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BOARD OF LAND AND NATURAL RESOURCES

STATE OF HAWAI'I

IN THE MATTER OF A Contested Case Hearing Re Final Habitat Conservation Plan and Incidental Take License for the Na Pua Makani Wind Energy Project by Applicant Na Pua Makani Power Partners, LLC; Tax Map Key Nos. (1) 5-6-008:006 and (1) 5-6-006:018, Ko'olauloa District, Island of O'ahu, Hawai'i	Case No. BLNR-CC-17-001 APPLICANT NA PUA MAKANI POWER PARTNERS, LLC'S **CLOSING BRIEF**; CERTIFICATE OF SERVICE HEARING DATE: AUGUST 7 & 8, 2017 TIME: 9:00 A.M. HEARING OFFICER: YVONNE Y. IZU, ESQ.

APPLICANT NA PUA MAKANI POWER PARTNERS, LLC'S CLOSING BRIEF

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I. INTRODUCTION

Applicant NA PUA MAKANI POWER PARTNERS, LLC ("**Applicant**") submits this Closing Brief pursuant to Hawai'i Administrative Rules ("**HAR**") §§ 13-1-32(c), 13-1-36(b), and Minute Order No. 10 dated August 28, 2017.

This contested case proceeding involves Applicant's Habitat Conservation Plan ("**HCP**") and Incidental Take License ("**ITL**") for a proposed 25 megawatt wind generating facility in Kahuku, on the Island of O'ahu (the "**Project**"). Approval of the HCP and ITL are governed by Hawai'i Revised Statutes ("**HRS**") §§ 195D-21 and 195D-4(g), as set forth in Minute Order No. 6 ("**MO6**").

The benefits of this Project include delivering electricity at approximately one-half the cost of burning oil and the Project will be one of the lowest cost wind projects in the State of Hawai'i. Increasing renewable energy sources on the island's electricity grid results in substantial environmental benefits as well as a decrease in dependence on importing foreign oil and should help stabilize the cost of electricity on O'ahu. These benefits are also coupled with extensive on the ground efforts to improve the habitat restoration and prevention of habitat degradation as well as significant funding for research and operational personnel that will increase the likelihood of survivability of the bats and other Covered Species.[1]

The procedural history of this case is detailed in Applicant's *[Proposed] Findings of Fact* ("**FOF**"), *Conclusions of Law* ("**COL**") *and Decision and Order* ("**Applicant's FOF/COL**")

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[1] The following eight (8) Federal and State-listed threatened or endangered species have the potential to occur or pass through at the Project site and be incidentally impacted by the Project: 'a'o (Newell's shearwater – *Puffinus newelli*), ae'o (Hawaiian black-necked silt –*Himantopus mexicanus knudseni*), 'alae ke'oke'o (Hawaiian coot – *Fulica alai*), 'alae 'ula (Hawaiian moorhen – *Gallinula chloropus sandvicensis*), koloa maoli (Hawaiian duck – *Anas wyvilliana*), nēnē (Hawaiian goose – *Branta sandvicensis*), pueo (Hawaiian short-eared owl – *Asio flammeus sandwichensis*), and the 'ōpe'ape'a (Hawaiian hoary bat – *Lasiurus cinereus semotus*) (collectively referred to as the "**Covered Species**"). Ex. A-1 at 1.

filed concurrently herewith pursuant to Minute Order No. 10 and HAR §§ 13-1-38(a) and 13-1-41(a). The evidentiary hearing in the above-captioned matter took place on August 7 and 8, 2017. Appearances were made by the following parties: Applicant, Keep the North Shore Country ("**KNSC**"), and Elizabeth Rago ("**Rago**") (KNSC and Rago collectively referred to herein as the "**Petitioners**").

The Petitioners challenge that the HCP is insufficient and therefore the ITL should not be approved. In particular, KNSC's main concern is that the take estimate for the Hawaiian hoary bat is too low. Rago is mainly concerned with the Project's proximity to her, the noise that may be generated by the Project, and the impact of the Project to the Hawaiian hoary bat in the context of the Hawaiian hoary bat being a cultural resource.

As set forth in Applicant's Reply Brief and the testimonies and evidence presented at the hearing, as well as Applicant's FOF/COL, KNSC's and Rago's arguments are not supported by specific, credible evidence establishing how Applicant's proposed HCP and ITL for the Project fails to meet the criteria of HRS Chapter 195D. Furthermore, the aesthetic, environmental and cultural concerns have already been assessed through the Project's previously completed and approved environmental review process under HRS Chapter 343. Those issues are not part of the HCP and ITL review and approval process here under HRS Chapter 195D. *See* MO6.

Rago's failure to provide support for her claims indicates that her request for this proceeding is primarily based on a personal dislike for the Project in the Kahuku area and near her home, and not a concern with the science and commitments underlying the HCP and ITL.

Both KNSC and Rago have not provided sufficient credible and reliable evidence to rebut the evidence provided by Applicant with respect to each of the issues set forth in MO6 and HRS Chapter 195D. Accordingly, the HCP and ITL satisfy the required criteria and the Hearing

Officer should adopt Applicant's FOF/COL and recommend the HCP and ITL for approval to the Board of Land and Natural Resources ("**Board**").

II. BURDEN OF PROOF

Applicant has the initial burden of proof in showing that the HCP has met the criteria set forth in HRS §§ 195D-21 and 195D-4(g). As set forth in Applicant's Opening Brief, Reply Brief, Applicant's FOF/COL, and as discussed below, Applicant's evidence submitted through its exhibits, Written Direct Testimony ("**WDT**"), and through the evidence presented at the hearing, all demonstrate that the HCP meets the threshold burden of proof for each of the criteria in MO6 by a preponderance of the evidence.

Once Applicant's *prima facie* case is met, the burden then shifts to persons contesting the action to rebut Applicant's *prima facie* case. *See Mauna Kea Power Co., Inc. v. Bd. of Land and Natural Res.*, 76 Hawai'i 259, 265, 874 P.2d 1084, 1090 (1994) (acknowledging that an applicant for a conservation district use permit before the Board bears the initial burden of proving its *prima facie* case meeting that it meets the criteria; substantial evidence must be presented to rebut a *prima facie* case). Conclusory statements that are not supported by reliable and credible evidence are insufficient to rebut a *prima facie* case. *See generally Thornton v. City of St. Helens*, 425 F.3d 1158, 1167 (9th Cir. 2005) (holding that "conclusory statements of bias do not carry the nonmoving party's burden in opposition to a motion for summary judgment "); *Lucas v. Chicago Transit Auth.*, 367 F.3d 714, 726 (7th Cir. 2004) (holding "that conclusory statements, not grounded in specific facts, are not sufficient to avoid summary judgment"); *Hansen v. United States*, 7 F.3d 137, 138 (9th Cir. 1993) ("When the nonmoving party relies only on its own affidavits to oppose summary judgment, it cannot rely on conclusory allegations unsupported by factual data to create an issue of material fact.").

III. LEGAL ANALYSIS

Applicant's FOF/COL set forth in detail the reasons why the HCP meets each of the requirements of HRS §§ 195D-21 and 195D-4(g) and thus, why the HCP and ITL for the proposed Project should be approved. *See* Applicant FOF 107-311; Applicant COL 97-122. This Closing Brief will not repeat each of those arguments in detail, but will address the main points of the Project, the HCP, and specific issues raised during the evidentiary hearing. For the reasons discussed in this Closing Brief, and as detailed in Applicant's FOF/COL, the HCP satisfies the HRS Chapter 195D criteria.

A. THE HCP ADEQUATELY ESTIMATED TAKE FOR THE COVERED SPECIES, INCLUDING THE HAWAIIAN HOARY BAT, USING THE BEST AVAILABLE SCIENCE

The Project's HCP was developed in conjunction with extensive consultation with state and federal agencies over a three-year period and fully incorporates their guidance, recommendations, expertise and requirements. The Department of Land and Natural Resources' ("**DLNR**") Endangered Species Recovery Committee ("**ESRC**") has recommended the HCP for approval and nothing to date has changed that position. KNSC seeks to second guess the extensive work and review of the various agencies conclusions to recommend approval of the HCP by arguing that the take estimate for the Hawaiian hoary bat is too low. Disregarding the expertise of the various agencies and experts at Tetra Tech who prepared the HCP based on the best available science, KNSC nevertheless seeks to halt the project by any argument it can muster mainly due to its dislike for the aesthetics or increased area development. KNSC broadly attacks the take estimates based on broad and loosely articulated arguments concerning: (a) take at other wind energy projects across the state; (b) the proposed height maximum of the wind turbine generators ("**WTGs**"); and (c) Applicant's chosen minimization and mitigation measures. KNSC also argues that the HCP does not use the best available science. *See* Applicant's FOF

135, 148, 151, 156, 157, 170. KNSC's arguments are not persuasive, as further discussed below.

The HCP, including the take estimates for each of the Covered Species, was developed through ***extensive*** consultation with the DLNR, Division of Forestry and Wildlife ("**DOFAW**"), the U.S. Fish and Wildlife Service ("**USFWS**"), the ESRC (the Board, DLNR, DOFAW, USFWS, and the ESRC are collectively referred to herein as the "**Agencies**"), and the public. *See* Applicant's FOF 68-101, 250-255, 303-311; Applicant's COL 244-248, 107(l)-111. The take estimates for each of the Covered Species were not random numbers chosen by Applicant unsupported by science, but were carefully determined through research, the best supporting data and science available, and the expertise of the agencies responsible for the protection of the Covered Species. *See* Applicant's FOF 227-233, 81, 121, 122, 140, 145, 156, 159, 169, 216, 252, 280, 288, 326.

The take estimates for each of the Covered Species is detailed in the HCP, DOFAW's Staff Report, and Applicant's FOF/COL. *See* Ex. A-1 at 41-55; Ex. A-2 at 2; FOF 77. As explained in the HCP and at the evidentiary hearing, Applicant is requesting to take a total of 51 Hawaiian hoary bats based on two tiered levels. Ex. A-1 at 43-44 & Table 7; Applicant's FOF 77-78, 197-198. The Tier 1 estimate in the HCP requests a maximum take of 34 Hawaiian hoary bats. The Tier 1 request of 34 bats is the ***anticipated and expected total take of the Hawaiian hoary bat over the course of the 20 year ITL term***. This estimated take amount is currently believed to be in excess of the likely actual take based on results from the neighboring Kahuku project, which has seen only one observed bat fatality since implementing low wind speed curtailment ("**LWSC**") in April 2012, during an operational period of under 4 years. Using information available at the time the HCP was prepared, the estimate of take for the Project would not exceed 34 bats, and the lack of any additional observed fatalities from Kahuku

supports this conclusion.

No one can accurately predict the future, and that is clearly true with the science behind estimating actual projected bat takes at a wind farm *See* Applicant's FOF 116, 120, 121, 126, 129, 141, 142, 146, 147, 169, 197, 198, 222, 286, 327. As a result, a second tier of incidental take is included to account for an additional 17 bats that may be taken if, for example, minimization measures and actual operational conditions are not as effective in reducing Hawaiian hoary bat take. *See* FOF 197-198. Thus, the Tier 1 estimated take of 34 Hawaiian hoary bats represents the actual estimated take for the Project over the ITL term, while Tier 2 provides for a conservative maximum that would trigger additional mitigation commitments and funding, as set forth in the HCP.

The agencies involved understood the analysis presented and recommended the HCP for approval on the basis of an 80% upper credible confidence level that the take would fall within the limits proposed. This is proving to be realistic from the neighboring Kahuku data after its implementation of LWSC. LWSC involves shutting down the wind turbines when the wind is blowing at less than 5 meters per second, which scientific studies show are the conditions under which bats are most likely to be flying. Curtailing operations at such times has been shown to be effective in reducing bat take at other wind farms, and particularly at Kahuku with only 1 observed bat fatality since its implementation of LWSC in April 2012. *See* Ex. A-55 at 8; Applicant's FOF 135.

The agencies and Applicant also fully considered and addressed the issues concerning the height of the turbines as well as extensive consultation to approve the type of mitigation through various measures, including research, funding recommendations based on the government's bat guidance document, habitat restoration and preservation, and other steps designed to enhance and

improve and prevent further degradation of known bat habitat so as to improve the survivability of the Hawaiian hoary bat. *See* Applicant's FOF 107-178, 188-203, 277-289, 298-299; Applicant's COL 83, 85, 107(c), (f), (j).

1. THE HCP CONSIDERED THE TAKE OF THE HAWAIIAN HOARY BAT AT THE OTHER WIND FARMS IN ITS ESTIMATE

KNSC's arguments against the HCP are based on the premise that Applicant's take estimate for the Hawaiian hoary bat must be too low because some of the other wind farms in Hawai'i are currently amending their HCPs to adjust for higher take estimates. *See* Applicant's FOF 170. First, KNSC misconstrues the data and interprets it to assert that all of the existing Hawai'i wind farms have taken more bats than predicted. This is not accurate. The existing data reveals only that bats have been taken at a faster rate than predicted. *See id.*

It must be kept in mind that the first wind energy facility in Hawai'i has been operating for approximately eleven years. Therefore, the first HCP in the state is also eleven years old. Applicant's FOF 288.

Although most previously approved wind HCPs that include the Hawaiian hoary bat are currently being amended to address those facilities' experience with higher bat take than those projects initially predicted in their HCPs, this was based, at least in part, on prior information and a lack of data to accurately predict take when those original HCPs were being developed. Applicant's HCP cannot be faulted for data gaps in other projects' HCPs that were developed prior to Applicant's HCP. More recent HCPs, including Applicant's HCP here, have the advantage of more data, including post-construction mortality monitoring data from other existing wind farms, to more accurately assess and estimate predicted take. Therefore, Applicant's HCP provides a current, better and more conservative estimate of take with less uncertainty than the earlier HCPs. *See* Applicant's FOF 288, 78, 197-198; Ex. A-27 (Snetsinger

WDT) at ¶¶ 22, 26. Applicant's HCP also had the benefit of and did consider and use the data of the HCPs for all existing wind farms in Hawai'i, including the information related to the existing take at those facilities. *See* Ex. A-1 at 55-56; Ex. A-12 at 4-106 to 4-112. Applicant incorporated the Agencies' recommendations and determined which set of data was most appropriate to consider for this HCP given similar circumstances and locale. Applicant's HCP is based on the best available scientific information and is the most comprehensive HCP in Hawai'i to date. *See* Applicant's FOF 288; Ex. A-29 (Oller WDT) at ¶ 140-41.

Applicant also used surrogate projects and measures to best estimate take. *See* Applicant's FOF 120, 122, 140, 144-145, 147, 216-217. The Kahuku Wind Farm was determined to be the best surrogate for the proposed Project and provides the best available data for estimating potential Project-related take of Hawaiian hoary bats because it is located immediately adjacent to the proposed Project. *See* Applicant's FOF 140,144-145. Thus, the Kahuku Wind Farm possesses topographical and vegetative characteristics that make it the most similar operational project in Hawai'i to Applicant's Project in terms of probable use of the area by Hawaiian hoary bats. *See* Applicant's FOF 145.

The Hawaiian hoary bat take estimate in the HCP was calculated using a per turbine fatality rate from observations at the Kahuku Wind Farm and also applied a conservatively high assumed value for unobserved take (based on Kahuku Wind Farm data), which was adjusted for the potential effectiveness of LWSC in reducing collision risk. LWSC has been found to be an effective method to reduce collisions and known bat use during certain wind conditions and data from mainland studies. To account for any uncertainty associated with the effectiveness of this measure in Hawai'i, a very conservative 150 percent of the estimated take was used to develop the total requested take limit in Applicant's HCP. When combined with the conservative

assumption associated with unobserved take,[2] effectiveness of LWSC may be as low as 36 percent for the Project to remain below the requested authorized take limit. Applicant's FOF 146; Ex. A-27 (Snetsinger WDT) at ¶ 17.

It is entirely appropriate to develop conservative estimates of potential take that accounts for uncertainty related to species biology, potential impacts, and the effectiveness of avoidance and minimization measures. *See* Applicant's FOF 229. This ensures that take levels authorized under the ITL are adequate to sufficiently cover the Applicant's proposed actions and provides confidence that no major amendment to the HCP would be needed during the permit term to account for higher than anticipated take levels of the Covered Species. However, it is also an applicant's obligation to take actions to avoid and minimize take to the maximum extent practicable. In this Project, such actions will be continually monitored based on the concept of Adaptive Management so that the Applicant can take steps to optimize operations when data and research demonstrate that conditions to improve survivability are present and can be realistically implemented. *See* Applicant's FOF 220-226, 324-330; Applicant's COL 100(h).

Applicant relied on the best available information and science to derive Hawaiian hoary bat take estimates in this HCP and incorporated several layers of conservative assumptions to develop the requested take limit. This resulted in a conservative estimate of take that uses the best available scientific information and accounts for uncertainty in the inherent inability of anyone to accurately predict the future. Applicant reasonably used higher than expected estimates of unobserved take in deriving the estimated take value and based the requested take

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[2] Data from the Kahuku Wind Farm suggest that using full-sized search plots, one can expect approximately 1.5 unobserved fatalities per observed fatality. *See* Ex. A-55 (Kahuku Wind Power, LLC HCP Annual Report FY 2015). By assuming 2 unobserved fatalities per observed fatality in developing the estimate, estimated take is approximately 20 percent higher than would be calculated using the actual Kahuku Wind Farm data.

limit on 150 percent of the estimated take value. *See* Applicant's FOF 146; Ex. A-1 at 44; Ex. A-27 (Snetsinger WDT) at ¶¶ 17, 21.

2. THE HCP CONSIDERED THE IMPACTS OF THE BLADE HEIGHT AND ROTOR DIAMETER CURRENTLY PROPOSED

KNSC argues that because the WTG height increased over the course of the four year process for developing the HCP, the take estimate cannot be accurate. *See* Applicant's FOF 148. Because of the amount of time it took to finalize the HCP, the original turbine proposed for the Project became obsolete and no longer available. Over time, the industry and manufacturers of turbines have continued to increase the height of wind turbines to capture more wind and increase the efficiencies of the technology. In response to State agency and community concerns about the visual impacts of the WTGs, the number and height of the turbines proposed for the Project changed to use fewer, but taller, WTGs. *See* Applicant's FOF 62. As reflected in the Project's HCP, Final Environmental Impact Statement ("**FEIS**"), and testimony at the hearing, such conclusory statements are not accurate, credible or reliable. The Project clearly considered the impacts of the relevant factors, including the proposed maximum turbine height, and the take estimate for the Hawaiian hoary bat reflects those assumptions. *See* Ex. A-12 at 2-12 to 2-13; Ex. A-10 at 1364; Applicant's FOF 150-160.

For purposes of estimating take, Applicant looked at the tallest potential turbines that might be commercially available in order to estimate impact. KNSC infers that this means if turbines are smaller, the impacts are less. Mr. Fretz, chair of the ESRC, however, testified that he would not draw that conclusion. The height of the turbine is not the only thing that affects impacts. Applicant's FOF 150. Applicant provided evidence that the best available data supports the existing HCP's take estimate for the Hawaiian hoary bat. Actual results at the nearby Kahuku wind farm demonstrate that only 1 observed bat fatality has occurred since April

2012. There was no evidence presented that demonstrated that this estimate of take was not reasonable or based on the best available science and agency review of conditions.

The HCP adapted the analysis presented in its Appendix B. Exhibit A-1 at App. B. Tetra Tech, Inc. ("**Tetra Tech**") used methodology presented in this study to estimate risk, but updated the analysis based on an array of 9 WTGs with a maximum blade tip height of up to 656 feet (200 meters) and a rotor diameter of up to 427 feet (130 meters). *See* Ex. A-1 at 40-57.

Among studies on the effects of turbine size on bat fatality rates, the Zimmerling & Francis (2016) study (Ex. A-10) evaluated the most comprehensive number of studies encompassing the largest range of turbine sizes studied to date. It bears noting that there is no evidence that rotors with heights above 600 feet are currently commercially available, so for all practical purposes the actual rotor height for this Project will likely be less than 600 feet. Nevertheless, results from the new 2016 Zimmerling & Francis study (Ex. A-10) indicates that earlier studies limited to smaller turbines did not consider data points from larger turbines which would result in erroneous conclusions if their results were extrapolated outside of the scope of inference for their study. Although there are no studies to understand potential differences in risk to bats between turbines 127 – 200 meters tall, based on Zimmerling & Francis, there is no evidence to conclude that turbines 100 – 135 meters tall would vary in the amount of bat take. *See* Applicant's FOF 155; Ex. A-10 at 1364; Ex. A-53 (Snetsinger WRT) at ¶ 12. Therefore, there is also no evidence to conclude that turbines larger than 135 meters tall would also significantly vary in bat take. However, to account for any uncertainty associated with risk to the Hawaiian hoary bat based on the blade height, the requested take authorization for this species under the HCP was adjusted to 150 percent of a conservative estimated level of take, which is reflected in the two tiered estimates. Ex. A-1 at 44; Ex. A-27 (Snetsinger WDT) at ¶ 21.

The older study pushed by KNSC, namely Ex. B-7, is outdated, fails to consider additional studies, and does not include turbines as tall as the maximum included in the more comprehensive and more recent Zimmerling & Francis study (Ex. A-10). Therefore, KNSC's arguments are not based on the best available and more recent scientific information. *See, e.g.*, Ex. A-10; Ex. A-53 (Snetsinger WRT) at ¶ 11.

3. APPLICANT'S MINIMIZATION AND MITIGATION MEASURES ARE ADEQUATE

The HCP here went through extensive review and vetting by the governmental agencies charged with protecting endangered species. The extensive habitat restoration and prevention of further degradation of areas like Poamoho Ridge habitat, as well as funding for research and personnel, are all designed to increase the survivability of the bats. KNSC argues that the mitigation measures proposed in the HCP are inadequate because they have not yet proven to provide a net benefit to the Hawaiian hoary bat, and that Applicant's take estimate is inaccurate. KNSC Responsive Brief at 5. However, no mitigation for a future event can accurately or definitively predict that future event. Take is estimated on the calculus of such risk and is reviewed and approved by the agencies with expertise in that area to develop appropriate measures to include in the HCP. That effort was fully satisfied in this case with this HCP.

As discussed above and testified to at the hearing, while more data and research is needed related to measure the effectiveness of proposed mitigation measures, the HCP here provides funding for those efforts and requirements to improve known habitat for the exact purposes of increasing the likelihood of survivability of the Covered Species. *See* Applicant's FOF 107-178, 201-203, 265-267, 292-293; Applicant's COL 83, 85, 107(c), (f), 107(d), (e). Ex. A-44. The evidence in the record supports the conclusion that the HCP and the minimization and mitigation measures proposed in the HCP, are based on the best available science as required by the

agencies charged with overseeing the process for approvals and application of the criteria in HRS Chapter 195D. *See* Applicant's FOF 227-233, 81, 121, 122, 140, 145, 156, 159, 169, 216, 252, 280, 288, 326; Applicant's COL 101-102.

At the time that the HCP was finalized, the studies used to support the HCP were considered to be and remain the best available science. Applicant and its expert consultant Tetra Tech are not aware of any new evidence (including those provided in Petitioners' exhibits or otherwise) that would suggest that different conclusions from those presented in the HCP should be drawn. Ex. A-53 (Snetsinger WRT) at ¶ 24. Furthermore, Mr. Fretz, as Chair of the ESRC, testified that based on the evidence presented to him at the evidentiary hearing, there is nothing that would change his mind about the ESRC's recommendation that the Board approve the HCP and ITL, or that would require the ESRC to once again review the HCP for compliance. *See* Applicant's FOF 332-333.

KNSC broadly argues that certain mitigation measures, such as LWSC, funded research, fence maintenance, employee monitoring, and habitat protection and restoration, do not definitively provide a clearly known benefit to the Hawaiian hoary bat and are therefore not effective.

LWSC effectiveness at other existing wind farms in Hawai'i could not have been included in the HCP because there is no data available from operational wind farms in Hawai'i to accurately estimate the effect of LWSC on Hawaiian hoary bat fatality rates. The relatively few bat fatalities that occur in Hawai'i, along with the fact that the agencies are now making a consistent recommendation that all wind farms implement LWSC, make it impossible to conduct a controlled experiment to predict LWSC effectiveness in Hawai'i or draw conclusions as to its effectiveness based on current data. *See* Applicant's FOF 192; Ex. A-27 (Snetsinger WDT) at ¶

18. For example, the Kawailoa Wind Farm has implemented LWSC since it began commercial operation so there is no way to compare fatality rates before and after LWSC implementation at that facility. Ex. A-27 (Snetsinger WDT) at ¶ 19. Furthermore, the methodology used to estimate take at Kawailoa relied on the use of baseline acoustic activity data (*see* Ex. B-35), which is now recognized as an inappropriate way to predict Project fatalities. *See* Ex. A-54 at 11-15 (Hein et al. 2013). Therefore, the difference between estimated take in the Kawailoa Wind Farm HCP and observed fatalities cannot measure the actual effectiveness of LWSC in Hawai'i. *See* Applicant's FOF 193; Ex. A-1 at 43-44; Ex. A-53 (Snetsinger WRT) at ¶ 25. However, one need look no further than to the Applicant's next door neighbor to see that only 1 observed bat fatality has occurred since the implementation of LWSC in April 2012, which is compelling actual evidence that supports the effectiveness of LWSC in the immediately adjacent area. Applicant's FOF 193.

The best available science regarding the potential benefits of LWSC exist from experimental studies conducted at wind farms on the mainland where numerous bat fatalities occur each year. These studies, as cited in the HCP, have found LWSC to be effective at reducing the take of hoary bats. *See* Exs. A-5 & A-6; Ex. A-27 (Snetsinger WDT) at ¶ 20. The inclusion of conservative assumptions in the take estimate here accounts for any inherent uncertainty in predicting the future effectiveness of LWSC. The LWSC analysis presented in the HCP was based on the best available science and the conclusions and rationale were supported by agency staff representatives from the ESRC, DOFAW, and the USFWS. *See* Applicant's FOF 193-199; Ex. A-1 at 43-44. The observation of one observed bat fatality in just under four years of monitoring at the Kahuku Wind Farm, since implementing LWSC, including accounting for changes in search protocols at the Kahuku Wind Farm, is wholly consistent with findings from

mainland studies that demonstrate the benefit of LWSC in reducing bat fatalities. *See* Applicant's FOF 199; Ex. A-55 at 8; *see also* Exs. A-5 through A-9.

KNSC also attempted to discredit Applicant's proposed LWSC cut-in speed of 5 meters/second ("**m/s**") and argued that the cut-in speed of only 1.5 meters more, or 6.5 m/s, should instead be the applied standard. *See* Applicant's FOF 135, 195; Ex. B-15 at 70. Contrary to that assertion, Applicant presented evidence that since the implementation of the ESRC recommended cut-in speed of 5 m/s LWSC at the Kahuku Wind Farm in April of 2012, or during an actual operational period of almost 4 years, only 1 bat fatality has been observed, with no other listed bird fatalities observed. Ex. A-55 at 8, 10. Additionally, utilizing LWSC with a 5 m/s cut-in speed is the operational guidance the Applicant received from the Agencies and is provided for in the ESRC Bat Guidance. Ex. A-44.

KNSC's Ex. B-15 is the only study that advocates for a cut-in speed of 6.5 m/s and has been contradicted by multiple other studies finding that there is no significant difference in bat casualty rates between cut-in speeds of 5 m/s and 6.5 m/s. *See* Applicant's FOF 195; Ex. A-44 § IV.c at PDF page 7-8 & Figure 2; Exs. A-5 through A-9. The ESRC, in developing and adopting its own Bat Guidance, Ex. A-44, reviewed the available studies on LWSC cut-in speeds. While some studies show that there may be a difference between 5 and 6.5 m/s, others have shown no difference. Consistent with the research, the ESRC adopted guidance that LWSC cut-in speeds for approved wind energy projects in Hawai'i begin at a minimum of 5 m/s. Adaptive Management is expected to be used to determine whether or not a higher cut-in speed is required or should be implemented, and based on ongoing research being funded by the Applicant if such clear evidence is presented then that will be considered in conjunction with Adaptive Management practices and agency guidance. *See* Applicant's FOF 195; Ex. A-44 at A-44 § IV.c

at PDF page 7-8; Vol. 1, Tr. 08/07/17 at 139:7-143:25.

Although there cannot be perfect prognostication of the effectiveness of the proposed minimization and mitigation measures, these measures were chosen through extensive consultation with and at the recommendation of DOFAW, USFWS, and the ESRC. There is no compelling evidence presented by KNSC or Rago that could lead one to second guess or supplant the expertise of those agency representatives as well as the HCP preparer's expertise in developing the HCP using the best available science. Clearly, the agencies expect to get results in the long term or the ESRC would not have recommended the HCP for approval by the Board, and still would approve it. *See* Applicant's FOF 114, 115, 117, 124, 126, 129, 130, 137; Applicant's COL 77.

Contrary to KNSC's arguments, HRS Chapter 195D does not require that the mitigation measures proposed in the HCP must definitively show a net benefit to the Covered Species, particularly where those studies have not yet been done or completed. The requirement is simply that the HCP use the best available science. *See Center for Biological Diversity v. U.S. Fish & Wildlife Service*, 807 F.3d 1031, 1047 (9th Cir. 2015) ("***CBD v. USFWS***"). This requirement does not require applicants or agencies to conduct new studies or to "make decisions on data that does not yet exist." *Id.*; *see also* Applicant's COL 77. Based on the best available science, the evidence in the record, and the testimony given at the hearing, it was rational for the Agencies to conclude that the minimization and mitigation measures proposed in the HCP will benefit the Covered Species. *See CBD v. USFWS*, 807 F.3d at 1041, 1049-50 (holding that the USFWS's decision that the mitigation measures proposed in the Memorandum of Agreement would result in an overall expected benefit to the covered specie).

Applicant's conservative take estimate for the Hawaiian hoary bat, accounting for

uncertainties, together with Applicant's mitigation measures, supports the conclusion that Applicant's take estimate is based on the best available science and satisfies HRS Chapter 195D.

B. THE HCP WILL INCREASE THE LIKELIHOOD OF SURVIVABILITY OF THE SPECIES AND IMPROVE HABITATS FOR THE COVERED SPECIES

The HCP here adequately demonstrates the increased likelihood of survival and recovery of the Covered Species, and there is no evidence that the implementation of the HCP will likely leave the Covered Species populations worse off. KNSC Responsive Brief at 6. Despite arguing that "there is a plethora of evidence that the impacts of the project are unmitigable," KNSC failed to present any concrete or credible evidence supporting these positions or that the HCP mitigation commitments will not increase the likelihood that the Covered Species will recover. *See* Applicant's FOF 107-178, 188-203, 277-289, 298-299; Applicant's COL 83, 85, 107(c), (f), (j).

DOFAW, USFWS, and ESRC agency officials worked closely with the Applicant and its experts for approximately four years to develop the HCP. The HCP certainly includes a mitigation plan that meets both the requirements of HRS Chapter 195D and USFWS standards. Applicant, through its expert consultant Tetra Tech, has worked for years to develop an appropriate HCP that incorporated the guidance and requirements and considered the concerns and sensitivities of the very agencies charged with handling endangered species and establishing take requirements at both the state and federal levels. *See* Ex. A-29 (Oller WDT) at ¶¶ 5-7.

Mitigation for each of the Covered Species is described in Section 6 of the HCP. Ex. A-1 at 56-77; Ex. A-29 (Oller WDT) at ¶ 66. Mitigation plans for each Covered Species rely on the best available science and are consistent with recovery plans and agency recommendations, including the ESRC guidance on Hawaiian hoary bat mitigation, measures of success, and checks to ensure that measures are achieved. *See* Applicant's FOF 166; Ex. A-1 at 46-77; Ex. A-

29 (Oller WDT) at ¶ 57; Ex. A-44.

Specifically, bat mitigation efforts are targeted at preventing the on-going degradation of occupied Hawaiian hoary bat habitat and are certainly designed to increase the chances of survivability of the species. *See* Ex. A-1 at 59; Ex. A-53 (Snetsinger WRT) at ¶ 8; Ex. A-29 (Oller WDT) at ¶¶ 28-32, 95-97. In addition, the bat mitigation plan includes support for research targeted at improving knowledge of the Hawaiian hoary bat so that future mitigation projects can leverage results to improve the efficacy of those efforts. Ex. A-27 (Snetsinger WDT) at ¶ 29. Similarly, based on agency recommendations, funding for Newell's shearwater and Hawaiian short-eared owl mitigation efforts supports specific management and research to benefit those individual species. Because impacts to these species, if they occur at all, are expected to be minimal, supporting research and management efforts for these species was determined to maximize the value of the mitigation funding. Ex. A-53 (Snetsinger WRT) at ¶ 9. As Mr. Fretz testified at the hearing, the State has learned much and increased its institutional knowledge of the Hawaiian hoary bat over time through information gathered from other wind farm projects, which projects have also helped to fund research efforts related to the Hawaiian hoary bat and other endangered species. *See* Applicant's FOF 326. Research efforts and study funded by the Applicant are designed to increase survivability and to benefit the Covered Species by developing data over time that will demonstrate the effectiveness of the mitigation measures.

Due to the many information gaps on the biology of the Hawaiian hoary bat, its limiting factors, and effectiveness of certain mitigation measures, the project applicants, the agencies, and the ESRC necessarily rely on assumptions based on the best scientific information available. *See* Applicant's FOF 229; Ex. A-27 (Snetsinger WDT) at ¶ 28. In recognition of these uncertainties and in an effort to increase the effectiveness of HCP mitigation strategies, DOFAW recently

prepared a guidance document for developing Hawaiian hoary bat mitigation strategies that was also approved by USFWS. *See* Applicant's FOF 229-230; Ex. A-44. This guidance directs project applicants to incorporate elements of habitat restoration (including habitat protection and/or enhancement) and research designed to increase the knowledge of the species, at a mitigation funding amount of $50,000 per bat. *See* Applicant's FOF 230; Ex. 44 at PDF pages 19-20; Ex. A-27 (Snetsinger WDT) at ¶ 29; Ex. A-29 (Oller WDT) at ¶ 92-93.

The restoration actions identified in the HCP are expected to persist longer than the wind farm operation and will benefit the entire watershed as well as support the life history requirements of the Hawaiian hoary bat. These expected short-term and long-term benefits of the restoration actions support the conclusion that the mitigation actions will increase survivability and benefit the species. *See* Applicant's FOF 231; Ex. A-1 at 65; Ex. A-27 (Snetsinger WDT) at ¶ 30.

Regarding the success criteria for the restoration component of the mitigation, techniques are not currently available to measure the increase in bat population in the Poamoho Ridge mitigation area with any degree of certainty. Therefore, as supported by DOFAW, USFWS, and the ESRC, measures for improving, enhancing and preventing further degradation of that area's habitat quality were identified to act as appropriate surrogate measures to track and demonstrate improvements designed to benefit the Hawaiian hoary bat. Applicant's FOF 120, 122, 140, 144-145, 147 & 216-217; Applicant's COL 85. For the research component of mitigation, success criteria include design and implementation of an approved study, monitoring and various reporting requirements. Over the course of the HCP term, DOFAW, USFWS, and the ESRC will have regular input through annual review and will also have approval authority over implementation of all key elements of the HCP. *See* Applicant's FOF 217; Ex. A-1 at 65-66; Ex.

A-27 (Snetsinger WDT) at ¶ 31.

The HCP also provides opportunities for adaptive management throughout the permit term. The key elements of HCP implementation are ***not*** discretionary, including fulfillment of obligations under avoidance and minimization measures, monitoring, reporting, mitigation, funding, and adaptive management. *See* Applicant's FOF 116, 220-226, 324-330; Ex. A-1 at 85-86; Ex. A-21 (Cutbirth WDT) at ¶¶ 22-23. The Board, if it approves the HCP and ITL, may also impose conditions to ensure that the HCP is implemented.

The HCP has identified and commits Applicant to fulfill measures that would reduce take of the Hawaiian hoary bat to the maximum extent practicable. *See* Applicant's FOF 259-264; Ex. A-27 (Snetsinger WDT) at ¶¶ 10, 33. Such measures are discussed in more detail in Applicant's FOF 259-264.

The HCP provides a methodology and the biological information necessary to account for impacts to the Hawaiian hoary bat. This includes accounting for impacts to bats potentially killed by the turbines and the dependent offspring. Ex. A-1 at 41-45 & Table 6, § 7.1.2 at 78, and App. A at 12. The HCP provides a robust monitoring plan for the life of the Project that will account for Project impacts including breeding individuals and dependent offspring. *See* Ex. A-1, App. A. All estimated take will be mitigated for by using the mitigation framework provided in the HCP. Ex. A-1 at 57-66. Accordingly, contrary to KNSC's claims, the HCP includes elements designed to minimize impacts and provide a net benefit to the Hawaiian hoary bat through appropriate mitigation efforts. Applicant's FOF 259-289.

C. KNSC INCORRECTLY STATES THAT DOFAW, USFWS, AND THE ESRC HAVE NOT DETERMINED THAT THE HCP IS ACCEPTABLE

Throughout this proceeding, KNSC has tried to discredit the extensive work and lengthy consultation that Applicant performed to develop the HCP, in conjunction with DOFAW,

USFWS, and the ESRC, by stating that no formal determination was made by these agencies as to the acceptability of the HCP. KNSC Responsive Brief at 8-9. Despite KNSC's semantic efforts, and as supported by the evidence in the record, DOFAW, ESRC and USFWS each determined that the final HCP was sufficient for submission to the applicable state and federal agencies for final review and approval. Under the state's review process, the ESRC recommended to the Board that the HCP be approved. Ex. A- 36 at 6; Ex. A-2 at 4; Ex. A-29 (Oller WDT) at ¶ 23; Ex. A-53 (Snetsinger WRT) at ¶ 31. Likewise, DOFAW field staff reviewed and supported approval of the HCP to the ESRC. Ex. A-2 at 4; Ex. A-57 (DOFAW Staff Report to ESRC Feb. 2016); Ex. A-53 (Snetsinger WRT) at ¶ 32. DOFAW's February 25, 2016 staff report to the ESRC stated that "DOFAW staff has worked closely with Na Pua Makani through several rounds of revisions of the draft HCP. The resulting document reflects amendments based on the comments received by the ESRC" and that "DOFAW staff has reviewed the amendments to the HCP and has no additional concerns." Ex. A-57 at 2, 3; Ex. A-53 (Snetsinger WRT) at ¶ 32. In its Staff Report to the Board recommending approval of the HCP, DOFAW determined that "[t]he HCP is a comprehensive analysis of both the threats and required mitigation for the proposed project." Ex. A-2 at 6; *see* Applicant's FOF 312-313.

The ESRC's recommendation for approval was secured and is owed due consideration as the approving body within the agency responsible for oversight of state HCPs. The ESRC's conclusions should be given deference and a presumption of validity and regularity. *See* Ex. A-36; Ex. A-29 (Oller WDT) at ¶ 23. Furthermore, Mr. Fretz testified that there was no information presented to him by Petitioners during the contested case hearing that would warrants the ESRC to reject the HCP or add any additional mitigation measures or conditions. *See* Applicant's FOF 331-333.

A fundamental principle of administrative and judicial law recognizes that the agency's determinations are entitled to deference during administrative or judicial review and are also entitled to a presumption of regularity and validity. *See Sierra Club v. Dep't of Transp.*, 115 Hawai'i 299, 317-18, 167 P.3d 292, 310-11, (2007) ("Therefore, a reviewing court must determine whether the agency's factual determinations were clearly erroneous"); *see also San Luis & Delta Mendota Water Authority v. Jewell*, 747 F.3d 581,601-602 (9th Cir. 2014) ("[T]he [Administrative Procedure Act] provides that an agency action must be upheld on review unless it is 'arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law' . . . . Although our inquiry must be thorough, the standard of review is highly deferential; the agency's decision is 'entitled to a presumption of regularity,' and we may not substitute our judgment for that of the agency").

In addition, the ESRC recommendation on the HCP is presumed a valid act under Hawai'i law. *See Keliipuleole v. Wilson*, 85 Hawai'i 217, 221, 941 P. 2d 300, 309 (1997) ("[A] presumption of validity is accorded to decisions of administrative bodies acting within their sphere of expertise and one seeking to upset the order bears 'the heavy burden of making a convincing showing that it is invalid because it is unjust and unreasonable in its consequences.'").

The ESRC is the expert consultant to the Board, specifically established by statute to review HCPs and ITLs and to provide a recommendation to the Board. HRS § 195D-25. The ESRC's recommendation for approval is owed due consideration as the body within DLNR responsible for oversight of HCPs, and its conclusions should be given deference and a presumption of validity.

As detailed in Applicant's FOF/COL and the evidence in the record, the HCP was

developed through extensive consultation with not only the ESRC, but also DOFAW and USFWS over the course of approximately four years. *See* Applicant's FOF 68-101. The evidence in the record supports the conclusion that the HCP was fully vetted by the ESRC and that no further review by the ESRC is required at this time. *See* Applicant's FOF 312-313, 331-333.

Accordingly, determinations, be they formal or informal, made by the Agencies should be upheld and confirmed, unless demonstrably false or wrong. Applicant has made its *prima facie* case to meet its burden of proof. Once the approved plan and agency approvals are shown to satisfy the applicable criteria, the burden then shifts to the opponents to prove that such determinations and approvals were clearly erroneous, arbitrary, capricious or an abuse of discretion by the approving agencies. Petitioners did not and cannot make such a showing. *See* Applicant's COL 112-117. There is also no credible evidence presented to second guess or change those agency recommendations for approval by the Board.

D. POST-HEARING PROCESS

The substantial credible evidence in the record supports the conclusion that the HCP and ITL should be recommended for approval to the Board, and that no further amendments to the HCP are warranted. *See* Applicant's FOF 323-337. If the ITL is granted and during the term of the ITL, the Agencies determine that changes to the mitigation and/or minimization measures should be made, or that additional mitigation and/or minimization measures should be implemented, the Agencies have the opportunity to work with Applicant to do so through the HCP's Adaptive Management process. *See* Applicant's FOF 220-226, 324-330.

E. LACK OF CANDOR

KNSC's closing argument at the hearing accused Applicant's representative, Mr. Michael Cutbirth, of a lack of candor with the tribunal for not admitting that the primary reason that

Applicant decided to go with fewer, taller WTGs was because they were cheaper. Contrary to those assertions, Mr. Cutbirth believes that he did in fact answer KNSC's question clearly and correctly. The reason for the change to fewer, taller WTGs was "in response to State agency comments as well as community concerns about visual impacts." Vol. 1, Tr. 08/07/17 at 19:9-22:12.

KNSC's attempts to have Mr. Cutbirth admit that fewer turbines would save Applicant money were fruitless and irrelevant to the criteria of HRS Chapter 195D. Mr. Cutbirth clearly responded to KNSC's question that while there are less WTGs proposed for the project, "the cost per turbine of the larger turbines are significantly higher than the cost per turbine of the smaller turbines." Vol. 1, Tr. 08/07/17 at 20:9-14. There was no lack of candor with the tribunal in these answers and such claims from KNSC are wholly specious and argumentative.

F. RAGO'S ARGUMENTS ARE NOT PERSUASIVE AND HER CONCERNS HAVE BEEN ADDRESSED

Applicant's responses to Rago's arguments are detailed in Applicant's FOF/COL. Applicant's FOF 314-322.

As previously briefed in Applicant's Reply Brief, and as set forth in the testimonies and evidence presented throughout this proceeding, as well as Applicant's FOF/COL, Rago's arguments should not alter the conclusion for approval of the HCP and ITL because she presented no specific, credible evidence establishing how the Project fails to meet the criteria of HRS Chapter 195D. Furthermore, Rago's concerns have already been assessed and addressed under the entirely separate environmental review process for this Project, as governed by HRS Chapter 343. Those EIS issues are not part of the HCP and ITL review and approval process. *See* MO6. Rago's failure to provide support for her claims indicates that her request for this proceeding is primarily based on a personal dislike for the Project in the Kahuku area near her

residence, and not a real concern with the underlying criteria for approval of the HCP and ITL. In fact, Rago did not provide any credible and reliable evidence to rebut the evidence provided by Applicant with respect to each of the issues set forth in MO6 and HRS Chapter 195D.

The testimony of Rago's witness, Tevita Ka'ili, was similarly concerned with "environmental and cultural" impacts, but provided no specifics on how the HCP or ITL fail to satisfy any of the specified criteria in MO6 or HRS Chapter 195D. Separately, their concerns are part of the environmental review process under HRS Chapter 343, which was previously completed and approved, notably with Ka'ili's consultation and participation in that process. *See* Applicant's FOF 317-322; Ex. A-20. The broad environmental and cultural concerns raised by Rago do not implicate the specific approval process and criteria for the HCP and ITL here. Nevertheless, Rago's concerns were considered and are incorporated in the approved FEIS and its accompanying environmental and cultural studies. *See id.*; Ex. A-12. As discussed in Applicant's Opening Brief, Reply Brief, and FOF/COL, the FEIS was published on August 8, 2016, and was subject to a 60-day challenge period. Applicant's Opening Brief at 8; HRS § 343-7. No timely legal challenges to the FEIS were made. *See* Applicant's FOF 322. This hearing is not an opportunity to get a second bite at the apple for opponents of the project concerned about separate EIS issues.

Furthermore, Rago testified that she used to support wind farms and that it was not until she moved to Kahuku in about 2013 or 2014 that she began to oppose the Project. *See* Applicant's FOF 316. When asked if she remembered if she opposed the Kahuku wind farm, she responded that she "wasn't residing in Kahuku, but I actually remember thinking it was a great idea." Vol. 1, Tr. 08/07/17 at 161:13-17; *see also* Applicant's FOF 316. Rago's testimony calls into question the sincerity or inconsistency of her opposition to the Project, the HCP and ITL.

Without any substantive analysis or evidence on point rebutting Applicant's evidence, and no direct opposition to the HCP and ITL, Rago's arguments are unpersuasive and should be given little or no weight on the outcome of evaluating the applicable criteria under HRS Chapter 195D.

Rago also asserted that she was not given notice of a May 25, 2016 meeting on the HCP. Rago WDT at 3-4. The May 25, 2016 meeting that Rago refers to was a public information meeting on the Second Draft EIS for the HCP, not the HCP itself. Notice of the meeting was published in the Star Advertiser on May 12 and 19, 2016. *See* Ex. A-58. Notice of the Second Draft EIS and the associated comment period was also published in the *Environmental Notice* on April 23, 2016. *See* Applicant's FOF 319; Ex. A-53 (Snetsinger WRT) at ¶ 36.

Rago further argued that Applicant was required to hold a public meeting on the HCP to address the WTG height increase. There is no legal basis to support this claim and no legal requirement for more than one public hearing on the HCP. The formal public hearing on the HCP took place after the draft HCP was published in the Office of Environmental Quality and Control ("**OEQC**") *Environmental Notice*, as required under HRS §§ 195D-21(b)(1) and 195D-4(g). Furthermore, multiple additional public meetings took place, some of which Rago attended. *See* Applicant's FOF 68-101, 250-255, 303-311; Applicant's COL 244 – 248, 107(l)-111. There were also two public ESRC meetings and hearings that were noticed to the public and involved consideration of the HCP that included taller turbines. Therefore, members of the public, including Petitioners, had multiple opportunities to participate in the development of and comment on the HCP. No complaints or objections to the HCP were recorded by either of the Petitioners at any of these meetings.

IV. SCHEDULE FOR FURTHER BRIEFING

Minute Order No. 10 is silent on the schedule for filing exceptions and/or responses to the parties' proposed FOF/COL and the Hearing Officer's FOF/COL. Applicant request that the

Hearing Officer set deadlines for exceptions and responses pursuant to HAR §§ 13-1-41 and 13-1-42.

V. CONCLUSION

For the reasons explained above and as supported by Applicant's FOF/COL, and the evidence and testimony in the record, the HCP and ITL satisfy the required criteria of HRS Chapter 195D. Applicant has met its burden of proof by a preponderance of the reliable, credible evidence that the HCP and ITL and the HCP and ITL should be recommended for approval, and that Applicant's accompanying FOF/COL be approved for submission to the Board.

DATED: Honolulu, Hawai'i, September 11, 2017.

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BOARD OF LAND AND NATURAL RESOURCES

STATE OF HAWAI'I

IN THE MATTER OF A Contested Case Hearing Re Final Habitat Conservation Plan and Incidental Take License for the Na Pua Makani Wind Energy Project by Applicant Na Pua Makani Power Partners, LLC; Tax Map Key Nos. (1) 5-6-008:006 and (1) 5-6-006:018, Ko'olauloa District, Island of O'ahu, Hawai'i	Case No. BLNR-CC-17-001 CERTIFICATE OF SERVICE

CERTIFICATE OF SERVICE

The undersigned certifies that the above-referenced document was served upon the following parties by email unless indicated otherwise:

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