

# **Desert Claim Wind Power Project**

---

Draft Supplemental Environmental Impact Statement

Lead Agency:

**Energy Facility Site Evaluation Council**

April 2009

## FACT SHEET

|  |   |
|--|---|
| <b>Project Title</b>                                   | Desert Claim Wind Power Project   |
| <b>Project Sponsor</b>                                 | Desert Claim Wind Power LLC   |
| <b>Proposed Action</b>                                 | <p>The Proposed Action is development of a 190-megawatt (MW) wind energy facility on a 5,200-acre site in Kittitas County, Washington. The proposal includes 95 2.0 MW turbines, each a maximum of 410 feet in height (measured from the ground to the tip of the rotor blade when pointing up). The towers would be anchored to steel and concrete foundations. The power collection system would be primarily underground and located within road alignments. One electrical substation would be constructed adjacent to the interconnection point with the regional transmission system (lines operated by Bonneville Power Administration [BPA] or Puget Sound Energy [PSE]). Other project elements include: approximately 27 miles of roads, providing access to all turbines for maintenance; a 5,000 square foot operation and maintenance (O&amp;M) facility; four meteorological towers; and visitor facilities (to be determined). Construction would be completed over an approximate 10 month period</p> |
| <b>Project Location</b>                                | <p>The Project Area is located approximately 8 miles north of the City of Ellensburg and consists of contiguous property owned by the Washington State Department of Natural Resources (1,529 acres), four private landowners (2,551 acres), and an affiliate of the applicant (1,120 acres). It consists of sections and portions of sections in Township 19N, Range 18E, Sections 9, 16, 17, 18, 19, 20, 21, 22, 27, 29 and 30 along with the NW corner of Township 19N, Range 17E, Section 25.</p>   |
| <b>Date of Implementation</b>                          | Construction would begin as soon as all required approvals and permits are obtained.  |
| <b>Lead Agency, Responsible Official &amp; Contact</b> | <p>Energy Facility Site Evaluation Council (EFSEC)<br/>Allen Fiksdal, EFSEC Manager<br/>905 Plum Street SE<br/>P.O. Box 43172<br/>Olympia, WA 98504-3172<br/>(360) 956-2152</p>   |
| <b>Required Permits, Approvals &amp; Licenses</b>      | EFSEC's Site Certification Agreement for the project will identify all required state approvals. No federal permits have been identified at this time.  |
| <b>EIS Authors &amp; Principal Contributors</b>        | <p>The Draft SEIS was prepared by Weinman Consulting, LLC and Tetra Tech EC. It summarizes and incorporates technical information that was prepared by the following firms: Ecology &amp; Environment (Wetlands &amp; Streams); Jones &amp; Jones (Aesthetics); Western Environmental Systems Inc. [WEST] (Wildlife and Vegetation); and Northwest Archaeological Associates (Cultural Resources).</p>  |

**Environmental Document Being Supplemented**

Desert Claim Final EIS (Kittitas County 2004)

**Type/Timing of Subsequent Environmental Review**

A Final SEIS will be prepared following closure of the public comment period.

**Location of Background Information**

The Desert Claim Application for Site Certification (ASC), this Draft SEIS and other background information concerning the project and EFSEC's procedures, may be found on EFSEC's website: [www.efsec.wa.gov](http://www.efsec.wa.gov). Copies of the application and this Draft SEIS are also available for public review at the following locations:

Energy Facility Site Evaluation Council  
905 Plum Street SE  
Olympia, WA 98504  
(360) 956-2121

Washington State Library, Joel Pritchard Branch  
Point Plaza East  
6880 Capitol Blvd.  
Olympia, WA 98504  
(360) 704-5200

Ellensburg Public Library  
209 North Ruby Street  
Ellensburg, WA 98926  
(509) 962-7250

**Date of Draft SEIS Issuance**

April 2, 2009

**Date and Time of Public Meeting on the Draft SEIS**

April 23, 2009, 7 pm at Hal Holmes Center, 209 N. Ruby Street, Ellensburg, WA

**Public Comment Period**

Ends May 4, 2009, 5 pm

**Availability of Draft SEIS**

CD and printed copies of the SEIS are available from EFSEC at the address listed previously, or may be viewed on EFSEC's website: [www.efsec.wa.gov](http://www.efsec.wa.gov)

# TABLE OF CONTENTS

|             |  |             |
|-------------|--|-------------|
| <b>1.0</b>  | <b>SUMMARY .....</b>                                       | <b>1-1</b>  |
| <b>1.1</b>  | <b>INTRODUCTION.....</b>                                   | <b>1-1</b>  |
| <b>1.2</b>  | <b>ENVIRONMENTAL REVIEW PROCESS.....</b>                   | <b>1-1</b>  |
| <b>1.3</b>  | <b>APPLICANT’S OBJECTIVES .....</b>                        | <b>1-2</b>  |
| <b>1.4</b>  | <b>PROPOSAL AND ALTERNATIVES.....</b>                      | <b>1-2</b>  |
|             | 1.4.1 Revised Desert Claim Proposal.....                   | 1-2         |
|             | 1.4.2 No Action .....                                      | 1-3         |
|             | 1.4.3 Off-Site Alternatives .....                          | 1-3         |
|             | 1.4.4 Alternatives Considered But Not Carried Forward..... | 1-4         |
| <b>1.5</b>  | <b>SUMMARY COMPARISON OF ENVIRONMENTAL IMPACTS.....</b>    | <b>1-4</b>  |
| <b>1.6</b>  | <b>CUMULATIVE IMPACTS .....</b>                            | <b>1-7</b>  |
|             | 1.6.1 Water Resources.....                                 | 1-7         |
|             | 1.6.2 Plants and Animals.....                              | 1-7         |
|             | 1.6.3 Historic Resources.....                              | 1-8         |
|             | 1.6.4 Aesthetics .....                                     | 1-8         |
| <b>1.7</b>  | <b>MITIGATION MEASURES.....</b>                            | <b>1-9</b>  |
|             | 1.7.1 Water Resources.....                                 | 1-9         |
|             | 1.7.2 Plants and Animals.....                              | 1-9         |
|             | 1.7.3 Wetlands.....  | 1-9         |
|             | 1.7.4 Wildlife.....  | 1-9         |
|             | 1.7.5 Historic Resources.....                              | 1-9         |
|             | 1.7.6 Aesthetics .....                                     | 1-10        |
| <b>1.8</b>  | <b>SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS .....</b>       | <b>1-11</b> |
|             | 1.8.1 Water Resources.....                                 | 1-11        |
|             | 1.8.2 Plants and Animals.....                              | 1-11        |
|             | 1.8.3 Historic Resources.....                              | 1-12        |
|             | 1.8.4 Aesthetics .....                                     | 1-12        |
| <b>1.9</b>  | <b>CONSULTATION AND COORDINATION.....</b>                  | <b>1-12</b> |
| <b>1.10</b> | <b>ISSUES TO BE RESOLVED.....</b>                          | <b>1-12</b> |
| <b>2.0</b>  | <b>ALTERNATIVES INCLUDING THE PROPOSED ACTION .....</b>    | <b>2-1</b>  |
| <b>2.1</b>  | <b>BACKGROUND .....</b>                                    | <b>2-1</b>  |
|             | 2.1.1 Proposal History and Process .....                   | 2-1         |
|             | 2.1.2 Scope of SEIS.....                                   | 2-2         |
| <b>2.2</b>  | <b>PROPOSED ACTION.....</b>                                | <b>2-3</b>  |
|             | 2.2.1 Existing Project Site Conditions.....                | 2-3         |
|             | 2.2.2 Project Facilities .....                             | 2-10        |
|             | 2.2.3 Construction Process .....                           | 2-20        |

|  |             |
|--|-------------|
| 2.2.4 Decommissioning.....   | 2-28        |
| <b>2.3 CHANGES TO THE PROPOSAL.....</b>  | <b>2-29</b> |
| <b>2.4 ALTERNATIVES TO THE PROPOSAL.....</b>   | <b>2-30</b> |
| 2.4.1 No Action Alternative.....   | 2-30        |
| <b>2.5 ALTERNATIVES NOT CONSIDERED IN DETAIL.....</b>  | <b>2-31</b> |
| <br>   |             |
| <b>3.0 AFFECTED ENVIRONMENT, SIGNIFICANT IMPACTS, MITIGATION MEASURES, AND SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS .....</b> | <b>3-1</b>  |
| <b>3.1 WATER RESOURCES: STREAMS .....</b>  | <b>3-1</b>  |
| 3.1.1 Summary of Prior Environmental Analysis .....  | 3-1         |
| 3.1.2 Affected Environment .....   | 3-1         |
| 3.1.3 Significant Impacts.....   | 3-2         |
| 3.1.4 Cumulative Impacts.....  | 3-3         |
| 3.1.5 Mitigation Measures.....   | 3-3         |
| 3.1.6 Significant Unavoidable Adverse Impacts.....   | 3-3         |
| <b>3.2 PLANTS AND ANIMALS .....</b>  | <b>3-3</b>  |
| 3.2.1 Vegetation .....   | 3-3         |
| 3.2.2 Wetlands.....  | 3-10        |
| 3.2.3 Wildlife (Birds and Bats) .....  | 3-13        |
| <b>3.3 HISTORIC RESOURCES .....</b>  | <b>3-26</b> |
| 3.3.1 Summary of Prior Environmental Analysis .....  | 3-26        |
| 3.3.2 Affected Environment .....   | 3-26        |
| 3.3.3 Significant Impacts.....   | 3-30        |
| 3.3.4 Cumulative Impacts.....  | 3-32        |
| 3.3.5 Mitigation Measures.....   | 3-32        |
| <b>3.4 AESTHETICS, LIGHT, AND GLARE .....</b>  | <b>3-35</b> |
| 3.4.1 Summary of Prior Environmental Analysis .....  | 3-35        |
| 3.4.2 Affected Environment .....   | 3-35        |
| 3.4.3 Significant Impacts.....   | 3-43        |
| 3.4.4 Cumulative Impacts.....  | 3-60        |
| 3.4.5 Mitigation Measures.....   | 3-61        |
| 3.4.6 Significant Unavoidable Adverse Impacts.....   | 3-63        |
| <br>   |             |
| <b>4.0 REFERENCES CITED.....</b>   | <b>4-1</b>  |
| <br>   |             |
| <b>5.0 DISTRIBUTION LIST .....</b>   | <b>5-1</b>  |

## List of Tables

|              |   |      |
|--------------|---|------|
| Table 1.5-1. | Summary of Environmental Impacts .....  | 1-5  |
| Table 2.2-1. | Nearby Non-Participating Residences and Distances from Nearest Proposed Turbine.....  | 2-8  |
| Table 2.2-2. | Estimated Area of Construction Disturbance and Permanent Facilities.....  | 2-21 |
| Table 2.3-1. | Comparison of Current and Prior Desert Claim Project Proposals.....   | 2-30 |
| Table 3.2-1. | Vegetation Types in the Project Area .....  | 3-5  |
| Table 3.2-2. | Approximate Acres of Impact by Facility and Habitat Type (before mitigation).....   | 3-8  |
| Table 3.2-3. | Avian Use Estimates and Avian Fatality Estimates for Wind Power Projects in the Columbia Plateau Ecoregion.....                       | 3-15 |
| Table 3.2-4. | Percent Composition of Avian Fatalities by Species Group for Existing Columbia Plateau Ecoregion (WA, OR) Wind Energy Facilities..... | 3-18 |
| Table 3.2-5. | Number and Species Composition of Bat Fatalities Found at Wind Projects in the Columbia Plateau Region .....                          | 3-19 |
| Table 3.2-6. | Mean Bat Mortality Estimates Based on Fatalities Found at Wind Projects in the Columbia Plateau Region.....                           | 3-20 |
| Table 3.4-1. | Summary of Impacts by Visual Assessment Unit and Viewpoint.....   | 3-45 |

## List of Figures

|               |   |      |
|---------------|---|------|
| Figure 2.2-1. | Project Area Vicinity Map.....  | 2-4  |
| Figure 2.2-2. | Project Area .....  | 2-5  |
| Figure 2.2-3. | Residences Located near Project Area.....   | 2-9  |
| Figure 2.2-4. | REpower MM92 Wind Turbine.....  | 2-11 |
| Figure 2.2-5. | Proposed Turbine Location and Project Power Collection System.....  | 2-14 |
| Figure 2.2-6. | Project Access Road System.....   | 2-18 |
| Figure 3.2-1. | Vegetation Mapping of the Revised Desert Claim Wind Power Project.....  | 3-6  |
| Figure 3.2-2. | Relationship between Raptor Use and Mortality for 13 Wind Projects Studied Since 2002 .....   | 3-17 |
| Figure 3.3-1. | Project Overview during 2008 Field Survey, Vicinity of BPA Transmission Lines; View to the North.....   | 3-27 |
| Figure 3.4-1. | Viewpoint 1B – Existing View with 35mm Lens (above) and 50mm Lens (below) .....   | 3-39 |
| Figure 3.4-2. | Viewpoint 3C – Existing View with 35mm Lens (above) and 50mm Lens (below).....  | 3-40 |
| Figure 3.4-3. | Final EIS and SEIS Project Areas.....   | 3-41 |
| Figure 3.4-4. | Project Area and Viewpoints .....   | 3-42 |
| Figure 3.4-5. | View 1B – SEIS Existing View Looking NW across the Northeast Valley Visual Assessment Unit from Intersection of Hungry Junction Road and Lookabout Lane ..... | 3-64 |
| Figure 3.4-6. | View 1B – SEIS Simulated View .....   | 3-64 |
| Figure 3.4-7. | View 1C – SEIS Existing View Looking NE across the Northwest Valley Visual Assessment Unit along Smithson Road near Highway 97 .....                          | 3-65 |

|  |      |
|--|------|
| Figure 3.4-8. View 1C – SEIS Simulated View .....  | 3-65 |
| Figure 3.4-9. View 1D – SEIS Existing View Looking SW across the Northwest Valley<br>Visual Assessment Unit from Immediately N of the Project Area.....  | 3-66 |
| Figure 3.4-10. View 1D – SEIS Simulated View.....  | 3-66 |
| Figure 3.4-11. View S1H – SEIS Existing View Looking W-by-SW across the Northwest<br>Valley Visual Assessment Unit from Robbins Road, just N of North Branch<br>Canal .....                    | 3-67 |
| Figure 3.4-12. View S1H – SEIS Simulated View.....   | 3-67 |
| Figure 3.4-13. View S1I – SEIS Existing View Looking NE across the Northwest Valley<br>Visual Assessment Unit from Reecer Creek Road, just N of North Branch<br>Canal .....                    | 3-68 |
| Figure 3.4-14. View S1I – SEIS Simulated View .....  | 3-68 |
| Figure 3.4-15. View S1J – SEIS Existing View Looking W-by-NE across the Northwest<br>Valley Visual Assessment Unit from Smithson Road, just E of Green<br>Canyon Road.....                     | 3-69 |
| Figure 3.4-16. View S1J – SEIS Simulated View .....  | 3-69 |
| Figure 3.4-17. View S1K – SEIS Existing View Looking S-by-SW across the Northwest<br>Valley Visual Assessment Unit from Reecer Creek Road, just N of the<br>Project Boundary .....             | 3-70 |
| Figure 3.4-18. View S1K – SEIS Simulated View.....   | 3-70 |
| Figure 3.4-19. View S1L – SEIS Existing View Looking SE across Northwest Valley<br>Visual Assessment Unit from Katie Ln., 1/8 Mile E of Green Canyon Rd.,<br>1/8 Mile N of Project Limit ..... | 3-71 |
| Figure 3.4-20. View S1L – SEIS Simulated View .....  | 3-71 |
| Figure 3.4-21. View S1M – SEIS Existing View Looking NE across the Northwest Valley<br>Visual Assessment Unit from Smithson Rd., ¼ Mile W of Howard Rd., just<br>S of Project Area.....        | 3-72 |
| Figure 3.4-22. View S1M – SEIS Simulated View .....  | 3-72 |
| Figure 3.4-23. View 2A – SEIS Existing View Looking SW across Northwest Valley<br>Visual Assessment Unit from Wilson Creek Road.....   | 3-73 |
| Figure 3.4-24. View 2B – SEIS Existing View Looking W across the Northeast Valley<br>Visual Assessment Unit from Wilson Creek Road on Rabbit Hill.....   | 3-74 |
| Figure 3.4-25. View 2B – SEIS Simulated View .....   | 3-74 |
| Figure 3.4-26. View 2C – SEIS Existing View Looking NW across the Northwest Valley<br>Visual Assessment Unit from the N end of Bowers Field at Hungry Junction<br>Road .....                   | 3-75 |
| Figure 3.4-27. View 2C – SEIS Simulated View .....   | 3-75 |
| Figure 3.4-28. View 3A – SEIS Existing View Looking N across the Greater Ellensburg<br>Visual Assessment Unit over the Burlington Northern Railroad near Hwy 97<br>and Cascade Way .....       | 3-76 |
| Figure 3.4-29. View 3A – SEIS Simulated View.....  | 3-76 |
| Figure 3.4-30. View 3C – SEIS Existing View Looking NW across the Greater Ellensburg<br>Visual Assessment Unit from Reed Park in Ellensburg .....  | 3-77 |
| Figure 3.4-31. View 3C – SEIS Simulated View .....   | 3-77 |

|   |      |
|---|------|
| Figure 3.4-32. View S5B – SEIS Existing View Looking N-by-NE from the Southwest Valley Visual Assessment Unit ½ mile N of the intersection of Killmore Rd. and Robinson Rd.....   | 3-78 |
| Figure 3.4-33. View S5B – SEIS Simulated View.....  | 3-78 |
| Figure 3.4-34. View 6A – SEIS Existing View Looking NE from the Hayward Hill Visual Assessment Unit at the Top of the Hill.....   | 3-79 |
| Figure 3.4-35. View 6A – SEIS Simulated View.....   | 3-79 |
| Figure 3.4-36. View S6B – SEIS Existing View Looking N from above Highway 97 in the Hayward Hill Unit from a Group of Residences roughly 2 miles S of the Project Boundary .....  | 3-80 |
| Figure 3.4-37. View S6B – SEIS Simulated View.....  | 3-80 |
| Figure 3.4-38. View 7A – SEIS Existing View Looking NE from the Dry Creek Slope Visual Assessment Unit 1/3 mile N of Smithson Road, off Highway 97.....                           | 3-81 |
| Figure 3.4-39. View 7A – SEIS Simulated View.....   | 3-81 |
| Figure 3.4-40. View S7B – SEIS Existing View Looking SW from the Dry Creek Slope Visual Assessment Unit from Hwy 97 at driveway 16011, roughly ½ Mile W of the Project Area ..... | 3-82 |
| Figure 3.4-41. View S7B – SEIS Simulated View.....  | 3-82 |
| Figure 3.4-42. View S7C – SEIS Existing View Looking E-by-NE from a Hilltop in Dry Creek Slope Visual Assessment Unit, 1/3 mile W of Hwy 97, due W of Smithson Road.....          | 3-83 |
| Figure 3.4-43. View S7C – SEIS Simulated View.....  | 3-83 |
| Figure 3.4-44. View S8C – SEIS Existing View Looking S from the Table Mountain Slope Visual Assessment Unit over the Kittitas Basin, Slightly W of Final EIS Viewpoint 8A.....    | 3-84 |
| Figure 3.4-45. View S8C – SEIS Simulated View.....  | 3-84 |
| Figure 3.4-46. View S8D – SEIS Existing View Looking W from the Table Mountain Slope Visual Assessment Unit from Robbins Road .....   | 3-85 |
| Figure 3.4-47. View S8D – SEIS Simulated View.....  | 3-85 |
| Figure 3.4-48. View S8E – SEIS Existing View Looking S from the Table Mountain Slope Visual Assessment Unit toward the WDNR Property from Upper Green Canyon Road.....            | 3-86 |
| Figure 3.4-49. View S8E – SEIS Simulated View .....   | 3-86 |
| Figure 3.4-50. Visual Resource Cumulative Impact Study Area .....   | 3-87 |



## Acronyms

|              |   |
|--------------|---|
| ASC          | Application for Site Certification                  |
| AWEA         | American Wind Energy Association                    |
| BBS          | Breeding Bird Survey                                |
| BMPs         | Best Management Practices                           |
| BPA          | Bonneville Power Administration                     |
| BWEA         | British Wind Energy Association                     |
| County       | Kittitas County                                     |
| DAHP         | Department of Archaeology and Historic Preservation |
| dba          | A-weighted decibel                                  |
| Desert Claim | Desert Claim Wind Power LLC                         |
| EFSEC        | Energy Facility Site Evaluation Council             |
| FAA          | Federal Aviation Administration                     |
| kV           | kilovolt  |
| met          | meteorological                                      |
| mm           | millimeter  |
| MOA          | Memorandum of Agreement                             |
| mph          | miles per hour                                      |
| MW           | megawatt  |
| NPDES        | National Pollutant Discharge Elimination System     |
| O&M          | operation and maintenance                           |
| PSE          | Puget Sound Energy                                  |
| PUD          | Public Utility District                             |
| SCADA        | Supervisory Control and Data Acquisition            |
| SEIS         | Supplemental Environmental Impact Statement         |
| SEPA         | State Environmental Policy Act                      |
| SWPPP        | Stormwater Pollution Prevention Plan                |
| TESCP        | Temporary Erosion and Sedimentation Control Plan    |
| WDFW         | Washington Department of Fish and Wildlife          |
| WDNR         | Washington Department of Natural Resources          |