

**BEFORE THE
ENERGY FACILITY SITING COUNCIL
OF THE STATE OF OREGON**

In the Matter of the Application for Site Certificate for Yellow Rosebush Energy Center)))	PROJECT ORDER
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Issued

January 26, 2024

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ACRONYMS AND ABBREVIATIONS

AC	Alternating Current
ACDP	Air Contaminant Discharge Permit
Applicant	Yellow Rosebush Energy Center LLC
ASC	Application for Site Certificate
BLM	Bureau of Land Management
BOC	Board of Commissioners
BPA	Bonneville Power Administration
CWA	Clean Water Act
DC	Direct Current
DEQ	Oregon Department of Environmental Quality
DLCD	Oregon Department of Land Conservation and Development
DOGAMI	Department of Oregon Geology and Mineral Industries
DSL	Oregon Department of State Lands
EFSC or Council	Energy Facility Siting Council
EFU Zone	Exclusive Farm Use Zone
facility	Yellow Rosebush Energy Center
kV	Kilovolts
MW	Megawatt
LCDC	Oregon Land Conservation and Development Commission
LCIS	Legislative Commission on Indian Services
LLC	Limited Liability Company
NOI	Notice of Intent to File an Application for Site Certificate
NPDES	National Pollutant Discharge Elimination System
OAR	Oregon Administrative Rule
ODAg	Oregon Department of Agriculture
ODAv	Oregon Department of Aviation
ODF	Oregon Department of Forestry
ODOE or Department	Oregon Department of Energy
ODOT	Oregon Department of Transportation
ODFW	Oregon Department of Fish and Wildlife
OPRD	Oregon Parks and Recreation Department
ORS	Oregon Revised Statute
Parent Company	Savion, LLC
pASC	Preliminary Application for Site Certificate
SHPO	Oregon State Historic Preservation Office
USFWS	U.S. Fish and Wildlife Service
WPCF	Water Pollution Control Facilities
YREC	Yellow Rosebush Energy Center

1 **I. INTRODUCTION**

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On September 28, 2023, the Oregon Department of Energy (ODOE or Department) received a Notice of Intent (NOI) to File an Application for a Site Certificate (ASC) for the Yellow Rosebush Energy Center (YREC). The NOI was submitted by Yellow Rosebush Energy Center, LLC (applicant), a wholly-owned subsidiary of Savion LLC.

This Project Order establishes the statutes, administrative rules, Energy Facility Siting Council (EFSC or Council) standards, local ordinances, ASC requirements and study requirements in accordance with ORS 469.330 and OAR 345-015-0160. As provided in ORS 469.330(4), this Project Order is not a final order. The Department or the Council may amend this Project Order at any time.

I.A. Facility Description

YREC (proposed facility or facility) is a proposed 800 megawatt (MW) solar photovoltaic (PV) energy generation facility to be located within an approximately 8,075-acre (12.6 sq. mile) site boundary of private land zoned for exclusive farm use (EFU) in Wasco and Sherman counties (See Figure 1). Such an “energy facility” is subject to EFSC jurisdiction.¹ The land within the proposed site boundary is currently used for crop cultivation and range land.

Under ORS 469.320, no “facility,” – i.e., an energy facility with related or supporting facilities,² may be constructed or operated in Oregon without a site certificate from the Council. Proposed related or supporting facilities include up to 800 MWs of battery energy storage; a collector substation; a 34.5 kilovolt (kV) collection system; Operation and Maintenance (O&M) building; two routing options for an overhead 500-kV transmission line and point of interconnection (POI) to the regional grid; perimeter fencing, access roads, and staging areas. The facility will be constructed in phases.

The facility will be primarily sited in Wasco County, except for a transmission line/POI option which extends into Sherman County. Major roads near the proposed facility include US 97 to the east, US 197 to the west, Bakeoven Road to the south, and Oregon Highway 216 (OR-216) to the north. The legal description for the proposed site boundary is shown in Table 1.

Table 1: Legal Description for Proposed Site Boundary

Township and Range	Section	Tax Lots
Sherman County		
4S 15E	11, 14, 23	300, 2100, 2200, 3200
Wasco County		

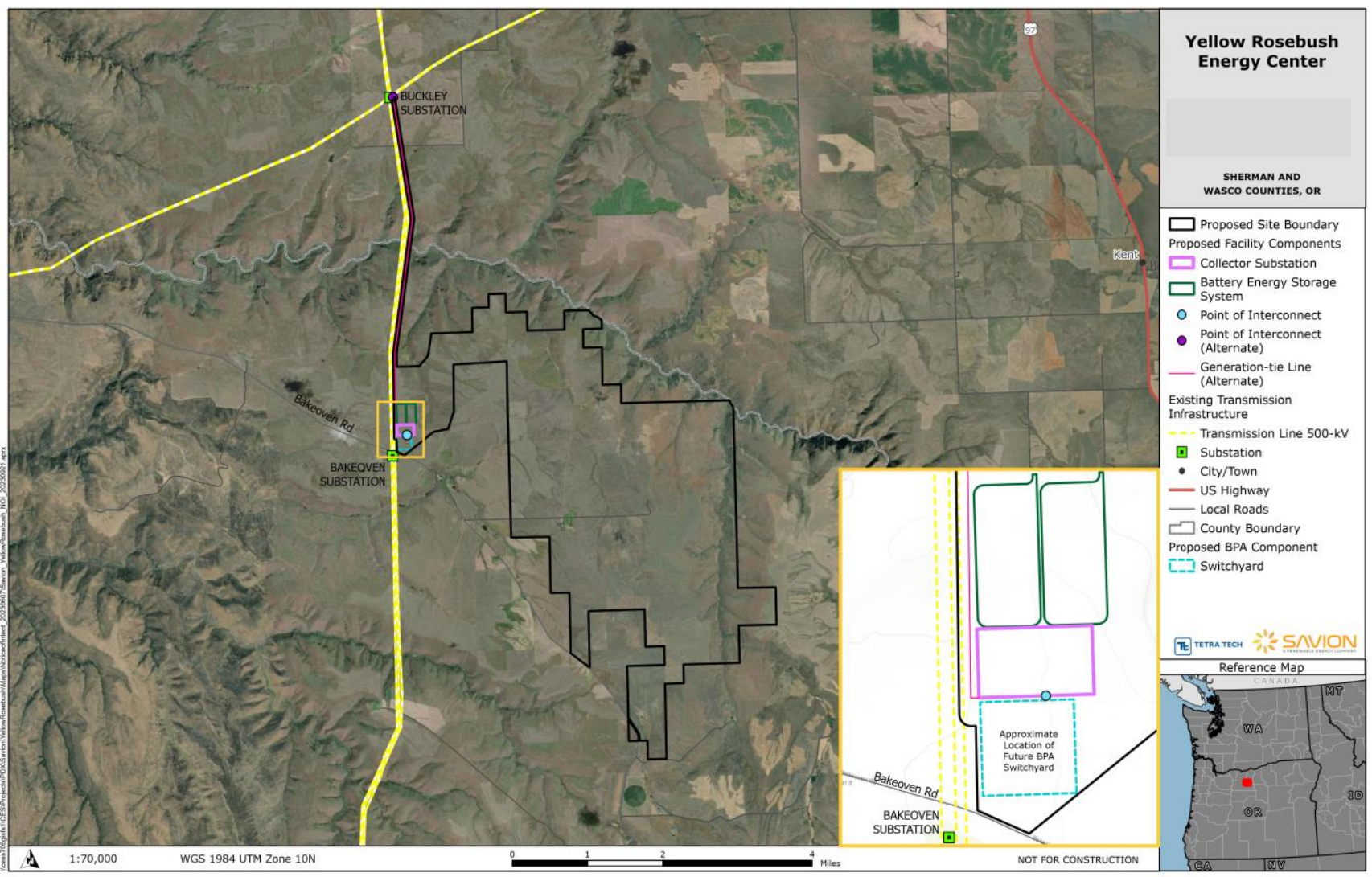
¹ ORS 469.300(11)(a)(D)(i)-(iii)
² ORS 469.300(14)

Table 1: Legal Description for Proposed Site Boundary

Township and Range	Section	Tax Lots
4S 15E	001, 002, 023, 025, 026, 030, 031, 035, 036	100, 1500
4S 16E	029, 030, 031, 032	300
5S 15E	001, 002	100
5S 16E	004, 005, 006, 007, 008, 009, 015, 016, 017, 018, 019, 020, 021, 029	900, 1000, 1100, 1300

1
2

1 Figure 1: Proposed Facility Location



1 **I.A.1 Facility Components/Structures**

2
3
4
5

The number and dimension of facility components are presented in Table 2 below. More specific details shall be included in the preliminary ASC.

Table 2: Proposed Energy Facility Components

Component	Quantity	Dimensions
PV Solar Modules	TBD	12' H
Trackers	TBD	TBD
Posts	TBD	TBD
Inverters, 3.6 MW each	244	10 W x 20 L and 3 feet below ground
Cabling	TBD	NA
34.5 kV Collector System	TBD	3 feet below ground/50-60 above ground

6

7 **I.A.1.1 Solar Array**

8

9 The facility's major components will consist of solar arrays with a total generating capacity of
10 up to 800 MW. The solar array is a configuration of solar modules, tracker systems, posts, and
11 related electrical collector equipment. The ASC will analyze potential impacts associated with
12 the largest estimated solar array layout within the approximately 8,075-acre (12.6 sq mile) site
13 boundary. The actual solar array equipment and layout selected at final design will not exceed
14 the area analyzed in the ASC within the proposed site boundary.

15

16 *Solar Modules*

17 Solar modules will be rated at 680 W direct current (DC) per module and designed to be
18 mounted on single-axis motorized trackers. Solar modules will be grouped and aligned in strings
19 that will be grouped into blocks and then grouped into solar arrays that will be spaced at
20 approximately 20-30 feet apart. The maximum height of the solar modules will be 12 feet when
21 the modules are fully tilted. PV modules will be manufactured at an off-site location and
22 transported via truck to the facility site. Steel piles supporting the PV modules will be driven
23 into the soil using pneumatic techniques on tracked equipment at varying depths depending on
24 soil characteristics.

25

26 *Tracker Systems, Piles & Posts*

27 The solar array will be oriented north-south with PV panels tracking east-west to follow the
28 movement of the sun throughout the day. After the piles are installed, tracker motors, torque
29 tubes, and other components will be assembled.

30

31

32

1 *Inverters*

2 The facility will include up to 244 inverters that convert DC power to alternating current (AC)
3 power. PV panels will be electrically connected into panel strings using wiring secured to the
4 metal racking system. Typical concrete foundations for inverters are 10 feet x 20 feet, between
5 2 to 3 feet in depth, which is subject to change during detailed design with use of structural
6 calculations. Underground cables, either rated for direct bury or installed in a polyvinyl chloride
7 conduit, will be installed to transmit the DC electricity from the panels via combiner boxes
8 throughout the solar array to inverters. Preliminary calculations suggest inverter station
9 capacity is 3.6 MW each. The output voltage of the inverters will be stepped up to the voltage
10 of the electrical collection system (i.e., 34.5 kV).

11
12 *Cabling*

13 Low-voltage cabling will connect the solar modules of each tracker string in a series and
14 combine multiple strings to a single combiner box. Cabling from multiple combiner boxes will
15 connect to a single inverter, which will convert the DC to AC and connect to the buried
16 collection system. Cabling can be mounted to the tracker system, placed in cable trays, or
17 buried. Cable associated with the solar array will be located within the solar area fence line that
18 will occur within the site boundary.

19
20 *Collection System*

21 The facility will include the electrical collection system (i.e., 34.5 kV) required to step up voltage
22 from inverters. The system will include 34.5-kV collector lines that will be directly buried at a
23 depth up approximately 3 feet; however, some portion of the lines may be constructed above
24 ground. If needed, overhead collector line segments will likely be placed on steel or wood
25 monopoles approximately 50 to 60 feet high and subject to the requirements of the National
26 Electrical Safety Code (NESC). From the inverters, medium-voltage wiring will be encased in
27 conduit and buried approximately 3 feet below grade. This medium-voltage wiring will be
28 routed to the facility switchyard and stepped up to 500 kV. Accumulated power will then be
29 transmitted to the proposed 500 kV transmission line, where it will be injected into the regional
30 electrical power grid via Bonneville Power Administration’s (BPA) 500 kV transmission line.

31
32 As shown in the table and described below, the proposed facility will also include the following
33 related or supporting facilities:

Table 3: Proposed Related or Supporting Facilities

Component	Quantity	Dimensions
Battery Energy Storage System	2, 40-acre areas, 400 MW each	Each system with many containers up to 12’ W x 36’ L x 10’ H
Batteries (Lithium Ion and/or Flow)	QTY TBD	
BESS Inverters	89 inverters per system	
Step-up Collector Substation	1	20 acre area
500 kV Transmission Line (2 route options)	Up to 4.5 miles	Up to 180-foot steel monopole structures
Operations & Maintenance Building	1	5,000 sq feet

Table 3: Proposed Related or Supporting Facilities

Component	Quantity	Dimensions
Facility Roads	TOTAL LENGTH TBD	20 feet wide w 35 ft turn radius
Facility Fencing	TOTAL LENGTH TBD	6 foot chain-link with 1 foot barbed wire total 7 feet tall
Temporary Staging and Laydown Areas	TBD	
Temporary Work Force Housing	TBD	

1

2 I.A.1.2 Battery Energy Storage System

3

4 Facility design includes an up to 800-MW battery energy storage system (BESS) located on the
 5 west side of the facility directly north of the collector substation. The BESS will consist of two
 6 separate non-additive, low-side AC Coupled systems, using lithium-ion batteries. The BESS
 7 containers will be placed on aggregate base material and gravel. The BESS containers will house
 8 the facility batteries. The lithium-ion and/or flow battery types may use a series of self-
 9 contained enclosures measuring approximately 12 feet wide, 36 feet long, and 10 feet tall and
 10 located on concrete pads within an approximately 40-acre centralized area near the facility’s
 11 collector substation. If selected, the DC coupled batteries typically use a series of self-contained
 12 enclosures (also measuring approximately 12 feet wide, 36 feet long, and 10 feet tall)
 13 distributed along the solar array tracker systems. Each container holds the batteries, a
 14 supervisory and power management system, and a fire prevention system. Cooling units will be
 15 placed either on top of the containers or along the side depending on the equipment selected
 16 at final design.

17

18 While use of lithium-ion batteries is anticipated, battery options under consideration include
 19 lithium-ion batteries, flow batteries, and DC coupled batteries. The battery options are
 20 anticipated to use a series of self-contained enclosures located on a concrete pad within a
 21 centralized fenced area. All BESS options under consideration include fire suppression systems.

22

23 I.A.1.3 Collector Substation

24

25 One collector substation will be used for the proposed facility and will be located within the
 26 facility site boundary. The collector substation is anticipated to consist of transformers, gen-
 27 tie line termination structures, a bus bar, circuit breakers and fuses, control systems, meters,
 28 and other equipment that will be determined at final design. The collector substation will be
 29 located on an approximately 20-acre area within the proposed site boundary and will be
 30 enclosed by a locked chain-link fence.

31

32 I.A.1.4 Operations and Maintenance Building

33

34 The Operations and Maintenance (O&M) building will be a pre-engineered, 5,000 square foot
 35 metal structure and will include a small administrative area with a supervisory control and data
 36 acquisition control (SCADA) room, a work area to perform minor repairs, and a storage area for

1 spare parts, transformer oil, and other incidental chemicals. The O&M building will be
2 supported on a reinforced concrete foundation or on individual spread footings. The
3 administrative area will be air conditioned and include offices, kitchen/break room, restrooms,
4 and locker rooms with showers.

6 I.A.1.5 500 kV Transmission Line and Point of Interconnect Options

8 A 500-kV transmission line will be constructed on steel monopoles supported with tension
9 stringing equipment (i.e., pulling site). Each monopole will require a concrete caisson
10 foundation. Two routing options are proposed:

- 12 • The primary transmission line routing option extends from the proposed facility
13 substation to the proposed BPA switchyard. The switchyard will then provide
14 connection to the BPA’s 500-kV transmission line located at the western edge of
15 the facility.
- 17 • The alternate transmission line routing option extends from the proposed facility
18 substation then turns north on the east side and parallel to the BPA’s 500-kV
19 transmission line and connects to the Buckley Substation.

21 I.A.1.6 Site Access and Service Roads

23 The primary transportation corridor to the site is Bakeoven Road via US Route 197 (US 197) to
24 the west or US Route 97 (US 97) to the east, and truck traffic is anticipated to access the site
25 from Wilson Road via US 97 to Boardman Road. New service roads will be constructed within
26 the site boundary to provide access to facility infrastructure.

28 The interior roads within the solar array will be 20-foot wide with a 35-foot turning radius to be
29 consistent with Oregon Fire Code requirements and applicable standards (i.e., access for first-
30 responder apparatus), which conform to the 2018 International Fire Code. The surface will be
31 composed of gravel, compacted aggregate base, or another commercially available suitable
32 surface and be able to support 75,000 pounds. The roads will be designed for construction and
33 O&M activities, such as cleaning the PV panels, and will include a fire buffer (30-foot-wide
34 perimeter road), facilitate on-site circulation and include adequate turnarounds for emergency
35 vehicles.

37 I.A.1.7 Perimeter Fencing, and Gates

39 The facility site will be locked and gated. The perimeter fence is anticipated to be a 6-foot-high
40 chain-link fence, topped with one foot of barbed wire (three strands) mounted on 45-degree
41 extension arms facing outwards. The fence posts will be set in concrete and/or driven into the
42 ground. The perimeter fence will have 24-foot-wide security gates installed at various locations
43 for ingress and egress. Controlled access gates will be located at the entrances to the facility.

1 Site access gates will be swing- or rolling-type. Access through the main gates will require an
2 electronic swipe card to prevent unaccompanied visitors from accessing the facility.

3
4 **I.A.1.8 Temporary Construction Staging Areas**

5
6 Temporary staging areas will be required on the facility site, including fenced parking, covered
7 trash disposal facilities, construction trailers, a laydown area, and sufficient portable toilets and
8 potable water for construction staff. Mobile trailers or similar suitable facilities (e.g., modular
9 offices) will be used as construction offices for facility and subcontractor personnel.
10 Construction laydown and parking areas will be within the facility site and may be relocated
11 periodically as the solar array is constructed.

12
13 **I.B. Applicant Information**

14
15 The applicant is Yellow Rosebush Energy Center, LLC (applicant), a wholly owned subsidiary of
16 Savion, LLC. (parent company). The officer responsible for submitting the NOI is:

17
18 Scott Zeimet, Officer
19 Yellow Rosebush Energy Center, LLC
20 422 Admiral Blvd.
21 Kansas City, MO 64106
22 Email: szeimet@savionenergy.com
23 Phone: (612)770-5189

24
25 The applicant's primary contact person for the NOI is:

26
27 Jeffrey Watson, Development Manager Savion, LLC
28 422 Admiral Blvd.
29 Kansas City, MO 64106
30 Email: jwatson@savionenergy.com
31 Phone: (410) 349-7679

32
33 **I.C. Procedural History**

34
35 On September 28, 2023, the applicant submitted a NOI with the fee required under OAR 345-
36 020-0006.

37
38 *Public Notice on NOI*

39 On October 10, 2023, the Department sent notice of the NOI to persons on the Council's
40 general mailing list, special mailing list, and to the owners of property located within the
41 distances specified in OAR 345-020-0010(1)(f)(A).³ Public notice appeared in The Dalles

³ Noticing conducted in accordance with OAR 345-015-0110, effective September 24, 2020.

1 Chronicle, a newspaper of general circulation for Wasco County, on October 18, 2023. Public
2 notice also appeared in the East Oregonian, a newspaper of general circulation for Sherman
3 County, on October 17, 2023. The public notice provided information regarding the proposed
4 facility and the EFSC review process and announced that a public informational meeting on the
5 NOI would be held in Maupin, Oregon on November 2, 2023. The public notice requested public
6 comment on the NOI and established December 1, 2023 as the public comment deadline.
7

8 *Public Information Meeting*

9 The Department held an in-person and virtual public informational meeting on the NOI for the
10 proposed facility on November 2, 2023. The in-person meeting was held at the Imperial River
11 Company in Maupin. The Department and the applicant appeared at the informational meeting
12 and provided information about the EFSC siting process and the proposed facility and
13 responded to questions from the public. The public meeting was recorded and
14 comments/questions from the public are summarized in Section I.D.1.1 and included in
15 Attachment 2: *Public Comments on the NOI*. Additionally, the meeting materials and recording
16 were made available to the public on the project webpage, and all public comments received in
17 writing via email and through the Department’s online comment portal for the proposed facility
18 were made available on the Department’s siting docket. All public comments received between
19 October 10 through December 1, 2023 during the NOI comment period, are also summarized in
20 Section I.D.1.1 below and included in full in Attachment 1 of this order.
21

22 *Special Advisory Group Coordination*

23 ORS 469.480(1) requires the Council to designate the governing body of any local government
24 within whose jurisdiction a facility is proposed to be located as a Special Advisory Group (SAG).
25 On October 10, 2023, the Department sent letters notifying both Wasco and Sherman counties
26 that through delegation by Council, the Department had appointed both the Wasco County
27 Board of Commissioners and the Sherman County Court as SAGs for all EFSC proceedings
28 associated with this proposed facility. The Department followed that notification with letters on
29 October 13, 2023 requesting comments and recommendations on applicable local substantive
30 criteria from both SAGs and requested to schedule conference calls with both county planning
31 departments. Comments received from both counties are summarized in Section I.D.1.2 below
32 and included in Attachment 2 of this order.
33

34 *Reviewing Agency Coordination*

35 In accordance with ORS 469.350 and OAR 345-020-0040(1), the Department prepared a
36 distribution list of state agencies with regulatory or advisory responsibility related to the siting
37 of the proposed facility and other (non-SAG) local governments and tribal governments that
38 could be potentially affected by the proposed facility. The input from reviewing agencies is
39 summarized in Section I.D.1.3 below and included in Attachment 3 of this order.
40

41 In accordance with OAR 345-015-0120, the Department prepared a memorandum requesting
42 comments from the reviewing agencies identified under OAR 345-001-0010. The Department
43 electronically distributed the memorandum to reviewing agencies on October 10, 2023 in

1 accordance with 345-020-0040⁴ and subsequently sent the memo to two additional affected
2 local governments on October 10, 2023 (City of Maupin and City of Shaniko). The Department
3 also sent reviewing agency requests to the following federal agencies: Bureau of Land
4 Management (BLM) and the Bonneville Power Administration (BPA) because the proposed
5 facility transmission line could impact BLM-and BPA-managed lands. The Department sent
6 email notifications and review request letters on the NOI and requested comments from all
7 reviewing agencies on or before November 10, 2023.

8
9 Follow up email requests for comments, coordination calls and meetings were sent by the
10 Department to Oregon Department of Fish and Wildlife (ODFW), Oregon Department of
11 Agriculture (ODAg), Oregon Department of Aviation (ODAv), Department of State Lands (DSL),
12 Department of Geology and Mineral Industries (DOGAMI), Oregon Parks and Recreation
13 Department (OPRD) and the Oregon State Historic Preservation Office (SHPO), and the City of
14 Maupin and are summarized in reviewing agency comments in Section I.D.1.3 of this order. All
15 written comments received are included in Attachment 3 of this order. The Department also
16 participated in an in-person meeting with representatives for the City of Maupin on November
17 3, 2023 to discuss the proposed facility.

18 19 *Tribal Government Coordination*

20 On April 12, 2023, the applicant consulted with the Legislative Commission on Indian Services
21 (LCIS) to identify tribes that may be potentially affected by the proposed facility. LCIS
22 recommended the applicant consult with the following tribes:

- 23
- 24 • Confederated Tribes of the Umatilla Indian Reservation (CTUIR)
 - 25 • Confederated Tribes of the Warm Springs Reservation of Oregon (CTWSRO)
 - 26 • Burns Paiute Tribe
 - 27 • Confederated Tribes of Grande Ronde
 - 28 • Confederated Tribes of Siletz Indians

29
30 On October 10, 2023 the Department initiated tribal government coordination on the NOI via
31 email letters to tribal leaders and cultural and natural resources staff of each tribe requesting
32 comments regarding historic, cultural, or archaeological resources, and other resources that
33 may have cultural or economic significance to the Tribe. On the same date, the Department
34 sent similar letters requesting comments from the Tribal Councils of each tribe. The
35 Department followed up with additional information on the proposed facility and requested
36 review letters via email on October 13, 2023 and November 17, 2023. Tribal comments
37 received on the NOI are summarized in Section ID.1.4 and are included in Attachment 4 of this
38 order.

39
40 The reviewing agencies, SAGs, tribal governments, and other local governments for the
41 proposed facility are listed in Table 2 below.

⁴ On August 29, 2023, OAR 345-020-0040 was removed from OAR 345 Division 20. Distribution of the NOI and agency memos is established in OAR 345-015-0120, effective August 29, 2023.

Table 4: Reviewing Agencies

State Agencies	
<ul style="list-style-type: none"> • Oregon Department of Agriculture • Oregon Department of Aviation • Oregon Department of Environmental Quality • Oregon Department of Fish and Wildlife • Oregon Department of Forestry • Oregon Department of Geology and Mineral Industries 	<ul style="list-style-type: none"> • Oregon Department of Land Conservation and Development • Oregon Department of State Lands • Oregon Office of State Fire Marshal • Oregon Parks and Recreation Department • Oregon Public Utility Commission • Oregon State Historic Preservation Office • Oregon Water Resources Department
Special Advisory Groups (SAGs)	
<ul style="list-style-type: none"> • Wasco County Board of Commissioners • Sherman County Court 	
Local Jurisdictions for Public Services	
<ul style="list-style-type: none"> • City of Maupin • City of Shaniko • Bakeoven-Shaniko Rural Fire Protection Agency 	<ul style="list-style-type: none"> • Wasco County Planning Department • Sherman County Planning Department
Other Reviewing Agencies	
<ul style="list-style-type: none"> • Bureau of Land Management • Bonneville Power Administration 	
Tribal Governments	
<ul style="list-style-type: none"> • Confederated Tribes of the Umatilla Indian Reservation • Confederated Tribes of the Warm Springs Reservation of Oregon • Burns Paiute Tribe • Confederated Tribes of Grande Ronde • Confederated Tribes of Siletz Indians 	

2

3 I.D. Comments Received on the Notice of Intent

4

5 The Department received written and oral comments, in addition to written and submitted
 6 comments received via email and the Department’s Public Comment Portal. All written public
 7 comments received during the comment period were uploaded to the ODOE Siting Docket⁵ and
 8 are available for online review. The audio recording of the Public Information Meeting including
 9 oral comments received during that meeting, is available on the ODOE project webpage⁶ and

⁵ Oregon Department of Energy Siting Docket Available at: [Siting Docket · Customer Self-Service \(powerappsportals.us\)](https://powerappsportals.us)

⁶ Oregon Department of Energy State of Oregon: Facilities – Yellow Rosebush Energy Center Available At: <https://www.oregon.gov/energy/facilities-safety/facilities/Pages/yrb.aspx>

1 are included in comment indexes and summaries. All comments received on the NOI during the
2 comment period are summarized in the following sections.

3
4 At the close of the comment period, the Department received 7 public comments and
5 comments from both SAGs, 2 federal agencies, 9 state agencies, 1 local government, 1
6 emergency fire services agency and 1 tribe. Full copies of all written comments received from
7 these reviewing agencies are attached to this Project Order in Attachments 1-4. In accordance
8 with OAR 345-015-0140, the Department provided the applicant with a copy of each comment
9 received for their review and consideration in preparing the ASC.

10
11 **I.D.1 Public Comments on NOI**

12
13 The Department received 7 public comments (5 written comments and 2 oral commenters at
14 the Public Information Meeting) by the close of the NOI comment period on December 1, 2023.
15 Written public comments and a summary of oral comments received at the Public Information
16 Meeting are included in Attachment 1. Table 3 below presents a summary of issues raised in
17 public comments received on the NOI.
18

Table 5: Summary of Issues Raised in Public Comments

General Theme	# of Related Comments	Relevant Council Standard
Question about visibility from Barlow Cutoff Road	1	Scenic and Recreation
General comments opposing renewable energy projects as not being sustainable or environmental (i.e., green)	2	N/A
Comments on facility impacts on Category 2 Big Game/Mule Deer habitat, habitat mitigation and Goal 5 resources.	1	Fish and Wildlife Habitat
Oral commenter questions at Public Meeting on BPA interconnect and substation for the facility	2	Facility Description/Related or Supporting Facilities
Laborer’s Union comment in support of the proposed facility	1	N/A

19
20 **I.D.2 Special Advisory Group Comments on NOI**

21
22 *Wasco County SAG*

23 The Department held a coordination call on October 31, 2023 with Wasco County Planning
24 Department staff to review the proposed facility and discuss potential concerns or issues for
25 the county. Written comments on the NOI were received from Wasco County Board of
26 Commissioners as a SAG for the proposed facility on November 1, 2023. A copy of this letter is
27 included in Attachment 2 of this order.

1
2 Most of the proposed facility site will be entirely within Wasco County, except for one of the
3 proposed 500 kV transmission line/POI routing options that would extend approximately 4.5
4 miles into Sherman County.

5
6 Wasco County commented that the proposed facility includes development in the non-National
7 Scenic Area portions of Wasco County. The County identified the following ordinances/plans as
8 applicable:

- 9 • Wasco County Comprehensive Plan (WCCP)
- 10 • Wasco County Land Use and Development Ordinance (WCLUDO)

11
12 Because the proposed facility includes development in the A-1 (160) Zone, an EFU Zone, per
13 OAR 660-033-0120, the facility will require a conditional use review, and will be subject to
14 WCLUDO Chapter 3, Chapter 5, 10, 19 and 20.

15
16 The County further identified that the proposed facility location is within the following Overlay
17 Zones:

- 18 • Geological Hazard Overlay Zone (OZ 2) - may require a written report by a certified
19 engineer that demonstrates proposed development can be completed without threat to
20 public safety or welfare.
- 21 • Military Airspace Overlay Zone (OZ 15) - requires early coordination with the NW
22 Regional Coordination Team (Department of Defense) for possible mitigation measures.
- 23 • Sensitive Wildlife Habitat (OZ 8) Overlay Zone for deer and elk (Big Game Winter Range)
24 within the National Scenic Area - requires consultation with Oregon Department of Fish
25 and Wildlife.
- 26 • Several sensitive bird sites (OZ 12) and require consultation with the Oregon
27 Department of Fish and Wildlife.

28
29 The County also noted that, consistent with WCCP Goal 5 (OAR 660-023-0190) and Policy 13.1.7
30 (a), the county will require a Comprehensive Plan Amendment at the time of the ASC to add/list
31 the facility as a significant energy facility resource (Goal 5 Resource). Comprehensive Plan
32 Amendment criteria can be found in Chapter 15 of the Wasco County Comprehensive Plan
33 (Wasco County 2040).

34
35 Potentially applicable local permit requirements were identified in the Nov. 1, 2023 letter and
36 included the County's Public Works utility permit and road use agreement (RUA), building
37 permits for electrical or structural, conditional use permit per Chapters 3, 10 and 19 of the
38 WCLUDO.

39 In their comment letter, Wasco County SAG recommended that the applicant conduct the
40 following studies/assessments and prepare the following mitigation plans or measures:

- 41
- 42 • Housing Study
- 43 • EMS Impact Study

- 1 • Fire Response Plan
- 2 • Traffic Control Plan
- 3 • Defined Work Schedule
- 4 • Construction Plans
- 5 • Defined Staging Area for Construction/Development
- 6 • Impact to Sensitive Species
- 7 • Impact to Military Airspace

8

9 *Sherman County SAG*

10 Written comments on the NOI were received from Sherman County Court as a SAG for the
11 proposed facility on November 9, 2023. A copy of this letter is included in Attachment 2 of this
12 order and is summarized below.

13

14 The proposed facility will extend into Sherman County if final facility design includes the
15 transmission line route option extending to the BPA Buckley Substation. County comments
16 identified the Sherman County Zoning Ordinance (SCZO) requiring a conditional use permit
17 (CUP) for any transmission line with towers over 200 feet tall. While the letter notes that the
18 proposed line is under 200 feet (approx. 140-160 feet tall), the County requests that a CUP be
19 required. Additional County permits would include a Road Approach Permit and a Building
20 Permit.

21

22 Recommendations for studies and analysis areas were also provided by the SAG in their written
23 comments. Specifically, the SAG recommended that 0.5 (1/2) mile study area for Wildfire Risk
24 and Land Use be larger for the analysis areas to be included in the preliminary ASC/ASC. No
25 specific recommendations on the size of these analysis areas were provided.

26

27 The County requested a soils impact assessment, which falls within the scope of EFSC review
28 and will be required as part of the ASC.

29

30 The SAG comment letter also requested a study to evaluate the potential economic/energy
31 impacts to the County, to determine how the capacity could impact future Sherman County
32 Solar or Wind projects to access the BPA regional grid, if the applicant selects the Buckley
33 Substation POI in final design. This request falls outside the scope of EFSC review, therefore the
34 applicant will not be required to provide such a study in the ASC.

35

36 SAG comments are provided in Attachment 2 of this order.

37

38 The applicable substantive criteria recommended by the SAGs and affected local government
39 agencies are discussed further in Section III.K. Local permitting requirements are discussed in
40 Section III.E.3 below.

41

42 **I.D.3 Reviewing Agency Comments on NOI**

43

1 *State Reviewing Agency Comments*

2 All written comments received from reviewing agencies are included in Attachment 3 of this
3 project order. A brief summary of comments on the NOI are summarized below:

4
5 Oregon Department of Agriculture (ODAg)

6 Coordination with ODAg included a conference call with Jordan Brown, Program Lead
7 Conservation Biologist with the Oregon Department of Agriculture – Native Plant Conservation
8 Program on known information and potential for rare plants and Threatened and Endangered
9 (T&E) plants within the proposed site boundary and study area. Written comments were
10 received on October 20, 2023 and identified potential known occurrences in Sherman County
11 for two Oregon-listed plants: Northern wormwood (*Artemisia campestris* var. *wormskioldii*) and
12 Lawrence’s milkvetch (*Astragalus collinus* var. *laurenti*), and potential known occurrences in
13 Wasco County for Northern wormwood and Tygh Valley milkvetch (*Astragalus tyghensis*),
14 however based upon historic agricultural uses, and habitat, the likelihood of any of these
15 species occurring in the site boundary or study area is relatively low.

16
17 A follow up coordination call with ODAg was held on October 27, 2023 and did not identify any
18 additional species of concern. No studies or surveys were requested due to the low likelihood
19 of T&E plants being present within the study area, and it was noted in written comments from
20 ODAg that previous surveys within the vicinity of the proposed facility had not identified any
21 presence of these species.

22
23 Department of State Lands (DSL)

24 DSL provided written comments on October 24, 2023 and a follow up coordination call on
25 October 25, 2023. Written comments received identified the need for the completion and
26 submittal of a wetland delineation conducted in accordance with the requirements of OAR
27 Chapter 141, Division 90. Specifically, DSL noted that the wetland delineation should be
28 conducted to identify wetlands and other surface waters to identify the presence of regulated
29 surface waters within the project site boundary. If results of the delineation and final facility
30 design identify the need for a removal-fill permit, the applicant would be required to obtain the
31 necessary permit. There is a known wetland that extends into and outside of the facility site
32 boundary.

33
34 Oregon Department of Aviation (ODAv)

35 ODOE held a coordination call on the proposed facility with ODAv on October 30, 2023 and
36 provided written comments on October 31, 2023 that the proposed facility may be required to
37 obtain aeronautical evaluations from ODAv and the Federal Aviation Administration (FAA)
38 depending on the location and height of proposed structures (transmission line) in final facility
39 design. Applicant is required to submit documentation to ODAv and FAA upon the final design
40 of the facility, to obtain review and evaluation by both entities per the requirements of OAR
41 738-070-0060 and Federal Aviation Regulation (FAR) § 77.9 Construction or alteration requiring
42 notice.

43
44 Oregon Department of Forestry (ODF)

1 ODF provided written comments on the proposed facility on October 27, 2023. Because the
2 proposed facility would not be located on (or near) any forestland, ODF did not have specific
3 comments or recommendations on the proposed facility.
4

5 Department of Land Conservation and Development (DLCD)

6 ODOE held a coordination call on the proposed facility with DLCD on November 6, 2023. During
7 that call DLCD recommended a “material stability analysis” should be conducted and that the
8 application should include assessments/evaluation related to the following: OAR 660-033-
9 0130(38)(h), OAR 660-033-0130(i)(D), ORS 215.296 as applicable. Because the facility will
10 require an EFSC exception to Goal 3, the applicant should provide supporting details for
11 “reasons” used to support this exception request from Council.
12

13 Department of Oregon Geology and Mineral Industries (DOGAMI)

14 ODOE held a coordination call on the proposed facility with DOGAMI on November 8, 2023.
15 DOGAMI comments on the call identified the existence of a recently active fault and tectonic
16 activity recorded near the Maupin area that warranted the 50-mile analysis area for seismic
17 risks be maintained in the ASC requirements. Additional comments included the
18 recommendation that the applicant utilize available DOGAMI resources and recommended
19 sources and study methods in the preparation of any geotechnical studies or reports prepared
20 for the facility as part of the ASC.
21

22 Oregon Department of Fish and Wildlife (ODFW)

23 ODOE held a coordination call on the proposed facility with ODFW on November 9, 2023.
24 ODFW submitted written comments on November 30, 2023. ODFW comments were specific to
25 habitat assessments, field surveys, and habitat categorization to identify habitat types in the
26 analysis area and potential impacts to habitat within the proposed micro-siting area and site
27 boundary. These studies should be conducted and submitted with the preliminary application
28 and should include a preliminary assessment of potential impacts and proposed mitigations, as
29 applicable. Applicant should coordinate with ODFW on methods and results, impact and
30 mitigation estimates, and any proposed minimization and mitigation measures within the
31 proposed site boundary and micro-siting area. A draft Habitat Mitigation Plan should be
32 prepared, if applicable, and include the coordination with landowners and ODFW. ODFW has
33 identified that the entire site boundary is within designated Category 2 habitat: big game winter
34 range. ODFW has also provided recommendations for avian surveys to be conducted as part of
35 the application.
36

37 Oregon Department of Environmental Quality (DEQ)

38 ODOE held a coordination call on the proposed facility with DEQ on November 9, 2023. No
39 written comments were submitted and no substantive comments from DEQ based on the call
40 other than the NPDES 1200-C permit requirements.
41

42 Oregon State Historic Preservation Office (SHPO)

43 ODOE initiated coordination with SHPO on October 13, 2023 with the submittal of the OR SHPO
44 review form via the SHPO email clearinghouse with a request for SHPO review and comment on

1 the NOI. A follow-up email was sent to SHPO on November 17, 2023. On December 5th, SHPO
2 responded with an assigned SHPO Case Number (#23-1578) for the proposed facility. Applicant
3 should submit copies of cultural resources survey reports to SHPO for review and comment
4 when ready and reference the assigned case number. All cultural resource surveys and reports
5 should meet current SHPO guidelines for archaeological and built-environment resources.
6 Copies of correspondence to and from SHPO should be included in the ASC.

7
8 *Federal Reviewing Agency Comments*

9
10 Department of Defense, US Navy

11 Review and written comments from the Northwest Training Range Complex reviewer were
12 received on November 20, 2023 stating that there were no concerns or additional requirements
13 for the proposed facility.

14
15 Bureau of Land Management (BLM)

16 The BLM submitted comments on the NOI via the comment portal on November 28, 2023. BLM
17 commented that a BLM Right-of-Way is needed for any lines crossing federal lands.

18
19 *Local Government Comments*

20
21 City of Maupin

22 ODOE met in person with representatives from the City of Maupin on November 3, 2023. The
23 mayor and city planning staff participated in this meeting on the NOI and proposed facility. The
24 city requested that the applicant coordinate with the Bakeoven-Shaniko Rural Fire Protection
25 Agency for wildfire and fire response because they are the local emergency responder for the
26 area including the area where the facility is to be located.

27
28 Bakeoven-Shaniko Rural Fire Protection Agency (RFPA)

29 Bakeoven-Shaniko RFPA submitted written comments on the NOI requesting coordination and
30 planning and some specific recommendations for design features and operations best practices
31 to minimize risk of fire/wildfire at the facility. The Bakeoven-Shaniko RFPA is the first responder
32 for the service area that includes the proposed facility location.

33
34 **I.D.4 Tribal Government Comments on NOI**

35
36 Confederated Tribes of the Umatilla Indian Reservation (CTUIR)

37 The Department sent a request for tribal review and comment on the NOI and proposed facility
38 to the CTUIR on October 13, 2023. A written response from CTUIR on October 13, 2023
39 identified the proposed facility within the ancestral lands of the Confederated Tribes of the
40 Warm Springs Reservation of Oregon (CTWSRO) and deferred review and comment to them.

41
42 Confederated Tribes of the Warm Springs Reservation of Oregon (CTWSRO)

1 The Department sent a request for tribal review and comment on the NOI and proposed facility
2 to the CTWSRO on October 13, 2023. A follow up coordination email was sent on November 17,
3 2023 and December 6, 2023. No comments were received on the NOI from CTWSRO.

4 5 **II. EFSC REGULATORY FRAMEWORK**

6
7 Under ORS 469.300(11)(a)(D)(i), a solar photovoltaic power generation facility using more than
8 160 acres located on high-value farmland as defined in ORS 195.300 is an “energy facility”
9 subject to the jurisdiction of the Council. Under ORS 469.320, no facility may be constructed or
10 operated in Oregon without a Site Certificate from the Council. Issuance of a site certificate is
11 governed by ORS 469.300 to 469.563, 469.590 to 469.619, 469.930 and 469.992 and OAR
12 chapter 345.

13
14 The following divisions of OAR chapter 345 include rules related to ASC requirements, EFSC
15 review of an ASC, and construction and operation of an approved facility:

16
17 **OAR Chapter 345, Division 21** (Site Certificate Application Requirements) includes the primary
18 ASC requirements. See Section III of this Project Order for specific information related to ASC
19 requirements for the proposed facility.

20
21 **OAR Chapter 345, Division 22** (Council Standards for Siting Facilities) establishes the General
22 Standards which apply to all proposed energy facilities. The applicant must ensure that
23 information provided to satisfy the ASC requirements in Division 21 demonstrates compliance
24 with the associated standard in Division 22.

25
26 **OAR Chapter 345, Division 24** (Specific Standards for Siting Facilities) includes additional
27 standards for specific categories of energy facilities. The applicant must ensure that the
28 information provided to satisfy the application requirements in Division 21 demonstrates
29 compliance with any associated Division 24 standards that are applicable to the proposed
30 facility. The Division 24 standard that applies to the proposed facility is OAR 345-024-0090,
31 Siting Standards for Transmission Lines.

32
33 **OAR Chapter 345, Division 25** (Site Certificate Conditions) includes site certificate conditions
34 that EFSC must include in all site certificates, as well as applicable site-specific and monitoring
35 conditions. As provided in OAR 345-025-0006(10), the Council will include all representations
36 made in the ASC and supporting record that are necessary to either comply with and/or
37 adequately mitigate a potentially significant impact to a resource protected by a Council
38 standard as conditions of approval if the application is approved.

39
40 **OAR Chapter 345, Division 26** (Construction and Operation Rules for Facilities) includes the
41 compliance plan requirements that will apply if the Council issues a site certificate for the
42 proposed facility. Note that, if a site certificate is issued, the certificate holder must also comply
43 with additional construction- and operation-related regulations that may apply to the proposed
44 facility but that may not be covered by the site certificate, per ORS 469.401(4).

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III. APPLICATION REQUIREMENTS

The applicant must include all information required under OAR 345-021-0010, including all information that would otherwise be required by any state agency or local government to issue a permit, license, or certificate that the applicant proposes to be included in and governed by the site certificate.⁷ The applicant must also submit copies of the applications for federally delegated permits that are needed for construction or operation of the proposed facility.⁸

OAR 345-021-0010(1) identifies the exhibits that must be included in the ASC. The specific subsections and paragraphs of OAR 345-021-0010(1) that apply to the proposed facility are indicated in the sections below. Each exhibit must include a table of contents.⁹

III.A. Exhibit A – General Information about the Applicant and Participating Persons

Applicable Paragraphs: OAR 345-021-0010(1)(a)(A), (B), (D) and (H)
Related Council and Other Standards: General Standard of Review [OAR 345-022-0000]
Discussion: Under OAR 345-021-0010(1)(a)(A), Exhibit A must identify the legal name and address of the applicant and any co-owners of the proposed facility. The ASC must provide the name, mailing address, email address and telephone number of at least one contact person for the applicant, and if there is a contact person other than the applicant, the name, title, mailing address, email address and telephone number of that person.

As described above, the NOI identifies YREC, LLC as the applicant. The applicant must notify the Department of any change in the legal name or business entity status of YREC, LLC. The Department may request that Exhibit A be amended or may accept an alternate form of documentation to document the change on the record of the ASC.

Under OAR 345-021-0010(1)(a)(B), Exhibit A must identify any participating entities other than the applicant, including but not limited to, the parent company of the applicant and any persons upon whom the applicant will rely for third-party permits or approvals related to the facility, and, if known, other persons upon whom the applicant will rely in meeting any facility standard adopted by the Council.

Under OAR 345-021-0010(1)(a)(D), Exhibit A must identify the legal name and business address of each of the applicant’s full or partial owners. The NOI identifies Savion, LLC as the parent company for the applicant. Exhibit A must either verify that Savion, LLC continues to be the Sole Member of YREC, LLC or provide an updated list identifying all LLC members.

⁷ OAR 345-021-0000(5)
⁸ OAR 345-021-0000(6)
⁹ OAR 345-021-0010(3)

1 The applicant must notify the Department of any change in the identity or ownership of the
2 applicant prior to the change. This notification requirement continues to apply until the Council
3 issues its Final Order on the ASC.

4
5 Savion LLC is a wholly-owned subsidiary of Shell New Energies US LLC, a subsidiary of Royal
6 Dutch Shell plc (Shell). Exhibit A must disclose any changes to the ownership or management of
7 YREC, LLC or Savion, LLC.

8
9 Because the applicant is a limited liability company, OAR 345-021-0010(1)(a)(H) applies. Under
10 this paragraph, Exhibit A must include:

- 11 • The full name, official designation, mailing address, email address and telephone
12 number of the officer responsible for submitting the application.
- 13 • The date and place of the LLC’s formation.
- 14 • A copy of the LLCs articles of organization and its authorization for submitting the
15 application.
- 16 • Proof of registration to do business in Oregon.

17
18 YREC, LLC is not required to identify a resident attorney-in-fact because it is registered to do
19 business in Oregon, however, it must still identify and maintain a registered agent that can
20 accept legal service in this state.

21 22 III.B. Exhibit B – General Information about the Proposed Facility

23
24 **Applicable Paragraphs:** OAR 345-021-0010(1)(b)(A)(ii) through (v), (B), (C), (E) and (F).

25 **Related Council and Other Standards:** General Standard of Review [OAR 345-022-0000]

26 **Discussion:** Exhibit B must provide information about the proposed facility, construction
27 schedule and activities, operations and maintenance activities and inspections, and temporary
28 disturbances of the site. Applicant must address all provisions applicable to transmission lines,
29 including the corridor assessment required under OAR 345-021-0010(1)(b)(E).

30
31 Under OAR 345-021-0010(1)(b)(A) through (C) and (E), Exhibit B must include a description of
32 the facility that includes, at a minimum:

- 33 • The nominal electric generating capacity and the average electrical generating capacity
34 of the proposed solar photovoltaic power generating facility.
- 35 • A detailed description of all major components, structures and systems that will be part
36 of the proposed facility, including:
 - 37 ○ The capacity, dimensions, type, and configuration of equipment used to
38 generate, store, transmit, or transport electricity, and the dimensions and
39 configurations of any other related or supporting facilities, including but not
40 limited to roads, storage facilities, fences, or other structures.
- 41 • A site plan showing the general arrangement of buildings, equipment, and structures,
42 including any proposed temporary laydown or staging areas and any proposed
43 micro-siting corridors. Note that if the applicant seeks flexibility to site proposed facility

1 components anywhere within the site boundary, or seeks approval of micrositing areas,
 2 the applicant must evaluate impacts to resources within the entire site boundary or
 3 micrositing areas based on the maximum impact facility layout option within the site
 4 boundary or micrositing areas, if different.

- 5 • The capacity, dimensions, type, and configuration of related or supporting facilities,
 6 including but not limited to the battery energy storage system, collector substation,
 7 transmission line, POI/interconnection facilities, roads, and fences.
- 8 • Identification and description of any fuel and chemical storage facilities, including oil-
 9 containing capacity and structures and systems for spill containment.
- 10 • Equipment and systems for fire prevention and control in any system components,
 11 including water tanks, internal fire suppression systems, and access and egress points
 12 for fire responders.

13
 14 The description must be in both narrative and tabular format, like the examples provided in
 15 Tables 6 and 7 below.
 16

Table 6: Example Energy Facility Specifications and Details

Component	PV Only	PV plus Storage (Dispersed)
3 MWac Block	160	
Modules	1,326,858	1,742,572
Module Rows (on trackers)	16,587 x 78 module rows	21,644 x 78 module rows
Posts	187,545	246,444
Inverters	160	
Transformers	160	

Table 7: Example Related or Supporting Facilities Specifications and Details

Component	PV plus Storage (Dispersed)
Direct current electrical system, above and belowground	Up to 2 million miles of cable; combiner boxes
34.5 kV ac electrical system	Inverters, step-up transformers and 160 home-run cables
Collector Substations, 1 acre each	4, with oil-containing step-up transformers; equipment height = 10'
115 kV generation-tie transmission line	2 miles, double circuit consisting of: <ul style="list-style-type: none"> • 37 single steel monopole structures up to 6 feet in diameter, spaced approximately 300 feet apart, and approximately 70 feet in height. • Concrete foundations up to 20 feet deep, which may have directional anchoring system structures.
115/500 kV step-up substation, 3 acres	1 substation consisting of: <ul style="list-style-type: none"> • up to 2 115 to 500 kV transformers, each containing 50,000 gallons of transformer oil • one 115 kV input structure

Table 7: Example Related or Supporting Facilities Specifications and Details

Component	PV plus Storage (Dispersed)
	<ul style="list-style-type: none"> • two 115 kV circuit breakers • two 500 kV circuit breakers • 500 kV output structures • a control building for housing control and communication equipment. • 65–100-foot interconnection structures
Operations and Maintenance Building, 0.5 acre	2 O&M buildings, 50 x 50 x 14', consisting of: <ul style="list-style-type: none"> • warehouse-like storage area • human machine interface system • restrooms and employee work areas • an exempt groundwater well • septic system
Perimeter Fence	Approx. 18 miles, chain link
Battery Storage Enclosures	134 steel framed structures: <ul style="list-style-type: none"> i. approximately 50 feet wide, 67 feet long and up to 30 feet tall Balance of Plant (BOP) consisting of: <ul style="list-style-type: none"> ii. large polymer tanks on each side of the cell stack, pumps, piping (polyvinyl chloride), thermal controls, and power conversion hardware (single stage, bidirectional inverters). iii. Storage tanks with non-hazardous, water-based electrolyte/polymer. iv. Primary and secondary spill containment devices v. Thermal system control of a heating, ventilation, air conditioning (HVAC) air-to-air and glycol-to-air (non-toxic) heat exchanger
Batteries	<ul style="list-style-type: none"> vi. outdoor rated vii. negatively grounded, ground fault detection and interruption capable of detecting ground faults in the dc current carrying conductors and components viii. intentionally grounded conductors, insulation monitoring, ix. dc and ac overvoltage protection and lightning protection, x. humidity control xi. data acquisition and communication monitoring interface.
Inverters	160
Redox Electrolyte Fluid	14,000 gallons per MW

Table 7: Example Related or Supporting Facilities Specifications and Details

Component	PV plus Storage (Dispersed)
Supervisory Control and Data Acquisition System	Fiber optic cables installed above- and below ground with collection system
Perimeter roads	50 miles <ul style="list-style-type: none"> • Built with materials designed to act as fire breaks, sized for emergency vehicle access in accordance with Oregon Fire Code. • Internal roads of 12 x 20' with at least a 30-foot noncombustible, defensible space clearance for fire prevention

1

2 The information in Exhibit B must be as complete and accurate as possible. If the ASC is
 3 approved, the information will form the basis for the description of the facility in the site
 4 certificate. As provided under OAR 345-025-0006(3)(a), the site certificate will contain
 5 conditions requiring the certificate holder to design, construct, operate and retire the facility
 6 substantially as described in the site certificate.

7

8 Under OAR 345-021-0010(1)(b)(F), Exhibit B must include a construction schedule including a
 9 description of all primary construction activities that will be performed at the site and the
 10 estimated timing of those activities. "Construction activities" include all work performed at the
 11 site, excluding surveying, exploration, or other activities to define or characterize the site. The
 12 construction schedule must be provided in sufficient detail to ensure construction activities will
 13 be completed within any required work-windows required to avoid or minimize impacts on
 14 sensitive resources.

15

16 The construction schedule must specify the date by which the applicant proposes to begin
 17 construction of the facility and the date by which the applicant proposes to complete
 18 construction activities. If the applicant proposes to construct the facility in phases, the
 19 construction schedule must describe the timing of construction activities for each phase.

20

21 Exhibit B must also describe routine operations and maintenance activities, including tasks and
 22 actions associated with panel or part replacement.

23

24 **III.C. Exhibit C – Location**

25

26 **Applicable Paragraphs:** All paragraphs apply.

27 **Related Council and Other Standards:** General Standard of Review [OAR 345-022-0000]

28 **Discussion:** Exhibit C must include information about the proposed facility site.

29 Under OAR 345-021-0010(1)(c)(A), Exhibit C must include maps showing the proposed locations
 30 of the energy facility site, all related or supporting facility sites, and all areas that might be
 31 temporarily disturbed during construction of the facility in relation to major roads, water
 32 bodies, cities and towns, important landmarks and topographic features.

1
2 Maps included in the ASC must provide enough information for property owners potentially
3 affected by the proposed facility to determine whether their property is within or adjacent to
4 property on which the site boundary is located. Major roads must be accurately named. Maps
5 included in the ASC must use a scale of 1 inch = 2000 feet, or smaller when necessary to show
6 detail.

7
8 The maps must identify all proposed transmission line routes and corridors for which the
9 applicant seeks Council approval.

10
11 If the applicant seeks flexibility to site facility components anywhere within the site boundary
12 or an established micrositing area, please identify in maps and include an evaluation to support
13 the facility “micrositing area,” to be consistent with the intent of a “micrositing corridor” (OAR
14 345-001-0010(32)).

15
16 Under OAR 345-021-0010(1)(c)(B), Exhibit C must also include a narrative description of the
17 proposed energy facility site, the proposed site of each related or supporting facility and areas
18 of temporary disturbance, including the total land area (in acres) within the proposed site
19 boundary, the total area of permanent disturbance, and the total area of temporary
20 disturbance.

21
22 **III.D. Exhibit D – Organizational Expertise**

23
24 **Applicable Paragraphs:** All paragraphs apply.

25 **Related Council and Other Standards:** Organizational Expertise [OAR 345-022-0010]

26 **Discussion:** Exhibit D must include information about the organizational expertise of the
27 applicant to construct and operate the proposed facility, providing evidence to support a
28 finding that the applicant has the ability to construct, operate, and retire the proposed facility
29 in compliance with Council standards and conditions of the site certificate; and, in a manner
30 that protects public health and safety. If the applicant will rely on the organizational expertise
31 or financial capability of its parent company to construct and operate the proposed facility, the
32 Parent Company must guarantee performance of the applicant’s obligations under the site
33 certificate and must indemnify the Council against costs and expenses it may incur because of
34 the enforcement of the Site Certificate. The applicant must coordinate with the Department to
35 obtain the appropriate form and content of this guarantee. The applicant may rely on its parent
36 company to fulfill the requirements of OAR 345-021-0010(1)(d)(A) through (D), and (G), as
37 further explained below.

38
39 Under OAR 345-021-0010(1)(d)(A), Exhibit D must describe the applicant's previous experience,
40 if any, in constructing and operating facilities like the proposed facility. The description must
41 include, at a minimum, the size, location, and date of commercial operation for any facilities
42 upon which the applicant wishes to rely as evidence of organizational expertise. The description
43 should also provide an analysis of similarities and differences between the sites of the facilities

1 on which the applicant is relying to demonstrate organizational expertise and the proposed
2 facility site, including engineering and environmental constraints at each.

3
4 Under OAR 345-021-0010(1)(d)(B) and (C), Exhibit D must describe the qualifications of the
5 applicant's personnel who will be responsible for constructing and operating the facility, and
6 the qualifications of any architect, engineer, major component vendor, or prime contractor
7 upon whom the applicant will rely in constructing and operating the facility, to the extent that
8 the identities of such persons are known when the application is submitted.

9
10 Under OAR 345-021-0010(1)(d)(D), Exhibit D must describe the compliance history of the
11 applicant, its co-owners and their subsidiaries, and other participating entities, including
12 disclosure of any regulatory citations in any jurisdiction received by the applicant (parent or any
13 other party on which the applicant is relying to demonstrate organizational expertise) in the
14 past 10 years in constructing or operating a facility similar to the proposed facility and a
15 description of the status or resolution of those citations.

16
17 Under OAR 345-021-0010(1)(d)(G), Exhibit D must include evidence that the applicant can
18 successfully complete any mitigation proposed to demonstrate compliance with any applicable
19 Council standards, including reports documenting experience with other projects and the
20 qualifications, experience, and contact information of personnel upon whom the applicant will
21 rely, to the extent that the identities of such persons are known at the date of submittal. The
22 applicant must provide evidence that past mitigation projects were completed successfully,
23 such as final reports submitted to the permitting agency.

24 25 III.E. Exhibit E – Permits

26
27 **Applicable Paragraphs:** All paragraphs apply.

28 **Related Council and Other Standards:** General Standard of Review [OAR 345-022-0000]

29 **Discussion:** Under OAR 345-021-0010(1)(e)(A) and (B), Exhibit E must identify all federal, state,
30 and local government permits related to the siting of the proposed facility. ORS 469.310
31 establishes the Council's comprehensive licensing authority, which is referred to as a "one-
32 stop" consolidated permitting process. Permits related to the siting of the proposed facility
33 should be included in and governed by the site certificate to consolidate permitting processes,
34 consistent with ORS 469.310; however, it is the applicant that must identify whether permits
35 should be governed by the site certificate. For each permit, Exhibit E must include:

- 36 • A description of the permit and the reasons the permit is needed.
- 37 • A legal citation of the statute, rule or ordinance governing the permit.
- 38 • The name, mailing address, email address and telephone number of the agency or office
39 responsible for the permit.
- 40 • The applicant's analysis of whether the permit should be included in and governed by
41 the site certificate.

1 Under OAR 345-021-0010(1)(e)(C) for any state or local government agency permits, licenses or
 2 certificates that are proposed to be included in and governed by the site certificate, Exhibit E
 3 must also provide evidence to support findings by the Council that construction and operation
 4 of the proposed facility will comply with the statutes, rules, and standards applicable to the
 5 permit. Information about removal-fill permits must be provided in Exhibits J and information
 6 about any necessary water rights or permits in Exhibit O.

7
 8 Under OAR 345-021-0010(1)(e)(E), if the applicant will rely on a contractor or third party to
 9 obtain a required state or local permit, license or certificate that would otherwise be governed
 10 by the site certificate, Exhibit E must also include evidence that the applicant has, or has a
 11 reasonable likelihood of entering into, a contract or other agreement with the third party for
 12 access to the resource or service to be secured by that permit and evidence that the third party
 13 has, or has a reasonable likelihood of obtaining, the necessary permit.

14
 15 Although the Council does not have jurisdiction over federally delegated permits, the Council
 16 may rely on the determinations of compliance and the conditions in federally delegated permits
 17 in evaluating the application for compliance with Council standards. Under OAR 345-021-
 18 0010(1)(e)(D), Exhibit E must include evidence that the responsible agency for any federally
 19 delegated permitted program has received a permit application. The applicant must provide the
 20 estimated date when the responsible agency will complete its review and issue a permit
 21 decision. If the applicant relies on a contractor or third party to obtain a required state or local
 22 permit, license or certificate that will be governed by the site certificate, Exhibit E must also
 23 include the information required by OAR 345-021-0010(1)(e)(F).

24
 25 Table 8 lists permits that may be required for the proposed facility. Additional information is
 26 provided in the discussion that follows.

27

Table 8: Potentially Required Permits

Permitting Authority	Permit	EFSC Jurisdiction
Federal and Federally Delegated Permits		
U.S. Army Corps of Engineers	Section 404 Permit	Not Jurisdictional, but information required for completeness ¹
Federal Aviation Administration	Notice of Proposed Construction or Alteration (Form 7460-1)	Not Jurisdictional
	Supplemental Notice of Actual Construction or Alteration (Form 7460-2)	Not Jurisdictional
U.S. Fish and Wildlife Service	Incidental Take Permit or Eagle Take Permit	Not Jurisdictional
Oregon Department of Environmental Quality	NPDES Construction Stormwater 1200-A Permit	Not Jurisdictional, but information required for completeness ¹

Table 8: Potentially Required Permits

Permitting Authority	Permit	EFSC Jurisdiction
	NPDES Construction Stormwater 1200-C Permit	Not Jurisdictional, but information required for completeness ¹
	Basic Air Contaminant Discharge Permit	Not Jurisdictional, but information required for completeness ¹
State (Oregon Only)		
Oregon Department of State Lands	Removal-Fill Permit & Wetland Delineation Concurrence	Jurisdictional if proposed by applicant
Oregon Department of Environmental Quality	Water Pollution Control Facilities Permit 1000, Gravel mining and Batch Plant	Not Jurisdictional
	Water Pollution Control Facilities Permit 1700-B	Not Jurisdictional
Oregon Department of Transportation	Oversize Load Movement Permit	Not Jurisdictional
	Access Management Permit	Not Jurisdictional
	Utility Encroachment Permit	Not Jurisdictional
Oregon Water Resources Department	Water Right Permit or Limited Water Use License	Jurisdictional if proposed by applicant
State Historic Preservation Office	Archeological Excavation Permit	Jurisdictional if proposed by applicant
Oregon Department of Aviation	Notice of Proposed Construction or Alteration (Form 7460-1)	Jurisdictional
Local (Oregon)		
Wasco County	Conditional Use Permit	Jurisdictional
	Zoning Permit	Jurisdictional
	Building Permit	Not Jurisdictional
	Utility Permit	Not Jurisdictional
	Road Approach Permit/Road Use Agreement	Not Jurisdictional
Sherman County	Zoning Permit	Jurisdictional
	Building Permit	Not Jurisdictional
Notes:		
¹ Under OAR 345-021-0010(1)(e) the application must identify all federal, state and local government permits related to the siting of the proposed facility. For federally delegated permits, the application must include evidence that the responsible agency has received a permit application and the estimated date when the responsible agency will complete its review and issue a permit decision. The department requests this evidence be provided for all federal permits.		
² Under ORS 469.401(4), matters including but not limited to employee health and safety, building code compliance, wage and hour or other labor regulations, local government fees and charges or other design or operational issues that do not relate to siting the facility are not included in or governed by the site certificate.		

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III.E.1.1 U.S. Army Corps of Engineers

Section 404 Permit: (Not Jurisdictional, but information required for completeness)

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Statute and Rule References: Clean Water Act, Section 404; 33 CFR 1344.

Discussion: Section 404 of the Clean Water Act requires authorization from the Secretary of the Army, acting through the Corps of Engineers (Corps), for the discharge of dredged or fill material into all waters of the United States, including wetlands. Note that a Section 401 Water Quality Certification from the State of Oregon is generally required before a Section 404 permit may be granted. The Section 404 permit and the 401 Water Quality Certification are separate from the Removal-Fill permit required under Oregon State Law, however, there is a Joint Permit Application that satisfies the information requirements for all three. The applicant must provide a letter or other indication from the Corps stating that it has received a Joint Permit Application for the project, identifying any additional information it is likely to need from the applicant based on the agency’s review of the application, and providing an estimated date for when it will complete its review and issue a permit decision.

III.E.1.2 Oregon Department of Environmental Quality

National Pollution Discharge Elimination System (NPDES) Construction Stormwater 1200-C permit: (Federally delegated. Not Jurisdictional, but information required for completeness)

NPDES Stormwater and Mine Dewatering Discharge 1200-A permit: (Federally delegated Not Jurisdictional, but information required for completeness)

Statute and Rule References: ORS Chapter 468B; OAR Chapter 340, Division 45

Discussion: The EPA has delegated authority to DEQ to issue NPDES Stormwater Discharge permits for construction and operation activities. Based upon the information in the NOI, a NPDES 1200-C permit would likely be required for facility construction.

In accordance with OAR 345-021-0000(6), the applicant must submit to the Department one copy of all applications for federally delegated permits (including the NPDES permit) or provide a schedule of the date by which the applicant intends to submit the application. Unless this permit will be obtained by a third-party (see Section III.E.4), the Department will not be able to find the application for site certificate complete before receiving a copy of the NPDES permit application and a letter or other indication from DEQ. The DEQ response must state that the agency has received a permit application from the applicant and provide an estimated date when the agency will complete its review and issue a permit decision. The applicant may incorporate this information into Exhibit I (Soils) or Exhibit BB (Other Information) of the ASC.

Disposal of concrete batch plant wash water (if a temporary batch plant is necessary) would require either an NPDES 1200-A permit or a WPCF General Permit 1000. If the batch plant was to discharge stormwater from a point source to surface water or to a conveyance system that discharges to surface water, the plant would require an NPDES 1200-A permit. The requirements of OAR 345-021-0000(6) (described in the preceding paragraph) would apply to the NPDES 1200-A permit. If the applicant’s third-party contractor would instead obtain the NPDES 1200-A permit, the requirements described in the Third-Party Permits section below

1 would apply. Alternatively, if the batch plant would be located within a construction staging
2 yard for which the applicant would seek coverage under an NPDES 1200-C permit described
3 above, the applicant may seek coverage for the batch plant under the same NPDES 1200-C
4 permit.

5
6 If the batch plant would not discharge to surface waters, a WPCF-1000 General Permit would
7 instead be required to dispose of process wastewater and stormwater by recirculation,
8 evaporation, and/or controlled seepage (see the State Permits discussion below).

9
10 *Basic Air Contaminant Discharge Permit: (Federally delegated. Not EFSC-jurisdictional, but*
11 *information required for completeness)*

12
13 **Statute and Rule References:** OAR Chapter 340, Division 216

14 **Discussion:** The United States Environmental Protection Agency (EPA) has delegated authority
15 to the Oregon Department of Environmental Quality (DEQ) to administer air quality under the
16 Clean Air Act. A Basic ACDP authorizes operation of a concrete manufacturing plant that
17 produces more than 5,000 but less than 25,000 cubic yards per year output. ACDPs for mobile,
18 temporary concrete batch plants are associated with the equipment itself. The requirements of
19 OAR 345-021-0000(6) would apply to this federally delegated permit. If the applicant’s third-
20 party contractor would instead obtain the ACDP, the requirements described in the Third-Party
21 Permits section below would apply.

22 23 **III.E.2 State Permits**

24 25 **III.E.2.1 Oregon Department of State Lands**

26
27 *Wetland Delineation and Removal Fill Permit: (EFSC-jurisdictional)*

28
29 **Statute and Rule References:** ORS 196.795-990; OAR chapter 141, division 85, 90

30 **Discussion:** A removal-fill permit is required if any removal or fill activities occur in streams
31 designated as Essential Indigenous Anadromous Salmonid Habitat or 50 cubic yards or more of
32 material is removed, filled, or altered within a jurisdictional water of the state [OAR 141-085-
33 0520(2) and (5)].

34
35 The applicant must conduct a wetland delineation, to be sent to Department of State Lands
36 (DSL) for concurrence, according to OAR chapter 141, division 90. The wetland delineation
37 determines the location of “waters of this state,” as defined in OAR 141-085-0510(91), within
38 the analysis area. A detailed discussion of the requirements for the wetland delineation report
39 are included Section III.J and the comments provided by DSL in Attachment 3: Reviewing
40 Agency Comments on NOI.

41
42 Depending upon facility impacts to “waters of this state” a removal-fill permit may be
43 necessary, and the application for site certificate must include information establishing whether

1 a removal-fill permit is required. The information in the NOI indicates that a removal-fill permit
2 is not likely to be required. If a removal-fill permit is required, the ASC must include a concurred
3 delineation from DSL and a complete application for an individual permit which demonstrates
4 consistency with ORS 196.825(1) and provides enough information for determinations and
5 considerations under ORS 196.825(3) and OAR 141-085-0565.

6
7 A Compensatory Wetland Mitigation Plan which meets the requirements of OAR 141-085-0680
8 through OAR 141-085-0715 must be provided to replace all lost functions and values previously
9 provided by the impacted wetlands and waterways.

10
11 III.E.2.2 Oregon Department of Environmental Quality

12
13 *Water Pollution Control Facilities (WPCF) 1000 General Permit, Gravel mining and Batch Plant:*
14 *(EFSC-jurisdictional unless obtained by third-party; see Third-Party Permits discussion)*
15 *WPCF General Permit 1700-B: (EFSC-jurisdictional)*

16
17 **Statute and Rule References:** ORS Chapter 468B; OAR Chapter 340, Division 45

18 **Discussion:** If a temporary batch plant is necessary, disposal of concrete batch plant wash water
19 would require either a Water Pollution Control Facilities (WPCF) 1000 General Permit or a
20 NPDES permit. Concrete batch plants that dispose of process wastewater and stormwater by
21 recirculation, evaporation, and/or controlled seepage with no discharge to surface waters
22 require a WPCF-1000 General Permit. A WPCF-1000 General Permit is a state permit under
23 Council jurisdiction. If the applicant’s third-party contractor would obtain the necessary WPCF-
24 1000 General Permit directly from DEQ, this permit would be related to the siting and operation
25 of the proposed facility but would not be included in and governed by the site certificate (see
26 the Third-Party Permits discussion below). If the batch plant was to instead discharge
27 stormwater from a point source to surface water or to a conveyance system that discharges to
28 surface water, the plant would require an NPDES 1200-A permit or coverage under the NPDES
29 1200-C permit for the construction yard in which it would be located (as discussed under the
30 federally delegated permits discussion of this Project Order).

31
32 Disposal of solar panel wash water would require a WPCF 1700-B permit. The NOI indicates that
33 either the Applicant or a third-party contractor who will conduct the solar panel washing
34 activities may seek coverage under the WPCF-1700-B permit from ODEQ following completion
35 of construction and before initiating any washing activities. DEQ has indicated to the
36 Department that a WPCF General Permit 1700-B is not required for solar array washing
37 activities that would not result in discharge to surface waters, storm sewers, or dry wells, and
38 that would not use acids, bases, metal brighteners, steam, or heated water. The use of
39 biodegradable, phosphate-free cleaners with cold water is allowed. However, cleaning only
40 with cold water is recommended. Chemicals, soaps, or detergents must be used sparingly. The
41 applicant or its third-party contractor should seek guidance from DEQ prior to conducting solar
42 module washing activities. A WPCF 1700-B and WPCF-1000 General Permit are state permits
43 under Council jurisdiction. If the applicant’s third-party contractor would obtain the necessary
44 WPCF 1700-B permit directly from DEQ, this permit would not be included in and governed by

1 the site certificate (see the Third-Party Permits discussion below).

2
3 III.E.2.3 Oregon Water Resources Department

4
5 *Water Right Permit or Water Use Authorization: (EFSC-jurisdictional)*

6
7 **Statute and Rule References:** ORS chapter 537; OAR chapter 690 division 310, 340, and 410

8 **Discussion:** As represented in NOI Exhibit J, the applicant proposes to obtain water from existing
9 municipal water sources with valid water rights and truck it to the site. Additionally, the
10 applicant states that if water is not available from nearby municipalities, they could apply for a
11 limited water use license to allow either a new well or use of an existing well for facility
12 construction water. Water right permits, limited water use licenses, and other water
13 authorizations for energy facilities are subject to review and authorization by the Council, and
14 any permit would be included in and governed by the site certificate.

15
16 III.E.2.4 State Historic Preservation Office

17
18 *Archaeological Excavation Permit: (Not EFSC-jurisdictional, unless proposed by the applicant)*

19
20 **Statute and Rule References:** ORS Chapter 97, 358, and 390; OAR Chapter 736, Division 51

21 **Discussion:** Per ORS 390.235 and 358.920 a person may not excavate, injure, destroy, or alter
22 an archaeological site or object or remove an archaeological object located on public or private
23 lands in Oregon unless that activity is authorized by an Archaeological Permit issued by the
24 State Historic Preservation Office (SHPO). The applicant has not proposed to have this permit
25 be included and governed by the site certificate, and as such the applicant will be required to
26 obtain this permit from the State Historic Preservation Office prior to ground disturbing
27 activities at the site. The applicant must provide a letter or other indication from SHPO stating
28 that it has received an application for an excavation permit for the project, identifying any
29 additional information it is likely to need from the applicant based on the agency's review of
30 the application, and providing an estimated date for when it will complete its review and issue
31 a permit decision. The applicant must attach a copy of any archaeological report and
32 inadvertent discovery plan prepared in support of the application to Exhibit S.

33
34 ***Oregon Department of Aviation – Form 7460-1 Notice of Proposed Construction or Alteration***

35 **Statute and Rule References:** ORS 836.530 and OAR 738-070-0060 – 0100.

36 **EFSC Jurisdiction:** Jurisdictional.

37 **Discussion:** OAR 738-070-0100 establishes standards and notification requirements for objects
38 affecting navigable airspace. Any structures exceeding 200 feet in height are subject to
39 compliance with Federal Aviation Administration (FAA) Part 77.9. Applicant shall provide
40 preliminary location data for facility components as indicated on FAA Form 7460-1 to aid in
41 ODAV's determination of potential impacts to air navigation. This review and determination will
42 be incorporated and governed by the site certificate.

1 **III.E.3 Local Permits**

2

3 III.E.3.1 Wasco County

4

5 *Conditional Use Permit (EFSC-jurisdictional)*

6

7 **Statute and Rule References:** ORS Chapter 469.504; Wasco County Land Use and Development
8 Ordinance

9 **Discussion:** At the time of the NOI, Wasco County has permitting requirements that relate to
10 the siting, construction, or operation of the proposed facility: Conditional Use Permit and
11 Zoning Permit. The applicant is required to provide updated permit information, as applicable,
12 at the time the ASC is submitted.

13

14 As stated in the NOI, the applicant requests that the Council determine compliance with the
15 statewide planning goals under ORS 469.504(1)(b). Accordingly, the conditional use permit will
16 be included in and governed by the site certificate.

17

18 The other listed Wasco County permitting requirements include the Wasco County Building
19 Permit, Utility Permit, and Road Approach Permit/Road Use Agreement. These are not related
20 to facility siting and as such will not be included in or governed by the site certificate. Building
21 permits are specifically excluded from EFSC jurisdiction by statute, ORS 469.401(4).

22

23 III.E.3.2 Sherman County

24

25 *Conditional Use Permit (EFSC-jurisdictional)*

26

27 **Statute and Rule References:** ORS Chapter 469.504; Sherman County Land Development Code
28 Article 928.320(18) and 921.874.

29 **Discussion:** At the time of the NOI, Sherman County has permitting requirements that relate to
30 the siting, construction, or operation of the proposed facility: Sherman County Zoning Permit.
31 The applicant is required to provide updated permit information, as applicable, at the time the
32 ASC is submitted.

33

34 As stated in the NOI, the applicant requests that the Council determine compliance with the
35 statewide planning goals under ORS 469.504(1)(b). Accordingly, if needed, the conditional use
36 permit will be included in and governed by the site certificate.

37

38 The other listed Sherman County permitting requirements are not related to facility siting and
39 as such will not be included in or governed by the site certificate. Building permits are
40 specifically excluded from EFSC jurisdiction by statute, ORS 469.401(4).

41

42 **III.E.4 Third-Party Permits**

43

1 **Discussion:** As noted in the NOI, the applicant may rely upon third-party permits for access to
2 resources necessary for facility construction and operation. If the applicant relies upon a state
3 or local government permit issued to a third party that is related to the siting of the proposed
4 facility, the applicant must identify each third-party permit, and, for each, include evidence that
5 the applicant has, or has a reasonable likelihood of entering into, a contract or other agreement
6 with the third party for access to the resource or service to be secured by that permit; evidence
7 that the third party has or, has a reasonable likelihood of obtaining, the necessary permit; and,
8 an assessment of the impact of the proposed facility on any permits that a third party has
9 obtained and on which the applicant relies to comply with any applicable Council standard
10 (OAR 345-021-0010(1)(e)(E)).

11
12 If the applicant relies on a federally delegated permit issued to a third party that is related to
13 the siting of the proposed facility, the applicant must identify the third-party permit and include
14 evidence that the applicant has, or has a reasonable likelihood of entering into, a contract or
15 other agreement with the third party for access to the resource or service to be secured by that
16 permit. The applicant must provide evidence that the responsible agency has received the
17 permit application and provide the estimated date when the responsible agency will complete
18 its review and issue a permit decision (OAR 345-021-0010(1)(e)(F)).

19
20 In accordance with OAR 345-022-0010(4), if the applicant relies on a permit or approval issued
21 to a third party and the third party does not have the necessary permit or approval at the time
22 the Council issues the site certificate, the Council may issue the site certificate subject to the
23 condition that the certificate holder shall not commence construction or operation as
24 appropriate until the third party has obtained the necessary permit or approval and the
25 applicant has a contract or other arrangement for access to the resource or service secured by
26 that permit or approval.

27 28 III.F. Exhibit F – Property Owners

29
30 **Applicable Paragraphs:** All paragraphs apply.

31 **Related Council and Other Standards:** General Standard of Review [OAR 345-022-0000]

32 **Discussion:** Exhibit F must identify all tax lots or parcels located wholly or partially within the
33 site boundary, and within the following distances of those tax lots or parcels:

- 34 • 500 feet, when the tax lot or parcel located within the site boundary is within a farm or
35 forest zone.
- 36 • 250 feet, when the tax lot or parcel located within the site boundary is outside of an
37 Urban Growth Boundary and not within a farm or forest zone.
- 38 • 100 feet, when the tax lot or parcel located within the site boundary is located wholly or
39 partially within an Urban Growth Boundary.

40
41 Tax lots must be identified in a consistent format that provides the Township, Range, Section
42 and Tax lot number of each tax lot. If the local government uses a different tax lot identification
43 system, please include the local tax lot identification number in a separate column.

1
 2 The preliminary ASC Exhibit F may omit mailing address information for the notification area
 3 described above because the Department is not required to issue a public notice reliant on the
 4 mailing address information until the ASC is deemed complete. pASC Exhibit F must, however,
 5 include a list of all tax lots within the notification area described above. The list must be
 6 accompanied by legible maps that clearly identify the site boundary, the notification buffer
 7 distances as described above, tax lot identification numbers as well as adjacent road names.
 8 Once the ASC is deemed complete by the Department, Exhibit F must include the mailing
 9 address information for the owner of record of each identified tax lot based on the tax
 10 assessment roll for the jurisdiction in which the tax lot is located. In addition to incorporating
 11 the list in the application, the applicant must submit the list to the Department in Excel
 12 Workbook (.xlsx) or comma-separated values (.csv) format.

13
 14 Following the submission of the complete application, the applicant must submit an updated
 15 property owner list as requested by the Department to ensure that all public notices issued use
 16 the most recent tax assessment roll.

Map Tax Lot	First Name	Last Name	Name 2	Company/Organization	C/O- Attn.	Address	City	State	Zip Code
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17
 18
 19 For record purposes, the Department requires the original information extracted from the tax
 20 assessment roll, including any duplicates.

21
 22 Following the submission of the complete ASC, the applicant must submit updated property
 23 owner lists as requested by the Department to ensure that all public notices issued use the
 24 most recent tax assessment roll.

25
 26 **III.G. Exhibit G – Materials Analysis**

27
 28 **Applicable Paragraphs:** All paragraphs apply.

29 **Related Council and Other Standards:** General Standard of Review [OAR 345-022-0000]; Soil
 30 Protection [OAR 345-022-0022]

31 **Discussion:** Exhibit G must include an inventory of substantial quantities of industrial materials
 32 flowing into and out of the proposed facility site during construction and operation of the
 33 proposed facility, including but not limited to, metals, oils and fuels. Quantities of waste
 34 materials must be inventoried, and methods of disposal should be described in Exhibits G and
 35 W. The applicant must identify any hazardous materials that will be used or stored at the site
 36 and describe plans to manage those materials during construction and operation of the
 37 proposed facility, including measures to prevent and contain spills.

38

1 The applicant must also describe plans to manage non-hazardous waste materials during
2 construction and operation. Exhibit G must identify any proposed fuel storage areas, vehicle
3 maintenance areas, or other areas that could be used to store hazardous materials.
4

5 III.H. Exhibit H – Geologic and Soil Stability
6

7 **Applicable Paragraphs:** All paragraphs apply.

8 **Related Council and Other Standards:** Structural Standard [OAR 345-022-0020]

9 **Discussion:** Exhibit H must include Information regarding the geological and soil stability within
10 the analysis area. The contents of Exhibit H must be based on a consultation with the Oregon
11 Department of Geology and Mineral Industries regarding the appropriate methodology and
12 scope of the seismic hazards and geology and soil-related hazards assessments, the appropriate
13 geotechnical work that must be performed at the site, and the guidelines for preparing the
14 geologic report for the application required under OAR 345-021-0010(1)(h)(A). Under OAR 345-
15 021-0010(1)(h)(B), Exhibit H must include a summary of this consultation.
16

17 Under OAR 345-021-0010(1)(h)(A), (E), and (F), Exhibit H must include a geologic report meeting
18 the Oregon State Board of Geologist Examiners geologic report guidelines and an assessment of
19 seismic hazards and appropriate mitigation consistent with the recommendations made by
20 DOGAMI during the consultation and the requirements of the rule. The assessment must
21 explain how the applicant will design, engineer, construct and operate the facility to integrate
22 disaster resilience design to ensure recovery of operations after major disasters and how future
23 climate conditions, including changes in precipitation and stream flow, for the expected life
24 span of the proposed facility will impact the proposed facility.
25

26 Under OAR 345-021-0010(1)(h)(C) and (D), Exhibit H must provide a description and schedule of
27 site-specific geotechnical work that will be performed before construction activities begin at
28 the site, and a description of any locations where the applicant proposes to perform site
29 specific geotechnical work.
30

31 III.I. Exhibit I – Soils
32

33 **Applicable Paragraphs:** All paragraphs apply.

34 **Related Council and Other Standards:** Soil Protection [OAR 345-022-0022]

35 **Discussion:** Exhibit I must include information from reasonably available sources regarding soil
36 conditions and uses in the analysis area. Reasonably available sources include NRCS web-soil
37 survey data, Wasco and Sherman County Soil and Water Conservation Districts (SWCDs) and
38 adjacent landowners. Exhibit I shall include accurate references and hyperlinks to source data.
39 Exhibit I must include the results of consultation with the County SWCDs and adjacent
40 landowners, as feasible, to inform existing agricultural practices, including harvest and rotation
41 schedules, within and adjacent to the site boundary. This information shall be applied to the
42 impact assessment, as discussed below.
43

1 Under OAR 345-021-0010(1)(i)(C) through (E), Exhibit I must identify and assess potential
2 adverse impacts of construction and operation of the proposed facility, including impacts such
3 as erosion and soil compaction.

4
5 Exhibit I must also include a soil reclamation plan that describes any measures the applicant
6 proposes to avoid or mitigate adverse impacts to soils during construction and operation of the
7 proposed facility and any proposed monitoring program. Minimum measures shall include a
8 phased grading plan, dust abatement plan, and coordinated construction and restoration
9 schedule that aligns with participating landowner rotation schedules (for lands within the tracts
10 associated with the facility) to minimize excessive bare ground impacts, when applicant may be
11 relying on landowners planting schedule for site stabilization. These measures can be
12 incorporated into the Noxious Weed Control Plan or other similar plan that applies to ground-
13 disturbing activities (to minimize the number of plans/conditions that apply).

14
15 For cultivated or arable lands, Exhibit I must contain sufficient evidence to demonstrate that
16 temporary disturbances during construction or maintenance activities will not result in long-
17 term losses of productivity. Any mitigation activities for permanent disturbance areas must also
18 be described in Exhibit X and the soil reclamation plan. If the applicant relies upon an erosion
19 and sediment control plan to meet the Soil Protection Standard a draft of that plan must be
20 included in the application.

21
22 The applicant can cross-reference any applicable information related to the federally delegated
23 NPDES 1200-C permit application. Please note that an erosion and sediment control plan that
24 meets the NPDES 1200-C requirements may not necessarily be sufficient to meet the EFSC Soil
25 Protection standard. See Section III(e), Exhibit E – Permits, for additional discussion of federally-
26 delegated permits.

27 28 III.J. Exhibit J – Waters of the State and Removal-Fill

29
30 **Applicable Paragraphs:** All paragraphs apply.

31 **Related Council and Other Standards:** General Standard of Review [OAR 345-022-0000];
32 Removal of Material, Filling [ORS 196.795-.990]; Administrative Rules Governing the Issuance
33 and Enforcement of Removal-Fill Authorizations Within Waters of Oregon Including Wetlands
34 [OAR chapter 141, division 085]

35 **Discussion:** Exhibit J must include information based on literature and field study, as
36 appropriate, about waters of this state, as defined under ORS 196.800, including, but not
37 limited to all natural waterways, intermittent and perennial streams, lakes, and wetlands.

38
39 Under OAR 345-021-0010(1)(j)(A), Exhibit J must include a description of all areas within the
40 site boundary that might be waters of the state and maps showing the location of these
41 features.

42
43 A wetland delineation report that complies with OAR chapter 141, division 90 must be provided
44 to the Department and DSL before the ASC will be determined to be complete. The wetland

1 delineation must be conducted using the standard wetland delineation methodology as
2 outlined in the 1987 Army Corps manual and relevant supplements. The applicant must also
3 provide GIS data including the study area boundary and the boundaries of all delineated
4 wetlands and waters to both ODOE and DSL.

5
6 Under OAR 345-021-0010(1)(j)(B), (C), and (F), Exhibit J must describe whether construction or
7 operation of the proposed facility could result in potential adverse impacts to any waters of the
8 state, assess the significance of those impacts, and describe proposed actions to avoid or
9 mitigate adverse impacts and the applicant’s proposed monitoring program, if any, for such
10 impacts.

11
12 If impacts to waters of the state cannot be avoided, Exhibit J must describe the amount and
13 type of material that could be deposited or removed from any waters of the state, consistent
14 with the requirements of OAR 141-085-0525, and any other information needed to determine
15 whether a removal-fill permit is required under OAR chapter 141, division 085.

16
17 Under OAR 345-021-0010(1)(j)(D) and (E), Exhibit J must include an analysis of whether a
18 removal-fill permit is required. If a removal-fill permit is necessary for the proposed facility,
19 Exhibit J must include all information required for the Council to decide on the removal-fill
20 permit application, including all information required under OAR chapter 141 division 85. This
21 must include a completed and signed Joint Permit Application on the current form, including:

- 22 • A complete project description.
 - 23 • An alternatives analysis including an analysis of alternative sites with lesser impacts to
24 waters of this State and an analysis of alternative designs with lesser impacts to waters
25 of this State.
 - 26 • An explanation of how the proposed project minimizes adverse effects to waters of this
27 State, including avoiding and minimizing activities outside of the ODFW-designated in-
28 water-work window; avoiding and minimizing interference with fishing, navigation, and
29 recreation; erosion control; avoiding and minimizing sediment suspension and
30 dispersion; spill response measures; avoiding or minimizing impacts to shallow water
31 habitats; avoiding and minimizing adverse effects to aquatic biota and habitats; avoiding
32 or minimizing disturbance or destruction of native riparian vegetation;
 - 33 • Figures depicting SWI wetlands and DSL compensatory mitigation sites.
 - 34 • Functions and values assessments of permanently impacted sites, including SFAM for
35 wadable streams, ORWAP for wetlands, and Best Professional Judgement for any other
36 non-wadable streams.
 - 37 • A rectification plan for restoring disturbed sites within 24-months of disturbance.
 - 38 • A compensatory mitigation plan to mitigate for any unavoidable impacts to waters of
39 this State; and
 - 40 • A monitoring plan with performance standards for restoration of disturbed areas and
41 performance of compensatory mitigation.
- 42

1 If a removal-fill permit is necessary for the proposed facility, a draft removal-fill permit with
2 draft conditions, must be submitted to the Department by DSL to be included as an attachment
3 to the draft proposed order.
4

5 Wetland delineation reports and removal-fill permit application materials can be sent directly
6 by the applicant to DSL; however, all materials as well as DSL’s concurrence with the wetland
7 delineation must also be submitted to the Department as part of Exhibit J. The Department will
8 work closely with DSL in review of the removal-fill permit application, if applicable.
9

10 When required for an energy facility, a removal-fill permit shall be included in and governed by
11 the site certificate. The Department and DSL would maintain dual responsibility for compliance
12 with any associated permit conditions. See Section III(e), Exhibit E – Permits, for additional
13 discussion of state permits.
14

15 III.K. Exhibit K – Land Use

16
17 **Applicable Paragraphs:** (A) and (C).

18 **Related Council and Other Standards:** Land Use [OAR 345-022-0030]

19 **Discussion:** The Council’s Land Use standard requires an evaluation for compliance with the
20 statewide planning goals. Under ORS 469.504(1), the applicant may establish compliance with
21 the applicable statewide planning goals either by obtaining local land use approval under ORS
22 469.504(1)(a) or by obtaining Council approval under ORS 469.504(1)(b). The applicant
23 indicated in the NOI that it has elected to seek a Council determination of compliance under
24 ORS 469.504(1)(b). Within Exhibit K, since the applicant has elected to obtain a Council
25 determination on land use under ORS 469.504(1)(b), paragraphs A and C of OAR 345-021-
26 0010(1)(k) apply; paragraph B does not apply.
27

28 Exhibit K must include information about the proposed facility’s compliance with the statewide
29 planning goals adopted by the Land Conservation and Development Commission, providing
30 evidence to support a finding by the Council as required by OAR 345-022-0030.
31

32 Under OAR 345-021-0010(1)(k)(A), Exhibit K must include a map showing the comprehensive
33 plan designations and land use zones in the analysis area. Based on information provided in the
34 NOI, the Department understands that the proposed facility is entirely within EFU Zones in
35 Wasco and Sherman counties.
36

37 Exhibit K must state the applicant’s election to either obtain local land use approval under ORS
38 469.504(1)(a) or to obtain a Council determination under ORS 469.504(1)(b). In the NOI, the
39 Applicant indicated that it intends to satisfy the Council’s land use standard, OAR 345-022-
40 0030, by seeking a Council determination under ORS 469.504(1)(b). Assuming the applicant has
41 not changed its election OAR 345-021-0010(1)(k)(B) does not apply to the application. Note that
42 once the election is made in the preliminary ASC, it is final.
43

1 All applicable criteria and standards associated with any zone in which the facility site boundary
2 is proposed to be located must be included, unless proposed micrositing corridors clearly
3 demonstrate that no part of the facility would be located within that zone. The applicant is
4 encouraged to consult with the planning departments of the affected local governments to
5 develop the list. Under OAR 345-021-0010(1)(k)(C), the applicant must identify all applicable
6 substantive criteria from the Wasco County Land Use and Development Ordinance and any land
7 use regulations adopted by Wasco County that are required by the statewide planning goals
8 and that are in effect on the date the application is submitted. Similarly, under OAR 345-021-
9 0010(1)(k)(C), the applicant must identify all applicable substantive criteria from the Sherman
10 County Land Development Code, and any land use regulations adopted by Sherman County that
11 are required by the statewide planning goals and that are in effect on the date the application is
12 submitted. The applicant should coordinate with the Special Advisory Groups (SAGs) prior to
13 submittal of the application to ensure that they are applying the current (at date of submittal of
14 application) applicable substantive criteria.

15
16 Wasco County applicable substantive criteria are found in the WCLUDO and WCCP. Written
17 comments from Wasco County identified applicable substantive criteria in effect at the time of
18 their review of the NOI, but as noted above, the applicant must identify applicable substantive
19 criteria in effect at the time of the ASC submittal. (See Attachment 2: SAG Comments on NOI)

20
21 Sherman County applicable substantive criteria are found in the Sherman County LDC, and the
22 Sherman County Comprehensive Plan. Written comments from Sherman County identified
23 applicable substantive criteria in effect at the time of their review of the NOI, but as noted
24 above, the applicant must identify applicable substantive criteria in effect at the time of the
25 ASC submittal. (See Attachment 2: SAG Comments on NOI)

26
27 Exhibit K must identify and discuss each applicable substantive criteria and must demonstrate
28 how the proposed facility complies with those criteria. If the proposed facility will not comply
29 with one or more of the applicable substantive criteria, the applicant must demonstrate that
30 the proposed facility nevertheless complies with the applicable statewide planning goals or that
31 an exception to a goal is justified under ORS 469.504(2) and OAR 345-022-0030(4).

32
33 Exhibit K shall also provide evidence that the proposed facility would comply with any directly-
34 applicable Land Conservation and Development Commission (LCDC) administrative rules and
35 statutory requirements related to the proposed facility, including ORS 215.243, 215.274,
36 215.283, 215.296, and specifically including all requirements regarding the location of the
37 proposed facility within the EFU zone. Exhibit K shall provide evidence that the proposed facility
38 would comply with the applicable administrative rules at OAR 660-033-0130(38) related to
39 development of solar power generation facilities, as well as rules related to associated
40 transmission lines to energy generating facilities.

41
42 As part of the evaluation of compliance with OAR 660-033-0130(38), Exhibit K must include
43 evidence that demonstrates that the proposed facility will not make it more difficult for existing
44 farms and ranches in the area extending one mile from the center of project to continue

1 operation due to diminished opportunities to expand, purchase or lease farmland, acquire
2 water rights, or diminish the number of tracts or acreage in farm use in a manner that will
3 destabilize the overall character of the study area, if required.

4
5 The proposed facility also requires an exception to Statewide Planning Goal 3 (Agricultural
6 Lands). The Council’s goal exception process is described at ORS 469.504(2) and OAR 345-022-
7 0030(4). Because the land within the site is not physically developed or irrevocably committed
8 to non-agricultural use ORS 469.504(2)(a) and (b) are not applicable to the proposed facility and
9 Exhibit K must evaluate whether each of the standards listed under ORS 469.504(2)(c) are
10 met:

- 11 • Reasons justify why the state policy embodied in the applicable goal should not apply
- 12 • The significant environmental, economic, social and energy consequences anticipated
13 because of the proposed facility have been identified and adverse impacts will be
14 mitigated in accordance with rules of the council applicable to the siting of the proposed
15 facility
- 16 • The proposed facility is compatible with other adjacent uses or will be made compatible
17 through measures designed to reduce adverse impacts

18
19 Exhibit K must clearly demonstrate that all three standards are met and must provide site-
20 specific evidence to support the evaluation. Evaluation of significant impacts to agriculture
21 should include relevant information about specific uses and historic agricultural production on
22 properties within and adjacent to the proposed facility, including agricultural revenue and
23 number of workers employed for agricultural activities. Reasons that support a local economic
24 benefit should provide specific and detailed information about how the proposed facility would
25 provide agricultural-based economic benefits which differ from any other type of development.
26 The applicant should address comments by reviewing agencies, the SAGs, and stakeholder
27 groups about impacts to agriculture in the context of the Goal 3 exception request.

28
29 If the proposed facility will not comply with one or more of the applicable substantive criteria,
30 the applicant must demonstrate that the proposed facility nevertheless complies with the
31 applicable statewide planning goals or that an exception to a goal is justified under ORS
32 469.504(2) and OAR 345-022-0030(4).

33 34 III.L. Exhibit L – Protected Areas

35
36 **Applicable Paragraphs:** All paragraphs apply.

37 **Related Council and Other Standards:** Protected Areas [OAR 345-022-0040]

38 **Discussion:** As shown in Table 7 below, Exhibit J of the NOI identifies 16 protected areas within
39 the 20-mile study area for protected areas. All 16 of these protected areas are more than 9
40 miles from the proposed facility site. Based on transportation routes and topographic location
41 (NOI Figure 5) and distance of the facility from any of the protected areas, the Department
42 establishes the protected areas analysis area at 2-miles from the site boundary.

Table 9: Protected Areas within 20 miles¹⁰

Type	Area Name	Approx. Distance to Site Boundary (miles)	Direction from Facility
<i>Wild, Scenic, or Recreational River included in the National Wild and Scenic River System OAR 345-001-0010(26)(d)</i>	White Wild and Scenic River	14	West
	Lower Deschutes Wild and Scenic River	9	Southwest, West and North
	John Day Wild and Scenic River	14	East
<i>Wilderness Study Area OAR 345-001-0010(26)(h)</i>	Lower John Day Wilderness Study Area	16	Northeast
	Thirtymile Wilderness Study Area	15	East
	North Pole Ridge Wilderness Study Area	13	East
<i>Area of Critical Environmental Concern OAR 345-001-0010(26)(i)(A)</i>	Armstrong Canyon	17	East
<i>State park, wayside, corridor, monument, historic, or recreation area under the jurisdiction of the Oregon Parks and Recreation Department OAR 345-001-0010(26)(j)</i>	Deschutes River State Recreation Area	18	North
	White River Falls State Park	10	Northwest
<i>Natural area listed in the Oregon Register of Natural Areas OAR 345-001-0010(26)(l)</i>	Tygh Valley State Natural Area	10	West
	Lawrence Memorial Grassland Natural Area	11	South
<i>State Scenic Waterway OAR 345-001-0010(26)(n)</i>	Lower Deschutes River State Scenic Waterway	12	North
	John Day River State Scenic Waterway	16	East
<i>State Wildlife Refuge or Management Area OAR 345-001-0010(26)(o)</i>	White River	16	North
	Lower Deschutes Wildlife Management Area	10	North and Northwest
<i>Fish hatchery operated by the Oregon Department of Fish and Wildlife OAR 345-001-0010(26)(p)</i>	Oak Springs Hatchery	9	Northwest

2

3 Under OAR 345-021-0010(1)(L)(A) and (B), Exhibit L must include a list and map of the
4 protected areas within the analysis area showing the distance and direction from the proposed
5 facility. If any additional protected areas in the analysis area are identified during the

¹⁰ Table adapted from NOI Table L-1

1 development of the ASC or if the site boundary is amended, the table and map must be
2 updated accordingly.

3
4 Under OAR 345-021-0010(1)(L)(C), Exhibit L must include a description of significant potential
5 impacts of the proposed facility, if any, on the protected areas including, but not limited to,
6 potential impacts such as:

- 7 • Noise resulting from facility construction or operation.
- 8 • Increased traffic resulting from facility construction or operation.
- 9 • Water use during facility construction or operation.
- 10 • Wastewater disposal resulting from facility construction or operation.
- 11 • Visual impacts of facility structures.
- 12 • Visual impacts from air emissions resulting from facility construction or operation.

13
14 Please note that compliance with the DEQ noise rules does not correlate to compliance with
15 the noise assessment considered in the Protected Areas standard. Particularly, while
16 construction noise is exempt from the DEQ noise rules, construction noise must be considered
17 under the Protected Areas standard. However, information developed to demonstrate
18 compliance with the DEQ noise rules (such as noise modeling) included in Exhibit Y can be used
19 in the assessment under the Protected Areas standard.

20
21 If the applicant becomes aware of any potential significant impacts to Protected Areas including
22 impacts to wildlife or wildlife habitat in the protected areas, the impacts must be disclosed and
23 evaluated in Exhibit L.

24 25 III.M. Exhibit M – Financial Capability

26
27 **Applicable Paragraphs:** All paragraphs apply.

28 **Related Council and Other Standards:** Retirement and Financial Assurance [OAR 345-022-0050]

29 **Discussion:** Exhibit M must include information about the applicant’s financial capability and
30 must include basic information about the applicant’s financial condition. The applicant is not
31 required to provide information or records protected from public disclosure by any provision of
32 state or federal law.

33
34 Under OAR 345-021-0010(1)(m)(A), Exhibit M must include an opinion or opinions from legal
35 counsel stating that, to counsel's best knowledge, the applicant has the legal authority to
36 construct and operate the facility without violating its bond indenture provisions, articles of
37 incorporation, common stock covenants, or similar agreements.

38
39 Under OAR 345-021-0010(1)(m)(B) and (C), Exhibit M must include the type and amount of the
40 applicant’s proposed bond or letter of credit. The proposed amount must be based on the
41 information provided under Exhibit X, and the applicant must explain any discrepancies
42 between the proposed bond amount and the retirement estimate.

1 Exhibit M shall include evidence that the applicant has a reasonable likelihood of obtaining the
2 proposed bond or letter of credit from a reputable financial institution in that amount before
3 beginning construction of the facility. If applicant chooses to provide a comfort letter from a
4 financial institution as evidence to support Council’s review of this requirement, the letter must
5 refer to the applicant or facility, be on letterhead, and provide assurance that the financial
6 would issue a bond or letter or credit to the applicant in an amount greater than or equal to the
7 estimated decommissioning amount.
8

9 III.N. Exhibit N – Need for Nongenerating Facility

10
11 **Applicable Paragraphs:** OAR 345-021-0010(1)(n) does not apply because the proposed facility is
12 a generating facility. Exhibit N is not required.
13

14 III.O. Exhibit O – Water Use

15
16 **Applicable Paragraphs:** All paragraphs apply except (D).

17 **Related Council and Other Standards:** General Standard of Review [OAR 345-022-0000]; OAR
18 690, Divisions 310 and 380 (Water Resources Department permitting requirements)

19 **Discussion:** Exhibit O must include information about anticipated water use during construction
20 and operation of the proposed facility.
21

22 Under OAR 345-021-0010(1)(o)(A) through (C) and (G), Exhibit O must include a description of
23 how water will be used during construction and operation of the proposed facility, and must
24 describe each source of water and the estimated amount of water the facility will need from
25 each source during construction and during operation under annual average and worst-case
26 conditions, and a description of proposed actions to mitigate the adverse impacts of water use
27 on affected resources.
28

29 Under OAR 345-021-0010(1)(o) E) and (F), Exhibit O must provide an evaluation of whether the
30 proposed facility would need a groundwater permit, surface water permit or a water right
31 transfer. If the proposed facility would need a groundwater permit, a surface water permit or a
32 water right transfer, Exhibit O information to support a determination by the Council that the
33 Water Resources Department should issue the permit or transfer of a water use, including
34 information in the form required by the Water Resources Department under OAR Chapter 690,
35 Divisions 310 and 380. See Section III(e) Exhibit E – Permits, for a discussion of OWRD permits
36 and Section III(u) – Public Services, for information requirements related to water service
37 providers.
38

39 III.P. Exhibit P – Fish and Wildlife Habitat

40
41 **Applicable Paragraphs:** All paragraphs apply.

42 **Related Council and Other Standards:** Fish and Wildlife Habitat [OAR 345-022-0060]

1 **Discussion:** Exhibit P must include Information about fish and wildlife habitat and the species
2 that could be affected by the proposed facility, providing evidence to support a finding by the
3 Council that the design, construction, and operation of the facility, taking into account
4 mitigation, are consistent with the general fish and wildlife habitat mitigation goals and
5 standards of OAR 635-415-0025(1) through (6) in effect as of February 24, 2017.

6
7 The applicant must consult with the Oregon Department of Fish and Wildlife (ODFW) in
8 developing the resources and methods used to develop materials for Exhibit P.

9
10 The Oregon Fish and Wildlife Habitat Mitigation Policy under OAR Chapter 635, Division 415
11 classifies six habitat categories and establishes a mitigation goal for each category. Under OAR
12 345-021-0010(1)(p)(B) and (C), Exhibit P must identify all fish and wildlife habitat in the analysis
13 area, classified by both vegetation class and habitat category as set forth in OAR 635-415-0025
14 and describe the characteristics and condition of that habitat in sufficient detail to justify the
15 categorizations. The habitat classification is subject to the Department and ODFW review.
16 Exhibit P must include maps and a table of the areas of permanent disturbance and temporary
17 disturbance (in acres) in each habitat category and subtype.

18 19 **III.P.1 Required Surveys**

20
21 Under OAR 345-021-0010(1)(p)(A) through (E), Exhibit P must include a description of biological
22 and botanical surveys performed or scheduled to support the habitat categorization and other
23 information in Exhibit P. At a minimum, the timing, scope, methods, and sources for each
24 survey must be discussed. Requirements for specific surveys are discussed in more detail
25 below. Additional surveys may be required based on consultation with ODFW.

26 27 **III.P.1.1 Habitat Surveys**

28
29 Under OAR 345-021-0010(1)(p)(B), Exhibit P must include the results of habitat surveys
30 identifying habitat type, vegetation and characteristics, habitat condition, and species use and
31 presence.

32
33 Based on the results of the habitat surveys, the applicant must categorize habitat in all areas
34 within Oregon as provided under OAR 635-415-0025. The habitat categorization is subject to
35 review and approval by ODFW. The habitat categories and the mitigation goals area
36 summarized in Table 8 below.

37
Table 10: Habitat Categories Under OAR 635-0415-0025

Category	Description	Mitigation Goal
1	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.	No loss of either habitat quantity or quality.

Table 10: Habitat Categories Under OAR 635-0415-0025

Category	Description	Mitigation Goal
2	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, is no net loss of either habitat quantity or quality and to provide a net benefit of habitat quantity or quality.
3	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.	No net loss of either habitat quantity or quality.
4	Important habitat for fish and wildlife species.	No net loss in either existing habitat quantity or quality.
5	Habitat for fish and wildlife having high potential to become either essential or important habitat.	If impacts are unavoidable, is to provide a net benefit in habitat quantity or quality.
6	Habitat that has low potential to become essential or important habitat for fish and wildlife.	Minimize impacts.

1

2 Under OAR 345-021-0010(C), Exhibit P must include tabular data and maps depicting the areas
 3 of permanent and temporary disturbance (in acres) in each habitat category, type and subtype
 4 based on the results of the habitat survey.

5

6 III.P.1.2 Sensitive Species Surveys

7

8 Under OAR 345-021-0010(D), based on consultation with the ODFW and appropriate field study
 9 and literature review, Exhibit P must identify all state sensitive species that might be present in
 10 the habitat survey areas and a discussion of any site-specific issues of concern to ODFW. Exhibit
 11 P must include baseline surveys in appropriate habitats for these species, and any other
 12 identified state sensitive species within the analysis area and must provide a map showing the
 13 locations of the different species and habitats with respect to the proposed activities. If state
 14 sensitive species, or suitable habitat for state sensitive species, are identified within the analysis
 15 area that could be adversely affected as a result of the proposed facility, the applicant shall
 16 include a description of the nature, extent, and duration of potential adverse impacts and a
 17 description of any proposed mitigation measures, consistent with the Exhibit P requirements,
 18 the EFSC Fish and Wildlife Habitat standard, and the ODFW Habitat Mitigation Policy. If
 19 sensitive species surveys are required by other jurisdictions, the applicant is encouraged to
 20 provide a single survey report that identifies occurrences of all sensitive species.

21

22 III.P.1.3 Raptor Nest Surveys

23

24 The applicant must conduct surveys for raptor nests within one quarter mile of all proposed
 25 disturbance areas. The applicant must also provide information on how it will avoid or minimize
 26 and monitor impacts to raptors and other avian species, including curtailing construction
 27 activities within one quarter mile of active raptor nests during the nesting season.

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III.P.2 Assessment of Impacts to Habitat and Sensitive Species

Under OAR 345-021-0010(1)(p)(F), Exhibit P must describe the nature, extent and duration of potential adverse impacts on the habitat and species identified in surveys that could result from construction, operation and retirement of the proposed facility. This assessment must discuss, at a minimum the temporary and permanent disturbance (during construction or maintenance activities).

III.P.3 Proposed Monitoring and Mitigation

Under OAR 345-021-0010(1)(p)(G) and (H), Exhibit P must describe any monitoring and mitigation activities proposed by the applicant to ensure that the construction, operation, and retirement of the facility will comply with the habitat mitigation goals and standards and to otherwise avoid, reduce, or otherwise mitigate adverse impacts to habitat and state sensitive species. At a minimum, mitigation measures discussed must include avoidance areas and implementation measures; and in-kind/in proximity mitigation as required by ODFW regulations. This information must also be incorporated into a draft Revegetation and Noxious Weed Control Plan, a draft Habitat Mitigation Plan, and a draft Post Construction Monitoring Plan, which must be included as attachments to Exhibit P.

The draft Habitat Mitigation Plan and associated information in Exhibit P must clearly demonstrate how the applicant will provide mitigation for both short- and long-term habitat impacts in accordance with the ODFW Habitat Mitigation Policy. This includes identifying the location of a specific habitat mitigation area that could be used to provide in-kind, in-proximity mitigation for any impacts to Category 2 to 4 Habitat, as well as ecological uplift mitigation actions that could be implemented at the habitat mitigation area to provide the appropriate mitigation.

The draft Habitat Mitigation Plan must include the results of the habitat categorization surveys as well as surveys of any proposed habitat mitigation areas and must provide the draft legal mechanism or mechanisms proposed for acquiring the legal right to maintain and enhance the habitat mitigation area. The Habitat Mitigation Plan must include draft success criteria for the proposed ecological uplift actions and describe a process for evaluating monitoring and reference site locations, prior to construction.

III.Q. Exhibit Q – Threatened and Endangered Species

Applicable Paragraphs: All paragraphs apply.

Related Council and Other Standards: Threatened and Endangered Species [OAR 345-022-0070]

Discussion: Exhibit Q must include information about threatened and endangered plant and animal species that may be affected by the proposed facility, providing evidence to support a

1 finding by the Council as required by OAR 345-022-0070. The ASC will include a desktop analysis
2 for 5 miles from the proposed site boundary and field survey data for within the site boundary.

3
4 Under OAR 345-021-0010(1)(q)(A) through (G), Exhibit Q must include a list of all threatened
5 and endangered species listed in OAR 635-100-0125 or 603-073-0070 that have the potential to
6 occur in the analysis area. The applicant shall identify these species based on a review of
7 literature, consultation with knowledgeable individuals, and reference to the list of species
8 maintained by the Oregon Biodiversity Information Center. For each species identified, Exhibit
9 Q must describe the nature, extent, locations, and timing of its occurrence in the analysis area;
10 how the facility might adversely affect the species; what measures the applicant proposes to
11 avoid or reduce and adverse impact; and the applicant’s proposed monitoring program for
12 impacts.

13
14 For each threatened and endangered plant species, Exhibit Q must describe how the proposed
15 facility, including any mitigation measures, complies with the protection and conservation
16 program adopted by the Oregon Department of Agriculture (ODAg), or if there is no protection
17 and conservation program in place for an identified threatened or endangered plant species,
18 describe any significant potential impacts the proposed facility may have on the continued
19 existence of the species and on the critical habitat of such species, and must provide evidence
20 that the proposed facility, including any mitigation measures, is not likely to cause a significant
21 reduction in the likelihood of survival or recovery of the species.

22
23 For each threatened and endangered animal species, Exhibit Q must describe any significant
24 potential impacts of the proposed facility on the continued existence of such species and on the
25 critical habitat of such species, and must provide evidence that the proposed facility, including
26 any mitigation measures, is not likely to cause a significant reduction in the likelihood of
27 survival or recovery of the species.

28
29 Field surveys for any threatened and endangered species that may occur within the analysis
30 area are required within or near suitable habitat that will be disturbed during construction and
31 operation of the proposed facility. The applicant must consult with ODFW and ODAg’s Native
32 Plant Conservation Program regarding appropriate field survey methods, survey areas, survey
33 seasons, qualifications of field survey personnel, and the information to be included in a field
34 survey report.

35 36 III.R. Exhibit R – Scenic Resources

37
38 **Applicable Paragraphs:** All paragraphs apply.

39 **Related Council and Other Standards:** Scenic Resources [OAR 345-022-0080]

40 **Discussion:** Exhibit R must include an analysis of potential significant visual impacts of the
41 proposed facility on scenic resources identified as significant or important in local, state or
42 regional land use plans, tribal land management plans and federal land management plans for
43 any lands located within the analysis area. Based upon the underlying topography and the lack

1 of visible components beyond 2 miles, the analysis area for Scenic Resources is set at 2 miles
2 from the site boundary.

3
4 For any scenic resources deemed “significant” or “important” in a local, state, regional tribal or
5 federal land management plan, the applicant shall include in the ASC an evaluation of the
6 proposed facility’s consistency or compliance with any development or land use criteria
7 included in the land management plan for the identified resource. ASC Exhibit R shall include a
8 copy of the portion(s) of the management plan that identifies the resource as significant or
9 important. The applicant shall also describe the measures it proposes to avoid, reduce, or
10 otherwise mitigate any significant adverse impacts to these scenic resources. A visual impact
11 assessment is required as part of Exhibit R; while no specific methodology is required by EFSC
12 rule, the applicant must submit evidence adequate to demonstrate why the proposed facility is
13 in compliance with the Scenic Resources standard. Visual simulations or other visual
14 representations are not required but can provide important evidence for use by the
15 Department and Council in understanding the potential visual impact of the proposed facility to
16 Scenic Resources.

17
18 III.S. Exhibit S – Historic, Cultural and Archaeological Resources

19
20 **Applicable Paragraphs:** All paragraphs apply.

21 **Related Council and Other Standards:** Historic, Cultural, and Archaeological Resources [OAR
22 345-022-0090]

23 **Discussion:** Exhibit S must include information about historic, cultural, and archaeological
24 resources. As described under OAR 345-022-0090(2), the Council may issue a site certificate for
25 a facility that would produce power from solar energy without making the findings required
26 under OAR 345-022-0090(1); however, the applicant must still provide sufficient information
27 for the Council to determine whether conditions of approval to ensure compliance with the
28 Standard are appropriate.

29
30 Information concerning the location of archaeological sites or objects may be exempt from
31 public disclosure under ORS 192.345(11). Such information, including archaeological survey
32 reports, should be provided confidentially under separate cover in **hard copy only** format, and
33 only after consultation with the Department. Confidential material shall also be provided
34 directly to SHPO, following guidance from the Department and SHPO. Please contact the
35 Department to discuss current practices regarding treatment and submittal of confidential
36 material.

37
38 As described under OAR 345-021-0010(1)(s)(D)(i) to (iii), Exhibit S must describe survey
39 methodology, survey areas, and the results of all surveys conducted for historic, cultural, and
40 archaeological resources as well as an analysis of any significant adverse impacts anticipated
41 and proposed mitigation measures.

42
43 Under OAR 345-021-0010(1)(s)(A) through (C), Exhibit S must include an inventory of all historic
44 properties discovered in the analysis area, including any archaeological sites or objects on

1 private land in the analysis area and archaeological sites on public land in the analysis area.
2 Exhibit S must include an evaluation of whether the historic properties have been listed on, or
3 would likely be listed on, the National Register of Historic Places, based on an evaluation of the
4 National Register Evaluation Criteria as described in National Register Bulletin 15.

5
6 Under OAR 345-021-0010(1)(s)(D), Exhibit S must also include an impact assessment, and
7 proposed measures to avoid or mitigate potential impacts to historic, cultural, or archaeological
8 resources that have been listed on, or would likely be listed on the National Register of Historic
9 Places.

10
11 Under OAR 345-021-0010(1)(s)(E), Exhibit S must include the applicant’s proposed monitoring
12 program, if any, for impacts to historic, cultural, and archaeological resources during
13 construction and operation of the proposed facility, including a program to address inadvertent
14 discovery of resources during ground disturbing activities at the site.

15
16 The applicant is strongly encouraged to discuss the proposed facility with all Tribes that could
17 be potentially affected by the construction and operation of the proposed facility, including but
18 not limited to the tribes identified by the Legislative Commission on Indian Services:
19 Confederated Tribes of the Umatilla Indian Reservation, Confederated Tribes of the Warm
20 Springs Reservation of Oregon, the Burns Paiute Tribe, the Confederated Tribes of Grand
21 Ronde; and the Confederated Tribes of Siletz Indians.

22 23 III.T. Exhibit T – Recreation

24
25 **Applicable Paragraphs:** All paragraphs apply.

26 **Related Council and Other Standards:** Recreation [OAR 345-022-0100]

27 **Discussion:** Exhibit T must include information about the impact the proposed facility would
28 have on important recreational opportunities. Based upon the underlying topography and the
29 lack of visible components beyond 2 miles, the analysis area for Recreational Opportunities is
30 set at 2 miles from the site boundary.

31
32 Under OAR 345-021-0010(1)(t)(A), Exhibit T must include a description of recreational
33 opportunities in the analysis area, and information identifying whether the opportunity is
34 considered “important” under OAR 345-022-0100, and a map of the analysis area showing the
35 locations of identified important recreational opportunities.

36
37 Under OAR 345-021-0010(1)(t)(B), (C), and (E), Exhibit T must include a description of any
38 potential significant adverse impacts to important recreation opportunities, and a description
39 of measures the applicant proposes to avoid, reduce, or otherwise mitigate and monitor those
40 impacts. Impacts that must be evaluated in Exhibit T include:

- 41 • Direct or indirect loss of a recreational opportunity because of facility construction or
42 operation.
- 43 • Noise resulting from facility construction or operation.

- Increased traffic resulting from facility construction or operation.
- Visual impacts of facility structures.

Note that a visual impact assessment is required as part of Exhibit T. While no specific methodology is required, the applicant must submit sufficient evidence to demonstrate how the proposed facility would comply with the Recreation standard. The applicant should consider the extent of impacts and prior Council evaluations when designing the impact assessment methodology. Visual simulations or other visual representations are not required but can provide important evidence for use by the Department and Council in understanding the potential visual impact of the proposed facility to important recreational opportunities.

Compliance with the DEQ noise rules (Exhibit Y) does not correlate to compliance with the noise assessment considered in the Recreation standard. Particularly, while construction noise is exempt from the DEQ noise rules, construction noise must be considered under the Recreation standard. However, information developed to demonstrate compliance with the DEQ noise rules such as noise modeling can be used in the assessment under the Recreation standard.

If the applicant becomes aware of any potentially significant impacts to the identified recreational opportunities other than those described above, the impacts must be disclosed and evaluated in Exhibit T.

III.U. Exhibit U – Public Services

Applicable Paragraphs: All paragraphs apply.

Related Council and Other Standards: Public Services [OAR 345-022-0110]

Discussion: Exhibit U must include information on how the construction and operation of the proposed facility will impact public services. Exhibit U must include sufficient evidence to support a finding by the Council that construction and operation of the proposed facility, taking into account mitigation, are not likely to result in significant adverse impact to the ability of public and private service providers to provide sewers and sewage treatment, water, storm water drainage, solid waste management, housing, traffic safety, police and fire protection, health care and schools. As described in the Public Services standard at OAR 345-022-0110(2), the Council may issue a site certificate for a facility that would produce power from solar energy without making the findings of the Public Services standard at OAR 345-022-0110(1), though the Council may apply the requirements of OAR 345-022-0110(1) to impose conditions on a site certificate issued for such a facility.

Under OAR 345-021-0010(1)(u)(A) through (D), Exhibit U must include an analysis identifying the public and private service providers in the analysis area that would likely be affected by construction and operation of the proposed facility, a description of any likely impacts on the ability of the service providers to provide their respective services, and evidence that any adverse impacts, taking into account any mitigation proposed by the applicant, are not likely to

1 be significant. The analysis must describe any important assumptions the applicant used to
2 evaluate potential impacts.

3
4 The applicant may include information developed in support of Exhibit V in its evaluation of
5 impacts to fire protection providers, an evaluation of any potential impacts that may affect
6 responders to structural fires at the proposed facility, including but not limited to fires involving
7 Battery Energy Storage Systems or electrical equipment at the site should also be included as
8 part of Exhibit U.

9
10 In evaluating impacts to traffic safety, Exhibit U must contain sufficient evidence to
11 demonstrate that the construction and operation of the proposed facility will not result in
12 significant safety impacts to drivers along major roads near the proposed facility: US 97 to the
13 east, US 197 to the west, Bakeoven Road to the south, and Oregon Highway 216 (OR-216) to
14 the north. Impacts that must be evaluated should include the impacts of vehicles entering and
15 exiting the site during construction and the potential for glint or glare from solar modules and
16 other surfaces during operation. Applicant must demonstrate that they consulted with local
17 public works department staff on potential haul and traffic routes to be used during
18 construction and discussed existing conditions and capacity of those roads. If County Public
19 Works Departments utilize road use agreements to manage traffic impacts on local roads, a
20 draft of the road use agreement to be used for the project for each county shall be included in
21 Exhibit U. Exhibit U should also evaluate whether any significant traffic delays will occur and
22 whether these delays could affect ambulance services or other emergency responders. In
23 addition, Exhibit U must evaluate the impacts that the construction and operation of the
24 proposed facility will have on local aviation resources, sufficient to demonstrate compliance
25 with OAR chapter 738, division 070.

26
27 Exhibit U must evaluate the impact that the temporary and permanent workforce will have on
28 housing in the analysis area, including the availability of hotels, RV parks, and other temporary
29 accommodations. **This evaluation must assume that 100 percent of the temporary
30 construction workforce will require temporary accommodations unless the applicant can
31 provide evidence to demonstrate the availability of local workers or can provide evidence of
32 a local hiring program.**

33
34 In addition to the analysis described above, the applicant is encouraged to obtain letters from
35 local public services providers to demonstrate that the proposed facility would not cause a
36 significant adverse impact on their ability to provide their respective services. Including:

- 37
- 38 • Local fire departments,
 - 39 • Police departments,
 - 40 • Public works departments,
 - 41 • Sewer and sewage treatment providers,
 - 42 • Water service providers
 - 43 • Solid waste providers

1
2 Letters obtained from public service providers include analysis indicating that their level of
3 service would not be impacted. For instance, letters obtained from water service providers
4 should include an evaluation of permit limits, permit or water right numbers, type of water use,
5 and historical demand to demonstrate that it can meet proposed facility needs. Letters from
6 fire service providers should explain how resources used by the facility, in the event of a fire-
7 related issue, would not impact their ability to provide fire emergency response, rather than a
8 conclusory statement without supporting analysis demonstrating a clear understanding of the
9 facility. Letters from public works departments should demonstrate an understanding of
10 proposed facility road use, including maximum number of vehicle miles travelled and vehicle
11 weight, and confirmation of whether the use would impact local roads.

12
13 As described in the Public Services standard at OAR 345-022-0110(2), the Council may issue a
14 site certificate for a facility that would produce power from solar energy without making the
15 findings of the Public Services standard at OAR 345-022-0110(1), though the Council may apply
16 the requirements of OAR 345-022-0110(1) to impose conditions on a site certificate issued for
17 such a facility.

18
19 Under OAR 345-021-0010(1)(u)(E), Exhibit U must include the applicant's proposed monitoring
20 program, if any, for impacts to public services.

21 22 III.V. Exhibit V – Wildfire Prevention and Risk Mitigation

23
24 **Applicable Paragraphs:** All paragraphs apply.

25 **Related Council and Other Standards:** Wildfire Prevention and Risk Mitigation [OAR 345-022-
26 0115]

27 **Discussion:** Exhibit V must include information about wildfire risk within the analysis area
28 sufficient to support the Council findings required under OAR 345-022-0115. This must include
29 a characterization of wildfire risk within the analysis area that identifies each of the following:

- 30
31
- 32 • Baseline wildfire risk, based on factors that are expected to remain fixed for multiple
33 years, including but not limited to topography, vegetation, existing infrastructure, and
34 climate.
 - 35 • Seasonal wildfire risk, based on factors that are expected to remain fixed for multiple
36 months but may be dynamic throughout the year, including but not limited to,
37 cumulative precipitation and fuel moisture content.
 - 38 • Areas subject to a heightened risk of wildfire, based on the Baseline and Seasonal risk
39 information.
 - 40 • High-fire consequence areas, including but not limited to areas containing residences,
41 critical infrastructure, recreation opportunities, timber and agricultural resources, and
42 fire-sensitive wildlife habitat.

43 Wildfire mapping shall apply to the ½-mile buffer, but comprehensive wildfire risk will be based

1 on county-wide data, if available. (For example, do either Sherman or Gilliam County have
2 County Hazard/Fire Risk Assessment/Plans that identify the entirety of the county as having
3 high wildfire risk?) The characterization must also describe all data sources and methods used
4 to model and identify risks. The applicant may select data sources and methods as appropriate
5 for the site, but all data must be current and from reputable sources.

6
7 Exhibit V must also include a draft Wildfire Mitigation Plan for construction, and separately for
8 operations and maintenance of the proposed facility. The Wildfire Mitigation Plan(s) must, at a
9 minimum:

- 10 • Identify areas within the site boundary that are subject to a heightened risk of wildfire,
11 using current data from reputable sources, and discuss data and methods used in the
12 analysis.
- 13 • Describe the procedures, standards, and time frames that the applicant will use to
14 inspect facility components and manage vegetation in any identified areas of
15 heightened risk of wildfire.
- 16 • Identify preventative actions and programs that the applicant will carry out to minimize
17 the risk of facility components causing wildfire, including procedures that will be used to
18 adjust operations during periods of heightened wildfire risk. This should include a
19 discussion of the use of defensible space, fire hardened infrastructure, and power
20 shutoff protocols, as applicable.
- 21 • Identify procedures to minimize risks to public health and safety, the health and safety
22 of responders, and damages to resources protected by Council standards if a wildfire
23 occurs at the facility site, regardless of ignition source. This should include:
 - 24 ○ A description of who will respond to wildfires at the site and a plan for ensuring
25 responders are aware of sensitive resources that should be avoided during fire
26 suppression activities.
 - 27 ○ A description and maps of access and egress options for wildfire responders and
28 emergency vehicles to enter and exit the site in a fire emergency.
 - 29 ○ Information about whether any specialized equipment or training will be needed
30 to respond to fire events at the site involving solar arrays, battery systems, or
31 other facility components.
- 32 • Describe methods the applicant will use to ensure that updates of the plan incorporate
33 best practices and emerging technologies to minimize and mitigate wildfire risk.

34 35 III.W. Exhibit W – Solid Waste and Wastewater

36
37 **Applicable Paragraphs:** All paragraphs apply.

38 **Related Council and Other Standards:** Waste Minimization [OAR 345-022-0120]; Public Services
39 [OAR 345-022-0110]

40 **Discussion:** Exhibit W must describe the applicant's plans to minimize the generation of solid
41 waste and wastewater and to recycle or reuse solid waste and wastewater, providing evidence
42 to support findings by the Council under OAR 345-022-0120. As provided in OAR 345-022-
43 0120(2), the Council may issue a site certificate for a facility that would produce power from

1 solar energy without making the findings required by OAR 345-022-0120(1); however, the
2 applicant must still provide sufficient evidence in Exhibit W for the Council to determine
3 whether conditions of approval are needed to ensure that waste generation will be minimized.
4

5 Under OAR 345-021-0010(1)(w)(A), (B), and (D), Exhibit W must include a description of the
6 major types and amount of solid waste and wastewater that construction, operation, and
7 retirement of the facility are likely to generate; the structures, systems, and equipment for
8 management and disposal of the wastes, including any plans to minimize, recycle or reuse the
9 wastes. This should include a discussion of whether the applicant has plans in place to recycle
10 solar modules or other facility components.
11

12 Under OAR 345-021-0010(1)(w)(C), Exhibit W must include a discussion of any actions or
13 restrictions proposed by the applicant to reduce consumptive water use during construction
14 and operation of the facility. This includes water needed for operation and maintenance of the
15 facility and should include a discussion of wastewater and runoff generated from panel
16 washing.
17

18 Under OAR 345-021-0010(1)(w)(E) and (F), Exhibit W must include a description of any adverse
19 impact on surrounding and adjacent areas from the accumulation, storage, disposal and
20 transportation of solid waste, wastewater and stormwater during construction and operation of
21 the facility and evidence that those impacts, taking into account any account any measures the
22 applicant proposes to avoid, reduce, or otherwise mitigate the impacts, will be minimal.
23

24 Under OAR 345-021-0010(1)(w)(G), Exhibit W must include the applicant's proposed monitoring
25 program, if any, for minimization of solid waste and wastewater impacts.
26

27 The applicant is encouraged to reference information provided under other exhibits, including
28 but not limited Exhibits O and U, in the development of this exhibit.
29

30 III.X. Exhibit X – Facility Retirement

31
32 **Applicable Paragraphs:** All paragraphs apply.

33 **Related Council and Other Standards:** Retirement and Financial Assurance [OAR 345-022-0050]

34 **Discussion:** Exhibit X must provide information about site restoration, providing evidence to
35 support a finding that the site can be restored adequately to a useful, non-hazardous condition
36 following permanent cessation of construction or operation of the facility.
37

38 Under OAR 345-021-0010(1)(x)(A) and (B), this information must include the estimated useful
39 life of the proposed facility and a description of the specific actions and tasks to restore the site
40 to a useful, non-hazardous condition.
41

42 Under OAR 345-021-0010(1)(x)(C) and (D), Exhibit X must also include an estimate, in current
43 dollars, of the total and unit costs of restoring the site to a useful, non-hazardous condition and
44 a discussion and justification of the methods and assumptions used in preparing the estimate.

1 The estimate should include sufficient detail to identify costs associated with individual tasks
2 and units.

3
4 Under 345-021-0010(1)(x)(E), Exhibit X must include a proposed monitoring plan for any
5 potential site contamination by hazardous materials, including oils or fuels used or stored on
6 site, such as periodic environmental site assessment and reporting. If the applicant believes no
7 monitoring for soil contamination is necessary, Exhibit X must provide evidence to support this
8 position.

9
10 III.Y. Exhibit Y – Noise

11
12 **Applicable Paragraphs:** All paragraphs apply.

13 **Related Council and Other Standards:** General Standard of Review [OAR 345-022-0000]; DEQ
14 Noise Control Regulations [ORS 467.020 and ORS 467.030; OAR 340, Division 35]

15 **Discussion:** Exhibit Y must include information about noise generated by construction and
16 operation of the proposed facility, providing evidence to support a finding by the Council that
17 the proposed facility complies with the Oregon Department of Environmental Quality’s noise
18 control standards in OAR 340-035-0035.

19
20 Under OAR 345-021-0010(1)(y)(A), Exhibit Y must include predicted noise levels from all
21 potential noise-generating components of the facility including, but not limited to the solar
22 inverters, transformers, transmission lines, switchgears, and the Battery Energy Storage System.

23
24 Under OAR 345-021-0010(1)(y)(B), Exhibit Y must include an analysis demonstrating that the
25 predicted noise levels will not exceed the ambient antidegradation standards established under
26 OAR 340-035-0035. Noise generated by the facility may not increase the ambient statistical
27 noise levels, L10 or L50, by more than 10 dBA in any one hour, and may not exceed the levels
28 specified in Table 9 below.

29

**Table 11: New Industrial and Commercial Noise Source Standards Allowable
Statistical Noise Levels in Any One Hour (OAR 340-035-0035, Table 8)**

7:00 a.m. – 10:00 p.m.	10:00 p.m. – 7:00 a.m.
L50 – 55 dBA	L50 – 50 dBA
L10 – 60 dBA	L10 – 55 dBA
L1 – 75 dBA	L1 – 60 dBA

30

31 The analysis must include a discussion and justification of the methods and assumptions used,
32 including methods used to measure ambient noise levels at the site. OAR 340-035-0035(3)
33 provides that sound measurement procedures must conform to the procedures set forth in
34 Sound Measurement Procedures Manual (NPCS-1). If the applicant’s sound measurement
35 procedures differ from the NPCS-1, please provide a discussion and basis for the variation. The
36 analysis must evaluate noise impacts using the maximum expected noise levels from all noise-

1 generating equipment during construction and operation. Operational noise shall be evaluated
2 from both stationary sources and corona noise from transmission lines.

3
4 Under OAR 345-021-0010(1)(y)(E), Exhibit Y must include a list of the names and addresses of
5 all owners of all dwellings or other noise sensitive properties within one mile of the proposed
6 site boundary; however, if the applicant determines potential exceedances of the ambient
7 antidegradation standards may occur beyond the 1-mile distance, impacts to noise sensitive
8 properties within the area of potential exceedance must be evaluated. The applicant is not
9 required to conduct ambient noise monitoring at each noise sensitive property; however, the
10 number of ambient monitoring sites shall be sufficient to reasonably represent the ambient
11 noise conditions at noise sensitive receptor locations in closest proximity to the proposed site.

12
13 Under OAR 345-021-0010(1)(y)(C) and (D), Exhibit Y must describe any measures the applicant
14 proposes to reduce noise levels or noise impacts or to address public complaints about noise
15 from the facility and any measures the applicant proposes to monitor noise generated by
16 operation of the facility. This information must be provided regardless of whether any
17 exceedances of the ambient antidegradation standards are expected.

18 19 III.Z. Exhibit Z – Cooling Tower Impacts

20
21 **Applicable Paragraphs:** OAR 345-021-0010(1)(z) does not apply because the applicant has not
22 proposed to construct an evaporative cooling tower in relation to the proposed facility.

23 24 III.AA. Exhibit AA – Electric and Magnetic Fields

25
26 **Applicable Paragraphs:** All paragraphs apply.

27 **Related Council and Other Standards:** Specific Standards for Transmission Lines [OAR 345-024-
28 0090].

29 **Discussion:** The provisions of OAR 345-021-0010(1)(aa) and OAR 345-024-0090 apply to the 500
30 kV gen-tie line and any other aboveground transmission lines.

31
32 Exhibit AA must include sufficient information to support a finding that the applicant:

- 33 • Can design, construct, and operate the proposed transmission line so that alternating
34 current electric fields do not exceed 9 kV per meter at one meter above the ground
35 surface in areas accessible to the public.
- 36 • Can design, construct, and operate the proposed transmission line so that induced
37 currents resulting from the transmission lines will be as low as reasonably achievable.

38
39 This must include the information about the expected electric and magnetic fields of the
40 transmission line required under OAR 345-021-0010(1)(aa)(A), and information about any radio
41 interference likely to be caused by the transmission line.

1 III.BB. Exhibit BB – Other Information

2

3 **Related Council and Other Standards:** General Standard of Review [OAR 345-022-0000]

4 **Discussion:** No additional information is requested at this time.

5

6 III.CC. Exhibit CC – Other Law

7

8 **Related Council and Other Standards:** General Standard of Review [OAR 345-022-0000]

9 **Discussion:** All requirements apply.

10 (cc) Exhibit CC. Identification, by legal citation, of all state statutes and administrative rules and
11 local government ordinances containing standards or criteria that the proposed facility must
12 meet for the Council to issue a site certificate, other than statutes, rules and ordinances
13 identified in Exhibit E, and identification of the agencies administering those statutes,
14 administrative rules, and ordinances. The applicant must identify all statutes, administrative
15 rules, and ordinances that the applicant knows to be applicable to the proposed facility,
16 whether identified in the project order. To the extent not addressed by other materials in the
17 application, the applicant must include a discussion of how the proposed facility meets the
18 requirements of the applicable statutes, administrative rules, and ordinances.

19

20 III.DD. Exhibit DD – Specific Standards

21

22 **Applicable Paragraphs:** Paragraph (C) applies.

23 **Related Council and Other Standards:** Specific Standards for Transmission Lines [OAR 345-024-
24 0090].

25 **Discussion:** The Council applies specific standards for transmission lines under its jurisdiction in
26 OAR 345-024-0090. The applicant must provide analysis regarding compliance with OAR 345-
27 024-0090 in Exhibit AA.

28

29 **IV. ANALYSIS AREAS FOR THE PROPOSED FACILITY**

30

31 The analysis areas are the areas that the applicant must study for potential impacts from the
32 construction and operation of the proposed facility. **Please Note:** If significant impacts
33 associated with the applicable Council standards could occur beyond the analysis areas
34 described here, then the applicant must assess those impacts in the ASC and show how the
35 facility would comply with the applicable standard with regard to the larger area where impacts
36 could occur.

37

38 For all potential impacts, the analysis area includes all the area within the site boundary. Most
39 analysis areas also include an area extending a specified distance from the site boundary. The
40 minimum required analysis areas are presented in the table below.

Table 12: Analysis Areas

Affected Standard or Resource	Exhibit	Analysis Area	ODOE's Basis for Analysis Area
Structural Standard	H	The area within the site boundary, notwithstanding the distances related to an assessment of seismic hazards required by OAR 345-021-0010(1)(h).	Default minimum of 50 miles for seismic risks per DOGAMI comments on recent seismic activity and faults identified near Maupin.
Soil Protection	I	The area within the site boundary.	Consistent with established study area distance.
Land Use	K	The area within and extending 0.5 mile from the site boundary.	Consistent with established study area distance (OAR 345-001-0010(35)(c))
Wetlands	J	The area within the site boundary.	Consistent with applicability of removal-fill permit
Protected Areas	L	The area within and extending 2 miles from the site boundary.*	Unlikelihood of impacts beyond 2-miles from the site given topography/location/transportation routes.
Fish and Wildlife Habitat	P	The area within and extending 0.5 mile from the site boundary.	Consistent with established study area distance (OAR 345-001-0010(35)(c))
Threatened and Endangered Species	Q	The area within the site boundary. Desktop review shall include the area within and extending 5-miles from the site boundary.	Consistent with established study area distance (OAR 345-001-0010(35)(a))
Scenic Resources	R	The area within and extending 2 miles from the site boundary.*	Unlikelihood of impacts beyond 2-miles from the site given topography/location/transportation routes.
Historic, Cultural and Archaeological Resources	S	For direct impacts to archeologic sites and objects, the area within the site boundary. For indirect impacts to aboveground resources, including Traditional Cultural Properties or Historic	Consistent with SHPO guidance

Table 12: Analysis Areas

Affected Standard or Resource	Exhibit	Analysis Area	ODOE’s Basis for Analysis Area
		Properties of Religions and Cultural Significance to Indian Tribes, identified within 1-mile of the site boundary during the desktop review, the analysis area shall include the area within and extending 1-mile from the site boundary.	
Recreation	T	The area within and extending 2 miles from the site boundary.*	Unlikelihood of impacts beyond 2-miles from the site given topography/location/transportation routes.
Public Services	U	For all resources except housing during construction, the area within and extending 10 miles from the site boundary, to include Wasco and Sherman counties, the City of Maupin and City of Shaniko. For housing impacts during construction, analysis must be based on impacts to available RV/camping locations within 10-miles of the site.	Consistent with established study area distance (OAR 345-001-0010(35)(b))
Wildfire Risk	V	For wildfire mapping, the area within and extending 0.5 miles from the site boundary. For wildfire risk assessment, based on county risk assessment, if available.	Consistent with established study area distance (OAR 345-001-0010(35)(c))
Noise Control Regulation	Y	The area within and extending 1-mile from the site boundary.	Consistent with distance identified in OAR 345-021-0010(1)(y)(E)
<p>Notes:</p> <ol style="list-style-type: none"> The applicant should note that analysis areas defined in this Project Order are to be used for the assessment of impacts to the associated resource. The applicant is not required to perform comprehensive field surveys of the entire analysis area if another method of impact assessment is suitable. However, the Department reserves the right to require field surveys if it is determined that a different method of analysis is insufficient to provide the level of information necessary to find the application complete. It is recommended that the Department be consulted if the applicant wishes to propose alternative methods of analysis than field surveys. 			

Table 12: Analysis Areas

Affected Standard or Resource	Exhibit	Analysis Area	ODOE's Basis for Analysis Area
*The Department establishes the analysis areas for Protected Areas, Scenic Resources and Recreational Opportunities at 2-miles from the site boundary based on transportation routes and topographic location (NOI Figure 5) and distance of the facility from any of these areas however these are subject to revision based on information provided in the application and during comment periods.			

1

1 **V. EXPIRATION DATE OF THE NOTICE OF INTENT**

2
3 The NOI will expire on September 28, 2025 unless the applicant submits a petition to extend
4 the expiration date in accordance with OAR 345-020-0060 not less than 45 days before that
5 date. If the Council finds that such a petition shows good cause, the Council may extend the
6 expiration date for a period of up to one year. The applicant's submission of a timely petition
7 for an extension under this rule stays the expiration of the NOI until the Council's decision to
8 grant or deny the extension.
9

10 **VI. PROJECT ORDER AMENDMENT AND APPLICATION COMPLETENESS**

11
12 As provided in ORS 469.330(4) and OAR 345-015-0160(3), the Council or the Department may
13 amend this Project Order at any time. Amendments may include changes to the analysis areas.
14 To issue a site certificate, the Council must determine that the proposed facility complies with
15 Oregon statutes and administrative rules identified in the Project Order, as amended, as
16 applicable to the issuance of a site certificate for the proposed facility (ORS 469.503(3)).
17

18 Under OAR 345-015-0190(5), when the Department determines the ASC contains adequate
19 information for the Council to make findings or impose conditions on all applicable Council
20 standards, the Department will issue a determination of completeness on the ASC. The
21 applicant may submit a written request to waive specific information requirements in OAR 345-
22 021-0010 that are identified as applicable in this Project Order. If the Department grants the
23 waiver, it will amend the Project Order accordingly. In accordance with OAR 345-015-0190(9),
24 after a determination that an application is complete, the Department may require additional
25 information from the applicant if additional information is needed during its continued review
26 of the application.
27

28 **VII. APPLICABILITY AND DUTY TO COMPLY**

29
30 Failure to include an applicable statute, rule, ordinance, permit or other requirement in this
31 Project Order does not render that statute, rule, ordinance, permit or other requirement
32 inapplicable, nor in any way relieve applicant from the duty to comply with the same.
33

34 OREGON DEPARTMENT OF ENERGY

35 Todd Cornett
36 Todd Cornett (Jan 26, 2024 14:29 PST)

37 Todd R. Cornett, Assistant Director, Siting Division
38 Energy Facility Siting Division
39 Oregon Department of Energy
40

41 Date of Issuance: January 26, 2024

Attachment 1: Public Comments

Public Information Meeting 11/2/2023 YRB NOI Oral Comment Summary

Commenter Name	Comment	EFSC Standard/Topic
Ken Clark	When do you expect to receive an interconnection agreement?	NA
	Applicant Response: Uncertainty in BPA reforms; 2028 is aggressive – 2028-2030.	
	Have you entered the BPA queue?	
	Applicant: Yes, we are in the transitional cluster. We filed 4 queue positions.	
	BPA will not start reviewing transmission clusters under 2025.	
	Applicant: 2025 is reasonable. Unfortunately, a lot of things with BPA are a moving target.	
Joe Dabulskis (Sherman County Judge)	Buckley 2 – you have secured easements?	NA
	Applicant. No – this is being explored. For the line tap, we have everything we need. With Buckley, there are still parties to work with.	
	Buckley, is that a choice you make or BPA makes? Why would you choose?	
Joe Dabulskis (Sherman County Judge)	Applicant: Choice that we make based on access to the substation. If we are able to secure – significantly more expensive to build a substation onsite. If we can go to an existing substation, we can sell energy at a lower price.	NA
	When will Buckley be upgraded? I am told it is in the next couple of years.	
	Applicant: That is generally in line with what we have heard. Will get more information once we get studies back from BPA. My information is no better than yours.	

About 24 people in the room, 6 on the phone

Comment Summary – Comment Portal ID 2023-189

Please identify the location of the Barlow Road Cutoff.

Comment Date

10/12/2023

source

portal

Siting Project Phase

NOI

Comment Details

Notice of Intent Exhibit

Exhibit C - Proposed Facility Location

Page Number(s)

Online map

Council Standards

—

Comment

The Barlow Road Cutoff is just north of the project area. I would like to know if the project is visible from the road.

Attachments

No files were attached.

SLOAN Kathleen * ODOE

From: ODOE ITService * ODOE
Sent: Thursday, October 12, 2023 10:05 AM
To: SLOAN Kathleen * ODOE
Subject: New Public Comment submitted for project : Yellow Rosebush Energy Center

Organization: Oregon-California Trails Association

Submitted by: David Welch

Email: welchdj@comcast.net

Zip Code: 98516

Siting Project Phase: NOI

Comment Summary:

Please identify the location of the Barlow Road Cutoff.

Please Click on the following link to view the full [Comment Details](#)

SLOAN Kathleen * ODOE

From: ODOE ITService * ODOE
Sent: Saturday, November 4, 2023 9:13 AM
To: SLOAN Kathleen * ODOE
Subject: New Public Comment submitted for project : Yellow Rosebush Energy Center

Follow Up Flag: Follow up
Flag Status: Flagged

Organization: The REAL Green New Deal Project

Submitted by: Megan Seibert

Email: megan.seibert@realgnd.org

Zip Code: 97448

Siting Project Phase: NOI

Comment Summary:

Solar and batteries are not renewable, sustainable, clean, or green. The environmental narrative has been captured, and this comment seeks to offer a broader context that shines a light on its falsehoods as well as a better way forward.

Please Click on the following link to view the full [Comment Details](#)

Comment Summary

Solar and batteries are not renewable, sustainable, clean, or green. The environmental narrative has been captured, and this comment seeks to offer a broader context that shines a light on its falsehoods as well as a better way forward.

Comment Date

11/4/2023

source

portal

Siting Project Phase

NOI

Comment Details

Notice of Intent Exhibit

—

Page Number(s)

—

Council Standards

—

Comment

4 November 2023

Dear Oregon DOE, EFSC, and other planning team members,

I'm writing on behalf of The REAL Green New Deal Project to comment on the proposed Yellow Rosebush Energy Center. We're an independent organization exposing the dangerous illusion of the Green New Deal – simply business-as-usual by alternative means – while offering a genuinely hopeful alternative grounded in ecological realism and spiritual reconnection.

While you'll no doubt receive many comments on the various adverse impacts of this project as far as non-human species, visuals, land use, etc. – all of which are important and legitimate – I'm offering a broader context within which we think this should be considered.

Despite the popular “Green New Deal” rhetoric being advanced by the Biden Administration and mainstream environmentalism, the truth is that so-called renewable energy technologies are neither renewable nor sustainable because they:

- Are impossible to build and maintain without fossil energy.
- Require other non-renewable resources, in addition to FF, that have been vastly depleted and whose extraction entails significant ecological destruction and social injustices.
- Have short life spans, necessitating continual replacement in perpetuity, in the process generating tons of waste (that cannot be waved away by the mythical wand of the industrial circular economy).
- Generate only electricity, leaving a massive, unaccounted-for problem since only one-fifth of global energy consumption is in the form of electricity and no viable alternatives exist to electrify the rest.
- Barely generate surplus energy beyond what it takes to build, distribute, and decommission them.

In short, these technologies are just as harmful as, if not more so than, fossil fuels.

The answer to our unsustainability crisis lies not in easy, destructive tweaks to an already destructive way of life, but in radical, fundamental change: dramatically reducing our population using the perfectly humane tools at our disposal and completely transforming society to exist more harmoniously with the natural world. This is obviously not an easy or politically expedient path, but it's nonetheless the one that will allow us to survive and thrive.

For more detailed information, I recommend the following resources that can be found on our website:

1. Our open-access article published in the journal *Energies* called *Through the Eye of a Needle: An Eco-Heterodox Perspective on the Renewable Energy Transition*. I've included the text below; here is a link to the article: <https://www.mdpi.com/1996-1073/14/15/4508>.
2. Our energy transition plan called *The PallasCeres Report: An Energy Transformation Plan to Guide an Intelligent Physical Contraction and Metaphysical Expansion of Society Away From Fossil Fuels*, which

builds upon Eye of the Needle to outline what a genuine Green New Deal what might look like. You can find more here: <https://www.realgnd.org/energy-transformation-plan>.

3. The books, articles, videos, and films on our Resources page, in particular Planet of the Humans and Bright Green Lies: <https://www.realgnd.org/resources>.

I think you and your colleagues must know, deep in your bones and in your heart of hearts, that something is wrong with the narrative we're being fed. Solar and wind are anything but "clean and green." We cannot save the planet by destroying it.

The environmental sector has been captured and led astray by dark forces – some ill-intentioned, some naively confused. But you and your agency can help undo that and turn things around.

Please feel free to reach out to me with any questions. I'm coming not from a hostile or aggressive place but a genuine desire to help steer things in a better direction.

Sincerely,

Megan Seibert

Through the Eye of a Needle: An Eco-Heterodox Perspective on the Renewable Energy Transition

by Megan K. Seibert^{1*} and William E. Rees^{1,2}

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Abstract

We add to the emerging body of literature highlighting cracks in the foundation of the mainstream energy transition narrative. We offer a tripartite analysis that re-characterizes the climate crisis within its

broader context of ecological overshoot, highlights numerous collectively fatal problems with so-called renewable energy technologies, and suggests alternative solutions that entail a contraction of the human enterprise. This analysis makes clear that the pat notion of “affordable clean energy” views the world through a narrow keyhole that is blind to innumerable economic, ecological, and social costs. These undesirable “externalities” can no longer be ignored. To achieve sustainability and salvage civilization, society must embark on a planned, cooperative descent from an extreme state of overshoot in just a decade or two. While it might be easier for the proverbial camel to pass through the eye of a needle than for global society to succeed in this endeavor, history is replete with stellar achievements that have arisen only from a dogged pursuit of the seemingly impossible.

Keywords: renewable energy; energy transition; overshoot; biocapacity; ecological limits; social justice; sustainability

Graphical Abstract

1. Introduction

We begin with a reminder that humans are storytellers by nature. We socially construct complex sets of facts, beliefs, and values that guide how we operate in the world. Indeed, humans act out of their socially constructed narratives as if they were real. All political ideologies, religious doctrines, economic paradigms, cultural narratives—even scientific theories—are socially constructed “stories” that may or may not accurately reflect any aspect of reality they purport to represent. Once a particular construct has taken hold, its adherents are likely to treat it more seriously than opposing evidence from an alternate conceptual framework.

The Green New Deal (GND) is the dominant aspirational pathway in the mainstream narrative for achieving socially just ecological sustainability. Its central message is that a smooth transition away from climate-hostile fossil fuels is a relatively simple technological matter. Not only do proponents claim that electrification of all energy consumption by means of high-tech wind turbines and solar photovoltaic (PV) panels is technically possible, but that such a vast and unprecedented replacement of society’s entrenched energy foundation is both financially feasible and carries the added benefit of creating thousands of “green” jobs [1,2,3,4,5,6,7]. The only missing ingredient, we are told, is political will. Energy transition plans produced by numerous academic institutions and researchers around the world support or conform obediently to the GND paradigm, and politicians everywhere have taken up the GND banner as the core of their environmental pledges.

We argue that while the GND narrative is highly seductive, it is little more than a disastrous shared illusion. Not only is the GND technically flawed, but it fails to recognize human ecological dysfunction as the overall driver of incipient global systemic collapse. By viewing climate change, rather than ecological overshoot—of which climate change is merely a symptom—as the central problem, the GND and its variants grasp in vain for techno-industrial solutions to problems caused by techno-industrial society. Such a self-referencing pursuit is doomed to fail. As Albert Einstein allegedly said, “we cannot solve our

problems with the same thinking we used when we created them". We need an entirely new narrative for a successful energy transition. Only by abandoning the flawed paradigmatic source of our ecological dilemma can we formulate realistic pathways for averting social–ecological collapse.

2. Climate Change in the Context of Overshoot

Long-standing calls from ecologists and informed environmentalists for society to adopt a systems perspective and employ a multi-disciplinary approach to anthropogenic climate change have largely fallen on deaf ears. Most people have succumbed to the mechanistic–reductionist paradigm that has dominated Cartesian science, as is evident by the isolation of climate from its broader ecological context and its treatment as a discrete, independent variable. The reality is that climate change is only one symptom of systems destabilization as the human enterprise has come to overwhelm the ecosphere.

To recalibrate our focal lens, consider the following accelerating changes. The population of *H. sapiens* is nearly eight times larger than it was at the beginning of the fossil-fueled Industrial Age a mere 200 years ago, and it has been growing nearly 20 times faster [8]. To accommodate the explosion of humanity, over half the land surface of Earth has been substantially modified, particularly for agriculture (that most ecologically destructive of technologies). One consequence of this is the competitive displacement of non-human species from their habitats and food sources. Prior to the dawn of agriculture eight to ten millennia ago, humans accounted for less than 1%, and wild mammals 99%, of mammalian biomass on Earth. Today, *H. sapiens* constitute 36%, and our domestic livestock another 60%, of a much-expanded mammalian biomass, compared with only 4% for all wild species combined [9,10,11]. McRae et al. [12] estimate that the populations of non-human vertebrate species declined by 58% between 1970 and 2012 alone. Freshwater, marine, and terrestrial vertebrate populations declined by 81%, 36%, and 38%, respectively, and invertebrate populations fell by about 50%.

While fossil fuels (FFs)—coal and later oil and natural gas—have been humanity's major source of energy over the past two centuries, 50% of all FFs ever burned have been consumed in just the past 30 years (as much as 90% since the early 1940s) as super-exponential growth has taken hold [13,14]. It should be no surprise, therefore, that carbon dioxide emissions—the major material by-product of FF combustion and principal anthropogenic driver of climate change—have long exceeded photosynthetic uptake by green plants. By 1997 (when annual consumption was 40% less than in 2021), humanity was already burning FFs containing about 422 times the net amount of carbon fixed by photosynthesis globally each year [15]. Between 1800 and 2021, atmospheric carbon dioxide concentrations increased by 48%, from 280 ppm to approximately 415 ppm.

These data show that plunging biodiversity and climate change, along with air/land/ocean pollution, deforestation, desertification, incipient resources scarcity, etc., are the inevitable consequences—indeed, parallel symptoms—of the same root phenomenon: the spectacular and continuing growth of the human enterprise on a finite planet. *H. sapiens* is in overshoot, exploiting ecosystems beyond their regenerative and assimilative capacities.

Overshoot is possible only because of: (a) the short-term availability of prodigious stocks of both renewable (fish, forest, soil, etc.) and non-renewable (coal, oil, natural gas, etc.) forms of so-called "natural capital"; and (b) the enormous, but finite, natural waste assimilation and recycling processes of the ecosphere. However, a reckoning is at hand. In just a few decades of geometric population and economic growth, humans have exploited (often to collapse) natural capital stocks that took millennia to

accumulate and have impeded natural life-support processes through excessive, often toxic, waste discharges. The human enterprise now uses the bio-productive and assimilative capacities of 1.75 Earth equivalents [16]. In simple terms, the industrial world's ecological predicament is the result of too many people consuming too much and over-polluting the ecosphere.

Clearly, the climate crisis cannot be solved in isolation from the macro-problem of overshoot—certainly not by using technologies that are reliant on the same FFs and ecologically destructive processes that created the problem in the first place.

3. Problems with So-Called Renewables

Here, we holistically examine renewable energy (RE), focusing on the widely overlooked limitations of the RE technologies commonly set forth as solutions (but that do not constitute all possible RE options). This examination shows that RE cannot deliver the same quantity and quality of energy as FFs, that the espoused technologies are not renewable, that their production—from mining to installation—is fossil-energy-intensive, and that producing them—particularly mining their metals and discarding their waste—entails egregious social injustices and significant ecological degradation.

The challenge before us is to identify which RE technologies are both sustainable and viable. Sustainability implies the ability to persist in perpetuity with minimal negative environmental impacts (i.e., within ecological limits). Viability entails basic, practical issues for production and implementation (e.g., is it possible to build and implement the RE technology without FF inputs? Can it be done on a climate-relevant schedule? Is it affordable?). Within this context, such pat slogans as “100% clean energy” and “net zero emissions” must be discarded. Every energy-producing technology—no matter how rudimentary or advanced—uses inputs from the environment and produces pollution or other ecological degradation over its life cycle. Trade-offs must be assessed. Just because raw sunlight and wind are “clean” and continuous energy flows does not mean that harnessing them to perform work is. While we inevitably face a future underpinned entirely by RE, the question is not how to meet current total demand, but rather to determine: (a) which RE technologies are actually sustainable and viable; (b) the contexts in which they might be so, including the priority uses to which they might be applied; and (c) how to effectively and fairly reduce energy demand.

GND proponents are appallingly tolerant of the inexplicable. They fail to address how the gigatons of already severely depleted metals and minerals essential to building so-called RE technologies will be available in perpetuity considering typical five to 30-year life spans and the need for continuous replacement [17,18,19]. They offer no viable workarounds for the ecological damage and deplorable working conditions, often in the Global South, involved in metal ore extraction [20,21]. Green New Dealers advance no viable solutions (technical or financial) for electrifying the many high-heat-intensive manufacturing processes involved in constructing high-tech wind turbines and solar panels (not to mention all other products in modern society) [22,23,24,25]. The waste streams generated by so-called renewables at the end of their short working lives are either ignored or assumed away, to be dealt with eventually by yet non-existent recycling processes [26,27,28]. Proposals for electrifying the 80% of non-electrical energy demand overlook crucial facts, namely that the national-scale transmission systems and grids required for electrified land transportation do not even exist today, nor is the needed build-out likely given material, energy, and financial constraints [29].

Finally, as emphasized previously, the quest for a magical source of free energy ignores the overriding overshoot crisis—which, paradoxically, was enabled by abundant, cheap fossil energy. We argue that the only viable response to overshoot is a managed contraction of the human enterprise until we arrive within the safely stable territory defined by ecological limits. This will entail many fewer people consuming far less energy and material resources than at present.

Obviously, a managed descent will require a paradigmatic shift in society's socially constructed values, beliefs, and assumptions. At a minimum, we must replace our unrelenting anthropocentrism and strictly instrumental approach to Nature with a more holistic, eco-centric perspective. People must come to acknowledge both their utter dependence on the integrity of the ecosphere and the intrinsic worth of other species and natural ecosystems. This means overcoming capitalism's addiction to material growth and adopting systems compatible with one-Earth living ('one-Earth living' implies any material standard of living that, if extended to everyone on Earth, would be sustainable—i.e., the human population would be living within the global carrying capacity [30]. Obviously, the more people, the lower the average sustainable standard of living).

Far from encouraging such a radically new paradigm, the GND promotes an eco-washed version of the status quo with its unquestioning faith that technology will save us and its comforting narrative of business-as-usual by alternative means. This myth has become so well accepted in the public and academic mind that to question it is to be perceived as anti-renewable, pessimistically discounting human ingenuity, or even a skill for the FF industry. Those who do venture critical observations often do so with trepidation and constraint.

The following eco-heterodox view of the renewable energy transition flows from our commitment to critical discourse and stewardship of our one and only planet. This perspective widens the lens of analysis and confronts naked realities that can no longer be ignored. Our overriding goal is to assist society in developing a considered appreciation of what a truly renewable energy landscape might look like.

3.1. The Electrification Question

Only 19% of global final energy consumption is in the form of electricity. The other 81% is in the form of liquid fuel [31]. There are formidable obstacles to converting electricity consumption alone to so-called renewable sources.

3.1.1. Big Picture Sanity Check

Transitioning the U.S. electrical supply away from FFs by 2050 would require a grid construction rate 14 times that of the rate over the past half century [32]. The actual installed costs for a global solar program would have totaled roughly \$252 trillion (about 13 times the U.S. GDP) a decade ago [33], and considerably more today. A recent report describing what would be needed to achieve 90% "decarbonization" and electrification by 2035 neglects to mention that, in order to meet such targets, the United States would have to quadruple its last annual construction of wind turbines every year for the next 15 years and triple its last annual construction of solar PV every year for the next 15 years—to repeat the process indefinitely since solar panels and wind turbines have average lifespans of around 15 to 30 years [34,35]. In addition, Clack et al. [36] found that one of the most cited studies on 100% electrification in the United States is error-prone and laden with untenable assumptions.

3.1.2. Heat for Manufacturing

The manufacturing processes used today to make solar panels, high-tech wind turbines, batteries, and all other industrial products involve very high temperatures that are currently generated using FFs. Despite the critical importance of heat in manufacturing, there is scant information on whether or how it can be generated with RE alone.

Approximately 30% of industrial heating applications require temperatures below 212 °F (100 °C); 27% can be met with temperatures between 212 °F and 750 °F (100 °C and 400 °C); and 43% require temperatures above 750 °F (400 °C) [37]. Most existing RE heating technologies can supply heat only within the lowest temperature category [37]. This is highly problematic given that solar panel manufacturing requires temperatures ranging from 2700 °F to 3600 °F (1480 °C to 1980 °C) and the steel and cement manufacturing for high-tech wind turbines, hydropower plants, and nuclear plants require temperatures ranging from 1800 °F to 3100 °F (980 °C to 1700 °C).

According to the U.S. Energy Information Administration [38], natural gas, petroleum, electricity, and coal are the current sources of industrial energy, with natural gas and petroleum being predominant. If modern industrial manufacturing—responsible for generating the seemingly countless components of so-called RE technologies—is to continue without FFs, renewable-based technologies must be developed that would supply seamless replacements for high-heat sources of energy at acceptable economic and ecological costs.

Existing reports explore numerous RE heat sources for manufacturing, including various forms of bioenergy, concentrated solar power (CSP), hydrogen, geothermal, and nuclear [22,23,24,25]. We discuss each in turn as they relate to the fossil energy sources they could potentially replace.

Possible replacements for natural gas include biomethane and hydrogen. Biomethane is a near-pure source of methane derived from one of two methods: the “upgrading” of biogas or gasified woody biomass. Biogas is a mixture of gases that results from the breakdown of agricultural, livestock, and household waste; sewage in wastewater treatment plants; and municipal waste (i.e., the anaerobic digestion of organic matter in an oxygen-free environment). Gasification entails heating wood in a low oxygen environment to produce synthetic gas, or syngas. The upgrading process involves removing nearly all gases in the biogas and syngas except for methane.

Problems abound with biomethane as an industrial energy replacement option. At present, biogas upgrading accounts for roughly 90% of all biomethane production [39]. From a technological standpoint, all five commercially viable processes for biogas upgrading have disadvantages, if not outright roadblocks, that limit their production and viability. The polyethylene glycol used in one type of physical scrubbing is a derivative of petroleum, and the other form of water-based physical scrubbing requires significant amounts of water and electricity [40,41]. Chemical scrubbing involves toxic solvents that are costly and difficult to handle, and it has a high heat demand [40,41,42]. Despite low energy and financial inputs [40], membrane separation involves fragile and short-lived membranes (lasting 5–10 years) [42] and produces relatively low methane purity [40]. Pressure swing adsorption is a highly complex process [40,42], and neither cryogenic separation nor biological methods are yet commercially viable [42,43]. Moreover, not all upgrading technologies are energetically self-sufficient—many, if not most, rely on FFs [41]. Problematically, upgrading biogas produces CO₂ [40,41]. Carbon capture and storage is one

proposal for dealing with the resulting CO₂ but presents ecological problems and high costs [40]. Gasification has yet to be deployed at a large industrial scale [43].

There are additional problems with feedstock and co-location requirements. Current waste streams are insufficient to support the widespread use of biomethane in the transportation sector, let alone the industrial sector [44]. It is estimated that the maximum practical contribution of biomethane via biogas and gasification is only around 11% of Europe's current total natural gas consumption [43]. Harvesting woody biomass for gasification would have to be judiciously considered within the broader context of its sustainable management. Given the post-FF transportation limitations discussed later, biomethane production facilities would have to be co-located with feedstock sites, which would then have to be co-located with manufacturing sites. These requirements present obvious challenges, if not outright roadblocks.

The single greatest problem with producing hydrogen is that, regardless of method, more energy is required to produce and compress the product than it can later generate [22,25,29,33]. The only viable, large-scale feedstock for hydrogen is natural gas, and the gas reforming process requires temperatures ranging from 1300 °F to 1830 °F (700 °C to 1000 °C) [25,29,33,45]. Gas reforming produces substantial greenhouse gas (GHG) emissions and presents numerous problems in the way of leakage, corrosion, and accidental combustion [22,25,45].

Potential replacements for petroleum (i.e., crude oil) include bioethanol (ethanol made from corn or other fermented plant matter) and biodiesel. As discussed later, the land requirements for feeding 8+/- billion people without FF inputs preclude the large-scale use of cropland and plant biomass for energy purposes, even if net energy was satisfactory.

Contenders for non-fossil-generated electricity include geothermal, nuclear, concentrated solar power (CSP), solar PV, and wind turbines. Geothermal systems produce temperatures of around only 300 °F (150 °C) and must be located in mountainous regions with active tectonic plate movement or near volcanic hot spots [24]. Production wells are commonly up to two kilometers deep [23,24]—depths that can be reached only with fossil-fueled machinery and advanced technologies. As discussed later, nuclear has massive water and material requirements. Facilities cannot be built and maintained without fossil-fueled machinery, and there is the still-unsolved problem of dangerous radioactive waste disposal. The much-touted small modular reactors (SMRs) are still in the R&D phase, still produce radioactive byproducts that must be disposed of, and pose the problem of transportability. Despite theoretical upper temperature limits ranging from 1800 °F to 2200 °F (1000 °C to 1200 °C), existing CSP systems generate heat in the range of only 300 °F to 570 °F (150 °C to 300 °C) [22,24]. CSP plants typically cost in excess of \$1 billion and require around five square miles of land. Though they can store thermal energy in molten salt, the on-site salt stores less than one day's worth of electrical supply and almost all CSP plants have a fossil backup to diminish thermal losses at night, prevent the molten salt from freezing, supplement low solar radiance in the winter, and for fast starts in the morning [22,29]. The DC electricity generated by wind and solar PV can only be stored in batteries, which presents serious ecological and practical problems, as discussed later.

The only potential replacement for coal is charcoal derived from wood. This poses two obvious problems. The remaining stock of woody biomass—vastly depleted during the Industrial Age—is nowhere close to supporting current manufacturing needs, particularly recognizing the need to set aside half of the Earth's major eco-regions to ensure the functional integrity and health of the ecosphere [46].

Even if a sustainable supply of an already-stretched renewable resource was not a concern, industrial furnaces/boilers and steel manufacturing equipment are specifically designed to function with thermal coal and coke (made from coking coal); switching to charcoal would require the redesign and reconstruction of entire systems.

Such roadblocks impede the electrification of all manufacturing processes that do not already use electricity. Even so, there has been little R&D on massive electrification options. Additionally, again, since most existing fossil-powered equipment would require complex, large-scale system redesigns, 100% electrification of manufacturing would be extremely difficult, if not impossibly expensive [25].

In short, no RE source or system is viable if it cannot generate sufficient energy both to produce itself (literally from the ground up) and supply a sufficient surplus for society's end-use consumption. Currently, no so-called RE technology is in the running.

3.1.3. Problems with Solar Panels

Manufacturing solar panels uses toxic substances, large quantities of energy and water, and produces toxic byproducts [33,47]. Mono- and poly-crystalline solar panels require high temperatures at every step of their production. For example, temperatures of 2700° to 3600 °F (1500° to 2000 °C) are needed to transform silicon dioxide into metallurgical-grade silicon. Up to half of the silicon is lost in the wafer sawing process. For every 1 MW of solar panels produced, about 1.4 tonnes of toxic substances (including hydrochloric acid, sodium hydroxide, sulfuric acid, nitric acid, and hydrogen fluoride) and 2868 tonnes of water are used, while 8.6 tonnes of emissions are released—8.1 tonnes of which are the perfluorinated compounds sulfur hexafluoride (SF₆), nitrogen trifluoride (NF₃), and hexafluoroethane (C₂F₆) that are thousands of times more potent than CO₂ [48]. Other toxic byproducts, such as trichlorosilane gas, silicon tetrachloride, and dangerous particulates from the wafer sawing process, are also produced. Amorphous (thin-film) solar panels are made with cadmium, which is a carcinogen and genotoxin.

The actual performance of installed solar panels is problematic [33,49,50]. The efficiency rates of solar panels are low (on average around 15% to 20%) and almost always less than what manufacturers advertise. Solar panels are highly sensitive and lose function in non-optimal conditions (e.g., when there is haze or humidity, if the panels are not angled properly, or if any obstructions—such as bird droppings, dust, snow, or pollution—block even small parts of the panel's surface). They become less efficient as they age, sometimes losing up to 50% efficiency.

Solar panels have a life span of only 20 to 30 years, making for a massive waste management problem. Inverters (which transform the DC output of solar panels into the AC input required by appliances) need to be replaced every five to eight years [33]. By the end of 2016, there were roughly 250,000 tonnes of solar panel e-waste globally, accounting for about 0.5% of all annual global e-waste [26]. According to the International Renewable Energy Agency [51], solar panel waste could amount to six million tonnes annually by 2050, and the cumulative waste by then could reach 78 million tonnes. By 2050, dead solar panels could account for 10% of all e-waste streams, and their cumulative end-of-life waste may be greater than all e-waste in 2018 [20]. The much-touted silver bullet of recycling is not the panacea it is purported to be. Recycling requires copious amounts of energy, water, and other inputs, and exposes workers to toxic materials that have to be disposed of. Currently, there are only two types of

commercially available solar PV recycling and only a handful of recycling facilities around the world [26,27].

Even without such drawbacks, solar PV has a low energy return on energy invested (EROEI)—too low to power modern civilization [52,53,54,55].

3.1.4. Problems with Batteries and Other Storage

There are four primary types of commercially proven, grid-scale energy storage: pumped hydroelectric storage, compressed air energy storage, advanced battery energy storage, and flywheel energy storage. Pumped hydroelectric storage is possible only if hydroelectric dams are part of the system. Flywheel energy storage is used more for power management than long-term energy storage. Of the remaining two, compressed air storage is deployed at only two power plants in the world, with likely little expansion since it is quite inefficient and relies on large underground cavities with specific geological characteristics [29,56,57]. Only a few power plants in the United States have operational battery storage, accounting for 800 MW of power capacity [56,58]. Consider that the United States consumes around 4000 terawatt-hours of electricity every year [59], or 563 times the existing battery storage capacity.

An entire year of production from the world's largest lithium-ion battery manufacturing facility—Tesla's \$5 billion Gigafactory in Nevada—could store only three minutes' worth of annual U.S. electricity demand [32]. Manufacturing a quantity of batteries that could store just two days' worth of U.S. electricity demand would require 1000 years of Gigafactory production [32]. Storing only 24 h worth of U.S. electricity generation in lithium batteries would cost \$11.9 trillion, take up 345 square miles, and weigh 74 million tons [29]—at enormous ecological cost. A battery-centric future means mining gigatons of rare-earth mineral ores. For every kilogram of battery, 50–100 kg of ore needs to be mined, transported, and processed [60]. Constructing enough lithium batteries to store only 12 h' worth of daily power consumption would require 18 months' worth of global primary energy production and the entire global supply of several minerals [29].

Battery chemistry is complex, and improvements in one characteristic (e.g., energy density, power capability, durability, safety, or cost) always come at a cost to another. The monitoring and cooling systems and the steel used to encase the flammable lithium (other types of batteries are also flammable) weigh 1.5 times as much as the battery itself [29]. Batteries lose capacity over time, are negatively impacted by temperature extremes, pose safety issues that internal combustion engines do not [61], and have a poor energy-to-weight ratio [62]. Batteries also have higher GHG emissions than internal combustion engines [63].

Not all vehicles and machinery used today can be powered by batteries. Small cranes, a crawler crane [64], light and some heavy-duty construction equipment, and passenger cars can be powered by batteries. However, other large cranes (used to load and unload cargo and in large construction projects, mining operations, and more), container and other large ships, airplanes, and heavy-duty trucks cannot [29,60]. Sripad and Viswanathan [65] concluded that the Tesla Semi concept vehicle is technically infeasible given current lithium-ion battery technology and is likely financially prohibitive. Tesla CEO Elon Musk stated in early 2021 that production was on hold due to battery cell unavailability and lack of profitability [66].

Batteries have a life span of around 5 to 15 years, creating an additional, significant waste management problem [20]. They cannot be disposed of in landfills due to their toxicity and are one of the fastest-growing contributors to e-waste streams. Only 5% of all lithium batteries are recycled.

3.1.5. Problems with Wind Power

The large metal wind turbines that have become ubiquitous today are composed primarily of steel towers, fiberglass nacelles and blades, and multi-element generators and gearboxes that contain large amounts of steel (iron) and copper. Roughly 25% of all large wind turbines use permanent magnet synchronous generators (PMSGs)—the latest generation technology that uses the rare earth metals neodymium (Nd), praseodymium (Pr), dysprosium (Dy), and terbium (Tb). The remaining 75% of operating wind turbines use some form of conventional magnetic generator. Employment of PMSGs is expected to grow given their post-implementation advantages [67].

Steel production is dependent on coal. Steel is an alloy of iron and carbon, the latter contributed by metallurgical, or coking, coal. The production of coke from metallurgical coal requires temperatures around 1800 °F (1000 °C). Combining coke and iron to make steel then requires blast furnaces at temperatures of 3100 °F (1700 °C). On average, 1.85 tons of CO₂ are emitted for every ton of steel produced [25].

Mining and processing the rare earth metals now common in most wind turbines produces significant toxic waste. Many rare earth metals are bound up in ore deposits that contain thorium and uranium, both of which are radioactive [68]. Sulfuric acid is used to isolate the rare earth metals from the ore, exposing the radioactive residue and producing hydrofluoric acid, sulfur dioxide, and acidic wastewater [68,69]. One ton of radioactive waste is produced for every ton of mined rare earth metals. Rare earth metal processing for wind turbines already generates as much radioactive waste as the nuclear industry [69].

A typical 3 MW wind turbine weighs anywhere from 430 to 1200 tonnes [70]. All components must be transported by large trucks from manufacturing to installation sites and then erected using enormous cranes once on-site. As previously noted, neither heavy-duty trucks nor cranes can yet operate on battery power. As shown later, electrified freight on a Paris Agreement schedule (~50% emissions reductions by 2030) is improbable, if not impossible.

Massive concrete bases—often requiring more than 1000 tons of concrete and steel rebar and measuring 30 to 50 feet across and anywhere from six to 30 feet deep—are needed to fix the tower to the ground. Heavy-duty fossil powered machinery is required to excavate the site. Cement, which is the primary ingredient in concrete, is produced in industrial kilns heated to 2700 °F (1500 °C). At least one ton of CO₂ is emitted for every ton of cement produced [71], and the cement must then be transported on fossil-fueled trucks to the installation site.

A 3.1 MW wind turbine creates anywhere from 772 to 1807 tons of landfill waste, 40 to 85 tons of waste sent for incineration, and about 7.3 tons of e-waste [20]. Wind turbine blades, made of composite materials, are completely unrecyclable at present [28].

Finally, while superior to solar PV, neither onshore nor offshore wind power has an EROEI >3:1—far less than necessary to sustain modern civilization [52].

3.1.6. Eco-Impacts of Hydropower

Large hydroelectric dams have enormous ecological impacts [72]. They disrupt water flow, degrade water quality, block the transport of vital nutrients and sediment, destroy fish and wildlife habitat, impede the migration of fish and other aquatic species, and compromise certain recreational opportunities. Reservoirs slow and broaden rivers, making them warmer. Many dams are not operating efficiently, are not up to environmental standards, produce less energy over time, and are in need of significant repairs [73,74,75].

3.1.7. Problems with Nuclear

To meet the anticipated primary energy demand in 2050—assuming 60% emissions reductions from 2004 levels—approximately 26,000 1-GW nuclear power plants would have to be built. The world currently has 449, many of which are nearing the end of their lives and will soon face decommissioning [76]. The EROI and materials for facility construction and operation aside, the enormous financial costs, regulatory time frames, social opposition, and waste disposal hurdles make the all-nuclear option a practical impossibility [76].

Only two prototype Generation IV “intrinsically safe” reactors have been built, one in China and one in Russia, with significant R&D remaining and commercialization forecasted to be two to three decades out [77]. Even though Generation IV reactors use fuel more efficiently and can even use some nuclear waste, claims about greatly reduced radioactive waste are misleading [78]. The narrow focus on reduced actinides is irrelevant since it is other fission byproducts that are of the greatest concern for long-term safety. Moreover, the fuel reprocessing process to reduce actinide quantities relies on exceptional technological requirements and itself generates waste that must be disposed of.

Small modular reactors (SMRs) would offer the benefits of a smaller size and transportability but are still in the R&D phase and pose two major problems [79]. Just as with large wind turbines, SMRs need to be transported long distances, which is not possible without large fossil-fueled trucks and cranes. Additionally, SMRs still produce the same radioactive waste products that large reactors do [80].

The holy grail of nuclear fusion continues to be plagued by problems [81]. To replicate fusion here on Earth, temperatures of at least 100 million degrees Celsius—about six times hotter than the sun—would be needed. Deuterium and tritium, the fuels available for Earth-bound fusion, are 24 orders of magnitude more reactive than the ordinary hydrogen burned by the sun, implying a billion times lower particle density and a trillion times poorer energy confinement. In Earth-bound fusion, energetic neutron streams comprise 80% of the energy output of deuterium–tritium reactions (the only potentially feasible reaction type). These neutron streams lead to four problems with fusion energy: radiation damage to structures, radioactive waste, the need for biological shielding, and the potential for the production of weapons-grade plutonium. Fusion reactors would share other serious problems that plague fission reactors: daunting water demands for cooling; parasitic power drains that make it uneconomic to run a fusion plant below 1000 MW; the release of biologically hazardous, radioactive tritium into the environment; and high operating costs. Additionally, they require a fuel (tritium) that is not found in Nature and is generated only by fission reactors.

Nuclear power plants cannot be built without large fossil-fueled cranes and enormous amounts of concrete, the production of which, as noted, emits a significant amount of CO₂ and requires high temperatures that cannot currently be generated without FFs.

3.1.8. Metal Extraction and Its Social Injustices

A shift to the RE technologies covered here would simply increase society's dependence on non-renewable resources—not just FFs but also more metals and minerals, adding massive exploitation of the geosphere to the existing over-exploitation of the atmosphere [17]. The demand for minerals is expected to rise substantially through 2050. Hund et al. [18] project increases of up to 500% from 2018 production levels, particularly for those used in energy storage (e.g., lithium, graphite, and cobalt), and a recent International Energy Agency (IEA) [82] report estimates that reaching “net zero” globally by 2050 would require six times the amount of mineral resources used today. This would entail a quantity of metal production—requiring considerable FF combustion—over the next 15 years roughly equal to that from the start of humanity until 2013 [17].

The explosion in demand is already underway. Michaux [19] shows that the production/consumption of industrial minerals increased by 144% between 2000 and 2018; precious metal consumption is up by 40% and base metal consumption by 96%. However, both the rate of mineral discovery and the grade of processed ores are well into decline. Michaux concludes that “global reserves are not large enough to supply enough metals to build the renewable non-fossil fuels industrial system or satisfy long term demand in the current system”. Clearly, without extraordinary advances in mining and refining technology, the 10% of world energy consumption currently used for mineral extraction and processing would rise as poorer and more remote deposits are tapped [17].

Social injustices abound in the production of current so-called RE technologies, confounding demands for social justice in the energy transition. Much of the mining and refining of the material building blocks of so-called renewables takes place in developing countries and contributes to environmental destruction, air pollution, water contamination, and risk of cancer and birth defects [20]. Low-paid labor is often the norm, as is gender inequality and the subjugation and exploitation of ethnic minorities and refugees [20]. Mining often relies on the exploitation of children, some of whom are exposed to risks of death and injury, are worked to death in e-waste scrapyards, or drown in waterlogged pits [20]. Land grabs and other forms of conflict and violence are routinely linked to climate change mitigation efforts around the world [21]. In short, while so-called RE technologies may deliver cleaner point-of-use conditions in the Global North, substantial ecological costs and social damage have been displaced to the Global South [20]. As the push for “green” energy and technology intensifies, such harms are increasingly spilling over into North America and Europe [21].

3.1.9. Problems with Technological Carbon Sequestration

Carbon capture and storage (CCS) and direct air capture (DAC) are widely advanced as mechanisms for removing carbon. Like all other so-called RE technologies, both carry hidden costs and problems. CCS presupposes the continued use of FFs, which is problematic given FFs' rapidly declining EROI and environmental and human health concerns. Both CCS and DAC pose energetic, ecological, resource, and financial problems. Over their life cycles, some technologies emit more CO₂ than they capture [83]. It would cost around \$600 billion to capture and sequester 1 Gt of carbon [84]. The largest DAC facility in the world captures only 4000 t CO₂ per year, which is 0.000004 Gt [83]. A larger plant is now being

engineered but will still capture only one Mt (0.001 Gt) of CO₂ annually [85]. These quantities are minuscule in comparison to what is needed: the world emitted roughly 38 Gt CO₂ in 2019 [86]. Vast quantities of natural resources and land would be needed to scale up such operations. “Renewably” powered DAC alone would use all wind and solar energy generated in the United States in 2018—and this would capture only one-tenth of a Gt of CO₂ [83]. Advocates of CCS and DAC also largely ignore their ecological impacts, including the transportation, injection, and storage of CO₂ in the Earth, as well as potential groundwater contamination, earthquakes, and fugitive emissions.

3.1.10. Hidden Fossil Fuel Subsidy

Every so-called RE technology today is subsidized by FFs throughout its entire life cycle. The metals and other raw materials are mined and processed using petroleum-fueled, large-scale machinery. These metals and raw materials are transported around the world on cargo ships that burn bunker fuel and on trucks that are powered by diesel and travel on roads constructed with FFs. Manufacturing processes use very high temperatures that can only be generated reliably and at scale from FFs. Finished products are transported from manufacturing to installation sites on trucks powered by diesel and, in the case of industrial-scale wind turbines, nuclear facilities, and hydroelectric dams, erected on-site with large petroleum-fueled machinery. At the end of their lives, they are then deconstructed, oftentimes with FFs, and transported to landfills or recycling facilities on large petroleum-fueled trucks. There is no possibility that all these FF-demanding processes can be replaced by renewable electricity in the foreseeable future, let alone on a schedule consistent with the Paris Agreement.

3.1.11. Performance Gains in Energy Extraction

Moore’s Law, which states that the number of transistors on a microprocessor chip will double every two years or so, has driven the information technology revolution for 60 years. This accounts for the billion-fold exponential increase in the efficiency of microchips in storing and processing information.

Moore’s Law is sometimes used to assure society that there can be equivalent exponential increases in future renewable energy output [32]. Regrettably, the analogy does not hold—Moore’s law is irrelevant to the physics of energy systems. Combustion engines are subject to the Carnot Efficiency Limit, solar cells are subject to the Shockley–Queisser Limit, and wind turbines are subject to the Betz Limit. Bound by the Shockley–Queisser Limit, a conventional, single-junction PV cell can convert a maximum of only about 33% of incoming solar energy into electricity (multi-layered solar cells could theoretically double this efficiency but can be orders of magnitude more expensive; useful in space exploration, they are impractical for large-scale terrestrial applications) [87,88]. State-of-the-art commercial PVs achieve just over 26% conversion efficiency—close to their theoretical efficiency limit. The Betz Limit states that the theoretical maximum efficiency of a wind turbine is just over 59%, meaning that blades can convert at most this amount of the kinetic energy in wind into electricity [89,90]. Turbines today exceed 45% efficiency, again making additional gains difficult to achieve.

Starry-eyed optimists who argue that the amount of solar radiation that reaches the Earth’s surface far exceeds global energy consumption confuse total energy flow with practical harvestability and thus generally ignore the limiting laws of physics.

3.1.12. The Liquid Fuels Question

Liquid fuels currently account for 81% of non-electric global energy consumption. It is highly unlikely that synthetic liquid fuel substitutes for FFs can be produced sustainably in any more than small quantities for niche applications. This is highly problematic, as modern urban civilization is dependent on highway transportation for essential supplies. As noted above, battery-powered cars and, in particular, trucks have serious limitations and raise many questions regarding resource use and manufacturing. We must also ask how asphalt roads and highways—made of petroleum-based products and laid with heavy machinery—will be maintained and built in the future. Like the bright green dream of electrified transportation, synthetic substitutes for liquid FFs pose myriad problems.

3.1.13. Biofuels vs. Food Production

The current population—and projected growing populations—can only be fed by using an array of fossil-fueled subsidies. The FF-based synthetic pesticides, herbicides, and fungicides, not to mention the petroleum-fueled heavy machinery, responsible for The Green Revolution have allowed for much higher agricultural outputs per unit of land area—at great ecological cost—than was previously attainable. Today's global food distribution system also relies on liquid-fossil-powered transportation and refrigeration systems. Clearly, removing FFs from the agricultural system would result in significantly reduced output. Even if a global one-child policy were enacted soon, we would still have eight to 3.5 billion mouths to feed by the end of the century [91]. Even under such an optimistic scenario, virtually every square inch of arable land would have to be dedicated to food production. This would ethically prohibit the widescale production of fuels like bioethanol and biodiesel. (It is scandalous that 40% of the U.S. corn crop is dedicated to heavily subsidized, carbon-emitting ethanol production, with virtually no net energy gains over the history of its production [92,93]). The delay in enacting, or the absolute failure to enact, fertility reduction policies, particularly in high-fertility countries, raises the specter of an even more dire scenario.

3.1.14. The Pipedream of Other Synthetic Fuels

Algae is not a solution to our liquid fuel needs [29]. More energy is consumed to cultivate the algae than it usefully generates. Major technical difficulties still need to be overcome despite 60 years of research. Protozoans that invade a pond can eat all the algae within 12–18 h. The National Research Council concluded that scaling up algal biofuel production to replace even 5% of U.S. transportation fuel would place unsustainable demands on energy, water, and nutrients. The U.S. Department of Energy found that “systems for large-scale production of biofuels from algae must be developed on scales that are orders of magnitude larger than all current world-wide algal culturing facilities combined”.

Nor is synthetic hydrogen an option. As discussed earlier, hydrogen is also a net energy sink and is extremely difficult to transport and store.

3.1.15. Electrification of Transportation

Electrifying the rail freight system seems improbable [29]. The current U.S. fleet of 25,000 mostly diesel-electric locomotives would use as much grid electricity as 55 million electric cars. Electrifying major routes (160,000 of the 200,000 miles of tracks) would require the energy equivalent of that generated by 240 power plants (keeping in mind, too, that railway load is one of the most difficult for an electric utility to cope with). It would also require a national grid—which does not yet exist—or at least a much-expanded grid.

An all-electric passenger rail system is equally improbable. Just as with freight, it would require an expanded grid. Passenger trains are highly inefficient due to the constant stopping and accelerating [94] and are extremely costly. California's planned high-speed rail connecting the length of the state was originally estimated to cost \$33 billion but, by 2019, the price tag had ballooned to \$79 billion. Annual operation and maintenance costs are currently pegged at \$228 million [95].

With accelerating climate change, possible food shortages, no viable alternatives to FFs, and the time when "the trucks stop running" not far off [29], the prospects for our globalized, transport-based, just-in-time urbanized civilization are dire [96].

4. Summary and What Might Actually Salvage Civilization

We have exposed fatal weaknesses in society's dominant aspirational pathway for combating climate change. The GND illusion paints a picture of "affordable clean energy" that ignores innumerable costs that cannot be afforded by any reasonable measure. It suggests solutions to the climate-energy conundrum that are impossible to deliver with current technologies, and certainly not within the timeframe specified by the IPCC and Paris Agreement.

Not only is the GND technically flawed, but it fails to situate climate disruption within the broader context of ecological overshoot. Anthropogenic climate change is merely one symptom of overshoot and cannot be treated in isolation from the greater disease. The GND offers little more than a green-washed version of the unsustainable growth-based status quo. Even if feasible, its operationalization would only exacerbate human ecological dysfunction.

What, then, might actually salvage a fossil-dependent world in overshoot? The answer is both stunningly simple and wretchedly complex: the world must abandon neoliberal capitalism's material growth imperative and face head-on that material life after fossil fuels will closely resemble life before fossil fuels. Put another way, we must act on the ecological imperative to achieve one-Earth living. This entails moving on three broad fronts.

4.1. Energy Realism

First, we must relinquish our faith in modern high technology and instead shift our attention to understanding what a genuinely renewable energy landscape will look like. As noted, the so-called RE technologies being advanced as solutions are neither renewable nor possible to construct and implement in the absence of FFs. They are not carbon neutral and will simply increase human dependence on non-renewable resources and cause unacceptable social and environmental harm.

Truly renewable energy sources will be largely based on biomass (especially wood), simple mechanical wind and water generation, passive solar, and animal and human labor. This means society will have to innovate and adapt its way through major reductions in energy supply. The upside is that new variants on old extraction technologies will be more ecologically sophisticated than today's so-called renewables, closely tuned to essential needs, and cognizant of the conservation imperative. On this latter point, it is important to highlight that approximately 62% of energy flow through the modern economy is wasted through inefficiency [97], and more still is wasted through trivial or at least non-essential uses (think leaf blowers and recreational ATVs). Globally, per capita energy consumption has increased nine-fold since 1850, though perceived well-being certainly has not. Together, these facts show there is much latitude for painless reductions in energy use.

A reduction in energy means there will be a resurgence in demand for human muscle and draft animals. Denizens of FF-rich societies tend to forget that that industrial energy now does the work that people and animals used to do. How many Americans are conscious of the fact that they have hundreds of “energy slaves”, per capita, in continuous employment to provide them with goods and services they have come to take for granted? According to Hagens and White [98], if we ignore nuclear and hydropower electricity, “99.5% of ‘labor’ in human economies is done by oil, coal, and natural gas” (for a summary of the energy slave concept and various definitions, see [99]). It is again important to highlight the silver lining accompanying this shift. More human labor will mean more physically active lives in closer contact with each other and Nature, which can restore our shattered sense of well-being and connection to the land. Similarly, a waning focus on material progress will allow for emphasis to shift to progress of the mind and spirit—largely untapped frontiers at present with unlimited potential.

On the draft animal side, the number of working horses and mules in the United States peaked at 26 million around 1915—when the human population was about 100 million—only to be gradually replaced by fossil-powered farm and industrial equipment [100]. Should the United States again become as dependent on animal labor, the country may once more need this many draft animals if the population shrinks to 100 million. If human numbers remain in the vicinity of 2021’s population of 333 million, the required horse/mule population might be as high as 87 million and require around 172 million acres of land for range and fodder production (note that of the five to 10 million horses in the United States today, only about 15% are working farm or ranch animals [100]).

4.2. Population Reduction

The second front in a one-Earth living strategy is a global one-child fertility standard. This is needed to reduce the global population to the one billion or so people that can thrive sustainably in reasonable material comfort within the constraints of a non-fossil energy future and already much damaged Earth [101,102]. Even a step as seemingly bold as this may be insufficient to avoid widespread suffering, as such a policy implemented within a decade or two would still leave us with about three billion souls by the end of the century [91]. Failure to implement a planned, relatively painless population reduction strategy would guarantee a traumatic population crash imposed by Nature in a climate-ravaged, fossil-energy-devoid world. (A human population crash imposed by a human-compromised environment (not Nature) may already be underway. Controversial studies have documented evidence of falling sperm counts (50%+) and other symptoms of the feminization of males, particularly in western countries, caused by female-hormone-mimicking industrial chemicals; see, for example, [103]).

Concerns over the restriction of procreative freedom, racism, and physical coercion that dominate much of the present discourse on population reduction must be put into perspective. Population is an ecological issue that, if left unchecked, can have catastrophic consequences. The human population growth curve over the past 200 years resembles the boom, or “plague”, phase of the kind of population outbreak that occurs in non-human species under unusually favorable ecological conditions (in our case, the resource bounty made available by abundant cheap energy). Plague outbreaks invariably end in collapse under the pressure of social stress or as crucial resources are depleted [104].

Previous cultures have recognized this fact, along with the need for population regulation, for thousands of years [105,106]. A judicious balance between the freedom and well-being of individuals and society involves knowing when to arc nimbly between these poles as circumstances change. There is perhaps no

greater rallying cry for the restriction of certain individual freedoms than the imminent threat of global social–ecological collapse.

Though it hardly seems worth stating, a universal one-child policy applied globally is not discriminatory. Moreover, it is entirely justified when the restoration of ecological integrity for the well-being of present and future generations—of humans and non-humans alike—is the motivation. Fortunately, there is a full toolbox of socially just and humane tools for bringing about the necessary population reduction [107,108]. That some inhumane practices have been used in particular circumstances historically is no reason to ignore the gravity of contemporary overshoot and the ample mechanisms available for sustainable population planning. When it comes to both the environmental and social aspects of overshoot, no other single individual action comes close to being as negatively consequential as having a child [109].

We should note that the human population at carrying capacity is a manageable variable whose magnitude will depend, in part, on society’s preferred material standard of living. This is a finite planet with limited productive capacity. A constant, sustainable rate of energy and material throughput will obviously support fewer people at a high average material standard than it will at a lower material standard.

We cannot stress enough that a non-fossil energy regime simply cannot support anywhere close to the present human population of nearly eight billion; this urgently necessitates reducing human numbers as rapidly as possible to avoid unprecedented levels of social unrest and human suffering in the coming decades. (This flies in the face of mainstream concerns that the falling fertility rate in many (particularly high-income) countries is cause for alarm; see, for example, [110]).

4.3. Radical Societal Contraction and Transformation

The third major front of a one-Earth sustainability strategy is a fully transformative plan to reshape the social and economic foundations of society while simultaneously managing a systematic contraction of the human enterprise (the latter to be consistent with Global Footprint Network estimates that humanity is in 75% overshoot). This is necessitated, in part, by the need to phase out fossil energy within a set time and carbon budget. (The situation is becoming increasingly urgent; Spratt et al. [111] argue that little or no budget exists to remain even within 2 °C). Whatever the identified FF budget, it must be rationed and allocated to: (1) essential uses, such as agriculture and essential bulk transportation; and (2) de-commissioning hazardous fossil-based infrastructure and replacing it with renewable-based infrastructure and supply chains.

Other elements of such a plan would include: (3) economic and political restructuring in conformity with the new energy and material realities (e.g., the cessation of interest-bearing debt and possibly even a shift to negative interest; a renewed focus on community building and regional self-reliance; re-localization of essential production and other economic activities; emphasis on economic resilience over mere efficiency; and a down-shifting of control over land and resource use to local self-governing bodies); (4) worker retraining for new forms of work and employment; (5) social planning to ensure a just allocation and distribution of societal resources, as it is inherently unjust for some individuals to appropriate much more than their fair share of the Earth’s limited bounty; (6) planned migrations and resettlement from unsustainable dense urban centers and vulnerable coastlines; and (7) large-scale ecosystem restoration. Restoration would serve the multiple purposes of not only creating meaningful

employment but also reclaiming ecosystem integrity for the benefit of humans and non-humans alike, capturing carbon, increasing social–ecological resilience, and increasing the stock of biomass available for human energy consumption. In many respects, this endeavor will resemble Polanyi’s [112] Great Transformation (about the emergent dominance of neoliberal market economics) in reverse, all contained within an envelope of ecological necessity.

Actions to embark swiftly, judiciously, and systematically on the transformation will be of a far greater scale and level of effort than WWII mobilization and will involve unprecedented levels of global cooperation. In our view, two main conditions must be satisfied concurrently for such an undertaking to have any chance of succeeding. First, we must have politicians in office who care about people and the planet (i.e., who are not beholden to corporate, monied, or otherwise compromised interests) and who are willing to fight fiercely for ecological stability and social justice. This starts with whom we choose to elect (politicians do not magically fall into office—we put them there), holding them relentlessly accountable, and fighting to get money out of politics. Second, history shows that monied and ruling elites do not relinquish their power willingly—their hand must be forced. Virtually no important gain has ever been made by simply asking those in power to do the right thing. Unrelenting pressure must be exerted such that the people and/or systems in question have no choice but to capitulate to specific, well-thought-out demands. We must reacquaint ourselves with the revolutionary change-makers of the past who, at great cost, delivered for us the better world we live in now through intelligent, direct action and risk-taking.

To adopt a biblical metaphor, it may very well be easier for a camel to go through the eye of a needle than for humanity to shift its prevailing paradigm and embark on a planned, voluntary descent from a state of overshoot to a steady-state harmonic relationship with the ecosphere—in just a decade or two. On the other hand, history shows that virtually all important achievements have only ever arisen from a dogged pursuit of the seemingly impossible. To contemplate the alternative is unthinkable.

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Attachments

No files were attached.

YRB Comment Portal Comment #2023-194 submitted 11/16/2023 (note- was not notified of this comment)

Comment Summary

Do not permit development

Comment Date

11/16/2023

source

portal

Siting Project Phase

NOI

Comment Details

Notice of Intent Exhibit

Exhibit J - Identification of Potentially Significant Environmental Impacts

Page Number(s)

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Council Standards

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Comment

Humanity is in overshoot. We must stop destroying intact habitat. Instead we should be rewilding human biomass back to nature. This is an existential situation that requires us to end business as usual. I will remind you that "renewable" energy is dependent on massive amounts of fossil fuel. Their lifecycle is only twenty years and then the production cycle must start over. All this at a time when we should be drawing down our dependence on oil. The can cannot be kicked down the road any longer. The US military is the biggest producer of carbon emissions in the world. Why should all beings be sacrificed for its existence? Please deny this project for the sake of future generations.

Attachments

No files were attached.

Comment Portal 2023-202 Yellow Rosebush NOI

Comment Summary

A siting council should decide where solar should go. Industrial solar destroys big game habitat and fences the game out. Solar should go near loads not areas long off limits to industrial development as Mule Deer winter range. The deer are suffering and declining already due to loss of habitat. Oregon land use Goal 5, regulations and comprehensive plans prohibit industrial use of the site because better alternative sites are available outside of Mule Deer winter range.

Comment Date

12/1/2023

source

portal

Siting Project Phase

NOI

Comment Details

Notice of Intent Exhibit

Exhibit C - Proposed Facility Location

Page Number(s)

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Council Standards

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Comment

Issues regarding the Yellow Rosebush Energy Center (12.5 square mile Industrial solar project sited on Mule Deer winter range in Wasco Co. Oregon.)

1. Mule Deer in Oregon are under severe distress from predation, disease, undernourishment from lack of suitable feed, poor fawn survival, road kill and other causes analyzed in detail by ODFW and other experts. In the Madras area numbers are down 50%. Expert analysis of the causes identifies loss of habitat as the underlying or precipitating cause of the multi-decade decline. A decision to fence the deer out of substantial winter range further constraining their world will delay or prevent their recovery. This cannot be allowed if other sites are available. We all know they are.

2. Habitat mitigation, as defined by ODFW, includes avoidance. The Applicant has not shown that it cannot lease land that has not been protected as Mule Deer winter range for several decades now. There are ample alternative sites for solar collectors (which do not have to be a single property sized to an arbitrary acreage, but can be many smaller, more suitable sites.)

3. EFSC should consider the possible or probable effects of permitting 800 MW far from current loads of any size. One of the great advantages of solar collectors is that they can be sited near and among loads for transmission efficiency. No doubt it is more cost effective to developers to site huge solar arrays on range land close to major substations. But that incurs the societal cost of transmission to electrical loads, none of which are close to the project, as well as the externality of avoidable Mule Deer habitat loss.

4. EFSC should not accept the idea that a site has already been so degraded by man that it is little used by deer that are left, so not much loss to fence them out. ODFW habitat site classifications as poor should not be based upon current human-caused damage to the range, i.e. making an unsupportable assumption that the current damage is permanent. Nature will recover the land if cultivation is unprofitable (apparently the case) or if public policy favors recovery. ODFW value classification should be based on the capability of the land to recover with or without human help. Conservation leases, federal CRP programs and individual actions provide restoration without any destruction. Consider that it's not particularly hard or expensive to burn and plow good habitat if there is a perverse incentive to do so.

5. One-for-one mitigation is not applicable for Mule Deer winter range mitigation because space, itself, is a critical feature of the range. Fawns do better when their mothers can spread them out in the spring. Impenetrable fences can cause deer to crash repeatedly into a barrier they do not understand much to the satisfaction of predators.

6. Siting must consider the cumulative impact of predictable additions of solar arrays and more fenced-out acreage. For example, the Bakeoven project was approved without considering that the precedent would attract another project several times as large, and more after that along with expansions of permitted projects.

7. The mitigation rules are in irreconcilable conflict with Oregon land use goals, including Goal 5, and associated comprehensive plans. Applied as applicants propose, these say, in effect, if there is a promise to cut a few small Juniper trees and clear some non-native plants from acre A, you can destroy all the native plants and fence big game out of acre B for 50 years (or probably, forever). Case law uniformly disallows permission to build hospitals, airports, and factories absent a rigorous Goal exception proceeding showing necessity to industrialize the specific site sought by a developer. For example a mine possibly can be justified by a scarce deposit. Here there is no site specific requirement to build on big game winter range. It appears developers are choosing sites because they now do not have any intensive development. But this condition is the deliberate effect of Oregon land use laws, rules and policy. The reason to protect winter range from industrial development has not only not gone away, it is increasingly important as shown by the decline in Mule Deer population.

8. EFSC should consider (or reconsider) whether the "mitigation" regime is a fair, reasonable and effective means of compensating for habitat destruction, or just devolves into a negotiated fee for destroying habitat. Developers have no necessary interest or expertise in wildlife or habitat management. Whatever favorite ideas they agree to fund will be undertaken by others. Actual examples are owners of lands to be "enhanced" are paid to make some changes and maintain them for 50 years. Or a donation is made to a conservation organization to enhance or dedicate other land. Are there really going to be audits 30 years from now? And what are the chances in all that time that a range fire will not reset all the conditions, making all the mitigation just temporary while the fences are permanent?

Comment Portal 2023-202 Yellow Rosebush NOI

Conclusion: If is a good idea to fence the deer out of 8 or ten square miles with say 12 miles of new fences, in exchange for cutting some trees and rearranging some forage on other land, then can someone explain why we shouldn't do more of it, say 80 square miles with 120 new miles of fence or 800 sq miles etc.?

Attachments

No files were attached.

New Public Comment submitted for project : Yellow Rosebush Energy Center

ODOE ITService * ODOE <ODOE.ITService@oregon.gov>

Fri 12/1/2023 11:23 AM

To:SLOAN Kathleen * ODOE <Kathleen.SLOAN@energy.oregon.gov>

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Zip Code: 97741

Siting Project Phase: NOI

Comment Summary:

A siting council should decide where solar should go. Industrial solar destroys big game habitat and fences the game out. Solar should go near loads not areas long off limits to industrial development as Mule Deer winter range. The deer are suffering and declining already due to loss of habitat. Oregon land use Goal 5, regulations and comprehensive plans prohibit industrial use of the site because better alternative sites are available outside of Mule Deer winter range.

Please Click on the following link to view the full [Comment Details](#)

Yellow Rosebush Comment on NOI

Comment Summary – Comment Portal 2023-203

—

Comment Date

12/1/2023

source

portal

Siting Project Phase

NOI

Comment Details

Notice of Intent Exhibit

—

Page Number(s)

—

Council Standards

—

Comment

To the Oregon Energy Facility Siting Council (EFSC),

On behalf of the thousands of construction craft Laborers of the Laborers International Union of North America (LIUNA) Local 737, and its affiliates, we stand firmly in support of the Yellow Rosebush Energy Center Project. We have met with the developers on this project, Savion Energy LLC., and we strongly believe that they will uphold good labor standards on this project. These good labor standards are vital to ensuring Oregon's renewable energy industry is an industry that supports workers in Oregon. LIUNA Local 737 urges EFSC to approve the Notice of Intent (NOI), and to ensure that this project proceeds to construction and completion.

With the passage of HB 2021 during the 2021 legislative session, our state enshrined into law many of the high road standards our union has historically pushed for on utility scale energy projects (10 MW and above). These high road standards include requiring contractors on all covered projects to: participate in an apprenticeship program, establish and execute plans for recruitment of women and minority workers with a goal of 15% utilization, have anti-harassment policies in place, be eligible to perform public work in the state of Oregon, demonstrate a seven year history of compliance with federal and state wage and hour laws, to pay area standard wages, offer healthcare and retirement benefits to employees, and provide reporting and documentation and to respond to requests to verify any of the above conditions. In lieu of demonstrating compliance with all these different aspects of the law, contractors may instead enter into a PLA and be "exempted" from these requirements. Because entering into a PLA ensures the

Yellow Rosebush Comment on NOI

highest degree of support for workers on projects, entering into a PLA is consistent with meeting the full intent and purpose of the law, and our state's law reflects this concept.

Savion Energy has worked under PLAs in the past in other states, and thus has demonstrated its commitment to upholding the values behind HB 2021 through these good practices in other states. Our union looks forward to growing our own partnership with Savion Energy, and we believe the firm will help ensure Oregon's renewable energy industry economy continues to lead the nation in good labor standards.

Our union requests that EFSC approve this draft proposed order.

Sincerely,

Zack Culver

Business Manager

Laborers International Union of North America (LIUNA) Local 737

Attachments

No files were attached.

New Public Comment submitted for project : Yellow Rosebush Energy Center

ODOE ITService * ODOE <ODOE.ITService@oregon.gov>

Fri 12/1/2023 2:24 PM

To:SLOAN Kathleen * ODOE <Kathleen.SLOAN@energy.oregon.gov>

Organization: Laborers Local 737

Submitted by: Zack Culver

Email: zculzer@local737.org

Zip Code: 97230

Siting Project Phase: NOI

Comment Summary:

Please Click on the following link to view the full [Comment Details](#)

Attachment 2:
Special Advisory Group Comments



BOARD OF COUNTY COMMISSIONERS

511 Washington St, Ste. 101 • The Dalles, OR 97058
p: [541] 506-2520 • f: [541] 506-2551 • www.co.wasco.or.us

Pioneering pathways to prosperity.

November 1, 2023

Oregon Department of Energy
ATTN: Kathleen Sloan, Senior Siting Analyst
550 Capitol Street NE
Salem, OR 97301
(Sent by email to Kathleen.Sloan@energy.oregon.gov)

Subject: Yellow Rosebush Energy Facility

Dear Ms. Sloan;

Per your letter dated October 10, 2023, the Wasco County Board of Commissioners is responding to your request for information.

1) The name, address and telephone number of the contact person assigned to review the application for your jurisdiction.

The application will be reviewed by the Wasco County Planning Director, Kelly Howsley Glover, who is available at 2507 E 2nd St, The Dalles, OR 97058 or via phone 541-506-2560.

2) A list of local ordinances and land use regulations that might apply to construction or operation of the proposed facility, and a description of any information needed for determining compliance.

The proposed project includes development in the non-National Scenic Area portions of Wasco County. As such, the following ordinances are applicable:

Wasco County Comprehensive Plan

Wasco County Land Use and Development Ordinance

The project proposes development in the A-1 (160) Zone, an Exclusive Farm Use Zone. Per OAR 660-033-0120, this facility requires a conditional use review, and will be subject to Chapter 3, Chapter 5, 10, 19 and 20 of the Wasco County Land Use and Development Ordinance.

Development appears to be within the following Overlay Zones that will impact review and criteria:

- Wasco County Geological Hazard Overlay Zone (OZ 2) and may require a written report by a certified engineer that demonstrates proposed development can be completed without threat to public safety or welfare.
- Development is within our Military Airspace Overlay Zone (OZ 15) and requires early coordination with NW Regional Coordination Team (Department of Defense) for possible mitigation measures.
- Development appears to be within the Sensitive Wildlife Habitat (OZ 8) Overlay Zone for deer and elk

within the National Scenic Area, which requires consultation with Oregon Department of Fish and Wildlife.

- Development appears to include several sensitive bird sites (OZ 12) and requires consultation with the Oregon Department of Fish and Wildlife.

It is important to note that, consistent with Goal 5 (OAR 660-023-0190) and Policy 13.1.7 (a) of the Wasco County Comprehensive Plan, we require a Comprehensive Plan Amendment at the time of application to list the facility as a significant energy facility resource. Comprehensive Plan Amendment criteria can be found in Chapter 15 of the Wasco County Comprehensive Plan (Wasco County 2040).

3) A list of any local permits that might apply to construction or operation of the proposed facility and a description of any information needed for reviewing a permit application.

Public Works will require:

- A Utility Permit: Detailed information about the project proposal
- Road Use Agreement: Detailed information about the project proposal

Building Codes Services may require:

- Electrical connection/panel inspections
- Permits/inspections for any structures owned by the private entity. Depending on the structure type it could include: foundation, anchorage, structural, plumbing, and electrical hook ups.
- Any electrical/plumbing hook ups for job trailers would also require permits/inspections

Planning will require:

- A Comprehensive Plan Amendment: Proposal for inventory addition to include site name, details about the proposal
- A conditional use permit, which should include information that addresses criteria in Chapters 3, 10, and 19 of the Land Use and Development Ordinance. Permits require a detailed site plan, fire safety certification, fire and emergency response plan, and review by a certified engineer for hazards.

4) Recommendations regarding the size and location of analysis areas for impacts to sensitive resources, including resources inventoried in your comprehensive plan.

This proposal sites development within our Geological Hazard (OZ 2) Overlay Zone which requires a study by a certified engineer for impacts when development is within the identified hazard point.

This proposal sites development within our Sensitive Wildlife Habitat (OZ 8) Overlay Zone and Sensitive Birds (OZ 12) Overlay Zone which requires consultation with the Oregon Department of Fish and Wildlife.

This proposal sites development within our Military Airspace Overlay Zone (OZ 15) that requires early coordination with the NW Regional Coordination Team/Department of Defense.

5) A list of studies that your jurisdiction recommends be conducted to identify potential impacts of the proposed facility and mitigation measures.


- *Housing Study
- *EMS Impact Study
- *Fire Response Plan
- *Traffic Control Plan
- *Defined Work Schedule
- *Construction Plans
- *Defined Staging Area for Construction/Development
- *Impact to Sensitive Species
- *Impact to Military Airspace

Thank you for your coordination.

Wasco County Board of Commissioners



Steven D. Kramer, Chair



Scott C. Hege, Vice-Chair



Philip L. Brady, County Commissioner



November 9, 2023

Oregon Department of Energy
Attn: Kathleen Sloan
550 Capitol Street NE
Salem Or 97301

RE: Yellow Rose Bush Energy, NOI Comment

Dear Ms. Sloan,

Thank you for the opportunity to comment on the Yellow Rosebush Solar project. The following comments are conveyed on behalf of the Sherman County Court.

Sherman County recognizes that the project is to be located primarily in Wasco County and possibly in Sherman County by the interconnection of a 500-kV gen-tie line to the Buckley Substation located southwest of Kent Oregon.

1) The name, address and telephone number of the contact person assigned to review the application for your agency:

Georgia Macnab
Sherman County Planning Director
PO Box 381
Moro, OR 97039

2) Comments on aspects of the proposed facility that are within the particular responsibility or expertise of your agency.

Transmission Lines

The proposal states the transmission lines will be 160-180 feet tall. Utility facilities used for public use are a permitted use according to the Sherman County Zoning Ordinance. However transmission lines over 200 feet are a conditional use in the SCZO. The county feels that the transmission line proposed is part of a commercial utility facility and should be treated as a CUP since the height of the poles are close to the threshold of 200 feet. We would like to make sure all properties and landowners are protected from the impact of the proposal. Counties in Oregon are allowed to be stricter than state law relative to land use zoning.

3) A list of statutes, administrative rules and local government ordinances administered by your agency that might apply to construction or operation of the proposed facility and a description of any information needed for determining compliance.

Transmission Lines

Article 3, 3.1, Exclusive Farm Use Zone 1.Conditional Uses Permitted

(x) Transmission Lines over 200 Feet in Height.

-The proposed transmission lines appear to be located near a natural hazards combining zone. The requirements and standards for that zone is in the SCZO:

Section 3.7 Natural Hazards Combining Zone

The regulations regarding Conditional Use Permits are found in the SCZO:

Article 5 Sections 5.1 Authorization to Grant or Deny conditional Uses

5.2 General Criteria

5.3 General Conditions

Section 5.8 Standards Governing Specific Conditional Uses

- 10. Radio or Television Transmitter Tower, Utility or Substation
- 14. Public Facilities and Services
- 20. Non Farm Uses in an F-1 Zone

4) A list of any permits administered by your agency that might apply to construction or operation of the proposed facility and a description of any information needed for reviewing a permit application.

- Road Approach Permit- Sherman County Road Department
- Building permits- Oregon State building codes, Pendleton Regional Office.

5. Recommendations regarding the size and location of analysis areas (see below for more information).

- Sherman County has a history of wildfires in the county. The analysis area should be expanded beyond the .5 mile radius.
- Land use should be expanded beyond the .5 mile radius.

6) A list of studies that should be conducted to identify potential impacts of the proposed facility and mitigation measures.

-Sherman County Court is concerned about the connection of the transmission line to Buckley and how that might limit capacity for future solar projects that may be located in Sherman County. They are requesting a study be prepared to determine how the amount of megawatts used could impact future Sherman County Solar or Wind projects.

-Soils Impact Analysis/Study

If you have any questions please contact me at 541-565-3601.

Sincerely,

Georgia L. Macnab
Sherman County Planning Director

cc: Sherman County Court

Attachment 3: Reviewing Agency Comments

SLOAN Kathleen * ODOE

From: BROWN Jordan A * ODA
Sent: Friday, October 20, 2023 10:08 AM
To: SLOAN Kathleen * ODOE
Cc: ESTERSON Sarah * ODOE
Subject: Re: Request for ODAg review and coordination call on Yellow Rosebush Energy Center Notice of Intent

Hello Kate,

I definitely have some availability next week to talk this over. I'm available Tue. 24 from 11-noon, Thu. 26 from 9-noon, and Fri. 27 from 9-3. Send an invite if any of those times work for you too.

I was able to assess the risk of rare plants occurring on the site, which I'm providing here:

The proposed project occurs mainly in Wasco County, but also extends into southern Sherman County. Sherman County is home to two Oregon-listed plants, Northern wormwood (*Artemisia campestris* var. *wormskioldii*) and Lawrence's milkvetch (*Astragalus collinus* var. *laurentii*), while Wasco County is known to support Northern wormwood and Tygh Valley milkvetch (*Astragalus tyghensis*). Northern wormwood is not likely to occur within the project area since it is a riparian plant only known from the banks of the Columbia River in Oregon. The only two documented occurrences of Lawrence's milkvetch in Sherman Co. are old herbarium specimen collections from 1950, over 25 miles from the project site on the northwest border of the county, and are now expected to be extirpated. The distance of the project from the known historic and current known range of Lawrence's milkvetch makes it extremely unlikely that it occurs in the project area or would be impacted by the project. Tygh Valley milkvetch is only known to occur in and around the Tygh Valley, with the closest occurrences about nine miles west of the project areas on the Juniper Flat plateau. The project area is located at about 2500 feet elevation which is substantially higher than the approximately 1700 feet elevation or less that known populations occur at. The project area is also separated from the known sites not only by substantial distance, but by natural barriers that have likely impeded the plants dispersal (to the project site) including the Deschutes River canyon, the river itself, and numerous other ridges canyons, and waterways. The endemic nature of Tygh Valley milkvetch may also be the result of some essential biotic or abiotic association specific to the currently known range of the species. These factors suggest that Tygh Valley milkvetch is unlikely to occur in the project area or be impacted by the project, but conducting a survey is the only way to be sure. Additionally, the fact that Tygh Valley milkvetch wasn't documented during the development of neighboring energy facilities suggests it is unlikely to occur in the current project area.

Jordan Brown, Program Lead Conservation Biologist
Oregon Department of Agriculture – Native Plant Conservation
635 Capitol St NE, Salem, OR 97301-2532
PH: 541.737.2346 | CELL: 541.224.2245 | WEB: Oregon.gov/ODA
Pronouns: he, him, his

*Please note my email address has changed to jordan.a.brown@oda.oregon.gov

From: SLOAN Kathleen * ODOE <Kathleen.SLOAN@energy.oregon.gov>
Date: Wednesday, October 18, 2023 at 2:18 PM
To: BROWN Jordan A * ODA <Jordan.A.BROWN@oda.oregon.gov>

Cc: ESTERSON Sarah * ODOE <Sarah.ESTERSON@energy.oregon.gov>

Subject: Request for ODAg review and coordination call on Yellow Rosebush Energy Center Notice of Intent

Hi Jordan,

I am following up on the notification email sent out last week on the Notice of Intent for the Yellow Rosebush Energy Center.

I am attaching a copy of the public notice on the NOI, the reviewing agency memo and GIS data for the project.

Do you have time in the next 2-3 weeks for a call to discuss ODAg review and any comments or recommendations you may have for this proposed facility?

At the NOI phase, we are particularly seeking input on potential for T&E plants and any survey considerations that the applicant should include in their assessment that they are conducting/preparing for a preliminary application. The NOI is based on their desktop review, no fieldwork, so it is helpful to include comments on surveys to be completed for the application.

Let me know if you have any questions or want additional information prior to a coordination call.

We have a public information meeting set for Nov. 2nd, and you are welcome to listen in and/or participate, details are in the attached notice. The NOI is too big to email but can be found here on the project page:

<https://www.oregon.gov/energy/facilities-safety/facilities/Pages/YRB.aspx>

Let me know what works best for you and I can follow up with a Teams invite.

Thanks,

Kate



Kathleen Sloan
Senior Siting Analyst
550 Capitol St. NE | Salem, OR
97301
P: 971-701-4913



Stay connected!



Oregon

Tina Kotek, Governor

Department of State Lands

951 SW Simpson Ave., Suite #104

Bend, OR 97702

(541) 388-6112

FAX (541) 388-6480

www.oregon.gov/dsl

State Land Board

October 24, 2023

OREGON DEPARTMENT OF ENERGY
ATTN: KATHLEEN SLOAN, SENIOR SITING ANALYST
550 CAPITOL STREET NE
SALEM, OR 97301

Tina Kotek
Governor

LaVonne Griffin-Valade

Secretary of State

Re: Comments on the Notice of Intent to Apply for a Site Certificate for the Yellow Rosebush Energy Center, located in Sherman and Wasco counties.

Tobias Read

State Treasurer

Dear Chase McVeigh-Walker:

We have received the Notice of Intent for the Yellow Rosebush Energy Center, in Morrow and Umatilla counties, Oregon. This letter is the Department of State Lands' response to the Notice.

1) The name, address and telephone number of the contact person assigned to review the application for your agency.

Richard Fitzgerald
Aquatic Resource Coordinator
Department of State Lands
951 SW Simpson Ave., Suite #104
Bend, OR 97702
richard.w.fitzgerald@dsl.oregon.gov
(503) 910-4565

2) Comments on aspects of the proposed facility that are within the particular responsibility or expertise of your agency.

- **The address and phone number listed for the Department of State Lands on pages 19 and 48 are incorrect. The correct headquarters address is Department of State Lands, 775 Summer St. NE, Suite 100, Salem, OR 97301-1279. The correct headquarters phone number is 503-986-5200.**
- **The Authority/Description listed for Removal / Fill Permit on page 19 is incorrect. A person or utility is required to have a permit if an activity will involve filling or removing 50 cubic yards or more of material in a wetland or waterway. For sites within a state designated Essential Indigenous Anadromous Salmonid Habitat (ESH), State Scenic Waterway, or compensatory mitigation site, a permit is required for any amount of removal or fill.**
- **Any potential impacts to waters of this state resulting from removal or fill should be identified. Such impacts should be addressed separately from "Surface and Groundwater Quality and Availability" as they are distinct from both water quality and availability.**

ATTN: KATHLEEN SLOAN, SENIOR SITING ANALYST

October 24, 2023

Page 2 of 2

3) A list of statutes, administrative rules and local government ordinances administered by your agency that might apply to construction or operation of the proposed facility and a description of any information needed for determining compliance.

**Oregon Removal-Fill Law (ORS 196.795 - 196.990)
OAR Chapter 141, Divisions 85, 89, 90, 93, 100.**

4) A list of any permits administered by your agency that might apply to construction or operation of the proposed facility and a description of any information needed for reviewing a permit application.

Removal-Fill Permit (including Individual Permit, General Removal-Fill Permit, and General Authorization). Please submit:

- a Wetland Delineation, and
- a complete Joint Permit Application.

5) Recommendations regarding the size and location of analysis areas (see below for more information).

A Wetland Delineation should be conducted to identify wetlands and other surface waters to identify the presence of regulated surface waters within the project site boundary. The Delineation should be conducted in accordance with the requirements of OAR Chapter 141, Division 90.

6) A list of studies that should be conducted to identify potential impacts of the proposed facility and mitigation measures.

Wetland Delineation.

If you have any questions, please call me at (503) 910-4565.

Sincerely,



Richard Fitzgerald
Aquatic Resource Coordinator
Aquatic Resource Management
Oregon Department of State Lands

RF:td

cc: Kathleen Sloan <kathleen.sloan@energy.oregon.gov>
Jason Seals, Oregon Dept. of Fish and Wildlife
US Army Corps of Engineers, Portland Office
Sherman County Planning Dept.
Wasco County Planning Dept.
Vernon Wolf, DSL Proprietary Coordinator



Oregon

Tina Kotek, Governor

Department of Forestry
State Forester's Office
2600 State St
Salem, OR 97310-0340
503-945-7200
www.oregon.gov/ODF

October 27, 2023

Kathleen Sloan, Senior Siting Analyst
Oregon Department of Energy
550 Capitol St NE
Salem, OR 97301

RE: Yellow Rosebush Energy Center

Dear Ms. Sloan,

Please accept the following response from the Oregon Department of Forestry (ODF) regarding the proposed Yellow Rosebush Energy Center in Sherman and Wasco Counties. Based upon the facility location map provided with the memorandum received October 10, 2023, the proposed project would not be located on (or in close proximity to) any forestland. Therefore ODF does not have specific comments or recommendations on the project within the scope of its responsibility or expertise.

In general, ODF's concerns regarding any proposed project are primarily related to the potential for construction, operation, and/or maintenance of project components across state or privately-owned forest lands, as well as to the mitigation of hazards with respect to wildfire risk. It is expected that the applicant will be familiar with and fulfill all relevant obligations under the Oregon Forest Practices Act (Oregon Revised Statutes Chapter 527; Oregon Administrative Rules Chapter 629) wherever a proposed project's components or activities may intersect with Oregon forestland and/or forest operations. Likewise, it is expected that the applicant will be familiar with and fulfill all relevant obligations related to fire prevention (Oregon Revised Statutes Chapter 477). While ODF does not have specific comments on the proposed Yellow Rosebush Energy Center, complete understanding and observance of these requirements is the responsibility of the applicant wherever they may be applicable to activities carried out as part of the proposed project.

ODF appreciates the opportunity to comment on the proposed project. In the event that future questions or concerns arise relative to ODF's scope of expertise, please do not hesitate to contact me by email at daniel.hubner@odf.oregon.gov or by phone at 503-779-4004.

Sincerely,

Dan Hubner, Information Analyst
Planning Division
Oregon Department of Forestry

ODOE Notes from DLCD Coordination Call on Yellow Rosebush NOI on 11/6/2023

Hilary Foote & John Jinings - DLCD

DLCD comments were in relation to the need for the applicant to conduct a “material stability analysis” for the proposed facility due to adjacent energy development and the size (acreage) of the YRB proposed facility. As noted in the call, DLCD referred to the following applicable OR rules and statutes:

OAR 660-033-0130(38)(i)(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)(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).

(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.

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.

(2) An applicant for a use allowed under ORS 215.213 (2) or (11) or 215.283 (2) or (4) may demonstrate that the standards for approval set forth in subsection (1) of this section will be satisfied through the imposition of conditions. Any conditions so imposed shall be clear and objective.

(3) A person engaged in farm or forest practices on lands devoted to farm or forest use may file a complaint with the local governing body or its designee alleging:

(a) That a condition imposed pursuant to subsection (2) of this section has been violated;

(b) That the violation has:

(A) Forced a significant change in accepted farm or forest practices on surrounding lands devoted to farm or forest use; or

(B) Significantly increased the cost of accepted farm or forest practices on surrounding lands devoted to farm or forest use; and

(c) That the complainant is adversely affected by the violation.

(4) Upon receipt of a complaint filed under this section or ORS 215.218, the local governing body or its designee shall:

(a) Forward the complaint to the operator of the use;

(b) Review the complaint in the manner set forth in ORS 215.402 to 215.438; and

(c) Determine whether the allegations made in a complaint filed under this section or ORS 215.218 are true.

(5) Upon a determination that the allegations made in a complaint are true, the local governing body or its designee at a minimum shall notify the violator that a violation has occurred, direct the violator to correct the conditions that led to the violation within a specified time period and warn the violator against the commission of further violations.

(6) If the conditions that led to a violation are not corrected within the time period specified pursuant to subsection (5) of this section, or if there is a determination pursuant to subsection (4) of this section following the receipt of a second complaint that a further violation has occurred, the local governing body or its designee at a minimum shall assess a fine against the violator.

(7) If the conditions that led to a violation are not corrected within 30 days after the imposition of a fine pursuant to subsection (6) of this section, or if there is a determination pursuant to subsection (4) of

this section following the receipt of a third or subsequent complaint that a further violation has occurred, the local governing body or its designee shall at a minimum order the suspension of the use until the violator corrects the conditions that led to the violation.

(8) If a use allowed under ORS 215.213 (2) or (11) or 215.283 (2) or (4) is initiated without prior approval pursuant to subsection (1) of this section, the local governing body or its designee at a minimum shall notify the user that prior approval is required, direct the user to apply for approval within 21 days and warn the user against the commission of further violations. If the user does not apply for approval within 21 days, the local governing body or its designee shall order the suspension of the use until the user applies for and receives approval. If there is a determination pursuant to subsection (4) of this section following the receipt of a complaint that a further violation occurred after approval was granted, the violation shall be deemed a second violation and the local governing body or its designee at a minimum shall assess a fine against the violator.

(9)(a) The standards set forth in subsection (1) of this section do not apply to farm or forest uses conducted within:

(A) Lots or parcels with a single-family residential dwelling approved under ORS 215.213 (3), 215.284 (1), (2), (3), (4) or (7) or 215.705;

(B) An exception area approved under ORS 197.732; or

(C) An acknowledged urban growth boundary.

(b) A person residing in a single-family residential dwelling which was approved under ORS 215.213 (3), 215.284 (1), (2), (3), (4) or (7) or 215.705, which is within an exception area approved under ORS 197.732 or which is within an acknowledged urban growth boundary may not file a complaint under subsection (3) of this section.

(10) This section does not prevent a local governing body approving a use allowed under ORS 215.213 (2) or (11) or 215.283 (2) or (4) from establishing standards in addition to those set forth in subsection (1) of this section or from imposing conditions to ensure conformance with the additional standards. [1989 c.861 §6; 1993 c.792 §15; 2001 c.704 §8; 2003 c.616 §3; 2011 c.567 §9]

RE: Request for Review and Comments on Notice of Intent for the Yellow Rosebush Energy Facility

PIKE Brandon <Brandon.PIKE@odav.oregon.gov>

Tue 11/7/2023 9:20 AM

To:SLOAN Kathleen * ODOE <Kathleen.SLOAN@energy.oregon.gov>

Good morning Kate,

Thank you for providing the opportunity for the Oregon Department of Aviation (ODAV) to comment on this case. ODAV has reviewed the proposal and prepared the following comment(s):

1. In accordance with FAR Part 77.9 and OAR 738-070-0060, the proposed development may be required to undergo aeronautical evaluations by the FAA and ODAV, depending on the final proposed height and location of structures. The aeronautical evaluations are initiated by the applicant providing separate notices to both the FAA and ODAV to determine if the proposal poses an obstruction to aviation safety. The applicant should receive the resulting aeronautical determination letters from the FAA and ODAV prior to approval of any building permits.

Please reach out if you have questions or concerns.

Best,

BRANDON PIKE
OREGON DEPARTMENT OF AVIATION
AVIATION PLANNER



OFFICE 503-378-2217 CELL 971-372-1339

EMAIL brandon.pike@odav.oregon.gov

3040 25TH STREET SE, SALEM, OR 97302

WWW.OREGON.GOV/AVIATION

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From: SLOAN Kathleen * ODOE <Kathleen.SLOAN@energy.oregon.gov>

Sent: Tuesday, October 10, 2023 3:02 PM

To: BLEAKNEY Leann <lbleakney@nwcouncil.org>; jason.cane@state.or.us; david.mills@state.or.us; JOHNSON James * ODA <James.JOHNSON@oda.oregon.gov>; BROWN Jordan A * ODA <jordan.a.brown@oda.oregon.gov>; PIKE Brandon <Brandon.PIKE@odav.oregon.gov>; SVELUND Greg * DEQ <svelund.greg@deq.state.or.us>; THOMPSON Jeremy L * ODFW <Jeremy.L.THOMPSON@odfw.oregon.gov>; BOWLES Jamie L * ODFW <jamie.l.bowles@odfw.oregon.gov>; MEYERS Andrew R * ODFW <Andrew.R.MEYERS@odfw.oregon.gov>; TOKARCZYK John A * ODF <John.A.TOKARCZYK@odf.oregon.gov>; MCCLAUGHRY Jason * DGMI <Jason.MCCLAUGHRY@dogami.oregon.gov>; hilary.foote@dlcd.oregon.gov; JININGS Jon * DLCD <Jon.JININGS@dlcd.oregon.gov>; RYAN Peter * DSL <Peter.RYAN@dsl.oregon.gov>; EVANS Daniel * DSL <Daniel.EVANS@dsl.oregon.gov>; SALGADO Jessica * DSL <Jessica.SALGADO@dsl.oregon.gov>; RASHID Yassir * PUC <Yassir.RASHID@puc.oregon.gov>; KENNEDY Mike * DEQ <Mike.KENNEDY@deq.oregon.gov>; inr@oregonstate.edu; INFO Park * OPRD <Park.Info@opr.oregon.gov>; BJORK Mary F * WRD <mary.f.bjork@water.oregon.gov>

Subject: Request for Review and Comments on Notice of Intent for the Yellow Rosebush Energy Facility

This message was sent from outside the organization. Treat attachments, links and requests with caution. Be conscious of the information you share if you respond.

Good Afternoon,

On September 28, 2023, the Oregon Department of Energy (ODOE or Department) received a Notice of Intent to File an Application for a Site Certificate (NOI) for an 800 megawatt (MW) solar generating facility, with related or supporting facilities. The facility would be located within a site boundary of approximately 8,075 acres of private land zoned for Exclusive Farm Use (EFU) in Wasco and Sherman counties. The NOI was submitted by Yellow Rosebush Energy Center, LLC (applicant), a wholly-owned subsidiary of Savion, LLC.

Additional information, including a complete Public Notice on the Notice of Intent and Public Informational Meeting and a complete copy of the Notice of Intent itself can be found at:

<https://www.oregon.gov/energy/facilities-safety/facilities/Pages/YRB.aspx>

The Public Notice and Reviewing Agency Request Letter are attached to this email.



DOGAMI Comments on Yellow Rosebush Energy Center Notice of Intent

SLOAN Kathleen * ODOE <Kathleen.SLOAN@energy.oregon.gov>

Wed 11/8/2023 3:11 PM

To:MCCLAUGHRY Jason * DGMI <Jason.MCCLAUGHRY@dogami.oregon.gov>

Hi Jason,

Thank you for taking the time to review the Notice of Intent for the proposed Yellow Rosebush Energy Center to be located in Wasco and Sherman counties.

I wanted to summarize your comments in this email, specifically that your only input on this NOI at this phase in the facility review is that there is an increased seismic risk in the vicinity of the proposed site boundary due to recent seismic activity near Maupin and identified faults in the area that would justify keeping the seismic risk analysis area at 50 miles from the proposed site boundary. Further comments included the use of DOGAMI and USGS sources in preparing the exhibits for the preliminary Application for Site Certificate.

If there is anything I missed, please add in a reply. If this is an accurate summary of your comments on the NOI, and affirmative reply is appreciated.

Kate



Kathleen Sloan
Senior Siting Analyst
550 Capitol St. NE | Salem, OR
97301
P: 971-701-4913



Stay connected!

RE: Comments Requested on Notice of Intent for the Yellow Rosebush Energy Center

Peacher, Kimberly N CIV USN NAVFAC NW SVD WA (USA)

<kimberly.n.peacher.civ@us.navy.mil>

Mon 11/20/2023 7:31 AM

To:SLOAN Kathleen * ODOE <Kathleen.SLOAN@energy.oregon.gov>

Kathleen,

Good timing – we actually did receive the G/G analysis and additional details re the height of the line.

We have no potential concerns with the current proposal.

Of course, if any component change please let us know.

Thank you.

V/R,

Kimberly Peacher

Community Planning & Liaison Officer

Northwest Training Range Complex

(360) 930-4085

NIPR: Kimberly.peacher@navy.mil

SIPR: Kimberly.peacher@navy.smil.mil

From: SLOAN Kathleen * ODOE <Kathleen.SLOAN@energy.oregon.gov>

Sent: Friday, November 17, 2023 2:00 PM

To: Peacher, Kimberly N CIV USN NAVFAC NW SVD WA (USA) <kimberly.n.peacher.civ@us.navy.mil>

Subject: [Non-DoD Source] Re: Comments Requested on Notice of Intent for the Yellow Rosebush Energy Center

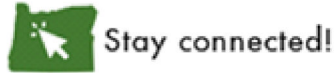
Hi Kimberly,

I am reaching out to follow up on this review request. Did you have a chance to review for any potential impacts, FAA requirements and/or comments for this proposed facility?

Thank you,



Kathleen Sloan
Senior Siting Analyst
550 Capitol St. NE | Salem, OR
97301
P: 971-701-4913



From: Peacher, Kimberly N CIV USN NAVFAC NW SVD WA (USA)
Sent: Monday, October 16, 2023 12:59 PM
To: SLOAN Kathleen * ODOE
Subject: RE: Comments Requested on Notice of Intent for the Yellow Rosebush Energy Center

Kathleen,

I was able to get the files and zip them.

Just waiting for some height details from the developer along with the G/G analysis.

Thank you.

V/R,

Kimberly Peacher
Community Planning & Liaison Officer
Northwest Training Range Complex
(360) 930-4085

From: SLOAN Kathleen * ODOE <kathleen.sloan@energy.oregon.gov>
Sent: Monday, October 16, 2023 12:21 PM
To: Peacher, Kimberly N CIV USN NAVFAC NW SVD WA (USA)
<kimberly.n.peacher.civ@us.navy.mil>
Subject: [Non-DoD Source] RE: Comments Requested on Notice of Intent for the Yellow Rosebush Energy Center

Hi!

These are the individual shape files for GIS – these are not KMZs. I can only send as a zip file or extract them all and send like this. I can't rename the zip at the end of the file name of the other folder.

If this does not work for you, let me know and I will ask for a KMZ for the project.

Thanks!

Kate

From: Peacher, Kimberly N CIV USN NAVFAC NW SVD WA (USA)
<kimberly.n.peacher.civ@us.navy.mil>
Sent: Monday, October 16, 2023 11:53 AM
To: SLOAN Kathleen * ODOE <kathleen.sloan@energy.oregon.gov>
Cc: ESTERSON Sarah * ODOE <Sarah.ESTERSON@energy.oregon.gov>
Subject: RE: Comments Requested on Notice of Intent for the Yellow Rosebush Energy Center

Hello Kathleen,

Thank you for sending the dataset over.

For shapefiles, can you please rename the file type from a “zip” to “piz” or anything with three letters?

Thank you.

V/R,

Kimberly Peacher
Community Planning & Liaison Officer
Northwest Training Range Complex
(360) 930-4085

From: SLOAN Kathleen * ODOE <kathleen.sloan@energy.oregon.gov>
Sent: Monday, October 16, 2023 11:38 AM
To: Peacher, Kimberly N CIV USN NAVFAC NW SVD WA (USA)
<kimberly.n.peacher.civ@us.navy.mil>
Cc: ESTERSON Sarah * ODOE <Sarah.ESTERSON@energy.oregon.gov>
Subject: [Non-DoD Source] RE: Comments Requested on Notice of Intent for the Yellow Rosebush Energy Center

Hi Kim,

I am attaching the GIS shape files received from the applicant.

Let me know if these do not work for you.

Thanks,

Kate

From: Peacher, Kimberly N CIV USN NAVFAC NW SVD WA (USA)
<kimberly.n.peacher.civ@us.navy.mil>
Sent: Monday, October 16, 2023 11:02 AM
To: SLOAN Kathleen * ODOE <kathleen.sloan@energy.oregon.gov>
Cc: ESTERSON Sarah * ODOE <Sarah.ESTERSON@energy.oregon.gov>
Subject: RE: Comments Requested on Notice of Intent for the Yellow Rosebush Energy Center

Hello Kathleen,

Thank you for the notice. We have put in a request with the developer to get more information re the potential 4 mile interconnect.

Hoping to review the footprint and the G/G analysis before we circle back with our comments.

If you have the 4 mile interconnect shapfiles/kmz, can you please forward?

Thank you.

V/R,

Kimberly Peacher
Community Planning & Liaison Officer
Northwest Training Range Complex
(360) 930-4085

From: SLOAN Kathleen * ODOE <kathleen.sloan@energy.oregon.gov>

Sent: Friday, October 13, 2023 3:21 PM

To: kimberly.peacher@navy.mil

Cc: ESTERSON Sarah * ODOE <Sarah.ESTERSON@energy.oregon.gov>

Subject: [Non-DoD Source] Comments Requested on Notice of Intent for the Yellow Rosebush Energy Center

Please find attached a reviewing agency request memo and the Public Notice for this proposed facility.

||

Click [here](#) if you are having trouble viewing this message.

Comments Requested on Notice of Intent for the Yellow Rosebush Energy Center

On September 28, 2023, the Oregon Department of Energy (ODOE or Department) received a Notice of Intent to File an Application for a Site Certificate (NOI) for an 800 megawatt (MW) solar generating facility, with related or supporting facilities. The facility would be located within a site boundary of approximately 8,075 acres (12.6 sq. miles) of private land zoned for Exclusive Farm Use (EFU) in Wasco and Sherman counties. The NOI was submitted by Yellow Rosebush Energy Center, LLC (applicant), a wholly-owned subsidiary of Savion, LLC.

Additional information, including a complete Public Notice on the Notice of Intent and Public Informational Meeting and a complete copy of the Notice of Intent itself, is [available online](#).

Public Comments

ODOE is now accepting public comments on the NOI. Comments must be submitted by **December 1, 2023** to be considered.

ODOE has an [online portal](#) for submitting public comments. The goal of the online portal is to provide members of the public with another convenient option to participate in Council rulemaking proceedings.

To [comment](#) on this project, select "Yellow Rosebush Energy Center" from the drop-down menu and follow the instructions. You will receive an email confirmation after submitting your comment.

Written comments may be submitted in writing by mail, e-mail, or by fax. Please send comments to:

Oregon Department of Energy
ATTN: Kathleen Sloan, Senior Siting Analyst
550 Capitol Street NE
Salem, OR 97301
Phone: (971) 701-4913
Fax: (503) 373-7806
Email: kathleen.sloan@energy.oregon.gov

In Person and Remote Public Informational Meeting:

The Department and applicant will also host a public informational meeting to provide an additional opportunity for the public to provide comments and ask questions about the proposed facility and review process. The public informational meeting will be held in person and virtually on **November 2, 2023**. Details on how to attend or participate in the meeting are provided in the Public Notice, which is available on the [project page](#).

Accessibility information

The Oregon Department of Energy is committed to accommodating people with disabilities. If you require any special physical or language accommodations, or need information in an alternate format, please contact Nancy Hatch at 503-428-7905, toll-free in Oregon at 800-221-8035, or by email at nancy.hatch@energy.oregon.gov

You received this notice either because you previously signed up for email updates related to specific siting projects, all Energy Facility Siting Council activities (the "General List"), or Rulemaking activities. You may manage your subscriptions to updates on various ODOE and Energy Facility Siting Council projects by logging in to our [ClickDimensions page](#).

If you have any questions or comments about ClickDimensions please feel free to contact Nancy Hatch at 503-378-3895, toll-free in Oregon at 800-221-8035, or email to Nancy.hatch@oregon.energy.gov

Oregon Department of Energy
Leading Oregon to a safe, equitable, clean, and sustainable energy future.

The Oregon Department of Energy helps Oregonians make informed decisions and maintain a resilient and affordable energy system. We advance solutions to shape an equitable clean energy transition, protect the environment and public health, and responsibly balance energy needs and impacts for current and future generations.



AskEnergy@oregon.gov | 503-378-4040 | 550 Capitol St. NE in Salem
Click [here](#) to unsubscribe or [here](#) to change your Subscription Preferences.

Comment Summary – Portal Comment 2023-196

BLM Right-of-Way

Comment Date

11/28/2023

source

portal

Siting Project Phase

NOI

Comment Details

Notice of Intent Exhibit

—

Page Number(s)

—

Council Standards

—

Comment

A Right-of-Way is needed for any lines crossing public lands. For additional information please visit:
<https://www.blm.gov/obtaining-right-way>.

Attachments

No files were attached.

New Public Comment submitted for project : Yellow Rosebush Energy Center

ODOE ITService * ODOE <ODOE.ITService@oregon.gov>

Tue 11/28/2023 8:31 AM

To:SLOAN Kathleen * ODOE <Kathleen.SLOAN@energy.oregon.gov>

Organization: Bureau of Land Management - Prineville District - Deschutes Field Office

Submitted by: John Griley Griley

Email: jgriley@blm.gov

Zip Code: 97754

Siting Project Phase: NOI

Comment Summary:

BLM Right-of-Way

Please Click on the following link to view the full [Comment Details](#)



Oregon

Tina Kotek, Governor

Department of Fish and Wildlife

High Desert Region Office

61374 Parrell Road

Bend, OR 97702

(541) 388-6147

FAX (541) 388-6049

November 29, 2023

Kathleen Sloan
Oregon Department of Energy
550 Capitol St. NE
Salem, OR 97301

RE: Request for comments on the Notice of Intent submitted by Yellow Rosebush Energy, LLC, subsidiary of Savion, LLC for the Yellow Rosebush Energy Center Project in Wasco and Sherman Counties

Dear Kathleen:

Oregon Department of Energy (ODOE) has requested comments from the Oregon Department of Fish and Wildlife (ODFW) on the Notice of Intent (NOI) to apply for a Site Certificate for Yellow Rosebush Energy Center Project outside of Maupin. This Letter contains: (1) ODFW contact information for the project; and (2) ODFW's comments on the NOI.

A. Contacts

I will be the main contact person for ODFW for the Energy Facility Siting Council (EFSC) permitting process and my contact information is: Jamie Bowles, 61374 Parrell Road, Bend, OR 97702. My phone number is (541) 388-6147. Jamie.L.Bowles@odfw.oregon.gov. In addition, please copy Jeremy Thompson, Energy Program Coordinator, 4034 Fairview Industrial Drive SE, Salem OR 97302. Phone number (541) 980-8524, Jeremy.L.Thompson@odfw.oregon.gov. ODFW requests that as applicable, all correspondence for this project be conveyed electronically.

B. Comments on the NOI

General Comments

Please find below a listing of the most applicable statutes, administrative rules and policies administered by ODFW that would pertain to the siting of this proposed facility. ODFW will review and make recommendations for the proposed project based on the following applicable statutes and rules.

Oregon Revised Statutes (ORS)

- ORS 496.012 Wildlife Policy
- ORS 506.036 Protection and Propagation of Fish
- ORS 496.171 through 496.192 Threatened and Endangered Wildlife and Fish Species. A listing of State and Federal threatened, endangered and candidate species can be found on ODFW's website at:
http://www.dfw.state.or.us/wildlife/diversity/species/threatened_endangered_candidate_list.asp
- ORS 498.301 through 498.346 Screening and By-pass devices for Water Diversions or Obstructions
- ORS 506.109 Food Fish Management Policy
- ORS 509-140 Placing Explosives in Water
- ORS 509.580 through 509.910 Fish Passage; Fishways: Screening Devices- a listing of requirements under ODFW's Fish Passage Program can be found on ODFW's website at <http://www.dfw.state.or.us/fish/passage/>

Oregon Administrative Rules (OAR)

- OAR Chapter 635, Division 100 provides authority for adoption of the State sensitive species list and the Wildlife Diversity Plan, and contains the State list of threatened and endangered wildlife and fish species. A current list of State sensitive species can be found on ODFW's website at:
http://www.dfw.state.or.us/wildlife/diversity/species/docs/SSL_by_category.pdf
- OAR Chapter 635, Division 415 (ODFW's Fish and Wildlife Mitigation Policy found on ODFW's website at: http://www.dfw.state.or.us/lands/mitigation_policy.asp describes six habitat categories and establishes mitigation goals and standards for each wildlife habitat ranging from Category 1 (irreplaceable, essential, limited) to Category 6 (non-habitat)
- The Policy goal for Category 1 habitat is no loss of either habitat quantity or quality via avoidance of impacts through development alternatives, or an ODFW recommendation of denial of the proposed development action if impacts cannot be avoided. Categories 2-4 are essential or important but not irreplaceable habitats. Category 5 habitat is not essential or important habitat, but has a high restoration potential. The application for a site certificate must identify the appropriate habitat category for all affected areas of the proposed project on mapping; provide basis for each habitat category selection; and provide an appropriate mitigation plan; all subject to ODOE and ODFW review and comment. ODOE has adopted this rule into OAR 345-022-0060 as an energy facility siting standard for Applicants to meet in order to obtain a site certificate.

- ODFW also provides technical review and recommendations on compliance with Oregon EFSC rules, particularly OAR 345-02100010(1) (p) and (q) and 345-22-040, 060 and 070.
- ODFW also advocates for project proponents to site solar facilities in a manner consistent with the Oregon Columbia Plateau Ecoregion (CPE) Wind Energy Siting and Permitting Guidelines that were established in conjunction with multiple state, federal and industry partners. The intent of these guidelines were to create a balance between the development of renewable energy and environmental protection. While these guidelines were developed for wind facilities, they are also applicable to solar projects within the CPE.

Specific Comments

The project falls wholly within the ODFW mapped Big Game winter range habitat overlay (*Oregon Department of Fish and Wildlife 2013 Big Game Winter Habitat White Paper*). ODFW considers all habitats within winter range, with the exception Category 6 habitats and dryland wheat in the CPE, to be Category 2 as per the Oregon Habitat Mitigation Policy. The CPE contains several habitats that are rare and declining including sagebrush steppe and native grasslands. Although the larger footprint of the site has been determined, ODFW requests that micro-siting within the larger footprint avoid impacts to native habitats and favors siting in previously disturbed areas to the maximum extent possible. As discussed with the applicant, ODFW recommends that mitigation be developed to offset the footprint of the fenced project area that will provide for “no net loss, net benefit” as outlined in the Mitigation Policy.

ODFW requests that the applicant limit construction activities outside of the project footprint during the winter period, December 1- April 1, to reduce disturbance to wintering wildlife. In addition, ODFW requests that the placement of project infrastructure, including buildings and roads be sited within the project boundary in a manner to reduce the potential for disturbing wildlife outside of the project boundaries both during construction and in the operational phase.

ODFW requests that any ground disturbance or vegetation removal within the project boundary be conducted prior to or after the critical period for ground nesting birds, April 15- September 1. Should ground disturbance occur during this period, ODFW requests that vegetative removal occur prior to the critical nesting period.

ODFW recommends that raptor nest surveys be conducted within a two-mile buffer around the perimeter as well as within the proposed footprint of the project area. Impacts to all nests located should be avoided, and all activities prohibited during the timeframes and within the distances listed below for the species that may occur within the project boundary.

Species	Spatial Buffer	Seasonal Restriction	Release Date if Unoccupied
Western burrowing owl	0.25 mile	April 1 to August 15	31-May
Golden eagle	0.5 mile	Feb 1- Aug 15	15-May
Red-tailed hawk	300-500 ft	Mar 1- Aug 15	31-May
Ferruginous hawk	0.25 mile	Mar 15- Aug 15	31-May
Swainson's hawk	0.25 mile	April 1- Aug 15	31-May
Prairie Falcon	0.25 mile	Mar 15- Jul 1	15-May
Peregrine falcon	0.25 mile	Jan 1- Jul 1	15-May
American kestrel	0.25 mile	Mar 1- Jul 31	15-May

ODFW recommends that the applicant work with the county weed department or Oregon State Extension to develop a revegetation and weed control plan that will be successful within the project area, given the challenges realized within this ecoregion with revegetation projects.

ODFW encourages the applicant to develop a mitigation plan that will effectively offset the habitat loss within in the project boundary. ODFW encourages the applicant to minimize fragmenting habitat due to fencing construction, to lessen potential impacts on species such as, but not limited to, mule deer, pronghorn and white-tailed jackrabbit. ODFW is willing to assist the applicant with the development of the plan.

ODFW appreciates the opportunity to comment on this NOI and looks forward to working with ODOE and the Applicant on this proposed project.

Respectfully,



Jamie Bowles
Regional Habitat Biologist, Deschutes District
Cc: Jeremy Thompson, Salem
Andrew Meyers, The Dalles
Corey Heath, Bend
Applicant

RE: SHPO Submittal Form and GIS files attached for Yellow Rosebush Energy Facility Notice of Intent to Apply for a Site Certificate

GROVER MaryBeth * OPRD <MaryBeth.GROVER@opr.oregon.gov>

Tue 12/5/2023 7:29 AM

To: SLOAN Kathleen * ODOE <Kathleen.SLOAN@energy.oregon.gov>

Kathleen. I'm sorry for my delayed response. Below is the case number assigned to this project. I've been super swamped and ended up with some backlog in October that I am processing when people follow-up. This is one of those instances. Hope you are doing well and gearing up for a great holiday season!! ~mbgrover

THIS E-MAIL CONFIRMS RECEIPT OF AN ELECTRONIC SUBMISSION FOR AN HISTORIC RESOURCE/106 REVIEW

.....THIS E-MAIL DOES NOT REPRESENT CONCLUSION OF THE REVIEW/106 CONSULTATION.....

We received a clearance submission on your above referenced project.

**The assigned SHPO Case Number is 23-1578 . Refer to this case number on all future correspondence.
This case has been placed in the appropriate Review Staff queue.
The SHPO receipt date is the initial date this complete submittal was received 10/13/2023.**

Do not respond to this email.

From: SLOAN Kathleen * ODOE <Kathleen.SLOAN@energy.oregon.gov>

Sent: Friday, November 17, 2023 2:11 PM

To: GROVER MaryBeth * OPRD <MaryBeth.GROVER@opr.oregon.gov>

Subject: Fw: SHPO Submittal Form and GIS files attached for Yellow Rosebush Energy Facility Notice of Intent to Apply for a Site Certificate

Hi MaryBeth,

I submitted this SHPO review request last month and am following up to see if there are any comments or recommendations from SHPO for this proposed facility that should be included in the Exhibit S for the Application for Site Certificate for the proposed Yellow Rosebush Energy Center in Wasco & Sherman County.

I am preparing the project order which will identify requirements for the Application included analysis areas and any specific comments from relevant reviewing agencies, local governments and tribes re: our EFSC standards.

Please let me know if SHPO has comments or recommendations, or if a coordination call would be beneficial.

Thank you,



From: SLOAN Kathleen * ODOE
Sent: Friday, October 13, 2023 4:32 PM
To: CLEARANCE ORSHPO * OPRD <ORSHPO.Clearance@opr.oregon.gov>
Subject: SHPO Submittal Form and GIS files attached for Yellow Rosebush Energy Facility Notice of Intent to Apply for a Site Certificate

Hello

See attached submittal form with attachments and accompanying GIS data for facility location and proposed facility boundary.

ODOE is initiating SHPO coordination on the Notice of Intent. Requested review is in attached documents. No case number has been assigned that we know of.

Thank you,



Yellow Rosebush Energy Center

Blaine Carver <carvermag@yahoo.com>

Wed 12/13/2023 8:23 AM

To:SLOAN Kathleen * ODOE <kathleen.sloan@energy.oregon.gov>

You don't often get email from carvermag@yahoo.com. [Learn why this is important](#)

Oregon Department of Energy
ATTN: Kathleen Sloan, Senior Siting Analyst

12-12-2023

The Bakeoven-Shaniko rangeleand fire protection association (BS-RFPA) is the wild-land fire protection for the lands within and surrounding the proposed Yellow Rosebush Energy Canter. Bs-rfpa is partnered with and backed by the federal and state wildland fire agencies. In the event of a fire in or near the proposed energy facility, bs-rfpa will be the first responder and the lead.

Bs-Rfpa has an open dialogue with Savion (the developer), and is currently in the process of formalizing an aid agreement between Yellow Rosebush and Bs-rfpa.

Using solar farms across the west as examples, there are two repeated fire hazards that we want eliminated on the farms in our jurisdiction.

1. Access around the perimeter of facilities is not a priority, and has created limited access, and death trap situations on wildland fires. The added benefit of good access, is it creates a natural fire break.

We ask that a 25' all weather (gravel) road be built around the perimeter of the facility, on the outside of the fence. We will help plan/engineer this access road/fire-break if prompted.

2. The perimeter fences of energy facilities are routinely filled up with fire fuels, (tumbleweeds, thistles, grass, brush, etc.). In a fire situation a build up of fuel on a fence will "torch, and jump" thus eliminating any fire fighting attempts, and benefits of fire lines or roads.

We ask that the perimeter fence be kept free of fire fuels. This can be done through a combination of tactics.. Keep the fuels down within the farm through grazing, mowing, spraying etc. Once at the fence fuels will need to be physically removed, mowed, baled, bagged, or etc..

We look forward to our wildfire free future in Bakeoven!

Blaine Carver

Chair-person BS-RFPA
541-910-0675
carvermag@yahoo.com

Attachment 4: Tribal Government Comments

SLOAN Kathleen * ODOE

From: Teara Farrow Ferman <TearaFarrowFerman@ctuir.org>
Sent: Friday, October 13, 2023 4:23 PM
To: SLOAN Kathleen * ODOE; Kat Brigham; Audie Huber; Eric Quaempts
Subject: RE: Request for Tribal Review and Comments on Notice of Intent for the Yellow Rosebush Energy Facility

Thank you for contacting the CTUIR regarding the Yellow Rosebush Energy Facility. The project area is outside the CTUIR's area of interest and is within the ceded lands of the Confederated Tribes of the Warm Springs Reservation of Oregon (CTWRO). The CTUIR will defer to the CRWSRO.

Thank you,

TEARA FARROW FERMAN

Cultural Resources Protection Program Manager | Department of Natural Resources
Assistant General Manager | Átaw Consulting, LLC
Confederated Tribes of the Umatilla Indian Reservation
TearaFarrowFerman@ctuir.org

The information in this e-mail may be confidential and intended only for the use and protection of the Confederated Tribes of the Umatilla Indian Reservation. If you have received this email in error, please immediately notify me by return e-mail and delete this from your system. If you are not an authorized recipient for this information, then you are prohibited from any review, dissemination, forwarding or copying of this e-mail and its attachments. Thank you.

From: SLOAN Kathleen * ODOE <Kathleen.SLOAN@energy.oregon.gov>
Sent: Friday, October 13, 2023 2:52 PM
To: Kat Brigham <KatBrigham@ctuir.org>; Teara Farrow Ferman <TearaFarrowFerman@ctuir.org>; Audie Huber <AudieHuber@ctuir.org>; Eric Quaempts <EricQuaempts@ctuir.org>
Subject: RE: Request for Tribal Review and Comments on Notice of Intent for the Yellow Rosebush Energy Facility

EXTERNAL EMAIL: Please use caution when clicking links or opening attachments.

Good Afternoon,

On Tuesday, I emailed you a copy of the Public Notice on the Notice of Intent to submit an application for an Energy Facility Siting Council site certificate (NOI) and a letter) for the proposed Yellow Rosebush Energy Center (attached again to this email for easy reference).

Also attached, please find the Reviewing Agency Request Memo that provides additional information on the facility and how to comment as a reviewing agency.

We are available if you would like to set up a call or meeting, at your convenience, to discuss the NOI and any comments the Tribe may have.

Please let me know if you have any questions,

Thank you,



Kathleen Sloan
Senior Siting Analyst
550 Capitol St. NE | Salem, OR
97301
P: 971-701-4913



Stay connected!

From: SLOAN Kathleen * ODOE
Sent: Tuesday, October 10, 2023 3:20 PM
To: Kat Brigham <katbrigham@ctuir.org>; Tera Farrow Ferman <TeraFarrowFerman@ctuir.org>; Audie Huber <AudieHuber@ctuir.org>
Cc: ESTERSON Sarah * ODOE <Sarah.ESTERSON@energy.oregon.gov>; CORNETT Todd * ODOE <Todd.CORNETT@energy.oregon.gov>; Rowe Patrick G <Patrick.G.Rowe@doj.state.or.us>; SADHIR Ruchi * ODOE <Ruchi.SADHIR@energy.oregon.gov>
Subject: FW: Request for Tribal Review and Comments on Notice of Intent for the Yellow Rosebush Energy Facility

Good Afternoon,

On September 28, 2023, the Oregon Department of Energy (ODOE or Department) received a Notice of Intent to File an Application for a Site Certificate (NOI) for an 800 megawatt (MW) solar generating facility, with related or supporting facilities. The facility would be located within a site boundary of approximately 8,075 acres of private land zoned for Exclusive Farm Use (EFU) in Wasco and Sherman counties. The NOI was submitted by Yellow Rosebush Energy Center, LLC (applicant), a wholly-owned subsidiary of Savion, LLC.

Additional information, including a complete Public Notice on the Notice of Intent and Public Informational Meeting and a complete copy of the Notice of Intent itself can be found at: <https://www.oregon.gov/energy/facilities-safety/facilities/Pages/YRB.aspx>

The Public Notice and Tribal Review and Comments Request Letter are attached to this email.

Please feel free to contact me if you have any questions or require additional information.

Thank you,



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