

**FINDING OF NO SIGNIFICANT IMPACT
FOR PROPOSED ISSUANCE OF A SECTION 10(a)(1)(B) PERMIT (TE118901-0)
UNDER THE ENDANGERED SPECIES ACT TO AUTHORIZE
INCIDENTAL TAKE OF THE HAWAIIAN PETREL, NEWELL'S SHEARWATER,
NĒNĒ AND HAWAIIAN HOARY BAT
BY KAHEAWA WIND POWER, LLC
FOR THE KAHEAWA PASTURES WIND ENERGY GENERATION FACILITY,
MAUI, HAWAII**

The U.S. Fish and Wildlife Service (Service) proposes to issue an Incidental Take Permit (Permit) to Kaheawa Wind Power, LLC (Kaheawa), addressing the federally endangered Hawaiian Petrel, threatened Newell's Shearwater, endangered Nēnē and the endangered Hoary Bat, and sign an Implementing Agreement (IA) for a Habitat Conservation Plan (HCP) for the Kaheawa Pastures Wind Energy Generation Facility (Facility). The IA concerns implementation of the HCP and would be signed by the Service, Kaheawa, and the Hawai'i Department of Land and Natural Resources (DLNR). The HCP would be implemented by Kaheawa to minimize and mitigate the effects of covered activities on the listed species. Take may occur during construction and operation of the Facility. Impacts may occur within an approximately 1,388 acre area, with the project site occupying approximately 200 acres. Mitigation will occur through the implementation of measures described in the HCP, including conducting surveys to gather additional information regarding these species; expanding existing propagation and release programs; protecting and managing existing colonies; expanding existing protection and research programs; and providing contingency funds for additional offsite mitigation if necessary.

Issuance of the Permit would be pursuant to section 10(a)(1)(B) of the Endangered Species Act of 1973, as amended (Act), and would be conditioned upon proper implementation of the HCP and the IA. The proposed Permit and IA have a term of 20 years from date of approval. Take authorization would be effective upon Permit issuance for currently listed covered species.

Documents reviewed in the preparation of this Finding of No Significant Impact (FONSI) include:

- Draft Implementing Agreement for the Kaheawa Pastures Wind Energy Generation Facility, dated January 2006;
- Draft Environmental Assessment for the Issuance of an Endangered Species Section 10(a)(1)(B) Incidental Take Permit for the Hawaiian Petrel (*Pterodroma sandwichensis*), Newell's (Townsend's) Shearwater (*Puffinus auricularis newelli*), Hawaiian Goose or Nēnē (*Branta sandvicensis*), and Hawaiian Hoary Bat (*Lasiurus cinereus semotus*) to the Kaheawa Pastures Wind Generation Facility, Ukumehame, Maui, Hawai'i, dated October 2005;
- Materials provided by Kaheawa that identify changes to the HCP in response to comments from the public, the Service and DLNR;
- Our intra-Service section 7 biological opinion on the proposed issuance of a federal permit;

- Our draft Findings and Recommendations on the Issuance of an Incidental Take Permit for Kaheawa Wind Power, LLC, Kaheawa Pastures Wind Energy Facility, Maui, Hawaii; and
- USFWS Interim Voluntary Guidelines for Wind Projects (2003).

These documents are incorporated by reference, as described in 40 CFR § 1508.13.

Alternatives Considered

This section provides a description and analysis of the reasonably practicable alternatives to the proposed action available to the Service. Alternatives for the project were developed in accordance with Section 10(a) of the Endangered Species Act and the National Environmental Policy Act. Four alternatives to the issuance of a Section 10(a)(1)(B) permit for the proposed project (preferred alternative) were considered: (1) a no action alternative pursuant to which the Service would not issue a Section 10(a)(1)(B) permit for the wind project; (2) an alternative turbine design; (3) issuance of a Section 10(a)(1)(B) permit for an alternative site on Maui; and (4) temporary shutdown of turbines. The latter three alternatives were described, but no further analysis was conducted because it was determined that these alternatives would not meet the development goals and/or objectives of the wind energy facility development.

No Action Alternative

Under the no-action alternative, the Service would not issue a Section 10 incidental take permit for the Facility. This alternative does not forbid the construction and operation of the Kaheawa Wind Energy Generation Facility, although the applicant would be subject to potential liability under the ESA should the project be constructed and any take of a listed species were to occur during the project's anticipated 20 year life. However, if the project is constructed without issuance of the ITP, the mitigation measures presented in the draft HCP would still be implemented pursuant to the June 24, 2005, amendment of the CDUP. Alternatively, the proposed project might not be developed, and the objectives of the proposed project would not be met. Under this scenario the existing conditions at the proposed project site would remain unchanged and the HCP would not be implemented.

Alternative Turbine Design Alternative

The alternative turbine design alternative would be similar to the proposed project but would use a different turbine design. All three designs considered would be built in a single articulated row at an elevation extending from approximately 610 to 975 meters (m) (2,000 to 3,200 ft.) in the vicinity of the existing Maui Electric Company (MECO) transmission lines.

One design proposed use of 27 Zond Z-48 turbines, each producing 750 kilowatts (kW), for a total output of approximately 20 MW. The Z-48 turbine consists of a 50 m (164 ft.) lattice tower and a 48 m (157 ft.) diameter rotor, for a maximum individual turbine height of approximately 74 m (243 ft.). The rotor speed of the Zond Z-48 turbine is 34 rpm.

A second design proposed using 30 Vestas V-47 turbines, each producing 660 kW, for a total output of approximately 20 MW. The V-47 turbine consists of a 40 m (131 ft.) tubular tower and

a 47 m (154 ft.) diameter rotor, for a total individual turbine height of approximately 64 m (208 ft.). The rotor speed is 28.5 rpm.

The preferred alternative design proposes using 20 General Electric (GE) wind turbines, due to advances in technology and product availability and reliability. Each turbine would produce 1.5 MW of power, for a total output of approximately 30 MW. The GE 1.5 MW turbine consists of a 55 m (180 ft.) monopole tower and a 70.5 m (231 ft.) diameter rotor, for a total individual turbine height of approximately 90 m (296 ft.). The rotor speed is 11-20 rpm.

Alternative Sites

In the early stages of the project, Kaheawa considered various sites around the Island of Maui, including West Maui (Honolua), North Shore (Haiku), Central Valley and Waihe'e. They were eliminated from further consideration because the wind regimes were less robust than the Kaheawa Pastures location and due to limitations on availability of a sufficient amount of land, site accessibility or proximity to residences or other potentially sensitive neighboring land uses.

Temporary Turbine Shutdown

Periodic or seasonal shutdown was considered but eliminated from additional analysis because this option is unlikely to significantly reduce the risk of collisions at the Kaheawa Pastures site and would not meet the Service's purpose and need for the proposed project. Shutting down turbines has not been shown to reduce collisions at existing wind project and it appears that most collisions occur regardless of whether a turbine is operating (Evans 2002). Modeling by Podolsky (2004) suggests that the probability of a bird colliding with a rotating, newer generation (slow rotation) turbine is only slightly higher (on the order of 10 percent for "average" bird size and speed) than with a stationary turbine. Accordingly, this alternative was not analyzed further because it is not likely to significantly reduce the risk of collisions at Kaheawa Pastures.

Effects and Finding of No Significant Impact

The Service's proposed action is to issue a Permit to the Applicant (Kaheawa) under section 10(a)(1)(B) of the Act pursuant to the proposed terms in the HCP and the IA. The Permit would authorize incidental take of approximately two Hawaiian Petrels, two Newell's Shearwaters, three Nēnē and one Hawaiian Hoary Bat each year, and identify measures that would be implemented to avoid, minimize, and mitigate incidental take of these species during the 20-year term of the Permit.

The Permit would authorize take in the form of harm and harassment of the four listed species associated with the proposed project. Anticipated impacts include indirect take for additional individuals who may be harmed or killed as a result of the direct take of another (e.g., the direct take of a breeding adult that could result in the indirect take of a chick that therefore would not survive). Direct take could occur for all four species due to injury or mortality resulting from collision with the wind turbines. Additional details regarding the impacts of the proposed action on the habitat and species in the project area are provided in EA Section 5.2.5.3 and Appendix A; Section V and Appendix 10 in the HCP; in our Findings and Recommendations document and in our Biological Opinion for the proposed action.

Due to the limited amount of information available concerning the occurrence and behavior of these four species, the HCP includes provisions for site-specific surveys, monitoring during construction and operations, post-construction monitoring and adaptive management to allow flexibility and responsiveness to new information over the project life. Monitoring and adaptive management will be coordinated with USFWS and DLNR's Division of Forestry and Wildlife (DOFAW), as described more fully in the HCP and the IA, with mitigation of project impacts appropriately adjusted on an annual basis.

As outlined in Section IV of the HCP, Kaheawa has sought to minimize the risk of collisions by making the turbines less attractive, more visible and more likely to be avoided by birds and bats. Those measures, in accordance with the USFWS Interim Voluntary Guidelines for Wind Projects, include employing relatively few turbines in a single row; using monopole steel tubular towers to eliminate perching and nesting opportunities; using a smaller tower (55 meters) than is typically used with GE 1.5 turbines to reduce the risk of collisions; utilizing a rotor with significantly slower rotational speed which makes the rotor more visible during operation; choosing a site in proximity to existing electrical transmission lines to eliminate the need for an overhead transmission line from the project to the interconnect location; placing all new power collection lines underground; marking met tower guy wires with high-visibility bird diverters; restricting construction activity to daylight hours to avoid the use of nighttime lighting; requesting endorsement from the Federal Aviation Administration of a minimal lighting plan to reduce the likelihood of attracting or disorienting seabirds; using minimal onsite lighting at the operations and maintenance building and substation and using fixtures that will be shielded and/or directed downward; limiting onsite vegetation to that which is already established and existing to eliminate new growth that could attract Nēnē; conducting pre-construction surveys for Nēnē and Nēnē nests prior to roadway and site clearing and construction to identify and avoid harming or harassing any active nests, eggs, young or adults; and following the Nēnē survey protocol should construction begin and Nēnē and/or a Nēnē nest subsequently be discovered. Kaheawa also has followed the Service interim guidelines for avoiding and minimizing wildlife impacts from wind turbines, as described in Section IV of the HCP.

To mitigate the indirect and direct impacts to all four species during project construction and operations, Kaheawa has proposed an adaptive management program that includes development and implementation of strategies and mitigation approved by the Service and DLNR. That program is described in detail in Sections V and VI of the HCP and in Appendices to the HCP. The strategy is based on four potential take scenarios – the anticipated Baseline Scenario, the Lower Take Scenario, the Higher Take Scenario and the Notably Higher Take Scenario – and includes mitigation measures and funding for each of those scenarios, as described in more detail in the HCP and in our Biological Opinion for the proposed action.

Kaheawa also has provided financial assurances that funding for each of the potential take scenarios and associated mitigation is available, by demonstrating the ability of the project to generate operating revenues sufficient to pay for proposed mitigation on an annual basis; establishing bonds to cover the amount of the required contingency funds and a portion of the “worst case” total mitigation requirement; and providing a Guaranty Agreement from third party

equity holders in Kaheawa to cover the entire “worst case” cost of mitigation of \$3.76 million over the life of the project. These financial assurances are described more fully in Section VI of the HCP and in the Implementing Agreement.

Pursuant to Section 7 of the Act, we have prepared a Biological Opinion on the proposed action of issuing the Permit and signing an IA. In the Biological Opinion, we concluded that the proposed action is not likely to jeopardize the continued existence of the Hawaiian Petrel, Newell’s Shearwater, Nēnē or Hawaiian Hoary Bat. The proposed action is not likely to adversely affect several listed plant species: the endangered *Cenchrus agrminioides*, *Diellia erecta*, *Remya mauiensis*, *Santalum freycinetianum* var. *lanaiensis*, and candidate *Cyanea obtuse* and the designated critical habitat of *Cenchrus agrminioides*, *Diellia erecta* or *Remya mauiensis*. This conclusion was based on an analysis of anticipated project impacts, proposed avoidance and minimization measures incorporated as part of the proposed project, and proposed mitigation measures, which will offset and minimize project impacts and contribute to the long-term survival and recovery of these species. Implementation of the HCP’s conservation strategy is expected to adequately offset impacts and result in a net conservation benefit for each of the species..

Foreseeable actions that could result in cumulative impacts are addressed broadly in the EA and Biological Opinion. Detailed project descriptions, information on species status, and the quantity and quality of species’ habitat within the area of potential effect are unavailable at this time. Therefore, any specific future development in this area that would affect these species would require separate environmental review.

In addition to analyzing effects to biological resources and cumulative effects, the EA evaluated the following aspects of the human environment for potential significant adverse effects as a result of the proposed action: energy generation; air quality; topography, geology and soils; hydrology and water resources; visual; noise; traffic; cultural resources; social and economic issues; land use; and hazardous materials. Appropriate mitigation measures were incorporated into the project to reduce impacts to a level below significance for those issues for which negative impacts were anticipated. No significant effects to these environmental resources are expected to result from permit issuance.

Public Review and Comment

On October 4, 2005, we published a public notice in the *Federal Register* (70 FR 57888) regarding the availability of and soliciting comments on the draft EA, HCP and IA. The 60-day public comment period closed on December 5, 2005. A total of 46 copies of the draft EA, HCP and IA were distributed to individuals, Federal and State agencies, Federal and State elected officials, city and county governments, libraries and environmental organizations. The documents were also available for review on the internet at <http://pacificislands.fws.gov>.

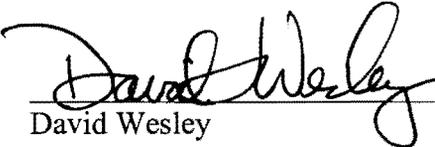
By the end of the public review period, we received five (5) comment letters, three from private citizens and one each from the Zoological Society of San Diego and the State of Hawai‘i Office

of Hawaiian Affairs. These comments were addressed by the Service in the Set of Findings and Recommendations Memorandum as part of the Administrative Record for this action. This FONSI and the Service's Findings and Recommendations document will be made available to all known interested parties. Following final action on this permit application, the Service will publish a notice of permit decision in the *Federal Register*.

Conclusion

In summary, as documented in the EA and Biological Opinion, approval of the HCP and IA and the proposed issuance of the section 10(a)(1)(B) permit for incidental take of the federally endangered Hawaiian Petrel, threatened Newell's Shearwater, endangered Nēnē and the endangered Hoary Bat are not expected to result in significant impacts to physical and biological resources. The issuance of the permit and implementation of the HCP and IA would not result in significant effects to the human environment.

The Service has determined that the proposal does not constitute a major Federal action significantly affecting the quality of the human environment within the meaning of section 102(2)(c) of the National Environmental Policy Act of 1969. Accordingly, preparation of an Environmental Impact Statement is not required.



David Wesley
Deputy Regional Director
U.S. Fish and Wildlife Service, Region 1

1/30/06

Date