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WHISTLING RIDGE ENERGY LLC
DAUTIS D. PEARSON
PREFILED TESTIMONY
EXHIBIT NO. 9.00

BEFORE THE STATE OF WASHINGTON
ENERGY FACILITY SITE EVALUATION COUNCIL

In the Matter of Application No. 2009-01: WHISTLING RIDGE ENERGY LLC; WHISTLING RIDGE ENERGY PROJECT	EXHIBIT NO. 9.00
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APPLICANT'S PREFILED DIRECT TESTIMONY
WITNESS #10: DAUTIS D. PEARSON

Q Please state your name and business address.

A My name is Dautis D. Pearson, and my business address is 111 SW Columbia, Suite 1500, Portland, Oregon 97201-5850.

Q What is your present occupation and profession, and what are your duties and responsibilities?

A I am a Principal Environmental Planner and NEPA/ESA Coordinator with URS Corporation, an international environmental and engineering consulting firm providing

1 services to organizations such as Whistling Ridge Energy LLC. URS Corporation
2 assists organizations in analyzing environmental impacts and land use compatibility of
3 projects such as the Whistling Ridge Energy Project. I have 25 years of experience in
4 land management planning and NEPA/SEPA environmental preparation. My duties
5 on this Project were to provide recreation and visual baseline information and impact
6 assessment. In that capacity, I assisted in the preparation of the Application for Site
7 Certification for this Project.

8 Q Please identify what has been marked for identification as Exhibit No. 9.01.

9
10 A Exhibit No. 9.01 is a résumé of my education background and employment
11 experience.

12
13 Q Are you sponsoring any portions of the Application for Site Certification for the
14 Whistling Ridge Energy Project?

15
16 A Yes. I am sponsoring the following sections for which I was primarily responsible for
17 the analysis and development:

18 Section 4.2.2 Light and Glare

19 Section 4.2.3 Visual (not including the visual simulations that were
20 done by GeoDataScape)

21 Section 4.2.4 Recreation

22
23 Q Are you sponsoring any appendices or other documents that are part of the Application
24 for Site Certification?

25
26

1 A No.

2

3 Q Are you familiar with the identified sections of the Application for Site Certification?

4

5 A Yes.

6

7 Q Did you prepare these sections, or, if not, did you direct and/or supervise their
8 preparation?

9

10 A Yes.

11

12 Q Is the information in these sections within your area of authority and/or expertise?

13

14 A Yes.

15

16 Q Are the contents of these sections of the Application for Site Certification either based
17 upon your own knowledge, or upon evidence, such as studies and reports that
18 reasonably prudent persons in your field are accustomed to rely on in the conduct of
19 their affairs?

19

20

21 A Yes.

22

23 Q To the best of your knowledge, are the contents of these sections of the Application
24 for Site Certification true?

24

25

26

1 A Yes.

2

3 Q Do you incorporate the facts and contents of these sections as part of your testimony?

4

5 A Yes.

6

7 Q Are you able to answer questions under cross examination regarding these sections?

8

9 A Yes.

10

11 Q Do you sponsor the admission into evidence of these sections of the Application for
12 Site Certification?

13

14 A Yes.

15

16 Q Are there any modifications or clarifications to be made to those portions of the
17 Application for Site Certification that you are sponsoring?

18

19 A Yes. I would like to provide clarification concerning the viewpoints selected for
20 analysis in the Application, which viewpoints are also designated as Key Viewing
21 Areas (KVAs) in Title 22 of the Skamania County Code (SCC), and which KVAs
22 were not selected for analysis in the Application. SCC Title 22, which is Skamania
23 County's Columbia River Gorge National Scenic Area ordinance, defines KVAs as
24 "those portions of important public roads, parks, or other vantage points within the
25 scenic area from which the public views scenic area landscapes." It lists the following
26 26 KVAs:

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1. In general and special management areas:

- a. Historic Columbia River Highway;
- b. Crown Point;
- c. Interstate 84, including rest stops;
- d. Multnomah Falls;
- e. Washington State Route 14;
- f. Beacon Rock;
- g. Panorama Point Park;
- h. Cape Horn;
- i. Dog Mountain Trail;
- j. Cook-Underwood Road;
- k. Rowena Plateau and Nature Conservancy Viewpoint;
- l. Portland's Women's Forum State Park;
- m. Bridal Veil State Park;
- n. Larch Mountain;
- o. Rooster Rock State Park;
- p. Bonneville Dam Visitor Center;
- q. Columbia River;
- r. Washington State Route 141;
- s. Washington State Route 142;
- t. Oregon Highway 35;
- u. Sandy River;
- v. Pacific Crest Trail.

2. In special management areas only:

- a. Old Washington State Route 14 (County Road 1230);
- b. Wyeth Bench Road;
- c. Larch Mountain Road;
- d. Sherrard Point on Larch Mountain

The Application analyzed potential impacts from 21 viewpoints (Table 4.2-5 of the

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Application), including the nine KVAs from which the Project would be visible, eight other viewpoints within the Scenic Area, and four viewpoints outside the Scenic Area. The following table identifies whether each of the 26 KVAs was analyzed in the Application, and if not, the rationale, either due to views being blocked by geological features, or due to distance from the Project site.

SCC KVA	Analyzed in SCA?	SCA Viewpoint	If not, why?
Historic Columbia River Highway	Yes	Viewpoint 19: Columbia River Highway	
Crown Point	No		Crown Point is on the west end of the CRGNSA; project area is outside of the 30 mile views of the Gorge from Crown Point
Interstate 84, including rest stops	Yes	Viewpoint 11: I-84 Eastbound Viewpoint 13: I-84 Westbound	
Multnomah Falls	No		Project area is on the north side of the Columbia River, approximately 35 - 40 miles to the northeast from the Falls
Washington State Route 14	No		Section of SR 14 nearest the project area has steep hills to the north, which block views of the project area
Beacon Rock	No		Views of the project area from Beacon Rock are blocked by steep hills to the northeast and forested areas
Panorama Point Park	Yes	Viewpoint 10: Panorama Point	
Cape Horn	No		Located at the west end of the CRGNSA, over 30 miles to the west of the project area
Dog Mountain Trail	No		Views of project from Dog Mountain Trail would be blocked by Cook Hill
Cook-Underwood Road	Yes	Viewpoint 4: Ausplund Road. Cook-Underwood Road Viewpoint 22: Cook-Underwood Road intersection with King Road	

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Rowena Plateau and Nature Conservancy Viewpoint	No		Rowena Plateau is located approximately 35 miles east of the project area on the south side of the Columbia
Portland's Women Forum State Park	No		Located west of Crown Point; project area would be more than 40 miles to the northwest
Bridal Veil State Park	No		Project area is on the north side of the Columbia River, approximately 40 - 45 miles to the northeast from the Falls
Larch Mountain	No		Larch Mountain is on the south side of the Columbia River. The summit is approximately 28 miles to the southwest of the project area
Rooster Rock State Park	No		Rooster Rock is on the west end of the CRGNSA on the north side of the Columbia River; project area is more than 40 miles to the northeast and views would be blocked by forested hillsides
Bonneville Dam Visitor Center	No		Views of the project area from Bonneville Dam Visitor Center are blocked by steep hills to the northeast and forested areas
Columbia River	No		The project site is located north of the Columbia River. Rather than analyzing views from a moving vessel on the Columbia River, a number of viewpoints were selected on either side of the Columbia as representative of locations where the project could be seen.
Washington State Route 141	Yes	Viewpoint 1: State Highway 141/Pucker Huddle Viewpoint 3: Husum, Highway 141 north	
Washington State Route 142	No		State Route 142 intersects with SR 14 nine miles east of Bingen and then continues in a northeasterly direction farther away from the project area. Views of the project area, if visible, would be more remote than the views analyzed from State Route 141 (see viewpoints 1 and 3)
Oregon Highway 35	Yes	Viewpoint 20: Highway 35	

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Sandy River	No		Sandy River flows into the Columbia from the south at a location south of Camas, more than 45 miles to the west of the project area
Pacific Crest Trail	No		The Pacific Crest Trail traverses through the CRGNSA at Cascade Locks and to the west of Stevenson; steep and forested hillsides would block views of the project area from the trail within the CRGNSA
Old Washington State Route 14 (County Road 1230)	No		Old Washington State Route 14, also called the Lyle White Salmon Road, intersects with State Route 14 approximately 4 miles east of Bingen. This would be more than approximately 11 miles east of the project site. Views of the project area would be blocked by intervening topography and forested lands.
Wyeth Bench Road	Yes, approximate location	Viewpoint 13: I-84 Westbound	According to the Friends of the Columbia River Gorge website (http://hcrh.org/hwyneeds.html): Between Cascade Locks and Wyeth there is little of the original highway remaining. Interstate 84 and the small remaining piece of HCRH are on a massive landslide. The paved Hood River County road, south of Interstate 84, is variously referred to as Wyeth Bench Road or Herman Creek Road.
Larch Mountain Road	No		Larch Mountain is on the south side of the Columbia River. The summit is approximately 28 miles to the southwest of the project area
Sherrard Point on Larch Mountain	No		Larch Mountain is on the south side of the Columbia River. The summit is approximately 28 miles to the southwest of the project area

Also, the discussion of road improvements within the Scenic Area in Section 2.3.4.3 of the Application should be removed.

1 Q Would you please summarize the existing light conditions of the Project site?

2

3 A The Project site and surrounding area are relatively dark at night with low levels of
4 ambient lighting. The primary light sources are from the small residential areas
5 nearby and ambient light from cities and towns and industry along the Columbia River
6 Gorge. The major sources of existing light come from outdoor lights at the residential
7 properties and headlights on the surrounding roads. These are considered minor light
8 sources because of their low density.

8

9

10 Q What changes in ambient lighting would occur during the construction period?

11

12 A Most construction would occur during daylight hours; however, minimal lighting
13 would be used on the site at night for safety purposes.

14

15 Q How would you rate these construction lighting impacts?

16

17 A Impacts would be short-term, lasting through the one-year construction period, and
18 would be negligible or minimal.

19

20 Q How would the Project be lighted during operation?

21

22 A In response to the FAA aviation safety lighting requirements, the wind turbines must
23 be marked with lights for nighttime lighting. Under recently released guidelines, the
24 FAA no longer requires daytime lighting of the turbines if the turbines are painted a
25 non-reflective flat neutral gray or light color. Whistling Ridge Energy LLC is
26 proposing to paint the turbines a non-reflective flat neutral gray or light color, and is

1 not proposing to install white daytime aviation warning lights unless required by FAA
2 as part of the No Hazard Determination.

3 Nighttime lighting would be limited to the minimum allowed by the FAA,
4 which would likely consist of two lights on the first and last turbine of every string,
5 and two lights on turbines located every 1,000 to 1,400 feet between the ends of the
6 strings. Based on these parameters, the number of red nighttime aviation warning
7 lights for the proposed Project would be approximately 24 lights.

8 The flashing red lights would add a new visual element into the Project area's
9 nighttime landscape. The flashing red lights would be most noticeable within one
10 mile of the Project and would be visible at night from residential properties in these
11 areas, including some residents on or near the hillside east of the site, and some
12 residents across the Columbia River in Oregon.

13 Q Did you prepare visual simulations of these flashing red lights?

14
15 A Simulations were not developed for nighttime conditions. Night simulations are
16 inherently inaccurate, since they do not show the periodic flashing of the air warning
17 lights, which is the impact most often mentioned. Night simulations are not typically
18 performed as part of the analysis of wind power projects, and have not been requested
19 by EFSEC.

20
21 Q What other lights from the Project would be visible at night?

22
23 A Other Project facilities that would require outdoor lighting at night for operational
24 safety and security include the proposed operations and maintenance facility and
25 substations. These facilities would create sources of light in areas where there is no
26 nighttime lighting other than vehicle headlights and would contribute to the overall

1 increase of nighttime illumination in the Project area. Sensors and switches would be
2 used to keep lights turned off when lighting would not be required. All lights would
3 be hooded and directed to minimize backscatter and illumination of areas outside the
4 Operations and Maintenance area and the substation sites.

5
6 Q How would you rate the change in overall ambient lighting?

7
8 A The facility is expected to make a slight contribution to overall ambient light levels in
9 the immediate vicinity, which would constitute a minimal change to residents within
10 one mile of the site.

11
12 Q Would you please summarize the existing glare conditions of the Project site?

13
14 A There are no reflective objects or facilities in the Project area that provide a source for
15 glare, however there could be glare from occasional timber harvest activities such as
16 truck movement and potential helicopter harvest.

17
18 Q In your opinion would the Project create glare during construction or operations?

19
20 A If any glare were to occur, it would be minimal. Most construction would occur
21 during daylight hours, minimizing construction lighting during hours of darkness.
22 With the proposed daytime construction hours, and the relative remoteness of the
23 Project site, glare impacts during construction are not anticipated.

24 As a safety requirement, the operations and maintenance building would be
25 illuminated at night. Because the building is located away from commercial or
26 residential development, and there are few neighboring properties, light and glare

1 impacts on are expected to be negligible and with topography and forested vegetation
2 would be partially screened.

3 During the day, potential glare impacts would be minimal because of the
4 planned use of non-reflective earth-tone/light paint colors on exterior building or
5 facility surfaces. There would be no anticipated glare impacts to vehicular drivers
6 using I-84, SR 141, SR 14, or local access roads.

7
8 Q Has the Applicant proposed mitigation measures for light and glare?

9
10 A Yes, proposed mitigation measures are outlined in Section 4.2.2.5 of the Application.
11 These measures include restricting lighting at the operations and maintenance facility
12 and substation to the minimal required lighting, and assuring that all lighting is
13 appropriately hooded and directed downward into the areas where it is needed. With
14 these measures in place, the potential for the buildings to create skyglow or
15 backscatter would be limited and considered a negligible impact.

16 Q Would you please summarize the Application's information on shadow flicker?

17
18 A Shadow flicker is a measure of changes in light intensity in the area. In the Project
19 area, light intensity changes as a result of movement of the sun through the trees and
20 other vertical land forms. This light reflects and changes in intensity as the sun moves
21 to differing quadrants, which are seasonally different and are considered slow in
22 movement and intensity. Beyond these changes in light intensity from natural sources,
23 no shadow flicker exists in the area.

24 Shadow flicker caused by wind turbines is defined as alternating changes in
25 light intensity as the moving blade casts shadows on the ground and objects (including
26 windows at residences). Analyses previously conducted at other wind energy facilities

1 approved by EFSEC (Kittitas Valley Wind Power Project and the Wild Horse Wind
2 Power Project) examined the potential effects of shadow flicker for residents near the
3 proposed projects and recommended certain measures for minimizing these effects.
4 However, due to the significant distance of the Project to residences, shadow flicker is
5 not anticipated to be noticeable for this Project.

6
7 Q Why do you believe that shadow flicker would not be noticeable for this Project?

8
9 A Shadow flicker, or strobe imparts, can only occur if the location of the turbine is close
10 to a receptor that is in a position where the blades interfere with very low-angle
11 sunlight. As the Council found in the Kittitas Valley Wind Power Project, as the
12 distance between the wind turbine generators and residences increases, the perception
13 of shadow flicker decreases or attenuates. The impact of shadow flicker at a particular
14 residence depends on the location of the residence and the position of features of the
15 home (*e.g.*, windows) in relation to the wind turbines. At a distance beyond 2,500
16 feet, shadow flicker is considered to be imperceptible. The Project is not expected to
17 result in any shadow flicker effects due to the distance of more than 2,500 feet to the
18 nearest existing residence (Figure 4.1-1 Noise Level Contours shows locations of
19 closest residences.) This distance is beyond the distance of which shadow flicker can
20 cause an impact. Moreover, the topography of the Project site in relation to the
21 existing residences, orientation of residences, and the tree cover between residences
22 and the wind turbine generators are expected to further eliminate or screen any risk of
23 perception of shadow flicker.

24 Q What methodology was used for the visual analysis?

25 A The visual analysis was based on the FHWA methodology, which uses the Scenery
26

1 Management System defined in *Landscape Aesthetics, A Handbook for Scenery*
2 *Management* (USFS 1995) and *Visual Impact Assessment for Highway Projects*
3 (FHWA 1988). The analysis was also designed to respond to the provisions of WAC
4 463-42-362, Built Environment–Land and Shoreline Use, which specifies the analysis
5 of aesthetic and light and glare issues as part of the EFSEC process.
6

7 Q Can you compare and contrast the FHWA, BLM, and USFS methodologies?
8

9 A The FHWA, BLM Visual Resource Management (VRM), and USFS Scenery
10 Management System (SMS) methodologies all utilize similar processes to establish
11 visual objectives/ratings and assess impacts to those objectives/ratings. The USFS and
12 BLM established and agreed upon guidelines for the development of the SMS, which
13 is still used by the USFS for visual resource planning and impact assessment. The
14 BLM incorporates all elements from the SMS into its VRM process, as did FHWA.

15 These three methodologies are similar in their approach to establishing visual
16 objectives/ratings. Each methodology establishes an objective or rating for the
17 following three overarching considerations: scenic quality, viewer sensitivity, and
18 distance zones. The scenic quality objective/rating is based on same seven key
19 characteristics in both the SMS and VRM methodologies: landforms, vegetation,
20 water, color, adjacent scenery, scarcity, and cultural modification. The FHWA
21 methodology also uses these same seven key characteristics but distills them into the
22 following three key characteristics: vividness, intactness, and unity. The contrast
23 ratings or impact assessment in all three methodologies is similar in that they all use
24 post-construction simulations to rate the change or contrast to the three overarching
25 considerations and the seven/three key characteristics.

26 The three methodologies differ in that they are intended to be used for different
types and scale of projects. The VRM and SMS methodologies are more appropriate
for land management planning on a large scale and for providing visual objectives that

1 are consistent with other management objectives for public lands that have multiple
2 management objectives and uses. In contrast, the FHWA methodology is more
3 conducive to the scale and complexity of projects like this one.

4 Because the VRM and SMS methodologies are designed for land management
5 planning, they rely on visual quality objectives (VQO) established in by a district
6 manager or contained in a plan that reflect the desired level of visual quality on public
7 land based on the physical characteristics and social concern for the area. For
8 example, in order to develop a plan using the BLM's VRM methodology, it is first
9 necessary to complete a Visual Resource Inventory (VRI) to delineate all lands subject
10 to the plan and place each delineated area into one of the BLM's five visual resource
11 classifications (*i.e.*, Class 1 -5) using the previously mentioned considerations and key
12 characteristics. If a project was subsequently proposed within the planning area, BLM
13 could then assess whether the project would meet the preexisting VQOs of the
14 relevant classification using the Visual Contrast Rating (BLM Form 8400-4). Thus,
15 the BLM's VRM methodology is generally used where projects are proposed on or in
16 proximity to BLM lands that have already been placed into one of BLM's five visual
17 resource classifications and for which VQOs have already been established.

18 In contrast, the FHWA methodology is widely used for visual assessment of
19 private lands, such as the this Project area, where VQOs have not been established.
20 The FHWA methodology provides for establishing existing visual quality objectives
21 and determining visual contrast at a smaller scale or project level.

22 Q In your opinion, is the FHWA methodology appropriate for this Project?

23 A Yes, the FHWA methodology is appropriate since it provides a clear understanding of
24 how the proposed Project would affect the visual landscape as seen from the analyzed
25 viewpoints. As I previously said, it is widely used for visual assessment of private
26 lands where VQOs have not been established, such as the Project area. The FHWA

1 methodology has been used to evaluate other recent wind power projects in
2 Washington, including the Desert Claim, Lower Snake River, Kittitas Valley, and
3 Wild Horse projects. The FHWA methodology is also used where linear features of a
4 project, such as roads or turbine strings, move into differing landscapes and visual
5 corridors with differing viewer groups.

6
7 Q In your opinion, would the use of the VRM or SMS methodology for this Project have
8 produced materially different outcomes?

9
10 A No. Because all three methodologies are similar and incorporate the same criteria or
11 characteristics for establishing scenic quality, viewer sensitivity, and distance zones, in
12 my opinion the use of any other methodology would have produced similar or
13 negligible differences in the outcome.

14
15 Q Would you please summarize the steps to prepare a visual analysis?

16
17 A The steps in preparing this visual analysis included: (1) selection of viewpoints to
18 characterize the visual resources for the differing landscapes in the Project area; (2)
19 inventorying and characterizing (based on established criteria) the existing landscape
20 setting for scenic integrity and scenic quality from these selected viewpoints; (3)
21 characterizing viewer sensitivity and exposure; (4) determining overall visual quality;
22 (5) preparing visual simulations from the selected viewpoints; (6) determining the
23 level of visual impacts or visual contrast based on the before and after simulations;
24 and (7) determining appropriate mitigation measures if necessary.

25 The analysis was based on field observations and review of wind energy
26 facilities' visual effects, public perception, design measures to reduce visual impacts,

1 and local planning documents. Project maps, drawings, technical data, and computer-
2 generated viewshed maps were used to determine areas where the Project would be
3 visible, and visual simulations were generated (described in Section 3.9.1.3 of the
4 Application) to illustrate the change from the existing conditions if the Project is
5 constructed. The analysis included systematic documentation of the visual setting,
6 evaluation of visual changes associated with the Project, and measures designed to
7 mitigate these visual effects. Mitigation measures include restoration or enhancement
8 activities in areas that would be disturbed during construction.

9 Q How would you briefly describe the existing landscape?

10
11 A The Project is set in two distinct landscapes. One landscape is the areas where the
12 turbines would be sited along ridges located on the northern plateau of the Columbia
13 River Gorge on Underwood Mountain (Figure 2.1-1 Location of Proposed Whistling
14 Ridge Energy Project). The other landscape is the Columbia River Gorge National
15 Scenic Area which is outside the Project site but within the viewshed looking into the
16 Project area.

17
18 Q How far does the Scenic Area extend?

19
20 A The Scenic Area extends 85 miles along the Columbia River, and includes portions of
21 three Oregon and three Washington counties. The Act designated for special
22 protection 292,500 acres on both sides of the Columbia River from the outskirts of
23 Portland-Vancouver in the west to the semi-arid regions of Wasco and Klickitat
24 counties in the east. The Scenic Area is categorized into three areas: Special
25 Management Areas (SMAs), General Management Areas (GMAs), and Urban Areas.
26 SMAs, which contain the most sensitive resources, total 114,600 acres and are

1 managed by the U.S. Forest Service. GMAs, which total 149,400 acres, include a
2 mixture of historic land uses such as farming, logging, and cattle grazing. The
3 Columbia River itself is currently designated as a GMA as well. Development on
4 GMA lands is administered by the Gorge Counties and the Gorge Commission.
5 Thirteen Urban Areas are exempt from Scenic Area regulation.
6

7 Q Is the Project area located within the Scenic Area?
8

9 A No, the Project area is outside of the Scenic Area and no visual quality objectives or
10 management designations have been established for areas outside of the Scenic Area.
11 Areas south of the Project within the Scenic Area are designated as Urban or GMA.
12 The views from the Gorge into the Project area were examined through viewpoint
13 selection. This area of the Gorge, closest to the Project, is considered to have a high
14 visual quality with a moderate sensitivity based on the vividly memorable, and
15 although the area is not free of visual encroachment, the visual resources join together
16 with a moderate degree of unity.

17 Q How were the analyzed viewpoints selected?
18

19 A Viewpoints were selected to characterize the aesthetic character of the Project area and
20 the differing landscapes in or near the Project. Most of the viewpoints are at publicly
21 accessible locations where most people would view the Project. Individual viewpoints
22 were chosen as being the most representative views for the different roads, population
23 areas, and recreation areas where views of the wind turbines would occur. Figure 4.2-
24 5 Locations of Simulation Viewpoints shows the locations of these viewpoints from
25 outside and within the Project area, and the distance and visible turbines from each
26 viewpoint. Because the focus is on locations that are publicly accessible and would
have the largest number of viewers (including residences), not every residential

1 location has been studied. Residences from 5 miles to 1 mile of the Project site are
2 depicted on Figure 4.1-1.

3
4 Q Could you please summarize how you assessed the visual impacts?

5
6 A The visual impact assessment was based on evaluating the changes to the existing
7 visual resources that would result from construction and operation of the Project.
8 These changes were assessed, in part, by evaluating the “after” views provided by the
9 computer-generated visual simulations and comparing them to the existing visual
10 environment. Consideration was given to the following factors in determining the
11 extent and implications of the visual changes:

- 12 • Changes in the affected visual environment’s composition, character, and valued
13 qualities
- 14 • The affected visual environment’s context, including distance
- 15 • The extent to which the affected environment contains places or features that have
16 been designated in plans and policies for protection or special consideration
- 17 • The number of viewers, their activities, and the extent to which these activities are
18 related to the aesthetic qualities affected by the changes
- 19 • The distance factor was considered in the sensitivity rating for establishment of
20 baseline and therefore becomes a factor in the impact assessment

21 Levels of impacts were classified as high, moderate or low.

22 Q How did you decide whether the view of the turbines would be considered a high
23 impact?

24
25 A The degree of impact depends on the viewer’s location, the orientation of structures
26 (such as homes), viewer sensitivity, and the impact on the established scenic quality.

1 Much of the public input and comments received on the proposed Project indicates
2 that for some viewers, the presence of the wind turbines represents a negative impact
3 because it alters the appearance of the rural landscape over a large area. The flashing
4 of FAA aviation lights on the tops of turbines at night would similarly be considered a
5 negative impact. While a particular viewpoint may be characterized as having a
6 “high” impact, that impact may be experienced by a relatively small number of
7 individuals, or relate to a small portion of the Project. In the final analysis, it is the
8 comparative number and sensitivity of viewers most affected by the Project that
9 determines the overall degree of impact. The degree of contrast may be considered
10 high based on changes in line, color, form, or alterations but the viewer exposure
11 and/or sensitivity may be low which indicates a moderate impact. If the changes in
12 the aesthetic values described above are rated “high” for those values and the viewer
13 numbers, exposure and sensitivity are also “high” an impact rating of “high” would be
14 warranted. This process (establishment of baseline conditions and contrast rating) was
15 completed using an interdisciplinary team.

15 Q Could you please describe the visual impacts that would occur during construction?

16
17 A During construction, large earth-moving equipment, trucks, cranes, and other heavy
18 equipment would be highly visible from nearby areas. At times, small, localized
19 clouds of dust created by road building and other grading activities may be visible at
20 the site. Because of construction-related grading activities, areas of exposed soil and
21 fresh gravel that contrast with the colors of the surrounding undisturbed landscape
22 would be visible. In close-up views, particularly those seen by travelers on the
23 segment of the local highway that passes around the Project site and those seen from
24 the closest residences, the visual changes associated with the construction activities
25 would be highly visible and would have a moderate to high visual impact depending
26 on topography and vegetation screening. From more distant locations, the visual
effects would be relatively minor and would have little or no impact on the quality of

1 views and are considered short-term.

2

3 Q Please summarize your overall findings for the 21 viewpoints analyzed.

4

5 A The Project has the potential to create low to moderate levels of visual impact from the
6 viewpoints. The visual simulations show the worst-case seasonal conditions for visual
7 contrast between the wind turbines and the primarily green and brown landscape
8 backdrop. The period with the least visual contrast is anticipated to occur when there
9 is snow cover and gray skies. The visual simulations also assume a hypothetical
10 scenario of 50 turbines at the maximum proposed height. This scenario likely
11 overstates the visual effect.

12 The result of this analysis for each of the 21 viewpoints is shown on Table 4.2-
13 5 in the Application. Taking into account existing visual quality of the Project site
14 from the viewpoints, the visual sensitivity of those viewers who would see the turbines
15 from each of those 21 viewpoints, the conclusions were that the anticipated level of
16 visual impacts would range from low to moderate. None of the visual impacts from
17 any of the 21 viewpoints would be considered “high” using the FHWA methodology.
18 For one location, Viewpoint 20 from Highway 35, there would be no change as the
19 turbines would not be visible.

20 Q Could you please summarize the recreational opportunities that exist in the Project
21 area?

22

23 A The primary recreation activities within Skamania County are camping, hiking and
24 fishing. Summer recreational activities include water sports such as fishing,
25 swimming, boating, river rafting, kayaking, water skiing, and wind surfing; as well as
26 camping, biking, hiking, horseback riding, hunting, picnicking, and other outdoor

1 sports. Some of these activities continue into the winter, weather permitting.
2 Sightseeing is a popular year-round activity in the Columbia River Gorge. The Lewis
3 and Clark Trail Highway follows the Columbia River through Skamania County. The
4 Columbia River Gorge National Scenic Area is located south of the Project site area.
5 Informal recreational activities such as hunting, hiking and mountain biking exist
6 subject to landowner approval. Recreational facilities or activities available closest to
7 the Project site are as follows: hiking and horseback riding along Buck Creek Trail;
8 Husum Hills Golf Course; BZ Corners Boat Launch; Underwood Park/Community
9 Center; and the Drano Lake Boat Ramp.

10 Q Were these 5 recreational facilities located closest to the Project site the only
11 recreational facilities you considered for your impact analysis?

12
13 A No, we considered 53 facilities located on both sides of the Columbia River within a
14 25 mile radius of the Project area, including National Scenic Areas and Trails,
15 Washington and Oregon State Parks, USFS parks and boat launches, County parks and
16 facilities in Skamania, Klickitat and Hood River, nearby city facilities, golf courses,
17 and museums.

18 Q Would there be an impact on these facilities during the construction period?

19
20 A A majority of the construction workers are expected to be within daily commuting
21 distance of the site. At peak construction periods, some workers may seek temporary
22 housing in apartments or motels, or may make private arrangements for recreational
23 vehicles. Existing limits on the length of stay in public camping areas would
24 minimize any potential impacts on park users. Workers would be more likely to use
25 the facilities on weekdays rather than busy weekends, so minimal impacts to park and
26 recreation facilities are expected from construction workers.

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Q How did you evaluate the potential impact of the operating Project on recreational resources?

A In addressing the impacts to the Scenic Area and recreation opportunities in proximity to the Project area we evaluated how the Project would affect the overall goals, objectives, and policies in the applicable recreation plans.

- **Protection of Resources.** The Project would not decrease any resources within the Scenic Area. No recreation resources would be lost in the Scenic Area.
- **Scenic Appreciation and Scenic Travel Corridors.** Impacts to scenic areas and highway are listed in Section 4.2.3. Key viewing areas for recreation and the visual impacts are also found in Section 4.2.3 and disclose the distance of these areas from the Project. The assessment for how the recreation visitor would view the Project is assessed from these viewpoints. The Project would have minor to moderate effects on the visual quality of the area as viewed from these recreation areas.
- **Resource Based Recreation.** No resource based recreation within the Scenic Area is expected to be affected by the Project. No resources are within or in proximity to the Project area.
- **River Access and Protection of Treaty Rights.** This Project is on private lands outside of the Scenic Area and would have no effect on River Access and Treaty Rights.
- **Interpretation/Education.** An opportunity to provide alternative energy interpretation and education could be included in this Project and further the goals of the Scenic Area.
- **Trails and Pathways.** The Project would not affect any trails or pathways in the Scenic Area. There may be some distant views of wind turbines from trails. Key

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recreation and trails viewpoints are assessed in Section 4.2.4.

- **Transportation.** Use of SR 14 and portions of Cook-Underwood Road that are within the Scenic Area to access the Project would have no effect on movement of recreational travel or access.
- **Coordination.** Coordination with the development of any of the projects set forth within the Scenic Area would be ongoing throughout the timeframes of the Project through construction and maintenance to assist in meeting overall goals, objectives, and policies.

Q Would you please summarize your conclusions of potential recreational impacts?

A Based on the factors listed above, it is expected that the Project would not “unreasonably diminish the scenic, recreational, and fish and wildlife values present in the area” (Wild and Scenic Rivers Act, 16 USC 1271-1287), so no impacts to wild and scenic rivers would occur. The Project would not have a direct impact on any recreation area in the sense of impairing access, diminishing use, or restricting planned installations and improvements. The Project would affect the visual experience of visitors in some locations (Figure 4.2-27 Key Recreation Viewing Areas and Recreational Facilities within Approximately 25 Miles).