

# Executive Summary

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## Introduction

This environmental impact report (EIR) analyzes the environmental effects of the proposed Hatchet Ridge Wind project (proposed project), recommends measures to reduce or avoid potential environmental damage resulting from the project, and identifies alternatives to the proposed project. This EIR also discloses the proposed project's significant environmental effects that cannot be avoided, growth-inducing effects, effects found not to be significant, and significant cumulative impacts.

An EIR is a public informational document used in the planning and decision-making process. Its purpose is not to recommend either approval or denial of a project, but to provide information to aid in the decision-making process. Although the EIR does not control the ultimate decision on the proposed project, Shasta County (County), as lead agency, must consider the information in the EIR and respond to each significant effect identified in the EIR by requiring feasible mitigation measures or adopting overriding considerations for significant and unavoidable impacts.

The California Environmental Quality Act (CEQA) requires the County to prepare an EIR that reflects the independent judgment of the County regarding the impacts of the project, the level of significance of the impacts both before and after mitigation, and mitigation measures proposed to avoid or reduce the impacts.

## Project Description

### Overview

Hatchet Ridge Wind LLC (HRW) is proposing to build the Hatchet Ridge Wind project. The proposed project would generate up to 102 megawatts (MW) of electricity. The project may comprise up to sixty-eight 1.5-MW wind turbines (i.e., a 102-MW facility utilizing relatively small turbines) or as few as forty-two 2.4-MW wind turbines (i.e., a 100.8-MW facility utilizing relatively large turbines). Because the applicant has selected it as the preferred option, this analysis considers an array of forty-four 2.3-MW wind turbines, constituting a project with a generating capacity of 101.2 MW. Impacts are not generally anticipated to vary substantially with the size/number of turbines; however, where differences exist, they are identified in the analysis. This EIR provides an evaluation of potential environmental impacts associated with any of the three configurations (i.e., 42, 44, or 68 turbines). The proposed project would be constructed in one or more phases and would include construction of an interconnection with an existing Pacific Gas and Electric Company (PG&E) transmission line that crosses the leased property; the interconnection switching station would be owned by PG&E.

Each turbine would be mounted on a tubular steel tower, which would in turn be erected on a reinforced concrete foundation. The turbine foundations would generally be spaced 600–800 feet (183–244 meters) apart along a linear corridor near the crest of Hatchet Ridge. The wind turbines would be connected by an electrical collector cable system that would most likely be buried underground. The turbines would operate at wind speeds of approximately 8–56 miles per hour (mph).

HRW has determined the approximate location and end points of the turbine corridor. However, the number and spacing of turbines in the string would depend on the type and supplier of turbines that are ultimately selected by HRW. HRW has requested flexibility in the precise spacing and number of turbines in the turbine corridor, as well as in the location of the corridor within the leased area. Final selection of turbine type, siting, spacing, and clear areas would be determined in accordance with industry standards and safety measures. All final project location information would be provided to the Shasta County Department of Resource Management and other resource agencies prior to the initiation of project construction. It is anticipated that the construction period would last 6–12 months.

## Purpose and Objectives

The overarching objective of the proposed project is to harness wind power in order to generate and deliver electricity derived from renewable energy to one or more electric utilities. The specific objectives are listed below.

- Develop a wind power project in close proximity to an existing transmission line with available capacity to receive power generated by the project.
- Develop a wind power project in a location that will have minimal impacts on birds, bats, vegetation, and other environmental resources.
- Utilize a wind resource area previously identified by the California Energy Commission as a potential site.
- Meet regional energy needs in an efficient and environmentally sound manner.
- Assist California in meeting its legislated Renewable Energy Portfolio standards for the generation of renewable energy in the state; these standards require investor-owned utilities to purchase 20% of their power from renewable sources by 2017.
- Offset the need for additional electricity generated from fossil fuels (which emit more air pollutants than wind-generated electricity), thereby assisting the state in meeting its air quality goals and reducing greenhouse gases.
- Develop a wind project that will produce up to 102 MW of electricity.
- Develop an economically feasible wind energy project that will support commercially available financing.

## Project Elements

The proposed project would consist of the components listed below.

- Wind turbine generators erected on tubular steel towers approximately 16 feet in diameter, set on concrete foundations, with associated crane pads, laydown areas, and transformer pads. Tower height would be either 65 or 80 meters (213 or 262.5 feet), total height would range from 103 to 127.5 meters (338 to 418 feet), and the rotor-swept area per turbine would range from 4,656 to 7,088 square meters (50,123 to 76,295 square feet).
- A 34.5 kV electrical system used to collect energy from all wind turbine generators; this system would include individual turbine *step-up* transformers to increase the voltage of generated electricity to 34.5 kV (primarily an underground system, possibly with short stretches of overhead cabling, if necessary). Depending on the turbine selected, step-up transformers may be located within the turbine nacelle or on the ground adjacent to each turbine on a concrete pad.
- A substation to further increase the voltage of the generated electricity to 230 kV (i.e., the voltage of the existing PG&E transmission lines).
- A switching/interconnection station/facility for connecting the project to the existing PG&E transmission line.
- A single 230 kV 3-phase overhead transmission circuit to transmit electricity from the substation to the existing PG&E transmission line.
- Cabling for a buried communication system.
- An operations and maintenance (O&M) building/control center.
- A temporary site office.
- Access roads (approximately 1 mile of new 30-foot-wide roads) and other related road improvements, including culvert installation (permanent impact of approximately 4 acres).
- Temporary construction staging areas.
- Up to four permanent meteorological masts (maximum 220 feet in height).
- Safety lighting.
- Water and wastewater service.

## Alternatives

The County considered a range of potential alternatives for analysis in this EIR, including alternative technologies, alternative sites, a phased project, an alternative site plan, a smaller project, and others as described in Chapter 4. Following the screening and analysis presented in this EIR, it was determined that none of the alternatives considered would substantially reduce the significant impacts of the project, and that the no-project alternative (followed by the proposed project) is the environmentally superior alternative.

Chapter 4 presents a complete description of the alternatives and the rationale for selection of the environmentally superior alternative.

## Impacts and Mitigation Measures

Sections 3.1 to 3.13 of this document present analysis of the potential impacts of the proposed project for each of the resource subjects required by CEQA. Growth-inducing and cumulative impacts are analyzed in Chapter 4. Table ES-1 provides a summary of the environmental impacts of the proposed project, the significance of each impact before mitigation, appropriate mitigation measures, and the significance of each impact with implementation of the mitigation measures.

## Summary of Public Scoping Process

A Notice of Preparation (NOP) was circulated for review by public agencies, special districts, and members of the public for an NOP comment period beginning April 11, 2007, and ending May 14, 2007. A preliminary project description and a copy of the Initial Study documentation were attached to the NOP. A copy of the NOP notice is provided in Appendix A-1 of this EIR. A copy of the Initial Study checklist is provided in Appendix A-2. The public scoping meeting was held on April 25, 2007, at the Burney Veteran's Hall in Burney, California, 7 miles east of the project site. A summary of the comments received during the scoping meeting is provided in Appendix A-3.

## Areas of Known Controversy

State CEQA Guidelines Section 15123(b) requires that the summary section of the EIR include a description of areas of controversy known to the lead agency; including issues raised by agencies and the public and issues to be resolved, including the choice among alternatives and whether or how to mitigate the significant impacts. Based on verbal input received during the scoping meeting and written input received during the comment period for the NOP, the issues below reflect areas of known controversy.

- **Aesthetics and Visual Resources.** Wind energy projects by their nature introduce large and prominent artificial structures into the viewscape. Typically, such projects result in significant and unavoidable impacts on aesthetics and visual resources; consequently, controversy and opposition are often associated with such projects.
- **Biological Resources.** Wind energy projects typically result in avian and bat mortality. Because this is a widely known impact, such projects are customarily controversial. Although there is a considerable amount of research underway to assess the efficacy of new and improved turbine designs in reducing these impacts, there are many variables that contribute to avian and bat mortality; moreover, no definitive solutions to avian and bat mortality have been identified to date.
- **Cultural Resources.** Hatchet Ridge–Bunchgrass Mountain is considered to be a sacred site by members of the Itsatati Band of the Pit River Tribe (refer to Appendix D). It is used for spiritual practices, and the Band feels that the introduction of wind turbines and associated facilities would disrupt the serenity necessary for those practices. Consequently, the proposed project's anticipated impacts on cultural resources constitute an area of known controversy.