Oregon Department of ENERGY

Energy Facility Siting Council Meeting

Boardman City Hall, Boardman, Oregon

December 14-15, 2017
Opening Items:

- Call to Order
- Roll Call
- Agenda Modifications
- Announcements
Announcements:

• For those attending in person:
  • Comment Registration Cards are available on the table
  • GovDelivery Sign Up Cards to receive project information by email are also on the table

• For those attending via teleconference, opportunity for public comment will occur at the end of today’s meeting. We will request that individuals interested in making a public comment identify themselves prior to the comment period

• Those participating via the AT&T phone line, please mute your phone and if you receive a phone call, please hang up from this call and dial back in after finishing your other call

• If you would like to address the Council, please do not use the speaker phone feature, because it will create feedback
Announcements continued:

• For those signed onto the webinar, please do not broadcast your webcam
• Please silence your cell phones
• Energy Facility Council meetings shall be conducted in a respectful and courteous manner where everyone is allowed to state their positions at the appropriate times consistent with Council rules and procedures. Willful accusatory, offensive, insulting, threatening, insolent, or slanderous comments which disrupt the Council meeting are not acceptable. Pursuant to Oregon Administrative Rule 345-011-0080, any person who engages in unacceptable conduct which disrupts the meeting may be expelled.
Agenda Item A

- Consent Calendar
- Council Secretary Report
Agenda Item B
(Hearing)

Boardman Solar Energy Facility:
Public Hearing on the Draft Proposed Order

5:30 p.m.
December 14, 2017
Overview of Hearing

• Proposed site and facility

• Procedural history

• Oral/written comment submittal

Photo credit: cablinginstall.com
Boardman Solar Energy Facility

Proposed Site and Facility
Facility Background

Applicant: Boardman Solar Energy LLC (Invenergy LLC)

Type of Facility: Photovoltaic Solar Facility

Location:
- Morrow County: 75 MW photovoltaic solar array
- Gilliam County: 115 kV, 2.1 mile transmission line (related and supporting facility)

Acreage: Approximately 798 acres
Related and Supporting Facilities

- Underground Electrical Collection System
- Substation, Control House, and Generator Step-up Transformer
- 115 kV Transmission Line (approximately 2.1 miles long) and Private Service Road
- Point of Interconnection
- Operations and Maintenance (O&M) Building
- Private Access Road
- Service Roads, Gates, and Security Fence
- Additional Temporary Construction Areas
Boardman Solar Energy Facility

Procedural History
## Procedural History Overview

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preliminary Application for Site Certificate</td>
<td>January 13, 2017</td>
</tr>
<tr>
<td>ODOE determined Application for Site Certificate complete</td>
<td>August 29, 2017</td>
</tr>
<tr>
<td>Final Application for Site Certificate Filed</td>
<td>September 1, 2017</td>
</tr>
<tr>
<td>Public Information Meeting</td>
<td>September 20, 2017</td>
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<tr>
<td>Draft Proposed Order and Notice of Hearing Issued</td>
<td>November 13, 2017</td>
</tr>
<tr>
<td>Hearing on the Draft Proposed Order</td>
<td>December 14, 2017</td>
</tr>
</tbody>
</table>
Draft Proposed Order (DPO)

• Draft Proposed Order
  • Department issued DPO on November 13, 2017
  • Recommendation that Council approve the site certificate for the Boardman Solar Energy Facility, subject to recommended conditions

• Record of the Public Hearing
  • Opened following public notice on November 13, 2017
  • Closes at the conclusion of the hearing held on December 14, 2017
Boardman Solar Energy Facility

Oral/Written Comment Submittal
Consideration of Issues in a Contested Case

To raise an issue in a contested case proceeding, the issue must be:

• within the jurisdiction of the Council;

• raised in person or in writing before the deadline stated in the notice of the public hearing; and

• raised with sufficient specificity to afford the Council, the Department of Energy, and the applicant an adequate opportunity to respond.

To raise an issue with sufficient specificity, a person must present facts that support the person’s position on the issue.

OAR 345-015-0016(3) and OAR 345-015-0220
Conclusion of Hearing
Agenda Item C
(Information & Action Items)

Consent Calendar
Routine Business

December 15, 2017

Next: Summit Ridge Wind Farm Informational Hearing on Transfer Request [8:35 a.m.]
Agenda Item D & E
Informational Hearing and Presentation on Transfer Request

Summit Ridge Wind Farm Site Certificate Transfer Request

Informational Hearing and presentation on Transfer Request

Chase McVeigh-Walker
December 15, 2017
8:35 a.m.
Summit Ridge Wind Farm

Facility Overview
- Type of Facility: 194.4 MW wind
- Location: Wasco County
- Approved but not yet built

Site Certificate History
- Site Certificate executed and became effective on August 19, 2011
- Site Certificate amended in 2015 and 2016
- Transfer Request filed on October 23, 2017
The Department evaluated the two applicable Council Standards (Organizational Expertise and Retirement and Financial Assurance) for the Request to Transfer. Presentation of the Department’s evaluation will follow the close of the Informational Hearing.
Informational Hearing
## Transfer Procedural History

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Responsible Party</th>
<th>Date</th>
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<tbody>
<tr>
<td>Notification of Intent to Transfer Site Certificate</td>
<td>Certificate Holder</td>
<td>Sept. 18, 2017</td>
</tr>
<tr>
<td>Submittal of Written Request</td>
<td>Certificate Holder</td>
<td>Oct. 23, 2017</td>
</tr>
<tr>
<td>Notice of Transfer Request</td>
<td>ODOE</td>
<td>Nov. 8, 2017</td>
</tr>
<tr>
<td>Informational Hearing</td>
<td>ODOE</td>
<td>Dec. 15, 2017</td>
</tr>
</tbody>
</table>
Transfer Review Process
OAR 345-027-0100

Council must find that the transferee complies with:

Organizational Expertise Standard

- (OAR 345-022-0010)

Retirement and Financial Assurance Standard

- (OAR 345-022-0050)

Standards for Facilities that Emit Carbon Dioxide – Monetary Path Payment Requirement (If applicable)

- (OAR 345-024-0710(1))
Organizational Expertise

• Parent Company experience
  o Pattern Energy Group 2 LP

• Past Performance

• Existing Site Certificate Conditions
Retirement and Financial Assurance

- Site Restoration
- Financial Assurance Letter
- Legal Authority
- Existing Site Certificate Conditions
Department Recommendations
Council Action
Agenda Item F
(Information Item)

Compliance Update

December 15, 2017

Presented by:
Duane Kilsdonk, Compliance Officer
EFSC Energy Facilities

31 Site Certificates

**WIND**
- 8 Operating
- 3 Not Yet Constructed
- 1 Under Construction

**NATURAL GAS**
- 8 Operating
- 1 Not Yet Constructed
- 2 underground natural gas pipelines
- 1 underground natural gas storage facility (currently operating; amendment under construction)

**NUCLEAR**
- 2 Research Reactors
- 1 Decommissioned Nuclear Facility (Trojan)

**OTHER**
- 1 Steam Generator
- 1 Ethanol Facility
- 1 500 kV Transmission Line
- 1 Coal Facility
EFSC Energy Facilities

Legend

- EFSC_OPT

Status
- Operating
- Approved
- Decommissioned

MW
- > 1,130
- 800
- 500
- 300
- < 0
BIGLOW CANYON WIND FARM

- Operated by Portland General Electric
- 450 MW wind energy facility
- Site Certificate issued on June 30, 2006
- Operating since late December 21, 2007
- Financial Assurance = $ 16,729,000
- Located in Sherman County
- Site Boundary 25,000 acres
BOARDMAN COAL PLANT

- Operated by Portland General Electric
- 550 MW coal-fired facility
- Site Certificate issued on March 24, 1975
- Operating since August 3, 1980
- No Financial Assurance
- Located in Morrow County
- Site Boundary 5,800 acres
CARTY GENERATING STATION

- Operated by Portland General Electric
- 900 MW natural gas facility in 2 Phases
- Site Certificate issued on July 02, 2012
- Phase 1, Operating since July 29, 2016
- Financial Assurance = $8,593,560
- Located in Morrow and Gilliam counties
- Site Boundary 1,000 acres
COLUMBIA ETHANOL PROJECT

- Operated by Pacific Ethanol Columbia
- 44 million gallons per year
- Site Certificate issued on October 31, 2007
- Operating since October 2007
- Financial Assurances = $936,000
- Located in Morrow County
- Site Boundary 25 acres
COYOTE SPRINGS COGENERATION

- Operated by Portland General Electric/ Avista Corp
- 503 MW natural gas facility
- Site Certificate issue on September 16, 1994
- Operations started:
  - Unit 1- November 26, 1995
  - Unit 2- July 1, 2003
- Financial Assurance = $3,920,000
- Located in Morrow County
- Site Boundary 20 acres
EUGENE TO MEDFORD TRANSMISSION LINE

- Operated by PacifiCorp
- 500 kV transmission line
- Site Certificate issue on December 21, 1982
- Operating since October 16, 1992
- No Financial Assurance
- Located in Lane, Douglas and Jackson counties
- Site Boundary 137 miles
HERMISTON GENERATING PROJECT

- Operated by Perennial Power Holdings
- 474 MW natural gas facility
- Site Certificate issued on March 16, 1994
- Operating since July 1, 1996
- Financial Assurance = $5,419,600
- Located in Umatilla County
- Site Boundary 13 acres
HERMISTON POWER PROJECT

- Operated by Calpine
- 546 MW natural gas facility
- Site Certificate issued on March 25, 1996
- Operating since August 1, 2002
- Financial Assurance = $4,805,869
- Located in Umatilla County
- Site Boundary 17 acres
KLAMATH COGENERATION PROJECT

- Operated by Avangrid Renewables
- 525 MW natural gas facility
- Site Certificate issued on August 27, 1997
- Operating since July 2001
- Financial Assurance = $ 5,061,342
- Located in Klamath County
- Site Boundary 20 acres (with Peakers)
KLAMATH GENERATION PEAKERS

- Operated by Avangrid Renewables
- 95 MW natural gas facility
- Site Certificate issued on October 11, 2005
- Operating since 2002/exemption
- Financial Assurance = $668,629
- Located in Klamath County
- Site Boundary 20 acres (with Cogeneration Project)
KLONDIKE III WIND PROJECT

• Operated by Avangrid Renewables
• 300 MW wind energy facility
• Site Certificate issued on June 30, 2006
• Operations:
  • Phase I-October 16, 2007 (125 turbines)
  • Phase II-June 21, 2008 (51 turbines)
• Financial Assurance = $11,060,000
• Located in Sherman County
• Site Boundary 14,500 acers
LEANING JUNIPER IIA WIND POWER FACILITY

- Operated by Avangrid Renewables
- 90 MW wind energy facility
- Single Site Certificate issued on September 21, 2007
  - Amended June 21, 2013 to create two separate facilities
- Operating since June 2011
- Financial Assurances = $11,429,000 (combined with IIB)
- Located in Gilliam County
- Site Boundary 6,404 acres
LEANING JUNIPER IIB WIND POWER FACILITY

- Operated by Avangrid Renewables
- 111 MW wind energy facility
- Single Site Certificate issued on September 21, 2007 Amended June 21, 2013 to create two separate facilities
- Operating since June 2011
- Financial Assurance = $11,429,000 (combined with IIA)
- Located in Gilliam County
- Site Boundary 7,962 acres
PORT WESTWARD GENERATING PROJECT

• Operated by Portland General Electric
• 650 MW natural gas facility
• Site Certificate issued on November 8, 2002
• Operating since June 1, 2007
• Financial Assurance = $10,421,600
• Located in Columbia County
• Site Boundary 19 acres
OSU NUCLEAR RESEARCH REACTOR

- Operated by Oregon State University
- 1 MW research reactor
- Site Certificate issued on April 3, 1972
- Operating since March 1967
- No Financial Assurance
- Located in Benton County
REED NUCLEAR RESEARCH REACTOR

- Operated by REED College
- 250 kW research reactor
- Site Certificate issued on March 31, 1972
- Operating since July 1968
- No Financial Assurance
- Located in Multnomah County
SHEPHERDS FLAT CENTRAL

- Operated by Caithness & the General Electric Company
- 290 MW wind energy facility (116 turbines)
- Site Certificate issued on July 25, 2008
- Operating since August 9, 2012
- Financial Assurance = $10,268,000
- Located in Gilliam and Morrow counties
- Site Boundary 11,769 acres
SHEPHERDS FLAT NORTH

- Operated by Caithness & the General Electric Company
- 265 MW wind energy facility (106 turbines)
- Site Certificate issued on July 25, 2008
- Operating since February 20, 2012
- Financial Assurance = $8,231,000
- Located in Gilliam County
- Site Boundary 9,264 acres
SHEPHERDS FLAT SOUTH

- Operated by Caithness & the General Electric Company
- 290 MW wind energy facility (116 turbines)
- Site Certificate issued on July 25, 2008
- Operations began July 17, 2012
- Financial Assurance = $9,688,000
- Located in Gilliam and Morrow counties
- Site Boundary 15,928 acres
MIST UNDERGROUND NATURAL GAS STORAGE FACILITY

- Operated by NW Natural
- Underground natural gas storage facility
- Site Certificate issued on June 30, 1981
- In operation since August 31, 1990 (construction extensions)
- Financial Assurance = $3,930,000
- Located in Columbia County
- Site Boundary 5,472 acres permitted storage area
SOUTH MIST FEEDER PIPELINE

- Operated by NW Natural
- 80-mile natural gas pipeline
- Site Certificate issued on February 15, 1989
- Operating since 2004
- No Financial Assurance
- Located in Columbia and Washington Counties
SOUTH MIST PIPELINE EXTENSION

- Operated by NW Natural
- 62-mile natural gas pipeline
- Site Certificate issued on March 13, 2003
- Operating since September 2004
- Financial Assurance = $115,421
- Located in Washington, Clackamas and Marion Counties
SPRINGFIELD UTILITY-INDUSTRIAL ENERGY CENTER

- Operated by Eugene Water and Electric Board
- 51.2 MW steam turbine generator
- Site Certificate issued on August 7, 1975
- Operating since December 3, 1976
- Financial Assurance = N/A
- Located in Lane County
STATELINE WIND PROJECT

- Operated by NexEra Energy Resources
- 222 MW wind energy facility
- Site Certificate issued on September 14, 2001
- Financial Assurance = $11,088,000
- Located in Umatilla County
- Site Boundary 8,000 acres
TROJAN NUCLEAR POWER PLANT

- Operated by Portland General Electric
- 1,130 MW nuclear reactor
- Site Certificate issued on July 20, 1971
- Decommissioned on April 8, 2005
- No Financial Assurance
- Located in Columbia County
- Site Boundary 634 acres
Wind Turbine History by Size

Average Highest Point of a Turbine Blade by Year

- 1990 = 56 feet
- 1995 = 98 feet
- 2000 = 164 feet
- 2005 = 229 feet
- 2010 = 242 feet / Stateline Wind Project
- 2012 = 492 feet / Shepherds Flat Central Wind Project
- Future off shore = 820 feet
TOTAL EFSC FACILITY SITE BOUNDARIES
= 178 SQUARE MILES

• Portland City Limits = 145 Square Miles = to 1.23 x Portland

• Eugene City Limits = 41.5 Square Miles = to 4.29 x Eugene

• Prineville City Limits = 11.3 Square Miles = to 15.6 x Prineville

• Boardman City Limits = 4.17 Square Miles = to 42.8 x Boardman
MORNING BREAK

• 15 minute

Agenda Item G
(Action Item)

Rulemaking:
Public Health & Safety Standards
for Wind Facilities

December 15, 2017

Presented by:
Jason Sierman, Rulemaking Coordinator
Scope and Purpose of Rulemaking

• Address how the Council applies its Public Health and Safety Standards for Wind Energy Facilities to the potential risk of aircraft striking wind turbines, wind turbine blades, and wind turbine towers.

• Rules affected:
  • 345-024-0010, Public Health and Safety Standards for Wind Energy Facilities
To issue a site certificate for a proposed wind energy facility, the Council must find that the applicant:

(1) Can design, construct and operate the facility to exclude members of the public from close proximity to the turbine blades and electrical equipment.

(2) Can design, construct and operate the facility to preclude structural failure of the tower or blades that could endanger the public safety and to have adequate safety devices and testing procedures designed to warn of impending failure and to minimize the consequences of such failure.
Why Needed?

Need to consider if and how the following factors the Council considered in deciding its Final Order on the Saddle Butte Wind Park should be written into rule:

1) Evidence of a pre-existing airspace approved for high-speed, low altitude flights in close proximity to proposed locations of wind turbines;
2) Average speed of flights occurring within the airspace;
3) Experience level of the aircrew flying within the airspace;
4) Number of areas of focus and responsibilities of aircrew flying within the airspace; and
5) Impacts of any existing turbines on the airspace.
Scope and Purpose of RAC

• Receive individual input from a diverse set of people with diverse interests.

• Receive input on how proposed rule language should be drafted in order to meet the purpose of the rulemaking projects.

• Not intended to seek agreement or consensus from all participants.

• Scope of Rulemaking:
  • 345-024-0010, Public Health and Safety Standards for Wind Energy Facilities
### Participants in 11/2/17 RAC Meeting

<table>
<thead>
<tr>
<th>Members of the Public Community</th>
<th>Local/State/Regional Government</th>
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<tbody>
<tr>
<td>1 Steve Puntenney</td>
<td>7 U.S. Navy – Region Northwest</td>
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<tr>
<td>NGO/Non-Profit</td>
<td>8 Morrow County</td>
</tr>
<tr>
<td>2 Friends of the Grande Ronde Valley</td>
<td>9 Gilliam County</td>
</tr>
<tr>
<td>3 Community Renewable Energy Association (CREA)</td>
<td>10 Oregon Dept. of Aviation</td>
</tr>
<tr>
<td>Private Industry/Investor Owned Utilities</td>
<td>Consumer Owned Utilities</td>
</tr>
<tr>
<td>4 Avangrid Renewables</td>
<td>11 Umatilla Electric Cooperative</td>
</tr>
<tr>
<td>5 PacifiCorp</td>
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<td>6 Portland General Electric</td>
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<thead>
<tr>
<th>EFSC Members</th>
<th>EFSC Staff</th>
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<tbody>
<tr>
<td>12 Barry Beyeler</td>
<td>15 Jason Sierman</td>
</tr>
<tr>
<td>13 Hanley Jenkins</td>
<td>16 Max Woods</td>
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<tr>
<td>14 Betty Roppe</td>
<td>17 Esther Kooistra</td>
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<tr>
<td>17 Esther Kooistra</td>
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</table>
Issues Discussed by the RAC

• How Council interpreted and applied OAR 345-024-0010 in approving the Saddle Butte Wind Park (SBWP) (more details in later slide)

• Safety concerns w/ Military Training Routes (MTRs), aviation and wind turbines

• How the Council has addressed MTRs affecting wind facilities other than SBWP

• How developers engage w/ military entities as they scope, plan, and propose wind facilities

• How local agencies (i.e. counties) engage w/ military entities to review wind facilities and other tall structures
Issues Discussed by the RAC (cont.)

• Property rights w/ airspace, easements, when easements are procured, and regulatory takings

• The idea of including MTRs in the comprehensive plans of Oregon counties

• Who bears the burden of ensuring safety risks are adequately minimized [developers vs. members of the public themselves (i.e. pilots, drivers, pedestrians, etc.)]

• Notification of newly constructed obstructions within an air space (who notifies?, who’s aware?)
Existing rule 345-024-0010:

• Council discretion

• **Location** of the safety concern:
  – Applies to both ground dwelling and airborne safety concerns
  – No mention of “ground” or “air” in rule

• **Type** of safety concern:
  – Under -0010(1): type of safety concern is close proximity to the turbine blades and electrical equipment
  – Under -0010(2): type of safety concern is structural failure of the tower or blades

• “Exclude” in rule vs. “Protect” in statute
Exclude vs. Protect

OAR 345-024-0010 To issue a site certificate for a proposed wind energy facility, the Council must find that the applicant:
(1) Can design, construct and operate the facility to **exclude** members of the public from close proximity to the turbine blades and electrical equipment.

ORS 469.501(1) The [EFSC] shall adopt standards for the siting, construction, operation and retirement of facilities. The standards may address but need not be limited to the following subjects:
g) **Protection** of public health and safety, including necessary safety devices and procedures.

ORS 469.401(2) The site certificate or amended site certificate shall contain conditions for the **protection** of the public health and safety...

ORS 469.310 In the interests of the public health and the welfare of the people of this state, it is the declared public policy of this state that the siting, construction and operation of energy facilities shall be accomplished in a manner consistent with **protection** of the public health and safety...
There are three options for how the Council could direct staff to proceed:

1) Make **no changes** at this time and cease the rulemaking project.

2) Make **minor changes** (provide more clarity and better notice as to how the Council interprets and applies the rule) that do not substantively alter the rule. For example:
   - Adding words such as “...in the air and on the ground...”
   - Any other minor changes?

3) Make **major changes** that substantively alter the rule. For example:
   - Changing the word “exclude” to “protect”
   - Codifying the factors the Council considered when it applied the rule under the circumstances of the Saddle Butte Wind Project
   - Any other major changes?
# Rulemaking Milestones

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Date</th>
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<tbody>
<tr>
<td>EFSC Approval and Appointment of a Rulemaking Advisory Committee (RAC)</td>
<td>Sept. 22, 2017</td>
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<tr>
<td>Convene RAC Meeting #1</td>
<td>Nov. 2, 2017</td>
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<tr>
<td>Convene RAC Meeting #2 (if necessary)</td>
<td>January</td>
</tr>
<tr>
<td>EFSC Authorization to Issue Official Public Notice (if necessary)</td>
<td>December / January</td>
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<tr>
<td>Public Notice Issued (if necessary)</td>
<td>TBD</td>
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<tr>
<td>EFSC Rulemaking Hearing (if necessary)</td>
<td>TBD</td>
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</table>
Agenda Item H
(Action Item)

Rulemaking:
Phase 2 – Updates to Carbon Dioxide Stds.

December 15, 2017

Presented by:
Jason Sierman, Energy Policy Analyst
Scope and Purpose of Rulemaking

Phase 2 – Updates to CO2 Standards

- Evaluate and update the CO2 emissions standards under:
  - OAR 345-024-0570 Modification of the Standards for Base Load Power Plants;
  - OAR 345-024-0550 Standard for Base Load Gas Plants;
  - OAR 345-024-0590 Standard for Non-Base Load Power Plants; and
  - OAR 345-024-0620 Standard for Nongenerating Energy Facilities

Phase 1 – Updates to CO2 Standards (Complete and Effective 10/23/17)

- Updated monetary offset rate under OAR 345-024-0580 to $1.90 per ton of CO2
- Corrected CO2 equivalency weights for methane and nitrous oxide under OAR 345-024-0620 to, respectively, 25 and 298 pounds of CO2
Dual Purposes of CO2 Stds.

1) Encourage applicants proposing a fossil-fueled energy facility to build the most efficient facility possible.
   • Closer gross CO2 emissions rate is to the net CO2 emissions rate limit set in rule (i.e. the CO2 standard), the less the facility must offset.

2) Reduce the net amount of greenhouse gases (GHGs) attributable to fossil-fueled energy facilities sited within the Council’s jurisdiction.
   • Facilities are required to “offset” their gross CO2 emissions rate to meet the net CO2 emissions rate limit set in rule (i.e. the CO2 standard).
   • All facilities have met this offset requirement through compliance with the monetary pathway (i.e. supplying offset funds to The Climate Trust).
How the CO₂ standard is set?

Most Efficient Gas Plant in U.S.

X (lbs.CO₂/kWh)

-17% reduction

Oregon Standard For Gas Plants

Y (lbs.CO₂/kWh)

 Std.

X (gross emissions rate)

Y (net emissions rate)

Std.

-17% reduction
What amount of emissions must be offset?

Proposed Gas Plant in Oregon

Z (lbs. CO₂/kWh)

Z (gross emissions rate)

Z’s Excess Emissions (EE) Rate Above the Standard

Z’s EE = Z - Y

Z’s EE rate used to calculate offset requirement

Z’s EE (lbs. CO₂/kWh)
How is the offset requirement calculated?

Z’s EE rate used to calculate offset requirement

Z’s EE

Proposed Gas Plant in Oregon

Z

Short tons of CO₂ required to be offset

Tons of CO₂

Z’s EE × lightning bolt × 30 Years × 1 TON =

(lbs. CO₂/kWh) (annual kWh) (plant life) (1 ton/2000 lbs.)
How is the offset requirement met?

Applicants may meet offset requirements by any combination of the following:

A) Designing CO$_2$ displacement (i.e. thermal recovery w/ CHP);
B) Implementing offset projects themselves or through a 3rd party; and/or
C) Providing offset funds to a qualified organization (i.e. The Climate Trust) (the “Monetary Path”)

\[
\text{Tons of CO}_2 \times \text{Monetary Offset Rate ($/ton CO}_2) = \text{Offset funds required (U.S. dollars)}
\]
Scope and Purpose of Rulemaking

• Update Councils’ CO2 emissions standards, last updated in year 2000
• OAR 345-024-0570, Modification of the Standard for Base Load Gas Plants
  • Sets benchmark heat rate of 6,955 BTU/kWh
  • Heat Rate = Power Plant Efficiency
• Benchmark is most efficient heat rate of a CCCT operating in U.S.
• Current Std. (17% below Yr. 2000 benchmark) = 0.675 lbs. CO$_2$/kW
• Prelim evidence of U.S. CCCTs operating at heat rates below the current std.
• Proposed Std. = TBD (17% below Yr. 2017 benchmark) = ??? lbs. CO$_2$/kW
• Same CO$_2$ standard applies to:
  • OAR 345-024-0550 Standard for Base Load Gas Plants,
  • OAR 345-024-0590 Standard for Non-Base Load Power Plants, and
  • OAR 345-024-0620 Standard for Nongenerating Energy Facilities
Proposed Process

1) Staff identifies the most efficient natural gas-fired power plant operating in the U.S.
   • Statutory authority, see ORS 469.503(2)(a)

2) Staff conducts an analysis of the 13 principles listed under ORS 469.503(2)(b) and OAR 345-024-0510

3) Staff utilizes a RAC to vet the heat rate(s) staff identifies and to vet staff’s analysis of the 13 principles.
   • After receiving RAC input, staff may identify a new or different heat rate than what was initially proposed to the RAC.

4) Staff presents the Council with a summary of staff’s evaluation and a summary of the input from the RAC.
   • Staff’s presentation may include a recommendation that the existing CO2 stds. be modified, and recommendations as to what they should be modified to.
Staff recommends the Council appoint a diverse set of entities to participate on a RAC, and a total of approximately 15 entities.

Council members are encouraged to attend RAC meetings, so long as their attendance would not constitute a quorum.

<table>
<thead>
<tr>
<th>NGO/Non-Profit</th>
<th>Tribal Government</th>
<th>Local/State/Regional Government</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. NW Energy Coalition (NWEC)</td>
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<tr>
<td>5. Sierra Club</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private Industry/Investor Owned Utilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Avangrid Renewables</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Calpine Hermiston Power</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. NW &amp; Intermountain Power Producers Coalition (NIPPC)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. NW Natural</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. PacifiCorp</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Portland General Electric (PGE)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Council may appoint any entity or person they wish, and are not limited to those listed*
Scope and Purpose of RAC

• Review results of staff’s search

• Review staff’s consideration and balancing of the 13 principles listed under ORS 469.503(b) and OAR 345-024-0510

• Provide input to staff regarding staff’s search and evaluations
## Rulemaking Milestones

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>EFSC Approval and Appointment of a Rulemaking Advisory Committee (RAC)</td>
<td>December 15, 2017</td>
</tr>
<tr>
<td>Introductory Phone Meeting w/ RAC</td>
<td>January</td>
</tr>
<tr>
<td>Convene RAC Meeting #1</td>
<td>February</td>
</tr>
<tr>
<td>Convene RAC Meeting #2 (if necessary)</td>
<td>March</td>
</tr>
<tr>
<td>EFSC Authorization to Issue Official Public Notice</td>
<td>March / April</td>
</tr>
<tr>
<td>Public Notice Issued</td>
<td>TBD</td>
</tr>
<tr>
<td>EFSC Rulemaking Hearing</td>
<td>TBD</td>
</tr>
</tbody>
</table>
Council Deliberation and Decision

Purpose and Scope of Rulemaking
1) Approve the purpose and scope for this rulemaking project
2) Change the purpose and scope for this rulemaking project

Purpose and Scope of RAC (if appointing one)
1) Approve the purpose and scope for a RAC
2) Change the purpose and scope for a RAC

Appoint a RAC
1) Appoint a RAC composed of the entities and people presented by staff.
2) Appoint a RAC w/ changes to the entities and people presented by staff.
3) Not appoint a RAC
Agenda Item I
(Action Item w/ Public Comment)

2018 Rulemaking Schedule

December 14-15, 2017

Presented by:
Jason Sierman, Energy Policy Analyst
<table>
<thead>
<tr>
<th>Subject Matter</th>
<th>Type</th>
<th>Early Public Participation</th>
<th>Target Timeframe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrative Updates see ORS 183.335(7)</td>
<td>Administrative</td>
<td>n/a</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Periodic Housekeeping</td>
<td>Housekeeping</td>
<td>None</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Amendment Processes</td>
<td>Process</td>
<td>Public Workshop(s) RAC</td>
<td>Completed 10/24/17</td>
</tr>
<tr>
<td>Fish &amp; Wildlife Habitat, Threatened &amp; Endangered Species (aka Sage-grouse)</td>
<td>Standards</td>
<td>None</td>
<td>Completed 3/8/17</td>
</tr>
<tr>
<td>Structural &amp; Geologic</td>
<td>Standards</td>
<td>None</td>
<td>Completed 10/18/17</td>
</tr>
<tr>
<td>Phase 1 – Updates to Carbon Dioxide Stds.</td>
<td>Standards</td>
<td>None</td>
<td>Completed 10/23/17</td>
</tr>
<tr>
<td>Public, Health, &amp; Safety for Wind Facilities</td>
<td>Standards</td>
<td>RAC</td>
<td>Q2-2017</td>
</tr>
<tr>
<td>Phase 2 – Updates to Carbon Dioxide Stds.</td>
<td>Standards</td>
<td>RAC</td>
<td>Q3-2017, Q1-Q2 2018</td>
</tr>
<tr>
<td>General Compliance</td>
<td>Compliance, Standards</td>
<td>RAC</td>
<td>Q4-2017, Q1-Q2 2018</td>
</tr>
</tbody>
</table>
Prioritization Process

What staff does:
- Collects rulemaking ideas (ongoing)
- Analyzes ideas
- Groups ideas into potential rulemaking projects
- Creates an overview of each potential rulemaking project (see Staff Report)
- Recommends whether each rulemaking would benefit from early public participation or not
- Recommends an annual schedule
Early Public Participation?

– Staff may recommend early public participation in rulemakings where:
  • Staff knows there is a high level of interest from outside stakeholders on the scope and subject of the rulemaking, or
  • Staff is unclear on a concept and/or proposed rule language

– Otherwise, staff may recommend no early public participation
## Early Public Participation?

<table>
<thead>
<tr>
<th>No Early Public Participation</th>
<th>Early Public Participation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Process Steps</strong></td>
<td><strong>Process Steps</strong></td>
</tr>
<tr>
<td>Staff Drafts Proposed Language</td>
<td>Council Approves Pub. Part. Process*</td>
</tr>
<tr>
<td>EFSC Authorizes Staff to File Notice*</td>
<td>Public Workshop(s)</td>
</tr>
<tr>
<td>Staff Issues Notice</td>
<td>Rulemaking Advisory Committee</td>
</tr>
<tr>
<td>Public Comment Period</td>
<td>Staff Drafts Proposed Language</td>
</tr>
<tr>
<td>Public Hearing*</td>
<td>EFSC Authorizes Staff to File Notice*</td>
</tr>
<tr>
<td><strong>Hearing Officer Report</strong></td>
<td>Staff Issues Notice</td>
</tr>
<tr>
<td>EFSC Adopts Final Rule Language*</td>
<td>Public Comment Period</td>
</tr>
<tr>
<td>Staff Files Final Rule Language</td>
<td>Public Hearing*</td>
</tr>
<tr>
<td><strong>Bold = optional</strong></td>
<td><strong>Hearing Officer Report</strong></td>
</tr>
<tr>
<td>* = EFSC Meeting</td>
<td>EFSC Adopts Final Rule Language*</td>
</tr>
<tr>
<td></td>
<td>Staff Files Final Rule Language</td>
</tr>
</tbody>
</table>

* = EFSC Meeting
# 2018 Rulemaking Schedule

<table>
<thead>
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<td>Standards</td>
<td>RAC</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Phase 2 – Updates to Carbon Dioxide Stds.</td>
<td>Standards</td>
<td>RAC</td>
<td>Q1 – Q2</td>
</tr>
<tr>
<td>General Compliance</td>
<td>Compliance, Standards, Process</td>
<td>RAC</td>
<td>Q1 – Q2</td>
</tr>
<tr>
<td>Solar PV - Single Energy Facility</td>
<td>Standards/Definitions</td>
<td>Public Workshop RAC</td>
<td>Q2 – Q3</td>
</tr>
<tr>
<td>Scenic Resources, Protected Areas, &amp; Property Owner Notification</td>
<td>Standards</td>
<td>None</td>
<td>Q3 – Q4</td>
</tr>
<tr>
<td>Exemptions from Requiring a Site Certificate</td>
<td>Standards</td>
<td>RAC</td>
<td>Q4</td>
</tr>
</tbody>
</table>
Administrative Updates

**Description:** Minor corrections to rules that do not require a formal rulemaking process.

**Rulemaking Type:** Administrative (no formal rulemaking)

**Staff Recommendation:**
- Allow staff to work on administrative updates at staff’s discretion
Periodic Housekeeping

**Description:** Minor changes to rules that require a formal rulemaking process.

**Rulemaking Type:** Housekeeping

**Staff Recommendation:**
- Allow staff to use its discretion in determining when to ask the Council for authorization to issue official notice of housekeeping rulemakings and allow staff to draft proposed language ahead of the Council meeting where staff asks for authorization to issue official notice.
In Process Rulemakings

Public Health and Safety Standards for Wind Energy Facilities

Phase 2 – Updates to CO2 Emissions Standards
General Compliance

Description: Establish improved compliance tools to better support ongoing compliance activities.

Rulemaking Type: Compliance, Standards, Process

Staff Recommendation:
- Target Timeframe Q1-Q2 2018
- Early public participation by appointing a RAC
Solar PV – Single Energy Facility

Description: Address how EFSC determines what constitutes a single solar PV energy facility.

Rulemaking Type: Standards, Process, Compliance

Staff Recommendation:
• Target Timeframe Q2-Q3 2018
• Early public participation by convening Public Workshop(s) and appointing a RAC
Scenic Resources, Protected Areas, and Property Owner Notification

**Description:** Address issues related to Scenic Resources standard, Protected Areas standard, and property owner notification requirements.

**Rulemaking Type:** Standards, Process, Compliance

**Staff Recommendation:**
- Target timeframe Q3-Q4 2014
Exemptions from Requiring a Site Certificate

**Description:** Evaluate potential updates to the exemption process.

**Rulemaking Type:** Process

**Staff Recommendation:**
- Proposed implementation Q4 2018
- Early public participation by appointing a RAC
<table>
<thead>
<tr>
<th>Subject</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHS Wind Facilities</td>
<td>Active</td>
</tr>
<tr>
<td>Phase 2 - Update CO2 Stds.</td>
<td>Active</td>
</tr>
<tr>
<td>Housekeeping</td>
<td>Inactive (TBD)</td>
</tr>
<tr>
<td>General Compliance</td>
<td>Inactive</td>
</tr>
<tr>
<td>Solar PV - Single Facility</td>
<td>Inactive</td>
</tr>
<tr>
<td>Scenic Resources, Protected Areas, &amp; Prop. Owner Notice</td>
<td>Inactive</td>
</tr>
<tr>
<td>Exemptions from Requiring Site Certificate</td>
<td>Inactive</td>
</tr>
</tbody>
</table>
Council Deliberation and Decision

1) Approve the 2018 rulemaking schedule as presented by staff.

2) Approve a 2018 rulemaking schedule different from that proposed by staff.
This time is reserved for the public to address the Council regarding its:

2018 Rulemaking Schedule
AFTERNOON BREAK

Next up:
Agenda J: Annual Agenda Topics
Agenda K: Election of Officers
Agenda L: Boardman Solar Council
Review of the DPO
Agenda Item J
(Information Item)

Annual Agenda Topics

December 15, 2017

Presented by:
Maxwell Woods, Senior Policy Advisor
Agenda Item K
(Information Item)

Election of Officers

December 15, 2017

Presented by:
Todd Cornett, Council Secretary
Boardman Solar Energy Facility,
Application for Site Certificate:
Council Review of Draft Proposed Order

December 15, 2017

Presented by:
Katie Clifford, Senior Siting Analyst
Thanks!

• Confederated Tribes of the Umatilla Indian Reservation
• Morrow County
• Gilliam County
• OR Dept. of Fish & Wildlife
• OR Dept. of Transportation
• OR State Historic Preservation Office
• OR Dept. of Geology & Mineral Industries
• OR Public Utility Commission
• OR Dept. of State Lands
• OR Dept. of Land Conservation & Development
• OR Dept. of Environmental Quality
Overview of Presentation

• Proposed site and facility

• Procedural history

• Review of Draft Proposed Order & Council Discussion

• Next Steps

Photo credit: cablinginstall.com
Boardman Solar Energy Facility

Proposed Site and Facility
Facility Background

** Applicant:** Boardman Solar Energy LLC (Invenergy LLC)

**Type of Facility:** Photovoltaic Solar Facility

**Location:**
- Morrow County: 75 MW photovoltaic solar array
- Gilliam County: 115 kV, 2.1 mile transmission line (related and supporting facility)

**Acreage:** Approximately 798 acres
Related and Supporting Facilities

• Underground Electrical Collection System
• Substation, Control House, and Generator Step-up Transformer
• 115 kV Transmission Line (approximately 2.1 miles long) and Private Service Road
• Point of Interconnection
• Operations and Maintenance (O&M) Building
• Private Access Road
• Service Roads, Gates, and Security Fence
• Additional Temporary Construction Areas
Boardman Solar Energy Facility

Procedural History
## Procedural History Overview

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preliminary Application for Site Certificate</td>
<td>January 13, 2017</td>
</tr>
<tr>
<td>ODOE determined Application for Site Certificate complete</td>
<td>August 29, 2017</td>
</tr>
<tr>
<td>Final Application for Site Certificate Filed</td>
<td>September 1, 2017</td>
</tr>
<tr>
<td>Public Information Meeting</td>
<td>September 20, 2017</td>
</tr>
<tr>
<td>Draft Proposed Order and Notice of Hearing Issued</td>
<td>November 13, 2017</td>
</tr>
<tr>
<td>Hearing on the Draft Proposed Order</td>
<td>December 14, 2017</td>
</tr>
</tbody>
</table>
Draft Proposed Order (DPO)

• Draft Proposed Order
  • Department issued DPO on November 13, 2017
  • Recommendation that Council approve the site certificate for the Boardman Solar Energy Facility, subject to recommended conditions

• Record of the Public Hearing
  • Opened following public notice on November 13, 2017
  • Closed at the conclusion of the hearing held on December 14, 2017
Boardman Solar Energy Facility

Review of Draft Proposed Order
General Standard of Review
(OAR 345-022-0000; DPO section IV.A.)

• Deadlines:
  • Commence construction within 3 years after site certificate executed
  • Complete construction within 3 years after construction commencement

• Mandatory and Site Specific Conditions
Organizational Expertise
(OAR 345-022-0010; DPO section IV.B.)

• Subsidiary of Invenergy LLC

• Parent company’s experience with habitat mitigation projects

• Condition requires evidence that Applicant has secured coverage through permits obtained by third-party contractor(s)
Structural Standard
(OAR 345-022-0020; DPO Section IV.C.)

- Applicant characterized the site for maximum considered earthquake, landslide, and other seismic and non-seismic hazards

- Conditions would require:
  - pre-construction geological & geotechnical investigation
  - facility designed, engineered, & constructed in accordance with current building codes

Photo credit: LinkedIn.com
Soil Protection  
(OAR 345-022-0022; DPO Section IV.D.)

• ~486 acres of permanent disturbance
• ~59 acres of temporary disturbance

• Conditions would require certificate holder to:
  • Conduct work in compliance with NPDES 1200-C permit and Erosion & Sediment Control Plan
  • Submit for approval a topsoil management plan
  • Submit Spill Prevention, Control & Countermeasure Plan
  • Implement a Hazardous Materials Spill Prevention Program
Land Use
(OAR 345-022-0030; DPO Section IV.E.)

• Applicant seeks a Council land use determination under ORS 469.504(1)(b)
• Special advisory groups: Morrow County and Gilliam County governing bodies
• Exclusive Farm Use zone
• Analysis of compliance with:
  • Morrow County applicable substantive criteria
  • Gilliam County applicable substantive criteria
  • Directly applicable state statutes and administrative rules
    • Statewide Planning Goal 3 exception request
• Issues raised on the record of the Draft Proposed Order
Land Use
(OAR 345-022-0030; DPO Section IV.E.)

• Non-compliance with a statewide planning goal requires a determination by the Council that an exception is warranted under ORS 469.504(2)

• Facility would not comply with Statewide Planning Goal 3:
  • Solar PV facility would preclude more than **12 acres of high value farmland** from use as a commercial agricultural enterprise [OAR 660-033-0130(38)(f)]
  • Solar PV facility would preclude more than **20 acres of arable land** from use as a commercial agricultural enterprise [OAR 660-033-0130(38)(g)]
ORS 197.732 – LCDC’s exceptions process

(2) A local government may adopt an exception to a goal if: ***

(c) The following standards are met:

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

(B) Areas that do not require a new exception cannot reasonably accommodate the use;

(C) The long term environmental, economic, social and energy consequences resulting from the use at the proposed site with measures designed to reduce adverse impacts are not significantly more adverse than would typically result from the same proposal being located in areas requiring a goal exception other than the proposed site; and

(D) The proposed uses are compatible with other adjacent uses or will be so rendered through measures designed to reduce adverse impacts.

ORS 469.504 – EFSC’s exceptions process

(2)....the council may take an exception to a goal if the council finds:***

(c) The following standards are met:

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

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

(C) The proposed facility is compatible with other adjacent uses or will be made compatible through measures designed to reduce adverse impacts.
• OAR 345-022-0030(4):

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

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

b) The land subject to the exception is irrevocably committed as described by the rules of the Land Conservation and Development Commission to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable; or
Land Use
(OAR 345-022-0030; DPO Section IV.E.)

• OAR 345-022-0030(4) [continued]:
  (c) The following standards are met:
    (A) Reasons justify why the state policy embodied in the applicable goal should not apply;

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

    (C) The proposed facility is compatible with other adjacent uses or will be made compatible through measures designed to reduce adverse impacts.
Land Use
(OAR 345-022-0030; DPO Section IV.E.)

Council’s OAR 345-022-0030(4)(c)(A) Reasons justify why the state policy embodied in the applicable goal should not apply

• LCDC’s OAR 660-004-0022(3)(c):
  The use would have a significant comparative advantage due to its location (e.g., near existing industrial activity, an energy facility, or products available from other rural activities), which would benefit the county economy and cause only minimal loss of productive resource lands. Reasons for such a decision should include a discussion of the lost resource productivity and values in relation to the county's gain from the industrial use, and the specific transportation and resource advantages that support the decision.
Land Use
(OAR 345-022-0030; DPO Section IV.E.)

- OAR 345-022-0030(4)(c)(B) & (C)

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

(C) The proposed facility is compatible with other adjacent uses or will be made compatible through measures designed to reduce adverse impacts.
## Protected Areas
*(OAR 345-022-0040; DPO Section IV.F.)*

<table>
<thead>
<tr>
<th>Protected Area</th>
<th>Distance from Site Boundary (in miles)</th>
<th>Direction</th>
<th>Protected Area Designation Basis (OAR Reference)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Willow Creek Wildlife Management Area</td>
<td>0.5</td>
<td>West</td>
<td>345-022-0040(1)(p)</td>
</tr>
<tr>
<td>Horn Butte Area of Critical Environmental Concern</td>
<td>2.1</td>
<td>West</td>
<td>345-022-0040(1)(o)</td>
</tr>
<tr>
<td>Arlington Wayside</td>
<td>6.3</td>
<td>West</td>
<td>345-022-0040(1)(h)</td>
</tr>
<tr>
<td>Umatilla National Wildlife Refuge</td>
<td>6.1</td>
<td>Northeast</td>
<td>345-022-0040(1)(d)</td>
</tr>
<tr>
<td>Boardman Research Natural Area</td>
<td>11.8</td>
<td>Southeast</td>
<td>345-022-0040(1)(o)</td>
</tr>
<tr>
<td>Coyote Springs Wildlife Area</td>
<td>15</td>
<td>East</td>
<td>345-022-0040(1)(p)</td>
</tr>
<tr>
<td>Lindsay Prairie Preserve</td>
<td>19.8</td>
<td>Southeast</td>
<td>345-022-0040(1)(i)</td>
</tr>
<tr>
<td>Umatilla Fish Hatchery</td>
<td>19.9</td>
<td>Northeast</td>
<td>345-022-0040(1)(f)</td>
</tr>
</tbody>
</table>
Retirement & Financial Assurance (OAR 345-022-0050; DPO Section IV.G.)

- Applicant’s retirement cost estimate: $4.4 million
- Department’s retirement cost estimate: $8.78 million
- Applicant provided letter from Wells Fargo Bank to demonstrate financial assurance
- Condition would require submittal of bond or letter of credit before construction
- Condition would require restoration if construction or operation is permanently ceased
Fish & Wildlife Habitat  
(OAR 345-022-0060; DPO Section IV.H.)

- No Category 1, 2, 3, 5, or 6 impacted
- Category 4 habitat impacted:
  - 486 acres permanently disturbed
  - 59 acres temporarily disturbed
  \[=545 \text{ acres total disturbance}\]

- Plans
  - Draft Habitat Mitigation Plan
  - Draft Revegetation and Noxious Weed Control Plan
  - Wildlife Monitoring and Adaptive Management Plan

Photo credit: ODFW
Threatened & Endangered Species (OAR 345-022-0070; DPO Section IV.I.)

- State-listed species with potential to occur in analysis area:
  - Chinook salmon – Snake River (fall run)
  - Chinook salmon – Snake River (spring/summer run)
  - Washington ground squirrel
  - Lawrence’s milkvetch

- Condition requiring pre-construction survey for listed species
Facility would be visible from only two of the six scenic resources:

- Blue Mountain Scenic Byway – 1.2 mi west
- Lewis and Clark Trail Scenic Byway – 1.3 mi north

Distance, intermittent views, vegetative and topographic screening

Glare-reducing technology for solar modules

Photo credit: https://traveloregon.com/
Historic, Cultural and Archaeological Resources
(OAR 345-022-0090; DPO Section IV.K.)

- 2016 records search and surveys
- 1 National Register of Historic Places-eligible resource in site boundary
- Direct disturbance avoided
- Archaeological monitor during construction
- Monitoring Plan and Inadvertent Discovery Plan
- Agreement between the Confederated Tribes of the Umatilla Indian Reservation and the Applicant
Recreation
(OAR 345-022-0100; DPO Section IV.L.)

• 5 “important” recreational opportunities identified
• Assessment of loss of use, impacts from noise and traffic, and visual impacts
• Willow Creek Wildlife Area
  • Upgrades to portion of access road; temporary access impacts
  • Applicant commits to providing alternate access during construction

Photo credit: ODFW
Public Services
(OAR 345-022-0110; DPO Section IV.M.)

- Approx. 590 construction vehicle trips per day; less with carpooling
- Condition requiring Construction Traffic Management Plan
- Solar modules with glare reduction technology

Photo credit: autoline.info
Waste Minimization
(OAR 345-022-0120; DPO Section IV.N.)

• Conditions requiring
  • Recycling solar panels
  • Construction Waste Management Plan

• Conditions in other sections of DPO protect against impacts from wastewater disposal and chemical spills

Photo credit: pvsolarreport.com
Siting Standards for Transmission Lines (OAR 345-024-0090; DPO Section IV.P.)

- Modeling results show proposed 115-kilovolt transmission line would not exceed 9-kV per meter at one meter above ground level.
- Conditions to reduce the risk of induced current and nuisance shocks, and meet Oregon Public Utilities Commission’s reporting requirements.

Photo credit: asisrunningshoes.com
Other Applicable Regulatory Requirements Under Council Jurisdiction (DPO Section IV.Q.)

• Noise Control Regulations (OAR 340-035-0035)
  • Closest noise sensitive receptors:
    • >2 miles from solar array and substation
    • >1 mile away from transmission line
  • Would comply with Oregon Department of Environmental Quality noise regulations for industry and commerce

• Removal-fill permit (ORS 196.795-990)
  • Permit not required

• Water rights
  • Water rights not required
Boardman Solar Energy Facility

Council Discussion
Boardman Solar Energy Facility

Next Steps
Public Comment

This time is reserved for the public to address the Council regarding any item within the Council’s jurisdiction that is not otherwise closed for comment.
Adjourn

Next Council Meeting (anticipated):
• January 18-19, 2018
• Boardman, OR