

Appendix M

Construction and Workforce Housing Plan

TWO RIVERS WIND PROJECT CONSTRUCTION AND WORKFORCE HOUSING PLAN

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November 2022

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Workers with some of the required construction skills are available within the existing Carbon, Albany and Natrona County labor force. Certain activities such as the erection, installation, and commissioning of WTGs requires specialized skills and contractors that are less common among the local labor force. Two Rivers Wind will direct its Engineering, Procurement, and Construction (EPC) contractor(s) to hire qualified local workers and qualified and cost competitive local contractors should they be available at the time of construction. The Project EPC contractor(s) and subcontractors will work with the local Wyoming Workforce Services offices in Laramie, Rawlins, Hanna, and Casper to post job openings and hire qualified workers.

3.0 Workforce Housing Plan

Due to housing demands from other anticipated wind and transmission projects' construction activity during the planned construction timeframe, a worker camp was initially considered to house all the workforce during Project construction in 2023 and 2024. However, the preferred, and most likely housing option is for workers to live in temporary accommodations in nearby towns if housing is available, or that workers would be housed further afield and bussed in to the work site each day. Assuming maximum availability of local accommodations, there would likely be plenty availability to house the peak construction workforce of 170 workers in existing temporary housing, given the approximately 1,295 hotel/motel rooms and 512 campground or RV park spots and pads available within a 70-mile radius of the Project.

4.0 Contractors

At this time, Two Rivers Wind is in the process of reviewing potential candidates for the EPC /Balance of Plant (BoP) contractor for the Project. Two Rivers Wind will provide the Board with an updated list of hired contractors prior to construction.

5.0 Construction Activities

Common techniques for the construction of a wind energy project are described in the subsections below.

5.1 Access Roads, Turbine Sites & Work Areas

Each new road site, turbine site and work area will first be cleared of vegetation and the topsoil will be removed. The topsoil will be separated and stockpiled per the requirements of the Project's Reclamation Plan. New roads will be constructed to access wind turbine locations. Access roads will be designed by a licensed engineer and roads will be compacted to meet equipment loading and hauling specifications. All new access roads will have a construction width of 40 feet and be reclaimed to approximately 20 to 25 feet wide. The roads will be graded and graveled to facilitate access by construction vehicles. All of the road and foundation materials will be sourced in Wyoming as close to the project site as possible.

5.2 Tower Foundations

Each turbine will be supported by a reinforced concrete foundation. It is anticipated that the foundations will be approximately 55 feet in diameter and eight to ten feet deep. Foundations will be designed in accordance with the manufacturer's specifications for the selected turbine model, based on site-specific geotechnical information and structural loading requirements. Refer to **Figure 2a-b** in the application for the Preliminary Site Plan.

Foundation pits will be excavated using excavators and back-hoes. A mud mat will be poured to be used as a level foundation installation work surface. Rebar will be formed and tied together, along with turbine foundation collars or embedment rings according to the foundation design specifications. Wooden formwork will be built around the rebar and structural concrete will then be poured in a continuous pour. The concrete will be left to cure as per the specification. Concrete will be tested at specified intervals to ensure that adequate strength is achieved.

Following construction of the wind turbine foundation, the wind turbine site will be cleared and graded for wind turbine installation. The wind turbine site will then be compacted in accordance with design specifications using compaction rollers and water trucks. An aggregate surface maybe placed across the wind turbine site using belly-dump trailers, dump trucks, bulldozers, and motor graders.

Each turbine location will have an associated crane pad/staging area. Crane pads are needed to provide adequate workspace in which to maneuver/operate a commercial crane and to lay down the turbine components. The compacted area around the turbine foundation will serve as a crane hardstanding to provide a stable platform on which to operate the crane. Specialized crane matting may also be used to provide stability to the crane hardstanding. The typical construction disturbance area will be approximately 1.6 – 2 acres at each turbine location. After the installation of the crane pad, the wind turbine installation site is ready for delivery of turbine components and is released for turbine construction.

5.3 Tower Assembly

Turbine components will be delivered to each turbine site. Towers are prefabricated and delivered in sections. Cranes will be brought on site to lift the tower sections, nacelle, rotor hub and blades from delivery trucks and place them near the tower foundation on the crane pad/staging area. The first step of tower assembly will be to lift and secure the down-tower electrical assembly, that will eventually be housed inside the turbine, and secure it to the foundation. The tower base section will be installed over this equipment and bolted to the foundation. Each tower section will be installed in sequence and bolted together. Once all tower sections have been installed, the nacelle is placed on the top of the tower. Depending on the rotor installation method, the rotor blades maybe be bolted to the rotor hub at ground level, then lifted by a construction crane, and connected to the main shaft of the turbine nacelle as a single piece. Alternatively, the rotor hub will be installed on to the nacelle first and rotor blades will lifted into the air one by one and be fixed to the rotor hub. Once all three rotor blades have been installed, the turbine wiring is completed inside the turbine.

Following construction, the majority of the crane pad and work area will be reclaimed and revegetated. The permanent footprint of each turbine site is expected to be approximately 0.2 acres.

5.4 Power Collection System

An electrical collection system comprising a network of power cables will be installed underground in trenches that will link turbine arrays in order to collect power generated by the individual wind turbines and route it to the collector substation. Step-up transformers located at each of the turbines will transform the power to 34.5 kV for collection,

5.5 Substations

A substation will be constructed to convert electricity to transmission voltage (230 kV). The substation site will first be cleared of vegetation and the topsoil will be removed. The topsoil will be separated and stockpiled per the requirements of the Project's Reclamation Plan. The site will then be graded to subgrade elevation per the requirements of the final design. Structural footings and underground utilities, along with electrical conduit and a grounding grid will be installed, followed by aboveground structures and equipment. A chain-link fence will be constructed around the new substations for safety, security and to restrict unauthorized persons, livestock, and wildlife from entering the substation. The site will then be finish graded and gravel surfaced, and reclamation will be initiated outside the substation fence.

5.6 Turbine Commissioning and Testing

Upon completion of construction, all associated systems, controls, and safety equipment will be calibrated and tested. Qualified technicians, as well as turbine vendor commissioning experts and electricians will test and inspect all WTG components, transformers, communications systems, substations, and transmission systems to ensure they comply with required design specifications and are working properly and safely. Every WTG and all associated equipment will be inspected and tested upon individual completion before being placed into service.

6.0 Water Use and Rights

During the construction phase, Project water supply needs will be met by purchasing water through a WSEO Temporary Water Use Agreement with an existing senior water rights holder. At this time, Two Rivers Wind anticipates obtaining water from the private land owners involved in the Project (Two Rivers Ranch) and potentially supplementing water needs by purchasing water from a municipal source, possibly from the Town of Medicine Bow in Carbon County. Water needed for the project will be hauled via trucks to the Project area and is not expected to exceed 35 acre-feet in total for concrete mixing, access road compaction, and fugitive dust control. By using established water rights, the Project will not impact existing water users.