Jackalope Wind Energy Project

Plan of Development

Version 2

August 2023

Bureau of Land Management

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Acronyms and Abbreviations

ACEC	area of critical environmental concern
ADLS	aircraft detection lighting system
AQD	Air Quality Division
AVE	area of visual effect
BLM	Bureau of Land Management
BMP	best management practice
COD	commercial operation date
CWA	Clean Water Act
EIS	environmental impact statement
ESA	Endangered Species Act
FAA	Federal Aviation Administration
FO	Field Office
GE	General Electric
gen-tie	generation-tie
HDPE	high-density polyethylene
I-80	Interstate 80
IBA	Important Bird Area
IM	Instruction Memorandum
ISD	Industrial Siting Division
Jackalope Wind	Jackalope Wind, LLC
KOP	key observation point
kV	kilovolt(s)
met	meteorological
mph	mile(s) per hour
MW	megawatt(s)
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NextEra	NextEra Energy Resources, LLC
NPDES	National Pollutant Discharge Elimination System
NRC	National Research Council
NRHP	National Register of Historic Places
O&M	operations and maintenance
OE	Obstruction Evaluation and Airspace Analysis

OSHA	Occupational Safety and Health Administration
PFYC	Potential Fossil Yield Classification
PM	particulate matter
POD	*Plan of Development*
POI	point of interconnection
Project	Jackalope Wind Energy Project
PRPA	Paleontological Resources Preservation Act of 2009
RMP	Resource Management Plan
RNAS	Navigational Aide Screening Study
ROW	right-of-way
SGCN	Species of Greatest Conservation Need
SMA	Special Management Area
SODAR	sonic detection and ranging
SPCC	spill prevention, control, and countermeasure
SWPPP	*Stormwater Pollution Prevention Plan*
TBD	to be decided
USFWS	U.S. Fish and Wildlife Service
VIA	visual impact analysis
VRM	visual resource management
WDEQ	Wyoming Department of Environmental Quality
WDOA	Wyoming Department of Agriculture
WECS	wind energy conversion system
WGFD	Wyoming Game and Fish Department
WOSLI	Wyoming Office of State Lands and Investments
WSA	wilderness study area
WSEO	Wyoming State Engineer's Office
WTG	wind turbine generator
WYDOT	Wyoming Department of Transportation

1. Project Description

1.1 Introduction

Jackalope Wind, LLC (Jackalope Wind), a wholly owned indirect subsidiary of NextEra Energy Resources, LLC (NextEra), is proposing to develop the Jackalope Wind Energy Project (Project), a commercial wind energy project in Sweetwater County, Wyoming, on lands managed by the Bureau of Land Management (BLM), the Wyoming Office of State Lands and Investments (WOSLI), and private landowners.

As currently proposed, the Project will comprise approximately 213 wind turbine generators (WTGs) and associated infrastructure to deliver approximately 600 megawatts (MW) of electricity to the electrical transmission grid. Jackalope Wind proposes to construct the Project in two phases, each totaling approximately 300 MW. The point of interconnection (POI) would be the Jim Bridger Substation, which is located adjacent to the Jim Bridger Power Plant near Point of Rocks, Wyoming.

This revised *Plan of Development* (POD) provides details about the proposed Project that support Jackalope Wind's accompanying application (SF-299) for a Type III right-of-way (ROW) grant to use and occupy public lands to construct, maintain, and decommission a wind power generation Project with ancillary facilities (over a 30-year term).[1] In particular, this POD provides the Project location, purpose, and need; the applicant's financial and technical capacity; the proposed Project Area, a conceptual Project design, and the process for refining the Project design. This POD is a dynamic document that will be updated as the Project develops and additional consultation with the BLM and other stakeholders is completed.

Section 1.3 contains a detailed description of the Project components and Table 1-1 presents a proposed schedule. Construction of the first 300 MW is expected to last up to 12 months, with a commercial operation date (COD) for the first phase of the Project achieved by June 2027. The COD is required to meet the project customer's, regulatory requirements, and electric grid operations. Delays will put the project financial viability at risk. The second phase schedule will be based on multiple commercial drivers; however, a COD concurrent with the first phase is targeted.

The proposed Project requires a new ROW grant from the BLM for long-term commercial wind energy development. This POD is a required component of the accompanying commercial ROW grant application, and describes how the Project would be built, operated, and decommissioned in a manner consistent with federal and state laws and regulations and BLM policy.

Table 1-1 presents initial construction milestone target dates. As consultation progresses, the POD will be updated with appropriate dates based on progress achieved and input from BLM.

Table 1-1. Anticipated Milestones for the Jackalope Wind Energy Project

Activity	Date
Type II Testing and Monitoring Project Area ROW application submitted	May 2021
Type II Testing and Monitoring Project Area ROW Grant issued	December 2021
Type III ROW Grant application submitted	August 2022

[1] A Type II ROW Grant for testing and evaluation of met towers (Serial Number WYW191426) was issued by BLM Rock Springs Field Office in December 2021.

Table 1-1. Anticipated Milestones for the Jackalope Wind Energy Project

Activity	Date
Revised Type III ROW Grant application submitted (in response to BLM completeness review)	January 2023
Preliminary meetings with BLM to address issues of concern	September 2022 and April 2023
Revised POD with Project update	August 2023
Applicant environmental surveys	First quarter 2022 through third quarter 2024
BLM NEPA review period	Fourth quarter 2023 through third quarter 2025
POD Finalized with all contents of POD template	TBD
Type III ROW Grant for construction issued	Third quarter 2025
Construction mobilization and initiation	Second quarter 2026
Type III ROW Grant for operation issued	Third quarter 2026
COD	June 2027

NEPA = National Environmental Policy Act

TBD = to be decided

1.1.1 Project Location and Land Ownership

The proposed Project location is mostly south of Interstate 80 (I-80) between the towns of Rawlins and Rock Springs in Sweetwater County, Wyoming. A small portion of the potential road network improvements is in Carbon County, Wyoming. The Project Area (including all ancillary facilities) includes public lands managed by two BLM Field Offices (FOs): primarily the Rock Springs FO and to a lesser extent the Rawlins FO. The Project Area encompasses 271,457 acres, including 153,855 acres of BLM-managed lands. The federally managed lands are split between the Rawlins FO (38,267 acres) and Rock Springs FO (115,589 acres). Of the nonfederal lands, 4,585 acres are state land, and 112,720 acres are private land.

1.1.2 Legal Land Description

Appendix A contains a legal land description (township, range, section, and quarter-quarter section) of the federal and nonfederal lands within the proposed Project Area. These descriptions may be revised in subsequent versions of the POD.

As consultation completes and the Project siting process matures, Jackalope Wind anticipates ultimately reducing the requested lease area based on the proposed wind turbine array and overall Project layout.

1.2 Purpose and Need for the Project

Jackalope Wind has proposed the Project due to the right combination of factors specific to Sweetwater County and to current conditions in the market for wind energy. Sweetwater County sits in an area with some of the fastest accessible wind speeds in the United States. By capturing this available wind resource, generated electricity can be delivered to regional electric power providers to meet United States renewable energy policy goals.

The National Energy Policy recommended that the federal government work to increase renewable energy production on federal lands (National Energy Policy Development Group 2001). Based on these recommendations and Executive Order 13212, the BLM established a Wind Energy Development Program on BLM-managed lands in the western United States. This program is meant to support wind energy development on public lands and establish policies regarding the processing of wind energy development ROW authorization applications (BLM 2005).

Additionally, the Energy Policy Act of 2005 (Public Law 109-58), Section 211 states, "It is the sense of the Congress that the Secretary of the Interior should, before the end of the 10-year period beginning on the date of enactment of this Act, seek to have approved non-hydropower renewable energy projects located on the public lands with a generation capacity of at least 10,000 megawatts of electricity."

On December 27, 2020, the Energy Act of 2020 was signed into law as part of the Consolidated Appropriations Act, 2021. Among other things, the Energy Act supports research and development of renewable energy. Title III of the Energy Act of 2020 directs the Secretary of the Interior to establish a program to improve interagency federal permit coordination for solar, wind, and geothermal permits on federal land. It also requires the Secretary of the Interior to set national goals for renewable energy production on federal land no later than September 1, 2022, and to issue permits that authorize production of at least 25 gigawatts of electricity from wind, solar, and geothermal energy projects by 2025.

The Project would comply with policies, processes (including NEPA), and best management practices (BMPs) outlined in the *Final Programmatic Environmental Impact Statement on Wind Energy Development on BLM-Administered Lands in the Western United States* (BLM 2005) and *Instruction Memorandum (IM) 2017-096, Acreage Rent and Megawatt Capacity Fees (Years 2016-2021) for Solar and Wind Energy ROW Grants and Leases* (pending update) (BLM 2017). A subsequent version of this POD will describe information about the renewable energy allowances and requirements provided in the relevant Resource Management Plans.

1.2.1 Project Objectives

The objective of the proposed Project is to develop an approximate 600-MW wind energy generation project that will connect to the regional electrical transmission grid at the Jim Bridger Substation. PacifiCorp's 2019 *Integrated Resource Plan* calls for 1,920 MW of additional new wind generation in Wyoming by 2024 as coal generation units are retired. Jim Bridger Units 1 and 2 are planned to be retired in 2023 and 2028, respectively, increasing the need for new generation resources and providing available transmission capacity at the Jim Bridger Substation (PacifiCorp 2019). In addition to meeting state renewable energy goals, construction of the Jackalope Wind Energy Project would bring millions of dollars of expenditures for local labor and materials.

1.3 Project Description, Design, and Operation

Jackalope Wind is proposing a 600-MW wind energy generation project that would provide renewable energy to the electrical transmission grid in Wyoming and the western United States.

The proposed Project requires a new temporary construction and long-term ROW grants from the BLM for commercial wind energy development. Jackalope Wind is requesting a 30-year ROW long-term grant based on electrical demand, maintenance, and the expected life of the Project facilities and major components. The technology presented in the conceptual design, which serves as the basis of the proposed Project in this POD, is the 2.82-MW General Electric (GE) turbine with 127-meter rotor diameter and 89-meter hub height, for a turbine height (with turbine blades) of 152.5 meters (499 feet). Jackalope Wind is considering other technologies with potentially larger turbines, up to the 3.4-MW GE turbines with

140-meter rotor diameter and up to 98-meter hub height, for a maximum potential turbine height of approximately 168 meters (551 feet). The specific technology will be based on supply chain availability and future project studies. The proposed number of turbines would vary by turbine type to maintain the proposed project generation capacity of approximately 600 MW. Aside from potentially fewer turbine locations if 3.4 MW turbines are used, changes to the proposed technology would be unlikely to substantively change the proposed ancillary facilities.

The proposed Project would interconnect to the Jim Bridger Substation via a new 345-kilovolt (kV) generation-tie (gen-tie) line. WTGs and ancillary facilities would be placed in locations that would maximize energy production while minimizing environmental impacts. Safety during construction, operation, and maintenance is also considered during siting.

Jackalope Wind anticipates the following components will be included in the Project design:

- WTGs and associated pad-mounted transformers at the base of each WTG
- Ancillary facilities
  - New and improved access roads
  - An underground electrical collection system and associated aboveground junction boxes
  - Up to four substations (three are proposed in this POD)
  - Avian curtailment system
  - Overhead gen-tie line to the Jim Bridger Substation POI
  - An operations and maintenance (O&M) facility
  - A water well for use at the O&M facility
  - Up to four permanent meteorological (met) towers
  - Distribution lines to bring power from the local distribution network to the Project substations
- Temporary/related facilities that will be necessary for construction
  - One or more borrow pits
  - Construction water wells
  - Construction laydown areas
  - One or more concrete batch plants

Subsequent versions of this POD will describe these components in depth, including information about the sizes, locations, and resources affected by these temporary and permanent facilities and improvements. The following subsections provide additional supporting detail on specific Project components. Appendix B contains preliminary layout plans; detailed site plans will be prepared for the proposed Project and included in the final POD.

1.3.1 Proposed Action

The Proposed Action meets Jackalope Wind's purpose and need while avoiding sensitive environmental resources to the greatest extent feasible. The Proposed Action area was selected based on wind energy resource mapping, land use compatibility, land availability, and interconnection feasibility, through an iterative process. Jackalope Wind initially evaluated an approximately 1.4-million-acre area within Sweetwater County encompassing land both north and south of I-80 in relative proximity to the Jim Bridger Substation proposed POI. Jackalope Wind narrowed this initial area to exclude various sensitive resource areas, including mule deer migration corridors, greater sage-grouse core areas, and BLM wilderness study areas (WSAs).

1.3.2 Alternatives Considered

As more surveys are being conducted, Jackalope Wind will continue to refine the current 271,457-acre Project Area to propose the most efficient wind energy system while avoiding adverse impacts to the surrounding environment. Alternatives to the Project may continue to be developed after further discussion with BLM, review of the revised POD and baseline environmental studies, and after NEPA scoping. Detail about the alternatives Jackalope Wind has considered in the formulation of the Proposed Action can be found in Appendix C.

1.3.2.1 Project Area

Following submission to BLM of the January 2023 POD, Jackalope Wind has conducted further analysis of the site and market potential and reconfigured the turbine array and ancillary facilities presented in this updated version of the POD. Figure 1-1 illustrates the proposed Project location. Figure 1-2 illustrates land ownership within the proposed Project Area, including 153,855 acres of BLM-managed lands.

The **Project Area** (Figure 1-1) is composed of the following three subareas, which Table 1-2 summarizes:

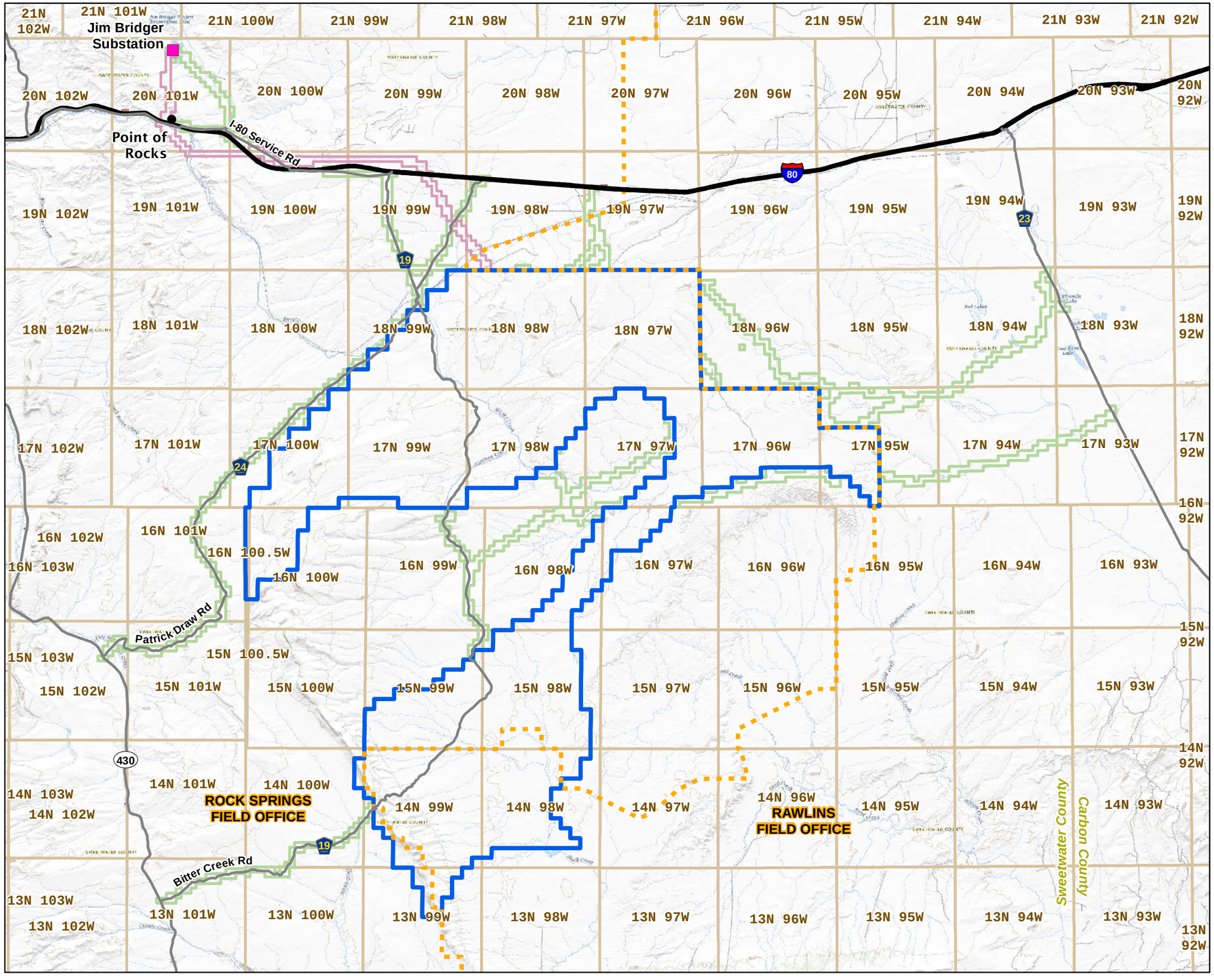
- The **Array Area** includes the WTGs and most of the associated infrastructure.[2]
- The **Gen-tie Area** includes the gen-tie connection to the Jim Bridger Substation POI.
- The **Potential Road Network Improvement Area** includes an extensive network of existing roads that may be used and improved as part of the Project. This area is intended to include all potentially required routes and will be reduced as Project design and construction planning progress. This area also includes limited collection lines and new access roads that extend beyond the Array Area boundary.

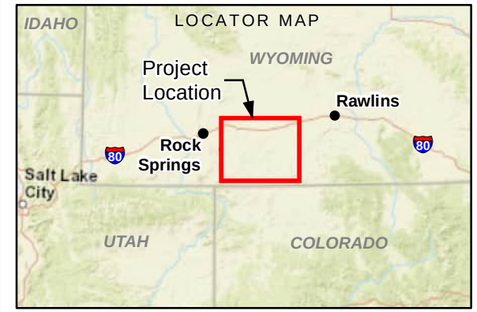
Table 1-2. Jackalope Project Area Acreage

	Total Acres	BLM Land
Project Area (Total)	271,457	153,855
Project Subareas		
Array Area	225,671	130,575
Gen-tie Area	5,684	2,798
Potential Road Network Improvement Area	40,102	20,482

The total Project Area was reduced from 293,108 to 271,457 acres, and the total BLM acres were reduced from 166,087 to 153,855. In the January 2023 POD Jackalope Wind had proposed two geographically separated array phases, but this distinction no longer remains.

[2] The Array Area is the same as the area of the Type II ROW Grant from BLM for Testing and Monitoring, Serial Number WY191426.





LEGEND

Project Area

- Array Area
- Gen-tie Area
- Potential Road Network Improvement Area
- Jim Bridger Substation Point of Interconnection
- City/Town
- Highways
- Major Roads
- Field Office Boundary
- Township/Range

Data Sources: ESRI USGSTopo, Esri World Street Map

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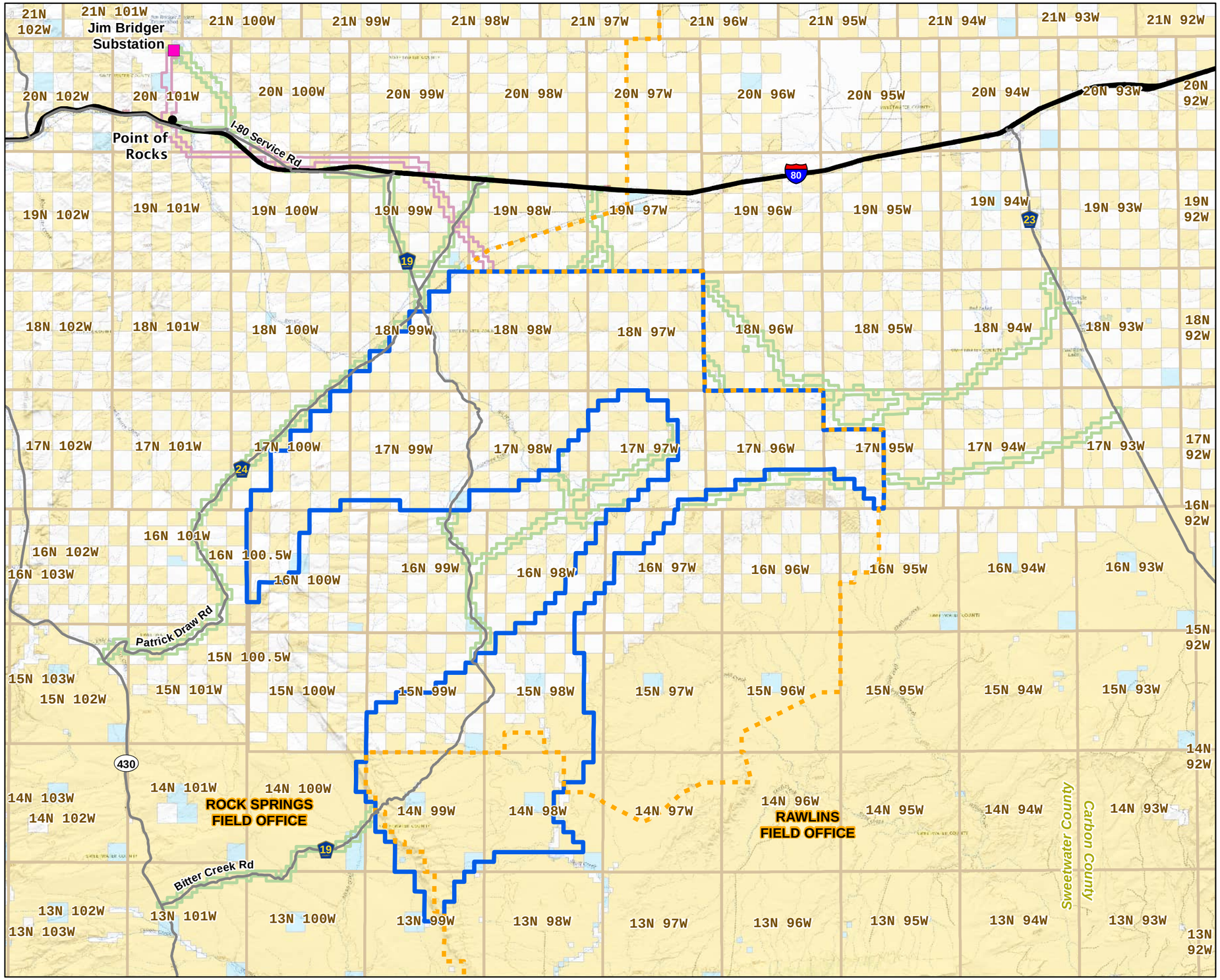
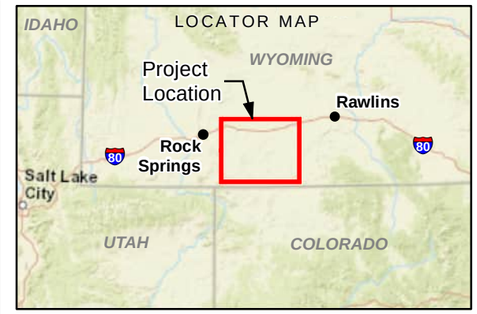
Figure 1-1
Project Area
Jackalope Wind Energy Project
Sweetwater County, Wyoming

Jacobs





LEGEND

Project Area
- Array Area
- Gen-tie Area
- Potential Road Network Improvement Area

- City/Town
- Highways
- Major Roads
- Field Office Boundary
- Township/Range

Land Ownership
- Bureau of Land Management
- Private
- State

Data Sources: Bureau of Land Management, ESRI USGSTopo, Esri World Street Map

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0 2 4

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Figure 1-2
Land Ownership
Jackalope Wind Energy Project
Sweetwater County, Wyoming

Jacobs

1.3.3 Number and Size of Wind Turbine Generators

The concept design consists of a total array of 213 turbines plus 30 alternates of the GE 2.82-MW machines. Alternate turbine types and locations would be evaluated in case proposed WTG locations are not viable. WTG locations may be determined not viable for numerous reasons throughout the permitting process and construction, including environmental resource constraints, engineering feasibility, and constructability. If a specific WTG location is determined unviable at any stage of the process, an alternate location would be incorporated to maintain the proposed Project size of up to 213 turbines and 600 MW. Jackalope Wind is also considering other turbine technologies for this project, but total generation would remain 600 MW. Turbine type selection will ultimately be based on future studies and supply chain availability. Any changes or alternatives to the proposed Project will be presented in subsequent versions of the POD.

Figure 1-3 presents a layout of the 2.82-MW turbine locations and ancillary facilities for the conceptual design; Appendix B provides preliminary site layout plans. If alternatives are established, a subsequent version of the POD will discuss a comparison of the number, size, and disturbance of the wind turbine and ancillary facilities by alternative. Section 2 presents details of the WTG construction.

Table 1-3 identifies the characteristics of the proposed WTGs from the conceptual design, including tower/hub height, rotor radius, rotor diameter, ground clearance, and maximum rotor tip height.

Table 1-3. Proposed Wind Turbine Generator Characteristics

	Concept Design WTG (GE 2.82 MW)		Maximum Design WTG (GE 3.4 MW)	
	Meters	**Feet**	**Meters**	**Feet**
Tower/hub height	89	292	98	322
Rotor radius	63.5	208	70	230
Rotor diameter	127	417	140	459
Ground clearance	25.5	83	28	92
Maximum rotor tip height	152.5	499	168	551

Source: General Electric 2022.

Note:

Technical data represent the design characteristics based on available manufacturer specifications.

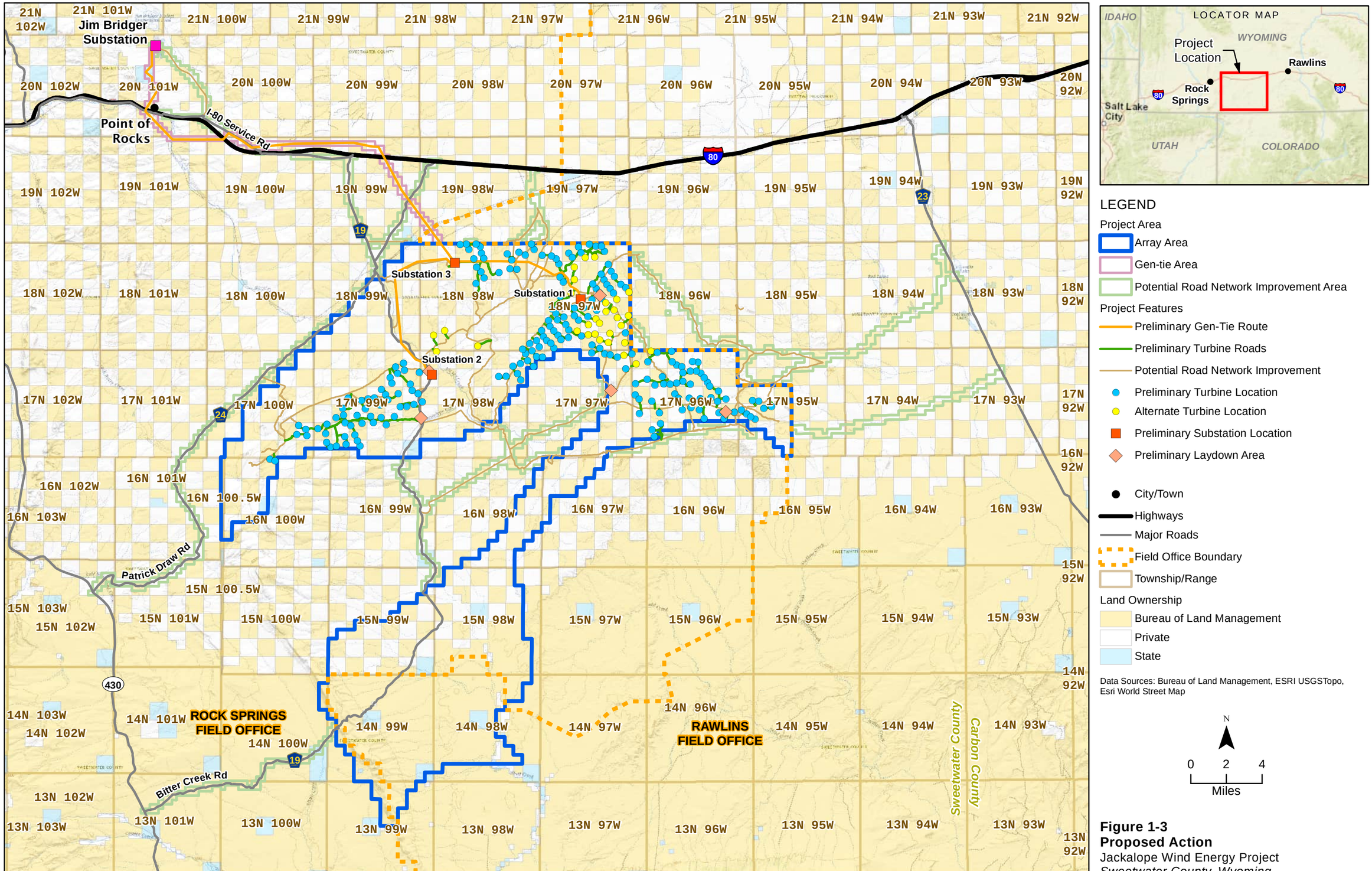

Figure 1-3
Proposed Action
Jackalope Wind Energy Project
Sweetwater County, Wyoming

Each WTG would have a pad-mounted transformer at the base. The transformer is approximately 10 feet long, 8 feet wide, and 7 feet high. The transformer box housing the circuitry would be mounted on a pad or vault developed from concrete or fiberglass. Each transformer box would transport the electricity to a substation by means of an underground electrical collection system (refer to Section 1.3.3). The transformer on each WTG would increase the voltage for electrical efficiency. Figure 1-4 illustrates the schematic and range of dimensions of the proposed WTG model.

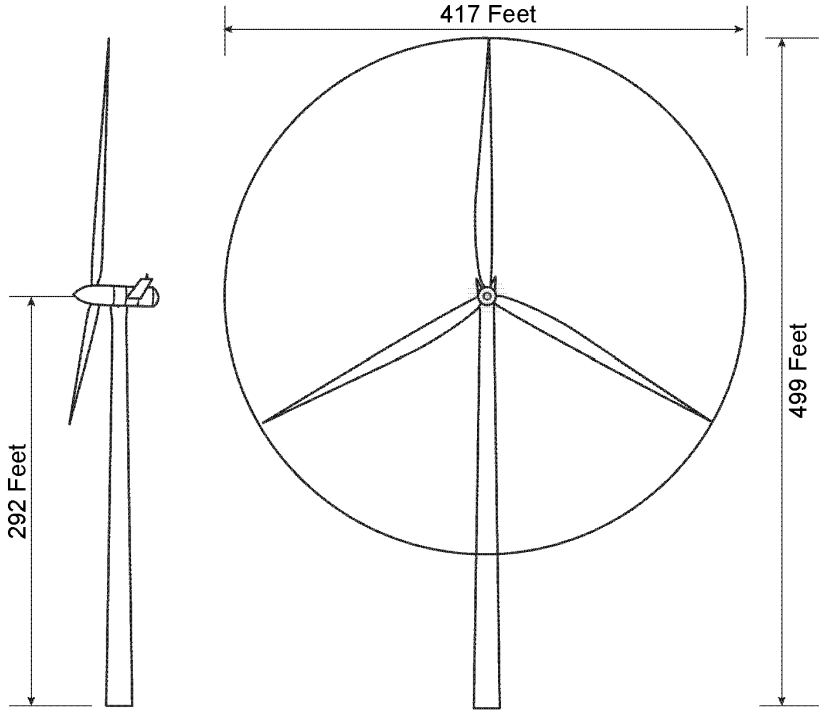

Figure 1-4. Schematic and Dimensions of Turbine in Conceptual Design (GE 2.82 MW)

1.3.4 Ancillary Facilities

In addition to the WTGs and associated pad-mounted transformers, the Project's permanent facilities would include access roads, an underground collection system, Project substations, an O&M building, a gen-tie line, distribution lines, and permanent met towers. The Project's temporary facilities would include the construction laydown areas, water well(s), concrete batch plant(s), and borrow pit(s).

The following subsections provide a brief description and purpose of each ancillary facility for the Project. Section 1.3.5 summarizes these ancillary facilities' locations and disturbance estimates, and Section 2 provides information on their construction.

1.3.4.1 Access Roads

The main access route will be Bitter Creek Road (Highway 19), which connects south of I-80 to the Project Area. This main access route would be used to accommodate construction and maintenance of the Project, including the turning radius needed for turbine delivery. Bitter Creek Road generally bisects the Project Area and will serve as a primary route to access Project facilities. Patrick Draw Road (Highway 24), Highway 430, and Wamsutter-Crooks Gap Road (Highway 23) may also be used to access the northwestern, southern, and eastern portions of the site, respectively. Patrick Draw Road branches off Bitter Creek Road heading southwest, and Highway 430 heads southeast from Rock Springs, intersecting both Patrick Draw Road and Bitter Creek Road. Significant improvements are not anticipated to these

roads; however, the road conditions and characteristics will be evaluated to determine whether improvements are required to accommodate the proposed Project construction and maintenance. Access roads outside the Array Area that may potentially be improved and used for the Project are shown as the Potential Road Network Improvement Area on Figure 1-3. As previously noted, this preliminary road network is intended to include all potentially required routes and will be reduced as Project design and construction planning progress.

An additional network of access roads would be needed to facilitate construction and maintenance of the wind turbines, as well as provide access to the substations and O&M facility. These roads would have an all-weather aggregate base-course surface and would be acceptable to support the size and weight of maintenance vehicles. The existing network of BLM roads will be used to the maximum extent feasible to minimize construction of new roads; these existing roads would need to be improved to support equipment delivery and ongoing maintenance requirements. Figure 1-3 shows the Potential Road Network Improvement Area and Section 2.2 contains more detail regarding proposed road improvements.

1.3.4.2 Collection Lines

Each wind turbine would be connected to a Project substation by underground electric and communication lines, referred to as collection lines. The collection system would connect each WTG transformer box to one of the up to four Project substations. These collection lines may be colocated with the access road footprints, when feasible, to minimize ground disturbance. Where underground collection lines and access roads are colocated, trenching would occur adjacent to the proposed roadbed, typically 2 to 4 feet from the roadbed (Figure 1-5). Junction boxes would be installed as part of the collection lines (refer to Section 2.9 for more detail). The final POD will describe the layout of the underground collection lines; Figure 1-3 provides preliminary collection system corridors.

Figure 1-5. Typical Buried Collection Lines

1.3.4.3 Substations

The Project substations are where all underground electrical collection lines would terminate. Up to four Project substations are presently proposed; however, depending on design refinements an additional substation (location not presently identified) may be added. No overhead collection lines are anticipated to be constructed to the substation. The purpose of the Project substations would be to step up the electrical voltage the Project generates to a level necessary to transmit across the transmission system. Each substation would include a power transformer, breakers, feeder breakers, switches, an equipment

enclosure, and a substation superstructure (Figure 1-6). Exterior lighting at the substation would be required for safety and would be downshielded. No motion-activated lighting is proposed for this facility. The footprint of the Project substations would be approximately 5 acres. The substations would be fenced with a 9-foot-tall chain-link security fence (the fence would be 8 feet tall with 1 foot of three-strand barbed wire, for a total of 9 feet), as allowed by Sweetwater County code and BLM standards. Figure 1-3 presents the preliminary substation locations.

Figure 1-6. Typical Substation

1.3.4.4 Avian Curtailment System Towers

Jackalope Wind proposes to install an autonomous system for detecting eagles and issuing alerts to the wind farm for control of wind turbines as part of an informed curtailment program of protected avian species conservation. The curtailment system involves a series of camera heads mounted on monopole towers throughout the project to provide coverage of the turbines. Figure 1-7 presents a typical curtailment system tower. Each tower will be accessed via existing and new access roads and connected to the Project by underground fiber cables. The number of towers for 213 WTGs would be approximately 100 to 150, depending on the level of coverage necessary. The height of the towers would be between 5 and 30 meters, based on the surrounding terrain. The locations of the curtailment system towers will be documented in a subsequent version of this POD.

Figure 1-7. Typical Avian Curtailment System Tower

1.3.4.5 Gen-tie Line

Power the Project generates will be collected from the proposed substations and transmitted to the existing Jim Bridger Substation (POI) via an approximately 29-mile-long, 345-kV gen-tie transmission line extending from one of the substations to the POI. The 345-kV gen-tie transmission line conductor will be supported on steel monopole structures. The proposed steel monopole structures are approximately 100 feet tall. The distance between power poles is approximately 750 feet and will vary depending on factors such as topography, location of jurisdictional waters, existing land use, and clearance requirements. Depending on the power off-taker, up to 2 separate parallel lines separated by a minimum of 100 feet within the proposed gen-tie corridor may be constructed. Figure 1-3 illustrates the preliminary 345-kV gen-tie route.

1.3.4.6 Distribution Lines

Jackalope Wind would tap into local power distribution lines to provide power for each of the Project substations. A subsequent version of the POD will provide details on the location and use of distribution lines. The proposed distribution lines would be designed and constructed to minimize avian electrocutions and collisions (APLIC 2006, 2012).

1.3.4.7 Operations and Maintenance Facility

The Project requires one O&M facility that would include an approximate 10,000-square-foot O&M building and associated outside areas on an approximately 5-acre facility. The O&M building would be a premanufactured building assembled on a concrete slab foundation that construction and operations personnel for the proposed Project would use (Figure 1-8). The O&M building would contain offices, restrooms, a kitchen/breakroom, a room to house the control system for the WTGs, and a warehouse area that would store spare parts, tools, and maintenance equipment. Outside the O&M building would be a gravel parking area and outdoor storage. A distribution line would supply electricity to the O&M facility (refer to Section 1.3.3.5). The water for the O&M facility during operations would likely be obtained by drilling a new well completely within or nearby the facility (refer to Section 2.16.2 for further information). A subsequent version of this POD will provide the O&M facility location.

Figure 1-8. Typical Operations and Maintenance Building

1.3.4.8 Meteorological Towers

The purpose of a met tower is to profile the wind, measure wind speed at different heights aboveground, and measure the thermodynamic structure of the lower atmosphere. Figure 1-9 depicts a typical monopole (nonguyed) met tower. For the Proposed Action, up to four permanent met tower locations would be considered.

Jackalope Wind anticipates that the met towers will be monopole structures 90 meters (296 feet) tall. Met tower height is based on and roughly the same as the WTG hub height. If met tower height exceeds 90 meters, then they would be guy-wired lattice towers, rather than monopole structures. Should guyed-wire met towers be required, Jackalope Wind would consider these locations when conducting postconstruction fatality monitoring, as detailed in the Bird and Bat Conservation Strategy (Appendix M). Met towers would be lighted as the Federal Aviation Administration (FAA) requires. If the Project can use an aircraft detection lighting system (ADLS), the met towers would be part of that system such that lights on the towers (the met towers as well as wind turbines) would automatically come on when an aircraft is detected in the area.

During preconstruction, meteorological collection instruments are needed to study the wind resource in the area. Temporary met tower and sonic detection and ranging (SODAR) units were placed in the study area in 2022 and may remain through construction of the Project as well as a few months into operation of the facility. Temporary met towers and SODAR on BLM and private land have been permitted under a separate action. These temporary meteorological collection instruments are not considered or depicted in the Proposed Action.

Figure 1-9. Typical Monopole Met Tower

1.3.5 Related Facilities

1.3.5.1 Borrow Pit

At least one new temporary borrow pit may be required during construction to supply the raw earthen materials needed for the onsite concrete batch plant and road construction (Figure 1-10). This borrow pit could be a new permitted and developed facility or could be an existing permitted borrow pit. During operations, typical construction equipment used at a borrow pit includes excavators, dozers, tipper trucks, graders, water trucks, and lowbed trucks. The need for a temporary borrow pit will be determined as part of the refinement of the Project, and additional information will be provided in a subsequent version of the POD. The environmental review for the Project would describe the potential impacts of a new borrow pit.

Figure 1-10. Typical Borrow Pit

It is anticipated that construction for the proposed borrow pit, if approved, would begin around the same time as the proposed Project construction, in compliance with vegetation and wildlife windows. If approved, Jackalope Wind would purchase the mineral materials excavated from the borrow pit and haul the material to a concrete batch plant. The access road to the borrow pit would be reclaimed after completion of Project construction.

1.3.5.2 Construction Water Well

One or more new wells may be required during construction to supply the water needed for construction. These wells would likely be supplied by leasing water from one or more landowners at market rate. The landowner would likely be responsible for the permit authorization for new or existing wells. The location of well(s) will be determined as part of the refinement of the Project, and additional information will be provided in a subsequent version of the POD. Jackalope Wind would perform any necessary construction associated with the new or existing wells under agreement with the landowner. The wells would be approved and permitted through the Wyoming State Engineer's Office (WSEO).

If Jackalope Wind is unable to get a sufficient quantity of construction water supplied from onsite wells to meet construction water supply needs, then water would be brought in from offsite. Potential water supply sources will be evaluated as Project development progresses.

1.3.5.3 Construction Laydown Areas

Multiple temporary construction laydown areas would be required during construction. The preliminary laydown areas could range from 5 to 20 acres. They are needed to contain mobile trailers for construction management and staff, parking areas for construction workers, equipment laydown areas, and materials storage. There could be colocation of laydown areas with a concrete batch plant facility.

Laydown area sizes and locations will be refined as Project development and construction planning continue. Siting of laydown areas will consider resources and minimizing impacts. Power needed for the construction laydown yards would be supplied through generators. Figure 1-11 is a photo of a typical construction laydown area. Figure 1-3 shows the preliminary laydown areas, including eight 10-acre laydown areas for the array and nine 5-acre laydown areas along the gen-tie route.

Figure 1-11. Typical Construction Laydown Area for Storage, Staging, Laydown

1.3.5.4 Concrete Batch Plant

The location of the Project is remote, and a nearby concrete batch plant does not exist. Therefore, the Project would require the use of up to two temporary concrete batch plants that would be colocated within a construction laydown area. The plant would be responsible for supplying the concrete needed for applicable Project components, including the WTG foundations and pads, and gen-tie pole foundations.

Temporary concrete batch plant facilities typically consist of loading bays, hoppers and mixing equipment, cement and admixture silos, concrete truck loading areas, aboveground water storage tanks, and bins for

aggregate and clean sand storage. Figure 1-12 is a photo of a typical concrete batch plant. The height and color of the batch plant equipment will vary depending on the equipment ultimately selected.

Generally, facilities will have heights ranging from 30 to 50 feet. A washout area would be located within the laydown/staging area, with the concrete removed and reclaimed when the washout area is no longer needed. The water needed for the concrete batch plant is likely to be supplied from a well located onsite using high-density polyethylene (HDPE) piping run overland along an access road to the laydown area/concrete batch plant (refer to Section 2.3 for more detail).

Figure 1-12. Typical Temporary Concrete Batch Plant

1.3.6 Project Component Summary

This section provides a description of the facility components for the proposed Project. Table 1-4 describes the potential temporary disturbance areas where they can be estimated from the current concept design. These temporary disturbances would occur during the construction period for each phase of the Project (up to 12 months). Refined information on locations and dimensions of components and disturbance from alternatives, if developed, will be added in the final POD. Table 1-5 describes the potential permanent disturbance acreage that can be estimated from the current concept design. These permanent disturbances would occur during the life expectancy of the Project (approximately 30 years). Further details of the components and quantities will be provided in subsequent versions of this POD. Section 2 provides construction details for these components.

Table 1-4. Project Components – Temporary Disturbance

Project Components	Proposed Project (Concept Design)
Wind turbine generators and pad-mounted transformers	243 turbine locations evaluated, 213 constructed 6.5 acres/turbine 1,385 acres total
Ancillary Facilities	
Access roads	200-foot-wide corridor in which to site and construct or improve roads 40-foot-wide access road used during construction TBD miles of improved roads Approximately 100 miles of new roads TBD acres

Project Components	Proposed Project (Concept Design)
Collection system	Construction corridors vary (60 feet wide or greater) depending on number of conduit runs Multiple runs are typically offset by 20 feet TBD miles TBD acres
O&M facility	5 acres
Substations	Up to four; presently proposed: one 5-acre substation and two 10-acre substations 25 acres total
Laydown/staging areas for construction	Five 10-acre laydown areas 50 acres total
Permanent met towers	Up to four Up to 0.5-acre/met tower 2 acres total
Gen-tie	Approximately 45 miles TBD construction corridor disturbance acres
Distribution lines	TBD miles TBD acres
Related Activities	
Borrow pit	TBD acres
Construction water wells	TBD acres
Concrete batch plant	TBD acres

Note:

All values are approximations based on preliminary design. These values may change during final engineering design.

Table 1-5. Facility Components and Estimated Acreage – Permanent Disturbance

Facility Components	Proposed Project
Wind turbines and pad-mounted transformers	213 constructed (assuming 2.82 MW WTGs) Approximately 0.3 acre/WTG (140-foot by 100-foot pad) Approximately 68 acres total
Ancillary Facilities	
Access roads	15- to 20-foot-wide operating footprint TBD miles of improved roads Approximately 100 miles of new roads TBD acres
Collection lines	4-foot-wide trenching TBD miles No permanent disturbance
Substations	One 5-acre substation and two 10-acre substations; 25 acres total
Gen-tie lines	Approximately 45 miles
Distribution lines	TBD (based on pole disturbance)
O&M facility	5 acres
Met towers	Up to four met towers TBD acres

Note:

All values are approximations based on preliminary design. These values may change during final engineering design.

1.4 Additional Design Criteria and Mitigation Measures

A set of general design criteria (proponent constraints and mitigation measures) would be implemented through each of the proposed Project. list of these criteria.

1.5 Other Federal, State, and Local Agency Permit Requirements

Federal, state, and local agencies have jurisdiction over certain aspects of the Project. Table 1-6 lists the federal and state permits and authorizations that are anticipated to be required for the Project. Because the POD is a living document, this table will be updated as additional permits are identified.

Table 1-6. Proposed Project Permits and Authorizations

Triggering Action	Permit Approval	Agency	Status
Federal			
Proposed Project and associated facilities (access road, transmission line, and other associated facilities) located on BLM-managed lands BLM is the lead agency for NEPA purposes	Right-of-Way Grant	BLM	Initiated

Triggering Action	Permit Approval	Agency	Status
Project activities must comply with NEPA and ESA	ESA Section 7 compliance Bald and Golden Eagle Protection Act Migratory Bird Treaty Act	USFWS in consultation with BLM	Pending
Project activities (grading and construction) may have the potential to affect cultural resources	Section 106 consultation as part of the National Historic Preservation Act	Wyoming State Historic Preservation Office in consultation with BLM	Pending
BLM must complete consultation with tribal governments to complete Section 106 requirements and meet obligations of the Federal Land Policy and Management Act, NEPA, and applicable Executive Orders	Section 106 of National Historic Preservation Act Federal Land Planning and Management Act	Tribal governments BLM	Pending
Permanent or temporary structures exceeding FAA Notice Criteria	Notice of Aviation Hazard	FAA	Pending
Dredge or fill of any waters of the United States	Clean Water Act Section 404 Permit	U.S. Army Corps of Engineers	Pending
If Project construction will occur within designated floodplain	Floodplain permit	Federal Emergency Management Agency	Pending
If Project will include microwave communication equipment	Licensed microwave study	Federal Communications Commission	Pending
If Project may affect existing microwave communication or radar systems	Impacts to telecommunication systems and radars	Department of Commerce – National Telecommunication and Information Agency	Pending
State			
Construction of wind power generation facility exceeding 20 turbines and greater than $250 million	Wyoming Industrial Development Information and Siting Act, Section 109	WDEQ Industrial Siting Division	Pending
Project construction stormwater discharge	Wyoming Pollutant Discharge Elimination System Large Construction General Permit (WYR10-0000)	WDEQ Water Quality Division	Pending
O&M building sanitary wastewater treatment	Water and Wastewater Permit to Construction	WDEQ Land Quality Division, Small Wastewater permitting authority	Pending
Proposed borrow pit	Mining/quarry permit (noncoal) for gravel quarry and construction materials	WDEQ	Pending
Proposed survey for Project construction and related facilities (the	Wind Energy Lease Survey Authorization Form	WOSLI	Pending

Triggering Action	Permit Approval	Agency	Status
access road and transmission line) located on WOSLI-managed lands	Temporary Use Permit		
Right-of-way improvements, road, and intersection improvements (as required), delivery of WTGs and met towers	Utility Permit Self-Issue Oversize Permit Wyoming Met Reporting System	WYDOT	Pending
WTG components will be delivered as oversized loads	Port of entry authorization for oversized/overweight loads	WYDOT	Pending
Improvements to access roads and intersections	Approach permit/right-of-way access	WYDOT	Pending
Project construction water use	Temporary Water Use Agreement	WSEO	Pending
Groundwater well for O&M building	Permit to appropriate groundwater	WSEO	Pending
Local			
Proposed Project and related facilities (the access road and transmission line) located on unincorporated areas of Sweetwater County	Commercial WECS Permit	Sweetwater Board of County Commissioners Sweetwater County Attorney's Office	Pending
Construction	Building Permit(s) County road permit/road use agreement	Sweetwater County	Pending
Project operation	Emergency management plan review	Sweetwater County Emergency Management Coordinator	Pending

ESA = Endangered Species Act

USFWS = U.S. Fish and Wildlife Service

WDEQ = Wyoming Department of Environmental Quality

WECS = wind energy conversion system

WYDOT = Wyoming Department of Transportation

1.6 Financial and Technical Capacity of the Applicant

Jackalope Wind, LLC is a wholly owned indirect subsidiary of NextEra Energy Resources, LLC. NextEra Energy Resources, LLC is headquartered in Juno Beach, Florida, and with its affiliates is the world's largest generator of wind and solar renewable energy, and world leader in battery storage. NextEra is a regionally diversified company with approximately 5,000 employees dedicated to the production of approximately 24,600 MW of electricity from over 200 facilities in 38 states and Canada. With more than 9,365 wind turbines in its fleet, NextEra's wind generation capacity totals more than 13,851 MW. NextEra is also capable of generating more than 420 net MW of electricity from natural gas facilities, operates three nuclear power plants with a capacity of more than 2,700 MW, and operates more than 2,100 MW of solar energy. It is estimated that nearly 95 percent of the electricity NextEra produces comes from clean or renewable sources.

Along with its rate-regulated sister company, Florida Power and Light, NextEra Energy Resources is a wholly owned subsidiary of NextEra Energy, Inc. (NYSE NEE). NextEra Energy, Inc. is a Fortune 150 company with a market capitalization of approximately $150 billion. The financial strength of NextEra and its parent company provides NextEra with the financial capital to self-finance and build up to $4 billion of projects per year on its own balance sheet.

NextEra Energy, Inc. has an A- issuer credit rating based on the June 14, 2021, S&P Global Ratings report. NextEra Energy, Inc.'s financial filings can be found at the following link: http://www.investor.nexteraenergy.com/reports-and-filings/sec-filings.

1.7 Preconstruction Activities

Prior to the start of construction, Jackalope Wind would conduct geotechnical studies and site preparation, surveying, and staking. The following subsections describe each of these activities in detail.

1.7.1 Geotechnical Studies

Jackalope Wind will submit a temporary use permit ROW grant application to conduct geotechnical investigations. The preliminary geotechnical investigation would include standard penetration test borings at proposed turbine sites to visually characterize the soils and obtain samples for laboratory testing. This survey is critical to inform the preliminary engineering for the turbine foundations, substation locations, and O&M building location. A cultural resources inventory of each boring location and coordination with BLM will be conducted prior to any geotechnical investigation. Suitable geotechnical investigation equipment would be used for the geotechnical investigation, such as a small vehicle or all-terrain vehicle mounted drill rig. The rig would bore to the engineer's required depths, and a backhoe would be used to identify the subsurface soil, rock types, and strength properties by sampling and lab testing. The preliminary geotechnical investigation would include one deep boring at each turbine location, substation, permanent met tower, and the O&M building at a depth of approximately 40 feet. Additionally, shallow borings would be conducted along the access road locations at a depth of approximately 2 feet.

Soil samples would be collected, and laboratory tests of the samples would be conducted. The tests include in situ electrical resistivity tests and bulk samples for thermal resistivity testing. Electrical resistivity testing measures how well the soil conducts electricity. This is primarily used in the design of the grounding grids, which are used to dissipate electricity into the ground. Thermal resistivity testing measures how well heat is dissipated into the soil. This is primarily used in the design of the underground collection circuits to ensure that the heat the cables generate does not exceed the cables' specification. Corrosion testing measures how corrosive the soils are to concrete and metallic conduits or materials. This is primarily used in specifying the cement type in concrete and corrosion mitigation. Jackalope Wind will apply for a temporary type III ROW for geotechnical testing proposed for BLM land.

1.7.2 Site Preparation, Surveying, and Staking

Disturbance area boundaries would be clearly defined prior to construction of roads, the collection system, turbines, and other Project components. Limits would be staked or flagged, and other methods for construction staking would be used for the road alignment and turbine construction. Limits of the ROW would also be flagged where necessary. Construction activities would be confined to these areas, preventing effects on sensitive areas to be avoided. Section 1.3.5 discusses these temporary and permanent disturbance limits for each facility component. Flagging and stakes that are damaged during construction would be repaired or replaced prior to resuming construction. When construction and restoration are complete, stakes and flagging would be removed. A *Flagging, Fencing, and Signage Plan* (Appendix K) will be included in the final POD to further detail the site preparation, surveying, and staking.