Kulning Wind Energy Plan of Development

FEBRUARY 2021

PREPARED FOR

Bureau of Land Management
Las Vegas Field Office

PREPARED BY

Crescent Peak Renewables, LLC

KULNING WIND ENERGY PROJECT
PLAN OF DEVELOPMENT

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Portfolio Project 01776

SWCA Cultural Resources Report No. 5-2791
SWCA Desert Tortoise Report No. 44-314
SWCA Avian Report No. 26-955
SWCA Bat Report No. 26-955
SWCA Plant Report No. 44-314

February 2021

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LIST OF ACRONYMS AND ABBREVIATIONS

BLM	**Bureau of Land Management**
BMP	**best management practice**
CFR	**Code of Federal Regulations**
E.O.	**Executive Order**
EIS	**Environmental Impact Statement**
EMF	**Electromagnetic fields**
FAA	**Federal Aviation Administration**
FLPMA	**Federal Land Policy Management Act**
GIS	**Geographical Information Systems**
GPD	**gallons per day**
GPM	**gallons per minute**
GPW	**gallons per week**
kV	**kilovolt**
kW	**kilowatts**
LGIA	**Large Generator Interconnection Agreement**
m	**meters**
m/s	**meters per second**
met	**meteorological**
mph	**miles per hour**
MW	**megawatts**
NEPA	**National Environmental Policy Act**
SNDO	**BLM South Nevada District Office**
O&M	**Operations and Maintenance Facilities**
OMS	**Operations Management System**
OSHA	**Occupational Safety and Health Administration**
P.L.	**Public Law**
PEIS	**Programmatic Environmental Impact Statement**
POD	**Plan of Development**
POI	**Point of Interconnect**

Project	**Kulning Wind Energy Project**
Reclamation	**Bureau of Reclamation**
ROD	**Record of Decision**
ROW	**Right of Way**
rpm	**revolutions per minute**
SCADA	**Supervisory Control and Data Acquisition**
SHPO	**State Historic Preservation Officer**
SPCC	**Spill Prevention, Control, and Countermeasure**
SWPPP	**Storm Water Pollution Prevention Plan**
US 95	**U.S. Highway 95**
Hwy 164	**Highway 164**
USACE	**U.S. Army Corps of Engineers**
USFWS	**U.S. Fish and Wildlife Service**
WAPA	**Western Area Power Administration**
WTG	**Wind Turbine Generator**

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1 PROJECT DESCRIPTION

1.1 Introduction

Crescent Peak Renewables, LLC (Applicant), a wholly owned subsidiary of Eolus North America, Inc. proposes to develop the Kulning Wind Energy Project (KWEP) a 308-megawatt (MW) wind energy generation plant consisting of up to 68 wind turbine generators (WTGs), a project substation including switchgear and battery energy storage equipment, accompanying infrastructure, and a 29-mile transmission line to Sloan Canyon Switching Station. The KWEP project area would be located on 9,154 acres in Clark County, Nevada, entirely within land managed by the Bureau of Land Management (BLM). The transmission corridor would occupy approximately 110 acres in Clark County, Nevada, along its 29-mile extent, primarily on land managed by the BLM with about 7 miles or 24 percent of the linear distance located in a designated Clark County utility corridor The combined area under application is 9,264 acres, but the project will only require temporary and permanent disturbance totaling up to 700 acres or 7.6 percent of the application area. Figure 1.1a, below, depicts the proposed wind energy generation plant; Figure 1.1b, below, depicts the project's proposed transmission line route.

Figure 1.1a - Kulning Wind Energy Project – Project Study Area

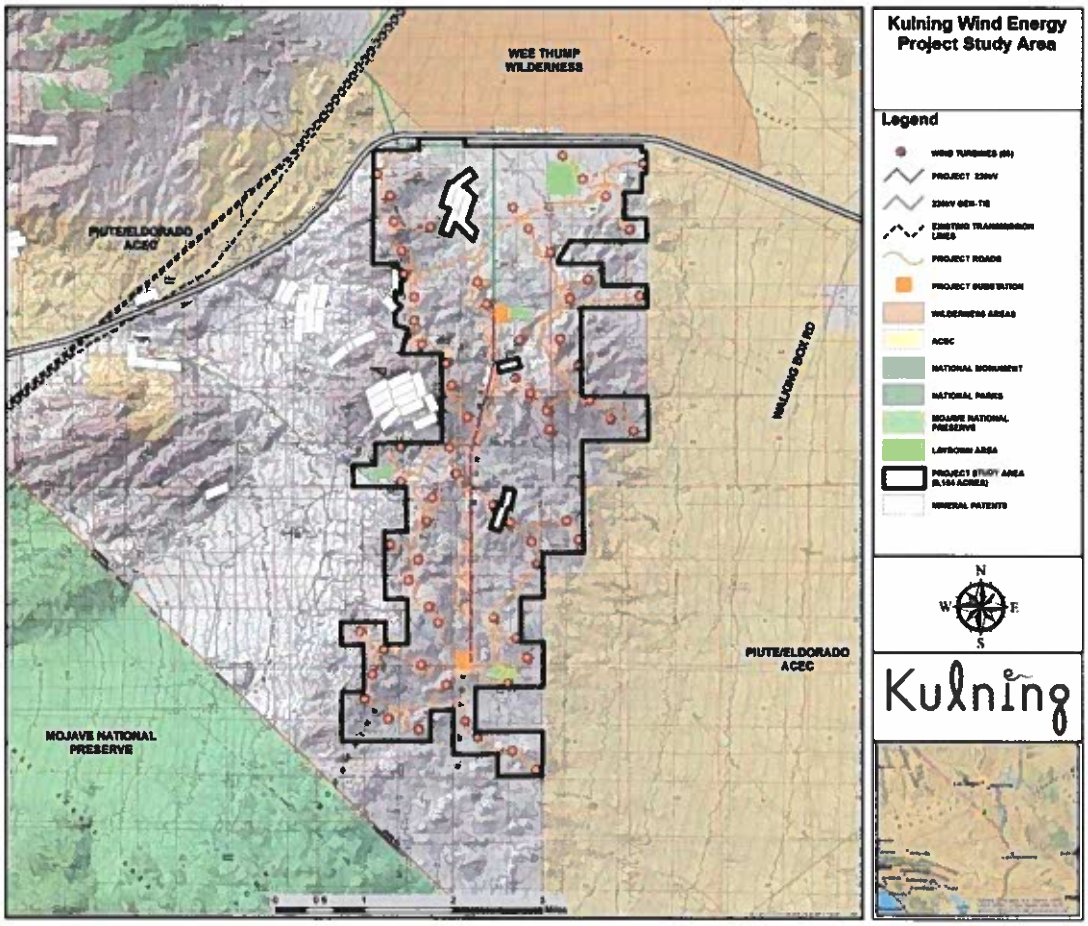
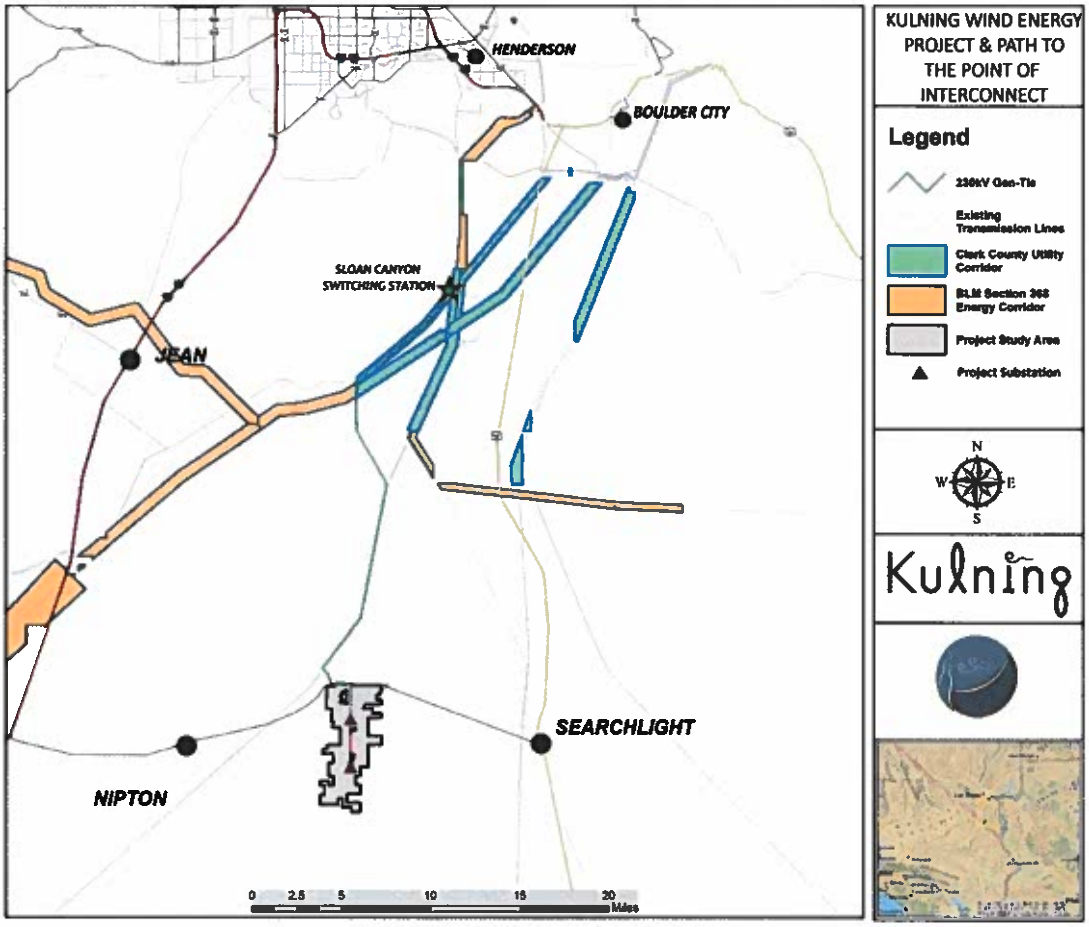


Figure 1.1b – Kulning Wind Energy Project – Transmission Path



The project will have a maximum rated net power output of approximately 308 MW alternating current (AC) and will inject renewable energy into the southern Nevada and California electrical transmission grid at the Sloan Canyon Switching Station via a new 230 kilovolt (kV) transmission line to be constructed along and adjacent to existing 230 kV and 500 kV network transmission lines.

The plant will generate electricity using state of the art WTGs that use algorithms to enhance grid reliability, in addition to augmenting grid stability by offsetting the daytime profile of solar generation with wind generation at night and battery energy storage (BESS). The energy from the WTGs would be gathered by an internal electrical collection system at a voltage of 34.5 kV that would be stepped up to 230 kV at a one of the two onsite project substations. The energy would then be transmitted to the grid via a new 230 kV transmission line that would utilize, or parallel, existing transmission corridors allocated by both the BLM and Clark County.

BLM's West Wide Wind Mapping Project specifically identifies the proposed project location for KWEP as "potentially developable wind resource" suitable for a utility scale wind energy project. An onsite wind resource measurement campaign conducted by the Applicant over 10 years supports this wind resource finding by identifying the project area as having average wind speeds in excess of 8.0 meters per second (m/s), which is an excellent resource for clean energy extraction at a commercial scale. An onsite wind

resource measurement campaign conducted by the Applicant over 10 years supports this wind resource finding.

Desert tortoise and golden eagles are known to occur near the project area. As explained in Section 5.2, below, site-specific surveys have documented little use of the project area by these species due to the area's marginal-to-unsuitable habitat. Potential impacts to these and other species will be addressed through mitigation measures developed as part of the NEPA process.

As part of its evaluation of the project site, the Applicant has commissioned and submitted to BLM the following baseline survey reports in 2018:

- SWCA Cultural Resources Report No. 5-2791 final draft submitted to BLM in October 2018
- SWCA Desert Tortoise Report No. 44-314 finalized and submitted to BLM in July 2018
- SWCA Avian Report No. 26-955 of December 2017 – revised/submitted to BLM in July 2018
- SWCA Bat Report No. 26-955 final draft submitted to BLM in October 2018
- SWCA Plant Report No. 44-314 finalized and submitted to BLM in November 2018

1.2 Applicant's Schedule for the Project, Including Anticipated Timelines for Permitting, Construction, and Operation, and Any Phased Development

The Applicant estimates the permitting process for the KWEP would take up to 18 months, with completion of National Environmental Policy Act (NEPA) review by Q4 of 2022, commencement of construction in Q1 2023, and a commercial operation date of Q4 2024.

Table 1 Project Schedule

Process	Date
NEPA NOI for Project	Q2 2021
NEPA EIS Draft	Q1 2022
Record of Decision	Q4 2022
Commencement of Construction	Q1 2023
Start Up and Testing	Q3 2024
Commercial Operation	Q4 2024

1.3 Applicant's Purpose and Need for the Project

The Applicant intends to construct, operate, maintain, and, eventually, decommission an economically feasible, commercially financeable, reliable, and safe, utility-scale wind-powered generating facility that will meet the requirements for the long-term generation and sale of renewable electric energy for distribution to utility customers.

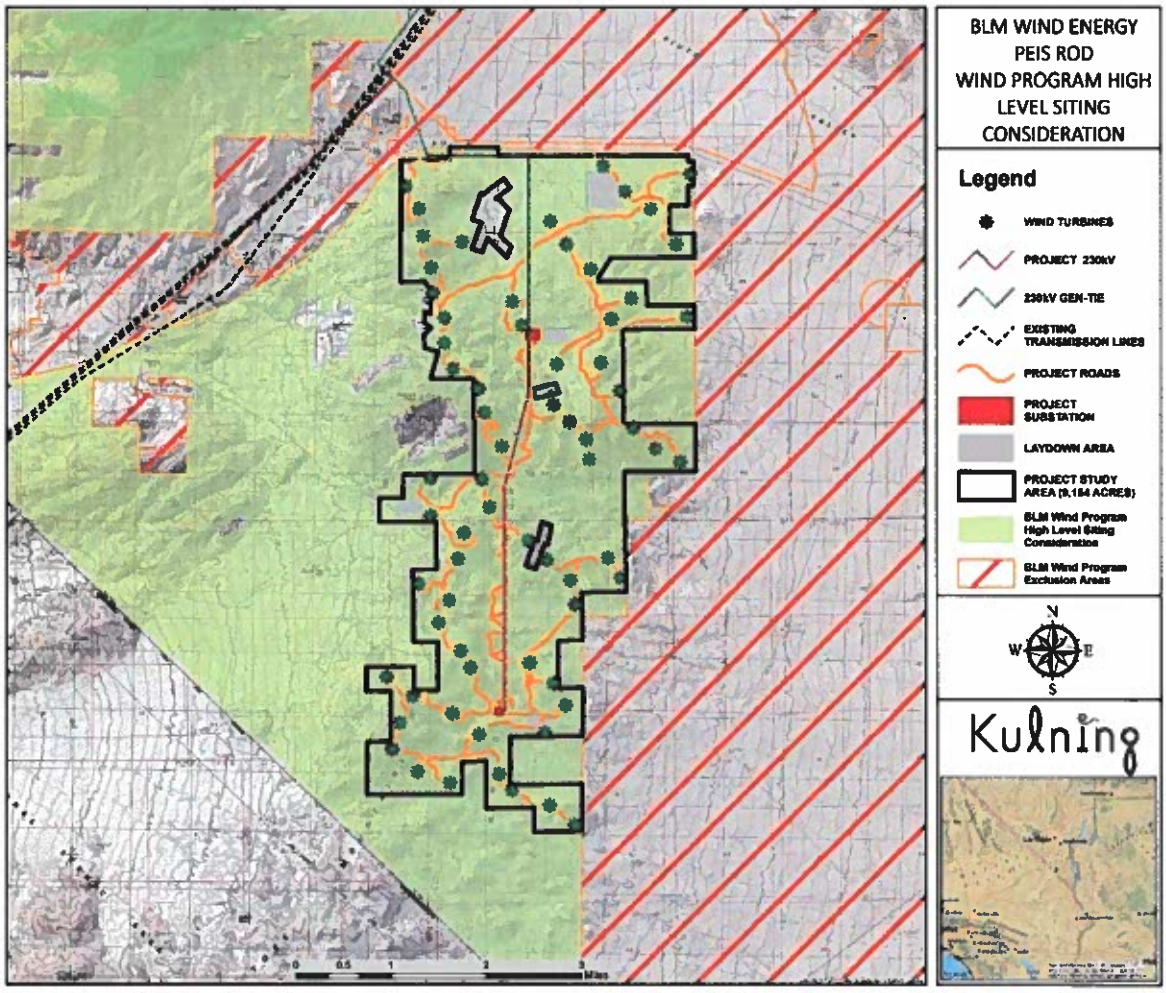
Project objectives include, but are not limited to:

- To build the project at an economically feasible scale that allows it to meet increasing regional renewable energy demands at a competitive, low-cost price;
- To provide a renewable energy generation source that offsets regional daytime solar generation imbalances with utility-scale wind generation (most of which occurs at night) with potential supplemental support from battery storage;
- To meet the renewable energy goals set forth by Congress in the Renewable Energy Act of 2020, which directs the Secretary of Interior to authorize 25 gigawatts (GW) of electricity from wind, solar, and geothermal projects by 2025;
- To respond to the command of Executive Order 14008 "to organize and deploy the full capacity of its agencies to combat the climate crisis," in no small part through the "deployment of clean energy technologies and infrastructure;"
- To further the purpose of Secretarial Order 3285A1, establishing the development of environmentally responsible renewable energy as a priority for the Department of the Interior;
- To fulfill s Nevada's Senate Bill 358 goal of achieving 50 percent renewable energy generation by 2030 and 100 percent by 2050; and
- To increase local short-term and long-term employment opportunities in Clark, Nevada.

1.4 BLM West Wide Wind Mapping Project

As mentioned above and as indicated in Figure 1.2.1a, below, BLM's West-Wide Wind Mapping Project identifies the KWEP project site as a developable wind resource.

Figure 1.2.1a - BLM West Wide Wind Mapping Project



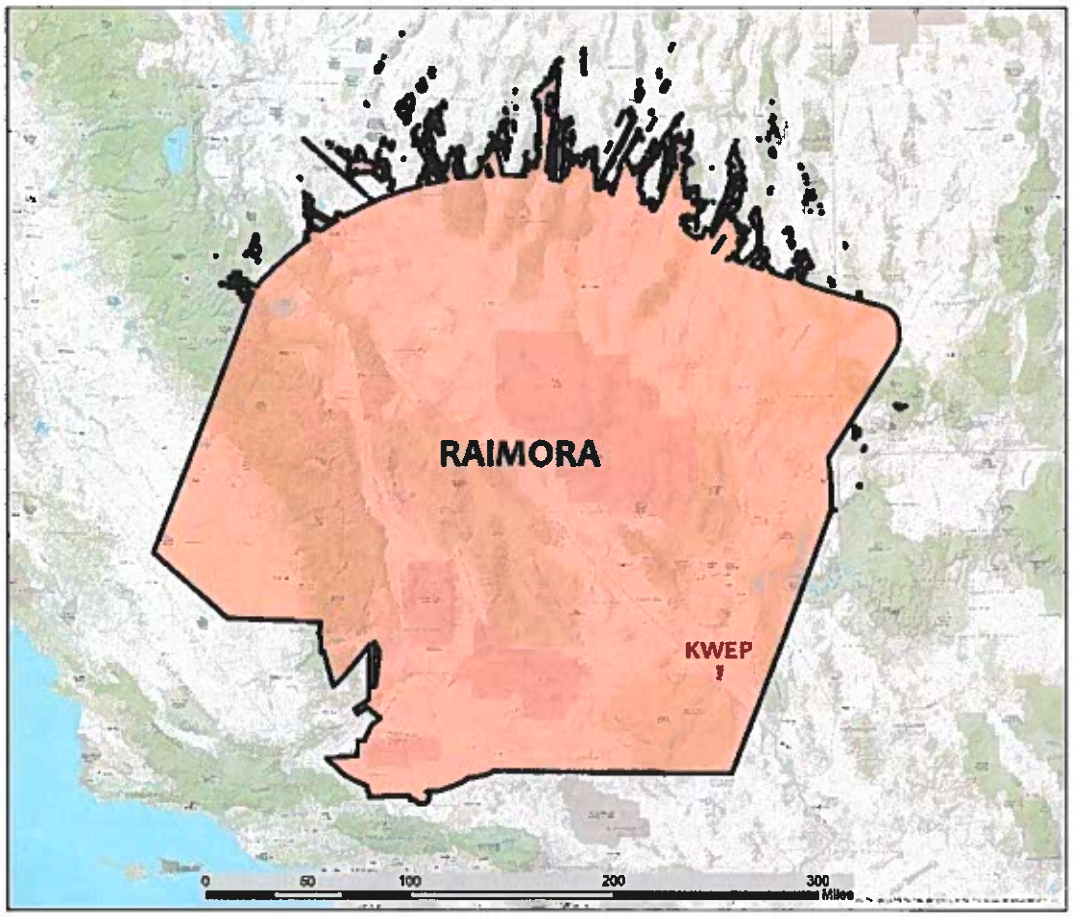
The West-Wide Wind Mapping Project also identifies where the presence of certain environmental resources or land use restrictions may require additional review. In this instance, the proposed project area is not subject to any BLM wind energy exclusions but is subject to just one of 15 separate high-level siting criteria identified by the West Wide Wind Mapping Project, specifically the "DOD-High Risk of Adverse Impacts" criterion.

This is due to the project's location, as indicated in Figure 1.2.1b, below, within the southeast extreme of the R-2508 Risk of Adverse Impact on Military Operations and Readiness Area (RAIMORA) that extends from Southern California into Nevada, Utah and Arizona, a circumstance shared by all wind

projects proposed within the massive, 16,000 square mile R-2508 military complex, including many of the extensive utility-scale wind installations currently operating in Kern County, California.

The Applicant has already engaged with the Department of Defense regarding the project's location within the R-2508 RAIMORA complex to identify how to mitigate any potential impacts by KWEP on DOD airspace through radar software adjustments and, if a software solution is inadequate, an adaptive management regime that could include potential turbine curtailment, likely in the form of a cooperation agreement that the Applicant has been working on with DOD that could become a stipulation of the KWEP right-of-way.

Figure 1.2.1b - Risk of Adverse Impact on Military Operations and Readiness Area



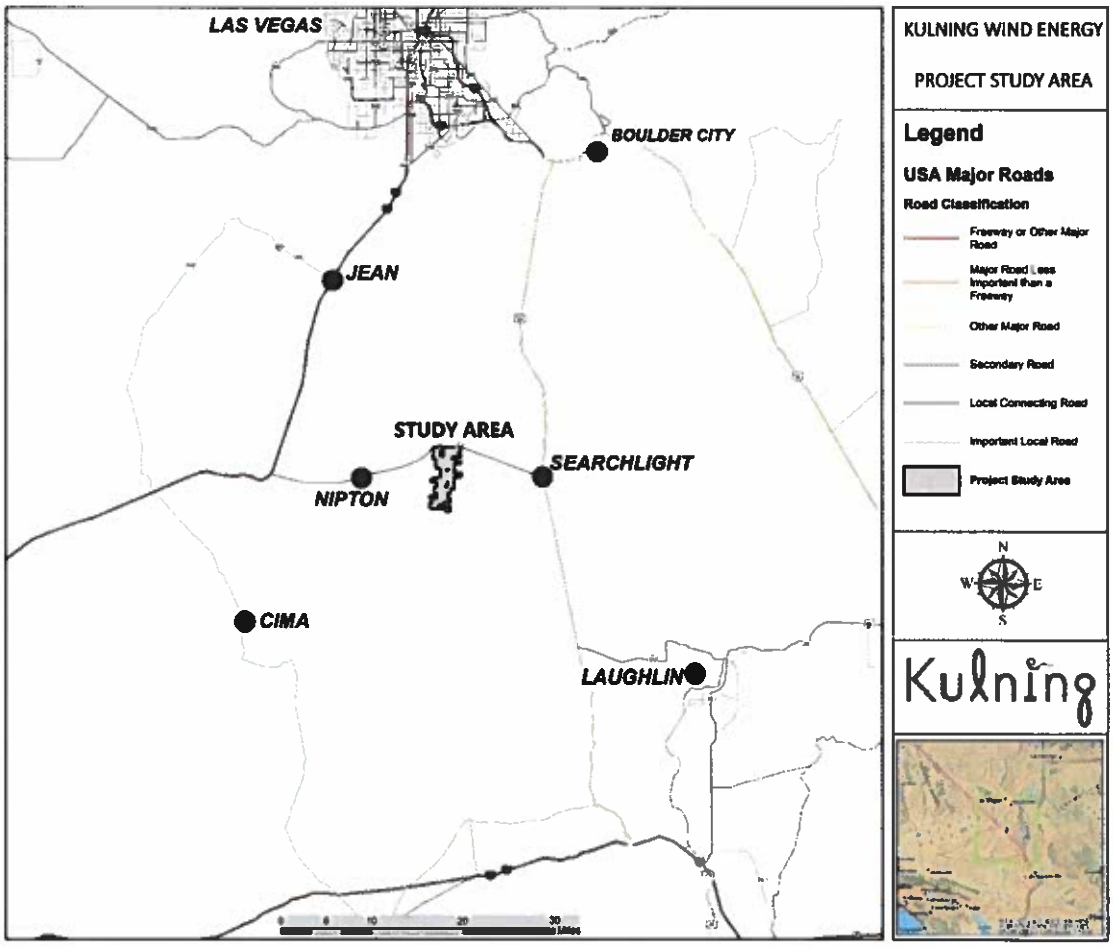
1.5 General Facility Description, Design, and Operation

The following sections describe the wind turbines(s), met towers, major equipment, substation, BESS, ancillary systems, site stormwater management/drainage, buildings, and other structures needed to develop a 308-MW/AC facility within the Project Area. KWEP will be designed, constructed, and operated in accordance with current and future applicable laws, ordinances, regulations, and standards. Preliminary design drawings for possible sites within the Project Study Area are included in Figure 1.3.3a.

1.5.1 *Project Location, Land Ownership, and Jurisdiction*

The Project Area is located approximately 9 miles west of Searchlight Nevada and Nevada's US 95, 16 miles east of Interstate 15 (I-15), 35 miles south of Las Vegas, Nevada, and situated at the north end of the New York Mountain Range. (see Figure 1.3.1 – Project Location). The KWEP wind generation facilities would be located entirely on lands administered by the BLM while a 7-mile portion of the project's 29-mile gen-tie would occupy a portion of an existing right-of-way in a Clark County Transmission Corridor.

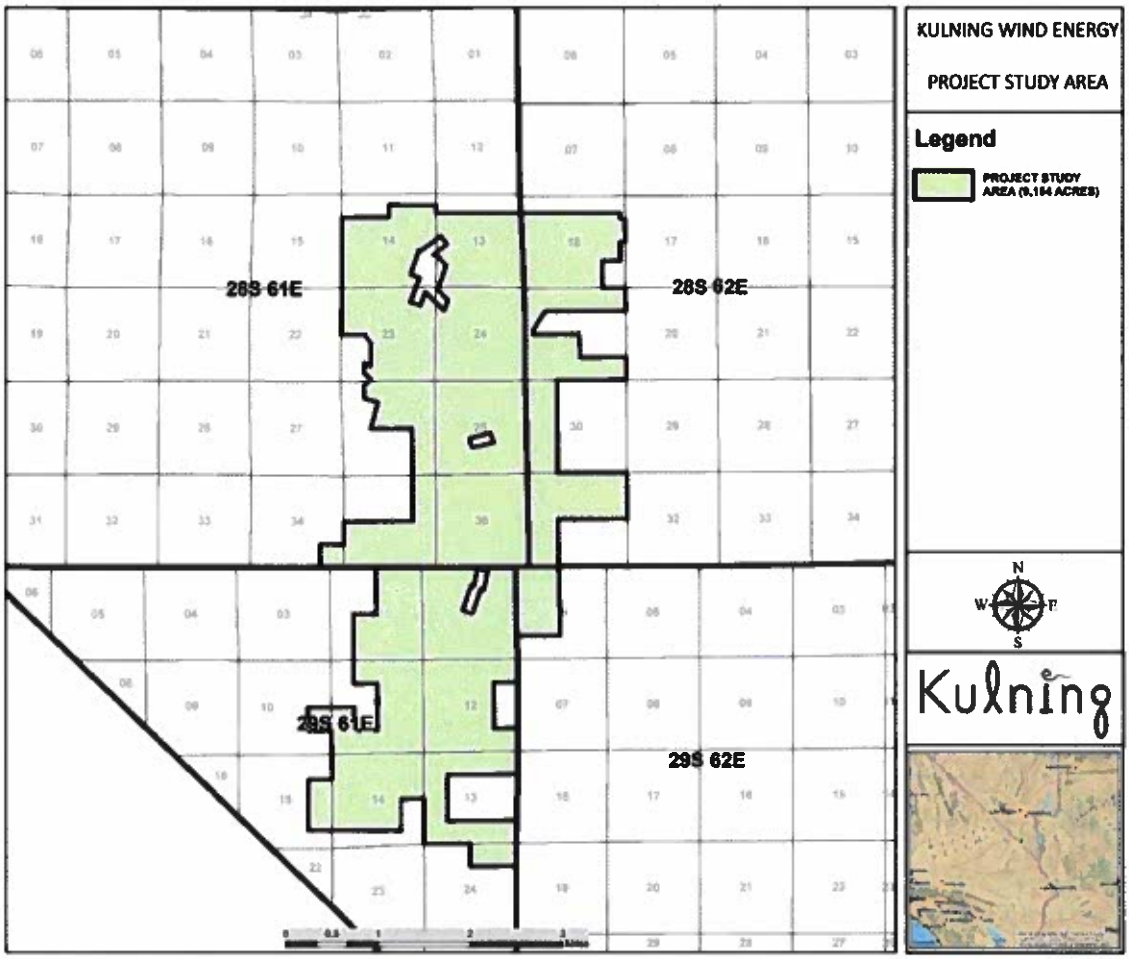
Figure 1.3.1 – Project Location



1.5.2 *Legal Land Description of Facilities (Federal and Non-Federal Lands)*

The Application Area is in Clark County, Nevada. Appendix A, attached hereto, lists the BLM lands requested to the quarter quarter-section as identified in the filed ROW grant application. Figure 1.3.2, below, visually depicts the proposed project's cadastral location.

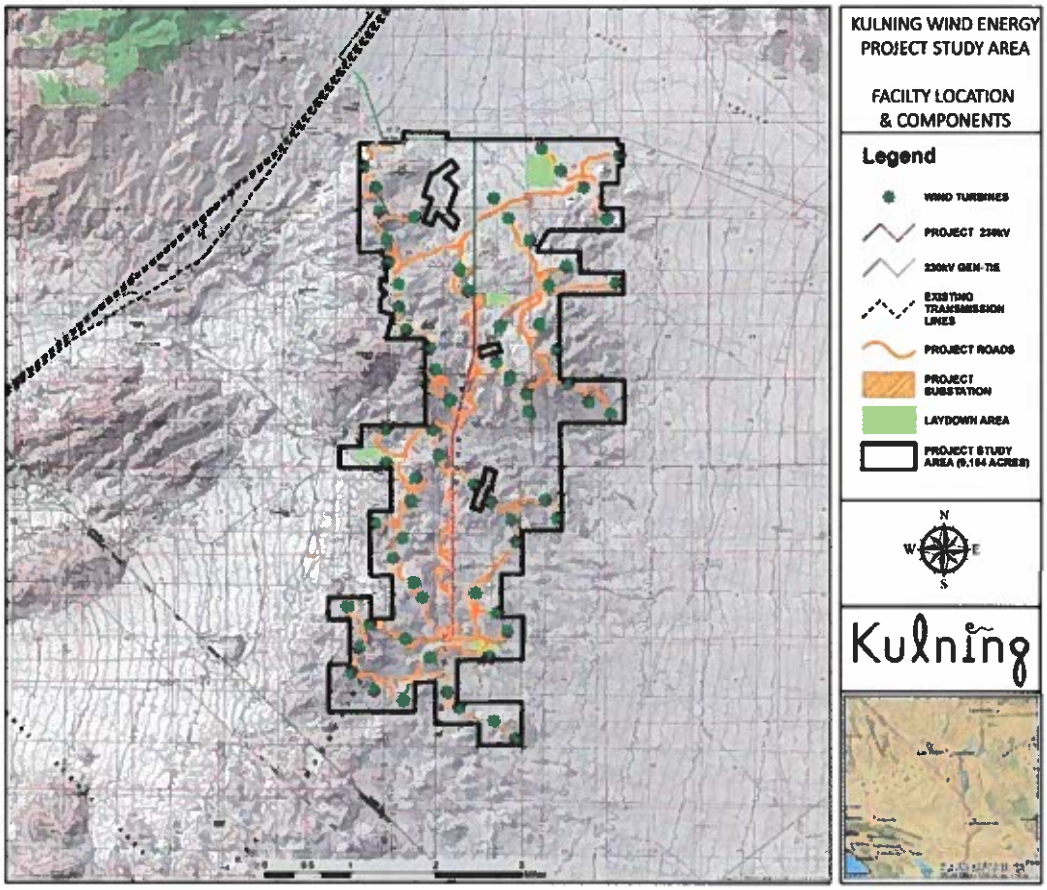
Figure 1.3.2 - Public Land Survey



1.5.3 *Facility Location and Components*

The KWEP project wind turbines and operations facility would be located entirely on BLM-administered lands. Originating on the project site, the gen-tie transmission would follow existing transmission corridors for about 25 of the 29 miles needed to reach the Sloan Canyon Switching Station which is the intended point of interconnect to the transmission network. The existing network of roads serving the utility corridors and existing transmission lines would support most of the needed access to the pole structures and minimize the need for construction of new roads. (See Figure 1.1b)

Figure 1.3.3a - Facility Location and Components



The KWEP would consist of two major types of facilities described in detail below: 1) wind turbines with associated work/crane pads facilities and 2) linear facilities.

1) The wind turbine facilities would be located within an approximately 9,154-acre Project Area. These facilities would include:
   - The wind turbines and their supporting foundations;
   - The crane and work pads surrounding each wind turbine;
   - Substations and related switchgear, power conditioning and centrally housed BESS facilities; and
   - On site O&M facility.

2) Project linear facilities would include:
   - Main and secondary access roads;
   - A 29-mile 230kV gen-tie line to carry electricity to the proposed point of interconnection (up to 110 acres of total disturbance);
   - Collection power lines for wind turbines, buildings and backup for control systems; and
   - Communications cables or lines

The entire Project Area, except for the O&M facility, substation and BESS facility, will remain unfenced and open to the public. Table 3, below, describes the anticipated key project components, quantities, and land requirements for the facilities and ancillary facilities.

Table 3 - Key Project Components, Quantities and Land Requirements

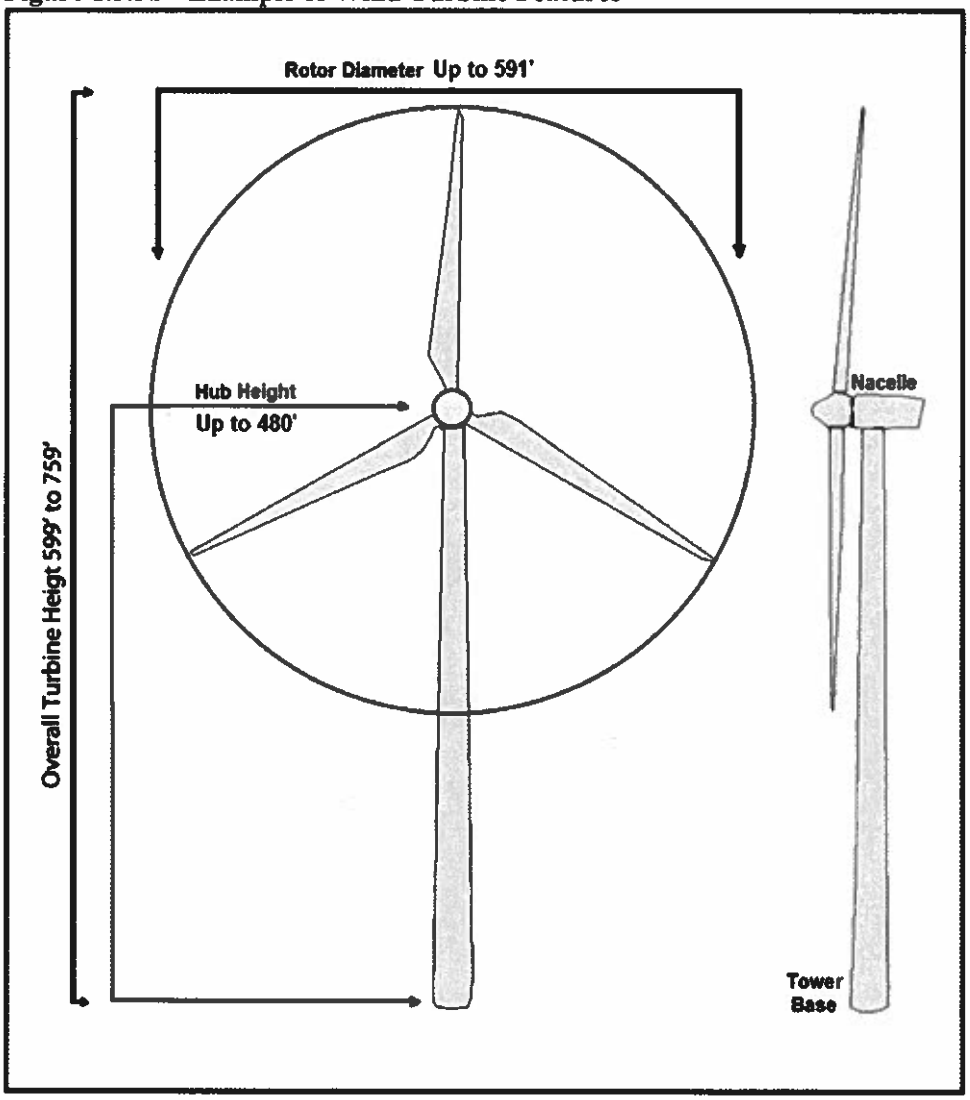
Component	Quantity	Purpose
Temporary Laydown/Staging Areas	Up to four areas (3 up to 24 acres per Staging Area and 1 up to 80 acres)	Secure areas for temporary construction offices, construction vehicle parking, equipment and construction materials storage, and stockpiled soil storage
Temporary Concrete Batch Plants	Two areas (within Laydown/Staging Areas)	Facilities for mixing concrete needed in the construction phase
Wind Turbine Generators (WTGs)	Up to 68 WTGs (within a 9,154-acre project area)	Generate power
WTG Pads and Crane Pads	Up to 136 acres of disturbance (for up to 68 WTG pads and 68 crane pads)	Wind Turbine Installation
Foundations and Pad-Mounted Transformers for the Wind Turbines	Up to 68 foundations (with a size range from 24 to 60 feet wide and 10 to 40 feet deep)	Foundations support the turbines and transformers step up the voltage between the turbine and the electrical collection system
Electrical Collection System and Communications	34.5-kilovolt collector lines (within interior roads disturbance area)	Connect each turbine to the substation and provide for communications between the turbine and substation
Overhead 230 kV Transmission Line from project site to POI	Approximately 29 miles in length with 8-12 support structures per mile (up to 110 acres of disturbance)	Connect with existing regional transmission line to deliver Project power to purchasing utility
Project Substations with BESS	2 Substations 1 at north end, 1 near south end (with up to 10 acres of disturbance each)	Central connection point for energy generated by the KWEP where voltage increases from 34 kV to 230 kV and battery storage to increase reliability of the transmission network
Operations and Maintenance Building.	One Building and Parking Area (approximately 4 to 5 acres)	Employee facility for operation and maintenance of Project facilities and storage of supplies and maintenance equipment
Interior Roads	Approximately 44-54 miles within the Wind Farm Site (up to 250 acres of disturbance)	Provide internal access within the Wind Farm Site between facilities (turbines, substation, and operations and maintenance building)
Internal Project 230kV Transmission	Approximately 4 miles (up to 6 acres)	Transfers power from the south side of the project to the northernmost project substation
Utility and Communication Lines	Approximately 12-14 miles	Provide operational power and communication abilities for on-site facilities
Meteorological Towers	Up to 4 permanent and 8 temporary met towers (up to .5 acres each and 6 acres total)	Monitor wind speed, direction and other ambient weather conditions for the purpose of allowing the evaluation of the project performance

The KWEP facilities would include the following major components or systems:

WIND TURBINES

Modern wind turbines consist of three main components nacelle, tower and blades. The nacelle houses the generator and gearbox and supports the rotor and blades at the hub. The turbine tower supports and provides access to the nacelle. The turbine hubs would be between 345 feet (105 meters) and 480 feet (146 meters) above the ground depending on the turbine model(s) selected. The turbine blades would extend between 246 feet (75 meters) and 295 feet (90 meters) above the hub. The rotor diameter likely would be between 492 feet (150 meters) and 591 feet (180 meters). Therefore, each turbine would have a rotor "swept area" of 190,520 square feet (17,700 square meters) to 274,320 square feet (25,450 square meters). At the top of their arc, the blades would be between 591 feet (180 meters) and 759 feet (231 meters) above the ground. Nameplate energy generation capacity could range between 3 Megawatts and 7 Megawatts (MW) per installed wind turbine while the anticipated quantity of WTGs will range between 40 and 68 WTGs, with a lower quantity if higher MW nameplate WTGs are used.

Figure 1.3.3b - Example of Wind Turbine Features



ACCESS ROADS

The Project would use existing federal, state, county, and local public roads to the extent feasible, as well as new roads constructed specifically for the KWEP. Project ingress/egress would be from Nevada Highway 164 (Nipton Road), which is a paved, two-lane highway connecting Interstate 15 and Nevada's US 95. In addition to these primary access routes, turbines and other Project facilities would be accessed via upgraded existing and new dirt access roads. The overall proposed road network, including the primary access points, is shown in Figure 1.3.3a, above.

The project's internal access roads would be located and designed to minimize disturbance, manage water runoff, avoid sensitive resources, and to maximize transportation efficiency during construction and maintenance activities. They would provide permanent vehicular access (construction and maintenance) to each WTG, the MET towers, the substations, and the other facilities. The access roads would allow for the ingress and egress of vehicles that range in size from passenger vehicles to semi-tractor trailer trucks, earth-moving equipment, cement trucks, tower and blade delivery machinery, and large cranes. During the construction of the facility, 16-foot to 32-foot wide road access would be required for the construction equipment and the delivery and erection of the WTGs. After construction, portions of these roads will be reclaimed leaving mostly 16-foot permanent roads with wider width sections at major corners.

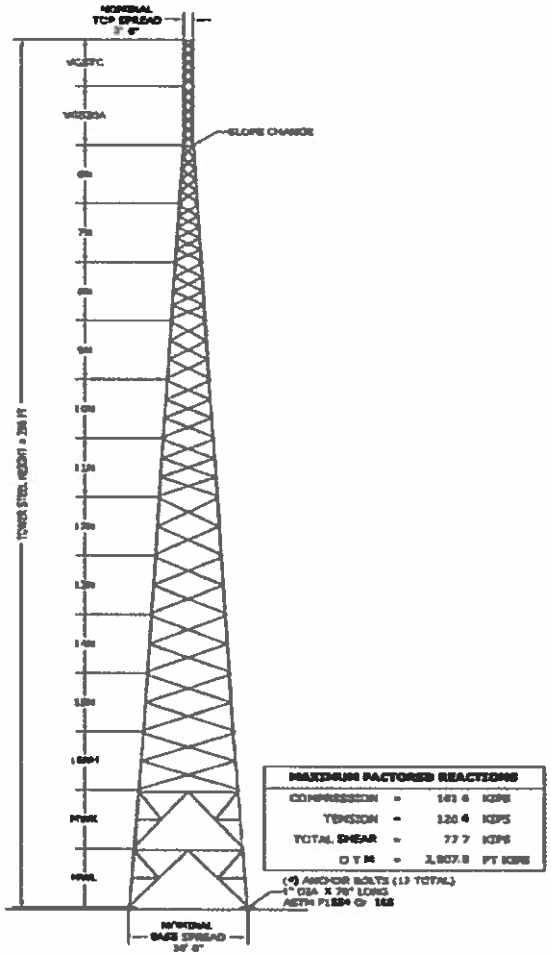
KWEP intends to utilize recent technological advances, such as the Goldhofer wind turbine blade transport vehicle depicted in Figure 1.3.3c, to reduce required road and turbine pad widths and disturbances when such an approach is practicable. An engineered model containing the disturbed footprint for a standard blade delivery vehicle and the footprint associated with the minimum civil requirements for the Goldhofer vehicle will be created to evaluate the benefits of such technologies.

Figure 1.3.3c - Goldhofer Blade Transport Vehicle

METEOROLOGICAL TOWERS

Permanent meteorological (MET) towers would be installed at the Project, to measure ambient weather conditions and to evaluate the performance of the WTGs. The permanent MET towers and their associated access roads would be sited within the WTG array corridors. These permanent towers would be installed prior to the installation of the WTGs and remain throughout the operational term of the Project. As depicted in Figure 1.3.3d below, the permanent MET towers would be triangular or square shaped lattice type un-guyed, self-supporting structures consisting of a pier-based foundation approximately 10-20 foot deep concrete piers spaced approximately 30 to 40 feet apart (three or four piers total) with each foundation pier consisting of up to 15 cubic yards of concrete (see Figure 1.3.3d). Total height of the structures is anticipated to be equal or within 3% of the nacelle/hub height of the wind turbine model(s) being used. Currently the height range of MET towers being considered is from 345' to 400'. The towers will be used to monitor incoming wind speeds, direction, and other ambient climatic conditions. They will assist with power forecasting for utilities and provide locations for FAA lighting control systems and project communication equipment. The structures would be galvanized and remain dull gray, subject to standard FAA painting and/or lighting requirements. Power and communication to the met mast will come via underground low voltage cable and fiber optic run adjacent to the wind turbine service roads.

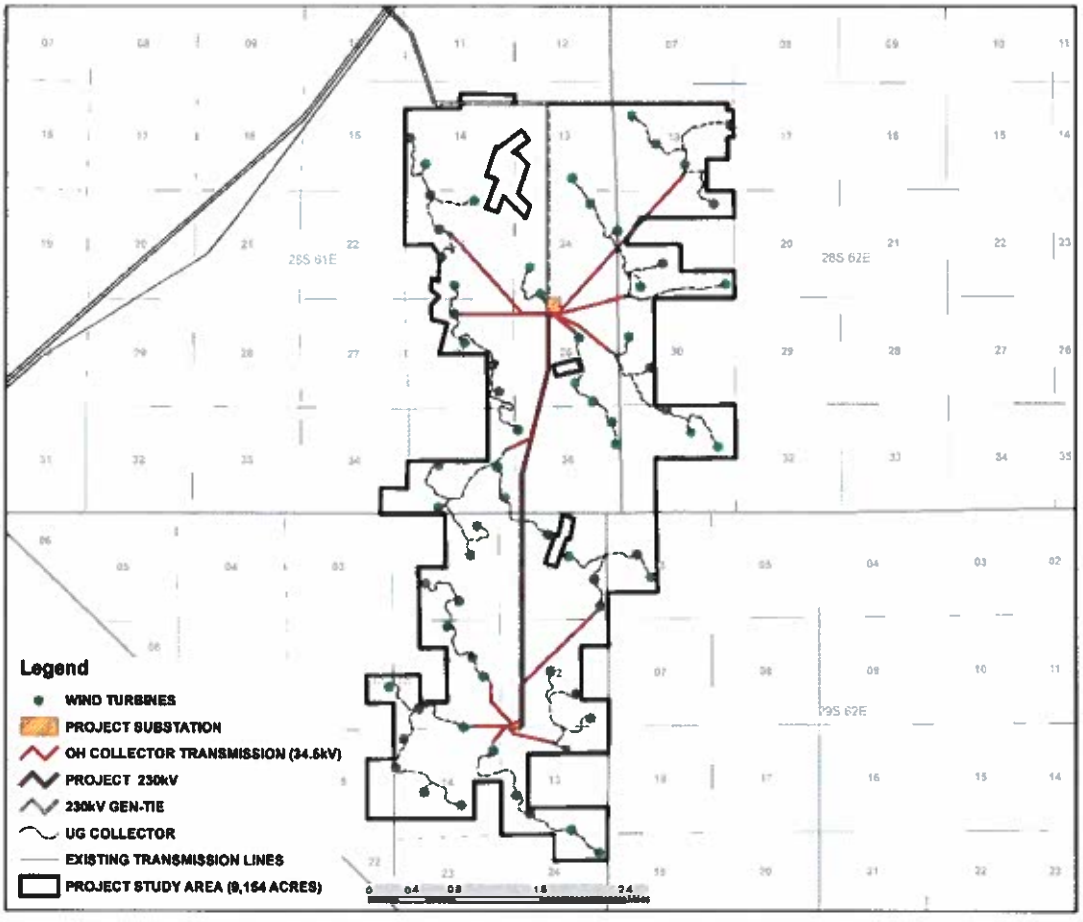
Figure 1.3.3d - Example of a free-standing Met tower.



PROJECT ELECTRICAL COLLECTION SYSTEM

The primary components of the electrical collection system consist of the wind turbine step-up transformer, the collector cabling utilizing underground and overhead pole-mounted circuits for collection of power from the turbines and transmission of the power to the collector substations. WTG step-up transformers are mounted in the turbine nacelle or on a pad-mount adjacent to the turbine foundation. The collector cabling system would consist primarily of underground cable with a limited number of overhead cable segments when terrain and other considerations merit such an approach. Overhead 34.5 kV lines would be used when good engineering practices require consolidating multiple circuits to minimize ground disturbance on main runs into substations, for crossing extreme topography (i.e., crossing major gullies), proximity to archaeological sites, and/or if avoiding underground hazards is necessary. Also, in areas with dense rock, it may be necessary to run the cables on overhead lines if the minimum trench depth of 3 feet cannot be economically achieved. An estimated 4 miles of internal project 230kV overhead transmission lines will connect the two project substations to the 230kV Gen-Tie line that is described below. Figure 1.3.3e, below, depicts the project's proposed electrical collection system.

Figure 1.3.3e - Project Electrical Collection System



The 34.5 kV underground cables would be armor-clad and buried directly into the soil when practical or placed in buried conduit. The cables would be buried in trenches at a depth of at least 3 feet. The trench

width would typically be 2-4 feet wide for each set of cables. When practical, the cable would be run along the side of the access roads, in an area already disturbed by road construction. After cable installation in areas outside of the access roads, the surrounding surface would be re-contoured and re-vegetated.

PROJECT SUBSTATIONS / BATTERY ENERGY STORAGE SYSTEM

The energy generated by the WTGs would be delivered to the project substations via the 34.5 kV Project electrical collection system described above. The project substations would step up the voltage of the electricity from 34.5 kV to 230kV as specified by CAISO for the interconnection point. Each substation would disturb up to 10 acres of land improved with equipment such as power transformers, BESS, circuit breakers, disconnect switches, relays, capacitor banks, metering equipment and a control building.

Each substation site would be surrounded by 8-foot-high, chain-link fence topped with barbed wire. Each would be equipped with an outdoor downcast lighting system. Warning signage would be mounted on the fence and would include "Keep Out," "Danger," and "High Voltage." A small control building would exist within each substation for electrical metering equipment, and the SCADA system for the substation. Riser poles at each substation connection point would have a pole-top, three-phase disconnect switch (operable from the ground), surge protection, insulated cable terminations and jumper wires, wildlife boots (a protective covering over cable terminators to protect birds from accidental electrocution), and lightning arrestors.

A Battery Energy Storage System (BESS) with a maximum output/charge rating of up to 80 MW for up to 5 hours will be integrated into the project substation(s). BESS would help facilitate a more stable energy grid by adding near-instantaneous energy output or consumption upon demand. Battery chemistry options to be considered would include NCA (lithium-nickel-cobalt-aluminum), NMC (nickel-manganese-cobalt) or other more economical and/or advanced technologies. AC to DC transformers and DC to AC transformers will be required as the system will be AC tied to the BESS. This means the batteries could be charged from grid power in the event the network is over producing power from combined sources or could deliver energy into the grid if grid conditions dictate such is needed. This system would be housed within one or both project substations.

OPERATION AND MAINTENANCE BUILDING

The O&M building would be constructed as an approximately 140 x 60-foot structure in the northeastern portion of the project site near the "laydown area" south of Highway 164 (see Figure 1.3.3f). The building would contain offices and house the control system for the WTGs, parts, consumables, and tools. Maintenance trucks would park adjacent to the O&M building. Potable water supplies would be trucked in and stored in 5000 gallon above-ground water tanks. Sewage disposal would be by means of an on-site septic tank or self-contained unit. Telecommunications lines and the SCADA system would also be connected to and installed inside the O&M building.

Figure 1.3.3f – Example of Operations and Maintenance Facility

230KV GEN-TIE TO SLOAN CANYON SWITCHING STATION

As depicted in Figure 1.1.b, above, a 230 kV overhead transmission line of approximately 29 miles in length would carry the energy from the Project substations to the Sloan Canyon Switching Station located approximately 23 miles north of the KWEP site. The transmission line would parallel the existing SCE Lugo-Eldorado 500-kV transmission line (N-66156), which passes in a northeast direction from the project site.

The transmission line alignment would follow the existing Lugo-Eldorado 500 kV ROW (N-66156) in a generally northeast direction for approximately 15 miles, and then divert in a northwesterly direction for approximately 3.4 miles to a point that is just west of the southwest corner of the Boulder City Conservation Easement (BCCE). The proposed line would then turn north for 2.7 miles just west of the BCCE where it traverses the Boulder Primm South legislative corridor to a junction point where it joins the Gridliance 230kV transmission line ROW (N-57100). Gridliance ROW N-57100 is contained within the 1998 Boulder–McCollough Pass Designated Corridor which is now a designated Clark County Utility Corridor. The KWEP transmission line would join the existing GridLiance Pahrump - Mead 230kV transmission line (N-57100), as a separate, seven-mile long conductor circuit on an upgrade to this existing GridLiance line. The line would then turn north-northwest for about 0.37 miles to a termination point at the Sloan Canyon Switching Station. An alternate configuration would consist of a new 230kV transmission line running parallel to, rather than on the same poles as, the Gridliance 230kV transmission line for this 7-mile segment. This option would be used in the event design specifications exceed the strength of the load bearing structures such as the transmission towers and cross-arms or if such a second circuit is not compatible with Gridliance plans for the Pahrump – Mead 230kV transmission line. See Appendix B, attached hereto, for the legal description of transmission path right of way.

The following plant auxiliary systems would control, protect, and support the KWEP and its operation.

LIGHTING SYSTEMS

Permanent outdoor night lighting would be provided at the O&M building, and the KWEP substations, although some portable lighting may be required for some maintenance activities that must be performed at night. Lighting would be kept to the minimum required for safety and security. Sensors, switches, and timers would be used to keep lighting turned off when not required and all lights would utilize "dark sky

friendly" design to minimize backscatter and off-site light impacts. Lighting would be fixed to buildings and other structural supports where possible or affixed to ground-mounted poles of approximately 15 to 20 feet height.

In support of FAA and DOD compliance, strings of wind turbines would have obstruction lighting placed on top of the WTG nacelles or elsewhere as required to comply with FAA requirements. It is anticipated that some of the wind turbines may not need obstruction lighting. A lighting plan will be implemented to minimize the number of turbines that are lit.

FIRE PROTECTION

Utility-scale wind facilities typically have a low risk of introducing fires because most project materials are non-combustible (concrete, aluminum, copper, or steel).

During construction, at least 1 water truck will be kept on-site and available to workers for use in extinguishing small fires. All vehicles working on-site will also carry a portable fire extinguisher. Wind turbine nacelles will contain "clean agent" fire suppression systems that are remotely monitored as well as closed door rooms servicing the project substation and supporting equipment. The fire protection systems for the wind facility site operations may include a fire protection water system for protection of the O&M building, portable water tanks (Buffalos), and portable fire extinguishers. The KWEP's primary fire protection water system may be supplied from a water storage tank located on the plant site near the main entrance. Additional water tanks will be strategically located to support local area fire suppression and crane pads and laydown areas will serve as base of operations for helicopter-based fire suppression efforts. The Applicant would develop a fire prevention, action, and escape plan in consultation with the BLM.

SCADA/COMMUNICATION SYSTEM

The WTGs would be operated by a control panel inside the tower of each WTG. Each WTG and substation would be connected via fiber-optic cable to a SCADA system that connects it to the central computer in the Project O&M building. The WTGs could be controlled on-site or remotely, and turbine performance data could also be accessed remotely. The fiber-optic communications cable would be co-located with the electrical collection system cables whenever possible to reduce environmental impacts. Where feasible, collection cabling and communication lines would be collocated with roads to further reduce environmental impacts.

1.5.4 *Temporary Construction Workspace, Yards, Staging Areas*

Temporary staging areas would be established on the facility site, including fenced parking, covered trash disposal facilities, construction trailers, a laydown area, portable toilets, and potable water sufficient for construction staff. Mobile trailers or similar suitable facilities (e.g., modular offices) would be used as construction offices for KWEP and subcontractor personnel. Construction laydown and parking areas would be located strategically within the confines of the Project Area. During construction, temporary utilities would be provided for the construction offices, laydown area, and Project Area. Temporary construction power before the construction of permanent distribution power would either be provided onsite by connection to the NV Energy owned 12kV distribution system or by temporary propane/diesel generators. Temporary area lighting would be provided and strategically located for safety and security.

The following site services would be provided by the Applicant or its contractors:

- environmental, health, and safety training
- site security
- site first aid
- construction and testing
- site fire protection and extinguisher maintenance
- furnishing and servicing of sanitary facilities
- trash collection and disposal
- disposal of hazardous materials and waste in accordance with local, state, and federal regulations
- flora & fauna monitoring and wildlife hazard abatement

Construction materials such as wind turbines, concrete, pipe, wire and cable, fuels, reinforcing steel, small tools and consumables will be delivered to the site by truck. Site access will be controlled for personnel and vehicles. During the initial grading, equipment will be stored overnight and during weekends and holidays in a secure, fenced, and gated equipment storage area within the future footprint of the project. There may be multiple temporary laydown and equipment storage areas on the project site to allow for completion of grading and excavation across the site.

1.5.5 *Geotechnical Studies*

The Applicant will procure a geotechnical study of the project site prior to construction to substantiate final engineering and design. The study would include a desktop review of the project site and analysis of on-the-ground test borings at the project.

Geotechnical testing methodologies to substantiate the final engineering and design of the foundations, roads and electrical infrastructure will adhere to the following standards:

- Seismic Refraction Test according to ASTM D5777
- Shallow Waves Test (MASW, SASW, or ReMi)
- Electrical Resistivity Test
- Thermal Resistivity
- Down Hole and Cross Hole according to ASTM D7400-07 and ASTM D 4428/D 4428M-07
- Presio-Dilatometer Test
- California Bearing Ratio Test
- Hydrological Test (Permeability Test, Lugeon Test, LeFranc or Gilg Gavar) Groundwater Level

The Applicant may seek separate approval of geotechnical work in advance of a decision on the project's right-of-way application in order to allow sufficient time to refine the project design before commencement of construction.

1.6 Alternatives

Before choosing the location for KWEP, the Applicant completed an exhaustive GIS based study of private and public land within 35 miles of the Sloan Valley Switching Station in an effort to find suitable

alternative sites for a utility scale wind farm. This process focused on areas indicated in the BLM Western Wind Energy PEIS areas suitable for wind development. All existing and proposed land use plans were taken into account during this process, including the Las Vegas land expansion and the Ivanpah Airport build-out. All other prospective project sites within the survey radius were deemed not suitable due to a lack of proximity to transmission, conflicts with desert tortoise connectivity linkages, BLM planned land swaps with the City of Las Vegas, interference with military flight corridors, proximity to sensitive and/or residential areas, potential issues with traffic patterns to accommodate the future Southern NV Supplemental Airport near Ivanpah, and poor wind resource.

As mentioned above, the Applicant is evaluating two 230kV transmission paths, one that co-locates on a seven-mile segment of an existing line and one that does not. KWEP is also assessing two alternative wind turbine layouts (Alternative A and Alternative B) as a part of the application, as follows:

Project Alternative A: The project would consist of a combined project and transmission line area of 9,264 acres or less, up to 68 wind turbine generators (WTGs) with a layout configuration as shown in Figure 1.3.3a, project substations and BESS facility, an approximately 29-mile transmission line to Sloan Canyon Switching Station and accompanying infrastructure. The KWEP would be a 308-megawatt (MW) wind energy generation plant consisting of located in Clark County, Nevada, and contained entirely within land managed by BLM.

The nameplate rating will be between 3.0 MW and 6.2 MW for each WTG with the quantity adjusted to keep the total MW to 308 MW or less. WTG size will include rotor diameters of up to 170 meters (558 feet) in diameter and maximum tip height of up to 213 meters (699 feet) The Project would have a maximum rated output of approximately 308 MW alternating current (AC) and would inject renewable energy into the southern Nevada and California electrical transmission grid at the Sloan Canyon Switching Station via a new 230 kilovolt (kV) transmission line to be constructed primarily along and/or adjacent to existing 230 kV and 500 kV network transmission lines.

Project Alternative B: This alternative action would consist of an up to 55 Wind Turbine subset of the Alternative A Layout with a combined project and transmission line area of 9,264 acres or less as described in the paragraph above and a layout configuration as shown in Figure 1.3.3a, project substations and BESS facility, an approximately 29-mile transmission line to Sloan Canyon Switching Station and accompanying infrastructure. This turbine layout is located within the same application area as Alternative A, but this modified layout would utilize fewer, larger wind turbines with longer blades and taller total turbine height to extract a similar energy with fewer WTGs. In addition to the quantity of WTGs, the combination of hub heights, swept area and power generation curves are being analyzed to determine the most efficient wind turbine generator configuration and quantity for this alternate version of the project.

The nameplate rating will be between 4.5 MW and 7.0 MW for each WTG with the quantity adjusted to keep the total MW to 308 MW or less. WTG size will include rotor diameters of up to 591 feet (180 meters) in diameter and maximum tip height of up to 759 feet (231 meters). The Project would have a maximum rated output of approximately 308 MW AC and would inject renewable energy into the southern Nevada and California electrical transmission grid at the Sloan Canyon Switching Station via a new 230 kV transmission line to be constructed primarily along and/or adjacent to existing 230 kV and 500 kV network transmission lines.

1.7 Other Federal, State, and Local Agency Permit Requirements

The KWEP is located on federal land managed by the BLM and must undergo NEPA review before BLM could authorize the project. Other federal, state, and local agency involvement would be completed as part of this process. In addition, coordination with Clark County would be undertaken when applicable.

Appendix B, attached hereto, lists the permits and authorizations that may or will be required and obtained prior to the commencement of construction.

1.8 Financial and Technical Capability of Applicant

Crescent Peak Renewables, LLC (a wholly owned subsidiary of Eolus North America, Inc. is a U.S. based renewable energy company with offices in Reno, Nevada and La Jolla, California. It is a subsidiary of Eolus Vind AB, headquartered in Sweden. Eolus Vind AB was founded in 1990 and was the first commercial wind power developer in Sweden. Since the company's creation in 1990, Eolus has facilitated the construction of over 500 of the approximately 3,400 wind turbines operating across Sweden. Please refer to the most recent Eolus Vind Annual Financial Reports as well as Sustainability Reports (attached as Appendix D). The Eolus team has a broad spectrum of renewable energy development experience with over 3,000 MW of wind energy projects developed and constructed worldwide with a value of over $2.5 billion. Eolus and Eolus North America can raise necessary financing for the Kulning Project construction through a combination of balance sheet and construction financing through various banking and investment sources that are at Eolus North America's disposal.

In early 2015, Eolus Vind made the decision to expand its development team to fill the growing need for clean renewable energy in the western United States. In late 2015, Eolus North America was formed and since then the development team has worked on the development of multiple renewable energy projects in California, Nevada, and Arizona. Eolus North America has developed, permitted, constructed and now operates the 46.8 MW Wind Wall I project under a power purchase agreement from Amazon Web Services and has several other projects under development. Eolus North America has over 2,500 MW's of utility scale wind, solar and battery storage projects under development in Arizona, Nevada, and California that it plans to bring online prior to 2026. The company has investments in both the United States and Europe and has experienced leadership that has been in the renewable energy industry since the early 1980's. Eolus North America's Development Team brings a wealth of diversity to the industry with team members from all over the world. Staff expertise covers the full spectrum of renewable energy generation from greenfield development to the negotiation of the Power Purchase Agreements, to facility operation.

2 CONSTRUCTION OF FACILITIES

2.1 Construction Process and Schedule

KWEP would be designed in conformance with the latest edition of the International Building Code, state and local requirements, and with applicable wind and seismic criteria for the project location. The engineering, procurement, and construction of KWEP would be performed under multiple contracts. KWEP construction would be undertaken in a sequential approach in accordance with a construction plan developed and finalized prior to the start of construction in conjunction with the selected contractors.

Temporary construction laydown and parking areas would be included within the Project Area. With the exception of linear facilities, construction laydown would remain within the overall footprint. The project's transmission line would have separate laydown areas, pad construction areas, and pulling areas, utilizing lands disturbed by existing transmission installations whenever feasible.

During construction, temporary utilities will be provided for the construction offices, laydown area, and the Project Area. Temporary power during the construction period will be supplied by either NV Energy-owned 12kV power which currently traverses the project site or by diesel/propane generators.

CONSTRUCTION SCHEDULE

Major milestones of the KWEP construction schedule (Table 6) are as follows:

Table 6 - Preliminary Construction Schedule (Dates to be verified upon finalizing the permit schedule)

Activity	Date
Mobilization and water supply installation	3/01/2023
Commence road/turbine pad grading and staging area construction	5/01/2023
Commence site electrical, substation and transmission installation	7/01/2023
Commence wind turbine and O&M building construction	9/01/2023
Complete access road rough grading	1/31/2024
Complete site electrical, substation and transmission construction	5/31/2024
Complete parking areas, roadways, drainage and erosion control measures	7/31/2024
Complete wind turbine and O&M building installation	8/31/2024
Commissioning and testing complete	9/30/2024

Construction of the KWEP is expected to occur over a period of up to 18 months, which includes mobilization, construction/installation, commissioning/testing, and demobilization. This construction schedule will include multiple concurrent tracks facilitate the construction of the facility in a manner that takes advantage of various mobilization and construction efficiencies.

The on-site workforce will consist of laborers, craftsmen, supervisory personnel, support personnel, and construction management personnel. Construction would require a monthly average of approximately 200 to 300 workers during the construction period, with labor requirements peaking at approximately 350 workers. As experience has shown, special circumstances may warrant an increased number of on-site workers for a short period of time, typically a few weeks. It is expected that there would be an additional 80 to 150 jobs induced in the region during construction for materials handling and supply, equipment supplies and maintenance, lodging and food needs for the construction crew, and other area jobs that would be induced by the construction of KWEP.

Construction will generally occur between 6 a.m. and 6 p.m., Monday through Saturday. Additional hours may be necessary to make up schedule deficiencies or to complete critical construction activities. For instance, during placement of concrete or during hot weather, it may be necessary to start and stop work much earlier to avoid some activities during high ambient temperatures. During the start-up phase of the KWEP, some activities (such as equipment and system testing) may continue 24 hours per day, 7 days per week. Table 7 depicts a proposed construction plan for the KWEP.

Table 7. KWEP Construction Plan

Activity	Month
Mobilization	Month 1
Survey and mark the boundaries of the construction zone	Month 1-3
Establish parking and staging areas for vehicles and deliveries	Month 1-2
Establish laydown area(s) for materials storage/staging	Month 1–2
Clear and grub	Months 1–12
Road Construction	Months 1-4
Foundation Excavation & Construction	Months 3–12
Assemble and erect wind turbines	Months 12–18
Construct gen-tie line	Months 5–12
Construct operations and maintenance building	Months 4–5
Construct substation	Months 6–18
Commissioning and testing	Months 12–18
Commercial operation	Month 18

2.1.1 *Construction and Operations Transportation Needs*

The KWEP will not provide on-site residential areas for construction workers. Construction workers will most likely commute from the greater Las Vegas areas or from temporary housing in nearby Nipton and Searchlight. At the expected construction peak month, about 350 workers will be needed. A more typical number of workers for non-peak construction periods would be 200 to 300 workers on site with 80 to 150 induced jobs in the communities within an approximate 50-mile driving distance of KWEP.

At the peak of construction, approximately 20-30 carpool vehicles carrying construction workers will be driving to and from the Project Area each day during the typical a.m. and p.m. peak hours. In addition, while the majority of workers are expected to arrive and depart during these peak hours, specialty workers are expected to arrive on-site during non-peak hours. Approximately 5-10 trucks per day are expected to deliver various materials and construction equipment during non-peak periods, and 20-40 trucks per day during peak periods which would be during the foundation pouring phase which could require daily aggregate deliveries.

With construction complete, the operation of the KWEP will require approximately 8 to 20 permanent positions along with approximately 17-34 induced jobs within an approximate 50-mile driving distance from KWEP, depending on final design. The typical permanent employee traffic is not expected to occur until after the peak period of construction is completed. A Traffic Management Plan will be prepared.

2.1.2 *Civil Works Description*

SITE PREPARATION / SURVEYING / STAKING

Prior to the commencement of construction, a land surveyor will obtain or calculate benchmark data, grades, and alignment from plan information and provide control staking to establish the alignments, benchmarks, and elevations. The detailed design documents will furnish data for the horizontal and vertical control points and horizontal alignments, profiles, and elevations. During construction, the

surveyor will reestablish and set additional control points to maintain the horizontal and vertical control points as needed.

SITE CLEANING / GRADING / EXCAVATION

Prior to initiation of grading operations, the construction areas will be surveyed for sensitive plants and any such sensitive plants will be transplanted as per a plan to be determined. The remaining vegetation will be cleared and grubbed of vegetation and miscellaneous debris. All vegetation and debris will be stockpiled and then properly disposed of off-site or vegetation may be ground and used on-site as mulch. The primary grading activities will be associated with the wind turbine/crane pad, and main access road, with lesser quantities associated with facility buildings, parking areas, KWEP substation, and the associated foundations.

For foundation areas, grading will consist of the excavation foundation area and compaction of earth to meet the design requirements. Grading within the project will blend with existing grades as close as possible. Some existing contours will need to be smoothed out for access and crane pad purposes.

Materials suitable for compaction will be stored in stockpiles at designated locations using proper erosion prevention methods. Materials unsuitable for compaction, such as debris and large rocks, will be stockpiled at designated locations for subsequent disposal at an acceptable off-site location. Contaminated materials are not anticipated, but if any are encountered during excavation, they will be disposed of in accordance with applicable laws, ordinances, regulations, and standards.

The portions of the project area that will be graded are expected to result in a balanced cut-and-fill quantity of earthwork to maintain the existing conditions to the extent practical for the protection of the equipment and facilities. Fill would be compacted as necessary, and appropriate dust abatement measures implemented. These measures may include restriction of vehicle speeds, watering of active areas, watering of stockpiles, watering on roadways, track-out control at site exits, and other measures.

WATER USAGE AMOUNTS AND SOURCES DURING CONSTRUCTION

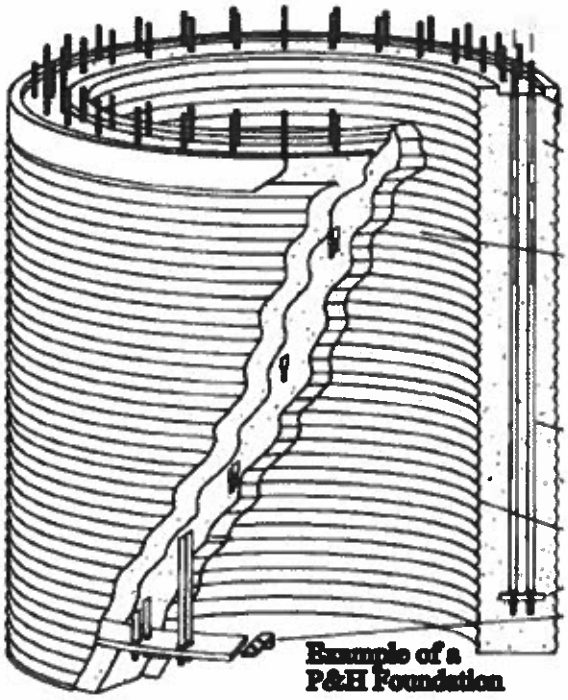
It will be necessary to import water to the project site for use during the construction of the project, and for ongoing operations after the project has been constructed. During construction civil work, water is required for compaction and dust control during the construction of roads, turbine pads, laydown yards, substations, and electrical trench backfilling. It will also be used in the batch plant operations to make concrete for turbine and other foundations and for fire suppression water tank system replenishment (if needed).

The construction phase of the project, which would include all construction civil activities, concrete production, final civil preparations, and post-construction revegetation activities, could utilize approximately 75-100 acre-feet of water depending on which site alternative is selected, weather conditions during construction, and other factors. This amount would be utilized over the 12-to-18-month construction period. It is estimated that 70% of the usage will be for dust control and grading, 20% for concrete needs and 10% for aggregate hydration. A study will be conducted to determine methodologies to reduce water usage during the construction process while adding further certainty to water consumption quantities.

KWEP has identified several nearby private sources of water available to the project for the construction phase. Water required for ongoing standard operations needs will be similarly sourced or may be sourced through the Las Vegas Valley Water District. All water used for construction and operations would be imported by a temporary pipeline or truck and would be stored in water tanks located at the operations and maintenance facility as well as outlying water tanks utilized for fire suppression requirements.

WTG FOUNDATION ALTERNATIVES

Figure 2.1.2a - Drawing of a P&H Patented Tensionless Pier Foundation.



The three types of WTG foundations under consideration are 1) Patrick and Henderson Inc. (P&H) patented tensionless pier foundation, 2) P&H (or similar) rock anchor foundation, or 3) a modified spread-footing foundation.

The P&H pier foundation would be drilled or dug to approximately 30 to 45 feet, depending on the geotechnical conditions and loadings, and would be approximately 14 to 18 feet in diameter. The foundation would be in the configuration of an annulus - two concentric steel cylinders filled with structural concrete. The central core of the smaller, inner cylinder would be filled with soil removed during excavation. The cavity between the cylinders would be filled with concrete and include limited reinforcement steel and full-length anchor bolts bolting the tower to the foundation. Using the high-strength anchor bolts provides post-tensioning to the concrete, assuring the concrete is always in compression, where it is strongest. This style of foundation uses much less concrete (~150 to 250 cubic yards) and therefore results in much less overburden and water use than a typical spread footing.

The rock-anchor foundation is an alternative to the P&H pier foundation. Six to 20 holes of 8" to 18" in diameter, depending on the geotechnical data, would be drilled approximately 35 feet into the bedrock, and steel anchors would be epoxy-grouted in place. A reinforced concrete cap containing the anchor bolts would be poured on the top of the steel anchors to support the tower structure. High-strength anchor bolts are embedded in the concrete to fasten the tower to the foundation.

A spread footing foundation also may be used. This foundation may be square or octagonal and formed with reinforcing steel and concrete. Depending on the geotechnical constraints at the site, this type of foundation may be as large as 50 × 50 feet and 6 to 10 feet thick. Total combined cut and fill volumes for the WTG foundations are estimated at up to 1,000 cubic yards. For all designs, the exposed concrete pad would be approximately 15 to 20 feet in diameter and extend about 1 to 2 feet above grade. Temporary disturbance for construction of all turbines is estimated at about 1.4 acre per turbine for construction impacts.

MAJOR EQUIPMENT INSTALLATION

Construction of the KWEP substation would begin early in the construction process. Heavy foundations and equipment pads will be constructed using trenching machines, compactors, concrete trucks and pumpers, vibrators, forklifts, boom trucks, and large cranes. Similar to site grading and excavation, appropriate dust abatement measures will be identified in a KWEP Dust Control Plan. The O&M building foundation and framework for the buildings will be placed as construction progresses. WTG installation requires specialized equipment and crews. The construction activities necessary for the assembly and installation of a WTG include WTG component delivery and storage, crane movement or assembly/disassembly, and connection of the wind turbine to the collection system. Limited construction

zones would be built around each WTG site directly adjacent to the WTG foundation and would support the crane pad area. The crane pad will vary according to final turbine selection and is expected to be approximately 290 x 210 feet and would require adequate structural support for the cranes during installation, WTG assembly area and limited storage during erection of the WTG.

The crane pad area would be cleared and level enough (generally less than 2% slope) to allow for the WTG components to be staged for installation.

Engineers would work to minimize the amount of land disturbance required at each site, and where possible only a minimal amount of vegetation would be removed to allow for the WTG component delivery. When such is practical and economical, portions of these pads would then be revegetated once construction is complete. To the greatest extent possible, the areas of construction and operation would be consolidated for efficient land use in order to minimize disturbance (for example, crane pads would in some cases be constructed to coincide with road areas).

The WTG components consist of the 4 to 6 tower sections, a nacelle, a drive train, a rotor hub, 3 blades, and step-up transformer. As the WTG components arrive at the project site, they would be staged at a laydown yard and then routed to the WTG sites where they are to be installed. When trucks arrive at each site, one or more small cranes would remove the cargo. Each site would have a plan prepared in advance for the arrangement of major components before erection. In some instances, some major components may be off-loaded and temporarily stored at a laydown area. These components would then be moved to their wind turbine pad as soon as feasible.

When the erection crane first arrives onto the project site, it would be taken to the location for the first WTG installation. The crane would be assembled on that site, and then used to install the WTG. Once the WTG at that site is erected, the crane either would be "walked" to the next WTG site using the crane's tracked base (providing that type of crane is used) or it would be partially disassembled, moved and reassembled at the next turbine pad.

Crane crews may erect the WTGs soon after all components arrive to minimize the amount of time the equipment is on the ground. The tower, which usually consists of three or four sections, would be installed first. Once the last tower section is in place, the nacelle is secured to the top of the tower. Finally, the rotor hub would be lifted into place and secured onto the nacelle, followed by the three blades.

Each WTG is placed on a foundation. The WTG foundation anchors the WTG (consisting of the tower, hub, blades, and nacelle) securely to the ground. The WTG foundations would be one of three commonly used designs, depending on the geotechnical constraints at each WTG site and other factors, including wind patterns at the site, site access, material availability, and the type of WTG manufacturer selected for the Project.

TESTING AND COMMISSIONING

After the equipment is connected, electrical service will be verified, motors checked, and control logic verified. The various hydraulic systems and electrical transformers will be charged with their appropriate fluids and go through individual start-up testing. Once all the individual systems have been tested, the overall plant will be ready to be tested under fully integrated conditions.

2.1.3 *Gravel, Aggregate, Concrete Needs, and Sources*

Concrete would be required for construction of foundations. Concrete for foundations would be supplied from a temporary batch plant located on-site at one of the laydown yards. Cement and aggregate needs are anticipated to be sourced locally from adjacent commercially operated resources. If additional resources are needed to complete the foundation, they will be sourced from the most efficient resources considering cost and impact to the environment as well as dust abatement.

3 RELATED FACILITIES AND SYSTEMS

3.1 Transmission System Interconnect

Crescent Peak Renewables, LLC executed a Large Generator Interconnection Agreement (LGIA) for the Kulning Wind Energy Project after completion of Phase 1 and Phase 2 studies as a part of CAISO Cluster 11 for 308 MW AC terminating to a point of interconnection at the Sloan Valley Switching station.

3.1.1 *Existing and Proposed Transmission System*

Nearly all of the power produced by the KWEP will be delivered to the grid. Any power needed at the site for plant auxiliaries such as turbine pumps, control systems, and general facility loads including lighting, heating, ventilation, and air conditioning, may be provided from external sources and not from the generation on-site. Final wind turbine generator selection, CAISO Grid rules, and the project power purchase agreement will dictate how onsite power consumption is ultimately addressed.

3.1.2 *Power Offtake*

The market demand for wind energy is currently higher than it is for solar energy due to the time-of-day delivery and the saturation of the solar market in this region. Large utilities, Corporate Offtakers and/or Community Choice Aggregation (CCA) entities will purchase power from the KWEP and resell this energy to the end consumer. The Applicant is presently seeking a single or multiple power purchase agreements (PPAs) that will allow flexibility in pricing and facilitate services to many offtakers.

4 OPERATIONS AND MAINTENANCE

4.1 Operations Staff and Vehicles

The project would create operational jobs for approximately 8 to 20 people. The operations work force would include an on-site facility manager, administrative support, SCADA instrument and WTG technicians, and other operations and maintenance personnel. The majority of the O&M job positions would be full-time and would be employed throughout the anticipated life of the project.

It is also expected that there would be an additional 17 to 34 jobs induced in the region during the O&M phase for O&M materials supply, O&M equipment supply and maintenance, lodging and food needs for visitors and/or visiting work crews, and other area jobs that would be induced by the ongoing operation and maintenance of KWEP.

Equipment used by the operations workforce would include pickup trucks, sport utility vehicles, boom trucks, welding rigs, motor graders and water trucks (road maintenance), and all-terrain vehicles. All equipment used in the operation of this project would be maintained onsite or at nearby maintenance facilities and would be inspected regularly by authorized and trained facility staff. A complete schedule would be established before the start of operations.

The access roads built and used during the construction phase would be maintained throughout commercial operations. During operations, all project access roads would be evaluated and graded as necessary to facilitate operations and maintenance. In addition to grading, from time to time the application of new gravel may be necessary to maintain road surfaces. Water and/or other environmentally friendly dust control suppressant products would be used as needed for dust control.

4.2 Operations and Maintenance Activities

The plant would be maintained by staff personnel for normal preventive maintenance. This would include daily inspection of field components, condition assessment of critical equipment, and routine lubrication of equipment. The KWEP facilities would be repainted on a regular basis to maintain its appearance and protect it from the elements.

4.3 Water Use

During the operation and maintenance period, water is needed for operation of the maintenance facility, equipment and components washing, site/road maintenance and dust control, on-going revegetation efforts support, and fire suppression water tank system replenishment. Once the project is operational, standard ongoing operations would require approximately 36,500 gallons per year in initial years of operation including post-construction revegetation and initial road maintenance activities have been completed.

Drinking (potable) water will be supplied for workers on-site and is estimated to be approximately 150 to 400 gallons per month varying seasonally and according to staffing levels and work activities.

4.4 Waste and Hazardous Materials Management

KWEP wastes may include relatively small amounts of wastewater, nonhazardous solid waste, hazardous solid waste, and hazardous liquid waste typically found on a wind generation facility. A variety of safety-related plans and programs will be developed and implemented to ensure safe handling, storage, and use of hazardous materials. Plant personnel will be supplied with appropriate personal protective equipment (PPE) and will be properly trained in the use of PPE and the handling, use, and cleanup of hazardous materials used at the facility, as well as procedures to be followed in the event of a leak or spill. Adequate supplies of appropriate cleanup materials will be stored on-site.

4.4.1 *Hazardous Chemicals*

A variety of hazardous materials could be used in limited quantities stored on site during construction and operation of the KWEP, as summarized below. Hazardous materials used during construction and operation could include gasoline, diesel fuel, oil, lubricants, and small quantities of solvents and paints.

For the BESS, battery chemistry options include NCA (lithium-nickel-cobalt-aluminum), NMC (nickel-manganese-cobalt), LiFePO4 (lithium-iron-phosphate), flow batteries, or more advanced technologies.

Design and engineering will follow original equipment manager guidelines while adhering to all applicable local, state, and federal code. Maintenance will be provided by the original equipment manufacturer. Work crews will be properly trained in the use of PPE and the handling, use, and operation of energy storage components at the facility, as well as procedures to be followed in the event the facility is operating out of specification. The system will be remotely monitored and contain multiple active and passive safety features designed to isolate electrical issues from the multiple modules.

During construction, all hazardous materials wouldbe stored on-site in storage tanks/vessels/containers that are specifically designed for the characteristics of the materials to be stored. The storage facilities would include secondary containment in case of tank/vessel failure until transferred to recycling/disposal facility. The project proponent will explore the use of plant-based lubricants to negate petroleum products onsite.

- **Fuel (diesel)**
- **Fertilizers**
- **Hydraulic fluid**
- **Transformer oil**

4.4.2 *Wastewater*

The sanitary wastewater system would collect sanitary wastewater at the O&M building. Portable chemical toilets would be provided for construction workers in the solar fields. The sanitary wastewater from sinks, toilets, showers, and other sanitary facilities in the O&M building would be discharged to a sanitary septic system and either an on-site leach field or pump-out holding tank. The septic system would be permitted and designed in accordance with all state and county regulations.

4.4.3 *Solid and Non-Hazardous Waste*

Construction, operation, and maintenance of the KWEP will generate non-hazardous solid wastes typical of power generation or other industrial facilities. The plant wastes that are produced would include oily rags, worn or broken metal and machine parts, defective or broken electrical materials, other scrap metal and plastic, insulation material, empty containers, paper, glass, and other miscellaneous solid wastes including the typical refuse generated by workers. These materials would be disposed off-site by means of contracted refuse collection and recycling services. Waste collection and disposal would be in accordance with applicable regulatory requirements to minimize health and safety effects.

4.4.4 *Hazardous Solid and Liquid Waste*

KWEP would develop a Hazardous Materials Management Plan (HMMP) to address transportation storage, use, and disposal of hazardous materials expected to be used on-site during construction and operation. The HMMP would be provided as an appendix to the final POD. The HMMP would also identify requirements for notices to federal and local emergency response authorities and include emergency preparedness and response plans, including spill response.

KWEP would develop a Spill Prevention Control and Countermeasures (SPCC) Plan for the Project in accordance with EPA requirements at 40 CFR 112, Oil Pollution and Prevention. The SPCC Plan, along with secondary containment design, would be developed in accordance with good engineering practices, obtaining the full approval of management at a level of authority to commit the necessary resources to fully implement the plan, and would meet the regulatory requirements. The SPCC Plan would be provided as an appendix to the final POD. The SPCC would ensure that adequate containment would be

provided to control accidental spills, that adequate spill response equipment and absorbents would be readily available, and that personnel would be properly trained in how to control and clean up any spills.

Petroleum products such as gasoline, diesel fuel, crankcase oil, lubricants, and cleaning solvents would be present within the project area and the transmission line corridor during construction. These products would be used to fuel, lubricate, and clean vehicles and equipment and would be transported in containerized trucks or in other approved containers. Petroleum materials would be properly stored to prevent drainage or accidents. Preventive measures such as the use of vehicle drip pans for overnight parking areas would be used. The construction or maintenance crew foreman would ensure compliance with Nevada SWPPP guidelines for spill prevention and response. Additionally, if storage of petroleum products during construction, operation, and maintenance is required by KWEP, the standards developed within the HMMP and SPCC Plan would be followed. Enclosed containment would be provided for petroleum wastes, and petroleum-related construction waste would be removed to a disposal facility authorized to accept such materials.

4.5 Termination and Reclamation

The KWEP would have a useful life of at least 25–30 years after which time, if a ROW for a repower and/or extension period for the existing turbines cannot be granted, the facilities would be removed. Applicant would be required to post a reclamation bond as a condition of authorization issuance for the initial Type 3 Right of Way. The value of this bond would be determined in accordance with BLM policy.A Preliminary Decommissioning and Site Reclamation Plan acceptable to BLM would be prepared by Applicant and submitted with the bond.

At the end of the useful life of the facility and the termination of the ROW grant, Applicant would remove all improvements. Materials that could be reused or recycled would be hauled away from the site and sold. Materials that could neither be reused nor recycled would be dismantled and hauled to the nearest approved landfill. Hazardous materials that could not be reused or recycled would be disposed of at approved facilities.

As may be required, Applicant would remove foundations to below the current ground contour level and/or restore contours over the foundations to be close to pre-project conditions. Some project roads would be left in place when appropriate to facilitate long-term fire breaks and firefighter access. If required, Applicant would also remove the stormwater management berms, restore the pre-project contours of turbine and crane pads, reclaim roads and reseed those areas with a native seed mix. During these reclamation operations, it is anticipated that fugitive dust abatement measures comparable to those applied during the KWEP construction would be implemented.

The transmission line and towers would be removed, except some structures and equipment may be required to remain in place based on final interconnection agreements. Conductors and tower steel would be sold for reuse or recycling. The KWEP substation, including all structures and fencing, would be removed. Foundations for the towers and substation facilities would be removed to one foot below ground surface and contours restored.

It is not possible to predict all of the conditions and management objectives that would exist at the time of decommissioning. Therefore, decommissioning details would be developed and provided to BLM when the time for permanent closure is closer and more information is available. The BLM would require the Applicant to submit an abandonment plan that would be reviewed and revised as needed in order to be approved by the BLM. The plan would include all activities required to dispose of or store all hazardous and toxic materials and chemicals associated with the KWEP. This plan would discuss all currently applicable laws, ordinances, regulations, and standards associated with the safe storage or disposal of

these materials. The plan would also include a description of procedures for notification of regulatory agencies.

5 ENVIRONMENTAL CONSIDERATIONS AND OTHER RESOURCES

Effects on environmental resources will be analyzed and mitigated through the NEPA process.

5.1 General Vegetation

General vegetation found in the Application Area consists mainly of Sonora-Mojave Creosotebush-White Bursage Desert Scrub and Mojave Mid-Elevation Mixed Desert Scrub (U.S. Geological Survey 2004). The creosote-bursage ecological system is found in broad valleys, lower bajadas, plains, and low hills in the Mojave and lower Sonoran Deserts. This system ranges from sparse to moderately dense layer (2%–50% cover). Creosote bush (*Larrea tridentata*) and white bursage (*Ambrosia dumosa*) are the typical dominant species, but a variety of shrub, dwarf-shrub, and cacti may be present to co-dominant.

Typically, the loss of vegetation communities would not be considered a significant impact, unless those vegetation communities support sensitive wildlife or plant species or there are substantial amounts removed (i.e., >10% of a species' range). In some cases, a local, State, or federal agency may also provide protection to a vegetation community because it is special or unique for the area. At this time, it is unknown if special or unique vegetation communities occur in the project area. The Applicant commissioned rare plant surveys over the project site in Spring 2018 to characterize and assess vegetation communities occurring at the site and inform the project's NEPA review.

In addition to general vegetation, the BLM and the State of Nevada have protections in place for cactus, yucca, and Christmas tree species (NRS 527.060–537.120 and NAC Chapter 527). The BLM requires preparation of a Site Restoration/Revegetation and Decommissioning Plan, which includes measures to salvage these species.

The project reclamation plan could include reseeding with a native seed mix as necessary.

5.1.1 *Invasive Plant Species and Noxious Weeds*

Noxious weeds are defined by the State of Nevada as "any species of plant which is, or liable to be, detrimental or destructive and difficult to control or eradicate" (NRS 555.005). Preparation of a noxious weed risk assessment and completion of a project-specific weed management plan would likely be required. In addition, the need for a Pesticide Use Plan will be evaluated throughout the environmental analysis for the project and prepared in accordance with BLM guidelines.

5.2 General Wildlife

Wildlife in the Application Area consists of reptiles, amphibians, insects, birds, and game and non-game species found in the Mojave Desert ecosystem. The Applicant has preliminarily assessed the following categories of wildlife at the project site.

- **Desert Tortoise:** A desert tortoise report was completed in July 2018 that covered the proposed project area. GIS analysis supported by site reconnaissance indicated that the vast majority of the project area was not suitable habitat for desert tortoise because the soils are very poorly suited for

tortoises to establish their burrows. In consultation with BLM, a protocol-level survey was conducted of the potentially suitable habitat. One live tortoise was located within the transmission ROW that is proposed for the KWEP. The project area is not located within desert tortoise critical habitat, ACECs intended to protect desert tortoise, or identified desert tortoise connectivity corridors. Potential impacts to desert tortoise will be addressed through the development of mitigation measures in the course of the NEPA process.

- **Golden Eagle**: Avian field surveys encompassing the proposed project area were conducted between 2015-2017. Survey methods were developed in consultation with BLM, NDOW, NPS, and USFWS. While eagles were observed, the survey report concluded that "Golden eagles exhibited low use across seasons in the Project area." The survey report noted that "the Project area does not provide an abundance of prey for golden eagles" and "[s]hort vegetation and relatively flat topography limit[] available nesting habitat for eagles." Potential impacts to golden eagles will be addressed through assessment of BLM's 2011 desert-wide golden-eagle survey results, by site-specific surveys as necessary, and by way of a Project-specific Bird and Bat Conservation Strategy (BBCS) which will include measures to avoid, minimize, and mitigate impacts to birds, including golden eagles, and could satisfy the requirements of an Eagle Conservation Plan pursuant to the Bald and Golden Eagle Protection Act if deemed necessary.
- **Migratory Birds**: Most of the nation's avian species are protected under the Migratory Bird Treaty Act of 1918. Impacts to avian species will be assessed by preparing a site-specific avian survey and by preparing the project BBCS as informed by the avian field surveys prepared for the project site between 2015 and 2017.
- **Desert Big Horn:** Significant impacts to desert big horn sheep, a big game hunting species (approximately 270 to 290 rams are harvested annually in Nevada alone), are not anticipated to occur as a consequence of development of the KWEP because of its highly dispersed development footprint. Pattern Energy's Ocotillo Wells wind farm Desert Big Horn Sheep Study supports findings that wind turbines do not negatively affect the movement patterns of the closely related but endangered peninsular big horn sheep subspecies. The Applicant intends to closely study the Ocotillo precedent to inform management strategies for KWEP's interaction with the unlisted desert big horn sheep subspecies.

5.3 Threatened and Endangered Species

The federally threatened desert tortoise is the only threatened or endangered species known by the Applicant to occur near the project site. As stated above, the project site is not suitable habitat due to slopes, elevation, and soil classification. Project-specific mitigation measures, if needed, will be determined during the EIS process.

5.4 Air Quality

Construction and operation would result in small amounts of dust and tailpipe emissions from vehicle traffic. All vehicles and construction equipment would be maintained to minimize exhaust emissions and would be properly muffled to minimize noise. There would be a short-term increase in dust emissions during construction activities that would be mitigated by the application of best management practices. Disturbed areas would be watered as necessary to suppress dust, during construction and operation. An air quality analysis will be prepared to support the proposed project's NEPA review.

5.5 Visual Resources

Visual resources (the landscape) consist of landform (topography and soils), vegetation, bodies of waters (lakes, streams, and rivers), and human-made structures (roads, buildings, and modifications of the land, vegetation, and water). These elements of the landscape can be described in terms of their form, line, color, and texture. The visual impact of projects is often raised as an issue during project development. The risk is determined by evaluating the existing landscape, including current structures and developments, the proximity to viewers with high sensitivity, and how the proposed KWEP would contrast with existing conditions. The Application Area occurs in an area of public land with little surrounding development and some transmission lines as well as commercial mineral and gem extraction. The nearest potential viewers would be citizens of Searchlight Nevada and Nipton California as well as motorists traveling on highway 164. The construction and operation of a wind energy generating facility would result in visual contrasts to the line, color, form, and texture of the existing landscape in the Application Area. A Visual Contrast Analysis would be completed to fully identify potential visual impacts.

BLM lands surrounding the project site are managed as visual resource management (VRM) Class II by operation of the now 23-year-old Las Vegas Resource Management, with most of the neighboring Piute Valley designated as VRM Class II. The objective of VRM Class II is to retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. The KWEP would be better suited for a VRM Class III designation to render the Las Vegas RMP consistent with West Wide Wind Mapping Project's identification of the project site as a viable wind resource area.

5.6 Cultural Resources

A preliminary cultural resource records search and field study has been conducted through the State Historic Preservation Office's (SHPO) Nevada Cultural Resource Information System (NVCRIS) to identify previous cultural resource projects and archeological sites within the Application Area. All cultural resources will be avoided during construction activities. Standard unanticipated discovery mitigation measures are expected to be required of the project, as well as National Historic Preservation Act Section 106 compliance.

5.7 Recreational Access

The KWEP area is approximately 35 miles south of Las Vegas and currently provides trail access to off-road-vehicles, hikers and outdoor enthusiasts while offering opportunities to view both flora and fauna in their natural habitat. Upland gamebird hunting is known to exist in and around the project vicinity as well as blacktail deer hunting. In addition to commercial scale mining operations adjacent to the project, smaller recreational mines exist around the project site.

The Proponent proposes to study and consider implementation within the project footprint of one or more of the following measures as a part of the KWEP.

- Improving existing trails and trailheads access and providing vehicular access to EMS services
- Providing gravel or paved parking and trails to accommodate wheelchair access
- Providing enhanced vehicle access and enhanced signage to designated trail heads
- Providing elevated wildlife viewing and/or hunting stands with associated trail access

- Establishing and providing support to a KWEP hosted visitors center highlighting local flora, wildlife, historic sites, mining, indigenous cultures and ranches

- Cooperation with area users in an effort to evaluate construction and operation of one or two campgrounds within or adjacent to KWEP

- Installation and operation of an EV charging station adjacent to Highway 164 that could charge vehicles visiting the site or passing through the area from clean energy generated by the KWEP

6 LITERATURE CITED

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Table 4 - Application Area and Gen-Tie Alignment Aliquot Parts

Meridian	Township	Range	Section	Subdivision Note	
Application Area					
Mount Diablo	28S	61E	13	NWSW	
Mount Diablo	28S	61E	13	NWSE	
Mount Diablo	28S	61E	13	NESW	
Mount Diablo	28S	61E	13	NESE	
Mount Diablo	28S	61E	13	SW	Less Patent Claim
Mount Diablo	28S	61E	13	SE	
Mount Diablo	28S	61E	14	NWSF	
Mount Diablo	28S	61E	14	NWSE	
Mount Diablo	28S	61E	14	NE	
Mount Diablo	28S	61E	14	SW	
Mount Diablo	28S	61E	14	SE	Less Patent Claim
Mount Diablo	28S	61E	23	NW	
Mount Diablo	28S	61E	23	NE	Less Patent Claim
Mount Diablo	28S	61E	23	SWNE	
Mount Diablo	28S	61E	23	SWSE	
Mount Diablo	28S	61E	23	SE	
Mount Diablo	28S	61E	24	NW	Less Patent Claim
Mount Diablo	28S	61E	24	NE	
Mount Diablo	28S	61E	24	SW	
Mount Diablo	28S	61E	24	SE	
Mount Diablo	28S	61E	25		Less Mine Claim
Mount Diablo	28S	61E	26	NWNE	
Mount Diablo	28S	61E	26	NWSE	
Mount Diablo	28S	61E	26	NE	
Mount Diablo	28S	61E	26	SENE	
Mount Diablo	28S	61E	26	SESE	
Mount Diablo	28S	61E	34	SESE	
Mount Diablo	28S	61E	35	NENE	
Mount Diablo	28S	61E	35	NESE	
Mount Diablo	28S	61E	35	SW	
Mount Diablo	28S	61E	35	SE	
Mount Diablo	28S	61E	36		
Mount Diablo	28S	62E	18	NWSW	
Mount Diablo	28S	62E	18	NWSE	
Mount Diablo	28S	62E	18	NESW	
Mount Diablo	28S	62E	18	NESE	
Mount Diablo	28S	62E	18	SW	
Mount Diablo	28S	62E	18	SENW	
Mount Diablo	28S	62E	18	SENE	

Mount Diablo	28S	62E	18	SESW	
Mount Diablo	28S	62E	19	NWNW	
Mount Diablo	28S	62E	19	NWNE	
Mount Diablo	28S	62E	19	NWSW	
Mount Diablo	28S	62E	19	NENW	
Mount Diablo	28S	62E	19	NENE	
Mount Diablo	28S	62E	19	SW	
Mount Diablo	28S	62E	19	SESW	
Mount Diablo	28S	62E	19	SESE	
Mount Diablo	28S	62E	30	NWNW	
Mount Diablo	28S	62E	30	NWSW	
Mount Diablo	28S	62E	30	SWNW	
Mount Diablo	28S	62E	30	SWSW	
Mount Diablo	28S	62E	31	NW	
Mount Diablo	28S	62E	31	NE	
Mount Diablo	28S	62E	31	SWNW	
Mount Diablo	28S	62E	31	SWSW	
Mount Diablo	29S	61E	1		Less Patent Claim
Mount Diablo	29S	61E	2	NE	
Mount Diablo	29S	61E	2	SWNE	
Mount Diablo	29S	61E	2	SWSE	
Mount Diablo	29S	61E	2	SE	
Mount Diablo	29S	61E	10	SENE	
Mount Diablo	29S	61E	11	NWNE	
Mount Diablo	29S	61E	11	NE	
Mount Diablo	29S	61E	11	SE	
Mount Diablo	29S	61E	11	SWNE	
Mount Diablo	29S	61E	11	SWSE	
Mount Diablo	29S	61E	11	SWSW	
Mount Diablo	29S	61E	12	NW	
Mount Diablo	29S	61E	12	NENW	
Mount Diablo	29S	61E	12	NENE	
Mount Diablo	29S	61E	12	SW	
Mount Diablo	29S	61E	12	SENW	
Mount Diablo	29S	61E	12	SESE	
Mount Diablo	29S	61E	12	SENW	
Mount Diablo	29S	61E	13	NWNW	
Mount Diablo	29S	61E	13	NWNE	
Mount Diablo	29S	61E	13	NWSW	
Mount Diablo	29S	61E	13	NENW	
Mount Diablo	29S	61E	13	NENE	
Mount Diablo	29S	61E	13	SWNW	
Mount Diablo	29S	61E	13	SWSW	
Mount Diablo	29S	61E	13	SWSE	
Mount Diablo	29S	61E	13	SESE	
Mount Diablo	29S	61E	13	SESW	
Mount Diablo	29S	61E	24	NENW	

Mount Diablo	29S	61E	24	NENE

Table 5 Transmission Path to Gen-Tie

Township	Range	Section	QQ section	Q section	QQ
25S	61E	24	NE	NE	NE 1/4 of the NE 1/4
			SE	NE	SE 1/4 of the NE 1/4
			NE	SE	NE 1/4 of the SE 1/4
			SE	SE	SE 1/4 of the SE 1/4
25S	61E	25	SE	NE	SE 1/4 of the NE 1/4
			NE	NE	NE 1/4 of the NE 1/4
			SE	SE	SE 1/4 of the SE 1/4
			NE	SE	NE 1/4 of the SE 1/4
25S	61E	36	NE	NE	NE 1/4 of the NE 1/4
			SE	NE	SE 1/4 of the NE 1/4
			SE	SE	SE 1/4 of the SE 1/4
			NE	SE	NE 1/4 of the SE 1/4
26S	62E	6	SE	SW	SE 1/4 of the SW 1/4
			L9		L9
			L11		L11
			L10		L10
			L12		L12
			L15		L15
			L13		L13
26S	62E	7	SW	NE	SW 1/4 of the NE 1/4
			NE	NW	NE 1/4 of the NW 1/4
			SE	NW	SE 1/4 of the NW 1/4
			SW	SE	SW 1/4 of the SE 1/4
			NW	SE	NW 1/4 of the SE 1/4
			SE	SE	SE 1/4 of the SE 1/4
26S	62E	17	SW	NW	SW 1/4 of the NW 1/4
			SE	SW	SE 1/4 of the SW 1/4
			NE	SW	NE 1/4 of the SW 1/4
			NW	SW	NW 1/4 of the SW 1/4
26S	62E	18	SE	NE	SE 1/4 of the NE 1/4
			NE	NE	NE 1/4 of the NE 1/4
26S	62E	20	SE	NW	SE 1/4 of the NW 1/4
			NE	NW	NE 1/4 of the NW 1/4
			SW	NW	SW 1/4 of the NW 1/4
			NW	SW	NW 1/4 of the SW 1/4
			SW	SW	SW 1/4 of the SW 1/4
			NE	SW	NE 1/4 of the SW 1/4
26S	62E	29	SW	NW	SW 1/4 of the NW 1/4
			NW	NW	NW 1/4 of the NW 1/4
			SW	SW	SW 1/4 of the SW 1/4

			NW	SW	NW 1/4 of the SW 1/4
26S	62E	30	NE	SE	NE 1/4 of the SE 1/4
			SE	SE	SE 1/4 of the SE 1/4
26S	62E	31	SE	NE	SE 1/4 of the NE 1/4
			NE	NE	NE 1/4 of the NE 1/4
			NE	SE	NE 1/4 of the SE 1/4
			L15		L15
			L17		L17
			L16		L16
			L14		L14
27S	61E	25	SE	NE	SE 1/4 of the NE 1/4
			NE	SE	NE 1/4 of the SE 1/4
			SE	SE	SE 1/4 of the SE 1/4
			SW	SE	SW 1/4 of the SE 1/4
27S	61E	35	SW	SE	SW 1/4 of the SE 1/4
			NE	SE	NE 1/4 of the SE 1/4
			SE	SE	SE 1/4 of the SE 1/4
27S	61E	36	NW	NE	NW 1/4 of the NE 1/4
			SE	NW	SE 1/4 of the NW 1/4
			SW	NW	SW 1/4 of the NW 1/4
			NE	NW	NE 1/4 of the NW 1/4
			NW	SW	NW 1/4 of the SW 1/4
27S	62E	6	SE	NE	SE 1/4 of the NE 1/4
			SE	SE	SE 1/4 of the SE 1/4
			NE	SE	NE 1/4 of the SE 1/4
			L1		L1
27S	62E	7	SW	NE	SW 1/4 of the NE 1/4
			NW	NE	NW 1/4 of the NE 1/4
			NE	NE	NE 1/4 of the NE 1/4
			SW	SE	SW 1/4 of the SE 1/4
			NW	SE	NW 1/4 of the SE 1/4
27S	62E	18	NW	NE	NW 1/4 of the NE 1/4
			NE	NW	NE 1/4 of the NW 1/4
			SE	NW	SE 1/4 of the NW 1/4
			SE	SW	SE 1/4 of the SW 1/4
			NE	SW	NE 1/4 of the SW 1/4
27S	62E	19	NE	NW	NE 1/4 of the NW 1/4
			SE	NW	SE 1/4 of the NW 1/4
			L4		L4
			L3		L3
			L2		L2
27S	62E	30	L2		L2
			L1		L1
28S	61E	2	SW	NE	SW 1/4 of the NE 1/4

			SE	NW	SE 1/4 of the NW 1/4
			SW	SW	SW 1/4 of the SW 1/4
			NE	SW	NE 1/4 of the SW 1/4
			NW	SW	NW 1/4 of the SW 1/4
			L2		L2
28S	61E	3	SE	SE	SE 1/4 of the SE 1/4
28S	61E	10	NE	NE	NE 1/4 of the NE 1/4

Table 5. Summary of Permits Required or Potentially Required

Authorization	Agency or Authority	Statutory Reference	Permit or Authorization Trigger
Federal			
Right-of-Way for Land under Federal Management	BLM	Federal Land Policy and Management Act of 1976 (Public Law [PL] 94-579; 43 United States Code [USC] 1761–1771; 43 Code of Federal Regulations [CFR] 2800)	Federal land, federal permit, federal funding (i.e., federal nexus).
NEPA Compliance to Grant ROW	BLM	NEPA (PL 91-190, 42 USC 4321–4347, January 1, 1970, as amended by PL 94-52, July 3, 1975; PL 94-83, August 9, 1975; and PL 97-258, 4(b), September 13, 1982)	Federal nexus.
Endangered Species Act (ESA)	U.S. Fish and Wildlife Service (USFWS)	ESA (PL 93-205, as amended by PL 100-478 [16 USC 1531, *et seq*.])	Section 7 ESA triggered by "take" of listed species, with a federal nexus; Section 10 ESA (Clark County Multiple Species Habitat Conservation Plan [Clark County 2000]) triggered by "take" of listed species, without a federal nexus.
Migratory Bird Treaty Act	USFWS	16 USC 703–711; 50 CFR Subchapter B	No permit available allowing take of migratory bird.
Bald and Golden Eagle Protection Act	USFWS	16 USC 668-668(d)	Eagle use in the Application Area.
Clean Water Act (CWA)	USACE	CWA Section 404	Placement of dredged or fill materials in waters of the U.S. or wetlands requires a federal permit.
National Historic Preservation Act (NHPA) Compliance	Nevada State Historic Preservation Office (SHPO)	NHPA 106 (PL 89-665; 16 USC 470 *et seq*.)	Federal nexus.
No Hazard Declaration	Federal Aviation Administration	49 USC 1501; 14 CFR 77	Required if structures are greater than 200 feet tall in designated airport areas.
Consultation Regarding Military Radar	Department of Homeland Security	Not applicable	Recommended if structures are over 100 feet tall.
State			
NHPA 106 Determination of Effect Concurrence	Nevada SHPO	16 USC 470 *et seq*., NRS 383	Federal nexus or human remains are discovered.

Table 5. Summary of Permits Required or Potentially Required

Authorization	Agency or Authority	Statutory Reference	Permit or Authorization Trigger
Utilities Environmental Protection Act (UEPA) – Permit to Construct	Public Utilities Commission of Nevada	NRS 704.820–704.900, Nevada Administrative Code (NAC) 704.9063, NAC 704.9359–704.9361	Greater than 70-MW renewable energy facility or a 200-kV transmission line
Rare and Endangered Plant Permit	Nevada Division of Forestry	NRS 527.260–527.300	Removal of critically endangered plants.
Desert Tortoise and Gila Monster Handling Permit	Nevada Department of Wildlife	NAC 503.093	Handling of protected wildlife.
Native Cacti and Yucca Commercial Salvaging and Transportation Permit	Nevada Division of Forestry	NRS 527.050–527.110	Removal or possession of six or more protected cacti in any 1 calendar day or of less than six for 7 or more consecutive calendar days.
Incidental Take Permit	Nevada Department of Wildlife	NRS 503.584–503.589	Capture, removal, or destruction of a fully protected species.
CWA, Section 401	NDEP, Bureau of Water Quality Planning	33 USC 1251 *et seq*.	Discharge into a water, wash, or wetland connected to a navigable water.
CWA, Section 402 National Pollutant Discharge Elimination System Notification for Stormwater Management during Construction	NDEP	33 USC 1251 *et seq*.	Construction activities larger than 1 acre that will discharge stormwater runoff from the construction site into a municipal separate stormwater sewer system or into waters of the U.S.
Groundwater Discharge Permit	NDEP, Bureau of Water Pollution	NRS 445A.300–730, NAC 445A.070–348, NAC 445A.810–925	Discharge of groundwater from construction sites into waters of the U.S.
ROW Occupancy Permit	NDOT	NRS 408.423, 408.210, NAC 408	Construction within an NDOT ROW.
State, Continued			
Over Legal Size/Load Permit	NDOT	NRS 484.437–775, NAC 484.300–580	Exceed 80,000 pounds gross weight; or Exceed 8 feet, 6 inches in width; or Exceed 14 feet in height; or Exceed 10 feet of front or rear overhang; or Exceed 70 feet in length.
Uniform Permit (for Transportation of Hazardous Materials)	Nevada Department of Public Safety	NAC 459.979	Transportation of hazardous materials in a vehicle on a public highway.
Encroachment ROW Occupancy Permits	NDOT		Transmission Line Road Crossings
Local Clark County			

Table 5. Summary of Permits Required or Potentially Required

Authorization	Agency or Authority	Statutory Reference	Permit or Authorization Trigger
Special Use Permit	Clark County Planning Commission	Clark County Zoning Ordinance Title 30	Triggered if the activity or facility does not meet land use permit conditions or conditions need to be modified/waived.
Dust Control Permit	Clark County Department of Air Quality and Environmental Management	Clark County Air Quality Regulations. Clean Air Act of 1977 and amendments (NRS 321.001, 40 CFR Subpart C, 42 USC 7408–7409)	Construction activities impacting greater than 0.25 acre.
Commercial Septic Holding Tank Permit	Southern Nevada Health District	NRS 439, 444.650	Septic system with less than 3,000-gallon capacity. NDEP review required if over 3,000 gallons.
Grading Permit	Clark County Civil Engineering and Clark County Building Department	Clark County Title 30.32.040	Grading activities in Clark County.
Building Permit	Clark County Comprehensive Planning Department	Clark County Title 30.32.030	Construction of a building in Clark County.
Federal Emergency Management Agency Map Review and Clark County Regional Flood Control District (CCRFCD) Plan Compliance	CCRFCD	CCRFCD Uniform Regulations for Control of Drainage	Requires an approved drainage study for sites associated with construction of a new facility requiring more than 2 acres within a Clark County, Nevada, ROW.