

Executive Summary

This Executive Summary is intended to provide a brief overview of the proposed project, alternatives, and conclusions from the impact analyses. For the supporting documentation and detailed analyses please see the full Environmental Impact Statement (EIS).

Project Overview

The Power Company of Wyoming, LLC (PCW) proposes to construct and operate a wind energy project south of Rawlins in Carbon County, Wyoming (**Figure 1-1**). PCW filed a Wind Site Testing and Monitoring Application with the Bureau of Land Management (BLM) for the lands encompassing a portion of The Overland Trail Ranch, which is owned and managed by The Overland Trail Cattle Company, LLC (TOTCO). The BLM Rawlins Field Office (RFO) administers the public lands within the proposed Application Area. The Overland Trail Ranch consists of approximately 315,000 acres in a checkerboard configuration of public, private, and state land primarily used by TOTCO for livestock grazing. Both PCW and TOTCO are wholly owned affiliates of The Anschutz Corporation. Most, but not all, of the privately held lands are owned by TOTCO.

The proposed project would consist of two wind farm sites located near each other (approximately 9 miles apart) within the Wind Site Testing and Monitoring Application Area – the Chokecherry site and the Sierra Madre site (CCSM) – totaling 229,076 acres of public, private, and state land; however, not all of this land would be used for, or disturbed by, the project. PCW has obtained a wind easement and entered into an agreement with TOTCO to use the private lands for the proposed wind energy project. Additional agreements with other private landowners would be required if PCW planned to use those lands for the project. PCW has applied for the necessary special use lease from the State of Wyoming, Board of Land Commissioners to construct and operate the wind farm on state lands. The Application Area studied in this document includes the entire Wind Site Testing and Monitoring Application Area, Application Areas for rights-of-way (ROWs) of ancillary facilities, and the areas considered for haul road and transmission connection between the Chokecherry and Sierra Madre sites, collectively referred to as the “Application Area” (**Figure 1-2**). The requested ROW grant is for a term of 30 years with the option to renew the ROW grant and upgrade the wind facility, as necessary. A general description of the project proposed by PCW can be summarized as follows:

- A 2,000- to 3,000-megawatt (MW) wind farm consisting of approximately 1,000 wind turbine generators (WTGs) with a nameplate capacity ranging from 1.5- to 3-MW;
- Development of step-up transformers, underground and overhead electric collection and communication lines, electric substations, rail distribution facility (RDF), operations and maintenance facilities, and laydown areas;
- Haul road and transmission connection between the two sites;
- Construct new roads and upgrade existing roads; and
- Power from the wind farms would be transmitted via overhead electric transmission lines that would connect to a new substation in the Application Area.

The BLM’s Proposed Action (Proposed Action) is to decide whether the area identified in PCW’s proposal would be acceptable for development of a wind farm and identify the appropriate development strategy (e.g., development in relation to greater sage-grouse core areas). The BLM has determined that an EIS would be required under the National Environmental Policy Act of 1969 (NEPA; Title 42 United States Code [USC] Section 4321, et seq.) to analyze and disclose the potential environmental impacts of the proposed project for BLM decision-making. Due to the large area considered and substantial number of turbines to be sited, the BLM has decided to go through the

NEPA process to establish a strategy for future development. Future siting of WTGs and associated Plans of Development (POD) would be submitted consistent with the strategy adopted in the Record of Decision (ROD) for this EIS. While this broad-scale EIS evaluates a general area, specific impacts will be evaluated in subsequent NEPA analysis based on site-specific proposals within the selected alternative boundary.

BLM's Purpose and Need for the Proposed Action

The purpose of the Proposed Action is to determine appropriate areas and restrictions for PCW to develop a wind energy facility on public lands administered by the BLM in compliance with the Federal Land Policy and Management Act (FLPMA), BLM ROW regulations, and other applicable federal laws. This action will assist the BLM in meeting the management objectives in the Energy Policy Act of 2005 (Title II, Section 211) which establish a goal for the Secretary of the Interior to approve 10,000-MW of electricity from non-hydropower renewable energy projects located on public lands. This action also furthers the purpose of Secretarial Order 3285 (March 11, 2009) that establishes the development of environmentally responsible renewable energy as a priority for the Department of the Interior.

The need for the Proposed Action is to respond to a FLPMA ROW application request submitted by the applicant to construct, operate, maintain, and decommission a wind energy facility and associated infrastructure on public lands administered by the BLM. In accordance with FLPMA (Section 103[c]), public lands are to be managed for multiple uses that take into account the long-term needs of future generations for renewable and non-renewable resources. The Secretary of the Interior with respect to public lands is authorized to grant ROWs for systems of generation, transmission, and distribution of electric energy (Section 501(a)(4)).

Decisions to be Made

Impacts are evaluated on a broad, project-wide level to enable the BLM to determine whether the Application Area is suitable for development of the proposed project and identify the appropriate development strategy. The impact analysis in this EIS is based on resource-specific assumptions, estimated project disturbance, and appropriate project-specific stipulations. All project alternatives conform to the 2008 Rawlins Resource Management Plan (2008 Rawlins RMP) and the Proposed Plan in the visual resource management (VRM)-targeted Plan Amendment in Volume I. The BLM will decide whether the area identified in PCW's proposal would be acceptable for development of a wind farm and the requirements for all future wind development in the area. For example, decisions may include restrictions on development in relation to greater sage-grouse core areas, construction sequencing, and reclamation practices.

The wind farm development EIS broadly evaluates impacts across the Application Area; however, specific impacts associated with the siting/location of individual project components that are not covered in this document would be evaluated in subsequent NEPA analyses based on site-specific proposals within the selected alternative boundary. Upon completion of the current NEPA analysis, PCW may submit up to four separate PODs for distinct aspects of the project, including: the Chokecherry development area, the Sierra Madre development area, the haul road(s), and transmission line(s). The site-specific POD proposals would be tiered to the analysis and decision in this EIS. ROW grants for these PODs must comply with NEPA and would include site-specific terms and conditions tiered back to this EIS. A NEPA tiering review procedure to guide subsequent site-specific NEPA approvals is provided as **Appendix B**.

PCW's Objectives for the Proposed Project

PCW's objectives for the project are to help fulfill the projected future need for power from renewable energy sources. There are four components that comprise the applicant's objectives (PCW 2012a):

- Extracting the maximum potential wind energy for the site;

- A 2,000- to 3,000-MW wind farm project consisting of approximately 1,000 WTGs;
- Development of the Sierra Madre site first to obtain an earlier return on investment due to the high wind energy potential of the site; and
- Constructing the Project as rapidly as possible on an optimized schedule.

Conformance with Existing Plans and Regulations

The BLM evaluated the proposed project in accordance with all major authorizing laws, regulations, and policies, including BLM manuals, handbooks, and instruction memoranda. The proposed wind farm project is in conformance with the following management goals and actions defined in the 2008 Rawlins RMP: Lands and Realty Objective 6, Alternative Energy Development–Wind Energy Resources Management Actions Common to All Alternatives, Alternative Energy Development–Wind Energy Resources Management Actions.

The proposed CCSM project is not in conformance with the Visual Resource Management (VRM) direction provided in the 2008 Rawlins RMP. The VRM Plan Amendment for the CCSM project is being addressed in Volume I of this document. As part of the RODs issued for the plan amendment and project EISs, the BLM will decide whether to amend the 2008 Rawlins RMP as a prerequisite to approval of the CCSM project. The Proposed Plan identified in the VRM Plan Amendment in Volume I has been carried forward to inform the alternatives and the conceptual areas of development as well as the analysis in this Volume.

The BLM Wyoming State Office initiated a planning review to determine whether RMP amendments are required to revise greater sage-grouse and sagebrush management in accordance with BLM Wyoming's Instruction Memorandum (IM) 2010-019 and 2010-013. For this project, policies set forth in BLM IM WY-2010-19 and WY-2010-13 were incorporated as BLM's environmental constraints that were used in defining the conceptual areas of development for the alternatives. In addition, the applicant-committed measures (ACMs) provided by PCW (shown in **Table C-2 of Appendix C**) for this project were used in defining the conceptual areas of development for the alternatives and incorporate the policies set forth in the Wyoming Governor's State Executive Order (EO) 2011-5 on greater sage-grouse.

Agency and Public Participation

The BLM is the lead agency for the EIS process. The lead agency takes primary responsibility for preparing the EIS as well as requesting the participation of each cooperating agency. The BLM has engaged cooperating agencies throughout the process through participation in workshops, meetings, and document reviews. The following agencies with jurisdiction, special expertise, or interest in the CCSM Wind Energy Project have agreed to participate in the EIS process as cooperating agencies:

- U.S. Forest Service (USFS) (Medicine Bow-Routt National Forest and Thunder Basin National Grasslands);
- State of Wyoming (including 12 departments);
- Carbon County (including 4 departments);
- Little Snake River Conservation District;
- Saratoga Encampment Conservation District;
- Medicine Bow Conservation District; and
- City of Rawlins.

The BLM initiated public involvement with publication of a Notice of Intent (NOI) to prepare an EIS for the proposed project in the Federal Register (FR) on July 25, 2008, which announced the initiation of a

45-day scoping period. A total of 80 people attended the four public scoping meetings. The BLM extended the 45-day scoping period to September 23, 2008, to allow more time for interested parties to participate and provide their input and comments about the proposed project. By the conclusion of the official scoping period, the BLM received a total of 47 comment submittals (e.g., letter, comment form, email) containing 411 individual comments.

BLM and U.S. Environmental Protection Agency (USEPA) published the Notice of Availability (NOA) for public review and comment on the Draft EIS concurrently in the FR on July 22, 2011 to initiate the 90-day public comment period, which concluded on October 19, 2011. Two public meetings were held and comment letters were received from 1,629 individuals.

Following publication by the USEPA and BLM of an NOA for the Final EIS in the FR and the distribution of the Final EIS, the public has 30 days to review the document and submit a protest letter, if desired. In addition, a 60-day Governor's Consistency Review also would occur during this time (43 Code of Federal Regulations (CFR) 1610.5-2).

Following protest resolution and the Governor's Consistency Review, the State Director will approve the Final EIS by issuing a public ROD, which is a concise document summarizing the findings and decisions brought forth from the Final EIS. RODs will be issued for both the plan amendment and project EISs. However, approval shall be withheld on any portion of a plan being protested until final action has been completed on such protest. Before such approval is given, there shall be public notice and opportunity for public comment on any significant change made, as necessary, to the selected alternative.

Elements Common to All Alternatives

A detailed discussion of elements common to all alternatives is provided in **Appendix A**.

BLM Environmental Constraints

Use of the public lands for either development or access requires compliance with the stipulations and policy governing the public lands, including the 2008 Rawlins RMP and relevant federal laws, regulations, and policy. A summary of the BLM's environmental constraints is provided in **Appendix C**. With the exception of variations for greater sage-grouse noted in Alternative 2, the No Surface Use (NSU) constraints and timing stipulations would apply on public lands to all action alternatives (**Appendix C, Table C-1**). Best management practices (BMPs) established through the *Record of Decision for Implementation of a Wind Energy Development Program and Associated Land Use Plan Amendments* (BLM 2005) and established in Appendix 15 of the 2008 Rawlins RMP ROD are considered applicable to this project.

Applicant-Committed Measures and Best Management Practices

PCW has provided ACMs and BMPs that would be applied to all private, state, and public lands (**Appendix C, Table C-2** and **Table C-3**). Under all action alternatives, PCW has committed to no development within the greater sage-grouse core breeding areas (Wyoming Governor's EO 2011-05 Greater Sage-grouse Core Area Protection).

Additional Constraints and Mitigation Identified Through the EIS Process

In addition to the BMPs, NSUs, and ACMs described in **Appendix C**, mitigation measures identified through the environmental analysis (**Appendix C, Table C-4**) and additional constraints that may come through development of an Avian Protection Plan (APP; **Appendix J**); a Biological Opinion (**Appendix L**); Programmatic Agreement for cultural and Native American resources (**Appendix E**); and reclamation and monitoring would be incorporated into the selected alternative. These constraints would then in turn be considered as stipulations of approval in the ROW grants.

Visual Resource Management Considerations

The VRM Plan Amendment for the CCSM project is being addressed in Volume I of this document. The Proposed Plan identified in the VRM Plan Amendment in Volume I has been carried forward for analysis in this Volume.

Phased Construction Sequence (GEN-1)

The BLM developed mitigation measure GEN-1 in the Draft EIS that would limit surface disturbance to areas where turbines would be constructed to occur within 12 months with a goal to mitigate impacts from surface disturbance to wildlife, soils, water, and vegetation (e.g., weeds). PCW has modified their construction schedule and approach in the revised draft POD to reflect Draft EIS Mitigation Measure GEN-1 (PCW 2012). The GEN-1 Phased Construction Sequence has been incorporated into all alternatives in the Final EIS, rather than applied as a mitigation measure.

Alternatives

The alternatives considered and carried forward for detailed analysis are listed below. **Table ES-1** compares the impacts by alternative. The BLM has identified Alternative 1R with modifications as the Preferred Alternative. The modification is to specifically prohibit project development from areas of the Red Rim-Grizzly WHMA located within the Greater Sage-grouse Core Area (247 acres) applied through ACMs as well as overlap with the Alternative 1R boundary. This modification prohibits development on 1,037 acres (**Figure 1-5**) in the Sierra Madre portion of the project. The BLM is prohibiting development in this area from the Preferred Alternative because construction within the Red Rim-Grizzly Wildlife Habitat Management Area (WHMA) may conflict with the Memorandum of Understanding (MOU) between the BLM and Wyoming Game and Fish Department (WGFD) associated with this area.

- **No Action Alternative** assumes the BLM would reject PCW's request to develop wind energy on public lands and deny any request to provide access to private lands for wind development with the Application Area. The area would continue to be used for livestock grazing and recreation. The BLM may consider ROW requests or similar applications for other projects, such as power transmission or mineral development, which may be proposed for this area in the future. This alternative does not meet the purpose and need of the project, which is to promote the development of wind energy on public lands.
- **Alternative 1R** considers authorizing wind development in PCW's Application Area within TOTCO ranch boundaries to accommodate a 2,000- to 3,000-MW wind farm consisting of 1,000 WTGs. This alternative was submitted by the applicant after determining the range of issues raised during scoping could not be addressed by the original project concept and optimized the conceptual layout with information from the Draft EIS. This alternative includes a haul road location between the Chokecherry and Sierra Madre sites that avoids steep terrain and a RDF location south of Interstate 80 (I-80) to address concerns with access and construction traffic across I-80. This alternative was developed after a comprehensive review of information pertaining to wildlife issues in the RFO had been identified.
- **Alternative 2** considers authorizing wind development in PCW's Application Area only above Township 18 North (T18N) to keep development primarily within the checkerboard landownership pattern to accommodate a 2,000- to 3,000-MW wind farm consisting of 1,000 WTGs. This alternative was developed in response to concerns raised in regard to visual impacts in areas with high recreational values. More conservative greater sage-grouse stipulations would apply to public lands. This Alternative has been modified from the Draft EIS as a result of agency comments to include a haul road variation that parallels WY 71/CCR 401 because of concerns for impacts to big game habitat in the Sage Creek Basin. The haul road variation would connect to the RDF located south of I-80 but within the boundaries of the Chokecherry site.

- **Alternative 3** considers authorizing wind development in the Chokecherry portion and only the area from the eastern half of T18N, Range 88 West (R88W) to the east of the Sierra Madre portion of PCW's Application Area to accommodate a 2,000- to 3,000-MW wind farm consisting of 1,000 WTGs. All lands would be excluded below T18N, and the western half of T18N, R88W. Under this alternative, WTGs would not be placed on Miller Hill or in the southern area defined as the Sierra Madre portion of the proposed project. WTGs would be placed east of the base of the slope to Miller Hill and into Sage Creek Basin. This alternative retains the original haul road location analyzed in the Draft EIS and RDF location north of I-80 that was included in the Draft EIS. This alternative was developed in response to concerns raised with regard to existing VRM Class II areas as well as areas with high wildlife concerns.
- **Alternative 4** considers no placement of WTGs on public lands within either the Chokecherry site or Sierra Madre site. This alternative, however, considers that the BLM would provide ROW grants to PCW for the public lands that would allow PCW to develop wind energy facilities on the privately held lands. The BLM would apply required NSU and timing stipulations to public lands for requested access points. This alternative retains the original haul road location analyzed in the Draft EIS and RDF location north of I-80 that was included in the Draft EIS. This alternative was developed in response to the overall concerns raised with developing a wind farm on public lands and the associated impacts.

Environmental Consequences

Table ES-1 provides a summary of the impacts from the project alternatives, organized by resource. The environmental consequences of each alternative are analyzed in Chapter 4.0.

Table ES-1 Impact Comparison by Resource for All Alternatives

Resource	Alternative 1R	Alternative 2	Alternative 3	Alternative 4	Additional Discussion
Cultural Resources and Native American Traditional Values					
Visual impacts to the historic properties	Visual effects to historic properties, specifically the Overland Trail, by introducing visual elements that diminish the integrity of the property's setting.	Increased potential for visual effects to the Overland Trail from Alternative 1R relative to the WTGs; visual effects associated with the proposed transmission line would be less than Alternative 1R.	Decreased potential for visual effects to the Overland Trail from Alternative 1R relative to WTGs; visual effects associated with the proposed transmission line would be the same as Alternative 2.	Increased potential for visual effects to the Overland Trail from Alternative 1R relative to WTGs; visual effects associated with the proposed transmission line would be the same as Alternative 2.	Section 4.2
Geology and Minerals					
Aggregate consumption ¹	2,800,000 yd ³	19 percent greater than Alternative 1R	9 percent greater than Alternative 1R	16 percent greater than Alternative 1R	Section 4.3
Land slide constraints (acres of landslide deposits potentially affected)	Approximately 8	Approximately 5	Less than 1	Approximately 5	Section 4.3
Swelling soil constraints (acres of shrink-swell potential bedrock)	Approximately 396	Approximately 548	Approximately 729	Approximately 793	Section 4.3
Land Use/Recreation					
Impacts to the Red Rim-Grizzly WHMA	The area inside the Red Rim-Grizzly WHMA and inside the Application Area, but outside the greater sage-grouse core breeding area, could have WTGs and supporting facilities.	Would not build within the Red Rim-Grizzly WHMA.	Would not build within the Red Rim-Grizzly WHMA.	Would not build within the Red Rim-Grizzly WHMA.	Sections 4.4 and 4.14

Table ES-1 Impact Comparison by Resource for All Alternatives

Resource	Alternative 1R	Alternative 2	Alternative 3	Alternative 4	Additional Discussion
Impacts to the CDNST (Special Recreation Management Area (SRMA))	No facilities within the 0.25 mile SRMA corridor. Strong visual impacts in the CDNST viewshed.	No facilities within the 0.25 mile SRMA corridor. Strong visual impacts in the CDNST viewshed.	No facilities within the 0.25 mile SRMA corridor. Strong visual impacts in the CDNST viewshed.	No facilities within the 0.25 mile SRMA corridor. Strong visual impacts in the CDNST viewshed.	Sections 4.7 and 4.12.
Impacts to the Teton Reservoir Recreation Site	No direct impacts to recreation opportunities. Strong visual impacts in the natural setting of recreation activities from WTGs and transmission line in the Teton Reservoir viewshed.	Visual impacts from the haul road traffic in close proximity to Teton Reservoir are intrusive. Strong visual impacts from the transmission line along haul road.	No direct impacts to recreation opportunities. Strong visual impacts in the natural setting of recreation activities from WTGs, haul road, and transmission line in reservoir viewshed.	No direct impacts to recreation opportunities. Change to natural setting of recreation activities from WTGs and transmission line in reservoir viewshed.	Sections 4.7 and 4.12
Impacts to the North Platte River SRMA	No direct impacts to recreation opportunities. Moderate to strong visual impacts in the natural setting as seen from some segments of the river.	No direct impacts to recreation opportunities. Moderate to strong visual impacts in the natural setting as seen from some segments of the river.	No direct impacts to recreation opportunities. Moderate to strong visual impacts in the natural setting as seen from some segments of the river.	No direct impacts to recreation opportunities. Moderate to strong visual impacts in the natural setting as seen from some segments of the river.	Sections 4.7 and 4.12
Lands with wilderness characteristics	No inventory units meet lands with wilderness characteristic (LWC) criteria; therefore no impacts to LWCs.	No inventory units meet LWC criteria; therefore no impacts to LWCs.	No inventory units meet LWC criteria; therefore no impacts to LWCs.	No inventory units meet LWC criteria; therefore no impacts to LWCs.	Section 4.4
Paleontology					
Potential Fossil Yield Classification (PFYC) Classes 4 or 5 areas (acres) direct impact	6,533	7,502	7,545	7,258	Section 4.5

Table ES-1 Impact Comparison by Resource for All Alternatives

Resource	Alternative 1R	Alternative 2	Alternative 3	Alternative 4	Additional Discussion
Range Resources					
AUMs lost – direct	969	1,067	977	995	Section 4.6
AUMs lost – dust deposition	2,000	2,201	2,083	2,236	Section 4.6
Socioeconomics					
Temporary employment (number jobs): Seasonal peak during development <ul style="list-style-type: none"> • Direct • Indirect and induced • Total 	1,154 <u>586</u> 1,740 (Years 3 and 4)	Comparable to, but possibly slightly higher than Alternative 1R due to higher labor requirements for road construction and, project development.	Comparable to, but possibly slightly higher than Alternative 1R due to higher labor requirements for road construction and, project development.	Comparable to Alternative 1R, with possibility for slightly higher labor requirements for road construction and, project development, with offsets due to 15 percent fewer WTGs.	Section 4.8
Long-term employment during Operations: (number of jobs – range)	205 to 284	Comparable to Alternative 1R.	Comparable to Alternative 1R.	Lower than Alternative 1R due to fewer WTGs.	Section 4.8
Temporary housing demand (peak)	1,231 units in years 3 and 4; demand for temporary housing exceeds local availability.	Comparable to Alternative 1R.	Comparable to Alternative 1R.	Peak comparable to Alternative 1R, but lower average demand during years 3 through 5.	Section 4.8
Public sector revenues – (millions of dollars): Federal ROW grant rentals	\$2.1 to \$3.2 per year at full development.	\$2.1 to \$3.2 per year at full development.	\$2.1 to \$3.2 per year at full development.	Unknown, but likely less than \$100,000 per year at full development.	Section 4.8
Local ad valorem/property tax at full development (including mandatory state levies)	\$29.7 to \$42.4 (Year 1) \$21.7 to \$31 (Year 10)	\$29.7 to \$42.4 (Year 1) \$21.7 to \$31 (Year 10)	\$29.7 to \$42.4 (Year 1) \$21.7 to \$31 (Year 10)	\$25.5 to \$36.1 (Year 1) \$18.6 to \$26.3 (Year 10).	Section 4.8

Table ES-1 Impact Comparison by Resource for All Alternatives

Resource	Alternative 1R	Alternative 2	Alternative 3	Alternative 4	Additional Discussion
Sales and use tax	\$216 to \$336 (over 5 years). Continue, but much lower during operations.	\$216 to \$336 (over 5 years). Continue, but much lower during operations.	\$216 to \$336 (over 5 years). Continue, but much lower during operations.	More than \$194 to \$284 (over 5 years). Continue, but much lower during operations..	Section 4.8
Wind energy production tax (at full production following 3-year exemption)	\$6.1 to \$9.2 per year	\$6.1 to \$9.2 per year	\$6.1 to \$9.2 per year	\$5.2 to \$7.8 per year	Section 4.8
Eligibility for Wyoming Impact Assistance	Yes Amount is contingent upon sales tax increment. Distribution subject to determination by the Council	Comparable to Alternative 1R	Comparable to Alternative 1R	Comparable to, but lower than Alternative 1R	Section 4.8
Soils					
Severely water erodible soils (acres)	2,086	1,936	1,900	1,697	Section 4.9
Severely wind erodible soils (acres)	100	45	74	53	Section 4.9
Poor topsoil ratings (acres)	3,001	3,702	3,840	3,790	Section 4.9

Table ES-1 Impact Comparison by Resource for All Alternatives

Resource	Alternative 1R	Alternative 2	Alternative 3	Alternative 4	Additional Discussion
Transportation and Access					
Delay and deterioration in Level of Service (LOS) at key intersections	High volumes of construction traffic on WY 76/CR 407 at I-80 Exit 221 during construction After RDF completed, most truck traffic and all WTGs delivered on private roads. Peak hour delays and lower LOS at Exit 221 during peak months with the Exit 221 workforce commuting option. Peak hour delays and lower LOS at WY 71/ Locust St. & S. Higley Blvd. intersection during peak month with the WY 71/CR 401 commuting option.	Similar to, but slightly higher than Alternative 1R due to additional road construction.	Traffic volumes similar to, but slightly higher than Alternative 1R due to additional road construction. Traffic from alternative RDF site results in significant peak hour delay and deterioration in LOS at I-80 Exit 221 during peak months (Exit 221 workforce commuting option) and at WY 71/ Locust St & S. Higley Blvd intersection (WY 71/CR 401 commuting option).	Reduced overall volumes of WTG construction traffic as compared to Alternative 1R, potentially offset by higher volumes of internal road construction. High volumes of peak month/peak hour traffic associated with alternative RDF still anticipated.	Section 4.10
WY 71 (crossing) Impacts: Percent of SM turbines west/east of WY 71/CR 401	62/38	54/46	40/60	41/59	Section 4.10
Visual Resources					
Percent of WTGs on BLM-VRM Class IV ²	46	39	43	0	Section 4.12
State ²	5	3	2	0	Section 4.12

Table ES-1 Impact Comparison by Resource for All Alternatives

Resource	Alternative 1R	Alternative 2	Alternative 3	Alternative 4	Additional Discussion
Private ²	50	59	54	100	Section 4.12
Total ³	100	100	100	100	Section 4.12
Impact to the CDNST	Closest WTGs would be 1.6 miles from trail in Chokecherry. Closest heavy truck traffic on haul road would be 3.8 miles from trail in Sierra Madre.	Closest WTGs would be 1.3 miles from trail in Chokecherry. Closest heavy truck traffic on haul road would be 0.3 miles from trail in off-site Sage Creek valley below Atlantic Rim.	Closest WTGs would be 1.3 miles from trail in Chokecherry. Closest heavy truck traffic on haul road would be 3.3 miles from trail in Sierra Madre.	Closest WTGs would be 1.9 miles from trail in Chokecherry. Closest heavy truck traffic on haul road would be 3.3 miles from trail in Sierra Madre.	Section 4.12
Water Resources					
Water consumption ⁴ (acre-feet/year)	553	604	577	602	Section 4.13
Waterbody crossings (number)	348	531	494	596	Section 4.13
Number of stream crossings – ephemeral	343	520	483	582	Section 4.13
Number of stream crossings - perennial	5	11	11	14	Section 4.13
Wildlife Resources					
Mule deer crucial winter (acres) direct habitat loss	232	280	200	191	Section 4.14
Mule deer permanent roads in seasonal range (miles)	436	483	456	488	Section 4.14
Pronghorn permanent roads in seasonal range (miles)	437	483	457	488	Section 4.14
Elk permanent roads in seasonal range (miles)	58	28	0	28	Section 4.14
Annual bat collision mortality	6,300	6,300	6,300	5,380	Section 4.14

Table ES-1 Impact Comparison by Resource for All Alternatives

Resource	Alternative 1R	Alternative 2	Alternative 3	Alternative 4	Additional Discussion
Estimated annual raptor collision mortality	150-210	150-210	150-210	128-179	Section 4.14
Estimated annual collision mortality for all birds	5,400	5,400	5,400	4,612	Section 4.14
Special Status Species					
Number of WTGs in greater sage-grouse core area	0	0	0	0	Section 4.15
Acres of greater sage-grouse core area within 4 miles of project facilities	127,465	114,340	89,498	126,376	Section 4.15
Noise					
Distance to nearest noise sensitive receptor	>0.5 mile from WTG >1 mile from substation	>1 mile from WTG and substation	>1 mile from WTG >5 mile from substation	>1 mile from WTG and substation	Section 4.16

¹ Aggregate would be used for roads, laydown areas, substations, transmission line access roads, and concrete.

² Percent of WTGs in VRM class areas are estimates based on alternative conceptual designs.

³ Discrepancies in totals due to rounding.

⁴ Water would be used for concrete mixing, road watering, and road compaction.