CCSM Project Infrastructure Components

Environmental Assessment

Appendix C

Summary of BLM Environmental Constraints, Applicant Committed Measures, Applicant Committed Best Management Practices, and Proposed Mitigation Measures

APPENDIX C

SUMMARY OF BLM ENVIRONMENTAL CONSTRAINTS, APPLICANT COMMITTED MEASURES, APPLICANT COMMITTED BEST MANAGEMENT PRACTICES, AND PROPOSED MITIGATION MEASURES

This appendix contains a copy of Appendix D from the Chokecherry and Sierra Madre (CCSM) Wind Energy Project Record of Decision (ROD) published in 2012 (BLM 2012a). This appendix identifies the Bureau of Land Management (BLM) environmental constraints, Applicant committed measures, Applicant committed best management practices, and proposed mitigation measures for the CCSM Project. This appendix is included in this EA for ease of reference to these design features and mitigation measures.

Appendix D

Summary of BLM Environmental Constraints, Applicant Committed Measures, Applicant Committed Best Management Practices, and Proposed Mitigation Measures

Record of Decision September 2012

Appendix Table D-1 Summary of BLM Environmental Constraints

Resource Area	Resource Concern	Protection Measure	Application to Jurisdiction[1]			Mitigation Type[2]	Authority/Source
			Private Land[3]	State Land	Public Land		
Cultural – Historic Trails	Within either 0.25-mile or the visual horizon (whichever is closer) of a cultural property/ historic trails.	No surface disturbing activities. Management actions resulting in visual elements that diminish the integrity of the property's setting will be managed in accordance with the Wyoming State Protocol and BMPs.	Yes[4]	Yes	Yes	1	2008 Rawlins RMP ROD; Wyoming BLM Mitigation Guidelines; Wind Energy Programmatic EIS ROD Policies and BMPs.
Recreation Sites	Within 0.25-mile of developed and undeveloped recreation sites.	Lands closed to operation of public land laws.	Yes[4]	Yes[4]	Yes[4]	1	2008 Rawlins RMP ROD.
Soils – Slopes	Steep slopes >25 percent.	Surface disturbance will be prohibited. No turbines, staging or substations.	Yes[5]	Yes[5]	Yes[5]	1	Wyoming BLM Mitigation Guidelines.
Special Management Areas – Designated Areas	Designated areas part of the National Landscape Conservation System (e.g., Continental Divide National Scenic Trail [CDNST]).	Lands will be excluded from wind energy site monitoring and testing and development on lands on which wind energy development is incompatible with specific resource values. *(0.25-mile swath centered on the trail)*	n/a	Yes[4]	Yes	1	Wind Energy Programmatic EIS ROD Policies and BMPs.
Water – Ephemeral Channels	Within 100 feet from the inner gorge of ephemeral channels.	Avoidance areas for surface-disturbing and disruptive activities and linear crossings. Only those actions within areas that cannot be avoided and that provide protection for the resource identified will be approved.	No[5]	No[5]	Yes[5]	1	2008 Rawlins RMP ROD.
Water – Floodplains	Identified 100-year floodplains.	Surface disturbing activities will be avoided. Only those actions within areas that cannot be avoided and that provide protection for the resource identified will be approved.	No	No	Yes	1	2008 Rawlins RMP ROD.
Water – Perennial Waters, Springs, Wetlands, Riparian	Within 500 feet of perennial waters, springs, and wetland and riparian areas.	Surface disturbing activities will be avoided. Only those actions within areas that cannot be avoided and that provide protection for the resource identified will be approved.	No[4,5]	No[4,5]	Yes[5]	1	2008 Rawlins RMP ROD; Wyoming BLM Mitigation Guidelines; Executive Orders (EOs) 11990 and 11988.
Water – Unstable Areas	Unstable areas (such as landslides, slopes >25 percent, slumps, and areas exhibiting soil creep).	Surface disturbing activities will be avoided. Reclamation practices and BMPs will be applied as appropriate for surface disturbing activities.	No	No	Yes	1	2008 Rawlins RMP ROD.
Water – Wetlands	Wetlands identified on National Wetlands Inventory (NWI) or proper functioning condition (PFC).[6]	No disturbance.	No	No	Yes	1	EOs 11990 and 11988.
Wildlife – Amphibians	Identified 100-year floodplains; within 500 feet of perennial waters, springs, wells, and wetlands; and within 100 feet of the inner gorge of ephemeral channels.	Surface disturbing and disruptive activities will be avoided.	No	No	Yes	1	2008 Rawlins RMP ROD.
Wildlife – Fish	Waterbodies that potentially support fish for a portion of the year.	Design road crossings to simulate natural stream processes.	No	No	Yes	1	2008 Rawlins RMP ROD.
Wildlife – Raptors	825 feet of active raptor nests (ferruginous hawks, 1,200 feet).	Well locations, roads, ancillary facilities, and other surface structures requiring a repeated human presence will not be allowed. Distance may vary depending on factors such as nest activity, species, natural topographic barriers, and line-of-sight distances.	Yes	Yes	Yes	1	2008 Rawlins RMP ROD.
Wildlife-Columbian Sharp-tailed Grouse	0.25 mile to 1 mile of an occupied or undetermined Columbian sharp-tailed grouse lek.	High-profile structures (e.g., buildings, storage tanks, overhead powerlines, wind turbines, towers, and windmills) would be authorized on a case-by-case basis from one-quarter mile to 1 mile of an occupied greater sage-grouse and sharp-tailed grouse lek.	No	No	Yes	1	2008 Rawlins RMP ROD.
Wildlife – Greater Sage-grouse	Inside Core Areas: 0.60 mile NSU from lek perimeter (includes occupied and undetermined leks). Outside Core Areas: 0.25 mile NSU from lek perimeter (includes occupied and undetermined leks).	Surface disturbing activities or surface occupancy is prohibited or restricted.	Yes	Yes	Yes	1	BLM IM No. WY-2012-019

Appendix Table D-1 Summary of BLM Environmental Constraints

Resource Area	Resource Concern	Protection Measure	Application to Jurisdiction[1]			Mitigation Type[2]	Authority/Source
			Private Land[3]	State Land	Public Land		
Wildlife – Greater Sage-grouse	Inside Core Areas.	Limit development to one disturbance location per 640 acres. Cumulative value of one location and existing disturbance to not exceed 5 percent of sagebrush habitat within 640 acres	No	No	Yes	1	BLM IM No. WY-2012-019
Wildlife – Greater Sage-Grouse	0.25-mile to 1 mile of an occupied sage-grouse lek.	High-profile structures (e.g., buildings, storage tanks, overhead power lines, wind turbines, towers, and windmills) will be authorized on a case-by-case basis.	No	No	Yes	1	2008 Rawlins RMP ROD.
Wildlife – Greater Sage-grouse	Inside Core Areas: Within 0.60-mile of the perimeter of an occupied or undetermined greater sage-grouse lek. Outside Core Areas: Within 0.25-mile of the perimeter of an occupied or undetermined greater sage-grouse lek.	Disruptive activities are restricted between 6:00 p.m. and 9:00 a.m. from March 1 to May 20.	No[7]	No[7]	Yes	2	2008 Rawlins RMP ROD; BLM IM No. WY-2012-019.
Wildlife – Greater Sage-grouse	Inside Core Areas: In suitable greater sage-grouse nesting and early brood-rearing habitat. Outside Core Areas: In suitable greater sage-grouse nesting and early brood-rearing habitat within 1) mapped habitat important for connectivity, or 2) within 2 miles of any occupied or undetermined lek.	Surface disturbing and/or disruptive activities are prohibited or restricted from March 1 – July 15.	No[7]	No[7]	Yes	2	BLM IM No. WY-2012-019; 2008 Rawlins RMP ROD.
Wildlife – Greater Sage-grouse	Greater sage-grouse delineated winter concentration areas.	Surface disturbing and/or disruptive activities in mapped or modeled greater sage-grouse winter habitats/concentration areas that support Core Area populations, are prohibited or restricted from November 15 – March 14.	No[7]	No[7]	Yes	2	BLM IM No. WY-2012-019; 2008 Rawlins RMP ROD.
Wildlife – Columbian Sharp-tailed Grouse	Within 0.25-mile of the perimeter of an occupied or undetermined Columbian sharp-tailed grouse lek.	Surface disturbing activities or occupancy are prohibited. Disruptive activities are prohibited between 6:00 p.m. and 9:00 a.m. from March 1 to May 20.	No[7]	No[7]	Yes	2	2008 Rawlins RMP ROD.
Wildlife – Barn Owl	Within 0.75-mile of barn owl nests.	Surface disturbing and disruptive activities potentially disruptive are prohibited February 1–July 15.	No[7]	No[7]	Yes	2	2008 Rawlins RMP ROD.
Wildlife – Big Game	Big game crucial winter range.	Surface disturbing and disruptive activities will not be allowed during the period of November 15 to April 30. Disruptive activities will require the use of BMPs designed to reduce the amount of human presence and activity during the winter months.	No[7]	No[7]	Yes	2	2008 Rawlins RMP ROD; Wyoming BLM Mitigation Guidelines.
Wildlife – Big Game	Big game parturition areas.	Surface disturbing and disruptive activities will not be allowed during the period of May 1 to June 30.	No[7]	No[7]	Yes	2	2008 Rawlins RMP ROD; Wyoming BLM Mitigation Guidelines.
Wildlife – Burrowing Owl	Within 0.75-mile of burrowing owl nests.	Surface disturbing and disruptive activities potentially disruptive are prohibited April 15–September 15.	No[7]	No[7]	Yes	2	2008 Rawlins RMP ROD.
Wildlife – Cooper's Hawk	Within 0.75-mile of Cooper's hawk nests.	Surface disturbing and disruptive activities potentially disruptive are prohibited April 1–July 31.	No[7]	No[7]	Yes	2	2008 Rawlins RMP ROD.
Wildlife – Ferruginous Hawk	Within 1-mile buffer of ferruginous hawk nests.	Surface disturbing and disruptive activities potentially disruptive are prohibited March 1–July 31.	No[7]	No[7]	Yes	2	2008 Rawlins RMP ROD.
Wildlife – Golden Eagle	Within 1-mile buffer of golden eagle nests.	Surface disturbing and disruptive activities potentially disruptive are prohibited February 1–July 15.	No[7]	No[7]	Yes	2	2008 Rawlins RMP ROD.
Wildlife – Goshawk	Within 0.75-mile of Goshawk nests.	Surface disturbing and disruptive activities potentially disruptive are prohibited April 1–August 31.	No[7]	No[7]	Yes	2	2008 Rawlins RMP ROD.
Wildlife – Great-Horned Owl	Within 0.75-mile of great-horned owl nests.	Surface disturbing and disruptive activities potentially disruptive are prohibited February 1–July 15.	No[7]	No[7]	Yes	2	2008 Rawlins RMP ROD.
Wildlife – Kestrel	Within 0.75-mile of kestrel nests.	Surface disturbing and disruptive activities potentially disruptive are prohibited April 1–July 31.	No[7]	No[7]	Yes	2	2008 Rawlins RMP ROD.
Wildlife – Long-Eared Owl	Within 0.75-mile of long-eared owl nests.	Surface disturbing and disruptive activities potentially disruptive are prohibited March 1–July 31.	No[7]	No[7]	Yes	2	2008 Rawlins RMP ROD.

Appendix Table D-1 Summary of BLM Environmental Constraints

Resource Area	Resource Concern	Protection Measure	Application to Jurisdiction[1]			Mitigation Type[2]	Authority/Source
			Private Land[3]	State Land	Public Land		
Wildlife – Merlin	Within 0.75-mile of Merlin nests.	Seasonal wildlife stipulation April 1–July 31.	No[7]	No[7]	Yes	2	2008 Rawlins RMP ROD.
Wildlife – Mountain Plover	Potential and occupied habitat Mountain plover.	Habitat will be avoided where practical. All surface-disturbing activities will be restricted from April 10 to July 10. Additional protection measures will be applied if this area is later determined to be within occupied habitat. Occupied habitat is defined as areas where broods and adults have been found.	No[7]	No[7]	Yes	2	2008 Rawlins RMP ROD.
Wildlife – Northern Harrier	Within 0.75-mile of northern harrier nests.	Surface disturbing and disruptive activities potentially disruptive are prohibited April 1–July 31.	No[7]	No[7]	Yes	2	2008 Rawlins RMP ROD.
Wildlife – Osprey	Within 0.75-mile of osprey nests.	Surface disturbing and disruptive activities potentially disruptive are prohibited April 1–July 31.	No[7]	No[7]	Yes	2	2008 Rawlins RMP ROD.
Wildlife – Peregrine Falcon	Within 0.75-mile of peregrine falcon nests.	Surface disturbing and disruptive activities potentially disruptive are prohibited March 1–July 31.	No[7]	No[7]	Yes	2	2008 Rawlins RMP ROD.
Wildlife – Prairie Falcon	Within 0.75-mile of prairie falcon nests.	Surface disturbing and disruptive activities potentially disruptive are prohibited April 1–July 31.	No[7]	No[7]	Yes	2	2008 Rawlins RMP ROD.
Wildlife – Raptor	Defined raptor and game bird winter concentration areas.	Activities or surface use will not be allowed from November 15 to April 30.	No[7]	No[7]	Yes	2	Wyoming BLM Mitigation Guidelines.
Wildlife – Raptor	Raptor nesting habitat.	Activities or surface use will not be allowed from February 1 to July 31.	No[7]	No[7]	Yes	2	Wyoming BLM Mitigation Guidelines.
Wildlife – Raptors	Within 0.75-mile of other raptor nests.	Surface disturbing and disruptive activities potentially disruptive are prohibited February 1–July 15.	No[7]	No[7]	Yes	2	2008 Rawlins RMP ROD.
Wildlife – Red-Tailed Hawk	Within 0.75-mile of red-tailed hawk nests.	Surface disturbing and disruptive activities potentially disruptive are prohibited February 1–July 15.	No[7]	No[7]	Yes	2	2008 Rawlins RMP ROD.
Wildlife – Screech Owl	Within 0.75-mile of screech owl nests.	Surface disturbing and disruptive activities potentially disruptive are prohibited March 1–July 31.	No[7]	No[7]	Yes	2	2008 Rawlins RMP ROD.
Wildlife – Sharp-Shinned Hawk	Within 0.75-mile of sharp-shinned hawk nests.	Surface disturbing and disruptive activities potentially disruptive are prohibited April 1–July 31.	No[7]	No[7]	Yes	2	2008 Rawlins RMP ROD.
Wildlife – Short-Eared Owl	Within 0.75-mile of short-eared owl nests.	Surface disturbing and disruptive activities potentially disruptive are prohibited March 1–July 31.	No[7]	No[7]	Yes	2	2008 Rawlins RMP ROD.
Wildlife – Swainson's Hawk	Within 0.75-mile of Swainson's hawk nests.	Surface disturbing and disruptive activities potentially disruptive are prohibited April 1–July 31.	No[7]	No[7]	Yes	2	2008 Rawlins RMP ROD.
Wildlife – Western Yellow-billed Cuckoo	Within 0.5 mile radius yellow-billed cuckoo nest.	Seasonal wildlife stipulation April 15–August 15.	No[7]	No[7]	Yes	2	2008 Rawlins RMP ROD.

1 Sources of information for application of stipulations for private and state lands include *Applicant Proposed Alternative and BLM Response Letter* (April 23, 2010), *PCW Response and Data on BLM Alternatives* (December 2009), and the *Plan of Development for the Chokecherry and Sierra Madre Wind Energy Project* (January 12, 2012).

2 1 = Restriction; 2 = Seasonal.

3 As indicated in PCW's submittal entitled *Applicant Proposed Alternative and BLM Response Letter* (April 23, 2010).

4 Applicant imposes more restrictive measures or applies measure to a specific area, see summary table of PCW ACMs.

5 Per the *PCW Response and Data on BLM Alternatives* (December 2009) footnotes to Alternatives Summaries #18, "No Surface Uses (NSUs), as provided by BLM, were avoided to the extent practicable; however, some NSUs could not be completely avoided in a small number of discreet instances (mainly ephemeral streams, slope, and perennial streams/springs/wetlands/riparian). An example of an exception to the NSUs is where a turbine is located in an area that cannot be accessed without crossing an ephemeral stream. If it is determined that the stream is a Water of the U.S., then a Section 404 permit will be obtained thereby allowing an access road to be constructed. Another example is the slope criteria. The accuracy of the digital terrain model used for this analysis is insufficient for micro-siting. Engineering judgment was used to determine in a limited number of cases that it may be possible to grade a resource road to design criteria."

6 See Chapter 8.0, Glossary.

7 Per the *PCW Response and Data on BLM Alternatives* (December 2009) footnotes to Alternatives Summaries #10, "seasonal timing restrictions were not applied to construction activities on private land."

Appendix D. Applicant Committed Measures

Appendix Table D-2. Summary of Applicant Committed Measures

Item	Environmental Resource	Applicant Committed Measure
A-1-01	ESA, sensitive species, and other wildlife and fish species	Site-specific surveys and/or monitoring for ESA threatened and endangered species, BLM sensitive species and other wildlife and fish species will take place during each phase of construction. Survey and monitoring approaches will be developed in coordination with USFWS, BLM, and WGFD and will be identified in the site-specific PODs developed for each construction right-of-way grant.
A-1-02	Avian and Bat Species, Golden and Bald Eagles	PCW will develop an Avian Protection Plan (APP), a Bat Protection Plan (BPP) and an Eagle Conservation Strategy (ECS) to identify measures to avoid, minimize, and mitigate project impacts through siting, operations, and monitoring.
A-1-03	Greater Sage-grouse	PCW will comply with EO 2011-5 and commit to no construction activities within Wyoming's SGCA as they are identified in EO 2011-5 (Core Area Version 3 Map).
A-1-04	Wildlife Habitat Management Areas	PCW will not construct any facilities within portions of the Red Rim-Grizzly WHMA and Upper Muddy Creek Watershed-Grizzly WHMA that are within the Wyoming Sage-Grouse Core Management Area Version 3 Map (EO 2011-5).
A-1-05	Mule Deer	PCW will continue to coordinate with WGFD on ongoing mule deer monitoring efforts on the Ranch.
A-1-06	Colorado River Fishes – bluehead sucker, flannelmouth sucker, roundtail chub, Colorado River cutthroat trout	PCW will continue to work with WGFD and BLM to develop conservation and monitoring strategies for native fish species in the Upper Muddy Creek watershed.
A-1-07	Fish species, amphibian species, other stream obligates; water quality	PCW will monitor watershed and stream conditions throughout the Application Area to document hydrologic conditions and stream channel characteristics (see Appendix H – Watershed Monitoring Plan).
A-1-08	Other wildlife species	PCW will continue to incorporate the outcome of site-specific surveys to microsite infrastructure in order to avoid, minimize, or mitigate impacts to wildlife species.
A-1-09	Wildlife Stipulations	PCW will adhere to the timing and spatial stipulations and exception processes as they are described in the Project ROD.
A-1-10	Wildlife Stipulations	Timing and spatial stipulations will be used on public lands.
A-1-11	Avian and Bat Monitoring	PCW will develop a project Avian Protection Plan, Bat Protection Plan and Eagle Conservation Strategy that will each describe post-construction monitoring efforts for avian and bat species.

Item	Environmental Resource	Applicant Committed Measure
A-1-12	Wildlife Monitoring and Survey	PCW will continue to incorporate the outcome of site-specific surveys to microsite infrastructure in order to avoid, minimize, or mitigate impacts to sensitive wildlife species.
A-1-13	Vegetation	Vegetation datasets developed by PCW will be used during project design to identify sensitive vegetation types for avoidance, minimization or mitigation and to optimize the reclamation plans for each construction phase.
A-1-14	Colorado butterfly plant and Ute ladies'-tresses orchid	Site-specific surveys for both plant species will be completed prior to surface disturbing activities in suitable habitat.
A-1-15	Revegetation and Reclamation	PCW will develop detailed reclamation plans for each of the construction phases and right-of-way grants. These plans will consider site-specific conditions and design considerations to maximize reclamation success.
A-1-16	Wetland Resources	Facilities would be sited to avoid and/or minimize impacts.
A-1-17	Wetland Resources	Any construction that occurs in or adjacent to wetlands and streams would use BMPs to protect surface water quality and minimize impacts to those resources.
A-1-18	Cultural Resources	Class III inventories of all proposed disturbance areas associated with the site-specific POD will be conducted prior to construction.
A-1-19	Cultural Resources	All cultural resource identification, evaluation, and treatment, including as a result of unexpected discovery at such time that construction has been permitted, will follow the stipulations of the Programmatic Agreement (PA) established for the project.
A-1-20	Paleontological Resources	In the event that fossils are discovered on public lands during construction activities, PCW will suspend work in that area, have an on-call paleontologist review the fossils, and notify the BLM. PCW expects the significance of the discovery and the resulting course of action to be determined within 48 hours of discovery.
A-1-21	Watershed Resources	PCW has implemented a watershed monitoring program to evaluate potential impacts of project construction and operations. PCW commits to continue watershed monitoring efforts for three years post-construction.
A-1-22	Greater Sage-Grouse	PCW will work cooperatively with BLM and WGFD to perform annual lek monitoring within the Ranch in accordance with approved WGFD protocols during pre-construction, construction and for five years post-construction.

Item	Environmental Resource	Applicant Committed Measure
A-1-23	Greater Sage-Grouse	PCW will work with BLM and private landowners to identify fences that pose a significant collision risk to sage-grouse. Identified fences will be removed or marked as practicable. To date PCW and TOTCO have removed over 10 miles of fence and have marked an additional 16 miles of fence with reflective bird diverters.
A-1-24	Greater Sage-Grouse	PCW will work with BLM and private landowners to evaluate proposed new fences and determine the risk of such fences to sage-grouse. If significant risk exists, new fence construction will be deferred where possible; if fences must be constructed they will be marked with reflective bird diverters.
A-1-25	Avian Species including Bald and golden Eagles and Greater Sage-Grouse	Guy wires on meteorological towers will be marked with reflective bird diverters. To date PCW has marked all guy wires on Project meteorological towers with reflective bird diverters.
A-1-26	Wildlife including Greater Sage-Grouse, Other Avian Species and Small Mammals	PCW will work with private landowners to install metal mesh escape ladders in water tanks that pose a risk to wildlife species. To date, PCW and TOTCO have installed metal mesh escape ramps on many Ranch water tanks.
A-1-27	Wildlife including Greater Sage-Grouse and Bald and Golden Eagles	PCW will work with BLM and private landowners to stabilize and rehabilitate burned areas to promote the biological integrity of the site and limit expansion of invasive species. In 2010 PCW and TOTCO pursued stabilization and recovery of a burned area in the Chokecherry site with an emphasis on rapid recovery and use of the area by sage-grouse and other species.
A-1-28	Wildlife including Greater Sage-Grouse and Bald and Golden Eagles	PCW will work with private landowners and water right owners to pursue water improvement conservation projects to benefit greater sage-grouse and other wildlife species in accordance with all applicable rules and regulations.
A-1-29	Wildlife including Greater Sage-Grouse and Bald and Golden Eagles	PCW will work with private land owners to enhance fallow agricultural fields on the Ranch located east of the North Platte River. Enhancements include vegetation treatments to improve forage and cover for greater sage-grouse.
A-1-30	Wildlife including Greater Sage-Grouse and Bald and Golden Eagles	To minimize habitat fragmentation PCW will work with BLM and private landowners to close unnecessary roadways and reclaim such roads where practicable.
A-1-31	Wildlife including Greater Sage-Grouse and Bald and Golden Eagles	PCW will work with BLM and private landowners to control the spread of noxious and invasive plant species.
A-1-32	Greater Sage-Grouse	PCW will work with private landowners to suspend the hunting of sage-grouse on private lands within the Ranch

Item	Environmental Resource	Applicant Committed Measure
A-1-33	Greater Sage-Grouse	PCW will cooperate with agencies and private land owners to evaluate and implement predator control techniques to benefit sage-grouse as appropriate.

Appendix Table D-2. Summary of Applicant Committed Measures

			Jurisdiction			Applies To			
Item	**Resource Concern**	**Restriction Distance**	**Private**	**State**	**BLM**	**WTGs**	**Subs**	**Roads Collection T-Line**	**Notes**
A-2-01	Cultural Historic Trails	1 mile WTGs, 0.25 mile surface of the Overland Trail	Y	Y	Y	Y	Y	No, minimize crossings, cross at right angles	1 mile setback from the center of the Overland Trail as presently mapped (2008 RMP/ROD) in all areas except the following sections, where the BLM's RMP requirement of 0.25 miles were used: T18N R87W S6; T18N R88W S1; T18N R88W S2; T18N R88W S4; T18N R88W S7; T18N R88W S9; T18N R89W S11; T18N R89W S12; T18N R89W S13; T18N R89W S14; and the unmapped Overland Trail alternative route located in T18N R88W S6, T18N R89W S1, T18N R89W S2, T18N R89W S11, and T18N R89W S10.
A-2-02	Lands and Realty - City/Town Limits	Structure base 0.5 mile setback	Y	Y	Y	Y	Y	No	Setback only applies to "towers," term not defined in Act; PCW to apply setback to WTGs, overhead
A-2-03	Lands and Realty Homes/ Occupied Buildings	Greater of 5.5 times total structure height or 1,000 ft. setback	Y	Y	Y	Y	N	No	Setback only applies to "towers," term not defined in Act; PCW to apply setback to WTGs, overhead collection, and transmission structures based on the height of each structure
A-2-04	Lands and Realty - ROW Setback	5D from ROW boundary	N	N	Y	Y	N	No	Waiver may be granted

			Jurisdiction			Applies To			
Item	**Resource Concern**	**Restriction Distance**	**Private**	**State**	**BLM**	**WTGs**	**Subs**	**Roads Collection T-Line**	**Notes**
A-2-05	Lands and Realty - Subdivisions	Greater of 5.5 times total structure height or 1,000 ft. setback	Y	Y	Y	Y	Y	Yes, except underground	Setback applies to all above-ground construction, underground appears permissible within setback
A-2-06	Lands and Realty - WTGs	Tower base 1.1 times total structure height from external property lines	Y	Y	Y	Y	N	No	Setback only applies to "towers," term not defined in Act; PCW to apply setback to WTGs, overhead collection, and transmission structures based on the height of each structure
A-2-07	Lands and Realty - WTGs	Tower base 1.1 times total structure height from any public ROWs	Y	Y	Y	Y	N	No	Setback only applies to "towers," term not defined in Act; PCW to apply setback to WTGs, overhead collection, and transmission structures based on the height of each structure
A-2-08	Recreation - Teton Reservoir	1 mile boundary WTGs of Teton Reservoir	Y	Y	Y	Y	N	No	WTG placement would be prohibited within one mile of the Teton Reservoir Recreation Site.
A-2-09	Water - North Platte River	1 mile high water mark WTGs of the North Platte River	Y	Y	Y	Y	Y	No, avoid if possible	WTG placement would be prohibited within one mile of the ordinary high water mark of the North Platte River.

			Jurisdiction			Applies To			
Item	**Resource Concern**	**Restriction Distance**	**Private**	**State**	**BLM**	**WTGs**	**Subs**	**Roads Collection T-Line**	**Notes**
A-2-10	Wildlife - Red Rim Grizzly Wildlife Habitat Area (WHMA)	No development within Red Rim-Grizzly WHMA within the Wyoming Sage-Grouse Core Management Areas Version 3 Map (finalized June 29, 2010)	Y	Y	Y	Y	Y	Yes	The Wyoming Game and Fish Department's (WGFD) Red Rim-Grizzly WHMA is approximately 37,630 acres in total, of which approximately 1,200 acres (3%) lie outside Sage-Grouse Core Management Areas Version 3. The area outside Sage-Grouse Core Management Areas Version 3 is located in the northeast corner of the Grizzly WHMA and is a part of or adjacent to Miller Hill. PCW may locate facilities within this area of the Grizzly WHMA.
A-2-11	Wildlife- Sage-Grouse Core Breeding Area	No facilities within the Wyoming Sage-Grouse Core Management Area Version 3 Map (finalized June 29, 2010)	Y	Y	Y	Y	Y	Yes	No construction of any facilities (WTGs, roads, transmission lines, collector lines, substations, staging areas, etc.) in Wyoming's Sage-Grouse Core Management Areas Version 3 (finalized June 29, 2010).

Appendix Table D-3. Applicant Committed Best Management Practices

Item	Resource Concern	Measure
A-3-01	Air – Dust Control	Water would be applied twice per day, or as deemed necessary by the Environmental Inspector, to all disturbed surfaces (i.e., exposed, dry, and unfrozen) during construction. During operation, dust control would occur twice per day in those areas where vehicular traffic exceeds normal operational needs. If, for example, heavy equipment is brought on site for maintenance or if vehicular traffic exceeds a few vehicles per day, additional dust control watering would be initiated.
A-3-02	Air – Dust Control	Magnesium chloride may be applied, if necessary, for adequate dust suppression. These treatments would occur on an as-needed basis, depending on weather conditions and the amount of traffic on the road.
A-3-03	Air – Dust Control	The driving surface of all roads constructed for project access would be surfaced with gravel to further reduce potential dust emissions.
A-3-04	Air – Dust Control	Dust abatement techniques would be used on unpaved, unvegetated surfaces to minimize airborne dust. Dust abatement techniques would be employed on construction materials and stockpiled soils if they are a source of fugitive dust. Dust abatement techniques would be used before and during surface clearing, excavation, or blasting activities.
A-3-05	Air – Dust Control	Speed limits (e.g., 25 miles per hour [mph] [40 kilometers per hour [km/h]) would be posted along all access roads and enforced during construction and maintenance activities and enforced to reduce airborne fugitive dust.
A-3-06	Air – Vehicle Emissions	All construction equipment would be maintained in good working condition and would contain appropriate pollution control devices to minimize trace gas emissions.
A-3-07	Cultural and Paleontological Resources	Unexpected discovery of cultural or paleontological resources during construction would be brought to the attention of the responsible BLM authorized officer immediately. Work would be halted in the vicinity of the find to avoid further disturbance to the resources while they are being evaluated and appropriate mitigation measures are being developed.
A-3-08	General – Decommissioning	Prior to the termination of the right-of-way authorization, a decommissioning plan would be developed and approved by the BLM. The decommissioning plan would include a decommissioning impact analysis, site reclamation plan and monitoring program. All management plans, BMPs, and stipulations developed for the construction phase would be applied to similar activities during the decommissioning phase as agreed to between BLM and PCW.
A-3-09	General – Decommissioning	All turbines and ancillary (above-ground) structures would be removed from the site.

Item	Resource Concern	Measure
A-3-10	General – Avoidance of sensitive areas	PCW would work with the BLM to mitigate for environmentally sensitive areas. Marshy soils, drainage bottoms, and riparian areas would be avoided to the extent practicable.
A-3-11	General – Electrical Lines	All underground electrical collector lines would be buried in a manner that minimizes additional surface disturbance (e.g., along roads or other paths of surface disturbance when possible).
A-3-12	General – Environmental Compliance	An Environmental Compliance Plan (ECP) would be developed and implemented to monitor implementation of mitigation measures during project construction. An Environmental Inspector would be on-site to oversee the implementation of the Project ECP.
A-3-13	General – Maintenance	The transmission lines would be inspected two times per year by ground or aerial patrols, and maintenance would be performed as necessary. Substation maintenance activities would include routine, scheduled equipment maintenance and grounds keeping. Once reclamation is complete and vegetation is stable, noxious weed surveys of the Project areas would be conducted on a regular basis. Inspection of the Project access roads and internal resource roads would include weed monitoring and treatment, as outlined in the Weed Management Plan.
A-3-14	General – Maintenance	Inoperative turbines would be repaired, replaced or removed in a timely manner.
A-3-15	General – Mitigation Measures	All control and mitigation measures established for the Project in the POD and the resource-specific management plans that are part of the POD would be maintained and implemented throughout the operational phase, as appropriate. These control and mitigation measures would be reviewed and revised, as needed, based on the mutual agreement of PCW and BLM, to address changing conditions or requirements within the Project area, throughout the operational phase. This dynamic approach would help ensure that impacts from operations are kept to a minimum.
A-3-16	General – Project Disturbance	The number and size/length of roads, temporary fences, lay-down areas, and borrow areas would be minimized.
A-3-17	General – Project Footprint	The area disturbed by construction-related activities (i.e., footprint) would be kept to a minimum.
A-3-18	General – Project Footprint	The area disturbed by operational-related activities (i.e., footprint) would be kept to a minimum.
A-3-19	Geology – Seismic Considerations	All structures will be built to appropriate seismic requirements for the local geology.
A-3-20	Hazardous Materials – SPCC Plan	A Spill Prevention, Control, and Countermeasures (SPCC) Plan would be implemented during the construction and operation phases of Project. The SPCC would define procedures to be used in the event of an accidental spill from vehicles or other equipment.

Item	Resource Concern	Measure
A-3-21	Hazardous Materials – Accidental Release	In the event of an accidental release of hazardous materials to the environment, the operator would document the event, including a root cause analysis, appropriate corrective actions taken, and a characterization of the resulting environmental or health and safety impacts. Documentation of the event would be provided to the BLM authorized officer and other federal and state agencies, as required.
A-3-22	Hazardous Materials – ESA	A Phase I Environmental Site Assessment would be required prior to the purchase of a property and would be conducted by a trained and experienced environmental professional. If the Phase I Environmental Site Assessment identifies potential hazardous substances, a Phase II Environmental Site Assessment is usually conducted to confirm the presence and extent of contamination.
A-3-23	Hazardous Materials – Handling	Pursuant to the Project's Hazardous Materials Management Plan, all personnel handling hazardous materials would be trained appropriately on the dangers of, and safety precautions to be taken, when working with hazardous materials. Any hazardous materials used on-site would be documented and properly labeled. Material Safety Data Sheets (MSDS) and proper handling procedures would be located on-site. In the event a significant chemical spill occurs, personnel should evacuate the immediate area (as required) and report the release. The Emergency Response Team would be called to the area to assess the extent of the emergency and would determine appropriate response actions based on the Emergency Response Plan.
A-3-24	Hazardous Materials – Secondary Containment	Secondary containment would be provided for all on-site hazardous materials and waste storage, including fuel. In particular, fuel storage (for construction vehicles and equipment) would be a temporary activity occurring only for as long as is needed to support construction activities.
A-3-25	Hazardous Materials – Storage, Handling, and Disposal	Safety measures would be implemented in accordance with Occupational Safety and Health Administration (OSHA) standards and operator requirements. Petroleum products (e.g., lubricating oils and greases) and items such as touch-up paint and fiberglass blade repair materials would be stored on-site for maintenance operations. All such wastes/substances would be handled, stored in a secured location, and disposed of in accordance with applicable federal, state, and local regulations.
A-3-26	Health and Safety – Crane Operation	Crane safety training would be conducted to ensure riggers and ground workers understand the hazards of working around mobile cranes and that they watch for signs of problems at all times, especially if power lines are nearby. Standard operating procedures would be developed and implemented for safely lifting loads. A written engineered lift plan for all critical lifts would be developed and followed.

Item	Resource Concern	Measure
A-3-27	Health and Safety – Crane Operation	Crane operators would take the following steps to protect themselves and other workers when operating mobile cranes on the Project Sites: 1) the minimum clearance between power lines and the crane or load would be 10 ft. for lines rated 50-kV or below; 2) for lines over 50-kV, the minimum clearance would be 10 ft. plus 0.4 foot for each 1-kV over 50-kV; 3) operation of a crane outside of design limitations, manufacturer's specifications, or without the load charts would be prohibited; 4) cranes would be operated only when wind velocities are under the maximum speeds stipulated for safe operation (these velocities are generally stated in the manufacturer's specifications); 5) cranes would be inspected daily prior to each use, monthly, and annually, and the records of these inspections would be available on the machine; 6) rigging equipment would be inspected daily; 7) all operators of mobile cranes would have, and be familiar with, the additional requirements in the ANSI standard; 8) the latch in the hook throat opening would never be tied back; and 9) employees would not be suspended from the cranes and the use of cranes for suspended personnel platforms would be avoided.
A-3-28	Health and Safety – Crane Operation	Meteorological stations would monitor wind speeds on the job site to support safe crane operating standards.
A-3-29	Lands and Realty – Foreign Lines, Monuments, and Markers	All foreign lines would be marked. Monuments and markers (i.e., General Land Surveys and BLM Cadastral Survey Corners, reference corners, U.S. Coastal and Geodetic benchmarks) would be protected during the construction and operational phases of the Project. In the event that a monument or marker is disturbed, the employee would report the incident in writing to the Authorized Officer. PCW, in consultation with the BLM or other appropriate agency, would be responsible for re-surveying and replacing any markers that are disturbed.
A-3-30	Noise – Blasting and Noisy Activity	If blasting or other noisy activities are required during the construction period, nearby residents would be notified in advance.
A-3-31	Noise – Construction Equipment	All equipment would have sound-control devices no less effective than those provided on the original equipment. All construction equipment used would be adequately muffled and maintained.
A-3-32	Noise – Construction Equipment	All stationary construction equipment (i.e., compressors and generators) would be located as far as practicable from nearby residences.
A-3-33	Noise – Road Use	Road use specifications designed to keep traffic to a minimum would be implemented to the maximum extent practical.
A-3-34	Noise – Turbine Noise	All WTGs would be properly maintained to prevent excessive noise.

Item	Resource Concern	Measure
A-3-35	Public Health and Safety – Construction Practices	A Project Health and Safety Plan would be implemented in accordance with OSHA standards. Hard hat requirements and "authorized personnel only" signs would be posted at the entrance to the main access points during construction. Permanent signs would be posted at gates on the main access roads. Safety signs (e.g., speed limits, steep grades, etc.) would be placed along the main access roads in accordance with local, state, and federal regulations. Safety signing would be posted on all transformers, at high-voltage facilities, along roads, and around towers (if necessary) in conformance with applicable state and federal regulations.
A-3-36	Public Health and Safety – Construction Practices	A comprehensive and continuous occupational Injury and Illness Prevention Program (IIPP) would be implemented and enforce a code of safe practices (CSP) for all employees. A designated field safety person would be responsible for on-site management and administration of the IIPP and CSP. Occupational safety and health matters would be communicated to employees by written documentation, staff meetings, formal and informal training, weekly safety meetings, and posted information. Communication from employees to supervisors or safety representatives about unsafe or unhealthy conditions would be encouraged and may be verbal or written. Results of investigations of any employee safety suggestion or report of hazard would be distributed to all employees affected by the hazard or posted, as appropriate.
A-3-37	Public Health and Safety – Construction Practices	Each supervisor would conduct an inspection to identify unsafe working conditions and practices, as follows: 1) weekly in all areas; 2) whenever new substances, procedures, or equipment that may represent a new safety or health hazard are introduced to the job site; and 3) whenever a supervisor is made aware of a new or previously unrecognized hazard. A hazard checklist or hazard assessment form would be used to document inspections. Employees may not enter a hazard area without appropriate protective equipment, training, and prior specific approval by the IIPP and CSP administrator.
A-3-38	Public Health and Safety – Fire Management	Fire control would be provided pursuant to the Project's Fire Safety Plan.
A-3-39	Public Health and Safety – Fire Management	Fire prevention standards would be followed to reduce the risk of a fire, in accordance with 36 CFR 261 and the Wyoming Interagency Fire Restriction Plan. All hot work that is to occur on site would be done in accordance with OSHA Regulation 29 CFR 1910.252(a).
A-3-40	Reclamation	All areas of disturbed soil would be reclaimed using weed-free native grasses, forbs, and shrubs. Reclamation activities would be undertaken as early as possible on disturbed areas not required for operation.
A-3-41	Reclamation – Roadways	Access roads would be regraded, the topsoil replaced, and all disturbed areas would be re-vegetated. Any roadway damage due to the transport of the heavy equipment would be repaired on the public roadways upon the completion of Project construction and decommissioning.

Item	Resource Concern	Measure
A-3-42	Reclamation – Topsoil	Topsoil from all decommissioning activities would be salvaged and reapplied during final reclamation.
A-3-43	Reclamation – Vegetation	All areas of disturbed soil would be reclaimed using weed-free native shrubs, grasses, and forbs. The vegetation cover, composition, and diversity would be restored to values commensurate with the ecological setting.
A-3-44	Recreation – Public Access	Temporary fencing would be installed around staging areas and storage yards during construction to limit public access. Public access to open excavations would be limited by either installation of locked gates at public access points, or utilization of other approved means of limiting public access.
A-3-45	Recreation – Public Access	Permanent fencing would be installed and maintained around electrical substations, and turbine tower access doors would be locked to limit public access during operations.
A-3-46	Roads – General Design	DELETED[1]
A-3-47	Roads – General Design	Access roads and on-site roads would be surfaced with aggregate materials, wherever appropriate.
A-3-48	Roads – General Design	Access roads would be located to follow natural contours where possible and minimize side hill cuts.
A-3-49	Roads – General Design	DELETED[1]
A-3-50	Roads – General Design	Roads would be located upwind from WTG rows, where possible, such that drifting caused by towers or transformers is not likely to accumulate on roads.
A-3-51	Roads – General Design	Roads are designed in accordance with the BLM Gold Book (BLM 2007a) design criteria as well as the BLM Manual 9113: Roads (BLM 1985).
A-3-52	Roads – General Design	Existing roads would be used, but only if in safe and environmentally sound locations. If new roads are necessary, they would be designed and constructed to the appropriate BLM road design standards where practical and be no higher than necessary to accommodate their intended functions (e.g., traffic volume and weight of vehicles).
A-3-53	Roads – General Design	Final roadway alignments will include erosion control measures to stabilize steeper slopes and to prevent loss of soil. These measures will include hay bales, shallow swales and ditches, rock/rip rap embankments, and culvert outlet protection. Final alignments will be ground-verified using BLM Rawlins Field Office knowledge of potentially problematic areas for road construction and/or maintenance.

[1] Power Company of Wyoming (PCW). 2012. Memorandum from G. Miller (PCW) to P. Murdock (BLM) dated April 10, 2012.

Item	Resource Concern	Measure
A-3-54	Roads – General Design	Where road intersection improvements are required to accommodate extra long vehicles, potential upgrades could include placement of relocating signs, placement of temporary paving, and use of flaggers, as needed. All intersection improvements would be restored to their original condition upon the completion of construction.
A-3-55	Roads – General Design	Where road-cattle guard intersection improvements are required to accommodate overweight vehicles, potential road profile upgrades may be required to allow travel safely over the cattle guards. All damaged cattle guards would be replaced upon the completion of construction.
A-3-56	Roads – General Design	All existing roads that would be used as primary access locations to the Project area would need to be upgraded to accommodate the anticipated extra traffic generated by the Project. Most of these roads are county roads or two-track roads that would need to be widened to accommodate the construction traffic. All necessary federal, state, and local permits would be obtained to complete this work prior to construction.
A-3-57	Roads – General Design	During the course of construction, if excessive wear and tear to the existing roadway surface is evident, these road surfaces would be restored to their original condition upon the completion of construction. Where necessary, consultation with the UPRR would be required to change the roadway profile at specific at-grade railroad crossings to smooth the existing hump for low-profile vehicles; consultation with various utility companies would be required to elevate the risk of oversized vehicles in relation to low-hanging power lines.
A-3-58	Roads – General Design	Due to crest and sag vertical curves in the roadway profile, select locations would require re-grading prior to hauling extra long loads. Any grades greater than 10 percent would require assist vehicles on-hand for the large tractor-trailers hauling WTG components. Any grades greater than 7 percent would require assist vehicles on-hand. These locations would be verified during the final design process. In addition, any construction site with grades ranging from 5 to 7 percent on non-paved roadways would require an assist vehicle on stand-by during adverse weather or road conditions.
A-3-59	Roads – General Use	Traffic would be restricted to the roads developed for the Project. Use of other unimproved roads would be restricted to emergency situations. Signs would be placed along construction roads to identify speed limits, travel restrictions, and other standard traffic control information.
A-3-60	Roads – Maintenance	Most road maintenance would be performed on an as-needed basis. The frequency and type of maintenance that would be required would be determined by routine inspections. The inspections would be performed on a regular basis and following snowmelt or heavy or prolonged rainfall. Inspections would identify maintenance needs for reduction of ruts and holes, maintenance of crowns and outslopes to keep water off the road, replacement of surfacing materials, clearing of sediment blocking ditches and culverts, maintenance of interim reclamation, and noxious weed control.

Item	Resource Concern	Measure
A-3-61	Roads – Maintenance	All roads would be maintained in a safe and environmentally responsible manner.
A-3-62	Roads – Operation Access	Project operation would require the use of the new roads for equipment and personnel to reach the WTGs. In addition, an access road that runs adjacent to each WTG site and the project substations would be used.
A-3-63	Roads – Operation Access	Internal resource roads would be located within the project boundaries and would provide access to each WTG. All internal resource roads would be surfaced with gravel. As part of routine maintenance activities, internal resource roads would be maintained in a condition that allows for continued access to the WTGs.
A-3-64	Roads – Reclamation	Abandoned roads and roads that are no longer needed would be recontoured and revegetated.
A-3-65	Soils and Geology – Slopes	Operators would identify unstable slopes and local factors that can induce slope instability. Operators also would avoid creating excessive slopes during excavation and blasting operations. Special construction techniques would be used where applicable in areas of steep slopes, erodible soil, and stream channel crossings.
A-3-66	Soils – Erosion Control	Erosion control measures would be employed as described in the Master Reclamation Plan
A-3-67	Soils – Erosion Control	Permanent erosion control devices would be installed during project construction and may include, but are not limited to, waterbars, roadside ditches with subsurface culverts, berms, trash racks on culverts, energy-dissipating structures, mulches, and establishment of permanent vegetation. Erosion controls that comply with county, state, and federal standards would be applied. Practices such as jute netting, silt fences, and check dams would be applied near disturbed areas. The Environmental Inspector would monitor construction to ensure that erosion control devices are functioning properly.
A-3-68	Soils – Erosion Control	Final roadway alignments would include erosion control measures to stabilize steeper slopes and to prevent loss of soil. These measures would include hay bales, shallow swales and ditches, rock/rip rap embankments, and culvert outlet protection.
A-3-69	Soils – Erosion Control	If, during operation, it is determined that snow accumulation causes significant accelerated erosion, appropriate mitigation measures (e.g., snow fence construction) would be developed and implemented.
A-3-70	Soils – Excavation and Blasting Activities	Foundations and trenches would be backfilled with originally excavated material as much as possible. Excess excavation materials would be disposed of only in approved areas or, if suitable, stockpiled for use in reclamation activities.
A-3-71	Soils – Excavation and Blasting Activities	Borrow material would be obtained only from authorized and permitted sites. Existing sites would be used in preference to new sites when possible.

Item	Resource Concern	Measure
A-3-72	Soils – Topsoil Handling	Topsoil from all excavations and construction activities would be salvaged and reapplied during reclamation.
A-3-73	Soils – Topsoil Handling	Topsoil material suitable for site reclamation would be removed in conjunction with clearing and grading and reserved in local stockpiles. Topsoil storage areas would generally be located within staging areas and alongside roadways during construction.
A-3-74	Soils – Wet Soils During Construction	Construction activities would be suspended when soils are wet. Construction would resume when soils become dry enough to support construction equipment. The Environmental Inspector (EI) would determine when conditions are too wet to continue.
A-3-75	Transportation – Traffic Considerations	To minimize impacts on local commuters, consideration would be given to limiting construction vehicles traveling on public roadways during the morning and late afternoon commute time. Consideration would also be given to opportunities for busing of construction workers to the job site to reduce traffic volumes.
A-3-76	Transportation – Transportation Planning	Ongoing ground transportation planning would be conducted to evaluate road use, minimize traffic volume, and ensure that roads are maintained adequately to minimize associated impacts.
A-3-77	Transportation – Transportation Planning	Following the finalization of site access locations and proposed roadways, a Traffic Management Plan would be developed for traffic both on and off-site. The Traffic Management Plan would discuss flagging guidelines on and off site, specifics of auxiliary lanes if needed, requirements for signage during construction of the project, passing zone and striping details for the existing public roadways, and other details specific to the individual approved access locations leading to and from, and on, the Project area.
A-3-78	Vegetation – Noxious Weed	Noxious weed surveys would be conducted to evaluate the presence and aerial extent of noxious weed and invasive species populations within the Project area. Preventative management measures would be applied as warranted pursuant to the Project's Weed Management Plan.
A-3-79	Visual Resources	Operators would reduce visual impacts during construction by clearly delineating construction boundaries and minimizing areas of surface disturbance; preserving vegetation to the greatest extent possible; utilizing undulating surface disturbance edges; stripping, salvaging and replacing topsoil; contoured grading; controlling erosion; using dust suppression techniques as required; and restoring exposed soils as closely as possible to their original contour and vegetation.
A-3-80	Visual Resources	Operators would monitor and maintain visual mitigation measures for the approved project in accordance with a visual monitoring and compliance plan. The operator would maintain revegetated surfaces until a self-sustaining stand of vegetation is reestablished and visually adapted to the undisturbed surrounding vegetation.

Item	Resource Concern	Measure
A-3-81	Waste Management – Disposal	Wastes would be properly containerized and removed periodically for disposal at appropriate off-site permitted disposal facilities.
A-3-82	Waste Management – Wastewater	Any wastewater generated in association with temporary, portable sanitary facilities would be periodically removed by a licensed hauler and introduced into an existing municipal sewage treatment facility or otherwise disposed of in accordance with applicable state and local laws and regulations. Temporary, portable sanitary facilities provided for construction crews would be adequate to support expected on-site personnel and would be removed at completion of construction activities.
A-3-83	Water – SWPPP	The Project's SWPPP would be implemented in accordance with the Wyoming Department of Environmental Quality (WDEQ) requirements to obtain National Pollutant Discharge Elimination System (NPDES) compliance under Wyoming's NPDES permit WYR10-0000. The SWPPP would describe site-specific erosion control and stream crossing measures that would be implemented during the construction and operation phases of the Project. The Environmental Inspector would direct activities to ensure compliance with the SWPPP.
A-3-84	Water – Excavation and Blasting Activities	DELETED[2]
A-3-85	Water – Excavation and Blasting Activities	Operators would avoid creating hydrologic conduits between two aquifers during foundation excavation and other activities.
A-3-86	Water – Road Design	DELETED[2]
A-3-87	Water – Road Drainage	Whenever possible, existing drainage systems would not be altered, especially in sensitive areas such as erodible soils or steep slopes. Potential soil erosion would be controlled at culvert outlets with appropriate structures. Catch basins, roadway ditches, and culverts would be cleaned and maintained regularly.
A-3-88	Water – Road Locations	Roads would be located away from drainage bottoms and avoid wetlands, if practicable.
A-3-89	Water – Stream Crossings	Access roads would be located to minimize stream crossings. All structures crossing streams would be located and constructed so that they do not decrease channel stability or increase water velocity. Operators would obtain all applicable federal and state permits.

[2]Power Company of Wyoming (PCW). 2012. Memorandum from G. Miller (PCW) to P. Murdock (BLM) dated April 10, 2012.

Item	Resource Concern	Measure
A-3-90	Water – Waterbodies and Wetlands	Waters of the U.S., including wetlands, will be avoided to the maximum extent practicable. Where these features cannot be completely avoided, impacts will be minimized through design modification, as necessary. Facilities (e.g., turbines, substations, staging areas) would be sited to avoid and/or minimize impacts; however, where impacts are anticipated (e.g., use of Project roads), minimization measures would be employed to minimize impacts (e.g., use of culverts to maintain downstream flow/drainage).
A-3-91	Water – Waterbodies and Wetlands	All impacts would be the minimum necessary to accomplish the Project, would be mitigated, and the appropriate Section 404 permit would be obtained from the U.S. Army Corps of Engineers (USACE) Wyoming Regulatory Office prior to the start of construction. To complete the Section 404 permit, a delineation of all Waters of the U.S. (WUS), including wetlands, would be performed by qualified wetland scientists to obtain current site-specific data regarding the location and extent of aquatic features within the Project area. Current resource mapping (e.g., U.S. Geological Survey (USGS) topographic maps, U.S. Fish and Wildlife Service (USFWS) NWI maps, Federal Emergency Management Agency (FEMA) floodplain maps, Natural Resources Conservation Service (NRCS) soils data, etc.) would be used to guide this future delineation effort. All aquatic features delineated in the field would be recorded using Global Positioning System (GPS) with sub-meter accuracy.
A-3-92	Water – Waterbodies and Wetlands	Any construction that occurs in or adjacent to wetlands and streams would use Applicant Committed BMPs listed in Appendix D to protect surface water quality and to minimize impacts to those resources.
A-3-93	Wildlife – Department of the Interior (DOI) Wind Turbine Guidelines	Although strictly voluntary on non-federal lands, PCW will review the DOI Wind Turbine Guidelines Advisory Committee Wind Turbine Guidelines (anticipated in late summer 2010) once they are finalized with the intention of complying with them as applicable and appropriate and to the extent they do not conflict with any requirements set out by the BLM in its ROD, any agreements entered into between PCW and the USFWS, or other controlling laws, permits, or regulations.
A-3-94	Wildlife – Disturbance and Harassment	All employees, contractors, and site visitors would be instructed to avoid harassment and disturbance of wildlife, especially during reproductive (e.g., courtship and nesting) seasons. During construction, pets would not be permitted on site; during operation, pets would be controlled to avoid harassment and disturbance to wildlife.
A-3-95	Wildlife – Excavation and Blasting Activities	Explosives would be used only within specified times and at specified distances from sensitive wildlife or streams and lakes, as established by the BLM or other federal and state agencies.
A-3-96	Wildlife – Habitat Restoration	In accordance with the habitat restoration plan, restoration would be undertaken as soon as practical after completion of construction activities to reduce the amount of habitat converted at any one time and to speed up the recovery to natural habitats.

Item	Resource Concern	Measure
A-3-97	Wildlife – Vehicle Collisions	Project personnel and contractors would be instructed and required to adhere to speed limits commensurate with road types, traffic volumes, vehicle types, and site-specific conditions, to ensure safe and efficient traffic flow and to reduce wildlife collisions and disturbance and airborne dust.
A-3-98	Wildlife – Yellow-billed Cuckoo	Yellow-billed cuckoo habitat (i.e., riparian areas) would be avoided to the maximum extent possible.

Appendix Table D-4 Proposed Mitigation Measures

Resource	Proposed Mitigation Measure
General	**GEN-1**: Phased Construction Sequencing. Limit surface disturbance to areas where turbines would be constructed within 12 months with a goal to mitigate impacts from surface disturbance to wildlife, soils, water, and vegetation (e.g., weeds). Four ROW grants would be issued for the project: 1) internal haul road; 2) transmission line between the two sites; 3) Sierra Madre development; and 4) Chokecherry development.
	GEN-2: Off-site Compensatory Mitigation. Off-site compensatory mitigation may be considered through future consultations between the BLM, Cooperating Agencies, and PCW if mitigation measures established through the project-wide EIS are later determined to not be adequate.
Air	No additional mitigation measures proposed.
Cultural	**CR-1**: To minimize unauthorized collecting of archaeological material or vandalism to known archaeological sites, PCW and its contractors, and all construction personnel, shall attend mandatory training and be educated on the significance of cultural resources and the relevant federal regulations intended to protect them.
	CR-2: Additional mitigation measures will be included in the Programmatic Agreement, which will be developed in coordination with the BLM, SHPO, ACHP, PCW; Indian tribes; and other interested parties.
Geology and Mineral Resources	No additional mitigation measures proposed.
Land Use	No additional mitigation measures proposed.
Paleontology	**PALEO-1**: If any vertebrate fossils or scientifically important fossils are discovered during construction operations on federal lands, the permittee shall cease activities immediately and notify the BLM so the agency can determine the significance of the discovery. The BLM shall evaluate or have evaluated such discoveries and shall notify PCW what action shall be taken with respect to such discoveries. Additionally, PCW also would contract with a qualified paleontologist approved by the BLM who shall be on call during all construction periods and available to travel to the site within 24 hours following notice of a discovery, and that the on-call paleontologist shall consult with the BLM to reach agreement on the significance of the discovery within 24 hours following arrival at the site by the on-call paleontologist. The BLM will then promptly notify PCW as to what actions shall be taken.
	PALEO-2: Any fossils recovered during the assessment of paleontological resources will be prepared in accordance with standard professional paleontological techniques. The fossils will be curated in a BLM-approved facility. A report on the findings and significance of the salvage program, including a list of the recovered fossils, will be prepared following completion of the program. A copy of this report will accompany the fossils, and a copy will be submitted to the Wyoming Museum, University of Wyoming.
Range	**RANGE-1**: Coordinate construction schedules and ranching operations to allow sequencing of pasture use to the extent practicable within the Pine Grove/Bolten allotment and other affected allotments (Cottonwood Draw, Middlewood Hill, Grizzly, McCarty Canyon, and Sage Creek) in a manner to minimize conflicts between grazing and construction activities.

Appendix Table D-4 Proposed Mitigation Measures

Resource	Proposed Mitigation Measure
Recreation	No additional mitigation measures proposed.
Socioeconomics	No additional mitigation measures proposed.
Soils	**SOIL-1**: Road fabric, or equivalent base stabilization as determined by the BLM, will be applied where roads cross sensitive soils (wet, severely erodible soils, and soils with low soil strength).
	SOIL-2: Excess subsoil excavated from tower foundations will not be used as topsoil or spread on top of topsoil without further laboratory testing of the subsoil physical and chemical characteristics, and agency approval. PCW will identify the acceptable disposal method for excess subsoil in the final reclamation plan.
	SOIL-3: Areas identified as having limited reclamation potential (as defined in the Rawlins Instruction Memorandum No. WYD-03-2011-002) will be avoided during construction unless an acceptable site-specific reclamation plan is approved by the BLM.
	SOIL-4: To reduce impacts related to road density in the Application Area, roads that are no longer needed will be effectively reclaimed.
	SOIL-5: PCW will be required to submit a snow removal plan as part of the ROW grant application. The snow removal plan will include measures to ensure protection of soil and water resources.
	SOIL-6: Drainages, vegetated sand dunes, salt flats, steep slopes, and gullied areas will be avoided for towers, laydown areas, facilities, and roads (to the extent possible). Towers, laydown areas, and other facilities will be re-located to areas of generally stable soils. These avoidances shall be taken into consideration during site specific analyses.
Transportation	**TRANS-1**: To the extent that all governmental entities are willing to participate, PCW shall participate in a coordinated transportation planning process with the BLM, WYDOT, Carbon County, the Town of Sinclair and the City of Rawlins, to identify and develop measures to avoid, manage or mitigate transportation impacts of construction. The BLM shall coordinate with affected local governments to solicit input from the Sinclair Refinery, the CIG compressor station, affected grazing operators, and other major property owners (including the operator of the truck stop just north of I-80 Exit 221) in the affected area. The group shall meet prior to and during the construction phase of the project and in the initial year of project operations, as needed.
	TRANS-2: PCW shall develop measures to inform and update Carbon County residents and travelers on I-80 near Sinclair and WY 71 about potential delays during peak months and especially during peak hours. In coordination with WYDOT, electronic signage shall be used near I-80 Exit 221 to encourage I-80 travelers to use alternate access to Sinclair during peak hours.
	TRANS-3: PCW shall coordinate with WYDOT to identify measures to control traffic and enhance traffic flows in the vicinity of I-80 Exit 221 during shift changes and at times when oversized vehicles will be crossing the bridge over I-80, and along WY 71 within the City of Rawlins if the WY 71/CR 407 (Sage Creek Road) workforce commuting option is selected.
	TRANS-4: PCW shall implement incentives for carpooling and/ or other workforce transportation measures to reduce traffic and congestion during shift changes.

Appendix Table D-4 Proposed Mitigation Measures

Resource	Proposed Mitigation Measure
Vegetation	**VEG-1**: Survey and mark the disturbance boundary to minimize unintentional surface disturbance. Actively monitor construction to ensure construction and staff stays within the defined limits.
	VEG-2: Salvage vegetative debris and redistribute to reclaimed surface areas in order to reduce erosion and preserve native organic material and seed sources.
	VEG-3: In areas where excavating soil is not necessary, such as temporary laydown areas or temporary access roads, avoid disturbing native soil and root zones where possible to preserve soil structure and soil biology and improve the success for reclamation.
Visual	**VR-1:** Monopole and H-frame transmission structures and overhead collector line structures would be treated to have a muted, darker color than conventional galvanized steel or laminated wood to reduce color contrasts. The recommended paint color for transmission structures is Shadow Gray from the BLM Standard Environmental Colors Chart CC-00 or an equivalent color. Steel pole equivalents used in the installation of the overhead electric collector lines should be finished with paint or a self-weathering finish that will harmonize with colors of the surrounding landscape (i.e., approximate the color of wood when used with wood overhead collector lines). When not used with wood poles, the recommended paint color for powerline structures is Shadow Gray from the BLM Standard Environmental Colors Chart CC-00. Conductors would have a non-reflective finish.
	VR-2: Place vegetative debris on cut-and-fill slopes to vary texture and color of cut-and-fills until vegetation has been re-established.
	VR-3: Lighting for ancillary facilities shall be motion-activated and shielded downward to limit night lighting impacts beyond the site.
	VR-4: Audio Visual Warning System (AVWS) for aircraft detection and warning may be required to reduce day and night lighting impacts from WTGs if technologies become available that are approved by FAA, are proven reliable at the scale of CCSM, and BLM determines that systems are cost effective.
	VR-5: Substation components and fencing would be Shadow Gray from the BLM Standard Environmental Colors Chart CC-00 or a similar color in a dark gray color range. Color mitigation would not be required on facilities that are treated in accordance with safety and engineering concerns.
Wetlands	**WET-1:** Conduct on-site delineations of all waters of the U.S., including wetlands and waterbodies within the Alternative Development Area prior to construction. The surveys would be performed and documented by qualified wetland scientists to determine the types and spatial extent of site-specific wetland and riparian features. Current resource mapping (e.g., USGS topographic maps, USFWS NWI maps, FEMA floodplain maps, AECOM wetland and riparian data, NRCS soils data, etc.) would be used to guide this future delineation effort. All features would be recorded using a GPS unit with sub-meter accuracy, in addition to photographic and written documentation of each feature according to standardized USACE delineation data requirements and any additional BLM data requirements. Subsequent NEPA tiering would include the site-specific waters of the U.S. delineation results.

Appendix Table D-4 Proposed Mitigation Measures

Resource	Proposed Mitigation Measure
Water	**WR-1**: Stream water quality monitoring sites will be identified by the BLM. Stream monitoring shall continue through construction, operation, and decommissioning of the project by PCW to monitor for changes in water quality.
	WR-2: PCW will be required to submit the site-specific SWPPP as part of the ROW grant application for approval by the BLM.
Wildlife and Fisheries	**WFM–1**: Workers, with the exception of security personnel, will not be allowed to possess firearms during work activities and will attend mandatory training (provided by WGFD) on wildlife regulations and ways to reduce disturbance to wildlife.
	WFM–2: Snow fences, if used, will be limited to segments of one-quarter mile or less. In addition, escape openings will be provided along roads, every one-quarter mile or less, to facilitate exit of big game animals from snowplowed roads.
	WFM–3: : If measured bat mortality is determined to be above levels of concern for the project (as presented in section 4.14 of the EIS), measures appropriate to avoid, minimize, and mitigate impacts to bat species will be identified in the Bat Protection Plan for the Project. Thresholds of impacts to bats and appropriate responses to exceeding such impact thresholds will be determined by BLM in coordination with the WGFD, and if appropriate, the USFWS, as part of the conservation, avoidance, minimization and mitigation measures identified in the Bat Protection Plan.
	WFM-4: Instream construction (stream crossings and stream construction activities) will occur during the low flow period (July 15 to September 30).
SSS	**SSS–1**: Prior to construction activities in suitable pygmy rabbit habitat, presence/absence surveys would be conducted following appropriate protocols. Areas within 0.25 mile of proposed disturbance that show characteristics of pygmy rabbit habitat will be surveyed in accordance with the Interagency Pygmy Rabbit Working Group Survey Protocols (Ulmschneider et al. 2004). If the surveys conclude that the pygmy rabbits occur, the "Habitat Preservation and Restoration" conservation measures will apply (Keinath and McGee 2004).
	SSS–2: Prior to construction activities in suitable Wyoming pocket gopher habitat, presence/absence surveys will be conducted following appropriate protocols. If active Wyoming pocket gopher mounds are identified by the presence/absence survey, the proposed surface disturbing activities will avoid the active pocket gopher mounds by 75 m (BLM 2009f). However, if PCW does not wish to avoid the active pocket gopher mounds by 75 m, classification surveys (via live capture) must be completed to identify the pocket gopher to the species level responsible for the mounds. If the results conclude that the Wyoming pocket gopher is responsible for the mounds, the "Occupied Wyoming Pocket Gopher Habitat Protection Measures" will apply (BLM 2009f). If the results conclude that the associated species is a Northern pocket gopher, then the proposed surface disturbance may proceed without mitigation. If the classification survey fails to conclusively identify the associated pocket gopher to the species level, then it will be assumed that the species is a Wyoming pocket gopher and the "Occupied Wyoming Pocket Gopher Habitat Protection Measures" will apply (BLM 2009f).

Appendix Table D-4 Proposed Mitigation Measures

Resource	Proposed Mitigation Measure
SSS (con't)	**SSS-3:** To protect potential mountain plover habitat, prior to any surface disturbance, a presence/absence survey for active mountain plover nests will be conducted in all potential habitat within the area proposed for surface disturbance. Surveys are to be performed by a wildlife biologist familiar with mountain plover and their associated habitat. If evidence of mountain plovers is found during the preconstruction survey, then additional stipulations may apply (BLM 2009a).
Noise	**N-1**: USEPA guidance stipulates the threshold for residential noise impacts resulting from construction activities, including blasting, is reached at 55 dB(A) at 1,600 feet (USEPA 1974). When a residence is within 1,600 feet of construction activities, construction activities exceeding 55 dB(A) would only be allowed to occur between the hours of 7 a.m. and 10 p.m., and on weekdays.
	N-2: Whenever feasible, multiple construction activities (e.g., blasting and earthmoving) shall be scheduled to occur concurrently to minimize the length of time residences within 1,600 feet may be affected.