

PLAN OF DEVELOPMENT PRELIMINARY

Lucky Star Wind Transmission Line Project (Lucky Star I) Carbon and Albany Counties, Wyoming

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Submitted to:

**Bureau of Land Management
Rawlins Field Office**

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List of Acronyms

AC	Alternating Current
APLIC	Avian Protection Line Interaction Committee
BGEPA	Bald and Golden Eagle Protection Act of 1940, as amended
BLM	Bureau of Land Management
BLM	U.S. Bureau of Land Management
BMP	Best Management Practices
BOP	Balance of Plant
CRA	Cultural Resource Analysis
CUP	Conditional Use Permit
DEQ	Department of Environmental Quality
EHS	Extra High Strength
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
Gen-Tie	Generation Tie
ISA	Wyoming Industrial Development and Siting Act
ISC	Industrial Siting Council
KCMIL	Thousands of Circular Mils
kV	kilovolt
LGIA	Large Generator Interconnection Agreement
Lucky Star	Lucky Star Wind, LLC
LWC	Lands With Wilderness Characteristics
MBTA	Migratory Bird Treaty Act of 1918, as amended
MW	megawatts
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NSO	no surface occupancy
NWI	National Wetland Inventory
OSLI	Office of State Lands and Investments
OPGW	optical ground wire
PFYC	potential fossil yield classification
POD	Plan of Development
Project	Lucky Star Wind Transmission Line Project

PUP	Pesticide Use Proposal
RAM	Ranching, Agriculture, and Mining
RFO	Rawlins Field Office
RMP	Resource Management Plan
ROW	right-of-way
SHPO	State Historic Preservation Office
SUP	Special Use Permit
SWPPP	Storm Water Pollution Prevention Plan
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
VRM	Visual Resource Management
WAPA	Western Area Power Administration
WECS	Wind Energy Conversion System
WGFD	Wyoming Game and Fish Department
Wind Project	Lucky Star Wind Development Project
WSA	Wilderness Study Areas
WWEC	West-Wide Energy Corridor
WYDOT	Wyoming Department of Transportation
WYPDES	Wyoming Pollutant Discharge Elimination System

Chapter 1

Introduction

Lucky Star Wind, LLC (“Lucky Star”), is planning to construct, operate, maintain, and eventually decommission approximately 24.8-miles of new 230-kilovolt (kV) alternating current (AC) electric transmission system lines, referred to as the Lucky Star Wind Transmission Line Project (“Project”), in Carbon and Albany Counties, Wyoming (**Figure 1**). The proposed Project would cross approximately 4.8 miles of land under the jurisdiction of the Bureau of Land Management (“BLM”), Rawlins Field Office (“RFO”), and 20.0-miles of non-federal lands. For segments of the transmission line crossing BLM-administered land (4.8 miles), Lucky Star is seeking approval for a 300-foot temporary right-of-way (“ROW”) (178.8 acres) and a 250-foot permanent ROW (147.7 acres) to facilitate construction, operation, and maintenance of the Project over a 30-year period. Lucky Star is submitting this right-of-way (ROW) application to the BLM Rawlins Field Office (RFO) pursuant to 43 CFR Part 2800. This updated preliminary Plan of Development (“POD”), is intended to accompany the applicant’s Standard Form 299 (SF-299), which was filed on September 19, 2019, in association with the Wind Project, i.e., Lucky Star Wind Project, but has been revised to include the Gen-Tie transmission system only. All facilities related to the Wind Project have been sited on private land and will no longer require access to BLM-administered land.

The primary objective of the Project is to transfer up to 500 megawatts (“MW”) of clean, renewable energy generated from the proposed Lucky Star Wind Project (“Wind Project”), located on private lands in Carbon and Albany Counties, to PacifiCorp’s Aeolus Substation located in Carbon County. The power will be distributed within PacifiCorp’s territory, which services Wyoming, Utah, Idaho, Oregon, Washington, and California, to the Aeolus substation. Lucky Star intends to sell the clean energy generated by the Wind Project through a power purchase agreement.

Functioning as a generation tie (“Gen-Tie”) line, the Project is composed of a high-voltage transmission system linking proposed and existing substations. The Project would begin at a new proposed substation on private land within the Wind Project and extend northwest to PacifiCorp’s existing Aeolus substation situated near Medicine Bow, Wyoming. The segments of the Project traversing BLM-administered lands would be aligned almost entirely within the West-Wide Energy Corridor (“WVEC”), a BLM-designated energy-transmission corridor (**Figure 1**). Additionally, the route runs parallel to two existing 115-kV transmission lines and a third proposed 230 kV transmission line (Rock Creek Gen-Tie Line (BLM 2023)) for approximately 18.7 miles (see **Site Plan, Appendix A**). The majority of the requested ROW is within the area evaluated for the WAPA 115 kV lines (Happy Jack to Seminoe and Seminoe to Laramie) and Rock Creek Gen-Tie Line subsequently approved by the BLM.

Construction and operation of the Project would require a total of approximately 38 (BLM land) and 164 (non-BLM land) wooden H-frame transmission-pole structures and would also require access to the structures; most access would consist of two-track routes that would occur within the transmission line ROW (see **Site Plan, Appendix A**). In addition, the Project would include temporary work areas, which would be established around each transmission structure during construction (see **Site, Plan, Appendix A**). Tensioning and pulling sites would also be temporarily required along the transmission line during construction.

On BLM-administered lands, the Project would include ground-disturbing activities associated with the construction of approximately 38 above-ground H-frame transmission line towers, temporary work areas, and pulling and tensioning sites. Existing roads and two-tracks would be used to access the Project ROW during construction and maintenance activities, to minimize the construction of new roads to the greatest extent practicable. Perennial streams will be spanned by the transmission line and access to the line would be obtained from either side of the stream; no access road crossing of perennial streams on BLM-administered land are planned. Other associated facilities, such as the collection substation and staging area, would be constructed as part of the Wind Project on private land.

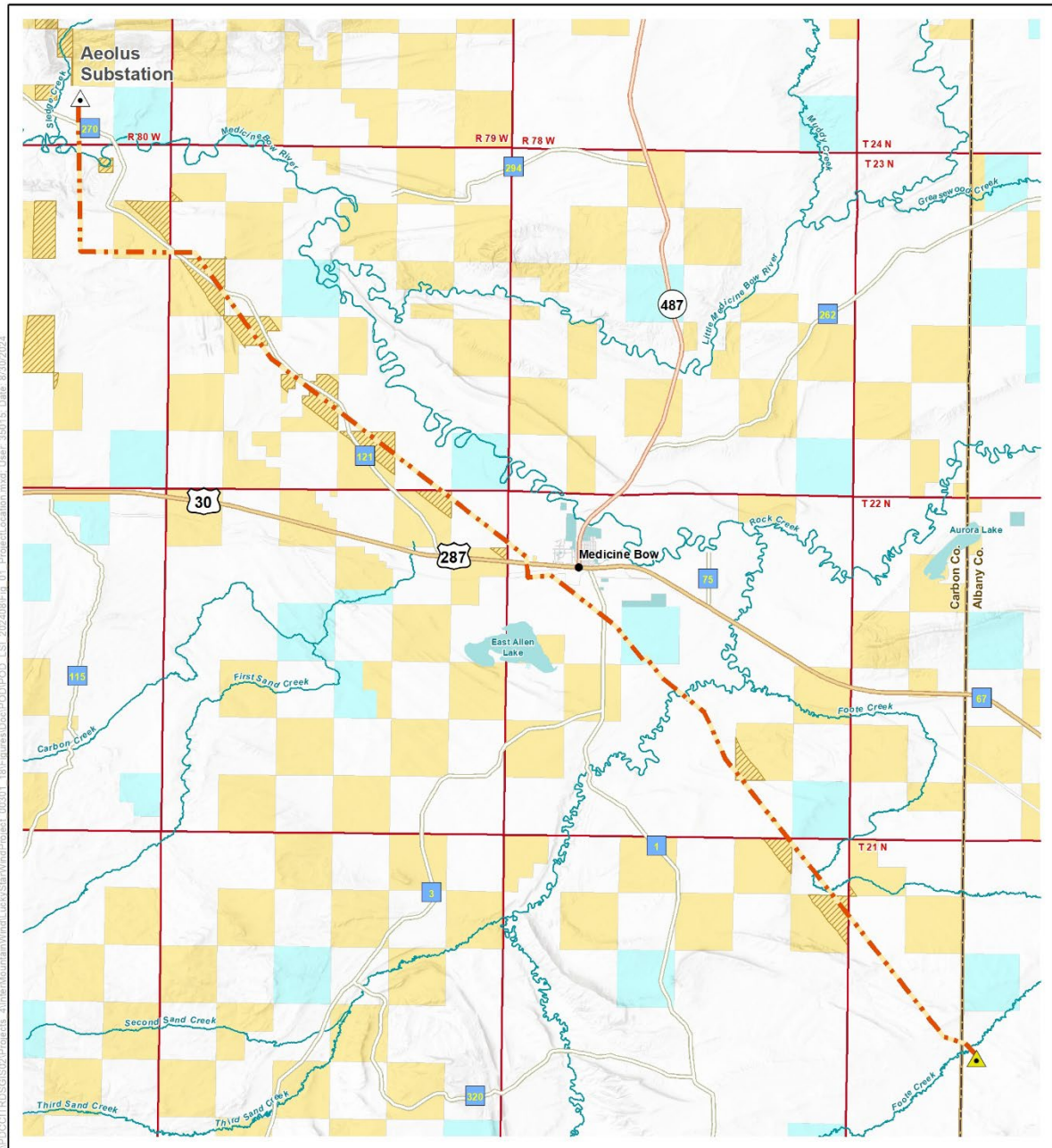
As a proactive measure, Lucky Star had a third party conduct a routing analysis. The purpose of the analysis was to determine the route of least impact for the Gen-Tie route. This resulted in collocating infrastructure with existing transmission infrastructure to reduce the Project's footprint and minimize environmental impact, where possible. The Applicant, Lucky Star Wind, LLC is firmly committed to developing the Project in a way that avoids, minimizes, and mitigates potential environmental impacts to the greatest extent practicable.

The Lucky Star Wind Project (applicant Lucky Star Wind, LLC) was granted an Albany County Wind Energy Conversion System ("WECS") Conditional Use Permit ("CUP") [WECS-01-19] on July 16, 2019, and an Industrial Siting Permit ("ISC Permit") by the Wyoming Department of Environmental Quality ("DEQ") Industrial Siting Council ("ISC") [DEQ/ISC 18-11] on November 20, 2019. At that time, the permits granted by Albany County and the Wyoming DEQ included the transmission line facilities along with the proposed wind project. In a subsequent decision, Lucky Star Wind, LLC decided to site the Wind Project facilities on only non-federal land. In doing so, the decision was also made to separate the transmission line permitting effort from the Wind Project. This POD addresses only the transmission line. Lucky Star is actively working to obtain all the necessary permits and approvals, as well as any necessary National Environmental Policy Act (NEPA) analysis for the transmission Project by Q3 of 2025 including a transmission line CUP from Carbon County.

Lucky Star has an executed Large Generator Interconnection Agreement (LGIA) with PacifiCorp to the Aeolus substation and is negotiating power purchase agreements with multiple offtakers. Construction of the Project is anticipated to begin in Q2 of 2027 following permit approvals and is expected to take 8-12 months. The targeted commercial operations date of the Wind Project is Q4 of 2028.

This POD provides a detailed description of the Project to satisfy Item 7 of the SF-299, including the purpose and need, the methods of construction and operation, and a list of measures that Lucky Star will take to avoid, minimize, and mitigate environmental impacts.

Figure 1. Project Location and Context Map



- - - Lucky Star Wind Transmission Line Project (Lucky Star I)
- U.S. Hwy
- State Hwy
- County Road
- ▲ Authorized/Existing Substation
- ▲ Proposed Substation
- West-wide Energy Corridor
- Land Status**
- Bureau of Land Management
- Private
- State

Source: Carbon County 2018, Albany County 2018.



Applicant's Goals and Objectives for the Project

Lucky Star's goals and objectives for the action are to reliably and economically deliver up to approximately 500 MW of renewable energy generated by the proposed Wind Project located in Carbon and Albany Counties. The Project follows existing transmission routes to the greatest extent possible; thereby minimizing environmental impacts.

The interconnection with the existing electric grid will enable Lucky Star to deliver energy to PacifiCorp's Western/Pacific Transmission grid and its energy customers. The development of PacifiCorp's Energy Gateway Transmission Expansion Program West, including Gateway South in Wyoming, is being built to facilitate access to both existing and new generating resources, including wind energy. The expansion aims to deliver electricity from these sources to customers, helping to support regional electricity needs and aligning with federal and Western States' renewable energy goals and mandates.

The Project, along with BLM's review of the associated Wind Project and decision-making role, aligns with President Biden's Executive Order 14008, "Tackling the Climate Crisis at Home and Abroad," and the Department of the Interior's commitment to collaborating with other federal agencies to increase renewable energy production on public lands and waters. The Project would support the goal of deployment of renewable energy and in achieving the Biden-Harris administration's goal of a carbon pollution-free power sector by 2035.

The proposed routing of the Project within a designated utility corridor would be in conformance with the approved RFO Resource Management Plan (RMP), as amended, and other fundamental policy objectives for the area's management of the area. Co-locating the Project with existing transmission lines is a strategic approach to limit development in non-disturbed areas and avoid or minimize potential adverse impacts, including those to wildlife and visual resources.

As described in this POD, the proposed Project route maximizes the utilization of existing linear rights-of-way and designated utility corridors.

Chapter 3 Project Description

The proposed Project would include the construction, operation, maintenance, and eventual decommissioning of an aboveground 230-kV double circuit, alternating current (AC) transmission system that will transfer electrons generated from the proposed Wind Project to PacifiCorp’s Aeolus interconnection substation (located in T23N, R80W) for distribution to the electrical grid. Based on the current alignment, approximately 4.8 miles of the transmission system are located on BLM-administered lands, as summarized below in **Table 3-1**. Lucky Star is requesting a total temporary ROW of 178.8 acres and a permanent ROW of 147.7 acres on BLM-administered land for the transmission Project.

Table 3-1. ROW Requirements for the Transmission System

Transmission Facilities	BLM	State	Private	Total
Gen-Tie Transmission Line (Miles)	4.8	0.8	19.2	24.8
Gen-Tie Transmission Line (Acres)	178.8 (temporary) 147.7 (permanent)	29.6 (temporary) 24.7 (permanent)	776.4 (temporary) 594.5 (permanent)	984.8 (temporary) 766.8 (permanent)

As summarized below in **Table 3-2**, actual surface disturbance would include 27.9 acres of temporary construction disturbance on BLM land, which would be reclaimed to 4.2 acres of permanently disturbed land.

Table 3-2. Temporary and Permanent Disturbance Summary

Disturbance Type	Land Ownership		
	BLM (acres)	Non-BLM (acres)	Total (acres)
Gen-Tie Transmission ROW			
Temporary ¹	27.9	170.0	197.9
Permanent	4.2	19.7	23.9

Construction and operation of the Project would require approximately 202 wooden H-frame transmission-pole structures, of which 38 would be located on BLM-administered lands and would also require access to the structures; most of the access would utilize two-track routes that occur within the transmission line ROW. Other construction activities would include installing foundations, erecting structures, installing ground wires and conductors, clean up and site reclamation. Further details on the proposed Project structures as well as Project construction and operation are found in the chapters below. The necessary temporary ROW is proposed to be 300 feet wide, 150 feet on either side of the centerline.

In addition, the Project would include temporary work areas, which would be established around each transmission structure during construction (see **Site Plan, Appendix A**). Tensioning and pulling sites would also be temporarily required during construction. **Table 3-3** summaries the

Project components and maximum disturbance area for proposed facilities for the entire Project, including federal and non-federal lands.

Table 3-3. Total Project Components and Disturbance Area on Federal and Non-Federal Lands

Project Facility	Temporary Disturbance (acres)		Permanent Disturbance (acres)		Quantity		Proposed Dimensions
	Non-Federal	Federal	Non-Federal	Federal	Non-Federal	Federal	
Transmission Structures	86.1	19.8	0.02	0.005	164 H-frames	38 H-frames	Temporary 150 feet x 150 feet Permanent 2.5 feet x 2.5 feet
Access Roads (new)	62.7	10.5		4.2	25.8 Miles	4.3 Miles	20 feet reclaimed to 8 feet.
Access Roads (existing)	-	-	-	-	9.5 miles	1.3 miles	Use existing disturbance.
Staging Areas	29	-	-	-	1 Yard	-	1,360 feet x 915 feet
Tensioning and Pulling Sites	9.4	-	-	-	25	-	60 feet x 150 feet
Collection Substation	10.0	-	2.5	-	1	-	Temporary 660 feet x 660 feet Permanent 330 feet x 330 feet

The Project location is near the Aeolus substation, making connectivity to the PacifiCorp electrical grid cost effective. Power will be exported within the PacifiCorp territory, which services Wyoming, Utah, Idaho, Oregon, Washington, and California. The Project location is depicted in **Figure 1** above.

3.1 Alternatives

3.1.1 Preferred Route

Feasible route corridors for the proposed Project were developed and evaluated based on publicly available resource data from federal and state agencies, historic resource data, project data collected for the Wind Project, and GIS analysis. Feasibility was defined as “the ability for the project to be permitted and constructed” based on environmental, engineering, and permitting considerations. Ideally, route corridors would optimize the following:

- Utilize WVEC and other federally or locally designated utility corridors, and use, where feasible, parallel existing compatible ROWs (i.e., high voltage transmission

lines, railroads, highways, pipelines). Where possible, use parallel property lines or other natural features.

- Avoid and minimize impacts to sensitive environmental resources and consider federal and state land policies for evaluating potential ROWs on federal and state lands.
- Maximize the use of existing access and minimize new access road construction to facilitate efficient and cost-effective transmission line design and construction.

The proposed Project route crossing approximately 4.8 miles of BLM administered lands was selected as the preferred route. Use of federal lands for portions of the Project would provide a range of benefits, including but not limited to the following:

- Supports the transportation of renewable energy to the bulk electrical grid in a way that is in the public interest and consistent with the federal policy initiatives;
- Reduces visual impacts and cost by routing parallel to the existing transmission lines;
- Reduces surface disturbance for access to the proposed Gen-Tie line by using existing access to adjacent transmission lines, to the extent possible;
- Maximizes use of existing utility corridors as designated by BLM in the RFO RMP; and
- Avoids Greater Sage-Grouse Core Areas established by the State of Wyoming to protect the greater sage-grouse and its habitat.

3.1.2 Alternative Non-federal Route

There are feasible alternative routes by which the Project would be able to connect to the bulk electric transmission grid that do not involve crossing federal lands, and Lucky Star evaluated a number of alternative non-federal routes. The results of the transmission line evaluation suggest that all alternative routes identified in the area are potentially viable when considering environmental and engineering constraints, however they are not without any environmental impact. Considerations for alternatives would be evaluated and analyzed for design and mitigation possibilities during any future environmental permitting studies for the Project.

The preferred non-federal alternative route corridor is approximately 27.5 miles long and parallels existing transmission lines for 7.2 miles including a 230 kV transmission line. This alternative does not cross BLM-administered land although it is located in the WWEC corridor for 10.0 miles. Construction, operation, maintenance, reclamation, and decommissioning activities under the non-federal alternative route would result in no impact to BLM-administered lands. Construction, operation, and maintenance of the Project on private land could proceed without BLM approval of the requested ROW grant.

When compared to the proposed Project, the non-federal alternative is longer, and anticipated to result in greater impacts to sensitive resources including an increased number of water resource crossings, encroachment into Ute ladies'-tresses potential suitable habitat, and traversing higher potential fossil yield classification (PFYC) geologic formations.

Based on the results of the siting analysis, Lucky Star has determined that the proposed Project transmission line ROW is the more efficient route and less impactful when considering

environmental and engineering constraints. Particularly, the proposed transmission line maximizes the use of existing linear ROW and designated utility corridors.

3.2 Special Land Use Designations

No BLM designated wilderness areas, wilderness study areas, areas of critical environmental concern (“ACEC”), herd management areas, national natural landmarks, wild and scenic rivers, or historic trails occur within or adjacent to the Project (**Figure 10, Appendix B**). Some private landowners in the area provide access to hunting on their lands.

3.2.1 Consistency with County Land Use Plans

3.2.1.1 Albany County

Albany County has regulatory jurisdiction over land use in the Project area through the Albany County Comprehensive Plan (2008), Planning and Zoning Commission, and Board of County Commissioners. The County assumes specific jurisdiction over wind energy projects and associated transmission through its Wind Energy Siting Regulations (Chapter 5, Section 12 of the Albany County Zoning Resolution).

The following are the Land Use goals of the Albany County Comprehensive Plan:

- LU1. Promote development patterns that are growth efficient and logically sequenced to be efficiently served by public services. Direct development to specific areas, facilitating this by phasing infrastructure and service investments.
- LU2. Preserve open spaces, agricultural lands, and environmentally sensitive areas that are not currently suitable for development.
- LU3. Fulfill needs for various kinds of housing and employment opportunities for current and future residents.
- LU4. Provide recreational opportunities.

The Project will not interfere with, and will be consistent with, the Land Use goals due to the relatively small footprint, the continued use of the land for livestock grazing and agriculture, and the creation of employment opportunities. A CUP for Project components located within the jurisdiction of Albany County was approved on July 16, 2019.

3.2.1.2 Carbon County

Carbon County has regulatory jurisdiction over land use in the Project area through the Carbon County Zoning Resolution of 2015 (as amended in 2019), Planning and Zoning Commission, and Board of County Commissioners. The County assumes specific jurisdiction over wind energy projects through its Commercial Scale Energy Facilities Regulations (Chapter 6 of the Carbon County Zoning Resolution of 2015, as amended, March 5, 2019). The purpose of the Ranching, Agriculture, and Mining (RAM) District is to preserve historic uses and open space areas of the County while at the same time permitting ranching, agriculture, animal husbandry, forestry, and mining in a manner that attains this purpose (Carbon County, 2012).

3.2.2 State of Wyoming Lands

There are 0.82 miles of State-owned parcels within the Project site. All State-owned parcels are leased for livestock grazing. Project components that will be located on State-owned parcels include roads and up to seven transmission towers. Lucky Star is currently working with the State of Wyoming Office of State Lands and Investments (“OSLI”) for the use of state lands and a lease is anticipated in the future.

3.2.3 Bureau of Land Management

BLM-administered lands are interspersed with private and State lands along the transmission line corridor. The current land use plan (and plan amendments) includes the RFO Record of Decision and Approved RFO RMP, and the Wyoming Greater Sage-Grouse Approved Management Plan Amendment and Record of Decision (BLM 2008b, 2015, 2019). According to the RFO RMP, the area does not contain any restrictions that will preclude development. The current land use plan and amendments allow for the development of transmission-line projects in designated utility corridors with appropriate mitigation to address any potential impacts on applicable sensitive resources. There are resource constraints, including areas of no surface disturbance, avoidance buffers, and timing stipulations, all of which have been incorporated as design features into the current Project presented in this POD. A ROW grant to use BLM-administered lands in the Project alignment is pending processing of the SF-299 application and fulfilling the associated National Environmental Policy Act (NEPA) requirements.

Lucky Star had previously submitted an SF-299 that included the Wind Project facilities as part of the application. However, all associated wind facilities have been sited exclusively on private land and will not require a BLM right-of-way authorization.

3.3 Major Users along the Route

There are no major users along the proposed Project route. The Project is being developed by Lucky Star Wind, LLC, an independent power producer, and is designed to deliver energy generated from the Wind Project to PacifiCorp’s Aeolus substation, providing cost effective connectivity to the PacifiCorp electrical grid. Power will be exported within the PacifiCorp territory, which services Wyoming, Utah, Idaho, Oregon, Washington, and California.

4.1 Project Location

The Project is in Carbon and Albany Counties, Wyoming (**Figure 1**). The Project would originate from a proposed substation within the Wind Project boundary in Albany County and run west of State Highway 30 and the towns of Rock River and Medicine Bow to PacifiCorp’s Aeolus Substation located in T23N, R80W, in Carbon County. The Project is generally located within Townships 21-24 North, and Ranges 77-80 West. The proposed Project would be located almost entirely within the existing 3,500-foot-wide Western Area Power Administration (WAPA) 115-kV transmission line corridor for more than 90 percent of its length, with the portion of the Project located on BLM-administered lands located entirely within this corridor.

4.2 Project Legal Description

Land ownership is primarily composed of private lands with interspersed parcels of land administered by the State of Wyoming OSLI and the BLM. **Table 4-1** summarizes the township, range, and section information by jurisdiction for the proposed Project route.

Table 4-1. Township, Range, and Section for the Project

Township	Range	Sections	Ownership
Gen-tie Line			
21 N	77 W	7, 17, 18, 20, 21	Private
21 N	78 W	1	
22 N	78 W	6, 7, 8, 17, 21, 22, 27, 35	
22 N	79 W	1	
23 N	79 W	7, 17, 20, 21, 27, 28, 35	
23 N	80 W	2, 11	
24 N	80 W	35	
21 N	78 W	2, 12	
22 N	78 W	26	
22 N	79 W	2	
23 N	79 W	18, 20, 28, 34	
23 N	80 W	12	
22 N	78 W	16	State

Source: BLM 2015

4.3 Surface Ownership

Surface ownership is summarized in **Table 4-2**. There are thirteen surface landowners (eleven private, State of Wyoming, and federal lands administered by the BLM) in the Project ROW. Land ownership is detailed on the Site Plan maps included in **Appendix A** at a scale of 1:24,000, which illustrates the locations where the Project crosses BLM-administered lands.

Table 4-2. Surface Ownership for the Project

ROW	Land Ownership	Albany County Acres	Carbon County Acres	Total Acres
Permanent ROW	BLM	N/A	147.7	147.7
	Private	14.1	580.3	894.5
	State	N/A	24.7	24.7
	Total	14.1	752.7	766.8

Source: Albany County 2018, Carbon County 2018

4.4 Surface Disturbance Associated with the Proposed Project

Table 4-3 summarizes the acres of surface disturbance occurring on BLM-administered lands from the Project, and total surface disturbance along the entire Project route. Disturbance is broken down by temporary and permanent disturbance and includes disturbance resulting from the transmission structures, work areas required for structure construction, staging areas, and the tensioning and pulling sites. Project Site Plan (**Appendix A**) maps show the proposed Project centerline routing and disturbance footprint.

Table 4-3. Temporary and Permanent Surface Disturbance Associated with the Project

Associated Project Components	Total Project Temporary Surface Disturbance (acres)	Total Project Permanent Surface Disturbance (acres)	BLM Temporary Surface Disturbance (acres)	BLM Permanent Surface Disturbance (acres)
Gen-Tie transmission line and all associated transmission roads	197.9	23.9	27.9	4.2

* ROW includes the access road along the transmission line.

4.5 Legal Description of Related Project Infrastructure

Currently, Lucky Star is considering options for locations of substations and ancillary facilities, such as access roads, staging/temporary work areas, and pulling/tensioning sites, which will be sited on private lands. Lucky Star will provide BLM with the legal land description, length, width, and acreage for all related project infrastructure in a future update of the POD.

4.6 Legal Description of Alternative Route 2 – Private Land Only Route

Land ownership is composed of private lands only with interspersed parcels of State of Wyoming OSLI. **Table 4-4** summarizes the township, range, and section information by jurisdiction for the entire Alternative Route 2.

Table 4-4. Township, Range, and Section for Alternative Route 2

Township	Range	Sections	Ownership
Gen-tie Line (Non-BLM Route)			
21 N	77 W	4, 5, 9, 21	Private
22 N	77 W	31, 32	
22 N	78 W	6, 7, 8, 17, 21, 22, 27, 34, 35	
22 N	79 W	1	
23 N	79 W	4, 5, 6, 9, 15, 22, 26, 27, 35	
23 N	80 W	1, 2	
24 N	80 W	35	
21 N	77 W	16	
22 N	78 W	16, 36	
23 N	79 W	16, 36	

General Facility Description, Design, and Operation

Lucky Star hired a third-party consultant to complete a routing analysis to determine the most feasible and economical routes, and those with the least environmental impacts, for the Project. The current proposed Project route was chosen because it is both economical and minimizes impacts to sensitive environmental resources through collocation along existing and proposed transmission line ROWs for 18.7 miles. The proposed Project route parallels the Rock Creek Gen-Tie Line for the majority of the route. On BLM-administered lands, the majority of the proposed Project would be located within the WWEC. In addition, the transmission system would be designed in accordance with Avian Protection Line Interaction Committee (APLIC) recommendations to reduce the potential for avian collisions and electrocutions.

The transmission line design will be optimized through careful planning, including the use of existing county roads to minimize the construction of new roads. The Project will be interconnected to the Western/Pacific transmission grid through the PacifiCorp Gateway systems via the Aeolus substation.

5.1 Gen-Tie Line Facilities included in the BLM ROW Request

5.1.1 Transmission System

The Project will transfer the electrons generated from the Wind Project to the point of interconnection at PacifiCorp's Aeolus substation in T23N, R80W, Section 15. The transmission system will consist of an aboveground 230 kV double circuit Gen-Tie line. Based on the current layout, approximately 4.8 miles of the Project alignment would be located on BLM-administered lands, as summarized in **Table 5-1**.

Table 5-1. Land Requirements for the Transmission System

Transmission Facilities	BLM (miles)	State (miles)	Private (miles)	Total (miles)
Gen-Tie Transmission Line	4.8	0.8	19.2	24.8

Note: Totals include transmission line facilities within the Project transmission line ROW and WECS ROW.

5.1.2 Transmission ROW Design

For portions of the transmission line crossing BLM-administered land, Lucky Star is requesting a 300-foot temporary ROW and a 250-foot permanent ROW for construction, operation, and maintenance of the transmission line.

An anticipated design including approximately 202 wooden H-frame transmission-pole structures, of which 38 would be located on BLM-administered lands is proposed for the Project. Ground-disturbing activities associated with the construction of the transmission line will be minimized to the greatest extent possible and will include the pole footings and pulling and

tensioning sites. There will likely be small work areas of approximately 0.5 acres/each next to each pole to construct and raise the pole.

There will be no blading/clearing along the transmission route. A site plan showing each structure will be provided to BLM prior to issuance of the notice to proceed. Lucky Star will coordinate with BLM to determine the appropriate time to provide the site plan.

5.1.3 Support Structures

It is anticipated that the aboveground 230 kV Gen-Tie line would use a double circuit wooden H-frame transmission structure. The H-frame structures consist of two poles connected with cross-braces and a beam that supports the conductors. In addition to the typical structure type along most of the line length, dead-end structures and turning structures will also be required at specific locations, as determined necessary by the engineers for design stability. Illustrations of typical 230 kV H-frame structures are provided in **Figure 2** and **Figure 3**.

Transmission line design characteristics are provided in **Table 5-2** below. Final design characteristics will be included in the site plans provided to the BLM.

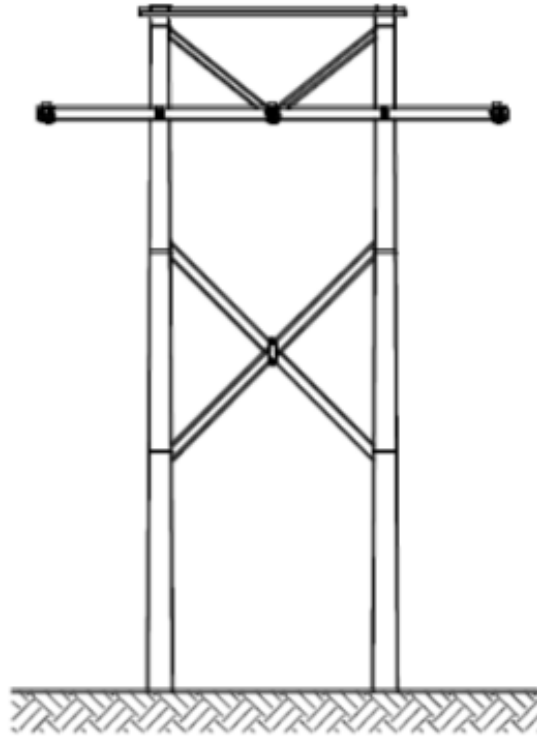
The APLIC has provided guidelines to reduce bird collisions with power lines and other risks that result from avian interactions with electric facilities. The Project will incorporate APLIC recommendations into its design.

Table 5-2. Typical Transmission Line Design Characteristics

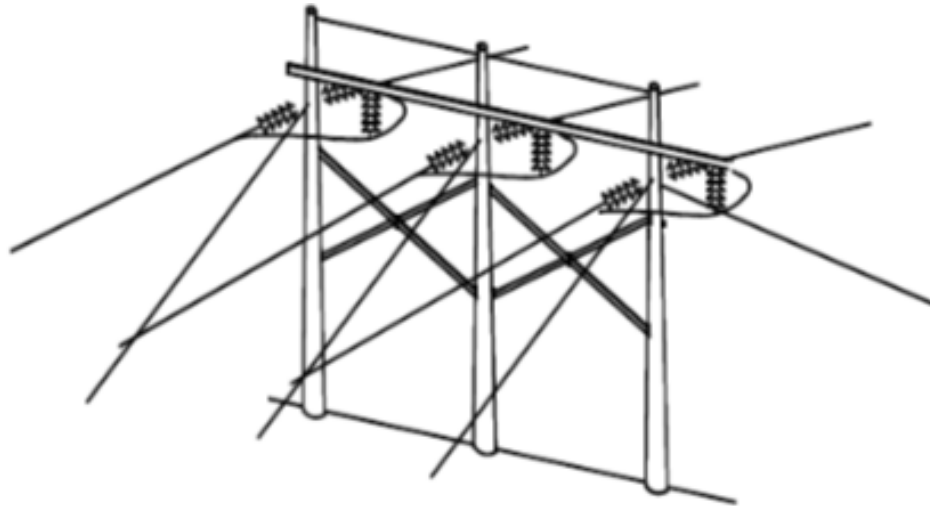
Characteristic	Specification
Voltage	230,000
Circuit Configuration	Double Circuit 230 kV
Proposed Route Line Length	24.8 miles
Total BLM ROW Requested for Proposed Route	4.8 miles
Total Project Length	24.8 miles
ROW Width	300-foot temporary ROW, 250-foot permanent ROW
Type of Structure	Wooden H-frame
Number of Towers on BLM	38
Number of Towers on Non-federal Land	164
H-frame Structure Height	60–90 feet
H-frame Structure Width	23–25 feet
Estimated Temporary Disturbance Area per Structure per Line	150 feet x 150 feet = 0.5 acre
Estimated Permanent Disturbance Area per Structure per Line	2.5 feet x 2.5 feet = 6.3 square feet
Temporary Staging Area	One area approximately 29 acres on private land
Wire Tensioning Site	150 feet x 60 feet located approximately every 9,300 feet
Access Roads	Use existing access roads and overland travel, use existing roads for water crossings

Characteristic	Specification
Other Hardware	Aerial marker spheres or other hardware may be applied as needed for aircraft and avian considerations if determined necessary

Figure 2. Typical H-frame Transmission Structure



Source: Lucky Star 2024

Figure 3. Typical Dead-End Structure

Source: Lucky Star 2023

5.1.4 Structure and Conductor Clearances

Conductor phase-to-phase and phase-to-ground clearance parameters are determined in accordance with the National Electrical Safety Code, ANSI C2, produced by the American National Standards Institute. These documents provide minimum distances between the conductors and ground, crossing points of other lines, and the transmission support structure, and other conductors, and minimum working clearances for personnel during energized operation and maintenance activities (IEEE 2007). Typically, the clearance of conductors above ground or vegetation is 28 feet for 230-kV structures. During detailed design, clearances may be increased to account for localized conditions.

5.1.5 Structure Foundations

Wooden poles will be directly embedded into the ground. The embedment depth would be approximately 15 feet on a 90-foot pole, resulting in a 75-foot above grade height. The diameter of the hole excavated for embedment is typically the pole diameter plus 18 inches. When a pole is placed in a hole, native or selected backfill will be used to fill the voids around the perimeter of the hole. If native soil is insufficient for backfill, select weed-free backfill will be used and the source will be communicated to BLM.

Current desktop level analysis indicates that structures would likely be directly embedded. However, if soil conditions do not prove to be conducive to this installation method, then drilled pier foundations may be utilized. Drilled piers require the same work area for installation as direct embedment but offer more stability in areas of weaker soils. Depending on the soil conditions encountered at the installation site, foundations are anticipated to range from three to six feet in diameter and 12 to 30 feet in depth. Final foundation depths would not be known until exact structure locations have been determined and a detailed geotechnical analysis has been performed, if necessary.

5.1.6 Transmission Line Hardware

5.1.6.1 Conductors

Conductors—the wires or cables on a transmission line system—are one of the major components of the transmission system. A conductor is a material that facilitates the flow of electricity (or electric current) through the transmission line. Different types of conductors are used in transmission lines, and they vary in number and size, depending on the type of circuit and the transmission voltage. Steel, aluminum, and copper are the most common conducting materials used in transmission lines. However, aluminum conductors have completely replaced copper conductors in overhead power lines because of their lower cost and lower weight.

The selection of conductor size is determined by the final engineering design, and is influenced by these main factors:

1. Electrical Requirements – substation requirements, operating voltage of the line, total line length.
2. Mechanical Requirements – strength, tension limits, climactic load, and line stresses.
3. Cost of construction.

The proposed conductor for the new 230 kV line is a single specular 1,272 kcmil Pheasant cable. The conductor for a circuit would consist of three phases, with a single wire for each phase. Final configurations would be determined following final engineering design.

5.1.6.2 Insulators

The overhead line conductors must be supported on the transmission structures in such a way that currents from conductors do not flow to the ground through supports. This is achieved by securing conductors to the transmission structures with the help of insulators. The insulators provide the necessary insulation between line conductors and tower structures, thereby preventing any leaking of current from the conductors to the earth.

Insulators are used to suspend each conductor bundle (phase) away from the structure, maintaining the appropriate electrical clearance between the conductors, the ground, and the structure. A V-shaped configuration may be used, to restrain the conductor so that it will not swing into the structure in high winds. Dead-end insulator assemblies typically use an I-shaped configuration, which consists of insulators hung from either a tower dead-end arm or a dead-end pole in the form of an “I.” The most used material for insulators is porcelain, but glass, steatite, and special composition materials are also used to a limited extent.

5.1.6.3 Overhead Shield Wires

Lightning protection shield wires will be installed on the peaks of each structure. Shield wires may be composed of extra high strength (EHS) steel wire or optical ground wire (OPGW) constructed of aluminum and steel that carries glass fibers within its core. Typically, EHS steel wires have a diameter of 0.495 inch and a weight of 0.517 pound per foot, and OPGWs have a diameter of 0.637 inch and a weight of 0.375 pound per foot. The glass fibers inside the OPGW shield wire may also help facilitate data transfer required for system control and monitoring.

5.1.6.4 Minor Additional Hardware

In addition to the conductors, insulators, and overhead shield wires, other associated hardware will be installed on the tower as part of the insulator assembly to support the conductors and shield wires. This hardware will include clamps, shackles, links, plates, and various other pieces composed of galvanized steel and aluminum.

5.1.6.5 Grounding Systems

A grounding system will be installed at the base of each transmission structure and will consist of copper ground rods embedded into the ground in immediate proximity to the structure foundation and connected to the structure by a buried copper lead. When the resistance to ground for each transmission structure is greater than 25 ohms with the use of ground rods, counterpoise will be installed to lower the resistance to 25 ohms or less. Counterpoise consists of a bare copper-clad or galvanized-steel cable buried a minimum of 12 inches deep, extending horizontally underground from structures (from one or more legs of structure) for approximately 200 feet within the ROW.

5.1.6.6 Other Non-Electric Hardware

Other hardware that is not associated with the transmission of electricity may be installed as part of the Project. This hardware may include aerial marker spheres or aircraft warning lighting as required for the conductors or structures per Federal Aviation Administration (FAA) regulations. Structure proximity to airports and structure height are the determinants of whether FAA regulations will apply based on an assessment of wire/tower strike risk. It is not anticipated that transmission structure lighting will be required, because proposed structures are less than 200 feet tall and are not near airports that require structure lighting.

5.1.7 Induced Currents

Alternating current (AC) transmission lines have the potential to induce currents on adjacent metallic structures such as other transmission lines, railroads, pipelines, fences, or structures that are parallel to, cross, or are adjacent to the transmission line. Induced currents on these facilities occur to some degree during steady-state operating conditions and during a fault condition on the powerline. For example, during a lightning strike on the line, the insulators may flash over, causing a fault condition on the line, and current will flow down the structure through the grounding system (i.e., ground rod or counterpoise) and into the ground. The magnitude of the effects of the AC induced currents on adjacent facilities is highly dependent on the magnitude of the current flows in the transmission line, the proximity of the adjacent facility to the line, and the distance (length) for which the two facilities parallel one another in proximity.

The methods and equipment needed to mitigate these conditions will be determined through electrical studies of the specific situation. As standard practice and as part of the design of the Project, electrical equipment and fencing at the substation will be grounded. All fences, metal gates, pipelines, metal buildings adjacent to the ROW, etc. that cross or are within the transmission ROW will be grounded. If applicable, grounding of metallic objects outside of the ROW may also occur, depending on the distance from the transmission line as determined through electrical studies. These actions take care of most induced current effects on metallic facilities adjacent to the line by shunting the induced currents to ground through ground rods,

ground mats, and other grounding systems, thus reducing the step and touch potential that a person may experience when touching a metallic object near the line (i.e., reduce electric shock potential).

In the case of a longer parallel facility, such as a pipeline parallel to the Project over many miles, additional electrical studies will be undertaken to identify any additional mitigation measures (more than the standard grounding practices) that will need to be implemented to prevent damaging currents from flowing onto the parallel facility and to prevent electrical shock to a person that may come in contact with the parallel facility. Typical mitigation measures that could be considered for implementation, depending on the degree of mitigation required could include:

- Fault Shields – shallow grounding conductors connected to the affected structure adjacent to overhead electrical transmission structures, poles, substations, etc.
- Lumped Grounding – localized conductor or conductors connected to the affected structure at strategic locations (e.g., at discontinuities).
- Gradient Control Wires – a continuous and long grounding conductor or conductors installed horizontally and parallel to a structure (e.g., pipeline section) at strategic lengths and connected at regular intervals.
- Gradient Control Mats – these are buried ground mats bonded to the structure and are typically used for aboveground components of a pipeline system and are used to reduce electrical step and touch voltages.

As there is no “standard” solution that will solve these issues every time, each case must be studied to determine the magnitude of the induced currents and the most appropriate mitigation for the parameters that exist. If electrical studies indicate a need to install cathodic protection devices on a parallel pipeline facility, a distribution supply line interconnection may be needed to provide power to the cathodic protection equipment.

During final design of the transmission line segments, appropriate electrical studies will be conducted to identify the issues associated with paralleling other facilities, and the types of equipment that will need to be installed (if any) to mitigate the effects of the induced currents.

5.1.8 Communications System

Primary communications for relaying and control will be provided via the OPGW that will be installed on the transmission lines.

5.1.9 Access Roads

Primary access to the Project would be from State Highway 30/287 and CR 1 and 121. The Project would primarily use existing roads and two tracks for transmission-line access roads because the Project would parallel other existing transmission structures, including the proposed Rock Creek Gen-Tie line and existing WAPA 115-kV transmission line. **Table 5-3** identifies the proposed access roads that would be used for the Project. These roads are identified on the Site Plan in **Appendix A**.

Table 5-3. Proposed Access Roads and Road Details for the Project

Project Access Road ID	Non-BLM Land			BLM Land			Grand Total
	Existing Road (Miles)	Existing 2-Track (Miles)	New 2-Track (Miles)	Existing Road (Miles)	Existing 2-Track (Miles)	New 2-Track (Miles)	
R-01	2.32	0.40	--	--	--	--	2.71
R-02	0.83	0.12	--	0.34	--	--	1.29
R-03	--	--	0.01	--	--	--	0.01
R-04	0.06	--	--	--	--	--	0.06
R-05	--	0.34	--	--	--	--	0.34
R-06	0.42	--	0.17	--	--	--	0.59
R-07	--	--	0.76	--	--	--	0.76
R-08	--	--	0.01	--	--	--	0.01
R-09	--	--	0.13	--	--	--	0.13
R-10	--	--	--	--	0.37	--	0.37
R-11	0.16	--	--	--	--	--	0.16
R-12	--	--	0.01	--	--	--	0.01
R-13	--	--	--	--	--	0.22	0.22
R-14	--	0.26	--	--	--	--	0.26
R-15	--	--	--	--	--	0.02	0.02
R-16	--	--	--	--	0.02	--	0.02
R-17	--	--	0.04	--	--	--	0.04
R-18	--	--	0.03	--	--	--	0.03
R-19	--	0.02	--	--	0.38	--	0.39
R-20a	--	0.79	--	--	--	--	0.79
R-20b	--	--	0.25	--	--	--	0.25
R-20c	0.59	--	--	0.22	--	--	0.81
R-21	0.21	--	0.44	--	--	--	0.65
R-22	--	--	0.02	--	--	--	0.02
R-23	--	--	0.07	--	--	--	0.07
R-24	0.13	--	0.11	--	--	--	0.25
Total	4.72	1.92	2.06	0.56	0.78	0.24	10.27

Overland travel may be used to access Project components where existing roads are not available to provide access. This could result in the creation of temporary two-tracks, which would be reclaimed in coordination with landowners, local agencies, or BLM using an approved seed mix. Road requirements for the Project are summarized in **Table 5-4**. A public road use plan will be developed prior to ROW grant issuance.

Table 5-3. Miles of Transmission Line Access Roads

Jurisdiction	BLM	Private	State	Total
Albany County	0.0	6.6	0.0	6.6
Carbon County	5.7	27.9	0.8	34.4
Total				41.0

5.2 Associated Project facilities located on Non-Federal Lands

5.2.1 Collection Substation

One collector substation will be built on private land to capture the energy from the Wind Project, convert it to 230 kV, and deliver the energy to the overhead transmission line. Approximately 5 to 15 acres of land will be required for construction of the substation. The permanent disturbance for the substation will be approximately 2.5 acres.

5.2.2 Interconnection Substation

Electricity from the Wind Development Project collection substation will travel to an interconnection substation where it is converted into extremely high voltage for long distance transmission. PacifiCorp's Aeolus substation, located in T23N, R80W in Carbon County, Wyoming, is the point of interconnection for the Wind Project to PacifiCorp's western territory transmission grid. Minor construction activities at the Aeolus substation on private land may be required for the Project's interconnection, such as substation bay modifications or other activities that would occur within previously disturbed areas.

5.2.3 Staging Areas

One staging area, which is a temporary use area, will be developed on private land only for construction. This area would require approximately 29 acres. The staging area would be determined in coordination with the private landowner and if possible, would be sited in a previously disturbed area. The staging area may also serve as a construction field office, storage area, and parking for equipment. The facility would be fenced and locked.

5.3 Interconnection request

Lucky Star has an executed LGIA with PacifiCorp to the Aeolus substation and is negotiating power purchase agreements with multiple offtakers. Construction of the Project is anticipated to begin in Q2 2027 following permit approvals with completion in Q3 2028. The targeted commercial operations date for the Wind Project Q4 2028.

6.1 Construction Schedule

Construction is scheduled to begin in Q2 of 2027, following permit approvals and is expected to take 8-12 months for the entire Project completion. The Gen-Tie line would start delivering power from the Wind Project in Q4 2028. Construction of the Project would follow the sequence of:

1. Centerline surveying
2. Clearing transmission pole–structure sites
3. Foundation drilling
4. Structure assembly and erection
5. Installation of ground wires and conductors
6. Installation of counterpoise/ground rods
7. Cleanup and site reclamation.

6.2 Preconstruction Activities

6.2.1 Required Preconstruction Permits

A Balance of Plant (BOP) contractor experienced in transmission construction projects will be responsible for securing the preconstruction permits required for the Project. Lucky Star is currently in the process of selecting a BOP contractor; the contractor will be on the team at least 6 months prior to construction.

The anticipated permits required for construction are listed by regulatory agency below in **Table 6-1**.

Table 6-1. List of Potential Permits Required for Construction

Jurisdiction	Permit/Decision	Status/Timeframe
Federal		
U.S. Army Corps of Engineers (USACE)	Clean Water Act Section 404 – Individual or Nationwide Permit	No permitting requirements under Section 404 have been identified. The Project would avoid all wetlands and waters, and a Section 404 permit is not anticipated. If a permitting need is identified, a preconstruction notification may be needed per Nationwide Permit 12.
U.S. Bureau of Land	Right-of-Way Grant for use of BLM-administered lands	Pending BLM processing and associated NEPA action with SF-299 application originally

Jurisdiction	Permit/Decision	Status/Timeframe
Management (BLM)		submitted on September 19, 2019, with latest update in April 2024.
U.S. Fish and Wildlife Service (USFWS)	Endangered Species Act (ESA) of 1973 (6 U.S.C. § 1531 et seq.)	Consultation with USFWS as needed to address listed species or habitats. Applicable permit or mitigation requirements to be determined through consultation.
USFWS	Bald and Golden Eagle Protection Act of 1940, as amended (BGEPA) (16 U.S.C. § 668-668d)	The transmission system will be designed in accordance with APLIC guidelines. Consultation with USFWS will occur as needed to address impacts to bald and golden eagles.
USFWS	Migratory Bird Treaty Act of 1918, as amended (MBTA) (16 U.S.C. §§ 703-712).	The transmission system will be designed in accordance with APLIC guidelines. Consultation with USFWS will occur to determine avoidance and minimization measures to reduce impacts to migratory bird species and to comply with the MBTA. Consultation with the USFWS as noted above for ESA-listed species and eagles will also address measures to minimize effects to migratory birds. No permit issued.
Federal Aviation Administration (FAA)	Federal Aviation Act of 1958 (PL 85-726; 14 CFR Part 77)	Determination of No Hazard.
Federal Highway Administration (FHWA)	Permits to Cross Federal Aid Highway; 4(f) compliance	U.S. Department of Transportation Act, 23 CFR Part 1.23 and 1.27; 23 U.S.C. Sections 109 and 315; 23 CFR Part 645; 23 CFR Part 771
State		
Wyoming Department of Environmental Quality (WDEQ)	Wyoming Industrial Development and Siting Act (ISA)/ Industrial Siting Council (ISC) Permit	Permit application filed July 15, 2019; permit issued on November 20, 2019. Included authorization for WECS and transmission line facilities associated with the Wind Project.
	Large Construction General Permit	Pending final design; will be filed before construction begins, if needed.
	Section 401 Water Quality Certification	Dependent on final design, it will be filed in conjunction with the Clean Water Act 404 Permit, if needed.
	Air Quality Division – Temporary/ Portable Source Permit/Fugitive Dust Permit	Dependent on final design, it will be filed before ROW grant issuance, if necessary.
	Water Quality Division – Temporary Increase in Turbidity Permit	Dependent on final design; permit review in conjunction with Clean Water Act 404 permit and 401 certification process; will be filed prior to construction, if necessary.
Wyoming State Engineer’s Office	Temporary Water Use Agreement (if construction water trucked to the Project area)	Pending further refinement of water use requirements; will be filed before ROW grant issuance.
Wyoming Office of State Lands and Investments	Non-roadway Easement	Leases will be pursued for project facilities sited on state lands.

Jurisdiction	Permit/Decision	Status/Timeframe
Wyoming State Historic Preservation Office	National Historic Preservation Act (NHPA) Section 106 Consultation	The entirety of the Project alignment has been covered by previous Class III surveys and Class III surveys completed by Cultural Resource Analysis (CRA) in 2019/2020, 2022 and 2024 (WYCRO 2018a, 2018b, 2019), for which BLM has completed consultation with as part of previous NEPA and ROW processes for the WAPA and Rock Creek Gen-Tie projects. The applicant will coordinate with BLM to determine if any additional Class III cultural field surveys are required. The BLM will complete the Section 106 consultation prior to making its decision on the requested ROW.
Wyoming Department of Transportation	Utility Crossings/M-54 license	Utility crossing license for transmission line crossings of state highways will be required from the WDOT.
Local		
Albany County	Floodplain Development Permit	Required for any proposed development occurring wholly or partially within a designated floodplain in rural Albany County. Development within a floodplain is not anticipated.
	Road Use Agreement	No agreement was required by Albany County.
	Conditional Use Permit	Lucky Star Wind, LLC was issued a WECS permit for the Wind Project, including transmission system, in July 2019.
Carbon County	Floodplain Permit	Required if developing in 100-year floodplain. Developing in a floodplain is not anticipated.
	Building Permits	Building permits will be required from for project facilities in Carbon County.
	Access Permit	An updated access permit from the Road and Bridge Department would be required for any new access points to County roads.
	Road Use Agreement	A Road Use Agreement will be negotiated with the County, if applicable.
	Special Use Permit (SUP)	SUP application for transmission line facilities will be submitted to Carbon County.

6.2.2 Right-of-Way and Property Rights Acquisition

On all private land necessary for the Project to interconnect at the Aeolus Substation, Lucky Star will secure a 300-foot temporary ROW easement. A desktop routing study has been completed to determine the anticipated centerline of the Project within the ROW. However, it is anticipated that the centerline may be adjusted to accommodate results from geotechnical and environmental studies, existing easements, landowner feedback, or other engineering constraints. For Project facilities traversing State land, Lucky Star will obtain a State of Wyoming Non-Roadway Easement.

6.2.3 Geotechnical Surveys and Testing

If determined necessary by the Project engineer, soil borings will be completed along the transmission line route to determine soil properties and depth to bedrock for engineering designs. Based on soil properties, foundation designs will be determined for transmission line towers. Borings are typically made with truck or track-mounted equipment. Access will primarily be gained through overland travel along access roads designated for the transmission system.

6.2.4 Biological Resource Surveys

A full suite of biological surveys has been completed for the requested ROW area. A summary and status of these environmental surveys can be found in Section 9-1.

A Noxious Weed and Invasive Species Management Plan has been developed in consultation with County Weed and Pest Departments and incorporates BLM guidelines (BLM Instructional Guidance for the National Invasive Species Information Management System (NISIMS) Workflow and BLM Manual H-9011-1 – Chemical Pest Control Handbook). Surveys for invasive and noxious weeds will be conducted and an approved Pesticide Use Proposal (PUP) will be obtained prior to the issuance of the ROW grant.

Noxious and invasive weed infestation areas of concern will be flagged in the field for construction crews prior to construction to ensure the appropriate best management practices (BMPs) are applied. Treatments will be applied in accordance with the BLM-approved PUP to prevent accidental spreading during construction activities. Vegetation in areas sited for construction will either be mowed or crushed. Tree limbs and brush will be windrowed or piled for use during reclamation when possible. Stumps will be removed, if necessary, to create a level workspace. Clearing, grading, and excavation will only occur within the work areas around the tower structures. No clearing or grading would be conducted along the ROW. Lucky Star will complete any necessary preconstruction clearance surveys for migratory birds and sensitive wildlife or plant species.

6.2.5 Flagging or Staking the ROW

Before construction surveying begins, it would be necessary to obtain either a land survey permit on federal and state lands or rights of entry for private lands. Construction survey work would consist of locating the centerline, structure-center hubs, and ROW boundaries. Flagging and staking are planned to take place in the vicinity of the Project to facilitate construction activities. Flagging and staking would be temporary.

6.3 Construction Activities

6.3.1 Workforce and Work Schedules

The workforce necessary for Project construction activities will vary with the type of work being completed but may include up to 60 workers. Work will generally occur between sunrise and sunset, Monday through Saturday. Additional hours and days may be necessary to make up schedule deficiencies, or to complete critical activities.

6.3.2 Fire Controls

A comprehensive Fire Prevention and Response Plan will be developed and administered for the Project to address fire controls. To minimize potential fire contributing activities, all vehicles associated with the Project will be required to stay on paved and gravel surfaces during operations, unless specifically required to perform a task, at which time fire conditions will be evaluated. During construction, vehicles are required to remain within working corridors and limit travel off graveled surfaces to the extent practical. Smoking will only be allowed on graveled or paved areas (conditions allowing), indoors, or within vehicles. Any local fire guidance, bans, or warnings will be followed and would further affect requirements on site. Project-related vehicles will be appropriately equipped with fire extinguishers as part of the broader site safety plan.

6.3.3 Staging Areas

Construction of the transmission system begins by establishing staging areas. The staging area is to be approximately 29 acres and will be located on non-federal land. Staging areas serve as field offices, reporting locations, parking areas for vehicles and equipment, material storage, fabrication assembly, and equipment maintenance stations. In some areas, the staging area may need to be scraped by a bulldozer, and a temporary layer of gravel may be spread to provide an all-weather surface. Unless directed otherwise by the landowner, the gravel will be removed upon completion of construction, and the area will be restored according to the Project's Reclamation Plan.

6.3.4 Transmission System

6.3.4.1 Transmission Line Structure and ROW Site Preparation

Individual structure sites will be cleared, if necessary, and grading and leveling for safe equipment operation will be required to install the transmission line support structures. Each site will be staked prior to construction, and stakes will be maintained during construction and interim reclamation. Clearing is typically done using a bulldozer to blade the required area. The temporary work areas for each structure will be approximately 150 by 150 feet and will be utilized for construction laydown, structure assembly, and structure erection at each site. The work areas will be cleared of vegetation only to the extent necessary.

Additional equipment may be required if bedrock is encountered at a structure location. Hammering may be required to remove the rock. Excess rock that cannot be spread at the individual structure site will be hauled away and disposed of at approved landfills, or at a location specified by the landowner.

A 300-foot temporary ROW is requested to accommodate installation of transmission structures and pulling and tensioning sites, and a 250-foot permanent ROW is requested thereafter. Any guyed structures would be built using APLIC standards. The clearing of some natural vegetation may be required; however, selective clearing will be performed only when necessary to provide electrical clearance, line reliability, and construction and maintenance operations.

6.3.4.2 Foundation Installation

The foundation diameter and depth for each transmission tower structure will be determined during the final engineering design and is dependent on structure loading conditions and the type of soil or rock present at each specific site.

Typically, the H-frame transmission line structures will be directly embedded into the ground. Holes will be drilled in the ground using a truck or track-mounted auger (**Figure 4**). Generally, excavated holes have a diameter between 5 to 6 feet wide and range from 15 to 25 feet deep. After poles are placed in the excavated holes, the holes will be backfilled with native or select weed-free backfill.

H-frame dead-end transmission line structures may require the installation of drilled pier foundations. One to three foundations will be required, depending on the structure. The holes for each foundation will be drilled using a truck- or track-mounted auger. Generally, the diameter of each foundation will be approximately 5 to 6 feet at a depth of 20 to 25 feet. Each foundation will extend approximately 1 to 2 feet above ground level. Typical foundation diameters and depths for the proposed structures are shown in **Table 6-2**.

Due to the remote location of the Project, any concrete will be delivered directly to structure sites in concrete trucks with a capacity of up to 10 cubic yards.

Figure 4. Typical Truck-Mounted Auger



Source: Creative Commons Bing Search

Table 6-2. Typical Foundation Design Parameters for 230 kV Transmission Line Tower Structures

Structure Type	Holes Per Structure	Diameter (feet)	Depth (feet)
H-frame	2	5-6	15-25
H-frame Angle	3	5-6	15-25
H-frame Dead-End	3	5-6	15-25

6.3.4.3 Structure Assembly

Generally, transmission tower structures will be assembled onsite. Transmission structure parts will be delivered to the site by flatbed truck. Assembly will be facilitated onsite by a truck-mounted crane (**Figure 5**).

The following methods may be used to assemble the transmission line tower structures:

- **Ground Assembly:** Using the ground assembly method, poles, braces, and cross arms will be framed and assembled on the ground onsite. Next, the transmission line hardware, and insulators are attached to the structures. Finally, a crane is used to set the poles of the fully framed structures directly into the excavated holes.
- **Air Assembly:** Using the air assembly method, poles will be set first in the excavated holes. Then braces, cross arms, hardware, and insulators are assembled on the erected poles to finish the structure.

Wherever possible, the crane and other vehicles needed for construction will move sequentially along the ROW from structure site to structure site to erect the structures. If access along the ROW is not possible, the vehicles will leave the ROW and use the approved access road network to reach the next structure.

Figure 5. Example of Cranes Assembling Transmission Towers

Source: Creative Commons Bing Search

6.3.5 Stringing

Conductor, shield, and fiber optic grounding wires will be placed on the transmission line tower structures by a process called stringing. The first step in stringing is usually to install insulators and stringing sheaves. Stringing sheaves are rollers that are temporarily attached to the lower portion of the insulators at each transmission line support structure to allow conductors to be pulled along the line.

Temporary clearance structures, or guard structures, will be erected for 1–2 days during construction where required prior to stringing transmission lines. These temporary clearance structures are typically vertical wood poles with cross arms and are erected at road crossings, or crossings with other energized electric or communication lines, to prevent contact during stringing activities. Bucket trucks may also be used to provide temporary clearance or serve as guard structures. The guard structures will be located directly under the line and used at the discretion of the BOP when needed for safety reasons.

Once the temporary clearance structures are in place, the initial stringing operation begins with the pulling of a lightweight “sock” line through the path the transmission line will follow. Often, the sock line is pulled through via helicopter (**Figure 6**). The hard line is attached to the sock line, which then follows the sock line as it is pulled through the sheaves into its final location. Pulling of the lines may also be conducted by a specialized wire stringing vehicle. The wire will then be tensioned to achieve the correct sag between support towers.

The 230 kV pulling and tensioning sites are 150 by 60 feet and will be required approximately every 9,300 feet along the ROW to accommodate the required equipment. These sites are

temporary and will be fully reclaimed. Equipment includes tractors and trailers with spooled reels that hold the conductors and trucks with the tensioning equipment. To the extent possible, pulling, and tensioning sites will be located within the ROW. Angle sites typically require an area outside of the ROW. Depending on topography, minor grading may be required at some sites to create level pads for equipment.

Figure 6. Example of Helicopter Stringing



Source: Lucky Star 2020

6.4 Access Roads

Based on the current layout, approximately 5.7 miles of access roads will be located on BLM-administered lands. Transmission line access roads will be located within the proposed Transmission ROW wherever possible.

Unimproved two-track ranch roads are present throughout the Project and will be used to minimize new disturbance. All roads will be used to minimize impact on sensitive resources (e.g., raptor nests, leks, wetlands, and waterbodies). Existing access roads will be used for any water crossings.

After construction, existing access roads will be used by maintenance crews and vehicles for inspection and maintenance activities. Lucky Star will seek to retire any unnecessary access roads after consultation with private landowners and after the construction phase is complete.

6.5 Cleanup

The cleanup operation will be performed after construction activities are completed. All waste and scrap material will be removed from the site and deposited in local permitted landfills in accordance with local ordinances (**Appendix F**, Draft Waste Management Plan). Temporary work areas, staging areas, and access roads will be kept in an orderly condition throughout the construction period. Approved enclosed refuse containers will be used throughout the Project. Construction debris and trash will be removed from the sites and disposed of in an approved manner. Oils or chemicals will be hauled to a disposal facility authorized to accept such materials. Open burning of construction trash will not be allowed. Disturbed areas not required for access roads and maintenance areas around structures will be restored and revegetated, as required by the Reclamation Plan (see **Appendix D**). All practical means will be used to restore the land to its original contour and to restore natural vegetation and drainage patterns within the Project area.

6.6 Water Use

Lucky Star Wind, LLC has a water supply agreement with Oftedal dated March 22, 2019. By using established water rights, the Project will not impact existing water users. According to a letter from the Wyoming State Engineer's Office (dated June 22, 2022) the planned temporary use of water (construction, operations, and decommissioning) will be covered under Wyoming's Depletions Plan. Projected water use by construction support need is shown in **Table 6-3** below.

Table 6-3. Total Water Consumption from Proposed Project

Water Use	Purpose	Total (gallons)
Vehicle Washing*	Prevent transporting noxious seeds and spores	6,400
Concrete Mixing	Anchors backfill, dead-end structure foundations	600,000
Reclamation**	Post- Construction reseeding and re- stabilization	450,000
Dust Control***	County roads, BLM roads, general construction	300,000

*Based on a projected washing of 25 trucks per week for 32 weeks.

**Based on a projected need to apply water for 90 days.

***Based on a projected 6,000 gallons/acre over 50 acres.

7.1 Reclamation

Areas that have been disturbed by construction activities will be restored to their original contours to the extent practicable and where such action is consistent with desired future operating needs. Interim reclamation activities could include recontouring eroded areas; applying mulch; creating berms, barriers, and water bars; and establishing vegetation. Hydrologic features would not be disturbed. Cut vegetation will be left in windrows for the benefit of seed banks and wildlife habitat per the direction of the BLM. Where required, reseeding will be with seed mixes approved by the BLM.

A Project Reclamation Plan has been developed for the Project in accordance with BLM Wyoming Reclamation Policy (2012b), Rawlins Field Office Resource Management Plan (RMP) (BLM 2008), RFO Reclamation Guidance (BLM 2011), and would apply to Federal lands (Draft Plan included as Appendix D). While the preference is to use these procedures and standards on private lands and State lands, specific reclamation procedures and standards on private and State lands may vary and will be developed in coordination with private landowners, the Wyoming ISC, the State of Wyoming OSLI, and the Wyoming Game and Fish Department (WGFD), as appropriate. A Project Stormwater Pollution Prevention Plan will also be developed and submitted to the BLM prior to construction.

7.2 Noxious Weed Control

The prevention of weeds and exotic-species invasion would be systematically addressed throughout the construction phase, following guidelines outlined in the approved BLM Noxious Weed and Invasive Species Management Plan, which will be an attachment to the Project POD (Draft Plan included as Appendix E). Monitoring would be conducted post-construction, as required by the Project's WGFD Monitoring Plan, and approved Weed Management Plan, and appropriate actions would be implemented, as necessary, to control weeds and ensure the re-establishment of native species.

7.3 Decommissioning

At the end of the ROW term, and in the event of non-renewal or repurposing of the Gen-Tie line facilities for other transmission uses consistent with prevailing BLM requirements, the Project facilities encompassing the ROW segment, will undergo decommissioning and final reclamation. This process will be executed in accordance with a BLM-approved Reclamation and Decommissioning Plan (refer to draft in Appendix D). Near the end of the ROW term, Lucky Star would coordinate with the BLM-authorized officer to schedule an inspection of the ROW and to develop a final plan for decommissioning and restoration. The Reclamation and

Decommissioning Plan would be reviewed and approved by the appointed authorized officer and would include the following information:

- The facilities and access routes to be removed, restored, and/or rehabilitated.
- How facilities and access routes would be removed, and the disturbed areas restored.
- The time of year the facilities and access routes would be removed.
- Stabilization and reclamation techniques to be used during restoration.

Decommissioning cost will be developed prior to submittal of the final POD.

8.1 Operation

Due to the static nature of transmission lines and substations, there are minimal related operational activities. No operations workforce is required.

8.2 Maintenance

Proper maintenance of the Project components is integral to achieving maximum efficiency. Lucky Star will develop an Operations and Maintenance Plan prior to issuance of the ROW grant, which will address all aspects of the design.

Properly trained and equipped technicians will be employed to perform the necessary Project maintenance. This work force will include high voltage technicians (transmission line and substation), and civil technicians for the roads and related earthwork. It is anticipated that Lucky Star will look first to the local labor pool to fill these positions. It may be necessary to employ additional personnel temporarily in response to some maintenance issues.

The maintenance on a transmission line is intermittent in nature and therefore, it is difficult to determine staffing needs. As such, the staffing needs and length of deployment will be determined as issues arise. In addition to addressing issues, Gen-Tie Line inspections will be completed at least once per calendar year and with no more than 18 calendar months between inspections on the same ROW. Inspections may be completed by personnel on the ground, by aerial inspection, or a combination of both. Findings will be documented in an inspection log and appropriate maintenance actions will be determined in coordination with current users.

While not expected, there is always the potential for unforeseen circumstances to arise that could cause the need for unscheduled Gen-Tie Line inspections and associated maintenance activities. In these instances, Lucky Star will coordinate closely with the BLM and other landowners to address contingency planning. The BLM will be informed of any maintenance actions requiring disturbance of BLM-administered lands prior to implementation.

Chapter 9

Environmental Considerations and Mitigation

Multiple surveys, baseline studies, and plans have been prepared to ensure adequate measures are taken to minimize and control impacts on biological, cultural, and visual resources as well as the local infrastructure and service providers in the Project area. The majority of the Project is proposed in the WAPA corridor and would be co-located with other BLM approved transmission lines. Lucky Star will continue to work with Federal, State, and local agencies throughout the construction and operation periods of the Project to minimize potential environmental impacts caused by the Project and to address community concerns.

The development of the Project is anticipated to result in relatively few environmental impacts. Lucky Star has been coordinating with the BLM, WGFD, USFWS, and the Wyoming State Historic Preservation Office (SHPO) since initiation of the Project to ensure proper environmental surveys are completed, and to incorporate agency feedback and appropriate setbacks into development of the preliminary alignment. Wildlife data has been collected and analyzed for greater sage-grouse leks, raptor and migratory bird species, and other sensitive wildlife species to determine their potential presence and inform the development of the Project such that impacts are avoided or minimized.

The Project avoids any greater sage-grouse core habitat areas. The Project area does not overlap with Greater Sage Grouse Core Areas established by WGFD (also referred to as Priority Habitat Management Areas by the BLM). Habitats in the Project area were surveyed in 2019. Two occupied leks, are located within 2-miles west of the northern portion of the Project (WGFD 2023). There are no known occupied leks within the Project. Greater sage-grouse have the potential to be present within the Project in areas of suitable habitat.

A WGFD Monitoring Plan has been developed in coordination with WGFD as part of the Wind Project. The Monitoring Plan establishes commitments to voluntary monitoring, reclamation, avoidance, and minimization measures that Lucky Star proposes to follow during preconstruction, construction, and post-construction phases of the Project. A BLM wildlife monitoring plan will also be developed for the Project as part of the NEPA process, as resource monitoring items are identified.

As part of the Monitoring Plan with WGFD, Lucky Star has committed to developing and implementing a Traffic Management Plan to minimize impacts to wildlife during all phases (construction, operations, maintenance, and decommissioning) of the Project and will be made available for WGFD review and comment prior to the start of construction. The Traffic Management Plan may include options for busing construction crews from concentrated locations to construction sites. Speed limits for construction and operations personnel along the access and service roads will be restricted to reduce the risk of wildlife or livestock collisions and to minimize sound emissions. Project personnel and contractors will be instructed to adhere to all posted speed limits along highways and county roads to reduce traffic and wildlife related incidents on the proposed transportation routes. Vehicle movement associated with the Project will be restricted to designated access and service roads and temporary construction areas, which will minimize roadkill availability that may attract wildlife.

Lucky Star has completed the cultural records search, which has been provided to the Wyoming SHPO as part of the ISC application process (see **Appendix I**). Class III pedestrian surveys of the Project area were conducted in 2020 with additional surveys completed in 2022 and provided to the BLM for coordination with the SHPO, tribes, and other permitting entities. Studies that have been, or will be, completed for the Project and provided to the BLM are included in **Table 9-1**.

Table 9-1. Summary and Status of Environmental Surveys for the Lucky Star Project

Title	Timeframe
Raptor Nest Surveys	Completed 2020/2024
Greater Sage-Grouse Lek Surveys	Completed 2019/2024
Wetland/Waters of the U.S. Delineations	Summer 2024
Cultural Resources Literature Review	Completed 2019
Cultural Resource Surveys	Completed Summer 2020/2022/2024
WGFDF Monitoring Plan	Completed 2019
Paleontological Resource Surveys	Completed Summer 2020 and fall 2022

9.1 Site Characteristics

The Project site is situated at approximately 6,500 feet in elevation on a plateau within the Laramie Basin Rolling Sagebrush Steppe Ecoregion of the Wyoming Basin (Chapman et al., 2004). The site is mostly flat, and the predominant vegetation communities consist of sagebrush shrubland and steppe. The site topography is a gently rolling plateau above incised drainages and adjacent to uplifts and mountain ranges (refer to **Appendix A** for site layout and topography). Drainages within the Project area are generally intermittent or ephemeral, with the exception of the Little Medicine Bow River, and Sand Creek, which are tributaries of the North Platte River.

Past and present land use in the vicinity of the Project area consists of rural ranching and some dry land crop production. Dry land crop production does not occur on BLM land. In Albany County, the Project will be located within the Rural Residential Zoning District and the Agriculture District. In Carbon County it will be in the RAM District. A transmission line is an appropriate use for land in both districts.

Development of the Project will allow for continued historic use of the Project area and surrounding areas for ranching and agriculture and is consistent with the land use classifications of surrounding private lands. Outlined below in **Table 9-2** is a list of resources and a summary of those resources in the Project area. See Figures (**Appendix B**) for illustrations of some of these resources in the Project area.

Table 9-2. Summary of Resources in the Project Area

Resource	Summary of Resources within Project Area
Public Health or Safety	The Project would not pose any threats to public health or safety and would be constructed, operated, maintained, reclaimed, and decommissioned in accordance with all applicable local, state, and federal regulations.
Unique Geographic Characteristics	There are no unique geographic features along the Project alignment.

Resource	Summary of Resources within Project Area
Air Quality	<p>The Gen-Tie Line would be in an area that is in attainment or unclassified with respect to all criteria pollutants. Construction activities would generate temporary increases in fugitive dust from earth-moving activities and mobile-source emissions from construction vehicles and equipment (see Draft Dust Control Plan (Appendix H)). Construction emissions would be typical of construction projects of similar scale and would not exceed the national ambient air quality standards. Lucky Star will implement construction BMPs (such as application of water) to control fugitive dust. Project emissions during operations would be negligible.</p>
Raptors (including eagles)	<p>Based on known range and distribution, 17 raptor species have the potential to occur within the Project area. Raptor species typical of open native grassland and shrub scrub and agricultural landscapes may be present during the nesting season, which is generally recognized in Wyoming as March through July. The following species could potentially breed in or near the Project alignment: bald eagle (<i>Haliaeetus leucocephalus</i>), golden eagle (<i>Aquila chrysaetos</i>), ferruginous Hawk (<i>Buteo regalis</i>), Peregrine falcon (<i>Falco peregrinus</i>), Swainson’s hawk, red-tailed hawk (<i>Buteo jamaicensis</i>), and northern harrier (<i>Circus hudsonius</i>). Owls with the potential to breed in or near the Project area include burrowing owl (<i>Athene cunicularia</i>), great-horned owl (<i>Bubo virginianus</i>), and the short-eared owl (<i>Asio flammeus</i>). Raptor species that may also occur outside of the breeding season (migration, winter, or post-breeding dispersal) include the rough-legged hawk (<i>Buteo lagopus</i>) and merlin (<i>Falco columbarius</i>) in addition to the species listed above.</p> <p>Surveys for raptors, including bald and golden eagles, were conducted in 2018 – 2020, and 2024, which included raptor aerial and ground-based nest searches within the Project area. The Aerial-based nest search locations are shown in Figure 5, Appendix B. Identified species include golden eagles, bald eagles, ferruginous hawk, prairie falcon, red-tailed hawk, Swainson’s hawk, and burrowing owl. Forty-six raptor nests identified during biological surveys are within two miles of the proposed Gen-Tie line. Six of these nests are on BLM lands; however, none of these are within the RFO RMP 825 feet no surface occupancy (NSO) buffer. Two ferruginous hawk nests are on BLM lands within 1,200 feet of the proposed Gen-Tie line or towers, which the RFO RMP designates a 1,200-foot NSO area (BLM 2008).</p> <p>Activities on BLM-administered lands would adhere to BLM RFO stipulations. Activities on private lands would also adhere to USFWS nest buffer recommendations within the raptor breeding season to minimize disturbance to breeding birds (USFWS 2019). To preclude avian electrocutions and minimize collision risk, Lucky Star will incorporate APLIC recommendations into the Project design (refer to Section 9.2, Applicant Committed Environmental Protection Measures).</p>
Migratory Birds	<p>The proposed ROW contains habitat that may support a variety of migratory bird species protected under the Migratory Bird Treaty Act (MBTA), including grassland- and shrubland-nesting species. Some migratory birds are also considered BLM Sensitive Species (see section below). There are no known documented migratory bird pathways within the Project area (e.g., whooping crane). The Project is located within the USFWS “Central Flyway” for migratory birds (USFWS 2013).</p> <p>Lucky Star would implement applicant committed environmental protection measures (Section 9.2) to minimize impacts to migratory bird species, such as limiting vegetation clearing activities to outside the migratory bird</p>

Resource	Summary of Resources within Project Area
	breeding season and conducting pre-construction clearance surveys to avoid loss of nests. The Gen-Tie line design would incorporate APLIC recommendations to minimize avian electrocution risk.
Big Game	<p>The Project area includes yearlong range for elk (<i>Cervus canadensis</i>), mule deer (<i>Odocoileus hemionus</i>), and pronghorn antelope (<i>Antilocapra americana</i>), which indicates that these species make general use of the suitable habitat on a year-round basis (Figure 6, Appendix B). The WGFD has mapped 600.7 acres of pronghorn crucial winter range along the proposed alignment. Mule Deer crucial winter range includes 49.1 acres. Crucial range for elk does not overlap with the Project but exists in the surrounding areas. There are no migration corridors or parturition (i.e., fawning or calving) areas located within the Project area (WGFD, 2023). The Project would not restrict movement of big game species, and habitat loss would be minimal. A Traffic Management Plan would be developed to minimize the risk of big game collision with construction related traffic. Lucky Star will comply with seasonal timing stipulations required on BLM lands. On non-federal lands, Lucky Star will avoid human activity in crucial big game winter range from November 15 through April 30. The Project will work with the BLM and WGFD on options and flexibility with this recommendation depending on local winter conditions and areas where development activities may not impact wintering populations of pronghorn. In Project areas where there is not crucial winter range, seasonal timing stipulations would not apply.</p>
Threatened, Endangered or Candidate Animal Species	<p>The Project area does not contain ESA-defined Critical Habitat for any federally listed species (USFWS Information & Planning for Consultation Tool (IPAC) 2024).</p> <p>The following federally threatened or endangered fish and wildlife species are listed on the USFWS IPAC database with potential habitat: black-footed ferret (<i>Mustela nigripes</i>), piping plover (<i>Charadrius melodus</i>) whooping crane (<i>Grus americana</i>), and the pallid sturgeon (<i>Scaphirhynchus albus</i>). However, desktop verification suggests potential habitat for only one of these species, the black-footed ferret could be present. No other habitat for federally threatened or endangered wildlife species is present.</p> <p>Potential habitat for the black-footed ferret is restricted to prairie dog colonies that are large, contiguous, and preferably with a high burrow density. Black-footed ferrets in Wyoming are managed under section 10(j) of the ESA as an experimental/non-essential population by the USFWS. Therefore, there are no requirements for the black-footed ferret population under ESA Section 7(a)(2). Surface-disturbing and disruptive activities in white-tailed and black-tailed prairie dog towns would be avoided to the greatest extent practicable. If prairie dog towns/complexes suitable as black-footed ferret habitat are present, attempts would be made to avoid locating surface disturbing activities within 164 feet (50 meters) of a town.</p>
Threatened, Endangered or Candidate Plant Species	<p>The USFWS IPAC database indicated potential habitat for the following federally threatened plant species.</p> <p>Ute ladies'-tresses orchid (<i>Spiranthes diluvialis</i>) is listed as a federally threatened species. It occurs along riparian edges, gravel bars, old oxbows, high flow channels, and moist to wet meadows along perennial streams. The elevational range of known orchid occurrences is 4,200 to 7,000 feet. According to the Wyoming Natural Diversity Database, the Gen-Tie line is outside Ute ladies'-tresses mapped suitable habitat; however, the area is within the USFWS-designated Area of Influence for the species (UWYO 2022,</p>

Resource	Summary of Resources within Project Area
	<p>USFWS 2013). It blooms, generally, from late July through August. No formal targeted surveys for special-status plants have been completed, as no findings for the plant are known in the vicinity of the Project. Riparian areas may occur at drainage crossings that are primarily co-located with existing disturbance. Mapped potential habitat along the proposed alignment is illustrated in Figure 7 (Appendix B). The Project would avoid surface disturbing activities in areas where there is potential habitat for Ute ladies'-tresses. Overhead transmission will span the riparian area, and existing roads will be used for crossings.</p> <p>Western prairie fringed orchid (<i>Platanthera praeclara</i>) occurs in unplowed, calcareous prairies and sedge meadows; has also been observed in successional communities such as borrow pits, old fields, and roadside ditches. This species is known to occur in the Platte River ecosystems in Nebraska downstream of the Gen-Tie line. This species is not known to occur in Wyoming but is reported by the USFWS for downstream impacts on water withdrawals within the Platte River. The Project would purchase temporary existing water rights for any water resources needed for construction, operation, maintenance, reclamation, or decommissioning activities, so no new water withdrawals or impacts to this species are anticipated.</p>
BLM Sensitive Species	<p>BLM Sensitive Species that have potential to occur in the Project area include:</p> <ul style="list-style-type: none"> • Fringed myotis (<i>Myotis thysanodes</i>) • Long-eared myotis (<i>Myotis evotis</i>) • Spotted bat (<i>Euderma maculatum</i>) • Townsend's big-eared bat (<i>Corynorhinus townsendii</i>) • Swift Fox (<i>Vulpes velox</i>) • White-tailed prairie dog (<i>Cynomys leucurus</i>) • Ferruginous hawk (<i>Buteo regalis</i>) • Burrowing Owl (<i>Athene cunicularia</i>) • Mountain plover (<i>Charadrius montanus</i>) • Loggerhead shrike (<i>Lanius ludovicianus</i>) • Sage thrasher (<i>Oreoscoptes montanus</i>) • Sage sparrow (<i>Artemisiospiza nevadensis</i>) • Brewer's sparrow (<i>Spizella breweri</i>) • Northern leopard frog (<i>Lithobates pipiens</i>) • Persistent sepal yellowcress (<i>Rorippa calycina</i>) • Laramie false sagebrush (<i>Sphaeromeria simplex</i>) <p>The Gen-Tie line and the surrounding vicinity may host BLM sensitive species (See Figure 9, Appendix B). In coordination with BLM, Lucky Star would conduct pre-construction clearance surveys aimed at identifying occupied habitat areas. Subsequently, appropriate buffers will be implemented in accordance with seasonal timing and spatial requirements. To minimize impacts on nesting and foraging habitats, the proposed alignment has been strategically co-located along existing ROWs. Reclamation efforts will be undertaken to restore disturbed areas with native vegetation. Throughout Project construction activities, avoidance measures and seasonal restrictions will be applied to safeguard species and their habitats. On BLM-administered lands, stipulations for BLM sensitive species would be applied, as applicable, per the ROD and Approved RFO</p>

Resource	Summary of Resources within Project Area
	RMP (BLM 2008). Because the Project has been co-located with existing transmission lines, impacts to BLM sensitive species and their habitats are anticipated to be minimal.
Greater Sage-Grouse	<p>The greater sage-grouse is a BLM Sensitive Species and WGF D Species of Greatest Conservation Need and is also managed by WGF D as a game bird (BLM 2010; WGF D 2017). The Project alignment does not overlap with Greater Sage Grouse Core Areas established by WGF D (also referred to as Priority Habitat Management Areas by the BLM) and is located east of the Hanna Core Area (see Figure 8, Appendix B). Greater sage-grouse surveys were completed in 2019 and 2024 in portions of the proposed Project alignment overlapping with the Wind Project area. According to lek data collected by WGF D, there are no known leks within the proposed ROW, and there are no occupied or active leks within ¼ to 1 mile of the proposed transmission line (2023). There are two occupied leks within 2 miles of the proposed transmission line, neither of which occur on lands managed by the BLM (WGF D 2023).</p> <p>All Project components are sited outside of the 0.25- to 1-mile buffer as stipulated in the RFO RMP, which applies to high-profile structures, such as towers, to avoid impacts on lekking greater sage-grouse outside of core areas. For any Project facilities located on BLM-administered lands within the 2-mile buffer of an active lek, Lucky Star would apply timing limitations to construction between March 15 and June 30 per the approved RFO RMP (BLM 2008). Greater sage-grouse have the potential to be present within suitable sage brush habitat located along the Project.</p>
Vegetation Excluding USFWS Designated Species	Vegetation cover within the proposed ROW is predominantly Inter-Mountain Basins Big Sagebrush Shrubland and Steppe with smaller areas of Wyoming Basins Dwarf Sagebrush Shrubland and Steppe and Inter-Mountain Basins Mat Saltbush Shrubland. Other vegetation cover-types have less than 5 percent cover. See Figure 4, Appendix B and Appendix D Reclamation Plan and Figures for illustrations of landcover. Surface disturbing activities would minimally remove vegetation in the ROW and would be limited to the work areas around the tower foundations. Interim and final reclamation of disturbed areas will be addressed in the Applicant’s approved Reclamation Plan.
ACECs	No ACECs are in the Gen-Tie line vicinity. The nearest ACEC is approximately 16 miles away from the Gen-Tie line area at the nearest point (see Figure 10, Appendix B).
BLM Natural Areas	BLM Natural Areas are not present in the Project Area.
Cultural Resources	<p>The Project is collocated with existing transmission lines for a majority of the route, and the entirety of the alignment has been subject to previous Class III inventories for telephone and utility development, fiber optic cable installation, county road improvements, wind energy development, land exchanges, and oil and gas pipeline expansions.</p> <p>A Class I literature review covering a 1-mile buffer of the proposed Project was completed and results submitted to the BLM, RFO on March 19, 2019 (Weston 2019). An updated report was completed on September 23, 2019. Following additional alignment revisions in 2022, a new file search was completed on September 15, 2022. The full extent of the records review, the 2019/2020 Class III inventories, and all identified cultural resources, are documented and evaluated in the initial 2019/2020 report by CRA (Weston and Tedrow 2020). This report was updated and revised in 2024, and will be</p>

Resource	Summary of Resources within Project Area
	<p>submitted prior to finalization of the Project. The addendum inventories surveyed those portions of the new Project alignment which were located outside of the 2019/2020 inventory areas. The Project avoids the Como Bluff National Natural Landmark.</p> <p>Lucky Star would avoid all recommended eligible sites by at least 100 feet, or would span segments, avoiding all physical disturbance.</p>
Environmental Justice	<p>The Project is not anticipated to have high and adverse human health or environmental effects that could disproportionately affect minority or low-income populations. The only community in the Project vicinity is Medicine Bow, Wyoming, which is approximately 0.5 mile from the route. There are no identified environmental justice communities in Medicine Bow.</p>
Farmlands (Prime or Unique)	<p>The transmission line crosses 1.8 miles of prime farmland and 1.8 miles of farmland of statewide importance.</p>
Floodplains	<p>Federal Emergency Management Agency (FEMA) floodplain boundaries are not available for Carbon County, however, there are no perennial stream crossings that would be associated with a 100-year floodplain on BLM-administered land.</p>
Fuels/Fire Management	<p>The Project does not conflict with RFO RMP fuel and fire management goals and objectives for Checkerboard and Inter-mixed Public and Private Lands.</p>
Mineral Resources/Energy Production	<p>The proposed Gen-Tie line is in a designated utility corridor and parallels existing transmission lines for 18.7 miles of the route. These utility corridors were designated by the BLM as preferred routes for energy infrastructure based in part on the limited potential for impacts on resources within the corridors. In addition, the Gen-Tie line is not expected to create any new impacts on geology, minerals, or energy production due to the existing developed nature of the corridor. As a result, the Gen-Tie line is not expected to result in new impacts on geology, minerals, or energy production. There are no known conflicts between the Project and mineral resource or energy production on BLM-administered lands within the proposed ROW. There are existing mineral extraction leases within the Project area. For oil and gas, most of the Project site is classified as “open to leasing with minor constraints” (Classification B) and “open to leasing with major constraints” (Classification C).</p> <p>Lucky Star provided written notice to recorded owners of mineral rights located on or under the land where the proposed Wind Project facilities were to be constructed, as part of the Carbon and Albany County and ISC permitting application process. Project notices will be published again as part of the Carbon and Albany County and ISC application resubmittal process after the BLM process is underway.</p>
Greenhouse Gas Emissions	<p>Emissions generated for construction and operation of the Project would make a negligible contribution to global greenhouse gas emissions. The Project would deliver energy produced by renewable wind resources; thereby reducing greenhouse gas emissions.</p>
Hydrologic Conditions (stormwater)	<p>Stormwater management to prevent erosion and sedimentation into streams would be typical of construction projects of similar scale. The Applicant would avoid surface disturbing activities on BLM-administered land within 100 feet of ephemeral channels and within 500 feet of perennial waters, springs, wetland, and riparian areas. Only those actions within areas that cannot be avoided (i.e., for linear crossings) and that provide protection for the resource identified will be approved, per the 2008 BLM RFO RMP (RMP). The Applicant will obtain a Wyoming Pollutant Discharge</p>

Resource	Summary of Resources within Project Area
	Elimination System (WYPDES) Large Construction General Permit (WYR10-000) from the WDEQ, Water Quality Division prior to the commencement of construction. The Applicant will comply with all applicable permit conditions for stormwater pollution prevention.
Noxious Weeds/Invasive Plants	Surface disturbance and vegetation clearing during construction of the Project would be minimal but could increase the potential for establishment and spread of invasive species and noxious weeds. Control of invasive species and noxious weeds during construction and operation of the Project will be addressed through implementation of construction BMPs, a Noxious Weed and Invasive Species Plan (Appendix E), along with a Reclamation Plan (Appendix D).
Lands/Access	There are no known conflicts with existing BLM rights-of-way. The Project site is not located within a linear exclusion or avoidance area.
Livestock Grazing and Rangeland Health Standards	The proposed route would cross three grazing allotments on BLM-administered land (Figure 13, Appendix B), including Chace Block (0.02 acres), North Area (150.84 acres), and Foote Creek Pasture (27.05 acres).
Migratory Birds	<p>The Project area is used by several species of migratory birds for nesting, foraging, and migration. Desktop analysis of avian habitats within the Project area have not identified any areas characterized as rare or unique avian habitats used for breeding or foraging relative to the surrounding areas. The Project is sited along an existing WAPA corridor and collocated with existing transmission lines, minimizing the potential for additional habitat loss or fragmentation. Lucky Star would conduct pre-construction clearance surveys prior to surface disturbance to minimize potential loss of nests.</p> <p>Surveys for mountain plover have been conducted for existing or proposed projects collocated with the proposed Project. Lucky Star would adhere to RFO RMP stipulations for Mountain Plover on BLM-administered lands, where applicable. On non-federal lands, pre-construction clearance surveys would be conducted in areas identified as potential plover habitat and establish appropriate non-disturbance buffers, minimizing potential impacts to the species.</p>
Native American Religious Concerns	A Class III cultural resource inventory and report was updated in January 2023 for the ROW on BLM land, and results will be submitted to the BLM. Prehistoric sites may be culturally sensitive to Native American tribes. If the Class III inventory identified sites that may be of interest to tribes, the BLM will initiate government-to-government consultation to determine the significance of identified sites to tribes. The Applicant would avoid direct effects to National Register of Historic Places (NRHP)-eligible cultural resources and the Project would not result in access restrictions to sites of sensitivity to tribes.
Lands With Wilderness Characteristics (LWC)	There are no Lands with Wilderness Characteristics in the Project Area.
Paleontology/Geology	Geologic formations with moderate to high (PFYC Classes 3 and 4) potential for important fossil resources occur along the Project alignment and fossils could be inadvertently discovered during construction (Figure 14, Appendix B). A Paleontological Resource Protection Plan, which would reduce potential impacts to paleontological resources, is currently under development.

Resource	Summary of Resources within Project Area
	Structure placement would avoid landslide deposits and slopes greater than 25 percent. Impacts related to geologic hazards will be addressed through RMP stipulations and Conditions of Approval.
Recreation	The proposed route would cross checkerboard land holdings with low recreation potential due to access restrictions and adjacent land uses. Impacts on recreation would be negligible.
Socioeconomics	Economic benefits of the Project for the State and affected counties would include payments associated with the lease of State lands; increased sales and use tax generation associated with construction expenditures for materials and services; construction and operations employment and associated payroll; and economic stimulus related to induced spending associated with the construction workforce. The construction workforce would consist of approximately 50-60 workers over an 8-12-month construction period. To the extent that workers are non-local there could be an incremental increase in demand for community services and facilities, particularly within the communities that are nearest to the Project site (i.e., Medicine Bow, Rock River). These impacts would be temporary as construction across the line progresses from east to west and are not anticipated to overburden local communities.
Soils	Natural Resources Conservation Service (NRCS) identifies five ecological sites within the ROW for the proposed route. The Gen-Tie line would also utilize the WWEC-designated utility corridor and would parallel existing transmission lines, which would minimize new impacts on soils due to the existing developed nature of the corridor. The proponent would apply BMPs and implement the Reclamation Plan to stabilize and rehabilitate disturbed soils to the maximum extent practicable.
Visual Resources	The BLM classifies areas of visual resource management (VRM) into Classes I-IV, with Class I being the areas that are most sensitive to visual impacts, and Class IV being the least. Transmission line construction is compatible with VRM classes in the Project Area (see Figure 15, Appendix B). The Gen-Tie line would also utilize the WWEC-designated utility corridor and would parallel existing transmission lines, which would minimize new impacts on visual resources due to the existing developed nature of the corridor.
Wastes (hazardous or solid)	During Project construction and operation, hazardous or solid waste will not be discharged onto the ground or into streams or drainage areas (Appendix F Draft Waste Management Plan and to be developed Appendix O Draft Hazardous Waste/Spill Prevention Plan). BMPs for materials transportation, handling, and storage will be implemented during Project construction and operation, and spill prevention and containment measures will be implemented. Enclosed containment will be provided for all waste. Construction sites will be maintained in a sanitary condition; waste materials at those sites will be disposed of promptly at an appropriate waste disposal site. All construction waste (solid waste, petroleum products, and other potentially hazardous waste) will be disposed of at facilities permitted or authorized to handle such waste.
Waters of the U.S.	Perennial streams in the Project area include the Little Medicine Bow River and Sand Creek (see Figure 12, Appendix B). Intermittent streams include First Sand Creek and other unnamed intermittent streams. Perennial streams will be spanned by the transmission line and access to the line would be obtained from either side of the stream; no access road crossing of perennial streams on BLM-administered land are planned and existing

Resource	Summary of Resources within Project Area
	<p>access would be used for stream crossings. Surface-disturbing activities on BLM-administered land will avoid 100-year floodplains and remain 500 feet from perennial surface water, wetland, and riparian areas, and 100 feet from ephemeral channels. Coordination with the BLM will determine appropriate site-specific engineering and mitigation plans if activities are required within these avoidance areas.</p> <p>Lucky Star has not identified any construction activities that would require permitting under Section 404 of the CWA at this time. If impacts to waters of the United States, including jurisdictional wetlands, are identified during final design, Lucky Star will initiate consultation with the USACE to review the Project.</p>
<p>Water Resources/Quality (surface/ground)</p>	<p>Construction of the Project will require water use for dust control (Appendix H). The required water will be procured from landowners holding existing water rights. No new water rights will be required. Impacts to surface and groundwater resources will be addressed through BLM RFP RMP stipulations, construction BMPs, and adherence to permit conditions included in permits to be administered by other federal and state agencies relevant to water resources, including the following, as applicable:</p> <ul style="list-style-type: none"> • USACE Section 404 Individual or Nationwide Permit, • WDEQ Water Quality Certification, • WYPDES Large Construction General Permit, and/or • WSEO Temporary Water Use Agreement.
<p>Wetlands/Riparian Zones</p>	<p>National Wetland Inventory (NWI) wetlands in the Project Area are shown on Figure 12, Appendix B. Any wetlands located within the proposed ROW would be spanned by the transmission line, and per BLM stipulations, the Applicant would avoid surface disturbing activities within 100 feet of ephemeral channels and within 500 feet of perennial waters, springs, wetland, and riparian areas. Only those actions that cannot be avoided (i.e., for linear crossings) and that provide protection for the resource identified will be approved, per the 2008 BLM RMP. If Project activities affect wetlands, these activities would be permitted through a Section 404 Permit. Impacts to wetlands and riparian areas would be addressed through BLM stipulations and Conditions of Approval, and the Section 404 permitting process (if required).</p>
<p>Wild and Scenic Rivers</p>	<p>There are no Wild and Scenic Rivers in the Project Area.</p>
<p>Wild Horses</p>	<p>The Project Area is not located within a Herd Management Area for wild horses.</p>
<p>Wilderness/WSA</p>	<p>There are no wilderness areas or Wilderness Study Areas (WSA) in the Project Area.</p>
<p>Woodland/Forestry</p>	<p>Based on LANDFIRE data, approximately 0.1 acres of woodland vegetation communities are present in the proposed ROW, which comprises less than one percent of the proposed ROW. Minimal to no tree clearing for the Project is anticipated.</p>

9.2 Best Management Practices and Applicant-Committed Measures

9.2.1 General Measures Applied to Entire Project

Lucky Star has committed to implementing design criteria and BMPs to minimize potential impacts on natural resources and the human environment from the proposed Project. The following measures would be applied consistently across the entire project, including federal and non-federal lands:

- Construction and maintenance activities will minimize disturbance to vegetation, drainage channels, and streambanks.
- There would be no blading/clearing along the transmission route. The clearing of some natural vegetation will be required within the ROW at structure sites; however, selective clearing will be performed only when necessary.
- Structures will be strategically placed to avoid sensitive features such as wetlands, riparian areas, perennial surface water, and cultural sites. Additionally, efforts will be made to allow conductors to span these features within the limits of standard structure design. Additional avoidance and/or restrictions will be observed on BLM-administered land.
- “Good housekeeping” protocols will be implemented to ensure that the Project area will be kept clean of debris, garbage, fugitive trash or waste, scrap heaps and dumps.
- Implementation of dust control measures including speed limits and dust abatement. Dust abatement techniques will be incorporated, as needed, during construction activities to minimize fugitive dust.
- Prior to breaking ground, the construction work area will be surveyed and clearly demarcated with stakes and flagging. Construction activities will be confined within predetermined limits, with no application of paint or permanent discoloring agents on rocks or vegetation to delineate construction boundaries.
- Power line design and construction will adhere to APLIC (2006) recommendations.
- In areas that do not require re-contouring, vegetation will be preserved, and original contours maintained.
- All movement of construction vehicles beyond the ROW would be restricted to pre-designated access points, contractor-acquired access, or public roads.
- Appropriate traffic controls and signage would be put in place to ensure safe operation of vehicles on access roads, and any signage required to be placed on BLM-administered lands would go through the appropriate clearance and approval process with the agency.
- If temporary road closures are needed during construction, flaggers would be provided for safety. Public road closures will be coordinated with relevant county/state agencies, and necessary permits and public notices will be submitted by Lucky Star.
- Construction sites, staging areas, and access roads supporting the project will be maintained in an organized condition throughout the construction period. Activities will cease during any adverse weather conditions when potential impacts reach unacceptable levels.

- Before construction commences, Lucky Star will develop a final Emergency Response Plan detailing fire, medical, and law enforcement support services.
- A Health and Safety Plan will be implemented across the Gen-Tie line area, including site-specific safety orientations for personnel.
- Appropriate signage would be placed in high-visibility areas to warn employees and visitors of all potential hazards.
- Erosion control measures will be installed prior to and immediately following surface disturbing activities. Initial stabilization measures will be used to control surface runoff and erosion and to ensure biophysical conditions are maintained until long-term reclamation can be initiated.
- All sediment and erosion control measures will be inspected periodically, and repairs performed, as necessary.
- High-visibility markings will be applied to structures and ground wires as required by governmental agencies.
- Supervisory construction personnel will be instructed on protecting cultural and ecological resources, including compliance with federal and state laws.
- Mitigation measures will be applied to eliminate induced currents and voltages on conductive objects collocated within the ROW.
- Coordination with livestock-grazing permittees will occur throughout construction, with repairs to fences, gates, and range improvements as required.
- Vehicle speed restrictions will be enforced to prevent collisions with livestock.
- The Gen-Tie line will be designed to limit audible noise due to corona effects with extra caution taken to avoid conductor surface damage. Tension would be maintained on all insulator assemblies to ensure positive contact between insulators, thereby avoiding sparking.
- During operation, the ROW will be kept free of debris, and slash will be left in place or disposed of in accordance with land management agency requirements.
- Fuels, oil, and solvents will not be drained onto the ground or into streams. Containment will be provided for all trash, and construction waste removed to authorized disposal facilities.

9.2.2 Selective Measures

The following measures will be selectively applied during the construction and operation of the Project as deemed appropriate:

- Lucky Star would conduct site-specific surveys and/or monitoring for Endangered Species Act threatened and endangered species, BLM sensitive species, and other wildlife and fish species prior to construction. Survey and monitoring approaches will be developed in coordination with USFWS, BLM, and WGFD.
- Structure design will be modified, or alternative types considered to minimize ground disturbance, operational conflicts, visual contrast, and potential avian conflicts.

- Standard structure design will be adjusted to match existing transmission-line structure spacing where feasible, reducing visual contrast and potential operational conflicts.
- Non-specular conductors, where specified by the authorized officer, will be considered to mitigate visual impacts.
- Except for emergency repair situations, construction, restoration, maintenance, and decommissioning activities within the ROW will be modified or suspended during sensitive periods, such as nesting and breeding periods for candidate, proposed threatened and endangered, or other sensitive wildlife species. The authorized officer will designate sensitive periods, affected species, and areas of concern prior to construction or maintenance.
- Construction and post-construction monitoring and treatment in specific areas will adhere to Section 106 of the NHPA, the Paleontological Resources Protection Act, Section 7 of the Endangered Species Act, or as specified by the BLM and relevant state or county authorities.
- Overland travel will be aligned to the natural contours of the designated access area whenever possible, minimizing ground disturbance and visual scarring, provided it does not compromise resource values.
- To minimize disturbance to any timber resources and reduce visual contrast, tree clearing within and adjacent to the ROW will be minimized where possible to meet conductor-clearance requirements (National Electric Safety Code and 10 years of timber growth). Selective removal, such as edge feathering, will be employed to blend the ROW edge with adjacent vegetation patterns as practicable and appropriate.

9.2.3 Water and Soil Resources

- Grading and clearing activities will be kept to a minimum, and disturbances will be promptly stabilized.
- Permanent or temporary soil erosion-control measures will be implemented immediately for slopes, channels, ditches, disturbed land areas, and soil stockpiles, following the completion of final grading or earth disturbance.
- Temporary erosion-control measures, as outlined in the Storm Water Pollution Prevention Plan (SWPPP), will be promptly employed during temporary pauses of earth-disturbing activity.
- Upon the completion of ground-disturbing activities, the disturbed area will be reseeded during the appropriate season, adhering to specifications provided by the BLM or surface landowner. Subsequent monitoring will confirm the success of the reseeded efforts.
- Vehicle speed restrictions will be strictly enforced to minimize accidents and dust generation.
- BMPs will be utilized to control fugitive particulate matter emission. This includes implementing wind breaks and barriers, frequent water application, soil additives, vehicle access and flow route control, covering soil stockpiles, using gravel at site exit points, daily equipment washing, reestablishing ground cover, and halting work, as necessary.
- All BMPs will be inspected and maintained on-site as required. Sediment-control logs, brush barriers, and rock logs utilized during construction will be retained in place until vegetation reaches the required density.

9.2.4 Noxious Weed and Invasive Species

- Before commencement of construction, Lucky Star will finalize an approved Noxious Weed and Invasive Species Management Plan in accordance with RFO RMP standards for BLM-administered lands. These standards dictate zero noxious weed infestation and limit invasives to not exceeding 10 percent of preconstruction presence. The plan will include provisions regarding construction, restoration, and operation, incorporating measures such as the use of weed-free materials and equipment washing.
- Approval from the BLM will be secured before the application of approved herbicides on BLM-administered lands. Herbicide applications will adhere to standard operating procedures outlined in Appendix A of the ROD for Vegetation Treatments Using Herbicides on Bureau of Land Management Lands in 17 Western States (BLM 2007). The Noxious Weed and Invasive Species Management Plan will delineate the approach to herbicide application, ensuring strict adherence to label use restrictions.
- The approved Noxious Weed and Invasive Species Management Plan will feature species-specific accounts outlining characteristics pertinent for control, along with a range of treatment options for each noxious weed mapped in the Gen-Tie line area. Herbicides will only be employed according to their registered use, administered by qualified applicators in compliance with federal and state laws.
- Revegetation of disturbed areas will prioritize minimizing ground disturbance and incorporating weed-resistant seed mixes comprising native grasses, forbs, and pollinator plant species. The use of certified weed-free mulch will be mandatory.
- To restrict the transport of noxious weeds, employees and subcontractors will be obligated to clean equipment, and large infestations near construction areas will be delineated to prevent disturbance. Portable wash stations will be strategically placed, and vehicles leaving weed-infested areas will be inspected and washed as per the approved Noxious Weed and Invasive Species Management Plan.
- The salvaging of topsoil will be selective, avoiding known noxious weed infestation areas whenever possible. Salvaged topsoil will be stored to discourage weed establishment, and any topsoil contaminated with weeds will be flagged, tracked, and stockpiled separately. Monitoring and treating noxious weeds during construction will involve staff training, regular inspections, and targeted herbicide application by qualified applicators following all label instructions.

9.2.5 Paleontological and Cultural Resources

- An Unanticipated Discovery Plan for cultural and paleontological resources will be developed for the Project.
- Should previously unreported paleontological resources be discovered during ground-disturbing activities, an immediate halt to all work within 30 meters (100 feet) will be enforced until a qualified paleontologist documents the finding. Notification of the discovery will be promptly conveyed to the BLM (if on BLM-administered land), the relevant county agency (if on private land), and/or applicable tribes within 24 hours. Resumption of work in the affected area will only proceed with the explicit approval of the landowner or administrator.

- The siting and design of the Gen-Tie line will prioritize avoiding impacts on cultural resources to the greatest extent possible. Cultural resource considerations will continue during post-NEPA phases of Project implementation, aligning with any mitigation plans developed in consultation with the BLM and the Wyoming SHPO) These plans aim to minimize impacts on historic properties identified in pre-construction surveys or during construction. Strategies may encompass project modifications, monitoring of construction activities, and data recovery studies.
- In the event of unreported cultural resources discovered during ground-disturbing activities, an immediate work stop within 30 meters (100 feet) will be enforced until a qualified archaeologist documents the discovery and assesses its eligibility for the NRHP. Notification within 24 hours to the BLM (if on BLM-administered land), relevant county agency (if on private land), and/or applicable tribes will follow, with work requiring approval from the relevant agency/owner before resuming.
- Encountering human remains during ground-disturbing activities will trigger an immediate work stop within 30 meters (100 feet) of the discovery. Notification within 24 hours, following agency protocol, to the BLM (if on BLM-administered land), relevant county agency or local law enforcement (if on private land), SHPO, and/or appropriate tribes will occur. Adherence to the Native American Graves Protection and Repatriation Act or Wyoming burial laws will guide the treatment of discoveries, and work will not recommence in the area without proper authorization.
- To minimize indirect impacts on historic properties, the following measures will be implemented:
 - Preservation of existing rocks, vegetation, and drainage patterns will be prioritized to the maximum extent possible.
 - Transmission structures will be self-weathering wooden structures with appropriate coloration, incorporating non-specular conductors to reduce visual contrast with the existing skyline.
 - Materials and surface treatments will replicate or blend with the existing form, line, color, and texture of the landscape.
 - A native seed mix will be applied to fill slopes, minimizing contrast with the existing landscape.
 - Visual impact mitigation objectives and activities will be communicated with equipment operators before construction activities commence to ensure compliance with the establishment of seeded vegetation.

9.2.6 Biological Resources

- Clearing activities would be avoided during the avian breeding season. However, if land clearing must be conducted during the avian breeding season (April 10-July 10), a qualified biologist will survey the area prior to land clearing activities within 10-days prior to ground-disturbing activities. If nests are located, or if other evidence of nesting (i.e., mated pairs, territorial defense, carrying nesting material, transporting of food) is observed, a protective buffer (the size depending on the habitat requirements of the species) should be delineated and the entire area avoided until young fledge or the nest is no longer occupied.

- Lucky Star would build and maintain transmission lines using recommendations identified by the APLIC to minimize electrocution and collision risks to all avian species (APLIC 2006, 2012). This may include constructing nest minimizing designs (monopoles) or installing perch deterrents in areas of concentrated prey resources (delineated mountain plover and white-tailed prairie dog towns).
- Lucky Star has committed to avoiding surface disturbing activities at perennial stream crossings (Little Medicine Bow and Sand Creek) or where there is potential habitat for Ute ladies'-tresses. Overhead transmission lines will span riparian areas, and existing roads will be used for crossings.
- Surface disturbing and disruptive activities will be avoided within 500-feet of perennial waters, seeps, wells, and wetlands, to protect the threatened Ute ladies'-tresses orchid.

9.2.7 Migratory Birds

- If clearing, grubbing, or tree/limb removal occurs between April 10 and July 10, then Lucky Star would employ a qualified biologist to conduct a migratory-bird nest search of all vegetation within the 10 days prior to ground-disturbing activities. Vegetation may be removed if it has been surveyed, and no active bird nests are present. If active nests cannot be avoided, then the contractor would notify the BLM to evaluate the situation. During the nonbreeding season (July 11– April 9), vegetation removal is not subject to this restriction.
- If active bird nests are identified within the Gen-Tie Line boundary, then construction activities would avoid disturbing any active nest. Avoidance areas, if necessary, would be marked in the field with temporary fencing or T-posts with flags by the approved biologist. The engineer would confer with the BLM to determine the appropriate avoidance strategies until the nestlings have fledged from the nest, and the nest is no longer active.

Raptors:

- Surface disturbing and disruptive activities potentially disruptive to nesting raptors are prohibited within the following distances during the following time periods:
 - 1-mile buffer: Golden Eagle, Bald Eagle, Ferruginous Hawk
 - Three-quarter-mile buffer: All others
 - February 1–July 15: Golden Eagle
 - February 1 – Aug 15: Bald Eagle
 - April 1–July 31: Prairie Falcon
 - March 1–July 31: Ferruginous Hawk
 - April 15–September 15: Burrowing Owl
- Surface disturbing and disruptive activities are prohibited within the following No Surface Occupancy (NSO):
 - 1200 feet NSO – Ferruginous Hawk
 - 825 feet NSO – Golden Eagle, Bald Eagle, Prairie Falcon, Burrowing Owl

Mountain Plover:

- Surface disturbing and disruptive activities located in potential mountain plover habitat are prohibited during the reproductive period of April 10 to July 10 for the protection of breeding and nesting mountain plover unless surveys consistent with the Plover Guidelines or other USFWS-approved methods find that no plovers are nesting in the area.
- Transmission structures near identified mountain plover-occupied habitat will include a perch-inhibitor in their design. Reclamation activities will not occur from April 10 to July 10 unless surveys confirm no nesting plovers.

Greater Sage-Grouse:

- Surface-disturbing activities or occupancy would not occur on nor within one-quarter mile of the perimeter of an occupied greater sage-grouse lek.
- Lucky Star would avoid surface-disturbing and disruptive activities in suitable greater sage-grouse nesting and early brood rearing habitat within two miles of the perimeter of an occupied greater sage-grouse lek, or in identified greater sage-grouse nesting and early brood-rearing habitat, from March 15 to June 30.

9.2.8 Big Game

- Surface disturbing and disruptive activities are prohibited between Nov 15 – April 30 for the protection of big game winter habitat.
- Disruptive activities within big game crucial winter range will require the use of BMPs designed to reduce the amount of human presence and activity during the winter months.

9.2.9 White-Tailed Prairie Dog

- Surface disturbing and disruptive activities in white-tailed prairie dog towns will be avoided.
- Anti-raptor perching devices will be considered, on a case-by-case basis, for any above-ground facilities within one-quarter mile of prairie dog towns.
- Placement of power poles within prairie dog towns will be avoided; however, if power poles are required to be placed within these towns, raptor anti-perch devices will be required.
- Motorized vehicle use within white-tailed prairie dog towns is limited to either designated roads and vehicle routes or existing roads and vehicle routes, depending on the landownership pattern in specific white-tailed prairie dog complexes.
- If prairie dog towns/complexes suitable as black-footed ferret habitat are present, then attempts would be made to avoid locating surface-disturbing activities within 164 feet (50 meters) of a town. If a black-footed ferret non-block cleared town/complex cannot be avoided, then a black-footed ferret survey would be performed.

9.2.10 Black-Footed Ferret (Non-essential Experimental Population)

- To protect black-footed ferrets surface disturbing activities will avoid prairie dog towns by 50 meters (164 feet).

9.2.11 Northern Leopard Frog

- For the protection of amphibian species and their habitats, surface disturbing and disruptive activities will be avoided in the following areas: (1) identified 100-year floodplains, (2) areas within 500 feet of perennial waters, springs, wells, and wetlands, and (3) areas within 100 feet of the inner gorge of ephemeral channels.

9.2.12 Ute ladies'-tresses

- Two additional years of surveys will be conducted in locations lacking three years of data to verify the presence or absence of Ute ladies'-tresses. If identified, operational plans will be modified to include facility design adjustments to avoid impacting this species and its habitat.

9.2.13 Persistent Sepal Yellowcress

- Surface disturbing and disruptive activities will be avoided within 500-feet of perennial waters, seeps, wells, and wetlands, to protect the BLM Sensitive Persistent Sepal Yellowcress.

9.2.14 Wetlands, Riparian Areas, and Surface Waters

- Surface-disturbing activities on BLM-administered land will avoid 100-year floodplains and remain 500 feet from perennial surface water, wetland, and riparian areas, and 100 feet from ephemeral channels. Coordination with the BLM will determine appropriate site-specific engineering and mitigation plans if activities are required within these avoidance areas.

9.2.15 RFO RMP Stipulations

- In addition to the general measures mentioned previously, Lucky Star will adhere to specific stipulations from the RFO RMP for activities on BLM-administered lands. Exceptions to certain stipulations can be sought from the BLM, subject to review based on site-specific environmental considerations:
 - Lucky Star would implement the BLM's Wildlife Inventory, Monitoring and Adaptive Management Plan.

10.1 Public and Agency Coordination

The following sections describe efforts by Lucky Star to coordinate with state and federal agencies, local governments and local agencies, and the communities located near the proposed Project.

10.1.1 Notice To Local Governments

As part of the permitting process to obtain the Project's ISC Section 109 Permit (W.S. 35-12-109, Chapter 1, Section 5 [b]), Lucky Star sent notification letters and a description of the Project to all local governments within Albany and Carbon counties and the municipalities of Baggs, Dixon, Encampment, Rawlins, Riverside, Saratoga, Sinclair, Elk Mountain, Hanna, Medicine Bow, Rock River, and Laramie. The notice included a description of the Project, its location, the expected construction period, the expected number of construction workers, and the anticipated economic benefits of the Project. It also included the date, time, and location for public informational meetings, the contact information for the local governments to provide comments to the Applicant and invited local governments to attend the scheduled informational meeting. The notice and description was sent by certified mail, return receipt.

10.1.2 Coordination with Local Governments

Previous communications with local governments about the Lucky Star Wind Energy Project were conducted via telephone, email, and/or in-person meetings. In September and November of 2018, Lucky Star held meetings with representatives from Albany and Carbon counties and the municipalities of Rawlins, Medicine Bow, Elk Mountain, Rock River, and Laramie. Presentations were made for the county commissioners and town councils in these jurisdictions. The meetings were intended to provide an overview of the Project, answer questions about the Project, and receive input from local governments on the impact of the Project to their communities. Coordination efforts also included communication with local public works employees and agencies regarding road maintenance and improvement; water and waste disposal plans; and emergency preparedness and response.

In addition, Lucky Star held an in-person meeting with representatives from Albany and Carbon counties, local governments, and community members on February 28, 2019, for an Affected Community Consultation. During this meeting, Lucky Star solicited additional feedback and input regarding anticipated local impacts and discussed the ISC Section 109 impact assistance fund payments calculated for the Project.

This Project is a subset of the original Lucky Star Wind Energy Project. Due to the decision to remove infrastructure from Federal lands to the extent possible, all wind energy generation facilities now will be sited on private land. An overview of the Project will be presented to Albany and Carbon counties and the State of Wyoming and discussions will be held to address any county or state concerns. Coordination efforts also will include communication with local public

works employees and agencies regarding road maintenance: water and waste disposal plans; and emergency preparedness and response (**See Appendix F- Draft Emergency Response Plan**).

10.1.3 Coordination with State Agencies

Lucky Star will coordinate throughout the development process with state and federal agencies to provide information about the proposed Project. Agency coordination efforts will include the SHPO to discuss preliminary archaeological data acquired for the area and identify agency concerns and regulatory requirements; WGFD, and the local USFWS office to discuss wildlife survey protocols; Wyoming DEQ to introduce the Project; and Wyoming Department of Transportation (WYDOT) to coordinate traffic control plans.

10.1.4 Public Outreach

As part of the Wind Project, public notification letters were sent by first class mail to all adjacent landowners within 1-mile of the Project area, and by certified mail to local government officials, agencies, and special districts in the Albany and Carbon counties and the municipalities of Baggs, Dixon, Encampment, Rawlins, Riverside, Saratoga, Sinclair, Elk Mountain, Hanna, Medicine Bow, Rock River, and Laramie. Display ads will be posted in the Rawlins Daily Times, Saratoga Sun, and Laramie Boomerang. The notification letters and display ads provided community members with a Project description, information about the anticipated construction including schedule, workforce, and routes used to access the site, a summary of anticipated effects, and announced the public informational meetings. The project will comply with any additional notification requirements as part of the Carbon County SUP application process.

Public Informational Meetings were held in Rawlins, Rock River, Medicine Bow, and Laramie, WY to provide an informal discussion format that allows the community to ask questions and gather information about the Project. Displays included a map of the proposed Project, a description of the proposed Project facilities, the anticipated construction schedule, and a summary of socioeconomic benefits and impacts.

The project will comply with any additional notification requirements as part of the Carbon County application process.

Chapter 11 References

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