meadows Interpretive Site	0.2	6.4	> 5	**Yes**
Corral Springs Oregon National Historic Trail (ONHT) Viewing Site	0.4	2.0	> 3	**Yes**
Fort Henrietta Park/ONHT site	2.7	> 5	> 8	**Yes**
F.T. George Park	2.8	> 5	> 8	No
Horseshoe Curve Hunt Club	> 3	2.0	> 3	No
Oregon Trail Arboretum	3.1	> 5	> 8	No
Echo Hills Golf Club	3.2	> 5	> 8	No

Notes:

1. Distances were derived by the Department, based on review of ASC Exhibit T Figure T-1 and ASC Exhibit C Figure C-4.
2. Per OAR 345-022-0100(1), to determine whether an impact assessment is required under this standard, Council must first evaluate the applicant's assessment of whether the identified recreational opportunities are "important" based on the following factors:
   (a) Any special designation or management of the location;
   (b) The degree of demand;
   (c) Outstanding or unusual qualities;
   (d) Availability or rareness;

Table 16: Recreational Opportunities within the Analysis Area and Distance from Proposed Micrositing Area

Recreational Opportunity	Distance from Micrositing Area (miles)[1]			Department Recommendation of Whether Recreational Opportunity is "Important"[2]
	Transmission Line	Wind	Solar	
(e) Irreplaceability or irretrievability of the opportunity.				

Echo Meadows Interpretive Site

Echo Meadows Interpretive Site is a 320-acre, BLM-designated high-potential site and Oregon Trail Area of Environmental Concern (ACEC) (special designation), located in the City of Echo, approximately 0.2-miles from the site boundary of the proposed 230 kV UEC Cottonwood transmission line.[213] The Echo Meadows Interpretive Site contains interpretive panel kiosks, nearly 1-mile of visible Oregon Trail ruts and ½-mile hiking path with overlook of wagon ruts and local wildlife (unusual qualities, rare and irreplaceable).[214] The degree of demand is assumed by the Department to be moderate to high because of its historic and recreational significance.

Based on these facts, the Department recommends Council find that the Echo Meadows Interpretive Site has a special designation as an ACEC; has unusual qualities (visible Oregon trail ruts); is irreplaceable (Oregon trail ruts); and, has a moderate degree of demand (due to its special designation). For these reasons, the Department recommends Council find that the Echo Meadows Interpretive Site is an important recreational opportunity.

Corral Springs ONHT Viewing Site

The Corral Springs ONHT viewing site is a 5-acre National Historic Oregon Trail Site, located on private land, but open to the public at landowner discretion, in the City of Echo, approximately 0.4-miles from the site boundary of the proposed BPA Stanfield 230 kV transmission line; and, approximately 2 miles from the closest micrositing area of proposed wind facility components (the solar micrositing area is at a greater distance than either of these referenced components). The Corral Springs ONHT viewing site provides views of 0.25-miles of intact wagon ruts.

[213] An analysis of potential impacts from the proposed transmission line is presented in this section, based on the Department's recommendation that the resource be considered an "important" recreational opportunity. As stated in the Amended Project Order, the analysis area for the transmission line is the area within the site boundary, unless there are resources identified outside of the site boundary that could be impacted, which would necessitate an evaluation under the standard.

[214] Information obtained by the Department from the City of Echo's Attractions. Available: https://echo-oregon.com/attractions/ Accessed: 2022-02-11.

The Department recommends Council find that the resource is important for the following reasons.[215] First, the Department recommends Council find that the ONHT designation is a special designation. Second, the Department recommends Council find that, while the applicant has identified several other ONHT locations within the analysis area, "most trail segments have been destroyed by agricultural use" and "access to remaining trail evidence is limited".[216] Therefore, the Department recommends Council find that Corral Springs ONHT viewing site (i.e. locations of intact wagon ruts) represents a resource that has unusual qualities, is rare, is limited in availability and is irreplaceable.

Horseshoe Curve Hunt Club

The Horseshoe Curve Hunt Club is a 650-acre, privately-owned, ODFW-licensed hunting preserve and lodge, located 2-miles from the closest micrositing area of proposed (wind) facility components (the solar micrositing area is at a greater distance than either of these referenced components). It is one of a few private hunting area in the region. Because this resource is privately owned and accessible only via fee-payment, the Department recommends Council find that the degree of demand is low. Because it is not free to the public, with low demand and without any special designation, the Department recommends Council find that the Horseshoe Curve Hunt Club is not an important recreational opportunity under the standard.

Fort Henrietta Park/ONHT Site

The Fort Henrietta Park/ONHT site is a 2-acre, city park, designated as an ONHT site, located in the City of Echo, approximately 2.7-miles from the site boundary of the proposed 230 kV UEC Cottonwood transmission line[217]; and more than 5 miles from the proposed wind micrositing area (the solar micrositing area is at a greater distance than either of these referenced components). The Fort Henrietta Park ONHT site provides RV parking, camping, a playground, skate part, an ONHT campsite and river crossing, and replica frontier-era blockhouse.

Based on the above-described facts, the Department recommends Council find that Fort Henrietta Park/ONHT site be considered an important recreational opportunity because of its special management as a municipal park; and, specific components of the park including the ONHT campsite and river crossing, and replica frontier-era blockhouse are unusual, irreplaceable and rare qualities.

[215] As presented in ASC Exhibit T, the applicant proposes that Corral Springs ONHT viewing site not be considered an important recreational opportunity because: the site has not been identified by BLM as a high-potential ONHT site and therefore has no special designation; demand is assumed to be low because the site has a small capacity and is not located on a high-volume travel route; and, it is not rare because there are multiple other locations in the vicinity (such as Echo Meadows, Well Spring, and Fourmile Canyon) with Oregon Trail ruts, interpretive information, and defined public access.

[216] NHWAPPDoc2-19 ASC Exhibit T. Recreation_2022-01-31, p. 7.

[217] As stated in the Amended Project Order, the analysis area for the transmission line is the area within the site boundary, unless there are resources identified outside of the site boundary that could be impacted, which would necessitate an evaluation under the standard.

F.T. George Park

F. T. George Park (often referred to as George Park) is a small (less than one acre) facility, located within the City of Echo, approximately 2.8-miles from the site boundary of the proposed 230 kV UEC Cottonwood transmission line. F.T. George Park includes landscaping, a gazebo, rose garden, pond and waterfall, and picnic facilities. These features are not rare and are replaceable. Based on these facts, the Department recommends Council find that F.T. George Park not be considered an important recreational opportunity because of its replaceable and common features.

Oregon Trail Arboretum

The Oregon Trail Arboretum is a small (less than one acre) property, within the City of Echo, approximately 3.1 miles from the site boundary of the proposed 230 kV BPA Stanfield transmission line. The resource provides a diverse collection (approximately 100) of ornamental trees and shrubs with interpretive panels of species name. These features are not rare and are replaceable. Based on these facts, the Department recommends Council find Oregon Trail Arboretum not be considered an important recreational opportunity because of its replaceable and common features.

Echo Hills Golf Club

The Echo Hills Golf Club is a 50-acre, municipal 9-hole golf course with a pro shop, snack bar, driving range, and cart rentals, located in the City of Echo, [218] approximately 3.2 miles from the site boundary of the proposed 230 kV transmission routes. These features are not rare and are replaceable. Based on these facts, the Department recommends Council find that Echo Hills Golf Club not be considered an important recreational opportunity because of its replaceable and common features.

IV.L.2. Impact Assessment

IV.L.2.a. Potential Direct or Indirect Loss of Important Recreational Opportunity

Direct Loss

A direct loss to an important recreational opportunity would occur when construction or operation of the proposed facility would impact a recreational opportunity by directly altering the resource so that it no longer exists in its current state. The proposed facility would not cross or be located within any important recreational opportunity. Therefore, the proposed facility would not physically disturb, or result in ground disturbance, to any important recreational opportunity, and would also not require any temporary or permanent closure or removal of the important recreation opportunities to public use. For these reasons, and upon review of the

[218] NHWAPPDoc2-19 ASC Exhibit T. Recreation_2022-01-31,Table T-1.

location and proximity of important recreational opportunities to the proposed facility site, the Department recommends the Council find that the proposed facility would not result in any direct impacts to the three identified important recreational opportunities.

Indirect Loss

Similar to the assessment of direct loss, indirect loss would result if construction or operation of the proposed facility would impact a recreational opportunity by indirectly altering the resource or some component of it. To evaluate indirect loss resulting from the construction and operation of the proposed facility, the Department considers potential noise, traffic and visual impacts to the above mentioned important recreational opportunities.

IV.L.2.b. Potential Noise Impacts at Important Recreational Opportunities

The Department's evaluation of the applicant's construction-related noise impact assessment is presented in Section IV.F.1. *Potential Noise Impacts at Protected Areas*, and is incorporated here by reference.

Construction Noise

Echo Meadows Interpretive Site

Echo Meadows Interpretive Site is located approximately 0.2-miles from the site boundary of the proposed 230 kV UEC transmission line, and over 3 miles from proposed wind or solar micrositing areas. Based on the Department's review of Google Earth, the parking lot area and first set of interpretive signs are less than 1,000 feet away. The applicant estimated a daily average noise level, in L_{eq}, of 48 dBA at 2,000 feet. Because the parking lot and first set of interpretive signs appear to be half the distance used by the applicant to assess the L_{eq} composite noise level for construction, the Department estimates the L_{eq} based on half the distance, using the accepted 3-dBA increase per halving of distance, at 51 dBA. Based on ASC Exhibit X Table X-1, a noise level of 51 dBA would be similar to a quiet rural residence or light auto traffic at a distance of 100-feet.

Proposed facility construction noise of 51 dBA could impact the quality of visitor experience at the Echo Meadows site. Therefore, the Department recommends Council impose a condition requiring that, prior to construction of the 230 kV UEC Cottonwood transmission line, if selected, that the applicant notify the BLM land manager of the construction schedule and potential noise impacts in efforts to alert potential visitors and minimize potential noise disturbance impacts at the Echo Meadows site (see recommended Protected Areas Condition 1 and 2).

Based upon compliance with the recommended conditions, the Department recommends Council find that proposed facility construction noise would not be likely to result in significant adverse impacts at the Echo Meadows Interpretive Site.

Corral Springs ONHT Site

Corral Springs ONHT site is located approximately 0.4-miles (2,112 feet) from the site boundary of the proposed BPA Stanfield transmission line, and over 2 miles from proposed wind or solar micrositing areas. At 2,000 feet, estimated construction noise (in L_{eq}) is 48 dBA. Construction noise could be louder if a helicopter is used to span the transmission line over the Umatilla River, ranging from 62 to 84 dBA at 1,000 feet.[219] Based on ASC Exhibit X Table X-1, a noise level of 48 dBA would be similar to a quiet rural residence or light auto traffic at a distance of 100-feet; a noise level of 84 dBA would be loud, similar to a motorcycle at 25 feet. Based on review of ASC Exhibit C Figure C-4.9, there is limited vegetation or topographic screening between construction areas and the resource. Therefore, proposed facility construction noise of 48 to 84 dBA could impact the quality of visitor experience at the Corral Springs ONHT Site. The Department recommends Council impose a condition requiring that, prior to construction of the 230 kV BPA Stanfield transmission line, if selected, that the applicant notify the landowner of the construction schedule and potential noise impacts in efforts to alert potential visitors and minimize potential noise disturbance impacts at the Corral Springs ONHT site during construction.

> **Recommended Recreation Condition 1 (PRE):** Prior to construction of the 230 kV BPA Stanfield transmission line, if selected as the final design transmission line option, the certificate holder shall provide notice to the Department and landowner for the Corral Springs ONHT site of the 230 kV BPA Stanfield transmission line construction schedule, potential construction-related noise impacts, and contact information to report noise complaints.
>
> **Recommended Recreation Condition 2 (CON):** During construction of the 230 kV BPA Stanfield transmission line, if selected as the final design transmission line option, the certificate holder shall, require contractors to have noise complaint and response signage on or near their equipment in a manner accessible to users of the Corral Springs ONHT site. If noise complaints are received, contractors must attempt to reduce equipment-related noise levels, to the extent practicable.

Based upon compliance with the recommended conditions, the Department recommends Council find that proposed facility construction noise would not be likely to result in significant adverse impacts at the Corral Spring ONHT site.

Fort Henrietta Park/ONHT Site

Fort Henrietta Park/ONHT site is located approximately 2.7-miles (14,256 feet) from the site boundary of the proposed transmission line routes, and over 5 miles from proposed wind or solar micrositing areas. Composite construction noise levels (L_{eq}) at 2,000 feet is estimated at

[219] Helicopter noise level obtained from 2017 Helicopter Association International.

48 dBA.[220] Using this noise level and accounting for noise attenuation of 3 dBA per doubling of distance, noise from proposed facility construction would be faint, similar to a bedroom or quiet living room, at this recreational opportunity. User experience would not be expected to be significantly impacted from a faint noise level of approximately 39 dBA at an over 2 mile distance. For these reasons, the Department recommends Council find that proposed facility construction noise would not be likely to result in significant, adverse impacts at the Fort Henrietta Park/ONHT site.

Operational Noise

As presented in Table 16 above, the nearest recreational opportunity to proposed facility infrastructure would be the BLM's Echo Meadows site[221], approximately 1,056 feet (0.2 miles) from the proposed 230 kV UEC Cottonwood transmission line. Therefore, the potential for proposed facility noise impacts would occur from corona noise generating from the proposed 230 kV transmission line during rainy conditions. Based on ASC Exhibit X Figure X-1, corona noise impacts are estimated at 35 dBA at 200 feet. At a distance of 1,000-feet, based on noise attenuation of 3 dBA per doubling of distance, noise levels are expected to range from 27 to 30 dBA during rainy conditions, and below 26 dBA (accepted ambient noise levels) during fair conditions. As presented in ASC Exhibit X Table X-1, noise levels ranging from 25-30 dBA are considered extremely quiet, similar to a quiet library at 15 feet. User experience would not be expected to be significantly impacts from extremely quiet, corona noise impacts of 27 to 30 dBA at a distance of over 1,000-feet.

Acoustic modeling results for all facility components identify a maximum noise level of 38 dBA within 200-feet. Using this noise level, at a distance of 0.4-miles and noise attenuation of 3 dBA per doubling of distance, noise from proposed facility operation at the Corral Spring ONHT site and Fort Henrietta Park/ONHT site would not be audible. For these reasons, the Department recommends Council find that proposed facility operational noise would not be likely to result in significant, adverse impacts at any important recreational opportunity within the analysis area.

IV.L.2.c. Potential Traffic Impacts at Important Recreational Opportunities

Construction Traffic

Access to the Echo Meadows site is via Oregon Trail Road (OR-320), which is a route that would be used during proposed facility construction. Traffic impacts to the Echo Meadows site include temporary (15 minutes) closure of the gravel road going north from OR-320; temporary closure of OR-320 for 1-2 days; and congestion from helicopter use for the I-84 crossing.

[220] NHWAPPDoc2-23 ASC Exhibit X Noise 2022-01-31. Table X-1.

[221] The Echo Meadows site is a 320 acre site managed for the preservation and enjoyment of the remaining evidence of the Oregon Trail.

Access to the Corral Springs ONHT site is via CR-1300 in the City of Echo.[222] CR-1300 is not identified in ASC Exhibit U Figure U-1 (Transportation Routes) as a primary transportation route associated with proposed facility construction. However, CR-1300 intersects with the proposed 230 kV BPA Stanfield transmission line route; therefore, construction related traffic impacts could occur on CR-1300, if this route is selected at final facility design.

Access to Fort Henrietta Park/ONHT site is provided via Lexington Echo Highway to Main Street from the west, and via N. Thielson to Main Street from the north. Both the Lexington Echo Highway and N. Thielson (which becomes CR-1300) could be used during proposed facility construction, given the location of the roads, which either intersect or parallel, the proposed 230 kV transmission line routes.

Proposed facility construction could result in up to 1,034 light- and heavy-duty one-way trips per day; and 2,068 round trips per day on any of the above-referenced access roads. Construction-related traffic impacts would be minimized through implementation of numerous best management practices (BMPs), including:

- Coordinating the timing and locations of road closures or oversize load movements in advance with emergency services such as fire, paramedics, and essential services such as mail delivery and school buses.
- Maintaining emergency vehicle access to private property.
- Posting signs on county- and state-maintained roads, where appropriate, to alert motorists of construction and warn them of slow, merging, or oversize traffic.
- Using traffic control measures such as traffic control flaggers, warning signs, lights, and barriers during construction to ensure safety and to minimize localized traffic congestion. These measures would be required at locations and during times when trucks would be entering or exiting highways frequently.
- Notifying landowners prior to the start of construction near residences, including helicopter use within one mile of residences.
- Restoring residential areas as soon as possible, and fencing construction areas near residences at the end of the construction day.

These BMPs have been incorporated into a draft Construction Traffic Management Plan and are recommended by the Department to be finalized, based on final facility design, construction methods and haul routes, and imposed in recommended Public Services Conditions 1 and 2. Based on compliance with the requirements of Public Services Conditions 1 and 2, the Department recommends Council find that construction-related traffic impacts would not be likely to result in significant, adverse impacts at the three important recreational opportunities within the analysis area.

Operational Traffic

[222] City of Echo Webpage, Attractions – Description of Corral Springs ONHT Site at: https://echo-oregon.com/attractions/ Accessed by the Department on March 27, 2022.

Routine O&M of the proposed facility could include equipment deliveries with oversized haul trucks, but generally is anticipated to result in a maximum of 30 daily, one-way light-duty vehicle trips. The Department recommends Council find that this level of traffic increase would not be likely to result in significant, adverse impacts at any important recreational opportunity within the analysis area because the primary and local routes have sufficient capacity to accept this increase in volume without impacting the quality of traffic service.[223]

IV.L.2.d. Potential Visual Impacts at Important Recreational Opportunities

Visibility impacts from temporary vegetation loss from construction and permanent facility structures during operations were evaluated. The proposed facility does not include combustion or thermal heat sources; therefore, the proposed facility would not result in plumes or visible air emissions.

Construction-Related Visibility

Visibility impacts from vegetation loss are based on amount of disturbance and distance from disturbance. The proposed facility would result vegetation loss including 2,079 acres of temporary disturbance. The most substantial vegetation loss would be from construction of the wind and solar facility components. Based on a distance greater than 2 miles from proposed wind and solar facility components to any of the important recreational opportunities, temporary vegetation loss would not be discernable.

The vegetation loss from construction and operation of the proposed UEC Cottonwood transmission line at the closest recreational opportunity - Echo Meadows site - would not be distinguishable given the limited amount of disturbance that would occur for placement of structures, combined with the existing viewshed which includes cropland, grassland, shrubs and an existing transmission line. Based on these facts, the Department recommends Council find that visual impacts from temporary vegetation loss would not be likely to result in a significant adverse impact to the Echo Meadows Interpretive Site.

Operational-Related Visibility

The Department's evaluation of the applicant's visual impact assessment is presented in Section IV.F.5. *Potential Visual Impacts at Protected Areas*, and is incorporated here by reference.

Echo Meadows Interpretive Site

The ZVI analysis demonstrates that, at the Echo Meadows ACEC, the proposed 230 kV UEC Cottonwood transmission line route (0.2 mile) would be visible at a foreground viewing distance and wind turbines would be visible at a variable visibility at a background viewing distance (6.4 miles or more). In ASC Exhibit R Figure R-6, the applicant provides photo

[223] NHWAPPDoc2-20 ASC Exhibit U. Public Services_2022-01-31, Table U-5.

simulations of the proposed 230 kV UEC transmission line route from the Echo Meadows site. These simulations demonstrate the existing viewshed as inclusive of wind turbines (from other facilities), existing UEC and other power lines, agricultural structures, and multiple center-pivot agricultural irrigation systems. The photo simulation also demonstrates that the proposed 230 kV UEC transmission line route would not be visible when visitors are oriented toward the remnant Oregon Trail ruts. However, where not screened by topography, the proposed transmission line would introduce new, moderately contrasting middle-ground and background features in the viewshed of Echo Meadows.

Based on review of the applicant's ZVI analysis and photo simulation, consideration of the existing viewshed, and BLM comments affirming that visibility of the transmission line would not be expected to impact user experience[224], the Department recommends Council find that proposed facility visibility would not impact the use or enjoyment of the resource by the public and therefore would not be likely to result in a significant adverse impacts to the Echo Meadows site.

Corral Springs ONHT Site and Fort Henrietta Park/ONHT Site

The ZVI analysis demonstrates that, at the Corral Springs ONHT Site and Fort Henrietta Park/ONHT Site, the proposed 230 kV BPA Stanfield transmission line (0.4 mile) would be visible at a foreground viewing distance and wind turbines would be highly visible (61-90 and 91-112 turbines) at a background viewing distance (2.0 miles or more). Based on review of Google earth imagery, the surrounding area is inclusive of agriculture, bridges, roads and existing transmission line infrastructure. Given that the existing viewshed of the proposed 230 kV transmission lines includes existing transmission lines, and the broader viewshed includes agricultural and urban development, visibility of proposed facility structures would not be expected to significantly impact the use or enjoyment of the resource by the public or the resource itself. For these reasons, the Department recommends Council find that visibility of proposed facility structures would not be likely to result in a significant adverse impacts to the Corral Springs ONHT site or Fort Henrietta Park/ONHT site.

Conclusions of Law

Based on the foregoing recommended findings of fact, reasoning and analysis, and subject to compliance with the recommended site certificate conditions, the Department recommends that the Council find that the proposed facility complies with the Council's Recreation standard.

IV.M. Public Services: OAR 345-022-0110

(1) Except for facilities described in sections (2) and (3), to issue a site certificate, the Council must find that the construction and operation of the facility, taking into account

[224] NHWAPPDoc3-12 pASC BLM comment Protected Areas impacts Echo Meadows Woolf 2021-04-30. BLM's Outdoor Recreation Planner Brian Woolf stated the that proposed transmission line would be in "conformance with the BLM's visual resource zoning for that viewshed."

mitigation, are not likely to result in significant adverse impact to the ability of public and private providers within the analysis area described in the project order to provide: sewers and sewage treatment, water, storm water drainage, solid waste management, housing, traffic safety, police and fire protection, health care and schools.

(2) The Council may issue a site certificate for a facility that would produce power from wind, solar or geothermal energy without making the findings described in section (1). However, the Council may apply the requirements of section (1) to impose conditions on a site certificate issued for such a facility.

** * **

The Council's Public Services standard requires the Council to find that the proposed facility is not likely to result in significant adverse impacts on the ability of public and private service providers to supply sewer and sewage treatment, water, stormwater drainage, solid waste management, housing, traffic safety, police and fire protection, health care, and schools. The standard may take into consideration mitigation measures to reduce potential impact to a public or private service provider.[225] Pursuant to OAR 345-022-0110(2), the Council may issue a site certificate for a facility that would produce power from solar energy without making findings regarding the Public Services standard; however, the Council may impose site certificate conditions based upon the requirements of the standard.

Findings of Fact

The analysis area for potential impacts to public services from construction and operation of the proposed facility is the area within and extending 10-miles from the site boundary. Based on the analysis area, the following evaluation assesses potential impacts to public and private providers within Umatilla County and Morrow County, and the cities of Hermiston, Stanfield, Echo, Pendleton, and Pilot Rock. These two counties and five cities are all reviewing agencies and have been provided notification throughout the review process and their comments have been requested.[226] Additionally, Umatilla County is the Council appointed Special Advisory Group (SAG), discussed further in Section IV.E., *Land Use*.

Important Assumptions used in Applicant's Impact Assessment

[225] OAR 345-001-0010(33) "Mitigation" means taking one or more of the following actions listed in order of priority:
(a) Avoiding the impact altogether by not taking a certain action or parts of an action;
(b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation;
(c) Partially or completely rectifying the impact by repairing, rehabilitating or restoring the affected environment;
(d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action by monitoring and taking appropriate corrective measures;
(e) Partially or completely compensating for the impact by replacing or providing comparable substitute resources or environments; or
(f) Implementing other measures approved by the Council.

[226] OAR 345-001-0010(51)(p).

Important assumptions relied upon by the applicant to evaluate potential impacts from proposed facility construction and operation to private and public service providers are summarized below:

Construction Assumptions

- The applicant anticipates construction of the facility to take 18 months to two years, however, the applicant requests and the Department recommends that proposed facility construction begins within three years after the site certificate is executed/date of Council action and that construction of all facility components shall be completed within three years after construction commencement.
- The proposed facility may be constructed in phases, or by facility component or related or supporting facility.
- Most temporary workers are expected to be on site for approximately 6-18 months and not expected to permanently relocate with their families.
- Up to 234 one-way delivery truck trips per day during construction, and up to 800 one-way private vehicle trips per day to bring workers to the facility site (see Section IV.M.5. *Traffic Safety*, in this Section).

Construction Labor Force

The applicant explains that the average number of construction workers on site would be 140 people, while the maximum number of workers during peak construction months would be approximately 500 people. The applicant assumes that 70 percent (98 workers during average construction periods and 350 workers during peak construction) of the workforce would be from out of state and would temporarily relocate to the vicinity of the proposed facility for the 6–18-month construction timeframe. The applicant continues by explaining that the remining 30 percent of workers would be hired locally which in ASC Exhibit U, means from Oregon and Umatilla County, while ASC Exhibit K (Land Use), focuses on local employment being from Umatilla County. The Department anticipates that a larger portion of the 70 percent of workers that would relocate temporarily to the vicinity of the proposed facility would be from Oregon more generally, including Portland, rather than arriving from out of state. However, the Department recommends Council consider local employment to mean hiring of personnel who live in Umatilla County and not from Oregon in its entirety. Umatilla County includes the communities of Pendleton, Hermiston, Stanfield, Umatilla, Echo, and Pilot Rock.

Based on the 30 percent of locally hired personnel, this would be 42 workers during average construction periods and 150 workers during peak construction summer months. The applicant explains that this is a conservative estimate because and references the 2018 National Solar Jobs Census, published by the Solar Foundation, which profiles a construction firm that provides Engineering, Procurement, and Construction contracting services for utility-scale PV solar projects, typically performs about 1 million labor hours for solar projects, and 60 percent of the

total work performed is done by direct hires from local communities.[227] The report continues by explaining that to achieve the 60 percent locally hired workforce, they partner with local workforce development organizations to help coordinate job fairs around the community. The same 2018 report provides examples of other large solar energy companies who hire up to 90% of the workforce from local communities.[228] It is possible that some of these workers may be employed by local subcontractors who maybe hired to assist with dump and water truck delivers, flaggers, aggregate suppliers and pavers.

Based upon the Department's review of applicant referenced materials and the Department's understanding of large construction projects, the Department concurs that the applicant's assumption of 30 percent (42 workers during average construction periods and 150 workers during peak construction summer months) of the work force would be hired locally from the communities of Umatilla County. This leave 70 percent (98 workers during average construction periods and 350 workers during peak construction) of the workforce that would relocate temporarily or commute longer distances to the proposed facility site boundary. It's anticipated that the 70 percent would be made up of out of state works as well as workers from other areas in Oregon.

Operation Assumptions

- Approximately 10-15 operational personnel expected to be permanently employed to operate the proposed wind and solar facility.
- Up to 10 personnel estimated to relocate from outside the analysis are to work at the facility site.
- Life of the proposed facility would be 30 years.

IV.M.1. Sewers and Sewage Treatment

Construction and operation of the proposed facility would generate sanitary waste. The proposed facility would not rely on or require use of existing public or private sewer system or connection to a sewage treatment facility, other than to have the licensed contractor dispose of sanitation waste. As discussed in ASC Exhibit U and V, all sanitation waste generated during construction would be managed via portable toilets which would be managed by a licensed subcontractor, who would be responsible for servicing the toilets at regular intervals, transporting, and disposing of wastewater in accordance with local and jurisdictional regulations.[229]

The applicant proposes to install an on-site septic system that would be located within and serve the O&M building during operations. The applicant's third-party contractor would obtain

[227] NHWAPPDoc2-10 ASC Exhibit K. Land Use_2022-01-31, Section 7.1.

[228] Swinerton Renewable Energy. National Solar Jobs Census 2018, NATIONAL SOLAR JOBS CENSUS 2018. Solar-Jobs-Census-2018-1-1. Available: https://irecusa.org/wp-content/uploads/2021/07/Solar-Jobs-Census-2018-1-1.pdf. Accessed and downloaded on 03-29-2022. The Department also reviewed the 2020 Solar Job Census, however, that report focused largely on impacts to the industry from the COVID-19 pandemic.

[229] NHWAPPDoc2-20 ASC Exhibit U. Public Services_2022-01-31, Section 3.2.2.1; Exhibit V, Section 2.2.

an On-site Sewage Disposal Construction Installation Permit for the septic system from the Oregon Department of Environmental Quality (DEQ) Eastern Region office in Pendleton.[230] As discussed in Section IV.B., *Organizational Expertise* and ASC Exhibit E, the permit for an on-site sewage septic tank are mostly ministerial and non-discretionary. However, recommended Organizational Expertise Condition 6, requires that the applicant provide written confirmation that its third-party contractors obtained On-site Sewage Disposal Construction Installation Permit from DEQ prior to construction of the proposed facility.

Because the proposed facility does not connect to any public or private sewers or sewage treatment facilities, and sanitary waste associated with construction and operation would be addressed with licensed portable toilet providers and a permitted on-site septic system, the Department recommends that the Council find that the proposed facility would not be likely to result in significant adverse impacts to public and private supplies of sewers and sewage treatment.

IV.M.2. Water Services

ASC Exhibit U and O identify public water service providers that would supply water for construction of the proposed facility, the applicant does not identify any private water service providers. The public entities that would supply water for the proposed facility construction are the cities of Pendleton, Hermiston and Echo Water Departments.

Construction of the proposed facility could result in impacts to public or private water service providers if the water needed to serve the facility would impact their ability to provide water to their customers. Construction of the proposed facility would use approximately 71 million gallons (Mgal) under average conditions and up to 100 Mgal of water under worst-case hot and dry weather conditions. Table 26: *Construction Period and Daily Worst-Case Construction-Related Water Use* as presented in Section IV.Q.3., *Water Rights*, also breaks down the construction-related water usage into annual and daily totals under worst-case, dry, circumstances. The primary uses for water would be for dust suppression, concrete mixing for foundations, road construction, and some water used for fire prevention.[231]

Dust associated with construction of the proposed facility would be generated from heavy equipment used for site preparation, moving construction materials, worker transportation in and out of the site and transportations within the construction site areas. Dust generation would be created and aggravated by the removal of topsoil and vegetation, grading for foundation placement and construction of roads, transmission lines and other related or supporting facilities. As discussed in ASC Exhibit O, to reduce fugitive dust water trucks would patrol the work site as often as one pass per hour, wetting down disturbed and exposed soils. Should construction occur in a particularly dry year, the water required for dust control during construction could increase from 58 Mgal to an estimated 87.5 Mgal, increasing the total water

[230] NHWAPPDoc2-20 ASC Exhibit U. Public Services_2022-01-31, Section 2.2.1.

[231] NHWAPPDoc2-14 ASC Exhibit O. Water Req_2022-01-31, Section 2.1.

requirement for all construction uses to approximately 100 Mgal.[232] As noted above, Section IV.Q.3., *Water Rights;* Table 26: *Construction Period and Daily Worst-Case Construction-Related Water Use* , outlines the estimated water consumed for each construction-related activity under average and worst-case conditions.

Concrete foundations would be required for each turbine, meteorological towers, the substations, O&M building, BESS, solar invertor and transformer pads and, for the ASC, the applicant assumes that the solar racking posts would need concrete footings, although that may not be necessary. Concrete mixing for foundations would require approximately 2.2 million gallons of water, and as noted in ASC Exhibit O Table O-2, the amount of water necessary for concrete mixing would not vary based on a worst case, dry season. Similarly, the applicant indicates that there would not be a difference in the estimated water used for road construction between average and worst-case conditions for a total of approximately 10.5 Mgal of water. Water may also be used for fire prevention, which would a involve stationing a water truck at the job site to keep the ground and vegetation moist to be prepared for extreme fire conditions.

The applicant or its third-party contractor would obtain water for construction of the proposed facility from the City of Hermiston, the City of Pendleton, and the City of Echo, who each have indicated willingness and ability to supply water for construction as evidenced by letters provided in ASC Exhibit O, Attachment O-1. In Attachment O-1, the City of Hermiston confirmed that it could provide up to 125,000 gallons per day up to 68 million gallons for facility construction. The City of Echo also provided a letter stating they could provide up to 125,000 gallons per day (with no limit stated) for the construction of the facility. In a March 2022 memo responding to a Department inquiry, the City of Echo confirmed its ability to supply water for the construction of the proposed facility under existing water rights, stating that; "…Echo's current water supply wells could meet the average and worst-case water use scenarios proposed by the Nolin Hills project during a typical peak summer month period."[233] The City of Pendleton's 2020 letter included in ASC Exhibit O confirmed the ability to provide 134,000 gallons per day up to 71,000,000 gallons for construction. The City of Pendleton also affirmed its ability to supply water for the construction of the proposed facility under existing water rights in a response received by the Department in February 2022.[234] Because the applicant or its third party contractor would obtain water for construction of the proposed facility from one or more of the public water service providers listed above, the Department recommends that the responses from the City Water Departments are sufficient to demonstrate that it is not likely that the proposed facility construction would adversely impact any of these service providers.

[232] NHWAPPDoc2-14 ASC Exhibit O. Water Req_2022-01-31, Section 3.2.

[233] NHWAPPDoc5-3 ASC Reviewing Agency Comment_City of Echo_Water_Slaght 2022-03-21.

[234] NHWAPPDoc5 ASC Reviewing Agency Comment_City of Pendleton_Water_Tarter 2022-02-02.

The applicant explains that operational use of water would include solar module/panel washing which would occur approximately once a year and use approximately 1.12 Mgal per year.[235] Other operational water use would occur from use of the O&M building and this water would be obtained from an on-site well. Operational water for solar panel washing would be purchased and trucked in from the City of Hermiston, Pendleton, and/or Echo. The letters included in ASC Exhibit O and in response to Department inquiries, listed above, indicate that these municipalities would be able to provide the annual water needed to wash solar panels. Further, Water Rights Condition 1 and 2 recommended in Section IV.Q.3., *Water Rights*, would require the applicant to verify total water usage needs for construction and that the applicant provide verification of agreements with any water service provider verifying their ability to legally provide water for identified purposes. Water obtained from the on-site well would not impact any water service providers during operation, however, Recommended Water Rights Condition 3 requires the same information be submitted to verify that water for solar panel washing or other operational activities could be supplied by one or more or the water service providers and Recommended Water Rights Condition 4 applies to the on-site well.

Based upon review of the correspondence from the City pf Pendleton, Hermiston, and Echo affirming their ability to meet proposed facility construction and operational water demand and the evaluation prided above, the Department recommends that the Council find that the construction and operation of the proposed facility are not likely to result in significant adverse impacts to the ability of public or private providers to provide water service.

IV.M.3. Stormwater Drainage

Construction and operation of the proposed facility could potentially impact rural stormwater management systems. Stormwater management systems include pervious surfaces that allow rainfall and snowmelt to percolate into soils to refill aquifers, streams, or rivers. Stormwater management systems also include infrastructure to direct and store stormwater such as culverts, catch basins, storm sewers and piping, as well as holding ponds and drainage ditches.

Stormwater infrastructure that could be impacted by construction of the proposed facility is limited to minimal facilities associated with public roads maintained by Umatilla County, state highways, and Highway I-84, which are managed by ODOT.[236] The proposed facility is not within the city limits of the surrounding communities of Pendleton, Hermiston, or Echo which may have more complex stormwater systems and stormwater management plans, therefore, the Department concurs with the applicant's statement that the proposed facility would not have an adverse impact on stormwater drainage services to these communities because construction, operation, and decommissioning of the facility would not require modification or expansion of these public stormwater drainage facilities.

[235] NHWAPPDoc2-20 ASC Exhibit U. Public Services_2022-01-31, Section 3.4.2.2.

[236] NHWAPPDoc2-20 ASC Exhibit U. Public Services_2022-01-31, Section 3.2.2.3.

Construction related activities such as an increase in traffic, on site excavation and removal of topsoil, watering roads and construction areas for dust control, and soil contamination from inadvertent spills could impact stormwater drainage facilities associated with roads managed by the County and ODOT. The applicant explains that stormwater management infrastructure added during construction such as roadside ditches, infiltration swales, or retention basins would be left in place to continue functioning throughout the life of the proposed facility, as necessary for continued management of stormwater.[237] The applicant describes that this stormwater infrastructure would be located on private land and would not affect stormwater management services provided by public agencies.

As discussed in ASC Exhibit U (Public Services), Exhibit I (Soil Protection), and in greater detail in Section IV.D., *Soil Protection* and IV.H., *Fish and Wildlife Habitat*, of this order, the applicant would deploy best management practices (BMPs) that would reduce soil erosion which could impact stormwater facilities associated with roads managed by public entities and roads constructed on private lands. These BMP's are included in the Draft Revegetation and Noxious Weed Plan included as Attachment P-2 (recommended under Fish and Wildlife Habitat Conditions 1, 2 and 3) and to the National Pollutant Discharge Elimination System (NPDES) 1200-C construction permit. The NPDES 1200-C permit application and Draft Erosion and Sediment Control Plan (ESCP) identify erosion and sediment control measures are provided as Attachment I-C (recommended under Soil Protection Conditions 1, 2, and 3) to this order. The Draft Revegetation and Noxious Weed Plan and/or the ESCP would include, but are not necessarily limited to, the following:

- To the extent practicable, existing vegetation would be preserved and where vegetation clearing is necessary, root systems would be conserved if possible.
- Silt fencing would be installed throughout the proposed facility site boundary on the contour downgradient of excavations, the O&M Building, and substations.
- Straw wattles would be used to decrease the velocity of sheet flow stormwater to prevent erosion; used along the downgradient edge of access roads adjacent to slopes or sensitive areas.
- Mulch would be used to immediately stabilize areas of soil disturbance, and during reseeding efforts.
- Jute stabilizing matting, straw matting, or turf reinforcement matting would be used in conjunction with mulching to stabilize steep slopes that were exposed during access road installation.
- Soil binders and tackifiers would be used on exposed slopes to stabilize them until vegetation is established.

Because the proposed facility would not interconnect to existing public or private stormwater drainage systems and best management practices would be employed to minimize erosion and runoff into roadside stormwater systems, the Department recommends Council find that construction and operation of the proposed facility would not be likely to result in significant adverse impacts to the ability of stormwater drainage service providers to provide service.

[237] NHWAPPDoc2-20 ASC Exhibit U. Public Services_2022-01-31, Section 3.2.2.3.

IV.M.4. Solid Waste Management

Construction, operation, and retirement of the proposed facility would generate solid waste that would be disposed of at licensed disposal facilities within the analysis area. The applicant identifies, and the Department affirms that the Columbia Ridge Landfill located in Arlington, OR and Finley Buttes Landfill located in Boardman, OR are solid waste disposal facilities within the analysis area.

Approximately 13,000 to 16,000 total cubic yards (cy) of solid waste generated from the construction of the proposed facility construction including scrap metal (e.g., wire and rebar scraps), wood, concrete, concrete washout, packing materials (such as crates, pallets, and protective and paper wrapping), dirt and rock spoils.[238] Construction materials associated with the solar and battery components (up to 816,812 solar modules, transformers, cooling systems, etc.) and installation of those components would largely be the same as the wind facility components listed above. As discussed in Section IV.N., *Waste Minimization*, the applicant represents and the Department recommends Waste Minimization Condition 1 and Waste Minimization Condition 2 which require the finalization and implementation of a Construction Waste Management Plan which would identify final waste quantities, methods for separating, recycling, and disposing of waste, and training for compliance with the plan. The applicant further explains that waste generated during construction would be collected in a central location during construction, to be hauled away by a licensed waste disposal service for disposal or recycling at the licensed facilities. Excess soil from road construction and foundation excavation would be spread on site to the extent practicable or hauled off-site to be disposed of in accordance with applicable regulations.

As additionally noted in Section IV.N., *Waste Minimization*, after construction waste minimization measures are implemented by the applicant, remaining waste and recycled materials would be hauled offsite to Columbia Ridge Landfill and/or Finley Buttes Landfills, both of which accept non-hazardous construction debris, industrial and special waste, including non-hazardous contaminated soils. The applicant provides correspondence from these waste disposal facilities in ASC Exhibit U, Attachment U-1. Both the Columbia Ridge Landfill and Finley Buttes Landfills indicate they have sufficient capacity to handle the proposed waste volumes needed for disposal from construction of the proposed facility. Finley Buttes Landfill reiterates this by stating that they have more than 100 years of remaining life and can receive any nonhazardous waste.[239]

Operation

Proposed facility operations would produce waste from replacement of energy facility components (i.e., turbine blades, solar panels and batteries) and associated packaging, and waste typical of a small office. Turbine blades and solar panels would be recycled to the extent

[238] NHWAPPDoc2-21 ASC Exhibit V. Waste_2022-01-31, Section 2.1.1.1.

[239] NHWAPPDoc2-20 ASC Exhibit U. Public Services_2022-01-31, Attachment U-1.

programs and facilities are available or other agreements are made as discussed in Section IV.N., *Waste Minimization* and as required under Recommended Waste Minimization Conditions 4 , 5, and 6. All other non-recyclable materials would be hauled offsite by a licensed hauler and disposed of offsite at a licensed facility. Lead-acid batteries would be hauled offsite by a licensed hauler and disposed of offsite at a licensed lead-acid battery recycling facility, such as O'Reilly Auto Parts, Baxter Auto Parts, and Olsen's Auto Parts in Pendleton, Oregon; R.S. Davis Recycling in Hermiston, Oregon; and at least 10 auto supply dealers in Portland, Oregon who use Interstate Batteries to handle lead-acid battery recycling.[240]

Based on the quantity and type of solid waste generated by the facility during construction and operation, existing and long-term capacity of the Columbia Ridge and Finley Buttes Landfills, and compliance with the recommended waste minimization conditions, the Department recommends Council find that construction and operation of the proposed facility would not be likely to result in significant adverse impacts to the ability of solid waste disposal providers to dispose of waste.

IV.M.5. Traffic Safety

Construction of the proposed facility would result in traffic impacts from the increased traffic and congestion resulting from delivery trucks, equipment, and workers travelling to and from the facility site.

Peak construction periods would result in approximately 500 workers onsite. Most workers would drive alone; vehicle trips per day are based on an assumed 1.25 occupancy rate. Estimated maximum worker daily trip rate is 400 round trips and 800 one-way trips. Estimated maximum haul and delivery trip rate is 117 round trips and 234 one-way trips per.[241] Total maximum daily construction-related traffic would be approximately 1,034 one-way trips and 2,068 round trips.

Most of the construction worker traffic would likely originate from the communities along I-84, including Boardman and Pendleton. Some workers may commute along US Highway 395 from Hermiston and Stanfield to the work site with a small number of workers who may stay in the communities of Pilot Rock (which is located east of the proposed facility) or Heppner in Morrow County (which is located southwest of the proposed facility). Primary and secondary transportation routes, which include rural major collectors, rural minor collectors, or rural local roads are discussed further below.

The 234 one-way truck trip and deliveries, throughout all construction phases would include the following activities:

[240] NHWAPPDoc2-21 ASC Exhibit V Waste 2022-01-31, Section 2.1.3.

[241] NHWAPPDoc2-20 ASC Exhibit U. Public Services_2022-01-31, Section 3.2.2.6. Project Trip Generation. Because construction of the facility components is not uniform, the applicant increased truck delivery trips by 25 percent to account for peak periods to yield the maximum round/one-way trips.

- Civil construction and material (aggregate, culverts, etc.) supply for new roads and upgrades to existing roads, turbine erection pads and crane pads, solar inverter/transformer and BESS areas, substations, laydown areas, collector lines, transmission lines, and the O&M Building;
- Turbine and related component delivery, including towers, nacelles, hubs, blades, pad mount transformers, substation equipment and transformers, collector line components, transmission line towers and conductor, and O&M Building materials;
- Solar modules and related equipment delivery, including racking system structure, electrical wiring/cabling and equipment, steel posts, inverters, and transformers;
- BESS delivery, including containers, battery modules, and all related equipment based on the final technology selected;
- Material supply for turbine foundations and solar area foundations such as for posts and BESS containers (sand, aggregate, cement, and steel rebar);
    - The applicant assumes concrete would be batched on-site in temporary plants; local suppliers may be used instead at the option of the construction contractor;
- Delivery of on-site construction equipment such as cranes, dozers, graders, compactors, forklifts, etc.; and
- Water truck traffic (assumes water comes from Hermiston, Stanfield, Echo, and Pendleton).

Primary transportation corridors, major county roads, and local county roads would carry the majority of construction-related truck and workforce traffic. The workforce is expected to use the same roads to access the proposed facility site as the equipment transporters. Figure 12: *Preliminary Construction Transportation Routes*, below illustrates the primary and secondary transportation routes proposed to be used for construction activities. The 2002 Umatilla County Transportation System Plan (TSP) county road classification system includes four road classes; all arterials in Umatilla County are interstate, national, and state highways, part of the state highway system; rural county roads are classified as either rural major collectors, rural minor collectors, or rural local roads and are assigned a County Road Number by the County Public Works Department. [242]

The primary corridors and highways identified by the applicant are I-84, I-82, and US Highway 395 (US- 395). The applicant discusses that the routes that would experience the highest increase in traffic from deliveries would be County Road (CR) 1350 (Coombs Canyon Road) from US-395.[243] Other local county roads, such as CR-1361, CR-1362, CR-1363, and CR-1394 would experience increases in traffic. Based upon review of maps in the vicinity of the proposed facility and the TSP, the Department affirms that Rieth Road may be used for deliveries and worker access to the site boundary, particularly from the northern highway routes and to

[242] NHWAPPDoc2-20 ASC Exhibit U. Public Services_2022-01-31, Section 3.2.2.6. The applicant highlights in ASC Exhibit U that, in 2018, they confirmed with the Umatilla County Planning Department that the 2002 TSP is the most current version, and no updates to the TSP have occurred, and this remains the case as of September 24, 2020.

[243] NHWAPPDoc2-20 ASC Exhibit U. Public Services_2022-01-31, Section 3.2.2.6.

access the northern parts of the site boundary. Rieth Road is identified as County Road 1300 and provides access to town of Rieth, Nolin, and an alternative route to Echo.[244] Existing private access roads would also have increased traffic and additional private access roads would also be developed within the site boundary to each of the proposed wind turbines, the solar array, substations, and associated facilities.

It is also possible that, based on final design and transportation routes selected to construct the proposed facility, roads through the communities of Echo and Nolin could be used and potentially impacted. Primary roads in the City of Echo include but are not limited to; Oregon Trail Road, South Thielsen Street (which turns into Rieth Road as it travels south), South Kennedy Street, and Echo Road. Roads within the unincorporated community of Nolin include Cunningham Road, CR 1133 and CR1350, which is a proposed transportation route for the proposed facility as illustrated below in Figure 12: *Preliminary Construction Transportation Routes.* If these roads would be used as transportation/haul routes for construction of the proposed facility, they would likely be included in any road inventory established prior to construction under a road use agreement executed with Umatilla County, as recommended under Recommended Public Services Condition 1, however, the Department also recommends the applicant coordinate with these governments, as necessary, to ensure any roads managed by the City or unincorporated community should be inventoried and maintained from potential construction traffic damage.

Potential Roads Impacted from construction and operation of the UEC Cottonwood Route:

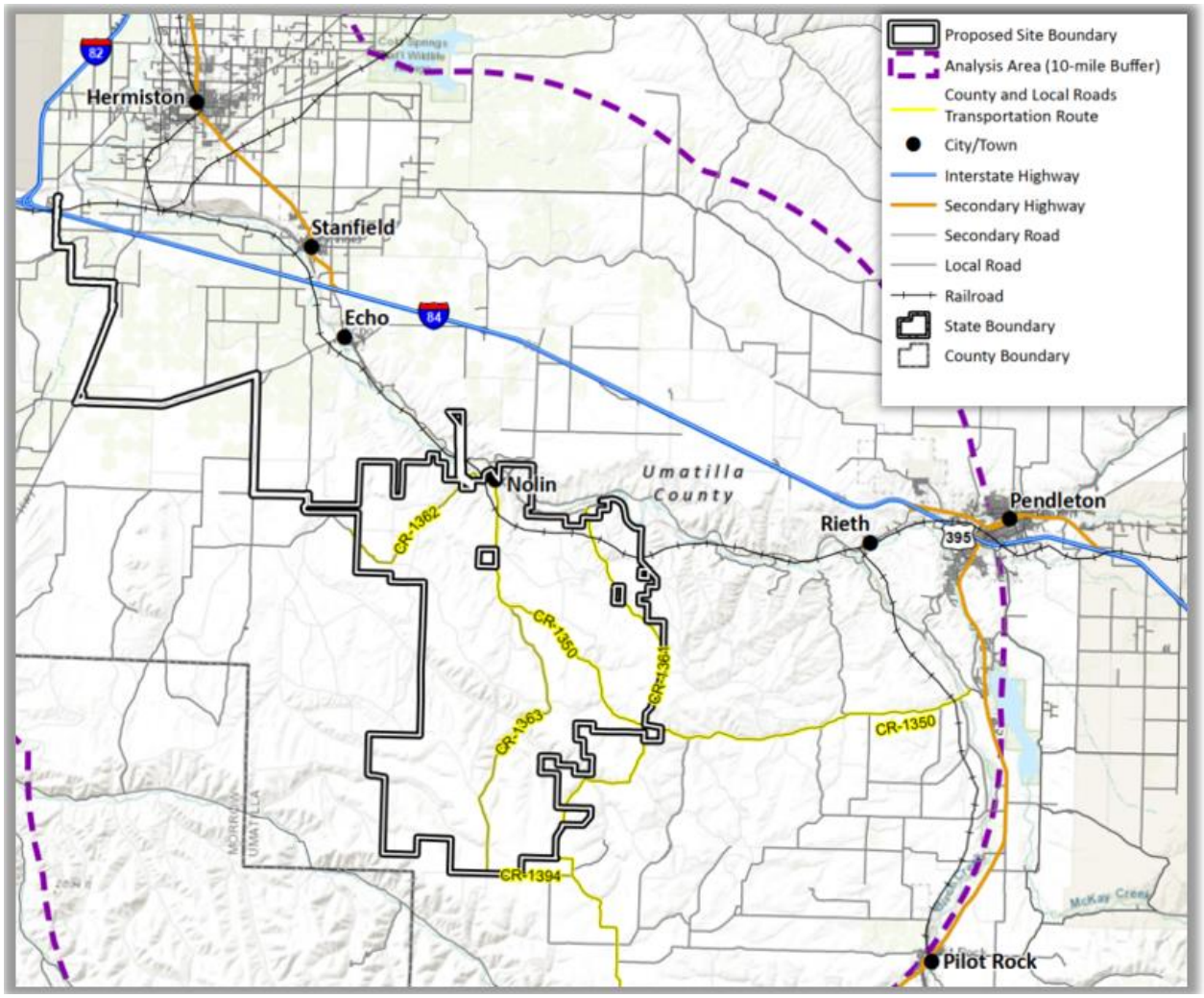
As described in Section III.A.2., *Related or Supporting Facilities*, the applicant proposes an Umatilla Electric Cooperative (UEC) Cottonwood Route 230 kV transmission line alternative that would be 25.3 miles lone connecting the norther proposed substation to an existing UEC Cottonwood substation. ASC Exhibit B and ASC Exhibit C provide some description and maps of this route, including ASC Exhibit B, Section 7.1.2.1 description of the segment lengths and right of way (ROW) widths. However, all the roads that the proposed alternative route would follow are not identified. The Department provides the following description of the roads that this proposed route would follow so that, if selected, these roads would be included and evaluated in an impact assessment and road use agreement as recommended under Recommended Public Services Condition 1, discussed further below.

From substation north of Interstate I-84, the proposed 230 kV transmission line crosses I-84 and continues south on Colonal Jordan Road/CR 1325(ASC Exhibit C, Figure C-4.1). At approximately the intersection of Colonal Jordan Road and Madison Sayler Road/CR 1334, the route appears to leave a road ROW and travels east, then south, and then east again though agricultural lands (ASC Exhibit C, Figure C-4.2), until it meets Highway 207/Hermiston Highway at approximately the intersection of Curtis Road (ASC Exhibit C, Figure C-4.3). The route travels south on Highway

[244] Umatilla County 2002 Transportation System Plan, Table 4-1: Important County Roads. https://www.co.umatilla.or.us/fileadmin/user_upload/Planning/Umatilla_County_TSP_June_02.pdf Accessed on 03-01-2022.

207 until Oregon Trail Road (Oregon Trail Road is east of Highway 207, and Madison Road is to the west pf Highway 207) (ASC Exhibit C, Figure C-4.3, 4.4, and 4.6). The route travels east/northeast on Oregon Trail Road (ASC Exhibit C, Figure C-4.6 and 4.7) until White House Road/CR1343 where it pivots sharply to head south on White House Road (ASC Exhibit C, Figure C-4.8 and 4.10). At CR 1348 and White House Road the route then turns south and then east (ASC Exhibit C, Figure C-4.10 and 4.11) until it connects to the site boundary for the wind facility components.

Figure 12: Preliminary Construction Transportation Routes[245]



When evaluating the Council's Public Services standard for potential impacts to public and private traffic safety providers, the Department may evaluate the estimated average and peak construction volumes from the construction of a proposed facility and how this impacts the level of service (LOS) of existing roads. According to the Umatilla County TSP, and outlined by

[245] NHWAPPDoc2-20 ASC Exhibit U. Public Services_2022-01-31, Figure U-1.

the applicant in ASC Exhibit U, a LOS evaluation includes the consideration of factors that include travel speed, delay, frequency of interruptions in traffic flow, relative freedom for traffic maneuvers, driving comfort and convenience, and operating costs.[246] If additional traffic generated by construction of the proposed facility were to exceed the capacity of existing roads resulting in significant and ongoing delays in travel times, or if there is unmitigated damage to roads, these would lower the level of service provided to the public.

The Umatilla County TSP defines LOS letter grades from A to F, with each grade representing a range of volume to capacity (V/C) ratios. A V/C ratio is the peak hour traffic volume on a highway divided by the maximum volume that a highway can handle. If traffic volume entering a highway section exceeds the section's capacity, then disruptions in traffic flow will occur, reducing the LOS.[247] ASC Exhibit U, Table U-3 identifies Umatilla County's LOS designations where LOS A represents free-flowing traffic and LOS F represents conditions where the road system is totally saturated with traffic and movement is very difficult.

Table 17: *Construction Traffic Volumes and Level of Service on Proposed Primary Access Roads*, below, offers the applicant and Department's synthesis of potential construction-related traffic impacts on road segments that are anticipated to carry the majority of construction traffic. Table 17 provides the highway's "existing" average daily traffic (ADT), estimated LOS, peak one-way trips of workers and deliveries, the ADT with facility traffic and the anticipated LOS taking into consideration impacts from facility construction. The proposed route segment which would have a reduced LOS (from E to E/F) from facility traffic impacts is the US-395 segment, south of Pendleton at ODOT Station 30-008 which directs traffic to CR-1350. This segment has a lower existing LOS where passing is virtually impossible and vehicles driving close together becomes intense when slower vehicles or other interruptions are encountered.[248]

The applicant explains and the Department concurs that the LOS criteria ("E" and "E/F") is based upon typical traffic for two-lane highways and this segment within the city limits of Pendleton has traffic lights, lower speed limits, and is a four-lane highway (compared to a two-lane highway for Umatilla County LOS criteria). Further south, US-395 tapers to a three and then two-lane highway, where the LOS improves to an "A" rating without facility traffic, to an anticipated "A" rating with construction-related traffic from the proposed facility. The applicant also highlights that delivery trucks would be traveling to and from the site on an ongoing basis though the day, and construction workers would be commuting on the earlier and later ends of typical workday hours, therefore actual impacts to these areas and other routes may be less than anticipated and shown in Table 17. Furthermore, the applicant would implement best management practices (BMPs) to avoid, reduce, and mitigate impacts to traffic service providers including minimizing heavy truck deliveries (dump trucks, concrete trucks, standard

[246] NHWAPPDoc2-20 ASC Exhibit U. Public Services_2022-01-31, Section 3.2.2.6.

[247] NHWAPPDoc2-20 ASC Exhibit U. Public Services_2022-01-31, Section 3.2.2.6.

[248] NHWAPPDoc2-20 ASC Exhibit U. Public Services_2022-01-31, Table U-3; Umatilla County 2002 Transportation System Plan, Table 4-3: Important County Roads. https://www.co.umatilla.or.us/fileadmin/user_upload/Planning/Umatilla_County_TSP_June_02.pdf Accessed on 03-01-2022.

size tractor-trailers or flatbeds) during peak traffic times and movements of oversize trucks would be prohibited during peak times (rush-hour traffic periods), to the extent practicable. These measures and other traffic-related BMPs are represented in Attachment U-1 the draft Traffic Management Plan and further below in discussion associated with Recommended Public Services Conditions 1 and 2.

Table 17: Construction Traffic Volumes and Level of Service on Proposed Primary Access Roads

Location	Existing ADT (2018[1])	Estimated Current LOS[2]	Estimated Existing V/C[3,4]	Project Construction Traffic[5]			ADT with Project Traffic	Projected V/C with Peak Construction Traffic[4]	Projected LOS with Peak Construction Traffic
				Total Peak Trips per day, one-way	Worker Traffic, peak trips per day, one-way	Truck Traffic, peak trips per day, one-way			
I-84 – Pendleton Station 30-004[6]	17,500	B	0.51	1,034	800	234	18,534	0.55	B (no change)
US-395 – South Pendleton Station 30-008	25,900	E	0.96	1,034	800	234	26,934	0.99	E-F
US-395 – 0.1 mile south of SW Gateway Avenue	4,300	A	0.16	1,034	800	234	5,334	0.2	A (no change)
US-395 – 0.02 mile south of Coombs Canyon Rd (CR-1350)	3,600	A	0.42	1,034	800	234	4,634	0.55	B

1. Data from ODOT (2018c).
2. Based on estimated volume to capacity (V/C) and equivalent level of service (LOS) as presented in ASC Exhibit U, Table U-3.
3. Estimated by dividing existing average daily traffic (ADT) by the maximum ADT of the federal functional class for the applicable highway segment (from ASC Exhibit U, Table U-4).
4. Except for US-395 within Pendleton urban growth boundary (existing and with proposed facility traffic), segments below maximum ODOT V/C ratios in ASC Exhibit U, Table U-2.
5. One-way trips are counted to tally both the inbound and outbound trips for proposed facility traffic (i.e., round-trip count would be half of total one-way trips).
6. 17,500 ADT; measured at automatic traffic recorder station 30-004 on I-84, west of Pendleton. ODOT 2018.

Source: NHWAPPDoc2-20 ASC Exhibit U. Public Services_2022-01-31, Table U-5.

1

The Umatilla County TSP estimates that the average daily traffic (ADT) volumes for local roads is 500 ADT, county roads which include rural county roads is below 1,000 ADT, and heavier use county/collector roads is between 1,200 and 10,000 ADT. The applicant explains that access to and from "highly important" roads at intersecting minor roads is adequate, reaching an estimated LOS B, where peak hour minor road traffic volumes reach up to 150 vehicles per hour. The Umatilla County TSP explains that some county roads serve only local uses, yet other county roads serve rural needs such as providing connections to higher functioning facilities such as a state highway or interstate freeway, accessing large businesses in rural areas, and accessing rural communities and farms, and these types of roads are considered to be of higher importance to Umatilla County.[249]

The applicant explains that, based upon field observations, County Roads (CR)-1350, CR-1361, and CR-1363 conditions vary from improved gravel two-lane roads to two-track roads with minimal aggregate surfacing, yet are well-maintained gravel roads in good condition.[250] The applicant maintains that construction truck traffic should also not adversely impact the CR's designated in the ASC because they are constructed for legal loads and currently serve truck traffic that would be similar to construction-related truck traffic. Another category of roads that would be used for proposed facility construction and operation are local county roads that are not paved.[251] The applicant states that these roads are either one or two lanes wide, have some to minimal aggregate on the surface, frequently have culvert pipes with inadequate covers, and have grades and corners that may require flattening or widening to accommodate the large and long construction trucks, in particular the turbine component and transformer delivery trucks. These roads may require the addition of more road base aggregate to support the loads, replacement or lengthening of culverts, grading, and replacement of cattle guards. Finally, the applicant states that private roads would be used for construction and operation of the proposed facility and may require upgrading to accommodate truck traffic associated with the wind farm construction, which could include widening, replacing cattle guards, replacing or adding covers to culverts, or adding road base aggregate to the existing private roads.

The Umatilla County TSP designates road design standards for county roads including arterial, major and minor collector, and local roads, which include surface width, speed limits, pavement or gravel standards, and shoulder width. The applicant represents that at the design stage for the proposed facility, a careful inspection of county roads used for construction and operation of the proposed facility would be required to determine where and what improvements would be needed to be made so that roads would be serviceable for construction traffic. The applicant expects that existing local unpaved roads would need to be upgraded from their current status

[249] Umatilla County 2002 Transportation System Plan, Table 4-3: Important County Roads. https://www.co.umatilla.or.us/fileadmin/user_upload/Planning/Umatilla_County_TSP_June_02.pdf Accessed on 03-01-2022. Rieth Road is considered a major collector and considered of high important to the County. The Department clarifies that the applicant is not representing that Rieth Road would be used as a proposed access route for construction-related traffic.

[250] These roads are located within the proposed facility site boundary and would be used during construction and operation.

[251] The Department highlights that these roads are not named in ASC Exhibit U.

to support construction. To ensure that road improvements are done consistent with current Umatilla County codes and standards, the applicant represents that it would cooperate with the Umatilla County Public Works Department to obtain permits to improve the roads and also to make repairs to roads that might be damaged from construction traffic. In addition, the applicant would enter into road use agreements with Umatilla County, to ensure that public roads impacted by construction would be left in as "good or better" condition than that which existed prior to the start of construction.

Based on other road use agreements reviewed by EFSC and the Department, Based on the review of a typical road use agreement used by Umatilla County, the Department understands that provisions typical of road use agreements between an applicant and a County or its Public Works Department includes, but is not limited to:

- Applicant responsibility to identify final transportation routes based on final design;
- Conduct pre-construction road inventory that identifies the condition of all roads used during construction;
- Applicant responsibility to pay for road improvements necessary for construction as well as any necessary road repairs caused from construction of the proposed facility;
- Applicant shall maintain roads to County standards which include the ability for the public and emergency services to access and use roads; and
- Conduct post-construction inventory to compare with pre-construction to negotiate all necessary improvements that must be made to roads.

The applicant states that a component of road use agreements would be a traffic management plan which would be employed by its construction contractor and would provide best management practices (BMP's) to minimize traffic impacts due to construction traffic congestion, flagging needs, road closures, and large equipment and deliveries. All BMPs are listed in their entirety in Attachment U-1, a draft Traffic Management Plan, some of which include:

- Coordinating the timing and locations of road closures or oversize load movements in advance with emergency services such as fire, paramedics, and essential services such as mail delivery and school buses.
- Maintaining emergency vehicle access to private property.
- Posting signs on county- and state-maintained roads, where appropriate, to alert motorists of construction and warn them of slow, merging, or oversize traffic.
- Using traffic control measures such as traffic control flaggers, warning signs, lights, and barriers during construction to ensure safety and to minimize localized traffic congestion. These measures would be required at locations and during times when trucks would be entering or exiting highways frequently.
- Restoring residential areas as soon as possible and fencing construction areas near residences at the end of the construction day.

The Department compiled all applicant-representations for avoiding, minimizing and mitigating impacts related to construction traffic for the proposed facility into a draft Traffic Management

Plan (Plan) which is attached to this order as Attachment U-1. To ensure that construction and operation of the proposed facility is not likely to result in significant adverse impacts on the ability of public and private service providers for traffic safety including impacts to roads and traffic flow, the Department recommends Public Services Conditions 1 and 2, which require the finalization of the Plan, submission of final road use agreements, and adherence to the final Traffic Management Plan during construction. The Department understands that it is likely that the applicant or its construction contractor may have its own Traffic Management Plan, which may be provided if it, at a minimum, includes the provisions in the draft Traffic Management Plan, Attachment U-1.

Recommended Public Services Condition 1 (PRE): Prior to construction of the facility, or facility component, the certificate holder shall:

a. Based on final design, finalize, identify, and provide maps of all public roads used for construction, road names, locations, segments used, and road conditions and include in Final Traffic Management Plan identified in (b) and (c).
b. Submit executed road use agreements between Umatilla County and the certificate holder or its contractor. Any Final Traffic Management Plan that is part of the road use agreements shall include, at a minimum, the provisions designated in Section II of Attachment U-1 of the Final Order on ASC.
    a. If final transportation/haul routes selected are within the City of Echo or the unincorporated community of Nolin and are not managed by the County, the certificate holder shall contact and coordinate with the local governments, execute a similar road use agreement that includes, at a minimum, the provisions designated in Section II of Attachment U-1 of the Final Order on ASC, and submit any final agreements to the Department.
c. If a Final Traffic Management Plan designated in sub (a) is not included in road use agreements executed with Umatilla County, then submit a Final Traffic Management Plan. A copy of the Final Traffic Management Plan shall be provided to the Department and Umatilla County Public Works Department. The Construction Traffic Management Plan shall, at a minimum, include the provisions in Section II of Attachment U-1 of the Final Order on ASC.
d. Submit to the Department, any ODOT permits obtained by the certificate holder, its third-party contractors or subcontractors including but not limited to Oversize Load Movement Permit/Load Registration, Permit to Occupy or Perform Operations Upon a State Highway, and/or an Access Management Permit.

Recommended Public Services Condition 2 (CON): During construction of the facility, or facility component, the certificate holder shall ensure that construction contractors adhere to the requirements of the Final Traffic Management Plan.

Proposed facility operation is anticipated to require 10 to 15 employees that would likely live within the surrounding communities within a commutable distance to site.[252] Operational traffic

[252] NHWAPPDoc2-20 ASC Exhibit U. Public Services_2022-01-31, Section 3.2.2.6.

is anticipated to result in a maximum of 30 daily, one-way light-duty vehicle trips, mostly consisting of operational workers and occasional specialty contractors that may visit the proposed site. The applicant highlights, however, that some operational activities (wind turbine or nacelle replacement, or major repairs) may require oversized haul trucks, yet this would not be frequent. The Department recommends Council find that the operational level of traffic increase would not be likely to result a potential impact to public or private traffic safety providers because the primary haul routes and access routes would have sufficient capacity to manage this increase in volume without impacting the quality of traffic service. The Department also recommends that these roads would be addressed, maintained, or improved after construction under the road use agreement with the County, recommended under Recommended Public Services Condition 1 above.

Based on the evaluation and findings provided above and on compliance with the recommended Public Service Conditions which address applicant proposed and Department recommended measures to reduce and mitigate traffic impacts associated with the construction and operation of the proposed facility, the Department recommends Council find that potential traffic impacts from proposed facility construction and operation would not be likely to result in significant adverse impacts to the ability of transportation providers to provide traffic safety.

IV.M.6. Air Traffic

Proposed facility construction and operation could result in impacts to private and public air traffic (airport) providers from impacts to navigable airspace from the taller facility components such as the proposed transmission line, wind turbines, and met towers. Also provided in this section is an evaluation of the potential for glare from the solar panels to impact air traffic providers and a Department evaluation of potential impacts resulting from the use of helicopters during construction. The applicant also evaluates the potential for glare from the solar panels to impact air traffic providers, which is discussed in this section. The tallest facility structures that may create an impact for public or private airports are the wind turbines with a maximum blade tip height of 496 feet and the met towers with a maximum height of 266 feet. The proposed 230 kV transmission lines associated with the UEC Cottonwood Route and BPA to Stanfield Route would be aboveground, on wooden H-frame or steel monopole structures approximately 100 to 140 feet tall and the aboveground portions of the collector lines for the wind and solar facility components may be up to 100 feet tall.

Potential Impacts to Airports/Navigable Airspace

The Department coordinated with the Oregon Department of Aviation (ODA) to determine which airports are located within the analysis area, the proximity of facility components to airports, potential obstructions to navigable airspace from tall facility structures, and to address any concerns ODA has regarding potential impacts to public and private providers of air traffic

safety.[253] Based on this consultation and data provided by the applicant, the Department generated Table 18: *Proximity of Proposed Facility Site Boundary and Components to Regional Airports*, below to illustrate the distance of facility components that may be a concern to airports.

Table 18: Proximity of Proposed Facility Site Boundary and Components to Regional Airports

Airport	UEC Transmission Line Site Boundary		Energy Facility Site Boundary	
	Distance (mi)	Direction[1]	Distance (mi)	Direction[1]
West Buttercreek	3.44	SSW	8.09	W
Eastern Oregon Regional, Pendleton	18.03	ENE	7.8-8.45[2]	ENE
Hermiston Municipal	5.79	ENE	10.2	NNW
Lexington	23.82	SW	26.01	WSW

Source: Department compiled with data provided by applicant and in consultation with Oregon Department of Aviation.

[1] Cardinal direction provided are the direction from site boundary/facility component location to the airport location.

[2] Applicant estimates distance from the site boundary to the Eastern Oregon Regional Airfield at Pendleton as 7.8 miles and Department GIS estimate is 8.45 miles.

ASC Exhibit U and ODA evaluated two airports that are closest to the proposed facility site boundary associated with the proposed UEC Cottonwood transmission line located in the northwest portion of the site boundary and the energy generating facility (wind and solar) which is located in the central/western area closer to Pendleton.[254] The West Buttercreek Airport is a private airfield located 3.4 miles southwest of the nearest transmission structures near the UEC Buttercreek substation, however, the nearest proposed wind turbine would be approximately 10 miles to the east of the airport. The other airport identified is the Eastern Oregon Regional Airfield at Pendleton, which is approximately 7.8 miles northeast of the site boundary where the closest proposed facility structures appear to be the 230-kV transmission structures associated with the BPA Stanfield line and wind turbines in the northern site boundary.[255]

Because facility components would exceed 200 feet in height, the proposed facility requires an airspace review by the Federal Aviation Administration (FAA) and ODA subject to the standards in Code of Federal Regulations (CFR): Title 14; Aeronautics and Space: PART 77—Safe, Efficient Use, and Preservation of the Navigable Space, specifically, all facility components are subject to

[253] OAR 345-001-0010(51)(i) designates the Oregon Department of Aviation as a reviewing agency for the EFSC review process.

[254] NHWAPPDoc3-7 NHWAPPDoc3-7 pASC Aviation comment 2020-03-12.

[255] NHWAPPDoc2-20 ASC Exhibit U. Public Services_2022-01-31, Section 3.2.2.6.

compliance with FAA Part 77.9 Construction or alteration requiring notice (a-d), FAA Part 77.17 Obstruction standards (a-b) and Obstruction Standards of OAR 738-70-0100. [256] To determine if new supporting facilities or structures more than 200 feet in height or within the FAA Part 77 Imaginary Surface threshold distances pose an obstruction to aviation navigation, the applicant must undergo airspace review by the FAA and ODA through submittal of a completed FAA Form 7460-1. The applicant maintains and based on review of ODA letters and understanding of FAA Form 7460-1 criteria the Department affirms, that there are not public use or military airports within 3.8 miles of the site boundary therefore, the need for a completed FAA Form 7460-1 is not triggered by the FAA Part 77 Imaginary Surface thresholds, but solely by the height of the facility component criteria. [257, 258]

The applicant indicates in ASC Exhibit U that it submitted the FAA form 7460-1 to the FAA in March of 2020, requesting a Determination of No Hazard to Air Navigation in order to allow the FAA and ODA to evaluate the effect of the proposed construction on air safety and navigable airspace. The applicant continues by explaining that a Determination of No Hazard to Air Navigation would be issued when the aeronautical study concludes that the proposed construction or alteration would exceed an obstruction standard (200 feet) but would not have a substantial aeronautical impact to air navigation. The Department highlights that according to the CFR Title 14 Chapter; Subchapter E Part 77 a future object would be an obstruction to air navigation if it is of greater height of 499 feet above ground level (AGL) at the site of the object or an object 200 feet or taller exceeds the FAA Part 77 Imaginary Surface threshold distances discussed above.[259] The tallest proposed facility components would be the wind turbines with a maximum total height of 496 feet, which is just below the 499 foot threshold. The ODA verified in an August 2021 letter that based their preliminary review of application materials and Department-complied data they; "… do not believe the proposed structures within the proposed micrositing corridor will result in any hazards to navigable airspace...At 496', the turbines will be just below the 499' threshold per Part 77 standards, which is less cause for concern as well. In addition, the "worst case" turbines appear to also be well outside the 3-nautical mile perimeter of nearby airports."[260]

[256] NHWAPPDoc5-1 ASC Reviewing Agency Comment_ODA_Aviation_Thompson 2022-02-17.

[257] FAA Part 77 Imaginary Surface thresholds:

- within 20,000 ft of a public use or military airport and exceed a 100:1 surface from any point on the runway of each airport with at least one runway more than 3,200 ft.
- within 10,000 ft of a public use or military airport and exceed a 50:1 surface from any point on the runway of each airport with its longest runway no more than 3,200 ft.
- within 5,000 ft of a public use heliport which exceeds a 25:1 surface.

NHWAPPDoc5-1 ASC Reviewing Agency Comment_ODA_Aviation_Thompson 2022-02-17.

[258] ASC Exhibit U states that the West Buttercreek Airport is a private field that the FAA does not evaluate, located approximately 3.7 miles from an existing, operating commercial wind power project. The West Buttercreek Airport is, however, included in the EFSC review of public and private providers of air traffic safety (airports).

[259] CFR. Title 14 Chapter I Subchapter E Part 77. PART 77 - SAFE, EFFICIENT USE, AND PRESERVATION OF THE NAVIGABLE AIRSPACE https://www.ecfr.gov/current/title-14/chapter-I/subchapter-E/part-77 Accessed 03-08-2022.

[260] NHWAPPDoc3-7 pASC Aviation comment 2021-08-03.

The applicant explains that an FAA Determination of No Hazard to Air Navigation may include conditional provisions, limitations to minimize potential problems, supplemental notice requirements, or requirements for marking and lighting, as appropriate. OAR 345-024-0015(6), discussed further in Section IV.P.2., *Cumulative Effects Standard for Wind Energy Facilities,* and in ASC Exhibit DD, requires the use of techniques to prevent casting glare from the site and the use of minimum lighting necessary for safety and security purposes, except as otherwise required by FAA and ODA. The applicant explains that the turbines would be marked and lighted only as necessary for safety and security purposes according to FAA standards (FAA Advisory Circular 70/7460-1L), but no other lighting would be used on the turbines. FAA standards detail the turbines and towers should be painted white or light gray, making them visible to pilots from the air.[261] Flashing red aviation lighting would be mounted atop turbines, and under current FAA standards, all of the lights would be programmed to flash in unison, so that all of the wind facility components would be perceived as a single unit by pilots flying at night. FAA lighting may also be required or recommended to be installed on the met towers, depending on the overall lighting scheme for the proposed facility, which would be determined by the FAA, ODA, the applicant and any participating agencies in the FAA commenting process, to be determined prior to operation and in consultation with FAA. The ODA indicates in its comment letter on the ASC that it may make recommendations for lighting of wind turbines and possibly transmission lines upon its under OAR 738-070-0060 of FAA Form 7460-1 Notice of Proposed Construction or Alteration.[262]

The applicant specifies that it would provide a record of all correspondence with FAA and ODA to the Department and EFSC no less than 30 days prior to construction, which would include FAA determinations from its review of the FAA Form 7460-1, and the applicant indicates that it would base the final lighting design on FAA recommendations.[263] To determine if any new or replaced supporting facilities or structures would pose an obstruction to aviation navigation and public or private providers of air traffic, ODA recommends and the Department affirms that the applicant would be required to first submit the FAA Form 7460-1 to ODA for review and comment, which meets the noticing requirements and ODA's review under OAR 738-070-0060.[264] Further, as described in ASC Exhibit E (Permits) the applicant lists that it would submit a Supplemental Notice of Actual Construction or Alteration Form 7460-2, which is a form submitted to the FAA that must be filed within five days after construction reaches its greatest height as specified in the No Hazard Determination (result of the FAA review of the FAA Form 7460-1).

To ensure that proposed facility construction and operation would not be likely to impact private and public air traffic (airport) providers from impacts to navigable airspace from the taller facility components, and to reflect the applicant-representations for FAA coordination,

[261] NHWAPPDoc2-29, ASC Exhibit DD, 2022-01-31, Section 4.6.

[262] NHWAPPDoc5-1 ASC Reviewing Agency Comment_ODA_Aviation_Thompson 2022-02-17.

[263] NHWAPPDoc2-20 ASC Exhibit U. Public Services_2022-01-31, Section 3.2.2.6 and NHWAPPDoc2-29, ASC Exhibit DD, 2022-01-31, Section 4.6.

[264] NHWAPPDoc5-1 ASC Reviewing Agency Comment_ODA_Aviation_Thompson 2022-02-17.

documentation and required facility lighting, the Department recommends Council impose the following condition:

> **Recommended Public Services Condition 3 (PRE)**: Prior to construction of the facility, facility component or phase, as applicable, the certificate holder shall submit 7460-1 Notice of Proposed Construction or Alteration Forms for all new or replaced supporting facilities or structures that meet the height and imaginary surface criteria for notice to FAA and ODA. Provide copies of FAA determinations and ODA comments to the Department.
>
> **Recommended Public Services Condition 4 (CON):** Within five-days after construction of facility components evaluated in the FAA Form 7460-1 reach their greatest height as specified in the FAA determinations listed in Public Services Condition 3(b), the certificate holder shall submit 7460-2 forms to FAA and Aviation and shall report both timing of submission and any results to the Department.
>
> **Recommended Public Services Condition 5 (OPR):** During facility operation, the certificate holder shall operate the facility in compliance with FAA required lighting for facility wind turbines, met towers, and transmission line(s).

Potential Impacts from Solar Panel Glare

Solar facility components would not meet the height or imaginary surface criteria necessitating notice to the FAA and ODA via the Form 7460-1.[265] ASC Exhibit U, Attachment U-4 is *A Glare Analysis Report* that assesses the potential for glare impacts on nearby airports (and on vehicular traffic). To support the conclusion that a Form 7460-1 is not necessary for the solar facility components, the applicant's consultant used the online FAA Notice Criteria Tool to identify whether a proposed structure is in proximity to a jurisdictional air navigation facility and to identify the final approach flight paths that may be considered vulnerable to a proposed structure's impact on navigation signal reception. The Glare Analysis is based upon the FAA's 2010 Technical Guidance for Evaluating Selected Solar Technologies on Airports and 2018 regulatory guidance under 78 Federal Register 63276 Interim Policy, FAA Review of Solar Energy System Projects on Federally Obligated Airports.[266] The FAA guidance documents recommend that glare analyses should be performed on a site-specific basis using the Sandia Laboratories Solar Glare Hazard Analysis Tool (SGHAT), which was completed by the applicant's consultant. SGHAT technology was used as part of an online tool (GlareGauge) developed by Sandia National Laboratories. The Glare Analysis includes two vehicular traffic routes from 12 observation points; where Analysis 1 represents the point of view from an average first floor residential/commercial structure and typical commuter car, and Analysis 2 represents the point

[265] The Department points that the ODA and FAA may evaluate the solar facility components upon its review of the Form 7460-1 designated in Recommended Public Services Condition 3.

[266] The Department confirms that these are the most recent technical and policy guidance documents on this matter from the FAA.

of view from an average second floor residential/ commercial structure and typical semi-tractor trailer truck. Analysis 3 focused on modeling the airports; the four, 2-mile final approach flight paths associated with Eastern Oregon Regional Airport at Pendleton and the two, 2-mile final approach flight paths associated with West Buttercreek Airport.[267] All three analyses included 18 separate "PV Array Areas," which were segmented polygons generally representative of the proposed solar facility layout, because, the applicant explains, segmentation of the solar facility layout allows GlareGauge to represent potential ocular impacts more accurately as a result of the operation of the proposed solar facility.[268] Section 5.0 of Attachment U-4 includes other conservative assumptions inputted into the Glare Analysis. Table 19: *Glare Analysis Result Summary*, below provides a summary of the three analyses conducted in ASC Exhibit U, Attachment U-4.

Table 19: Glare Analysis Result Summary

Analysis No.	OP Height (feet)	Route Height (feet)	Total Green Glare Predicted (annual minutes)[1]	Total Yellow Glare Predicted (annual minutes)	Total Red Glare Predicted (annual minutes)	Total Glare Predicted (annual minutes)	Total Potential Glare Percentage of Annual Daylight Hours[2]
1	6	5	0	1967	0	1967	0.75
2	16	9	0	2136	0	2136	0.81
3	-	Variable (flight paths)	0	0	0	0	0

[1.] Total annual daylight minutes equal approximately 262,800.
[2.] Total annual daylight hours equal approximately 4,380
Source: NHWAPPDoc2-20 ASC Exhibit U. Public Services_2022-01-31, Attachment U-4, Table 7.

The vehicular Analyses 1 and 2 predicted yellow glare at the modeled road receptor CR-1350-1 with .75 percent and .81 percent, respectively, of annual daylight hours primarily during the early morning and late evening hours (5:00-6:00 a.m.).[269] The applicant continues in explaining that this is a conservative total because, in general, tracking and backtracking of the panels would occur at a slower pace than assumed by GlareGauge therefore would result in significantly less glare experienced than predicted. The Glare Analysis also assumed there was

[267] At the request of the Department/ODA, the applicant included the West Buttercreek Airport in the Glare Analysis although it is not Federally Obligated Airports but is a private air traffic service provider in the EFSC process.
[268] NHWAPPDoc2-20 ASC Exhibit U. Public Services_2022-01-31, Attachment U-4, Section 4.0.
[269] NHWAPPDoc2-20 ASC Exhibit U. Public Services_2022-01-31, Attachment U-4, Section 3.0. Red glare: glare predicted with a potential for permanent eye damage (retinal burn); Yellow glare: glare predicted with a potential for temporary after-image; Green glare: glare predicted with a low potential for temporary after-image.

no vegetative blocking from the road to the segmented panels, yet at these areas there is vegetation and buildings.

The aviation Analysis 3 did not predict glare at any of the 2-mile final approach paths of either airport. This includes no potential for glint or glare in the existing or planned pilots and/or air traffic control facilities and no potential for glare or "low potential for after-image" along the final approach path for any existing landing threshold or future landing thresholds as shown on the current FAA-approved Airport Layout Plan, which are the criteria that would necessitate the submission of Form 7460-1 to the FAA for the solar facility components.[270] Based upon the Department's review of the applicant's Glare Analysis, the Department recommends Council find that it would not be likely that there would be potential impacts to public and private air traffic providers (airports and pilots) due to the construction and operation of the solar facility components. The Department highlights that under Recommended Public Service's Conditions 3 and 4, the applicant would submit a FAA Form 7460-1 first to ODA for review and comment, which could include an ODA evaluation of solar facility components and then would submit the Form 7460-1 to FAA which would include any facility components that must be reviewed by FAA.

Potential Impacts from Helicopter Use During Construction

Potential impacts to public or private providers of air traffic services could result by the applicant-proposed helicopter use during construction. In ASC Exhibit U and L, the applicant explains that if the 23.3-mile UEC Cottonwood route is selected for the 230-kV transmission line, it would have to be strung across I-84, as shown in the northwest corner of Figure 411*: Preliminary Construction Transportation Routes*, in the Traffic Safety Section. To facilitate the spanning of I-84 to connect both sides of the 230 kV transmission line, structures would be placed on either side of I-84 and a helicopter would be used to fly the lines across.[271] There would be five lines including the grounding wire, each flown over and secured individually. Further, as indicated in ASC Exhibit J and additional information provided to the ASC, if the 5-mile 230 kV Bonneville Power Administration (BPA) Stanfield transmission line is selected it would likely span the Umatilla River using BPA specifications and standard practices to install the transmission line which could include spanning with a helicopter.[272] The location of the Umatilla River crossing/spanning is provided in ASC Exhibit C, Figure C-4.13.

Helicopter use during construction of the facility has the potential to intersect with flight paths in and out of public and private airports within the analysis area. The applicant indicates that construction-related helicopter use related to the I-84 crossing would occur over a few hours in

[270] NHWAPPDoc2-20 ASC Exhibit U. Public Services_2022-01-31. Attachment U-4, Section 2.0 and 7.0. The final approach path is defined as 2 miles from 50 feet above the landing threshold using a standard three-degree glidepath.

[271] NHWAPPDoc2-20 ASC Exhibit U. Public Services_2022-01-31, Section 3.2.2.6; and NHWAPPDoc2-11 ASC Exhibit L. Protected Areas_2022-01-31, Section 4.2.

[272] NHWAPPDoc2-30 ASC Additional Information Package Exhbs B, M,O J, U, DD 2022-03-04; NHWAPP ASC Applicant Responses to ODOE RAI's Exhbs B, M,O J, U, DD, Additional Info.

one day, and that this work would be coordinated with ODOT and conducted in accordance with provisions of the applicable Permit to Occupy or Perform Operations Upon a State Highway. The applicant explains in ASC Exhibit U, that the applicant's construction contractor would implement BMP's to minimize impacts from construction-related traffic which include notification to landowners prior to the start of construction near residences. To reduce the potential for construction-related helicopter traffic to impact airports, the Department recommends Council include the following revisions to the traffic BMP's be incorporated into the Draft Traffic Management Plan recommended under Public Services Condition 1:

- Notifying landowners prior to the start of construction near residences, including residences within one mile of the site boundary where helicopters would be used for construction.
- Notify airports within 10 miles of the site boundary of construction-related helicopter use.

Based on the findings of fact, conclusions of law, and compliance with the above recommended condition, the Department recommends Council find that the proposed facility would not be likely to result in significant adverse impacts on the ability of public and private air traffic service providers to provide service.

IV.M.7. Police Protection

Construction of the proposed facility could result in impacts to police protection providers due to increased activity at the site and increased population and traffic from temporary workers. As presented in ASC Exhibit U, and also discussed above, the applicant anticipates there to be an average of 140 construction workers on site during the 6-18-month construction period with a maximum number of workers during peak construction months that would not be more than 500 people. Of these, the applicant estimates that 30 percent (42 workers during average construction periods and 150 workers during peak construction summer months) of workers would be hired locally and 70 percent of workers (98 workers during average construction periods and 350 workers during peak construction) would be from out of state or would not live locally and would temporarily relocate to the area. Potential impacts from the increase in workers and truck deliveries commuting from outside of the analysis area, during peak worker levels, could include traffic safety risks and an increase in traffic on the roads within the analysis area. Even if all workers temporarily relocated to the analysis area and none were hired locally, the Department recommends that the measures below that address concerns of safety impacts would minimize potential impacts to law enforcement agencies within the analysis area.

There may also be an increase in theft associated with access to construction materials at the site. As described in Section III.A.2., *Related or Supporting Facilities*, during construction the applicant would establish one, 27-acre temporary staging area adjacent to the northern substation location, O&M building, and solar site. The staging area would contain field construction offices, be used to store construction supplies and materials and construction equipment when not in use. Temporary batch plants may be located and used at the temporary staging area and facility components may be assembled within the area as well. To ensure

safety at the staging area and to prevent access by the public and theft, the applicant states that the area would be temporarily fenced and would have on-site security staff and have signage marked as private, with no trespassing.[273] Further, the proposed O&M Building, substations, solar array, battery energy storage system (BESS), and construction yards would be within fenced enclosures, either enclosed individually or within the larger solar siting area fence line. The solar array enclosure will have at least two gates allowing for emergency vehicle access.[274]

The applicant explains that typically turbine and tower components would be delivered directly to each turbine site rather than being received and stored at the construction yards. The site would be temporarily fenced, would be signed as private, with no trespassing and the applicant would have on-site security staff.[275] In addition to the central temporary staging area, 8 to 11 smaller temporary staging areas (less than 1,000 square feet each) would be distributed throughout the proposed site to support construction.

The applicant explains that the primary law enforcement provider that serves the proposed facility site would be the Umatilla County Sheriff's Office. The applicant includes a September 2018 letter from the Umatilla County Sheriff as ASC Exhibit U, Attachment U-3, in which the Sheriff indicates states they do not see any significant impact to their law enforcement services in the area. Other law enforcement/police protection services in the analysis area include the cities of Hermiston and Stanfield which have their own police departments, but they would not likely respond to an emergency event at the site. Additional law enforcement service is available through the Oregon State Police (OSP), which also has offices in Hermiston and Pendleton. As discussed in the following Section IV.M.7, *Fire Protection*, the applicant proposes and the Department recommends measures to reduce potential impacts to service providers from fires at the proposed facility by recommending the finalization and adherence to a Fire Prevention, Suppression and Emergency Management Plan under Public Services Conditions 7 and 8. In addition to measures that would reduce fire emergencies the Plan also includes measures to address other safety emergencies where the County Sheriff or other law enforcement might be called onsite, therefore, these measures could also reduce any potential impacts to law enforcement providers in the analysis area.

Proposed facility operations would not be likely to impact law enforcement providers. The applicant estimates approximately 10 to 15 workers would be necessary to operate the proposed facility.[276] Some outside contractors may also be required periodically for specialized maintenance tasks, such as turbine inspections, or the repair of nacelles or meteorological equipment. However, it is not anticipated that these workers would increase the security needs

[273] NHWAPPDoc2-1 ASC Exhibit B. Project Desc_2022-01-31, Section 7.7 and NHWAPPDoc2-29 ASC Exhibit DD. Specific Standards_2022-01-31, Section 3.1.
[274] NHWAPPDoc2-29 ASC Exhibit DD. Specific Standards_2022-01-31, Section 3.1.
[275] NHWAPPDoc2-1 ASC Exhibit B. Project Desc_2022-01-31, Section 7.7; and NHWAPPDoc2-29 ASC Exhibit DD. Specific Standards_2022-01-31, Section 3.1.
[276] NHWAPPDoc2-20 ASC Exhibit U. Public Services_2022-01-31, Section 3.2.1.2.

from operation of the proposed facility or impact the ability of the Sheriff's Officer to be able to provide law enforcement services during operations.

Based on the evaluation and findings provided above, the Department recommends Council find that the construction and operation of the proposed facility would not be likely to impact law enforcement providers from providing service within the analysis area.

IV.M.8. Fire Protection

Construction and operation of the proposed facility could result in impacts to fire protection providers within the analysis area due to increased fire risk from and to the proposed facility, which are discussed below. The proposed facility would be located in a high-risk zone for wildland fires.[277] Proposed facility components including the wind turbines, solar array, transmission line and the battery storage system could result in health and safety impacts from unanticipated fire and electrical hazards. Findings of compliance of how the applicant has demonstrated the ability to design, construct and operate the proposed facility in compliance with site certificate conditions and in a manner that protects public health and safety are provided in Section IV.C., *Organizational Expertise*, and measures recommended to design, construct and operate the proposed facility to preclude structural failure of the tower or blades that could endanger the public safety and safety devices and testing procedures designed to warn of impending failure and to minimize the consequences of such failure are provided in Section IV.P.3., *Public Health and Safety Standards for Wind Facilities*.

Construction-related fire risks include accidental fires caused by metal cutting and welding used to construct the steel reinforcing cages for foundations.[278] Additional construction-related fire hazards could result from workers smoking and vehicle and equipment refueling, and operating equipment off roadways in areas of tall dry grass that could ignite upon contact with hot vehicle parts, particularly in dry seasons. ASC Exhibit U provides a summary of the best management practices (BMPs) that would be implemented during construction to reduce the potential for construction-related fires. The Department compiled these BMP's into a Draft Fire Prevention, Suppression and Emergency Management Plan included as Attachment U-2 to this order. Some of these BMP's include:

- Keeping water trucks on-site to keep the ground and vegetation moist during extreme fire conditions.
- Plan and manage the work and the movement of vehicles. No off-road driving would be done while working alone.
- Smoking would only be allowed in designated smoking areas in the site boundary.
- Each vehicle used on-site would have a fire extinguisher of sufficient type and capacity to suppress small fires around vehicles.

[277] April 2021 letter from Echo Rural Fire Protection District NHWAPPDoc2-20 ASC Exhibit U. Public Services_2022-01-31, Attachment U-3.
[278] NHWAPPDoc2-20 ASC Exhibit U. Public Services_2022-01-31, Section 3.2.2.8.

- Prior to start of construction work activities, contact local fire department(s) and advise them of work type, location, and probable duration.

The risks of fires igniting during operation of the proposed facility would vary depending on the type of operating facility component. As noted above, there would be the potential for electrical fires from electrical equipment associated with the wind turbines, solar modules, transmission lines, and the lithium-ion batteries associated with the Battery Energy Storage System (BESS), which are discussed further below:

- Wind turbines: The applicant explains that fires within wind turbines generally occurs from improper maintenance or electrical malfunction. Fires could also be caused by mechanical or electrical factors or by lightning strikes.
- Solar panels and BESS: Electrical equipment associated with the solar and BESS could short-circuit and generate sparking, which could cause fires. The chemicals used in lithium-ion batteries are generally nontoxic but do present a flammability hazard because these batteries are susceptible to overheating and typically require cooling systems dedicated to each BESS enclosure, especially at the utility scale such as the proposed facility.
- 230 kV transmission lines and 34.5 kV collector system: The applicant acknowledges that potential fires from the transmission and collector lines may occur from improper maintenance of electrical equipment. Other known fire risks associated with transmission lines that Council has reviewed are associated with improper vegetative maintenance around transmission lines.[279]

ASC Exhibit U explains that there are several fire protection agencies within the analysis area including the Echo Rural Fire Protection District, Pilot Rock Rural Fire Protection District, Oregon Department of Forestry Pendleton Unit, Umatilla County Fire District #1, the Stanfield Fire District, the City of Pendleton Fire Department, and the Heppner Rural Fire District in Morrow County, however, the Umatilla County Fire District #1 and Echo Rural Fire Protection District (Echo RFPD) are the fire protection service providers that would serve the proposed facility in case of a fire emergency.[280]

ASC Exhibit U, Attachment U-3 includes correspondence from the Umatilla County Fire District #1 and Echo Rural Fire Protection District. The letter from Echo RFPD indicates that they do not have concerns about the facility and that they would respond to any fires or provide initial emergency medical responses if required, however they do not provide high angle rescues nor confined space rescues. Echo RFPD indicates that the applicant would conduct a site orientation

[279] BSPAPP Final Order 2020-04-24. Bakeoven Solar Project Final Order, Section IV.E. Land Use; and IV.M. Public Services.

[280] ASC Exhibit U, Section 3.2.2.8 explains that the proposed facility site is also within the Pilot Rock Rural Fire Protection District which, as of July 2018, merged with the Umatilla County Fire District #1 and that because the majority of the site is outside the city limits of the city fire departments any emergency fire response will likely be by Umatilla County Fire District #1 and the Echo Rural Fire Protection District, and any assistance by another fire department will be in the service of one of these districts.

session prior to or as soon as possible once operations begin and that, to minimize fire risks to and from the proposed facility, Echo RFPD requests a 100-foot vegetation free zone be maintained around facility structures. As described in Section III.A.1., *Energy Facility* and in ASC Exhibit B, Figure B-4, the applicant maintains there would be an 82-foot diameter permanent disturbance area around each wind turbine which would largely be made up of the turbine foundations. The proposed solar array facility area would be enclosed in a fence line and vegetation would be managed to reduce burnable vegetation. Further described in Section III.A.2., *Related or Supporting Facilities*, the O&M building, BESS, and substations would be located within permanent impact areas surrounded by gravel which would reduce risks of fire from the facility or outside fires impacting these facility components.

ASC Exhibit U also includes a letter from the Umatilla County Fire District #1 (UDFD #1) who would be the Ambulance Service Area (ASA) provider supplying ambulance transport service for the western half of the proposed facility site boundary. UDFD #1 also indicates they have automatic and mutual aid agreements for emergency response with all the surrounding fire districts and expects that daily operations would have minimal impact on their operations, yet requests the applicant provide them site safety and emergency response plans when those are updated/developed and implemented. The measures raised by the fire districts and the applicant; onsite training, vegetative clearance areas with a non-combustible base around structures, and being provided copies of fire and safety plans, would reduce potential impacts to these service providers because they would reduce the risk of fires originating and impacting the facility, and would improve fire district personnel training and knowledge of the site and safety programs. Facility design measures are also represented by the applicant as described in the proposed facility description in Section III. To minimize the impacts to fire protection service providers that would serve the proposed facility site, the Department recommends the training requests raised by the fire districts, be included, apply to both fire districts, and be imposed under the following Recommended Public Services Condition 6 and under Recommended Public Services Condition 7, discussed further below.

> **Recommended Public Services Condition 6 (PRO):** Prior to operation the certificate holder shall contact the Echo Rural Fire Protection District (Echo RFPD) and Umatilla County Fire District #1 (UDFD #1) to schedule an on-site orientation to review facility layout and safety procedures.

The applicant provided measures to avoid, minimize and mitigate the potential for fires and other safety risks during proposed facility operation are discussed in ASC Exhibits B, D, U, and DD. There are specific measures that apply to certain facility components, which are discussed below, however, the applicant also discusses design measures and features for roads and the Supervisory Control and Data Acquisition (SCADA) system that relate to the proposed facility as a whole and to wind and solar facility components.

As discussed in Section III.A.2., *Related or Supporting Facilities*, 43 miles of new permanent access roads and 19 miles of road improvements would be built during construction for the operation of the wind facility. Approximately 18 miles of new permanent access roads would be

constructed to access the solar array, BESS, and O&M building within the permanent solar siting area fence line.[281] Temporary access roads to the wind turbines would be widened to 82 feet to accommodate crane paths, cut and fill slopes, and any necessary drainage or erosion control features. However, following turbine construction, site access roads would be narrowed for use during operations.[282] Permanent access roads for the wind and solar facility components would be 16 to 20 feet wide with an internal turning radius of 28 feet and less than 10 percent grade to provide access to emergency vehicles, in accordance with 2019 Oregon Fire Code requirements, including Section 503 and Appendix D - Fire Apparatus Access Roads. All newly constructed and improved site access roads would be graded and graveled to meet load requirements for heavy construction equipment, as necessary.[283]

The Supervisory Control and Data Acquisition (SCADA) system consists of fiber optic and copper communication lines that would connect the turbines, met towers solar array, BESS, and substations to a central control computer at the O&M building. The fiber optic lines that connect the components are strung with collector lines either above ground or buried. This system monitors facility components and the met tower data for variables such as meteorological conditions, critical operating parameters, and power output, and allows each component of the system to be monitored and controlled, even remotely, for activity in present time. If an issue occurred with a wind turbine or solar string, it would alert the O&M staff so that the component can be shut down to minimize consequences of failure, fires, and potential safety risks. In the event there is an anomaly with a facility component observed by the SCADA system or during an inspection, the applicant would coordinate with the original equipment manufacturer (i.e., OEM) and further inspection may be carried out by subject matter experts to determine root cause and resulting action required to rectify the issue.

The applicant represents measures that would reduce the risk of fire during operation that is specific to each facility component are listed below, which the Department also compiled into Attachment U-2, a draft Fire Prevention, Suppression and Emergency Management Plan recommended under Public Services Conditions 7 and 8, below.

Wind Turbines:

- The risk of turbine fires would be minimized through proper maintenance of the turbine and its critical mechanical and electrical components. Turbine towers and blades are regularly inspected during annual turbine maintenance activities. These inspections include all turbine related components for irregular wear and may be supplemented with further repair as needed.
- Turbine models considered would be equipped with internal fire suppression systems in the nacelles.

[281] NHWAPPDoc2-1 ASC Exhibit B. Project Desc_2022-01-31, Section 7.6.

[282] NHWAPPDoc2-29 ASC Exhibit DD. Specific Standards_2022-01-31, Section 4.1.

[283] NHWAPPDoc2-1 ASC Exhibit B. Project Desc_2022-01-31, Section 5.0.

- Lightning protection systems would be built into the turbine blades and tower to electrically ground the entire structure and to eliminate the potential for lightning-caused fires.
- Wind turbines contain fully independent braking systems and emergency shutoff devices safety features designed to provide increased fire protection.
- Turbines and their foundations are regularly inspected during monthly operating rounds and regular annual turbine maintenance activities. Operating rounds would consist of a visual assessment of turbine foundations and the materials connecting the turbine to the foundation, as well as observation of SCADA data that provide insight into how the turbine structural components would withstand the stresses applied to them.
- Annual turbine maintenance would include inspections on turbine components, lubrications and replacement of worn parts as necessary.

Transmission lines, 34.5 kV collector system, and substation:

- Proper maintenance and safety checks.
- Substations, collector lines, and other electrical connections will be built to National Electrical Safety Code standards. All collector and transmission lines will be constructed according to National Electrical Safety Code (NESC) standards.

Solar panels and BESS:

- Proper installation and maintenance of electrical equipment would prevent short-circuits and consequent sparking.
- Vegetation management to reduce the chance of fire spreading.
- The solar array would have shielded electrical cabling, as required by applicable code, to prevent electrical fire.
- Vegetation near and under solar panels may be mowed periodically, and weeds would be managed in accordance with the weed management procedures described in the Revegetation Plan (discussed further in Section IV.H., *Fish and Wildlife Habitat*)
- Electrical equipment would meet NESC standards reducing significant fire risk.
- The areas immediately around the O&M Building, substations, and BESS would be graveled, with no vegetation present.
- The batteries would be contained in completely leak-proof modules and stored upon a concrete pad.
- Transportation of lithium-ion batteries is subject to 49 CFR 173.185 – Department of Transportation Pipeline and Hazardous Material Administration. This regulation contains requirements for prevention of a dangerous evolution of heat; prevention of short circuits; prevention of damage to the terminals; and prevention of batteries coming into contact with other batteries or conductive materials.
- Adherence to the requirements and regulations, personnel training, safe interim storage, and segregation from other potential waste streams will minimize any public hazard related to transport, use, or disposal of batteries.
- The following design practices would apply to the proposed facility:

    - Use of lithium-ion phosphate battery chemistry that does not release oxygen when it decomposes due to temperature;
    - Employment of an advanced and proven battery management system;
    - Qualification testing of battery systems in accordance with UL 9540A (UL 2018);
    - Installation of fire sensors, alarms, and clean agent-based fire extinguishing systems in every battery container (e.g., FM200, Novec 1230);
    - Installation of deflagration venting and/or sacrificial deflagration panels per National Fire Protection Association standards 68 and 69 (NFPA 2020);
    - Installation of remote power disconnect switches; and
    - Clear and visible signs to identify remote power disconnect switches.

In an additional information package to the ASC, the applicant provided Table of Contents (TOC) documents extracted from its existing operational Emergency Management Plans, one from a wind facility and one from a solar facility. The TOCs outline procedures to reduce safety risks, including fire emergencies, the applicant applies to existing facilities and that would apply to the proposed facility, which the Department includes in Attachment U-2, the draft Fire Prevention, Suppression and Emergency Management Plan recommended under Public Services Condition 7 and 8, below. Some of these fire and emergency safety measures are:

- Hazard, Risk, Vulnerability Assessment (HRVA)
- Training and Exercises
- Site status reports to maintain the Plan
- Emergency Responses which include notice, alarms, and public information
- Tactical Response Procedures (TRPs) for
    - Structure fires
    - Evacuations
    - Medical emergencies
    - Severe weather (Tornado, Earthquake, Flood)
    - Wind turbine rescue
    - Prolonged equipment outage
- Emergency Contact information and responses
- On-site emergency equipment

The actions the applicant proposes to reduce potential risks of fire and other safety emergencies would reduce impacts to fire service providers because, if properly maintained and implemented, they would avoid emergencies that would require fire department resources and response. To ensure that these measures are applied during construction and operation of the proposed facility and to reduce impacts to fire service providers, the Department recommends these measures be included in a draft Fire Prevention, Suppression and Emergency Management Plan included in this order as Attachment U-2, recommended in the following conditions. The Department understands that it is likely that the applicant or its

construction contractor[284] may have its own Fire Prevention, Suppression and Emergency Management Plan, which may be provided if it, at a minimum includes the provisions in the draft Fire Prevention, Suppression and Emergency Management Plan, Attachment U-2.

Recommended Public Services Condition 7 (PRE): Prior to construction of the facility, or facility component the certificate holder shall:

a. Finalize and submit to the Department a Fire Prevention, Suppression and Emergency Management Plan which shall include at a minimum the provisions included in Attachment U-2 of the Final Order on ASC.
b. Submit copies of the Final Fire Prevention, Suppression and Emergency Management Plan to the Echo Rural Fire Protection District (Echo RFPD) and Umatilla County Fire District #1 (UDFD #1).

Recommended Public Services Condition 8 (OPR): During operation the certificate holder shall operate the facility consistent with the provisions in the Final Fire Prevention, Suppression and Emergency Management Plan, as approved in Public Services Condition 7**.** If substantive updates or changes are made to the Plan, submit copies of the updated Plan to the Department and to the Echo Rural Fire Protection District (Echo RFPD) and Umatilla County Fire District #1 (UDFD #1).

Based on the findings of fact and analysis provided above and compliance with the above-recommended Public Services Conditions, the Department recommends Council find that the construction and operation of the proposed facility is not likely to result in significant adverse impacts to the ability of fire protection service providers to provide fire protection services.

IV.M.9. Housing

Potential impacts to public and private housing providers could result if there were an inadequate supply of housing in relation to the demand from the new temporary and permanent residents (workers) associated with the construction and operation of the proposed facility. Examples of public housing providers would be government provided housing, and potentially subsidized
housing for low-income people and through a variety of government loans and other incentives. It is not anticipated that temporary or permanent workers associated with proposed facility would use public housing. Examples of private housing options are motels, hotels, trailer or RV parking areas or campgrounds, or house, room or apartment rentals.

Construction

[284] For instance, ASC Exhibit G includes Attachment G-1: Draft Spill Prevention, Control, and Countermeasures Plan (SPCC Plan), which Section 3.0 requires that each construction contractor is required to develop a Contractor's Emergency Response Plan for environmental emergency preparedness and response, which includes measures for emergency response and fire-fighting equipment. To reduce redundancy, the same Emergency Response Plan required in the SPCC Plan may be provided to comply with Recommended Public Services Conditions 7 and 8.

The applicant anticipates that during the 6–18-month construction period 140 workers would be needed on average and during peak construction approximately 500 workers could be necessary. Of these, the applicant estimates and the Department concurs that 30 percent of these workers (42 during average construction periods and 150 during peak construction summer months) would be hired locally from Umatilla County, potentially from the communities of Pendleton, Hermiston, Stanfield, Umatilla, Echo, and Pilot Rock. This leaves 70 percent of workers (98 during average construction periods and 350 during peak construction) that would temporarily relocate from out of state or other areas in Oregon to the vicinity of the proposed facility for the construction period duration. The 98-350 workers would likely seek housing options within the larger communities of Pendleton, Hermiston and Umatilla.[285]

Demand for temporary housing (hotels RV and RV camping) is generally greatest during the tourism season in the summer months, which is also the anticipated busiest construction season to construct the proposed facility. The applicant explains that according to the American Hotel and Lodging Association, hotels in the Oregon 2nd Congressional District, which includes Umatilla and Morrow counties, have an average of 60 rooms per hotel, they then use this average to estimate that Umatilla and Morrow counties have approximately 1,800 hotel and motel rooms available at any given time. The applicant describes that, based on data from the Oregon Tourism Commission, the average hotel and motel occupancy rate during the month of August 2019 in Eastern Oregon (comprising 11 counties, including Umatilla and Morrow counties) the occupancy rate was 73 percent. The year-to-date occupancy rate includes the slower seasons and averages year-round occupancy rates for 2019 was 59.1 percent for the Eastern Oregon region. The Department reviewed more recent data from the Oregon Tourism Commission which listed the occupancy rate from March 2021 to February 2022 (12 months) for the Eastern Oregon Region as 61.8 percent.[286] Using the highest August of 2019 occupancy rate of 73 percent, and the estimated average of 1,800 hotel and motel rooms, to provide a worst-case occupancy/vacancy rate for hotel rooms for construction workers, there would be approximately 486 rooms available. Using the 2022, 12-month occupancy rate of 62 percent, this would leave approximately 684 hotel and motel rooms available. Under the maximum occupancy estimate and average annual occupancy estimate, for hotels and motels alone, this housing option would be able to house the 350 workers estimated to need temporary housing. If there were no workers hired locally and all workers needed temporary housing, under worst-case peak summer occupancy, housing all 500 workers solely in hotels and motels create an inadequate supply of housing. However, there are other housing options available as discussed below, the Department also highlights that the applicant did not evaluate the possibility of privately owned homes or apartments that could be rented as short-term vacation rentals (i.e. Airbnb).

[285] NHWAPPDoc2-20 ASC Exhibit U. Public Services_2022-01-31, Section 3.2.2.5.

[286] Oregon Tourism Commission. Statewide-Lodging-Performance-Statistics-for-February-2022-v2. Accessed and downloaded on 03-32022. https://industry.traveloregon.com/wp-content/uploads/2022/03/Statewide-Lodging-Performance-Statistics-for-February-2022-v2.pdf

The applicant also evaluated the presence of RV parks, campgrounds or other areas where workers could park mobile housing, stating that over 20 RV parks in Umatilla and Morrow counties.[287] However, the Department conducted a preliminary desktop review using the Google Maps to located RV parks in only Umatilla County yielded over 30 RV parks and campground where RV trailers could park, the spaces of these parks varied widely from 7 sites to over 50. Occupancy during the summer months at these sites would be higher than during the rest of the year, but it would be anticipated a that some occupancy would be available to accommodate some workers that would travel with an RV or similar trailer.

The applicant provides an evaluation of longer-term rentals such as a house or apartment that may be occupied by temporary workers, especially those who would work for 12-18 months during construction. The applicant explains that the US Census Bureau estimates the number of vacancies by calculating rental units as a percentage of total vacant housing units, which is based on the ratio of renter-occupied dwellings to owner-occupied dwellings. Using this method and 2017 Census data, the applicant estimates that 1,185 housing units would be available for rent in Umatilla County. The Department does not anticipate a large portion of the temporary workforce to secure long term housing or apartment rentals, although this is an option for workers.

Based on the availability of hotels, motels, RV parks and campgrounds, and house or apartment rentals within Umatilla County, the Department recommends Council find there to be sufficient housing available for the 70 percent of workers (350 workers) that would travel to the vicinity for the construction of the proposed facility. Further, if zero percent of workers were hired locally and all workers traveled from outside the analysis area, which is not likely, the Department also anticipates there to be sufficient housing options for the maximum number of temporary workers. The Department recommends that construction of the proposed facility would not adversely impacts the ability of public and private providers of housing to provide their services.

Overlapping Regional Construction Projects Impact on Housing

In ASC Exhibit U, the applicant provides a discussion of other EFSC jurisdictional facility that have been approved, are currently under review by EFSC, or are under construction within Umatilla or adjacent counties. The applicant provides estimated number of temporary workers that would be needed for each project and the Department anticipates that if all or several of these projects were to be constructed simultaneously or with overlapping construction periods, this could strain the housing supply in the analysis area. Whereas the impact assessment for the proposed facility under the Council's Public Services standard for housing is focused on this ASC, there could be external circumstances that could create an inadequate supply of housing in the analysis area during the construction period of the proposed facility. These circumstances include simultaneous or overlapping construction of other EFSC energy facilities, as well as other local government or private sector construction projects during summer months when it

[287] NHWAPPDoc2-20 ASC Exhibit U. Public Services_2022-01-31, Section 3.2.2.5.

is also peak tourist season. In these circumstances there could be a measurable impact on the housing sector, where there could be an inadequate supply of housing to accommodate all temporary workers within the analysis area and surrounding communities. Potential impacts from an inadequate supply of housing for temporary workers staying within the area to work on the proposed facility, and other construction projects could be that workers may stay in illegal or inappropriate locations. For instance, if RV parks or all hotel rooms are full, workers may park and stay their RVs or cars in neighborhoods or other local areas which may have law enforcement or waste issues. These types of issues could implicate the County to respond.

To address the circumstances where several overlapping construction projects in one County impact the availability of housing, and where a County could be left responsible to respond to the issue, the Department offers the following pathway as a potential solution for the issue. Section IV.E. *Land Use*, states that the applicant elects to have the Council make the land use determination under ORS 469.504(1)(b) and OAR 345-022-0030(2)(b) for the proposed facility. Under this Section, the Department recommends the proposed facility, subject to site certificate conditions, complies with applicable substantive criteria from Umatilla County, applicable Land Conservation and Development Commission (LDCD) administrative rules and goals, and that an exception be granted to statewide planning goal 3. Because the applicant requests Council review of local applicable substantive criteria, as is allowed under ORS 469.504(1)(b), if approved, Umatilla County may not impose any additional conditions following Site Plan Review or in issuance of a Conditional Use Permit because pursuant to OAR 469.401(3), the County is obligated to issue any necessary permits, following proper submission of application and fees, without hearing or other proceedings, and subject only to the conditions set forth in the site certificate. However, OAR 660-033-0130 under (LCDC rules) governs the minimum standards appliable to permitted and conditional uses including power generating facilities and wind power generating facilities and contemplates the need for on-site and off-site facilities for temporary workforce housing for workers constructing a power generation facility. Temporary workforce housing facilities are not included in the applicant's ASC; therefore, this would not be included in Council's review and initial approval of the proposed facility. However, under OAR 660-033-0130(22) temporary workforce housing facilities may be considered through a minor amendment request submitted to the County where the facility is located.[288] Under OAR 660-033-0130 a minor amendment request shall be subject to OAR 660-033-0130(5) and shall have no effect on the original approval (EFSC approval and site certificate). The scope of the local government's review of the minor amendment request to add on-or-off site temporary housing under OAR 660-033-0130(5) would be whether or not the temporary housing forces a significant change in accepted farm or forest practices on surrounding lands devoted to farm or forest use; and whether it significantly increases the cost of accepted farm or forest practices on surrounding lands devoted to farm or

[288] OAR 660-033-0130(22) addresses temporary workforce housing and minor amendments for permanent features of a power generation facility shall not use, occupy or cover more than 20 acres unless an exception is taken pursuant to ORS 197.732 and OAR chapter 660, division 4. OAR 660-033-0130(37) addresses temporary workforce housing and minor amendments for wind power generation facilities.

forest use.[289] Therefore, to avoid adverse impacts to public and private service providers of housing in the analysis area from overlapping or concurrent EFSC or other construction projects, the applicant could submit or the County could request the applicant submit a minor amendment request to the County for the County to review options for temporary workforce housing for this or other facilities. Any minor amendment would not affect any EFSC approval or site certificate conditions consequently would be permissible under OAR 469.401(3).

Operation

Of the 10-15 permanent employees required for operation of the proposed facility, the applicant assumes some staff (up to 5 personnel) would already reside within the analysis area or within a commutable distance to the analysis area. Even if all operational employees permanently relocated to within the analysis area or within a nearby communities, it is not anticipated to have an impact on housing providers because there would be enough homes for purchase or for rent within the analysis area. Therefore, the Department recommends that impacts from the proposed facility operation would not have an adverse impact on housing within the analysis area.

IV.M.10. Healthcare and Schools

Healthcare

Proposed facility construction and operation could result in increased demand of health care providers or impact access to hospitals and health care as a result of on-site medical emergencies or traffic related impacts, particularly during construction. The nearest hospitals are the St. Anthony Hospital located in Pendleton, the Good Shepherd Medical Center in Hermiston, and Pioneer Memorial Hospital located in Heppner, in Morrow County. The nearest Level I trauma centers are located in the City of Portland: Oregon Health & Science University Hospital and Legacy Emmanuel Medical Center. As discussed in Section IV.M.8., *Fire Protection*, ambulance service would be provided by the Umatilla County Fire District #1.[290] The health care providers within the analysis area and health care providers that accommodate trauma level services and the distance from the norther site boundary are provided below in Table 20: *Health Care Providers and Distance from Site Boundary*.

[289] OAR 660-033-0130(5) Approval requires review by the governing body or its designate under ORS 215.296. Uses may be approved only where such uses:
(a) Will not force a significant change in accepted farm or forest practices on surrounding lands devoted to farm or forest use; and
(b) Will not significantly increase the cost of accepted farm or forest practices on surrounding lands devoted to farm or forest use.

[290] NHWAPPDoc2-20 ASC Exhibit U. Public Services_2022-01-31, Section 3.2.2.9.

Table 20: Health Care Providers and Distance from Site Boundary

Provider	Distance from Northern Site Boundary[1]
St. Anthony Hospital, Level IV (Pendleton, Oregon)	19 miles
Umatilla County Fire District #1 (Hermiston, Oregon)[2]	19 miles
The Good Shepherd Medical Center Level III (Hermiston, Oregon)	20 miles
Pioneer Memorial Hospital, Level IV (Heppner, Oregon)	50 miles
Legacy Emmanuel Medical Center – Level I (Portland, Oregon)	196 miles
Oregon Health and Science University – Level I Trauma Center (Portland, Oregon)	198 miles

[1] Distances provided are from the unincorporated community of Nolin, Oregon which overlaps with the northern part of the site boundary.
[2] UCDF#1 is the Ambulance Service Area (ASA) provider who provides ambulance transport service to western half of proposed facility.
Source: NHWAPPDoc2-20 ASC Exhibit U. Public Services_2022-01-31, Section 3.2.2.9.

Impacts on health care could occur if facility construction or operation activities result in emergencies that necessitate an influx of workers into local hospitals or from an on-site medical emergency that would need several area ambulances which may impact ambulances from serving other emergencies. The applicant explains that impacts on local health care services during both construction and operation would be minimized by implementation of a robust safety program avoid and minimize health and safety risks. The Department compiled emergency and safety measures proposed to avoid fires, hazards, and other on-site emergencies that may include medical emergencies into a draft Fire Prevention, Suppression and Emergency Management Plan recommended under Public Services Condition 7 in Section IV.M.8, *Fire Protection*, of this order. The safety risks and measures to avoid and minimize safety and medical risks on-site identified in the draft Fire Prevention, Suppression and Emergency Management Plan would apply to construction as well as operation of the proposed facility.

Construction-related worker and delivery traffic would increase in traffic near the proposed facility and in the analysis area, which could, in turn could impact emergency services and access to hospitals and health as a result of traffic congestion or delays. As discussed in Section IV.M.5, *Traffic Safety*, the primary corridors for worker traffic and deliveries would be I-84, I-82, and US Highway 395 (US395), then they would generally follow County Road (CR) 1350 from US-395. CR-1350 (Coombs Canyon Road). Other local county roads, such as CR-1361, CR-1362, CR-1363, and CR-1394, as well as some private roads on leased lands inside the site boundary. Under Public Services Conditions 1 and 2, the Department recommends the finalization of the draft Traffic Management Plan which addresses BMP's that would manage traffic congestions

and keep traffic flowing, especially for emergency vehicles such as ambulances. Further, as explained in Section IV.M.8, *Fire Protection* and in the draft Fire Prevention, Suppression and Emergency Management Plan recommended under Public Services Condition 7, proposed roads would be sized for emergency vehicle access in accordance with 2019 Oregon Fire Code requirements and would be 16 to 20 feet wide with an internal turning radius of 28 feet and less than 10 percent grade to provide access to emergency vehicles. This would allow sufficient space for fire and ambulance and any other necessary emergency vehicles to access the site.

Based on the applicant proposed measures to avoid medical and safety emergencies on-site that could impact local ambulance services and hospitals and the proximity and amount of hospital/medical service providers in the analysis area, the Department recommends the Council find that the construction and operation of the proposed facility would not adversely impact the ability of hospitals and ambulances to provide their services.

Schools

Construction and operation would impact the ability of schools to provide educational services if the amount of school aged children joining the system impacted the ability of other children to access education. The applicant and Department do not anticipate there to be adverse impacts to schools in the analysis area because construction workers generally do not bring school aged children with them for temporary work, and the if operational personnel enrolled children in schools, it is anticipated that the school district capacity would not be affected. School districts within the analysis area include Hermiston, Stanfield, Pendleton, Echo, Umatilla, Pilot Rock, and Morrow County school districts. According to the Umatilla County Coordinated Human Services Public Transportation Plan, the Mid-Columbia Bus Service provides school bus service to all county public schools on a contract basis in Umatilla County. [291]

The applicant anticipates that during the 6–18-month construction period 140 workers would be needed on average and during peak construction approximately 500 workers could be necessary. The applicant estimates, and the Department concurs, that 30 percent of these workers (42 during average construction periods and 150 during peak construction summer months) would be hired locally from Umatilla County and 70 percent of workers (98 during average construction periods and 350 during peak construction) would temporarily relocate from other areas for the construction period duration. The applicant explains, and the Department agrees based on its understanding of large construction projects, that only a small percentage of workers hired from outside the area bring their families and school-age children for a short-term relocation, so the number of additional students added to the school system would be minimal. Peak construction would also occur during the summer months, when school is not in session, therefore when the most workers would be present school would not be provided.[292] The Department compiled applicant-represented measures to avoid and minimize impacts to traffic service providers into a draft Traffic Management Plan,

[291] NHWAPPDoc2-20 ASC Exhibit U. Public Services_2022-01-31, Section 3.2.2.10.

[292] NHWAPPDoc2-20 ASC Exhibit U. Public Services_2022-01-31, Section 3.2.2.10.

recommended under Public Services Conditions 1 and 2. The applicant explains that the Traffic Management Plan would address such issues as flagging, signage, and traffic flow around work sites on public roads; timing of oversize/overweight truck loads and road closures to avoid impacts to school bus schedules or during peak travel hours.

The number of new permanent resident employees is not expected to exceed 15 people, some of which may move school-aged children. Given the number of schools in the locations where new residents are likely to settle, and the small number of new school children that may move to the area, it is anticipated that the school districts would be able to enroll and educate these youth without it impacting their ability to enroll and educate other students.

Because construction workers are not likely to bring families with school-aged children with them during construction of the proposed facility, and fewer operational workers with families are anticipated to move and enroll children in schools in the analysis area, the Department recommends the Council find that construction and operation of the proposed facility is not likely to adversely impact the ability of schools in the analysis area to provide their services.

Conclusions of Law

Based on the foregoing analysis, and in compliance with OAR 345-022-0110(2), the Department recommends that the Council include the above referenced conditions in the site certificate to meet the Council's Public Services Standard.

IV.N. Waste Minimization: OAR 345-022-0120

(1) Except for facilities described in sections (2) and (3), to issue a site certificate, the Council must find that, to the extent reasonably practicable:

(a) The applicant's solid waste and wastewater plans are likely to minimize generation of solid waste and wastewater in the construction and operation of the facility, and when solid waste or wastewater is generated, to result in recycling and reuse of such wastes;

(b) The applicant's plans to manage the accumulation, storage, disposal and transportation of waste generated by the construction and operation of the facility are likely to result in minimal adverse impact on surrounding and adjacent areas.

(2) The Council may issue a site certificate for a facility that would produce power from wind, solar or geothermal energy without making the findings described in section (1). However, the Council may apply the requirements of section (1) to impose conditions on a site certificate issued for such a facility.
*****

Findings of Fact

ASC Exhibit V presents the applicant's representations about sources, quantities and its plans to minimize impacts and generation of waste and wastewater from construction, operation, and retirement of the proposed facility.

Construction

Solid Waste

Proposed facility construction is anticipated to produce 13,000 to 16,000 total cubic yards (cy) of waste, including scrap metal (e.g., wire and rebar scraps), wood, concrete, concrete washout, packing materials (such as crates, pallets, and protective and paper wrapping), dirt and rock spoils. Concrete waste would be limited to washout from the concrete truck chutes and other equipment following pouring for foundations of turbines, Operations and Maintenance (O&M) building, substations, battery energy storage system, inverters/transformers foundations, and solar array tracker posts. The excavation of turbine foundations and installation of solar array tracker posts would produce dirt and rock spoils that would require disposal due to the volume of dirt and rock produced.[293]

Waste and recycled materials would be hauled offsite to Columbia Ridge and Finley Buttes Landfills[294] by licensed waste haulers who would be required to comply with OAR 340-093-0220 for transportation of waste.[295] Columbia Ridge Landfill is located in Arlington, OR and accepts non-hazardous construction debris, industrial and special waste but does not accept hazardous waste and is designed to meet or exceed the Oregon Department of Environmental Quality (DEQ) and the US Environmental Protection Agency.[296] Finley Buttes Landfill is located in Boardman, OR and also accepts any non-hazardous construction and industrial waste, including non-hazardous contaminated soils. In a letter from Finley Buttes Landfill provided in ASC, they indicate that some wastes require prior approvals through their Special Waste process, but that should not impact their ability to accept your waste.[297,298] According to their webpage, Finley Buttes Landfill is a modern municipal solid waste disposal facility permitted by the Oregon DEQ and is in full compliance with Oregon DEQ rules and regulations.[299] While both facilities offer

[293] NHWAPPDoc2-21 ASC Exhibit V Waste 2022-01-31, Section 2.1.1.1.

[294] NHWAPPDoc2-21 ASC Exhibit V. Waste_2022-01-31, Section 2.1.3.

[295] OAR 340-093-0220 provides provisions for Collection and Transfer Vehicles including loading and operating to prevent dropping, leaking, sifting, or blowing, cleaning vehicles, and proper disposal of wastewater.

[296] Waste Management Solutions. Columbia Ridge Landfill. Accessed by the Department at: https://www.wmsolutions.com/locations/details/id/248 Date Accessed: 2022-03-15.

[297] NHWAPPDoc2-20 ASC Exhibit U. Public Services_2022-01-31, Attachment U-1.

[298] OAR 340-093-0190 identifies wastes that require special handling or management practices and shall not be deposited at a solid waste disposal site unless special provisions for such disposal are included in a Special Waste Management Plan maintained by a disposal site or landfill. Some of these wastes include construction and demolition materials and oil wastes.

[299] Waste Connections Company, Finely Buttes Landfill. Accessed by the Department at: https://www.finleybutteslandfill.com/services/ Date Accessed: 2022-03-15.

some limited recycling programs, neither advertise recycling of construction waste or specialized recycling of facility components such as turbine blades or solar panels.

The applicant's Exhibit V focuses on the waste minimization of construction-related waste for wind turbines and the wind generating component of the facility but does not specifically consider the waste stream associated with the construction of the solar component (consisting of up to 816,812 solar modules) of the facility. Nonetheless, waste sources identified are assumed to be similar for wind and solar facility components including: packaging of components, excavated soils, metals and concrete waste. For wind components, the applicant's proposed management of construction waste includes collection at each turbine location, followed by consolidation into labeled, appropriately sized disposal and recycling containers with lids, located at construction yards. The applicant states that soils and rock spoils would be reapplied within temporary disturbance areas, used as fill or removed and disposed of offsite. Prior to any offsite disposal of spoils, applicant affirms that contractors would be required to obtain a disposal agreement with landowner and conduct an evaluation of, and avoid, any disposal sites containing sensitive resources.[300]

The applicant represents that, to minimize solid waste during construction, contractors would be required to submit a plan to address: how solid waste materials would be reused, recycled or disposed of; the number and types of waste containers to be maintained onsite; the process for segregating recyclable and waste materials; and, the names and locations of appropriate recycling and waste disposal facilities, collection and hauling requirements. The applicant also represents that construction waste would be minimized by estimating material needs and employing efficient construction practices.

Wastewater

Proposed facility construction is anticipated to produce wastewater from concrete washout, including soil berms and concrete solids; vehicle cleaning; dewatering discharge; and sanitary wastewater. The applicant quantified the potential wastewater from concrete washout at up to 1,018 gallons per day or 549,905 gallons per year (based on 25% of total water used during foundation construction). The applicant's proposed management of construction wastewater includes burying the concrete washout water as part of backfilling foundations. Concrete pouring can contribute suspended solids and heavy metals to stormwater runoff and cause pH increases in receiving waters.[301] For this reason, any on-site concrete or washout disposal must be conducted in accordance with OAR 340-093-0080 which requires DEQ approval of a permit exemption for materials substantially similar to clean fill; and infiltration and evaporation in accordance with a DEQ-issued NPDES 1200-C permit. DEQ recommends the use of an infiltration pit or tank to capture and hold concrete washout as a method for capturing and

[300] NHWAPPDoc2-21 ASC Exhibit V Waste 2022-01-31, Section 2.1.2.1.

[301] Oregon Department of Environmental Quality. Construction Stormwater Best Management Practices Manual. 1200-C NPDES General Permit. Water Quality Permitting Department. 2021-02-01, p. 50.

neutralizing high pH materials to prior to any disposal.[302] Sanitary wastewater would be managed by a licensed subcontractor. Applicant affirms that wastewater generated onsite would not affect streams, wetlands or groundwater supplies.

The Department recommends Council find that the applicant has adequately evaluated construction waste and wastewater sources and management methods; and its plans to minimize waste and wastewater. The Department also recommends Council impose the following conditions to ensure the waste and wastewater impacts are minimized, via recycling and proper disposal:

Recommended Waste Minimization Condition 1 (PRE): Prior to construction of the facility, facility component or phase, as applicable, the certificate holder shall require contractors to develop and submit to the Department for review and approval, Construction Waste Management Plan(s) that, at a minimum, include the following:

a. All sources and quantities of construction waste and wastewater, including damaged or dysfunctional energy facility components, and where feasible, estimated quantities that can be recycled.
b. Process for disposal and recycling, including use of licensed haulers and disposal/recycling facilities; names and locations of licensed recycling and disposal facilities; collection, hauling and tracking requirements.
c. Requirements for securing landowner disposal agreement and evidence of evaluation and avoidance of sensitive resources if offsite spoil disposal is necessary.
d. Process for requesting a permit exemption from DEQ pursuant to OAR 340-093-0080 to ensure that concrete washout materials reused in foundation backfill are substantially the same as clean fill.
e. Process for training workers and tracking compliance with the requirements of the plan.

Recommended Waste Minimization Condition 2 (CON): During construction of the facility, facility component or phase, as applicable, the certificate holder shall require that contractors adhere to the requirements of the Construction Waste Management Plan(s) and maintain records of employee training and tracking compliance onsite and available upon Department request.

Recommended Waste Minimization Condition 3 (CON): During construction, on-site concrete washwater disposal is prohibited unless DEQ approval of a permit exemption for materials substantially similar to clean fill is obtained. If DEQ approval of a permit exemption is obtained, concrete washwater must be disposed of onsite via infiltration and evaporation in accordance with a DEQ-issued NPDES 1200-C permit.

[302] Oregon Department of Environmental Quality. Construction Stormwater Best Management Practices Manual. 1200-C NPDES General Permit. Water Quality Permitting Department. 2021-02-01, p. 50.

Recommended Waste Minimization Condition 1 is based on the applicant's representation to estimate, manage and minimize construction-related waste and wastewater impacts; the other conditions are recommended by the Department to afford the Department and applicant an ability to track and demonstrate compliance with the condition and satisfy the intent of the Waste Minimization standard.

Operation

Solid Waste

Proposed facility operations are anticipated to produce waste from replacement of energy facility components (i.e., turbine blades, solar panels and batteries). These components would be electronically disconnected and removed by maintenance crews or qualified contractors. Replacement of facility components would be delivered and installed which would have associated packaging and materials that would be recycled and hauled offsite by a licensed hauler and disposed of or recycled offsite at a licensed facility. The O&M operations would generate waste typical of a small office, which would be separated and recycled and waste would be collected and hauled offsite by a licensed hauler and disposed of offsite at a licensed facility. Turbine blades and solar panels would be recycled to the extent feasible. Lead-acid and the lithium-ion batteries associated with the BESS, batteries would be hauled offsite by a licensed hauler, in compliance with any applicable federal transportation regulations, and disposed of offsite at a licensed battery recycling facility.[303]

To ensure the applicant establishes a plan or protocol that would minimize waste associated with replaced solar panels during operations and to support to the maximum extent practicable, recycling or reuse of solar panels based on available licensed facilitates or programs at the time of replacement, the Department recommends the following conditions:

> **Recommended Waste Minimization Condition 4 (PRO):** Prior to operation of solar facility components, the certificate holder shall develop a Solar Panel Recycling Plan or protocol requiring that damaged or nonfunctional panels be recycled through the Solar Energy Industries Association National PV Recycling Program (or similar program), to the extent practicable. The certificate holder shall report in its annual report to the Department the quantities of panels recycled, reused or disposed of in a landfill.
>
> **Recommended Waste Minimization Condition 5 (OPR):** During operation of solar facility components, the certificate holder shall adhere to the requirements of the Solar Panel Recycling Plan or protocol developed under Waste Minimization Condition 4.

Further, for wind facility component replacement during operations, the Department recommends the following condition that would require the applicant to ensure its third-party contractors reuse or recycle wind turbine blades, hubs and other removed wind turbine

[303] NHWAPPDoc2-21 ASC Exhibit V Waste 2022-01-31, Section 2.1.3.

components, to the extent practicable, and that the applicant demonstrate that the recycling or disposal facility selected to receive turbine parts is licensed. These measures address the applicant's plans to manage the accumulation, storage, disposal and transportation of waste generated during operation and would minimal adverse impact on surrounding and adjacent areas.

> **Recommended Waste Minimization Condition 6 (OPR)**: During operation of wind facility components, the certificate holder shall ensure its third-party contractors reuse or recycle wind turbine blades, hubs and other removed wind turbine components, to the extent practicable. The certificate holder shall demonstrate that the recycling or disposal facility selected to receive turbine parts is licensed. The certificate holder shall report in its annual report to the Department the quantities of removed wind turbine components recycled, reused, sold for scrap, or disposed of in a landfill.

Wastewater

Proposed facility operations would produce wastewater from solar panel washing and nontoxic ionized solution (if flow battery technology is selected for the proposed BESS). Water for washing solar panels will require an estimated one gallon per solar module, for a total of approximately 1,120,000 gallons per year during operations.[304] The applicant represents that the solar panel wash water would not contain solvents and would be discharged via evaporation and seepage into the ground. The nontoxic ionized solution would be hauled offsite by a licensed hauler and disposed of offsite at a licensed facility.

The Department recommends Council find that the applicant has adequately evaluated operational wastewater sources and management methods; and its plans to minimize wastewater. The Department also recommends Council impose the following condition to ensure that operational wastewater impacts are minimized on surrounding and adjacent areas:

> **Recommended Waste Minimization Condition 7 (OPR):** During operation of the solar facility components, the certificate holder shall:
> a. Prohibit use of chemicals, soaps, detergents and heated water unless Chemical Safety Data Sheets for low volatile organic compound/biodegradable cleaning chemicals and solvents are submitted to the Department for review and approval prior to use;
> b. Ensure that pressure washing is conducted in a manner that does not remove paint or other finishes.
> c. Discharge wash water through evaporation and infiltration only.

Conclusions of Law

[304] NHWAPPDoc2-14 ASC Exhibit O. Water Req_2022-01-31, Section 3.2.

Based on the foregoing recommended analysis, recommended conditions of approval and in compliance with OAR 345-022-0120(2), the Department recommends that the Council include the conditions listed above in the site certificate to address the Council's Waste Minimization Standard.

IV.O. Division 23 Standards

The Division 23 standards apply only to "nongenerating facilities" as defined in ORS 469.503(2)(e)(K), except nongenerating facilities that are related or supporting facilities. The proposed facility is not a nongenerating facility as defined in statute, and therefore Division 23 is inapplicable to this application for site certificate.

IV.P. Division 24 Standards

The Council's Division 24 standards include specific standards for siting facilities including wind, underground gas storage reservoirs, transmission lines, and facilities that emit carbon dioxide. The applicable Division 24 specific standards for the proposed Nolan Hills Wind Facility are OAR 345-024-0010, Health and Safety Standards for Siting Wind Facilities; OAR-24-0015 Cumulative Effects Standard for Wind Energy Facilities; and OAR 345-024-0090, Siting Standards for Transmission Lines.

IV.P.1. Public Health and Safety Standards for Wind Energy Facilities: OAR 345-024-0010

> *To issue a site certificate for a proposed wind energy facility, the Council must find that the applicant:*
>
> *(1) Can design, construct and operate the facility to exclude members of the public from close proximity to the turbine blades and electrical equipment.*
> *(2) Can design, construct and operate the facility to preclude structural failure of the tower or blades that could endanger the public safety and to have adequate safety devices and testing procedures designed to warn of impending failure and to minimize the consequences of such failure.*

Findings of Fact

For a proposed wind energy facility, the Council must evaluate an applicant's proposed measures to exclude members of the public from proximity to the turbine blades and electrical equipment, and the applicant's ability to design, construct and operate the proposed facility, to prevent structural failure of the tower or blades and to provide sufficient safety devices to warn of failure.

As described in Section III.A., *Proposed Facility* and throughout this order, the proposed facility includes solar PV and wind energy generation components; battery storage; and grid-interconnection transmission lines. The Public Health and Safety Standards for Wind Energy Facilities was implemented to address public health and safety for wind energy generation

components – therefore, the recommended findings of fact, reasoning and conclusions below are based on an evaluation specific to wind energy generation components including wind turbines (blades and tower structures); pad-mounted transformers; 34.5-collection lines (above- and belowground); generator step-up transformers and substations; meteorological towers; and SCADA and O&M building and does not apply the requirements of the standard to the proposed grid-interconnection transmission lines, solar PV energy generation or battery storage components.

Potential Impacts to Public Health and Safety from Construction and Operation of the Proposed Facility

The proposed facility would include up to 112 wind turbines, each with three blades, with a rotor diameter up to 459 feet constructed on spread-footing, bedrock, or other foundation type. The maximum blade tip height is 496 feet and the minimum blade tip clearance is 36.5 feet.[305] Electrical equipment includes above- and below-ground 34.5-collector lines, Substation Connector Transmission Line and substation; and oil-containing pad-mounted transformers (PMTs).[306] The proposed facility site includes public and private roads; however, the wind facility components would be located entirely on privately owned land.

Impacts to the health and safety of the public from the construction and operation of the wind turbines could include structural, mechanical failures, electrical fires, or fire caused by lightning.[307] Other potential impacts to the public from the construction and operation of the facility include structural failure risks such as a collapsed turbine towers (tower failure) or thrown blades. Tower failure during facility operations most commonly occurs due to faulty construction, material defects, or improper design, where other turbine failures can occur from improper maintenance or early material degradation.[308] Public health and safety impacts from the construction and operation of electrical equipment including the substation and pad-mounted transformers could occur if the public is impacted by spills or leaks, electrical fires, or equipment failure that would impact the operation of the wind turbine. These safety risks to the public and measures to avoid and minimize them are discussed further in the section below.

Other possible impacts to the health and safety of the public originating from the construction and operation of the collector lines and transmission lines could occur from electrical fires or public contact with these facilities. The 89 miles of underground collector line associated with the wind facility components would be located on private lands so it is not anticipated that the public would have access to create a health or safety risk. As footnoted in Section IV.P.3., *Siting Standards for Transmission Lines*, the 9.1 miles of 34.5 kV aboveground collector line would be

[305] NHWAPPDoc2-1 ASC Exhibit B. Project Desc_2022-01-31

[306] A typical wind turbine configuration is provided in ASC Exhibit B Figure B-1; a typical turbine site plan view is provided in ASC Exhibit B Figure B-4.

[307] NHWAPPDoc2-29 ASC Exhibit DD. Specific Standards_2022-01-31. Section 3.2.

[308] *Id.*

located on private property; therefore, these collector lines would be located in an area not accessible to the public, avoiding risks to the public. Also in this section, the proposed Substation Connector Line is anticipated to operate in compliance with OAR 345-024 -0090, which designates a threshold for electric fields associated with transmission lines. To avoid public access to the 230-kilovolt (kV) transmission line(s) the applicant explains that it would utilize overhead poles that would inhibit climbing by members of the public.[309] Further in Section IV.M.8., *Fire Protection*, under Recommended Public Services Condition 7, would require the finalization and implementation of a Final Fire Prevention, Suppression and Emergency Management Plan that includes measures to construct and operate electrical equipment, including the transmission lines, in a manner that avoid safety hazards.

The applicant also identifies that wind turbines and transmission lines could increase both the difficulty and risks to aerial spraying (crop dusters), which is an accepted farm practice within the surrounding area and discussed further in Section IV.E., *Land Use*.[310] Similarly, the Department recommends findings related to potential impacts to adjacent airports and aircraft operators from the construction and operation of the wind turbines and transmission lines in as Section IV.M.5., *Public Services*; *Air Traffic*. The closest airport to the wind facility components is approximately 8 miles away, and the location of the transmission line would be 3.4 miles away. The Oregon Department of Aviation (ODA) reviewed the height and location of the tallest proposed facility structures and indicated that they do not believe proposed structures within the proposed micrositing corridor would result in any hazards to navigable airspace and that the turbines appear to also be well outside the 3-nautical mile perimeter of nearby airports. Therefore, it is not likely that normal operation of the turbines and transmission line as well as any risks of collapsed turbines or thrown blades would impact navigable airspace or airports. As recommended under Public Services Condition X, the applicant would be required to submit to the Federal Aviation administration (FAA) a Form 7460-1 to ODA and the FAA, to determine if any supporting facilities or structures would pose an obstruction to aviation navigation, and the determination or conclusions from the ODA and FAA would be submitted to the Department and ODA.

Excluding Public Access from Proximity to Wind Turbines and Electrical Equipment

As provided above, the wind facility components including the wind turbine towers, blades and transformers would be located on privately owned lands, which would preclude public access to these components. The wind turbines would not be within a fenced area on the landscape, however access to each turbine tower would be limited with locked steel door and the minimum ground-to-blade clearance would be 36.5 feet which would limit impacts to the public that may access the facilities. As discussed in Section IV.M.5., *Traffic Safety*, the applicant would construct roads used for construction and operation as well as use existing public roadways for the construction and operation of the proposed facility. During construction, gates would be

[309] NHWAPPDoc2-29 ASC Exhibit DD. Specific Standards_2022-01-31. Section 3.1.

[310] NHWAPPDoc2-10 ASC Exhibit K. Land Use_2022-01-31. Section 4.3.1.3.

installed on access roads to reduce unauthorized access when requested by property owners and access roads developed or

improved for the purposes of operation would be gated and locked when not actively in use in coordination with private landowners.[311] To address concerns of turbine blades dropping or tower failure from malfunctioning wind turbines, the applicant indicates that it would comply with a minimum setback of 110 percent of the maximum blade tip height from public roads, which would be a minimum of 546-foot setback from public roads. Setbacks from public roads and from residences that are non-project participants are discussed further in Section IV.E., *Land Use*, and under recommended Land Use Condition 4, which requires that all wind turbines be sited to adhere to a setback equivalent to 110% of the overall tower-to-blade tip height from the boundary of county road, state and interstate highway rights-of-way boundaries.

ASC Exhibits B and DD explain that the proposed facility substations would be enclosed within a fence line with locked gates to manage access to equipment with signs labeled private, no trespassing. The northern substation would be enclosed in the same fence line as the O&M building, solar array and BESS, which would limit public access to these related or supporting facilities. Therefore, public access to electrical equipment and any safety or spills associated with that equipment would be avoided by proper security measures. As discussed in Section III.A.1., *Energy Facility,* a generator step up transformer would be necessary for each wind turbine and may be nacelle-mounted or pad mounted. If pad-mounted transformers are selected, these would be located at the base of the tower and would be enclosed in rectangular cases and protected from collisions by bollards.

The Department recommends that, for the wind energy facility components, the applicant has demonstrated that it can design, construct, and operate the facility to exclude members of the public from close proximity to the turbine blades and electrical equipment because the proposed facility is largely located on private lands and the applicant proposes design measures, such as fencing and gates that would sufficiently exclude the public from accessing the wind turbines and other electrical equipment.

Design, Construct and Operate Proposed Facility to Prevent Structural Failure and Adequate Safety Devices and Testing Procedures

Structural failures of the towers, foundations, or blades that could endanger the public safety are those listed in the beginning of this section and include tower collapse, blade throws, equipment failure and electrical fires. The applicant explains that prevention of structural failure of wind turbines includes designing, engineering, and constructing the wind turbines to

[311] NHWAPPDoc2-29 ASC Exhibit DD. Specific Standards_2022-01-31. Section 3.1 and NHWAPPDoc2-20 ASC Exhibit U. Public Services_2022-01-31, Section 3.2.2.6.

meet or exceed all current applicable standards.[312] This includes avoiding dangers to human safety and non-seismic hazards including conducting site-specific geotechnical evaluations for the facility components to inform operational design and construction techniques. In Section IV.C., *Structural Standard*, the Department recommends that Council find the applicant adequately characterized the potential seismic, geological (landslides) and soil hazards (erosion) of the site, and that the applicant can design, engineer and construct the facility to avoid dangers to human safety and the environment from these hazards. To inform and ensure that the facility is designed to provide suitable subsurface information based on the soil Site Class, to ensure that current code and design standards are used, and that Quaternary faults would be considered active and included in the site-specific hazard analysis, the Department includes Recommended Structural Standard Condition 1 which requires a site-specific geotechnical investigation be conducted prior to construction in coordination with the Department and Department of Geology and Mineral Industries (DOGAMI). The resulting geotechnical report would be used to calculate the bearing capacity of the soils, conduct stability analyses, and provide engineering recommendations for construction of the foundations and structures. Further, Structural Standard Condition 2 imposes mandatory condition designated under OAR 345-027-0020(12), which requires the applicant to design, engineer and construct the facility to avoid dangers to human safety and the environment presented by seismic hazards affecting the site that are expected to result from all maximum probable seismic events.

The applicant explains that turbines and materials are tested during and after the construction process to verify proper installation and that continued safe operation depends on monitoring how the structures and foundations respond to design or unusual stresses, such as rotational, axial, torsion, bending, and vibration stresses, which could occur during extreme weather or seismic events or from operational malfunctions.[313] The applicant would conduct monthly inspections which include operating rounds which would consist of a visual assessment of turbine foundations and the materials connecting the turbine to the foundation, as well as observation of SCADA data that provide insight into how the turbine structural components are withstanding the stresses applied to them. Annual operating inspections and turbine maintenance includes inspections on turbine components, lubrications and replacement of worn parts as necessary, which include all turbine related components for irregular wear and may be supplemented with further repair as needed. Further, the SCADA system monitors facility components and the met tower data for variables such as meteorological conditions, critical operating parameters, and power output, and allows each component of the system to be monitored and controlled, even remotely, for activity in present time. In the event an anomaly is observed by the SCADA system or during an inspection or during operation, original

[312] According to 2016 Occupational Safety and Health Administration (OSHA) guidance policy for Process Safety Management (PSM) Standard's recognized and generally accepted good engineering practices (RAGAGEP) apply to process equipment design and maintenance; inspection and test practices; and inspection and test frequencies and are the basis for engineering, operation, or maintenance activities and are themselves based on established codes, standards, published technical reports or recommended practices or similar documents. OHSA Recognized and Generally Accepted Good Engineering Practices 2016-05-11, https://www.osha.gov/laws-regs/standardinterpretations/2015-06-05-0. Accessed 04-13-2022.

[313] NHWAPPDoc2-29 ASC Exhibit DD. Specific Standards_2022-01-31, Section 3.2.

equipment manufacturer and engineering is advised, and further inspection may be carried out by subject matter experts to determine root cause and resulting action required to rectify the issue.

To capture and implement the applicant's discussions of monthly and annual inspections, testing, maintenance, and reporting on the performance of wind foundations, towers, blades, nacelle, pad-mounted transformers, and SCADA system, the Department recommends the applicant develop and adhere to an operational safety-monitoring program which is recommended below in Public Health and Safety Standards for Wind Facilities Condition 1. The operational safety-monitoring program required elements include conducting inspections and testing of wind facility components consistent with manufacturers' recommendations and recognized and generally accepted good engineering practices (RAGAGEP) and maintaining records of such inspections and tests. Records generated from the operational safety-monitoring program would include details that would be provided to the Department upon request and a summary would be included in the annual report required under OAR 345-026-0080, which is detailed further in Section I.V.A., *General Standard of Review*. The operational safety-monitoring program also includes notification and documentation procedures in the event of a significant event such as blade or tower failure, structural or electrical issue that causes fires. Therefore, to demonstrate that the applicant can design, construct and operate the proposed facility to preclude structural failure of wind facility components that could pose a danger the safety of the public safety and to ensure that the applicant's safety devices and testing procedures are adequately designed to warn of future failures and to minimize the consequences of component failures, the Department recommends the applicant deploy an operational safety-monitoring program, imposed by the below recommended conditions:

> **Recommended Public Health and Safety Standards for Wind Facilities Condition 1 (OPS)**: During operation, the certificate holder shall develop and implement an operational safety-monitoring program that includes regular inspections, maintenance, and reporting program to prevent structural or electrical failure of wind turbine foundations, towers, blades, or electrical equipment. Required elements of the operational safety-monitoring program include:
>
> a. Identify and conduct inspections and testing of wind facility components, including but not limited to foundations, towers, blades, nacelle, pad-mounted transformers, and SCADA system, consistent with manufacturers' recommendations and recognized and generally accepted good engineering practices (RAGAGEP) for frequency and process.
> b. Maintain records of each inspection and test performed. Records shall:
> i. Identify the date of the inspection or test, the name of the person who performed the inspection or test, the serial number or other identifier of the equipment on which the inspection or test was performed, a description of the inspection or test performed, and the results of the inspection or test.
> ii. Identify testing or inspection results that show deficiencies in equipment or operation issues that are outside acceptable limits or recommendations identified by the manufacturer. These issues must be corrected before

further use, or in a safe and timely manner if precautions are taken to assure safe operation.

iii. Be made available for inspection by the Department's Compliance Officer during site visits, or upon request from the Department. A summary report of the annual inspections, testing and maintenance activities performed shall be submitted to the Department pursuant to OAR 345-026-0080 in the facility's annual compliance report. The summary report shall include the details of the replacement of any system components which could impact the structural integrity of foundations, towers and blades.

c. In the event of blade or tower failure, a structural or electrical issue that causes a fire or other safety hazard the certificate holder shall report the incident to the Department within 72 hours, in accordance with OAR 345-026-0170(1), and shall, within 30 days of the event, submit a report which contains:

i. A discussion of the cause of the reported incident including results of on-site or remote inspections or investigations;

ii. A description of immediate actions taken to correct the reported conditions or circumstances; and

iii. A description of actions taken or planned to minimize the possibility of recurrence and a description of manufacturers' recommendations and recognized and generally accepted good engineering practices to avoid instances in the future.

Recommended Public Health and Safety Standards for Wind Facilities Condition 2 (PRE): Prior to operation, the certificate holder shall submit to the Department the operational safety-monitoring program elements described in Public Health and Safety Standards for Wind Facilities Condition 1(a).

As described above, OAR 345-024-0010(2) requires the Council to find that the certificate holder can design, construct and operate the facility to preclude structural failure of the tower or blades that could endanger public safety. In other words, the Council must evaluate if the certificate holder has demonstrated that it has the ability to preclude a structural failure in the first place through design, construction and operation of the turbines. OAR 345-024-0010(2) does not establish a minimum setback requirement nor require that a certificate holder demonstrate an *elimination* of all public health and safety risk *[Emphasis added].* Instead, it requires that the certificate holder design, construct and operate the facility to avoid structural failure, to have adequate mechanisms in place to warn of an impending failure, and to minimize the consequences of such failure.

Conclusions of Law

The Department recommends Council find that, based on compliance with recommended conditions and the evidence in the ASC, the applicant has demonstrated an ability to design, construct, and operate the facility in compliance with OAR 345-024-0010, the Public Health and Safety Standards for Wind Energy Facilities.

IV.P.2. Cumulative Effects Standard for Wind Energy Facilities: OAR 345-024-0015

To issue a site certificate for a proposed wind energy facility, the Council must find that the applicant can design and construct the facility to reduce cumulative adverse environmental effects in the vicinity by practicable measures including, but not limited to, the following:

(1) Using existing roads to provide access to the facility site, or if new roads are needed, minimizing the amount of land used for new roads and locating them to reduce adverse environmental impacts.

(2) Using underground transmission lines and combining transmission routes.

(3) Connecting the facility to existing substations, or if new substations are needed, minimizing the number of new substations.

(4) Designing the facility to reduce the risk of injury to raptors or other vulnerable wildlife in areas near turbines or electrical equipment.

(5) Designing the components of the facility to minimize adverse visual features.

(6) Using the minimum lighting necessary for safety and security purposes and using techniques to prevent casting glare from the site, except as otherwise required by the Federal Aviation Administration or the Oregon Department of Aviation.

Findings of Fact

The standard is limited to environmental effects that an applicant is capable of reducing and does not require the Council to find that a wind energy facility would have no cumulative environmental impacts.

Access Roads

OAR 345-024-0015(1) encourages the use of existing roads for facility site access, minimizing the amount of land used for new roads, and locating new roads in such a manner that reduces adverse environmental impacts. As described in Section III.A.2., *Related or Supporting Facilities*, of the 62 total miles of access roads needed for the proposed wind facility, 19 miles would be temporarily improved existing access roads, so 44 percent of the access roads for the wind facility would be existing roads. Eighteen miles of new permanent access roads would be developed for the solar facility and BESS. These roads would also be the access roads used for the northern substation and O&M building for both the wind and solar facility. The roads to these other related or supporting facilities would be located in a centralized area next to one another which would reduce the overall impact of each of these facilities if they were located in

separate locations, which would require longer or more access roads. After construction operational roads would be narrowed to have a smaller overall operational footprint. These areas used for construction wouldn't be necessary for facility operation and would be decompacted as needed and revegetated according to the procedures and success criteria identified in Attachment P-2: Draft Revegetation and Noxious Weed Plan discussed more in Section IV.H., *Fish and Wildlife Habitat*, under recommended Fish and Wildlife Habitat Condition 1.

New roads and modifications to existing roads would have to be compliant with avoidance measures that avoid direct impacts to environmental resources protected under other Council standards. For instance:

- Under recommended Threatened and Endangered Species Condition 1, there must be a 785–1320-foot buffer from Category 1 Washington Ground Squirrel (WGS) habitat;
- Under recommended Historic, Cultural, and Archeological Resources Condition 2 a 50-meter buffer would be maintained about resources that are listed or likely to be listed on the National Register of Historic Places (NRHP);
- Under recommended Removal Fill Condition 2 the final proposed facility layout would have to maintain at least a 50-foot buffer from any jurisdictional wetlands and waters.

Section IV.M.5., *Traffic Safety*, provides a detailed discussion of the public roads that the applicant proposes to use as primary haul and transportation routes. Recommended Public Services Condition 1, the applicant would be required to coordinate the final haul and transportation routes with Umatilla County and other communities that may manage roads and develop and submit to the Department executed road use agreements as part of a Traffic Management Plan. The Traffic Management Plan would be based on final design and identify and include maps of all public roads used for construction, road names, locations, segments used, and road conditions. The road use agreements would establish pre-construction road conditions for public roads used and would identify where upgrades would be necessary to accommodate facility traffic and deliveries. The agreements would also establish standards for road improvements and maintenance for any public roads damaged or worn during construction. For instance, one of the primary public transportation routes proposed to be used by the applicant would be County Road (CR) 1350, which is managed by Umatilla County. This road would be inventoried propped to construction to document conditions, improved in a manner that meets County standards within the County right-of-way, therefore would avoid impacts to sensitive resources, and would be improved or repaired after construction is completed. Using these types of existing public roads in a manner where potential impacts to sensitive environmental resources is avoided or minimized is consistent with and encouraged under OAR 345-024-0015(1), therefore, the Department recommends that Council find that the applicant can design and construct the facility to reduce cumulative adverse environmental effects in the vicinity by using existing roads to provide access to the facility site.

It would be anticipated that the use of public roads would avoid impacts or not cause any new impacts to sensitive resources such as habitat, cultural resources, and wetlands, nevertheless, the applicable buffer distances and avoidance areas designated in applicable and

abovementioned recommended site certificate conditions would apply to public roads within the site boundary. Roads located on private property would also be required to adhere to avoidance measures and buffers as designated in the applicable and abovementioned conditions, however, to ensure that, to the maximum extent feasible, the applicant uses existing roads on private property to provide access to the proposed site for construction and operation and to ensure that new roads used for construction and operation on private property minimize the amount of land used and are located to reduce adverse environmental impacts, the Department recommends the following condition:

> **Recommended Cumulative Effects Standard for Wind Energy Facilities Condition 1 (GEN)**: The certificate holder shall design, construct, and operate the facility to reduce cumulative adverse environmental effects in the vicinity by using existing roads to provide access to the facility. And new roads must minimize the amount of land used and be located to reduce adverse environmental impacts.
>
> **Recommended Cumulative Effects Standard for Wind Energy Facilities Condition 2 (PRE)**: Prior to construction, the certificate holder shall:
>
> a. Evaluate existing roads on private property and use existing roads to the maximum extent practicable for construction and operation; and
> b. Provide to the Department a map set illustrating the location of new roads used for construction and operation of the facility. Maps shall illustrate the locations of:
> i. New roads
> ii. Wetlands or waters of the state;
> iii. Category 1 through Category 5 habitats;
> iv. Active agricultural lands and property boundaries.

Collector Lines, Transmission Lines and Substations

OAR 345-024-0015(2) and (3) encourage wind facilities to utilize underground transmission lines, combine transmission routes and minimize the number of new substations. As described in Section III.A.2., *Related or Supporting Facilities*, the proposed facility includes proposed 230 kV transmission lines and 34.5 kV collector lines.

The new 6.8-mile, single circuit 230-kV Substation Connector transmission line would connect the southern and northern substations. Although this would be a new proposed transmission line, it would be centrally located within the site boundary within the proposed wind turbines and other related or supporting facilities (See ASC Exhibit C, Figure C-4: Detail Map Index and Figures C-4.31 and Figure C-4.35.)

The 25.3 miles of proposed 230 kV UEC Cottonwood transmission line (UEC Cottonwood Route/Alternative Route) would include approximately 8.4 miles of new single-circuit 230-kV transmission line in a new transmission corridor. However, it would also include the replacement of

approximately 9.6 miles of an existing 12.47-kV distribution line with a 230-kV transmission line and distribution underbuild, and approximately 7.3 miles of existing 115-kV UEC transmission line would be upgraded to a double-circuit 230/115-kV line with 12.47-kV underbuilt distribution. Therefore, approximately 16.9 miles of the proposed UEC Cottonwood Route would be located within an existing transmission line corridor/right-of-way, minimizing new cumulative impacts from visual intrusions and ground disturbing activities.

Three of the five miles of new 230 kV/115 kV BPA Stanfield transmission line would parallel an existing 230-kV transmission line, outside of the existing transmission line's right-of-way. The Department recommends that Council find that this co-location of the transmission line corridors be considered combining transmission routes under OAR 345-024-0015(2), therefore would be a measure to reduce cumulative adverse environmental effects in the vicinity.

All of the 230 kV transmission lines would be constructed to Avian Power Line Interaction Committee (APLIC) standards. APLIC recommended measures are intended to protect raptors and other large birds from accidental electrocution and intended to protect even the largest birds that may try to roost on the proposed 230-kV transmission lines. Further, as described in Section III.A.2., *Related or Supporting Facilities*, the transmission line poles would be either wooden or non-reflective steel monopoles which would further reduce the lines' visibility compared to steel lattice construction.

For the proposed wind energy generation components, the 34.5 kV electrical collection system would include up to 89 miles of underground and up to 9.1 miles of aboveground collector lines. The majority of the 34.5 kV collector lines would be buried underground, thus not contributing to a cumulative visual impact of the proposed facility and the aboveground portions would only be used in situations where a buried cable would be infeasible, such as for long "home run" stretches, and at stream or canyon crossings. The aboveground collector lines would be placed on 3-foot wide by 100-foot tall, wooden, pole structures, spaced approximately 150 to 300 feet apart. The underground portions of the collector lines would avoid cultural resources, wetlands, and Category 1 habitat, similar to what is listed in the above subsection and most collector lines would be placed within or adjacent to access roads to minimize additional disturbance.[314] Because the majority of the 34.5 kV collector lines would be buried underground in a manner and placement that would minimize ground disturbing activities and impacts to resources, and that the aboveground portions of the collector lines would be minimal, the Department recommends Council find that the applicant can design, construct and operate the collector lines in a manner that would reduce cumulative adverse environmental effects in the vicinity of the proposed facility.

The proposed facility includes up to two on-site collector substations; the southern substation and the northern substation, where the northern substation would be co-located with the solar facility components, O&M building and primary construction laydown yard. The power generated from the solar facility components would feed into the northern substation, where

[314] NHWAPPDoc2-29 ASC Exhibit DD. Specific Standards_2022-01-31, Section 4.3.

power generated from the wind facility components in the southern area of the site boundary would feed into the southern substation then would be transmitted via the new overhead 230-kV transmission line discussed above to the northern substation. The applicant proposes to connect the proposed facility to a planned BPA substation or to an existing UEC substation, therefore, the Department recommends that Council find that the applicant would use existing substations as well as needing the proposed facility substations. The applicant explains that there are not any existing substations available along the route between the northern and southern areas of the site boundary where power would be generated.[315] The area around both substations would be graveled, with no vegetation present to reduce any fire risks. Outdoor lighting at the proposed substations would be kept to a minimum through the use of motion sensors and switches to reduce lighting to the minimum required for safety when not in use, and lighting would be directed downward and inward to prevent off-site glare. The Department recommends Council find that the applicant can design, construct and operate the substations in a manner that would reduce cumulative adverse environmental effects in the vicinity of the proposed facility because they are necessary for the operation of the facility and would be constructed in a manner that would reduce fire and safety risks and would minimize visual impacts.

Wildlife Protection

OAR 345-024-0015(4) encourages facility design that reduces the risk of injury to raptors or other vulnerable wildlife in areas near wind turbines or electrical equipment. Potential impacts, avoidance and mitigation measures to wildlife are addressed in Sections IV.H., *Fish and Wildlife Habitat* and IV.I., *Threatened and Endangered Species* of this order, and summarized below.

Under Fish and Wildlife Habitat Conditions 6 and 7, in Section IV.H., *Fish and Wildlife Habitat,* the Department recommends Council require the implementation of a Wildlife Monitoring and Adaptive Management Plan that applies to construction (Attachment P-4 to this order). This plan includes design measures that would be established during construction that would minimize impacts to wildlife and state sensitive species including raptors and other birds including, but not limited to:

- Develop and implement a worker environmental training program throughout the construction of the proposed facility;
- Constructing and operating transmission lines and collector lines according to APLIC recommendations to avoid electrocution;
- Establishing driving speed limits on access roads during construction to minimize the potential for vehicle collisions with wildlife or livestock, which could attract birds;
- Minimization of nesting disturbance and collision risk to state sensitive raptors through implementation of a .25-mile setback of turbines from active ferruginous hawk and Swainson's hawk nests;
- Minimization of collision risk and nesting disturbance to state sensitive raptors through implementation of a 656-foot (200-meter) turbine setback along Alkali Canyon;

[315] NHWAPPDoc2-29 ASC Exhibit DD. Specific Standards_2022-01-31, Section 4.3.

- Minimization raptor nesting disturbance through avoidance of trees with active state sensitive raptor species nests;
- Minimization of wildlife collision with guy wires by installing unguyed permanent met towers.

Further, during operation the applicant would employ the measures identified in the Wildlife Monitoring Plan (WMP), attached to this order as Attachment P-3 and recommended under Fish and Wildlife Habitat Condition 8. The WMP describes procedures for post-construction bird and bat fatality monitoring, raptor nest monitoring, and Washington Ground Squirrel (WAGS) monitoring, and describes the wildlife reporting and handling system that would be implemented by operations personnel. Finally, Attachment P-2 includes a draft Revegetation and Noxious Weed Plan which is recommended under Fish and Wildlife Conditions 1, 2 and 3 and would guide the restoration of temporarily impacted areas based on their habitat type. The revegetation plan also would apply to retirement activities and long term weed control. Revegetation and noxious weed control measures would reduce impacts to wildlife and raptors because the measures and success criteria, if met, assist the habitat to regenerate and support the wildlife that uses it.

Based on the analysis provided above and subject to compliance with the site certificate conditions recommended under applicable Council standards; the Department recommends Council find the applicant has demonstrated that it can reduce cumulative adverse environmental effects in the vicinity by designing the facility and implementing procedures, monitoring, and reporting to reduce the risk of injury to raptors or other vulnerable wildlife in areas near turbines or electrical equipment.

Visual Features

OAR 345-024-0015(5) encourages the applicant to design a facility to minimize adverse visual features. Visual impacts from the facility are primarily related to views of the wind turbines and the 230-kV transmission lines because these would be the tallest features associated with the proposed facility. The O&M Building, substations, solar array and BESS are not anticipated to represent significant visual impacts are not the focus of the applicant's visual impact assessment provided for Scenic Resources and Protected Areas in ASC Exhibits R and L, respectively. Based upon the Department's review of the visual impact assessment to resources protected under these standards, and subject to proposed site certificate conditions, the Department recommends that Council find that the proposed facility structures would not pose a significant visual impact to scenic resources under OAR 345-022-0080 and protected area under OAR 345-022-0040. Further, as evaluated in Section IV.M.6., *Air Traffic*, the Department and the Oregon Department of Aviation evaluated the potential of the proposed wind turbines and transmission lines to object aviation traffic, where it is not anticipated to impact any local airports of flight paths. This section also provides an evaluation of the glare analysis from the solar panels that the applicant submitted, which concludes that the operation of the solar panels would not cause significant glare effects to vehicular or air traffic.

Other measures, besides facility lighting, which is discussed below, that would reduce visual impacts of the proposed facility are described in Section III.A., *Proposed Facility*. Mandatory Condition under OAR 345-025-0006(3) (General Standard of Review Condition 3) requires that, among other items, the applicant design, construct, operate, and retire the facility substantially as described in the site certificate. The design features that would reduce visual impacts of the proposed facility are described in this section and in sections that evaluate visual impacts from the proposed facility. Measures the applicant would implement to reduce visual impacts of the prosed facility are:

- Wind turbines and towers would be painted in a uniform matte-finish neutral white or light gray;
- Support poles for the transmission lines would be wood or non-reflective steel (e.g., self-weathering steel) to blend with the surroundings;
- O&M Building and substations structures would be finished in a neutral color to blend with the surrounding landscape;
- Solar module crystalline cells would be housed within antireflective glass panels to reduce reflectivity and prevent glare;
- Access roads and other areas of ground disturbance would be watered during construction to avoid the generation of airborne dust.

Based on the analysis provided here, applicant described facility construction and design features, and subject to site certificate conditions recommended under applicable Council standards, the Department recommends that Council find that the applicant has demonstrated that it can design the components of the facility to minimize adverse visual features.

Lighting

OAR 345-024-0015(6) requires the use of techniques to prevent casting glare from the site and the use of minimum lighting necessary for safety and security purposes, except as otherwise required by the Federal Aviation Administration (FAA) and the Oregon Department of Aviation. Section IV.M.6., *Air Traffic*, of this order provides a lengthy discussion of the potential impacts of the proposed facility to public and private providers of air traffic and includes an evaluation from the Oregon Department of Aviation and an evaluation of FAA requirements. As detailed in that section, the submission of a FAA Form 7460-1 may result in a FAA Determination of No Hazard to Air Navigation and may include conditional provisions, limitations to minimize potential problems, supplemental notice requirements, or requirements for marking and lighting. Recommended Public Services Condition 3 requires the submission of the FAA 7460-1 Notice to ODA and FAA, where the results are provided to the Department. Wind turbines would be marked and lighted only as necessary for safety and security purposes according to FAA standards (FAA Advisory Circular 70/7460-1L), but no other lighting would be used on the turbines. Under current FAA standards, flashing red aviation lighting would be mounted atop turbines, and all of the lights would be programmed to flash in unison, so that all of the wind facility components would be perceived as a single unit by pilots flying at night. The applicant

maintains that is would use the minimum lighting required to maintain safe operations of the facility and that lighting at the O&M building and substations would be pointed downward to reduce visual intrusions from the proposed facility.

Based on the evaluation provided here and subject to compliance with site certificate conditions recommended under the applicable Council standard, the Department recommends Council find the applicant has demonstrated that it can reduce cumulative adverse environmental effects in the vicinity by designing the components of the facility to minimize the adverse impacts of lighting.

Conclusions of Law

Based on the foregoing recommended findings of fact and conclusions, and with recommended conditions, the Department recommends that Council find that the proposed facility complies with the Council's Cumulative Effects Standards for Wind Energy Facilities.

IV.P.3. Siting Standards for Transmission Lines: OAR 345-024-0090

To issue a site certificate for a facility that includes any transmission line under Council jurisdiction, the Council must find that the applicant:

(1) Can design, construct and operate the proposed transmission line so that alternating current electric fields do not exceed 9 kV per meter at one meter above the ground surface in areas accessible to the public;

(2) Can design, construct and operate the proposed transmission line so that induced currents resulting from the transmission line and related or supporting facilities will be as low as reasonably achievable.

Findings of Fact

The proposed facility includes the following transmission lines:

- 6.8-mile, single circuit 230-kV Substation Connector transmission line
- 25.3 miles of 230 kV UEC Cottonwood transmission line (UEC Cottonwood Route/Alternative Route), of which:
    - approximately 8.4 miles would be a new single-circuit 230-kV transmission line,
    - approximately 9.6 miles would replace an existing 12.47-kV distribution line with a 230-kV transmission line and distribution underbuild, and
    - approximately 7.3 miles would upgrade an existing 115-kV UEC transmission line to a double-circuit 230/115-kV line with 12.47-kV underbuilt distribution.
- 5 miles of 230 kV/115 kV BPA Stanfield transmission line, of which approximately 3 miles would parallel an existing 230-kV transmission line, outside of the existing transmission line's right-of-way

- 9.1 miles of aboveground 34.5 kV electrical collector lines for wind and 5.5 miles of 34.5 kV aboveground collector lines for solar.[316]

Electric Fields

The electric charge (measured as voltage) on an energized transmission line conductor produces electric fields. The greater the overall transmission line voltage, the greater the strength of the electric field. The software program used by the applicant and its consultant, Tetra Tech, to evaluate electric fields and compliance with the 9 kV per meter (kV/m) at one meter above the ground surface threshold is the Corona and Field Effects Program (Version 3.1). This program was developed by BPA and is based on the methods and equations of the Transmission Line Reference Book published by the Electric Power Research Institute (EPRI). The modeling assumptions included in the electric field evaluation for the proposed transmission lines is provided below:[317]

<u>UEC Cottonwood 230kV/115kV double-circuit transmission line (ASC Exhibit AA Figure AA-3):</u>

- Width of modeling – 200 feet on each side of the center line. Sample points are taken every 4 feet uniformly in a perpendicular direction to the center line. The right-of-way (ROW) is estimated at 50 feet on each side of the center line;
- Horizontal location of the three conductors – 10 feet (A circuit), 13 feet (B circuit), and 10 feet (C circuit) on each side of the double-circuit center line;
- Height of conductors – 24.9 (C circuit), 40.9 (B circuit), and 56.9 (A circuit) feet, respectively;
- Conductor diameters – 1.345 inches;
- Power – 961 amps, or 0.961 kiloamperes (kA);
- Horizontal location of the two ground wires – 6 feet and -6 feet from each side of the double-circuit center line;
- Height of ground wires – 63.9 feet; and
- Ground wire diameter – 0.5 inch.

<u>Substation Connector 230-kV single-circuit transmission line (ASC Exhibit AA Figure AA-4):</u>

- Width of modeling – 200 feet on each side of the center line; sample points were taken every 4 feet uniformly in a perpendicular direction to the center line. The ROW is estimated at 50 feet on each side of the center line;
- Horizontal location of the three conductors – 10 feet (A circuit), -10 feet (B circuit), and 10 feet (C circuit);

[316] The above-ground 34/5 kV Collector Lines were not included or evaluated in ASC Exhibit AA. The 9.1 miles of 34.5 kV aboveground collector line would be located on privately owned lands and the 5.5 miles of 34.5 kV aboveground collector lines for solar facility components would be located within the fence line for the solar and battery facilities and on private property. Therefore, these collector lines would be located in an area not accessible to the public, consequently, compliance with the standard is not required.

[317] NHWAPPDoc2-26 ASC Exhibit AA. EMF_2022-01-31, Section 2.1.2.1.

- Height of conductors – 44.9 feet (A circuit), 34.9 feet (B circuit), and 24.9 feet (C circuit);
- Conductor diameters – 1.345 inches;
- Power – 961 amps, or 0.961 kA;
- Horizontal location of the single ground wire – 5 feet from on one side of the center line;
- Height of the single ground wire – 54.2 feet; and
- Ground wire diameter – 0.5 inch.

230 kV/115 kV BPA Stanfield transmission line (ASC Exhibit AA Figure AA-5):

- Width of modeling – Out to 200 feet beyond the center line for both the proposed 230-kV BPA Stanfield transmission line and the existing BPA 230-kV transmission line. Sample points were taken every 6 feet uniformly in a perpendicular direction to the center line. The ROW is estimated at 50 feet on each side of the center line;
- Other modeling assumptions were the same inputted as the Substation Connector 230-kV single-circuit transmission line listed above; and
- Inputs from the existing BPA H-frame transmission line including:
    - Horizontal location of the three conductors – -20 feet (A circuit), 0 feet (B circuit), and 20 feet (C circuit) from center line of the H-frame structure;
    - Height of conductors – 30 feet for all;
    - Conductor diameters – 1.345 inches; and
    - Power – 425 megawatts, calculated at 1,066 amps, or 1.066 kA.

The BPA Corona and Field Effects Program is the standard modeling software used to evaluate electric field for EFSC facilities.[318] The assumptions and modeling inputs (i.e., width of modeling on both sides of center line, height of conductors, power, and conductor diameter, etc.) are consistent with the transmission line description included in ASC Exhibit B. Other assumptions and inputs the applicant fed into the Corona and Field Effects Program include an elevation of 1,000 feet, a precipitation rate of one inch per hour, and a wind speed of 2 miles per hour. Based on use of an accepted modeling software and identification of inputs and assumptions, the Department recommends Council find that the methods to evaluate electric fields from the proposed transmission lines are adequate.

ASC Exhibit AA Attachment AA-1 through 3, *Results of the Bonneville Power Administration Corona and Field Effects Program* presents the results of modeled AC electric fields for the proposed transmission lines, presented in Table 21: *Overhead Electric Field Results*. Figures 13 through ~~3~~14 below illustrate the electric field modeling output for each proposed transmission line configuration; Figure 15: *BPA Stanfield 230 kV with Existing 230 kV H-Frame Electrical Field*

[318] EFSC Final Order on ASC of Obsidian Solar Center. 2022-02-25. Page 177.

Modelling Output, illustrates the proposed transmission line and the existing BPA transmission line.

Table 21: Overhead Electric Field Results

230 kV Transmission Line	Electric Field (kV/m)		
	Left Side	From Centerline	Right Side
230-kV/115-kV Double Circuit UEC Cottonwood Line	0.052	4.26	0.061
230-kV Single-Circuit Substation Connector	0.042	3.22	0.044
230-kV Single-Circuit Stanfield to BPA Substation	0.046	3.18	N/A
Below 9 kV/m limit (yes, no?) =	Yes	Yes	Yes

The proposed UEC Cottonwood Transmission Line would have a maximum electric field of 4.26 kV/m at 1-meter, the Substation Connector Line would have a maximum of 3.22 kV/m at 1-meter, and the Stanfield to BPA Transmission Line would have a maximum electric field of 3.18 kV/m at 1-meter. Because all of these values are below the threshold of 9 kV/m at one meter above the ground surface in areas that are accessible to the public, the Department recommends Council find that the applicant has demonstrated compliance with OAR 345-024-0090(1).

Figure 13: UEC Cottonwood 230 kV/115 kV Electrical Field Modelling Output

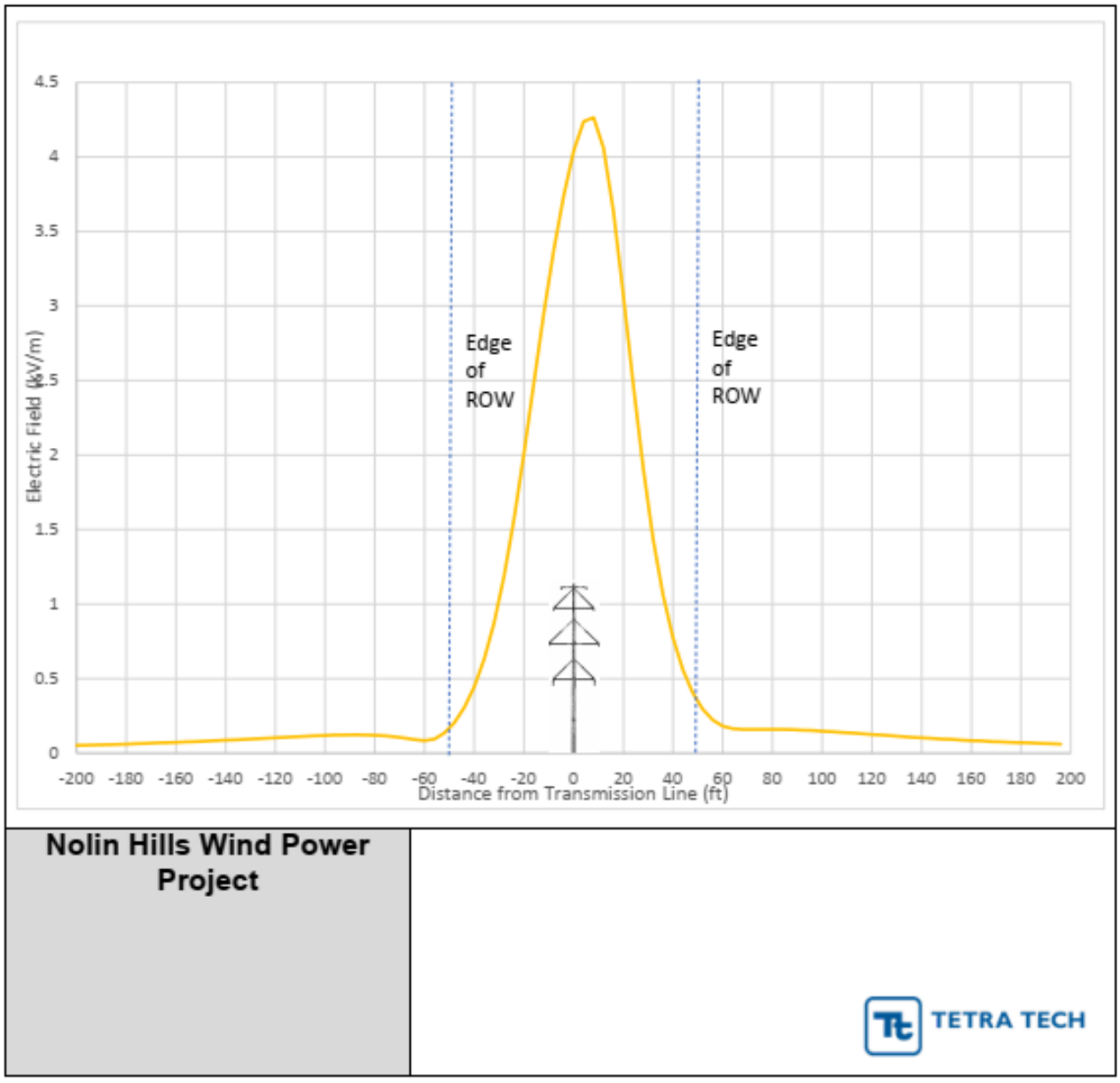


Figure 14: Substation Connector 230 kV Electrical Field Modelling Output

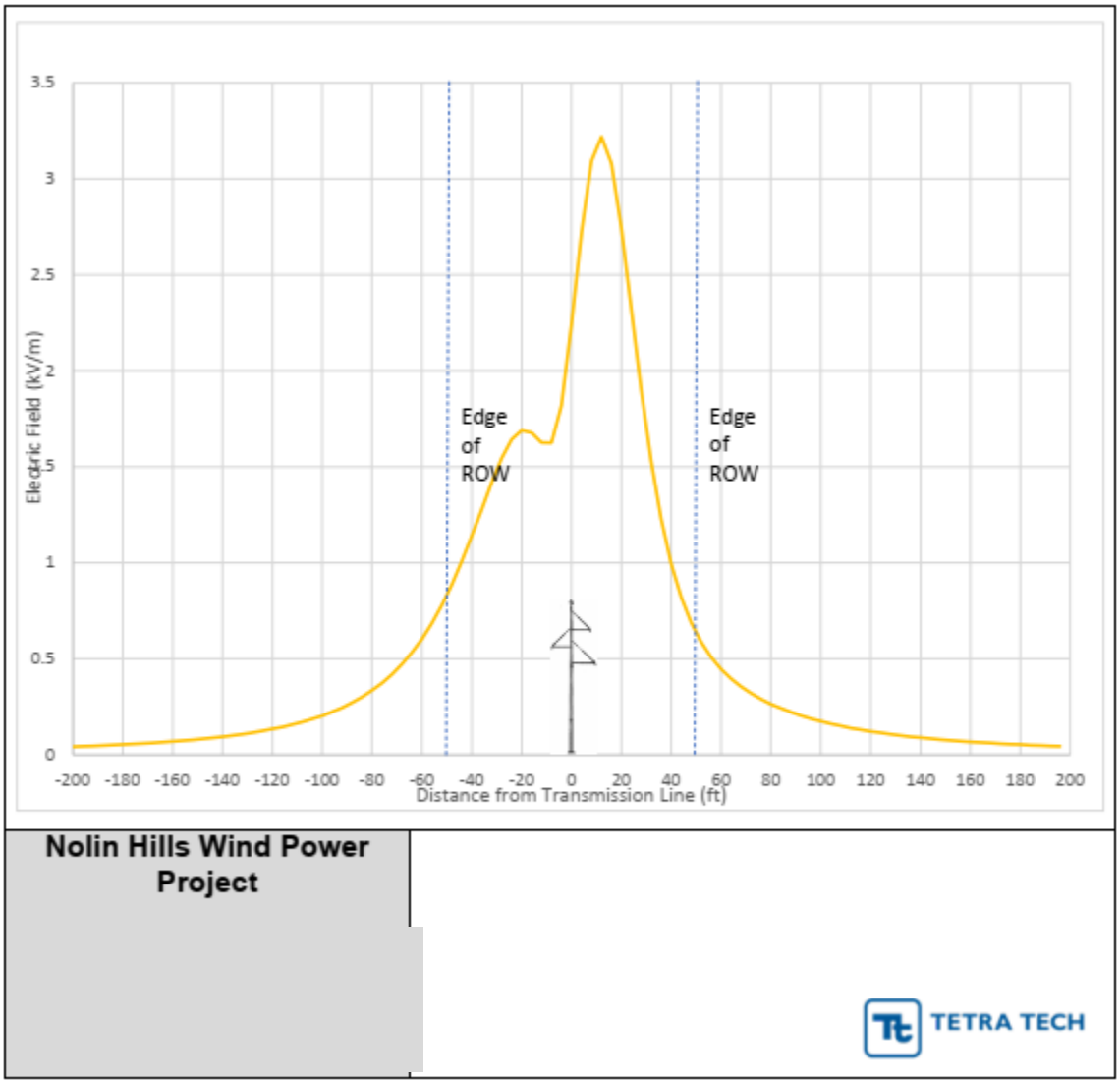
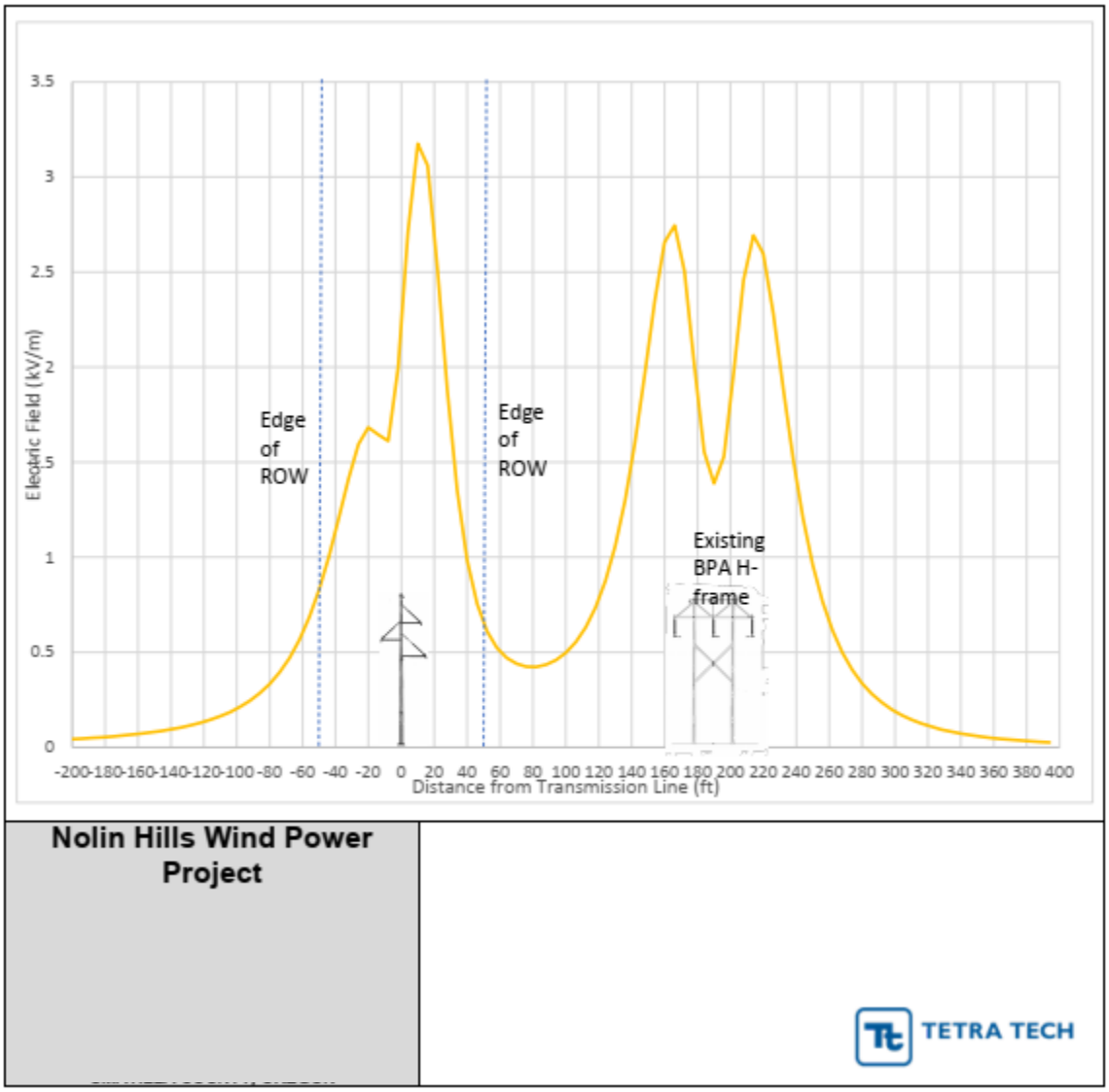


Figure 15: BPA Stanfield 230 kV with Existing 230 kV H-Frame Electrical Field Modelling Output



Induced Current

Per OAR 345-024-0090(2), the induced current from the proposed 230 kV transmission lines must be as low as reasonably achievable. This is because a conductive object in proximity to the lines, but not touching them, can become charged and when someone touches the conductive object they create a path to ground for the electric current and can receive an electric shock. The strength of the induced current in an object is positively related to the electric field strength of a nearby transmission line. More conductive materials accumulate greater charge than less conductive materials while large objects, such as a tractor trailer,

accumulate a greater charge than smaller objects such as a pick-up truck.[319] The National Electrical Safety Code (NESC) sets the standards for practical safeguarding of people during the installation, operation, or maintenance of electric supply and communication lines and the 2012 NESC Rule 234G.3 that addresses induced current and sets forth a certain standard to ensure the safety and health implications of the same are properly addressed: [320]

> *[f]or voltages exceeding 98 kV ac to ground, either the clearances shall be increased or the electric field, or the effects thereof, shall be reduced by other means, as required, to limit the steady-state current due to electrostatic effects to 5 mA, rms, if an ungrounded metal fence, building, sign, billboard, chimney, radio or television antenna, tank or other installation, or any ungrounded metal attachments thereto, were short-circuited to ground.*

The applicant used Electric Power Research Institute (EPRI) to estimate the maximum current that could be induced in several types of vehicles and agricultural-related pieces of equipment potentially present in the transmission line right-of-way.[321]

Table 22: Predicted Maximum Induced Current Factors

Object	Object Length	Factor: I_{SC}/E (mA/kV/m)	Maximum Induced Current (mA)*
Car	L 4.6 m x W 1.78 m x H 1.37 m	0.088	0.37
Pickup Truck	L 5.2 m x W 2.0 m x H 1.7m	0.10	0.43
Large Tractor-Trailer	Total Length 15.75 m Trailer: 12.2 m x W 2.4 m x H 3.7m	0.64	2.7
Combine	L 9.15 m x W 2.3 m x H 3.5 m	0.38	1.6

I_{SC} = short-circuit current
E = AC electric field
m = meter
* Maximum induced current calculated for strongest predicted electric field of 4.26 kV/m associated with the proposed facility.
Source: NHWAPPDoc2-26 ASC Exhibit AA. EMF_2022-01-31, Table AA-4.

The strongest predicted electric field for the transmission line configurations is 4.26 kV/m for the 230-kV/115-kV double-circuit transmission line. Based on these calculations, vehicles and equipment listed in Table 22 would all have short-circuit currents less than the 5-mA NESC standard.

Programs and design measures to reduce or eliminate induced current include:

[319] NHWAPPDoc2-26 ASC Exhibit AA. EMF_2022-01-31, Section 4.1.

[320] The Department understands that NESC Rule 234G.3 was not updated in the 2017 and 2020 NES Codes. NESC 2017 Updates previews_1914980_pre. file:///F:/State%20Projects/NHW%20-%20Nolin%20Hills%20Wind/02%20Application%20Review/02.03%20Draft%20Proposed%20Order/DPO%20Reference%20Docs/NESC%202017%20Updates%20previews_1914980_pre.pdf Accessed on 04-05-2022.

[321] Electric Power Research Institute. Transmission Line Reference Book. Third Edition. 2005, Table 7.8-2.

- Constructing the substation with a grounding mat extending 4-feet from the substation fence; aboveground structures would be electrically connected to the grounding mat
- Preconstruction identification of wire fences, pipelines, irrigation lines, metal roofs, and other objects near the right-of-way in which a current could be induced. All such objects would be properly grounded within or as close as practicable to the right-of-way in order to prevent induced current and nuisance shocks.

To ensure that induced currents are minimized based on applicant's representations, consistent with Council's Site-Specific Condition under OAR 345-025-0010(4), the Department recommends Council impose the following condition:

Recommended Siting Standards for Transmission Lines Condition 1 (GEN):

a. The certificate holder must design, construct and operate the transmission lines in accordance with the requirements of the National Electrical Safety Code as approved by the American National Standards Institute; and
b. The certificate holder must develop and implement a program that provides reasonable assurance that all fences, gates, cattle guards, trailers, or other objects or structures of a permanent nature that could become inadvertently charged with electricity are grounded or bonded throughout the life of the line.

[Site Specific Condition OAR 345-025-0010(4)]

Conclusions of Law

Based on the recommended findings of fact presented in this section and subject to compliance with the recommended Siting Standards for Transmission Line Condition 1, the Department recommends that the Council find that the proposed facility complies with the Council's Siting Standards for Transmission Lines.

IV.Q. Other Applicable Regulatory Requirements Under Council Jurisdiction

Under ORS 469.503(3) and under the Council's General Standard of Review (OAR 345-022-0000), the Council must determine whether the proposed facility complies with "all other Oregon statutes and administrative rules…as applicable to the issuance of a site certificate for the proposed facility." This section addresses the applicable Oregon statutes and administrative rules that are not otherwise addressed in Council standards, including noise control regulations, regulations for removal or fill of material affecting waters of the state, and regulations for appropriating ground water.

IV.Q.1. Oregon Department of Environmental Quality (DEQ) Noise Control Regulations for Industry and Commerce: OAR 340-035-0035

(1) Standards and Regulations:

*****

(b) New Noise Sources:

(A) New Sources Located on Previously Used Sites: No person owning or controlling a new industrial or commercial noise source located on a previously used industrial or commercial site shall cause or permit the operation of that noise source if the statistical noise levels generated by that new source and measured at an appropriate measurement point, specified in subsection (3)(b) of this rule, exceed the levels specified in Table 8, except as otherwise provided in these rules. For noise levels generated by a wind energy facility including wind turbines of any size and any associated equipment or machinery, subparagraph (1)(b)(B)(iii) applies.

(B) New Sources Located on Previously Unused Site:

(i) No person owning or controlling a new industrial or commercial noise source located on a previously unused industrial or commercial site shall cause or permit the operation of that noise source if the noise levels generated or indirectly caused by that noise source increase the ambient statistical noise levels, L10 or L50, by more than 10 dBA in any one hour, or exceed the levels specified in Table 8, as measured at an appropriate measurement point, as specified in subsection (3)(b) of this rule, except as specified in subparagraph (1)(b)(B)(iii).

(ii) The ambient statistical noise level of a new industrial or commercial noise source on a previously unused industrial or commercial site shall include all noises generated or indirectly caused by or attributable to that source including all of its related activities. Sources exempted from the requirements of section (1) of this rule, which are identified in subsections (5)(b) - (f), (j), and (k) of this rule, shall not be excluded from this ambient measurement.

(iii) For noise levels generated or caused by a wind energy facility:

i. The increase in ambient statistical noise levels is based on an assumed background L50 ambient noise level of 26 dBA or the actual ambient background level. The person owning the wind energy facility may conduct measurements to determine the actual ambient L10 and L50 background level.

ii. The "actual ambient background level" is the measured noise level at the appropriate measurement point as specified in subsection (3)(b) of this rule using generally accepted noise engineering measurement practices. Background noise measurements shall be obtained at the appropriate measurement point, synchronized with windspeed measurements of hub height conditions at the nearest wind turbine location. "Actual ambient background level" does not include noise generated or caused by the wind energy facility.

iii. The noise levels from a wind energy facility may increase the ambient statistical noise levels L10 and L50 by more than 10 dBA (but not above the limits specified in Table 8), if the person who owns the noise sensitive property executes a legally effective easement or real covenant that benefits the property on which the wind energy facility

is located. The easement or covenant must authorize the wind energy facility to increase the ambient statistical noise levels, L10 or L50 on the sensitive property by more than 10 dBA at the appropriate measurement point.

iv. For purposes of determining whether a proposed wind energy facility would satisfy the ambient noise standard where a landowner has not waived the standard, noise levels at the appropriate measurement point are predicted assuming that all of the proposed wind facility's turbines are operating between cut-in speed and the wind speed corresponding to the maximum sound power level established by IEC 61400-11 (version 2002-12). These predictions must be compared to the highest of either the assumed ambient noise level of 26 dBA or to the actual ambient background L10 and L50 noise level, if measured. The facility complies with the noise ambient background standard if this comparison shows that the increase in noise is not more than 10 dBA over this entire range of wind speeds.

v. For purposes of determining whether an operating wind energy facility complies with the ambient noise standard where a landowner has not waived the standard, noise levels at the appropriate measurement point are measured when the facility's nearest wind turbine is operating over the entire range of wind speeds between cut-in speed and the windspeed corresponding to the maximum sound power level and no turbine that could contribute to the noise level is disabled. The facility complies with the noise ambient background standard if the increase in noise over either the assumed ambient noise level of 26 dBA or to the actual ambient background L10 and L50 noise level, if measured, is not more than 10 dBA over this entire range of wind speeds.

vi. For purposes of determining whether a proposed wind energy facility would satisfy the Table 8 standards, noise levels at the appropriate measurement point are predicted by using the turbine's maximum sound power level following procedures established by IEC 61400-11 (version 2002-12), and assuming that all of the proposed wind facility's turbines are operating at the maximum sound power level.

vii. For purposes of determining whether an operating wind energy facility satisfies the Table 8 standards, noise generated by the energy facility is measured at the appropriate measurement point when the facility's nearest wind turbine is operating at the windspeed corresponding to the maximum sound power level and no turbine that could contribute to the noise level is disabled.

*****

(3) Measurement:

(a) Sound measurements procedures shall conform to those procedures which are adopted by the Commission and set forth in Sound Measurement Procedures

Manual (NPCS-1), or to such other procedures as are approved in writing by the Department;

(b) Unless otherwise specified, the appropriate measurement point shall be that point on the noise sensitive property, described below, which is further from the noise source:

A. 25 feet (7.6 meters) toward the noise source from that point on the noise sensitive building nearest the noise source;

B. That point on the noise sensitive property line nearest the noise source.

(4) Monitoring and Reporting:

(a) Upon written notification from the Department, persons owning or controlling an industrial or commercial noise source shall monitor and record the statistical noise levels and operating times of equipment, facilities, operations, and activities, and shall submit such data to the Department in the form and on the schedule requested by the Department. Procedures for such measurements shall conform to those procedures which are adopted by the Commission and set forth in Sound Measurement Procedures Manual (NPCS-1);…

(5) Exemptions: Except as otherwise provided in subparagraph (1)(b)(B)(ii) of this rule, the rules in section (1) of this rule shall not apply to:

*****

(c) Sounds created by the tires or motor used to propel any road vehicle complying with the noise standards for road vehicles;

*****

(g) Sounds that originate on construction sites.

*****

(k) Sounds created by the operation of road vehicle auxiliary equipment complying with the noise rules for such equipment as specified in OAR 340-035-0030(1)(e);

*****

The Oregon Department of Environmental Quality's (DEQ) Noise Control Regulations for Industry and Commerce apply to operational noise from proposed energy facilities, as industrial noise sources. In 1991, DEQ's Noise Control Program was terminated; however, the rules remain in effect. Regulated sources of noise are legally responsible for complying with the applicable provisions and standards of the regulations. As described above, because ORS 469.503(3) and the Council's General Standard of Review (OAR 345-022-0000) require Council to find that a proposed facility complies with all other applicable requirements, which includes DEQ's noise control regulations, and because DEQ no longer enforces or monitors the regulations, Council assumes the authority as the decision maker to interpret and implement the DEQ noise rules.

Findings of Fact

OAR 340-035-0035 establishes noise limits for new industrial or commercial noise sources based upon whether those sources would be developed on a previously used or previously

unused site.[322] Land use within the site boundary includes private agriculture, generally used for dryland wheat production or rangeland. Agricultural operations are not considered industrial and commercial noise sources per OAR 340-035-0015(47). Therefore, the proposed facility is considered a new industrial noise source and the site is considered a previously unused site and evaluated per the requirements of OAR 340-035-0035(1)(b)(B).

The analysis area for evaluating compliance with the DEQ noise regulation includes the area within and extending one-mile from the proposed site boundary.

Per OAR 340-035-0035(1)(b)(B), noise generated by a new industrial or commercial source located on a previously unused site must comply with two standards: the "ambient noise degradation standard" and the "maximum allowable noise standard." Both of these standards represent allowable noise levels at "real properties normally used for sleeping," otherwise referred to as a "noise sensitive property."

- Under the ambient noise degradation standard, facility-generated noise must not increase the ambient hourly L10 or L50 noise levels at any noise sensitive property by more than 10 dBA in any one hour, with ambient noise levels established based on noise measurements taken at an appropriate noise measurement location (point on the noise sensitive property line nearest to the noise source).

- Under the maximum allowable noise standard at OAR 340-035-0035(1)(b)(B)(i), new industrial or commercial noise sources may not exceed the noise levels specified in the noise rules Table 8, which are represented in Table 20: *Statistical Noise Limits for Industrial and Commercial Noise Sources* below.

Table 23: Statistical Noise Limits for Industrial and Commercial Noise Sources

Statistical Descriptor[1]	Maximum Permissible Hourly Statistical Noise Levels (dBA)	
	Daytime (7:00 AM - 10:00 PM)	Nighttime (10:00 PM - 7:00 AM)
L50	55	50
L10	60	55
L1	75	60

[322] OAR 340-035-0015(47) defines a "previously unused industrial or commercial site" as "property which has not been used by any industrial or commercial noise source during the 20 years immediately preceding commencement of construction of a new industrial or commercial source on that property. Agricultural activities and silvicultural activities generating infrequent noise emissions shall not be considered as industrial or commercial operations for the purposes of this definition."
OAR 340-035-0015(24) defines "industrial and commercial noise sources" as "noise generated by a combination of equipment, facilities, operations or activities employed in the production, storage, handling, sale, purchase, exchange, or maintenance of a...service."

Table 23: Statistical Noise Limits for Industrial and Commercial Noise Sources

Statistical Descriptor[1]	Maximum Permissible Hourly Statistical Noise Levels (dBA)	
	Daytime (7:00 AM - 10:00 PM)	Nighttime (10:00 PM - 7:00 AM)
Notes: 1. The hourly L50, L10 and L1 noise levels are defined as the noise levels equaled or exceeded 50 percent, 10 percent, and 1 percent of the hour, respectively. Source: OAR 340-035-0035, Table 8		

The noise limits apply at "appropriate measurement points" on "noise-sensitive property." The "appropriate measurement point" is defined in the DEQ Noise Rules under OAR 340-035-0035(3)(b) as whichever of the following is farther from the noise source:

- 25 feet (7.6 meters) toward the noise source from that point on the noise-sensitive building nearest the noise source;
- That point on the noise-sensitive property line nearest the noise source; or
- Otherwise specified by applicant.

Noise Sensitive Receptors

Noise sensitive receptor (NSR) within 1-mile of the proposed site boundary were identified based on review of property owner records. Then, an NSR identification number was assigned to the UTM coordinates of the property taxlot; NSR locations were plotted on a facility layout map[323]; modeled operational noise levels at those properties were evaluated. Of the property owners within 1-mile of the proposed site boundary, 45 NSRs were identified and evaluated for operational noise impacts.

Construction

Construction noise is exempt from the noise standards pursuant to OAR 340-035-0035(5)(g) and (h).[324] The evaluation of construction-related noise, including methodology and assumptions, is an informational requirement per OAR Chapter 345 Division 21 and can be utilized to inform the evaluation of construction-related noise impacts under the Council's Protected Areas and Recreation standard of this order.

Proposed facility construction-noise impacts are based on the following:

- 12 construction vehicles/equipment

[323] NHWAPPDoc2-23 ASC Exhibit X Noise 2022-01-31. Figure X-2.

[324] An evaluation of construction noise generated from auxiliary vehicle use and helicopter use at NSRs is not required.

- Noise levels per equipment, ranging from 73 to 88 dBA and usage rates of 16 to 50% obtained from or consistent with the Federal Highway Administration's (FHWA) 2006 Roadway Construction Noise Model
- Composite L_{eq} noise level[325] estimated based on 12 pieces of equipment, applied usage rates for an 8-hr day, at 2,000 feet

Operations

OAR 340-035-0035(1)(b)(B)(i) restricts noise levels of new industrial or commercial noise sources located on a previously unused industrial or commercial site from increasing the ambient statistical noise level, L10 or L50, by more than 10 dBA in any one hour. OAR 340-035-0035(1)(b)(B)(iii) apply to noise levels generated by a "wind energy facility."[326] The primary difference between (i) and (iii) is that (iii) allows for the noise evaluation of a "wind energy facility" to be based on an assumed 26 dBA ambient noise level and allows for an impacted landowner to waive the ambient degradation standard.

The proposed facility includes wind and solar energy generation components and 230 kV transmission lines. The Department recommends Council apply DEQ's noise rules for a wind energy facility. The applicant's evaluation of proposed facility operational-noise impacts is based on an assumed ambient noise level of 26 dBA and the following noise levels from facility components:

- 112 wind turbines (GE 3.0 – 140), each at 108 dBA (includes confidence interval of k = 2 dBA)[327]
- 2 substation GSU transformers (222 MVA), each at 105 dBA
- 97 solar inverter blocks at 97 dBA, including 5 solar panel inverters and distribution transformer; solar DC converter at 96 dBA; and BESS at 98 dBA (represented in ASC Exhibit X Figure X-2 as "DC BESS Inverter Block")
- 1 substation GSU transformer (300 MVA) at 103 dBA
- 230 kV transmission line, during foul weather events (1-millimeter per hour)

Based on the above-referenced noise levels, the applicant utilized two programs to analyze potential noise impacts – the DataKustic GmbH's computer-aided noise abatement program (CadnaA) v 2020 MR1 and the Corona and Field Effects Program Version 3 (Corona 3). The CadnaA is a comprehensive three-dimensional acoustic software model that conforms to the International Organization for Standardization (ISO) standard ISO 9613-2 "Attenuation of Sound during Propagation Outdoors."[328] The Corona 3 is a DOS-based computer model developed by

[325] The Department recommends Council find that estimating noise in Leq is the most appropriate metric because of the intermittent nature of construction equipment operation and allows for the prediction to be based on a compilation of varying noise levels throughout an 8-hr day.

[326] OAR 340-035-0035(1)(b)(A).

[327] NWHAPPDoc2-23 ASC Exhibit X Noise 2022-01-31, Section 4.2.6.1.

[328] NWHAPPDoc2-23 ASC Exhibit X. Noise 2022-01-31, Section 4.2.5.1.

the BPA and produces estimates of electric and magnetic fields, and audible noise, based on line voltage, load flow, physical dimensions of the line, and site elevation.[329]

The Department recommends Council find that the applicant's methods for evaluating operational noise impacts are acceptable for the following reasons. CadnaA is an established model that has been relied upon for the evaluation of noise impacts for numerous EFSC decisions on site certificates[330] and represents statistical-computations with sourced inputs. The Corona 3 model has been developed by BPA. In this model, Corona performance is calculated using empirical equations that have been developed by BPA over several years from the results of measurements on numerous high-voltage lines. The validity of this approach for corona-generated audible noise has been demonstrated through comparisons with measurements on other lines all over the United States.[331]

Maximum Allowable and Ambient Noise Degradation Standards

The Computer Aided Noise Abatement (CadnaA) version 2018 MR1 was used to evaluate operational noise from the proposed facility. CadnaA includes sound propagation factors adopted from International Organization for Standardization's (ISO) 9613-2 "Acoustics - Sound Attenuation During Propagation Outdoors" to account for geometric divergence, atmospheric absorption, reflection from surfaces, screening by topography and obstacles, terrain complexity and ground effects, source directivity factors, seasonal foliage effects, and meteorological conditions.

Operational noise from the proposed facility is compared to the maximum allowable noise limits, as summarized in Table 24 (OAR 340-035-0035, Table 8), the most restrictive of which is 50 dBA at night. The anti-ambient noise degradation standard requires a demonstration that noise generated during proposed facility operation must not cause the hourly L50 noise level at any NSR to exceed 10 dBA above ambient statistical noise levels, or in this case, result in operational L50 noise levels of 36 dBA.

[329] *Id.*

[330] EFSC Final Order on ASC for Madras Solar Energy Facility, June 2021. Available: https://www.oregon.gov/energy/facilities-safety/facilities/Pages/MSE.aspx. EFSC Final Order on ASC for Bakeoven Solar Project, April 2020. Available: https://www.oregon.gov/energy/facilities-safety/facilities/Pages/BSP.aspx

[331] Bonneville Power Administration. Klondike III/Biglow Canyon Wind Integration Project, Appendix C: Electrical Effects, Page 1. 2006. Accessed online: https://legacy.bpa.gov/efw/Analysis/NEPADocuments/nepa/Klondike/AppendixC-EMF.pdf Date Accessed: 2022-03-09.

Table 24: Proposed Facility Operational Noise Analysis – Acoustic Modeling Results

NSR ID	Property Owner	Modeled Project Sound Level (dBA)[1]	Increase Above 26 dBA Ambient (dBA)	Waiver Required? [2]
1001	Sylvia Aristequi	33	8	No
1002	Margaret Skillman	31	6	No
1009	Brian and Bridget Schultz	28	4	No
3	Westland Enterprises LLC	36	10	Yes
1010	Janet Grove	28	4	No
1012	Tyler & O'Neil Bowman	26	3	No
1013	Kent Beebe	26	3	No
1014	Delwyn & Sandra Hendrickson	32	7	No
1015	Brian Skillman	33	8	No
1020	Kent & Katherine Beebe	26	3	No
10	Chester Prior	34	9	No
1022	Jordan Creek Cattle Ranch LLC	29	5	No
1025	Cunningham Sheep Co.	29	5	No
15	J.R. Simplot Company	38	12	Yes
1026	Cunningham Sheep Co.	29	5	No
1027	Damon & Lori Horn	28	4	No
1028	Cunningham Sheep Co.	29	4	No
1029	Herbert & Nadine Bork	27	4	No
1030	Kathy Nelson	27	4	No
1031	Bill & Jeanne West Family Trust	26	3	No
1038	Samuel Ramos	25	2	No
1042	Lloyd & Katherine Ferge	29	4	No
1043	Lloyd & Katherine Ferge	29	5	No
1046	Patricia Widner	35	9	No
1051	Clayton Briscoe	29	5	No
1052	Phillip Marcum	29	5	No
1053	Anthony Koleszar	31	6	No
1054	Ygnacia & Sylvia Aristequi	35	10	Yes
1057	Delwyn & Sandra Hendrickson	30	6	No
1061	Kent Beebe	26	3	No
1064	Cunningham Sheep Co.	29	5	No
1066	Jason & Thyann Horn	31	6	No
47	Bert Curtis	37	11	Yes
54	Brian & Arlene Moore	36	10	Yes

Table 24: Proposed Facility Operational Noise Analysis – Acoustic Modeling Results

NSR ID	Property Owner	Modeled Project Sound Level (dBA)[1]	Increase Above 26 dBA Ambient (dBA)	Waiver Required? [2]
59	Vincent & Lohman Vazza	34	9	No
61	Jack Paluso	31	6	No
71	Saul Chairez	38	12	Yes
79	Paul & J Wagner-Bellingham	36	10	Yes
89	Harry & Helen Noble	17	1	No
85	Harry & Helen Noble	38	12	Yes

Notes:

1. Modeled project sound level is the predicted noise level from proposed facility components and does not include the L_{cum} with ambient noise level of 26 dBA.
2. OAR 340-035-0035(1)(b)(B)(iii)(IV) allows for a landowner to waive the ambient degradation standard. For NSR locations where modeled operational noise levels are predicted to exceed the ambient noise degradation standard, the applicant would be required to obtain a waiver from the landowner or demonstrate that the proposed facility has been designed in a manner that satisfies the standard. Actual ambient monitoring data may also be used to provide a more accurate evaluation, prior to construction.

As presented in Table 24: *Proposed Facility Operational Noise Analysis – Acoustic Modeling* Results, the operational noise from the proposed facility would comply with the maximum allowable L50 noise limit of 50 dBA at all NSR locations. The proposed facility would not comply with the 10 dBA ambient noise degradation standard at NSRs 3, 15, 47, 54, 71, 79, 1054 and 85. At each of these NSR locations, the predominant noise source contributing to the exceedance is the proposed 230 kV transmission line during rainy conditions.

The Department recommends Council impose the following condition requiring that the applicant demonstrate that the facility, at final design, complies with the ambient noise degradation standard as follows:

Recommended Noise Control Condition 1: Prior to construction, the certificate holder shall provide to the Department:

a. Information that identifies the final design locations of all facility components to be built at the facility;
b. The maximum sound power level for all noise generating facility components based on manufacturers' warranties or confirmed by other means acceptable to the Department;
c. The results of the noise analysis of the final facility design performed in a manner consistent with the requirements of OAR 340-035-0035(1)(b)(B)(iii)(IV) and (VI). The analysis must demonstrate to the satisfaction of the Department that the total noise

generated by the facility would meet the ambient noise degradation test and maximum allowable test at the appropriate measurement point for all potentially-affected noise sensitive properties within 1-mile of the site boundary, unless otherwise agreed upon by the Department based on the acoustic noise environment, or that the certificate holder has obtained the legally effective easement or real covenant for expected exceedances of the ambient noise degradation test described (d) below; and,

d. For each noise-sensitive property where the certificate holder relies on a noise waiver to demonstrate compliance in accordance with OAR 340-035-0035(1)(b)(B)(iii)(III), a copy of the legally effective easement or real covenant pursuant to which the owner of the property authorizes the certificate holder's operation of the facility to increase ambient statistical noise levels L_{10} and L_{50} by more than 10 dBA at the appropriate measurement point. The legally effective easement or real covenant must: include a legal description of the burdened property (the noise sensitive property); be recorded in the real property records of the county; expressly benefit the property on which the wind energy facility is located; expressly run with the land and bind all future owners, lessees or holders of any interest in the burdened property; and not be subject to revocation without the certificate holder's written approval.

Noise Control Regulations—Noise Complaints and Monitoring Program

Pursuant to the DEQ noise standards under OAR 340-035-0035(4)(a), the Council has authority to require the owner of an operating noise source to monitor and record the statistical noise levels upon written notification. In the event of a complaint regarding noise levels during proposed facility operation, the Council has the authority to act in the place of DEQ to enforce this provision to verify that the certificate holder is operating the facility in compliance with the noise control regulations. Therefore, the Department recommends the Council adopt the following conditions:

Recommended Noise Control Condition 2: During operation, the certificate holder shall maintain a complaint response system to address noise complaints. The certificate holder shall notify the Department within two working days of receiving a noise complaint related to the facility. The notification should include, but is not limited to, the date the certificate holder received the complaint, the nature of the complaint, the complainant's contact information, the location of the affected property, and any actions taken, or planned to be taken, by the certificate holder to address the complaint.

Conclusions of Law

Based on the foregoing recommended findings of fact and analysis, and compliance with the recommended conditions, the Department recommends that the Council find that the proposed facility would comply with the Noise Control Regulations in OAR 340-035-

0035(1)(b)(B).

IV.Q.2. Removal-Fill Law

The Oregon Removal-Fill Law (ORS 196.795 through 196.990) and Department of State Lands (DSL) regulations (OAR 141-085-0500 through 141-085-0785) require a removal-fill permit if 50 cubic yards (cy) or more of material is removed, filled, or altered within any "waters of the state"[332] (WOS). In addition, any amount of fill or removal of material below the ordinary high water level (OHWL) or within hydrologically connected wetlands for a designated essential salmonid stream would require a removal fill permit. The Council, in consultation with DSL, must determine whether a removal-fill permit is needed and if so, whether a removal-fill permit should be issued.

The analysis area for wetlands and other waters of the state is the area within the site boundary, which encompasses 48,159 acres. The applicant established a smaller area within the analysis area to delineate wetlands and WOS via desktop and field surveys (study area), which encompasses the proposed 15,477-acre micrositing area (13,767 acres associated with the wind facility, and the remaining 1,710 for the solar facility).

Findings of Fact

ASC Exhibit J provides the applicant's analysis of potential impacts from construction and operation of proposed wind facility components on regulated WOS as defined under ORS 196.800(15). ASC Exhibit J Attachment J-3 provides the applicant's analysis of potential impacts from construction and operation of proposed solar facility components on regulated WOS as defined under ORS 196.800(15).

The Department's recommended findings of fact, reasoning and analysis are presented below to support Council's evaluation of potential impacts to jurisdictional wetlands and WOS and of whether a removal-fill permit is required for the proposed facility.

IV.Q.2.a Department's Evaluation of Applicant's Methods for Evaluating Potential Waters of the State

In order to identify potential wetlands and other WOS, the applicant's consultant, Tetra Tech, conducted wetland delineation studies in accordance with DSL's technical requirements under OAR 141-090-0030 and OAR 141-090-0035(1-17). The applicant's wetland delineation studies were submitted to DSL, through the EFSC siting process, and were reviewed and concurred with by DSL, as referred and incorporated into this section.[333] The Department reviewed the applicant's methods for evaluating potential wetlands and other WOS within the study area and

[332] ORS 196.800(15) defines "Waters of this state." The term includes wetlands and certain other waterbodies.

[333] NHWAPPDoc2-9a ASC Exhibit J DSL Concurrence Wind Components (WD # 2019-0633) 2021-05-04. NHWAPPDoc2-9b ASC Exhibit J DSL Concurrence Solar Components (WD #2020-0613) 2021-04-07.

recommends Council find that the methods are appropriate because they are consistent with and follow DSL's technical requirements under OAR 141-090-0030 and OAR 141-090-0035(1-17) and were acceptable to DSL to provide concurrence. The applicant's methods are summarized below.

The applicant conducted both desktop and field studies in 2019 and 2020, including a review of the National Wetlands Inventory (NWI) and the National Hydrography Dataset, hydraulic soils data, aerial photographs to identify potential wetlands and other waters. Field investigations for the delineation of wetlands and other waters included pedestrian surveys within established sample plots of the features identified through the literature review, throughout the 15,477 acre study area. While the applicant's literature review included areas where the proposed transmission line corridors would be located, certain areas were not accessible for field surveys (see ASC Exhibit J Figure J-3). These unsurveyed transmission line corridors are addressed below.

The applicant's consultant conducted field delineation surveys based on review of guidance documents including: the U.S. Army Corps of Engineer's 2008 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0); USACE's 1987 Corps of Engineers Wetlands Delineation Manual, Technical Report, Y-87; EPA's 2015 Streamflow Duration Assessment Method for the Pacific Northwest; U.S. Fish and Wildlife Service's 1979 Classification of Wetlands and Deepwater Habitats of the United States; and OAR Chapter 141, Division 90.[334]

Field delineation surveys were conducted on:

- July 17-22, 2017
- September 19-22, 2017
- April 23-27, 2018
- July 17-21, 2018
- July 8-12, 2019
- May 4-5, 2020
- June 23, August 21, 2020

Based on the above-described methods, the applicant identified 78 waterways, 21 wetlands, and 2 ponds within the study area. Of these, twenty-seven were identified by the applicant as potentially jurisdictional. Concurrence on the identification, delineation and jurisdictional designation of these wetlands and WOS was received from DSL on April 7 and May 4, 2021, which are further described below.

IV.Q.2.b Jurisdictional Wetlands and Waters of the State within the Study Area

As presented in Table 25: *Summary of DSL-Concurred Jurisdictional Wetlands and WOS Within the Micrositing Area* below, a total of twenty-seven jurisdictional wetlands and WOS were

[334] NHWAPPDoc2-9 ASC Exhibit J. Wetlands_2022-01-31, p. 4.

identified and delineated by the applicant within the proposed wind facility micrositing area and no jurisdictional wetlands or WOS within the proposed solar micrositing area. As presented in Table 25 and ASC Exhibit J, the applicant represents that proposed facility construction would avoid impacts to jurisdictional waters and WOS.[335]

Table 25: Summary of DSL-Concurred Jurisdictional Wetlands and WOS Within the Micrositing Area

Wetland/ Stream ID	Area (Acres)	ASC Exhibit J Figure Reference	Nearest Facility Component	Applicant's Proposed Avoidance Method[1]
Ponds				
POND-1	0.04	J-2.7	Farm Road off of County Road 1363	No changes will be made to the roadway that would intersect the wetland or buffer.
POND-2	0.04	J-2.7	Farm Road off of County Road 1363	No changes will be made to the roadway that would intersect the wetland or buffer.
Wetlands				
WET-A	0.06	J-2.7	Transmission Line	Support structures will not be sited within this wetland or required buffer.
WET-B	0.01	J-2.7	Transmission Line	Support structures will not be sited within this wetland or required buffer.
WET-C	0.38	J-2.7	County Road 1363	No changes will be made to the roadway that would intersect the wetland or buffer.
WET-D	1.01	J-2.9	Crane Path	Path is sited outside of the buffer zone for this wetland.
WET-E	0.22	J-2.6	Crane Path, Underground Collector Line	Path and collector lines are sited outside of wetland buffer.
WET-F	0.19	J-2.6	Crane Path, Underground Collector Line	Path and collector lines are sited outside of wetland buffer.
WET-G	0.13	J-2.6	Crane Path, Underground Collector Line	Path and collector lines are sited outside of wetland buffer.
WET-H	0.05	J-2.6	Crane Path, Underground Collector Line	Path and collector lines are sited outside of wetland buffer.

[335] NHWAPPDoc2-9 ASC Exhibit J Wetlands 2022-01-31, p.9. Applicant represents that impacts would be avoided "to the extent practicable." This representation is omitted because the Department cannot make recommendations to Council based on an assumption of avoidance while allowing an applicant to potentially impact jurisdictional waters if avoidance is not practicable – if avoidance is not practicable, applicant would be required to evaluate whether a removal-fill permit is necessary and may need to submit an amendment determination request to the Department to ensure impacts not presented in the ASC would not necessitate review and approval of a site certificate amendment.

Table 25: Summary of DSL-Concurred Jurisdictional Wetlands and WOS Within the Micrositing Area

Wetland/ Stream ID	Area (Acres)	ASC Exhibit J Figure Reference	Nearest Facility Component	Applicant's Proposed Avoidance Method[1]
WET-I	0.02	J-2.3	County Road 1361	No changes will be made to the roadway that would intersect the wetland or buffer.
WET-J	0.55	J-2.5	Transmission Line	Conductor will span canyon where this wetland is located.
WET-K	0.12	J-2.8	Underground Collector Line	Collector lines are sited more than half a mile away.
WET-L	0.04	J-2.7	Crane Path, Underground Collector Line	Collector lines are sited more than half a mile away.
WET-M	0.66	J-2.5	County Road 1363	No changes will be made to the roadway that would intersect the wetland or buffer.
WET-N	0.01	J-2.7	Farm Road off of County Road 1363	No changes will be made to the roadway that would intersect the wetland or buffer.
WET-O	0.10	J-2.5	County Road 1363	No changes will be made to the roadway that would intersect the wetland or buffer.
WET-P	0.20	J-2.5	Farm Road off of County Road 1363	No changes will be made to the roadway that would intersect the wetland or buffer.
WET-Q	0.02	J-2.4	Transmission Line	Conductor will not be sited near this wetland.
WET-R	0.46	J-2.5	Farm Road off of County Road 1363	No changes will be made to the roadway that would intersect the wetland or buffer.
WET-S	0.16	J-2.5	Farm Road off of County Road 1363	No changes will be made to the roadway that would intersect the wetland or buffer.
WET-T	0.09	J-2.8	Crane Path	Path is sited outside of the buffer zone for this wetland.
WET-Z	0.53	J-2.9	Crane Path	Path is sited outside of the buffer zone for this wetland.
Waterways				
INT-001	--	J-2.1	Transmission Line	Conductor will span over irrigation ditch.
INT-002	--	J-2.5	Transmission Line	Support structures will not be sited within the stream channel or required buffer
INT-003	--	J-2.7	Transmission Line	Support structures will not be sited within the stream channel or required buffer.
Umatilla River[2]	--	J-2.2	Transmission Line	Conductor will span over the river.

Notes:

1. Applicant confirmed that "required buffer" refers to a 50-foot buffer from the edge of the delineated wetland or WOS.
2. Umatilla River is an essential salmonid stream and therefore any amount of fill or removal below the ordinary high water level (OHWL) or within hydrologically connected wetlands would require a removal fill permit.

In ASC Exhibit J, the applicant identifies that wetland delineation surveys have not yet been conducted in certain areas along the proposed 230 kV transmission line corridors because landowner permission for survey access was not obtained. The Department estimates that the extent of unsurveyed area is approximately 549 acres.[336] Based on review of ASC Exhibit J Figure J-1 and Figures J-3.1 through J-3.4, J-3.6 and J-3.7 and the online NWI, there are likely jurisdictional wetlands and WOS within these unsurveyed areas, which the applicant commits to avoiding.[337, 338]

The applicant has not requested a removal-fill permit; if a removal-fill permit is needed for proposed facility construction, the applicant would be required to seek approval of a site certificate amendment from EFSC for inclusion of removal-fill permit requirements, as established by DSL. Because the applicant has not field delineated all potentially jurisdictional wetlands and WOS within the proposed transmission line corridors, the Department recommends Council impose the following condition to ensure that preconstruction field delineation surveys are conducted to support impact avoidance; and that if, once delineated, there are potential removal-fill impacts of 50 cubic yards (cy) or greater, that the applicant be required to submit a request for site certificate amendment for Council approval of a removal-fill permit.

> **Recommended Removal Fill Condition 1 (PRE):** Prior to construction of the 230 kV transmission line, the certificate holder shall:
>
> a. Conduct field delineation surveys within unsurveyed transmission line corridor areas to identify any potentially jurisdictional wetlands or waters of the state.
> b. If, based on the field delineation surveys conducted per (a), construction activities would result in 50 cy or more of removal-fill, submit the field delineation report to DSL and the Department, requesting DSL concurrence and confirmation of removal-fill permit applicability. If DSL concurrence is received on the identified wetlands/waters of the state, seek approval from EFSC to include removal fill permit requirements in a request for site certificate amendment; or
> c. If a removal-fill permit is not required for disturbance impacts within the transmission line corridors, comply with Removal-Fill Condition 2(a) and (b).

IV.Q.2.c Avoidance and Minimization Measures

[336] NHWAPPDoc2-18 ASC Exhibit S Cultural 2022-01-31, Section 3.1.2,

[337] Applicant represents that impacts would be avoided "to the extent practicable." This representation is omitted because the Department cannot make recommendations to Council based on an assumption of avoidance while allowing an applicant to potentially impact jurisdictional waters if avoidance is not practicable – if avoidance is not practicable, applicant would be required to evaluate whether a removal-fill permit is necessary and may need to submit an amendment determination request to the Department to ensure impacts not presented in the ASC would not necessitate review and approval of a site certificate amendment.

[338] National Wetlands Inventory (https://fwsprimary.wim.usgs.gov/wetlands/apps/wetlands-mapper/) accessed by the Department on March 10, 2022.

In ASC Exhibit J, the applicant states that proposed facility construction and operation would not adversely impact jurisdictional wetlands and WOS, as presented in Table 25 above, and that a removal-fill permit would not be needed. The applicant represents that it would implement avoidance and minimization measures including: worker training on avoidance of jurisdictional wetlands/WOS, exclusion flagging/signage, 1200-C permit requirements, spanning the Umatilla River; and, facility design to avoid removal-fill impacts.

A removal-fill permit would not be needed for proposed facility construction or operation. To ensure that removal-fill impacts are either avoided or, if not avoided, that the applicant track impacts in a manner that ensures a removal-fill permit is obtained prior to the 50 cy threshold or any impacts below the OHWL within the Umatilla River, the Department recommends Council impose the following conditions:

Recommended Removal Fill Condition 2 (PRE): Prior to construction of facility components within the wind micrositing area, the certificate holder shall:

a. Provide the Department maps and GIS data showing the final design/layout and location of jurisdictional wetlands and waters of the state (WOS) as presented in Table X of the Final Order on the ASC and as a result of Removal-Fill Condition 1, if applicable; and, in tabular format, the distance from each facility component to the nearest jurisdictional wetland or WOS, demonstrating that facility components are at least 50 feet or more from any of the jurisdictional wetlands and waters of the state referred to in (a).
b. If final design of facility components cannot adhere to the 50-foot buffer under (a)(i), provide evidence to the Department that a removal-fill permit has been obtained by a third-party or through a site certificate amendment; or that a removal fill permit is not required.
c. Provide the Department a copy of the Worker Environmental Awareness Training, developed for construction workers, to inform and educate on the location of jurisdictional wetlands and WOS and of the purpose and specific location of exclusion flagging and signage.

Recommended Removal Fill Condition 3 (CON): During construction of facility components within the wind micrositing area the certificate holder shall:

a. Require contractors to complete the Worker Environmental Awareness training described in (a)(i). Maintain training records onsite for Department review upon request.
b. Maintain maps onsite and ensure contractors have awareness of the location of jurisdictional wetlands and WOS during construction activities.
c. Install flagging or signage around jurisdictional wetlands and WOS around the delineated boundary including a 50-foot buffer, when any construction activities are planned to occur within 150 feet.
d. Monitor flagging and signage and repair or replace flagging and signage, as needed, following weather events or construction impacts.

e. If construction impacts encroach upon the 50-foot buffer under (b)(iii), provide evidence to the Department that a removal-fill permit has been obtained by a third-party or through a site certificate amendment; or that a removal fill permit is not required.

Recommended Removal Fill Condition 4 (OPR): During operation and maintenance (O&M) of facility components within the wind micrositing area the certificate holder shall:

a. Require employees and contractors to complete the Worker Environmental Awareness training described in (a)(i). Maintain training records onsite for Department review upon request.
b. Maintain maps onsite and ensure employees and contractors have awareness of the location of jurisdictional wetlands and WOS during construction activities.
c. Install flagging or signage around jurisdictional wetlands and WOS around the delineated boundary including a 50-foot buffer, when any O&M activities are planned to occur within 150 feet.
d. Monitor flagging and signage and repair or replace flagging and signage, as needed, following weather events or O&M impacts.
e. If O&M impacts encroach upon the 50-foot buffer under (c)(iii), provide evidence to the Department that a removal-fill permit has been obtained by a third-party or through a site certificate amendment; or that a removal fill permit is not required.

Recommended Removal Fill Condition 5 (PRE): Prior to construction of the 230 kV BPA Stanfield transmission line, if selected, the certificate holder shall identify the construction method to be used to cross the Umatilla River.

Recommended Removal Fill Condition 6 (CON): During construction of the 230 kV BPA Stanfield transmission line, if selected, the certificate holder shall verify that removal-fill impacts do not occur below the OHWL unless a removal-fill permit is obtained from DSL through a third-party or a site certificate amendment.

Conclusions of Law

Based on the foregoing recommended findings of fact and conclusions, and subject to compliance with the recommended site certificate conditions, the Department recommends that the Council find that a removal-fill permit would not be needed for proposed facility construction or operation.

IV.Q.3. Water Rights

Under ORS Chapters 537 and 540 and OAR Chapter 690, the Oregon Water Resources Department (OWRD) administers water rights for appropriation and use of the water resources of the state. Under OAR 345-022-0000(1)(b), the Council must determine whether the proposed facility would comply with the statutes and administrative rules identified in the

Amended Project Order. The Amended Project Order identifies OAR 690, Divisions 310 and 380 (Water Resources Department permitting requirements) as the administrative rules governing use of water resources and water rights as applicable to the proposed facility. OAR 345-021-0010(1)(o)(F) requires that if a facility needs a groundwater permit, surface water permit, or water right transfer, that a decision on authorizing such a permit, rests with the Council.

Findings of Fact

OAR 690 establishes the procedures and standards which shall be applied by the OWRD in the evaluation of applications for a permit to appropriate surface water, ground water, to construct a reservoir and store water, to use reserved water, or to use water stored in a reservoir. The applicant is not requesting, nor representing as a third-party permit, the need for a groundwater permit, a surface water permit, or a water rights transfer during the construction and operation of the proposed facility. Therefore, the Department presents recommended findings of fact, reasoning and analysis to support Council's conclusions that, because the applicant has estimated maximum water use during proposed facility construction and operation and demonstrated that, with conditions, it has an ability to obtain an adequate supply of water, that neither the applicant nor a third-party contractor would require a groundwater permit, surface water permit, or water right transfer for construction or operation of the proposed facility.

Water Use and Source During Proposed Facility Construction

As presented in Table 26: *Construction Period and Daily Worst-Case Construction-Related Water Use*, proposed facility construction would use approximately 100 million gallons (Mgal) of water per year primarily for dust suppression, concrete mixing for foundations, road construction and site preparation. The applicant estimates that based on an 18-month construction duration, average monthly water demand would be approximately 3.9 Mgal.[339] Based upon the applicant's estimated monthly water usage of 3.9 Mgal, this would calculate out to an average of 130,000 gallons of water per day. The 18-month construction period is estimated to total 432 days of water demand for facility construction.[340] As part of the Department's own calculations of applicant's data for daily water usage under worst case conditions, the following table estimates the worst-case daily demand over this 432-day period by proposed activity and water usage. Based on these assumptions, the Department estimates that the worst-case daily water demand and usage, during the 18-month construction period would range between 158,400-232,081 gallons per day. The estimated water usage for foundations associated with the proposed facility components would be approximately 2.2 Mgal over the 18-month construction period or about 5,000 gallons per day. The largest variable that impacts water consumption for a worst-case water usage is scenario is increased water used for dust suppression during dry summer months. Under this scenario, water usage for all construction

[339] NHWAPPDoc2-14 ASC Exhibit O. Water Req_2022-01-31, Section 3.2.

[340] Applicant assumes that over the 18-month wind and solar facility construction period workers would average 24 working days per month. NHWAPPDoc2-20 ASC Exhibit U. Public Services_2022-01-31, Section 3.2.2.6.

tasks could reach over 100 Mgal for the 18-month construction period or approximately 232,000 gallons per day.

Table 26:Construction Period and Daily Worst-Case Construction-Related Water Use

Project Component/Task	Water Usage (gallons)	
	18-Month Construction Period	Daily
Concrete Foundations		
Wind Turbines	2,016,000	4,667
Meteorological towers	2,500	6
Substation	24,000	56
O&M building	10,000	23
Battery energy storage system	65,000	150
Solar racking posts	77,000	178
Solar Inverter/transformer pads	5,120	12
Subtotal =	2,199,620	5,091
Compaction and Dust Control		
Road construction	10,560,000	24,444
Dust control	58-87,500,000	134-202,546
Subtotal =	98,060,000	226,990
Total =	**100,259,620**	**232,081**
Source: NHWAPPDoc2-14, ASC Exhibit O, Table O-1 and O-2. 2022-01-31.		

ASC Exhibit O Attachment O-1 includes letters from 2020 from the cities of Pendleton, Hermiston and Echo Water Departments. The City of Hermiston confirmed that it can provide up to 125,000 gallons per day up to 68 million gallons for facility construction. The City of Echo also provided a letter stating they could provide up to 125,000 gallons per day (with no limit stated) for the construction of the facility. In a March 2022 memo responding to a Department inquiry, the City of Echo confirmed its ability to supply water for the construction of the proposed facility under existing water rights, stating that; "…Echo's current water supply wells could meet the average and worst-case water use scenarios proposed by the Nolin Hills project during a typical peak summer month period."[341] The City of Pendleton's 2020 letter included in ASC Exhibit O confirmed the ability to provide 134,000 gallons per day up to 71,000,000 gallons for construction. The City of Pendleton also affirmed its ability to supply water for the construction of the proposed facility under existing water rights in a response received by the Department in February 2022.[342]

Water Use and Source During Proposed Facility Operation and Maintenance

[341] NHWAPPDoc5-3 ASC Reviewing Agency Comment_City of Echo_Water_Slaght 2022-03-21.

[342] NHWAPPDoc5 ASC Reviewing Agency Comment_City of Pendleton_Water_Tarter 2022-02-02.

The applicant identifies water use during operations to be limited to the annual washing of solar panels and the on-going water usage for the O&M building. The O&M building would be served by a groundwater well, limited to 5,000 gallons per day, which is the daily limit for an exemption under ORS 537.545(1)(f).[343] Per the applicant's estimates, during operations, the facility would use approximately 1.12 million gallons of water per year for solar panel washing[344] with this water to be purchased from City of Hermiston, City of Pendleton, or the City of Echo.[345]

Under ORS 537.545(5) through (7), the landowner, where an exempt well is constructed, must file a record of the well, with appropriate fee, with the OWRD.[346] The provisions of ORS 537.765 outline water log requirements and apply to any person who constructs, alters, abandons or converts a well, which would apply to bonded contractors installing the wells, and not the applicant. Because the applicant proposes to use water from the on-site well during operation of the facility, to ensure compliance with statutory limitations under ORS Chapters 537, the Department recommends Council impose the following conditions:

> **Recommended Water Rights Condition 1 (PRE):** Prior to construction of the facility, facility component or phase, as applicable, the certificate holder shall identify all water-related needs and estimate daily and annual water demand for each construction phase. Provide excerpts of agreements or other similar conveyance to the Department demonstrating that construction activities will be adequately and legally served by service providers or third-party permits.
>
> **Recommended Water Rights Condition 2 (CON):** During construction of the facility, facility component or phase, as applicable, if a water right, limited water use license or water rights transfer is needed and would not be obtained by a third-party, submit and obtain approval of the applicable water permit through the site certificate amendment process.
>
> **Recommended Water Rights Condition 3 (PRO):** Prior to operation, the certificate holder shall:
>
> a. Identify all water-related needs and estimate daily and annual water demand. If a water right, limited water use license or water rights transfer is needed and would not be obtained by a third-party, submit and obtain approval of the applicable water permit through the site certificate amendment process.
> b. Install the groundwater well in accordance with the recording requirements under OAR 690-190-0100. If the certificate holder is not the landowner, the certificate holder shall facilitate the landowner submission of required materials to Oregon Water Resources Department. The certificate holder shall submit to the Department

[343] Exempt industrial water uses include drinking, flushing toilets, using sinks, and other general industrial uses.
[344] NHWAPPDoc2-14 ASC Exhibit O. Water Req_2022-01-31, Section 3.2.
[345] NHWAPPDoc2-14 ASC Exhibit O. Water Req_2022-01-31, Attachment O-1
[346] See OAR 690-190-0005 for exempt groundwater use recording requirements in rule.

a copy of the file submitted to Oregon Water Resources Department. This could also occur within 30 days after exempt well completion under ORS 537.545, whichever occurs first.

Recommended Water Rights Condition 4 (OPR): During operation, the onsite well must not exceed 5,000 gallons of water use per day for the facility unless a water right or limited water use license is obtained via third-party or site certificate amendment.

Conclusions of Law

Based on the recommended findings of fact and condition of compliance with other applicable rules, the Department recommends that the Council conclude that the proposed facility does not need a groundwater permit, surface water permit, or water right transfer.

V. PROPOSED CONCLUSIONS AND ORDER

The applicant submitted an ASC requesting authorization to construct and operate a wind and solar photovoltaic energy generation facility and related or supporting facilities within Umatilla County. Subject to compliance with the recommended conditions, the Department recommends that the Council find that a preponderance of evidence on the record supports the following conclusions:

1. The proposed Nolin Hills Wind Power Project complies with the requirements of the Oregon Energy Facility Siting Statutes, ORS 469.300 to 469.520.

2. The proposed Nolin Hills Wind Power Project complies with the standards adopted by the Council pursuant to ORS 469.501.

3. The proposed Nolin Hills Wind Power Project complies with all other Oregon statutes and administrative rules identified in the Amended Project Order as applicable to the issuance of a site certificate for the proposed facility.

Based on the recommended findings of fact, reasoning, conditions and conclusions of law in this draft proposed order, the Department recommends that the Council conclude that the applicant has satisfied the requirements for issuance of a site certificate for the proposed Nolin Hills Wind Power Project, subject to the conditions set forth in this draft proposed order.

Issued this 19th day of April 2022

The OREGON DEPARTMENT OF ENERGY

Attachments:

Attachment A: Recommended Draft Site Certificate Conditions (to be replaced in final order with Site Certificate)
Attachment B: Reviewing Agency Comments on preliminary/complete ASC
Attachment C: [Reserved for Draft Proposed Order Comments/Index]
Attachment D: References Cited in Draft Proposed Order
Attachment E: Draft Geotechnical Investigation Protocol (framework)
Attachment G-1: Draft Spill Prevention, Control, and Countermeasures Plan
Attachment K-1: Draft Agricultural Mitigation Plan
Attachment P-1: Draft Habitat Mitigation Plan
Attachment P-2: Draft Revegetation and Noxious Weed Plan
Attachment P-3: Draft Wildlife Monitoring Plan
Attachment P-4: Wildlife Monitoring and Adaptive Management Plan (Construction)
Attachment S-1: Draft Cultural Resources Monitoring and Inadvertent Discovery Plan
Attachment S-2: Historical Resources Mitigation Plan
Attachment S-3: Draft Subsurface Probing Plan
Attachment U-1: Draft Traffic Management Plan
Attachment U-2: Draft Fire Prevention, Suppression and Emergency Management Plan

Notice of the Right to Appeal

[Text to be added to Final Order]