Summary of Nā Pua Makani Wind Energy Project Habitat Conservation Plan for the

Endangered Species Recovery Committee

May 17, 2024

**I. Wind Facility Background**

The Nā Pua Makani Wind Energy Project (Project) is a wind farm consisting of eight Vestas V136 wind turbine generators, with a maximum blade tip height of 173 meters, and associated infrastructure located in Kahuku in the Ko‘olauloa District on the island of O‘ahu. Nā Pua Makani Wind Power Partners (NPMWPP) submitted a Habitat Conservation Plan (Nā Pua Makani HCP) to the U.S. Fish & Wildlife Service (USFWS) and the Division of Forestry and Wildlife (DOFAW) to minimize and mitigate the Project’s impacts on threatened and endangered species.

The Project site encompasses 706.7 acres of leased land, owned by DLNR-Land Division and Malaekahana Hui West, LLC, and surrounded by agricultural farmlands, residential housing, community infrastructure, and undeveloped forest lands. The local vegetation is dominated by non-native weed species that took over following the abandonment of sugar cane agriculture. None of the plant species identified in the Project area are listed as threatened, endangered, candidate, or proposed for listing. Adjacent and nearby properties include Kahuku District Park, Kahuku Wind Facility, Kahuku Golf Course, Turtle Bay Resort (and Conservation Easement), Kuilima Wastewater Treatment Plant, and the Ki‘i Unit of James Campbell National Wildlife Refuge.

**II. Habitat Conservation Plan Procedural Background**

The Nā Pua Makani HCP and associated Incidental Take License (ITL) were approved by the Board of Land and Natural Resources (Land Board) on May 16, 2018 after a contested case hearing involving the proposed impacts of the Project on the Hawaiian hoary bat (‘ōpe‘ape‘a). The Land Board approved of the Nā Pua Makani HCP and ITL on the conditions that the ITL authorize incidental take of Covered Species as described in the Nā Pua Makani HCP dated March 2016 and the ITL be issued in substantially the same form shown to the Land Board on October 27, 2016. NPMWPP is required to provide additional funding for research on the Hawaiian hoary bats (‘ōpe‘ape‘a) required by Special Condition 8 of the ITL. If Tier 2 mitigation for the Hawaiian hoary bat (‘ōpe‘ape‘a) is triggered, then financial assurances for an additional $894,000 will be provided to ensure funding for Tier 2 mitigation. These funding assurances will be provided before Tier 1 take threshold is exceeded. Low wind speed curtailment may be required if the rate of take of the Hawaiian hoary bat (‘ōpe‘ape‘a) exceeds the projected rate of take. The number of wind turbines on the Project site was also reduced from nine to eight wind turbines.

**III. Impacts to Covered Species**

The Covered Species impacted by the Project include the Hawaiian hoary bat (‘ōpe‘ape‘a), the Hawaiian goose (Nēnē), Newell’s shearwater (‘a‘o), the Hawaiian stilt (ae‘o), the Hawaiian coot (‘alae ke‘oke‘o), the Hawaiian duck (koloa maoli), the Hawaiian moorhen (‘alae ‘ula), and the Hawaiian short-eared owl (pueo). The ITL accompanying the Nā Pua Makani HCP authorized incidental take of:

* Four adult/immature and two chicks Newell’s shearwater (‘a‘o);
* Six Hawaiian geese (Nēnē);
* Four Hawaiian duck (koloa maoli);
* Four Hawaiian stilt (ae‘o);
* Eight Hawaiian coot (‘alae ke‘oke‘o);
* Eight Hawaiian moorhen (‘alae ‘ula); and
* Four adult/fledgling and two chicks/eggs Hawaiian short-eared owl (pueo).
* Hawaiian hoary bats (‘ope‘ape‘a) are particularly vulnerable to wind farms, so their authorized take was divided into a tiered system. Tier 1 authorized the take of 34 bats. However, if 75 percent of the authorized incidental take were reached, and projections suggest that take for the permit term would exceed the Tier 1 threshold, 51 bats would be authorized for take under Tier 2.

1. Avoidance and Minimization Measures

In an effort to minimize take of these Covered Species, NPMWPP promised to: install three temporary guyed met towers with bird flight diverters and/or white poly tape; install one unguyed free-standing permanent met tower to replace one of the temporary guyed met tower; ensure O&M and substation will have shielded lights; ensure no barbed wire on perimeter fence; only use FAA required lighting for nacelle (flashing red); place collection lines beneath the ground; place line marking devices; avoid removing non-native and native woody vegetation between June 1 to September 15; use low wind speed curtailments to reduce impacts to bats and shearwaters; use bat acoustic monitors to document activity; set a daytime speed limit of 25 mph and nighttime speed limit of 10 mph; use a stormwater management system to avoid accumulating standing water; collect trash weekly; minimize construction during daylight during the seabird breeding season (October 15 – November 23); lower construction cranes at night; establish fire safety response protocols and responsibilities; and coordinate with O‘ahu Invasive Species Committee (OISC) to minimize risk of introducing chromolaena.

1. Mitigation Measures

The HCP also included mitigation efforts to compensate for any potential loss of the Covered Species. For Newell’s shearwater (‘a‘o), NPMWPP promised to provide funding to the National Fish and Wildlife Foundation research fund to support research and management of Newell’s shearwaters. To protect Hawaiian geese (Nēnē), NPMWPP constructed a hogwire fence at James Campbell National Wildlife Refuge (JCNWR) and purchased predator traps and predator monitoring supplies for JCNWR. For Hawaiian duck (koloa maoli), Hawaiian stilt (ae‘o), Hawaiian coot (‘alae ke‘oke‘o), and Hawaiian moorhen (‘alae ‘ula), NPMWPP designed and installed fence and public information signs to reduce fatalities of waterbirds at Hamakua Marsh and supported public education and monitoring through the funding of a part-time biologist. For Hawaiian short-eared owls (pueo), NPMWPP provided funding to DOFAW’s Endangered Species Trust Fund to support research and management of Hawaiian short-eared owls.

DOFAW O‘ahu has since planted a vegetative barrier where the installed fence would have been, effectively barring human access to Hamakua Marsh. The actions described in the HCP are no longer viable and NPMWPP has since designed a new mitigation plan. The revised mitigation plan will now consist of funding for vegetative management and predator control at Hamakua Marsh.

Hawaiian hoary bats (‘ope‘ape‘a) are the species most significantly affected by wind farms, so NPMWPP took a tiered approach to mitigation for bats. Under Tier 1, NPMWPP would provide funding ($100,000) for and report results from a bat research study contributing to the knowledge of deterring Hawaiian hoary bats and implement bat habitat restoration measures and associated monitoring at the Poamoho Ridge mitigation area. This habitat restoration would involve funding the management of a newly fenced area at two Poamoho Ridge units for eight years. Management would involve fence maintenance, pig removal, and invasive species removal. NPMWPP would provide funds to hire two full-time employees at the Ko‘olau Mountains Watershed Partnership (KMWP) or a similar organization ($198,000 annually). NPMWPP would acquire property for forest restoration and management if such funding could not be carried out.

1. Adaptive Management Measures

If 75 percent of the incidental take associated with Tier 1 is reached and projections suggest that the incidental take for the license term will exceed the Tier 1 threshold, planning for Tier 2 would be initiated. Under Tier 2, NPMWPP would provide funding (an additional $50,000) for and report results from a bat research study contributing to the knowledge of Hawaiian hoary bats and implement bat habitat restoration measures and associated monitoring at the Poamoho Ridge mitigation area. NPMWPP would also fund management for four years at the two Poamoho units.

1. Post-Construction Monitoring at the Project Site

A Post-construction Monitoring Plan (PCMP) was implemented to document impacts on listed species and ensure compliance with authorized provisions and take limits of the HCP and the associated ITP and ITL (Appendix A). Key aspects of the PCMP include: carcass searches conducted under the wind turbines for bat and bird carcasses; an education and reporting program for observations made by onsite staff; and a protocol for the recovery, handling, and reporting downed wildlife.

1. Cumulative Impacts to Listed Species on the Incidental Take License

According to NPMWPP, there is low potential for the cumulative impacts of the Project to have a population-level effect on Newell’s shearwater (‘a‘o), Hawaiian goose (Nēnē), Hawaiian stilt (ae‘o), Hawaiian duck (koloa maoli), Hawaiian coot (‘alae ke‘oke‘o), Hawaiian moorhen (‘alae ‘ula), or Hawaiian short-eared owl (pueo). As for the Hawaiian hoary bat (‘ōpe‘ape‘a), other wind farms have indicated higher than anticipated levels of estimated take. However, this Project is unlikely to result in cumulative impacts to Hawaiian hoary bats (‘ōpe‘ape‘a) since: “1) Hawaiian hoary bats [that] breed on Oahu, have a larger population, and are more widespread than previously assumed 2) the Project provides mitigation commitments in this HCP that are designed to provide a net benefit including contributions to improving the understanding of how to effectively mitigate for impacts to the Hawaiian hoary bat; 3) it is highly probable that future industrial-scale wind farms in Hawaii will similarly provide compensatory mitigation for the anticipated take of Hawaiian hoary bats; and 4) there are no reasonably foreseeable additional onshore wind projects planned for Oahu. See the Project EIS (Tetra Tech 2015) for a more complete evaluation of potential cumulative impacts to the Hawaiian hoary bat as well as the Covered Species.” *Na Pua Makani HCP Pg 56*

**IV. Impacts to Covered Species Habitats at the Project Site**

The Project site includes agricultural lands, grassland, shrub-scrub, and dryland forest, which provide habitat for: invertebrates; migratory, native, and non-native birds; and a variety of introduced mammals. The only species listed that makes its home on the property is the Hawaiian hoary bat, which uses the site for roosting and foraging. For this reason, NPMWPP avoided removing non-native and native woody vegetation between June 1 to September 15 to avoid potential impacts to bats.

**V. Funding Assurances**

Na Pua Makani Power Partners provided USFWS and DOFAW with copies of a letter of credit for $3,736,050 to cover Tier 1 mitigation, the Post-construction Monitoring Plan, and any required DOFAW compliance monitoring. An additional $894,000 would be provided if Tier 2 mitigation were necessary.