

MITIGATION ACTION PLAN

FOR THE

FINAL

ENVIRONMENTAL ASSESSMENT

FOR THE

GREEN ENERGY SCHOOL WIND

PROJECT

SAIPAN, COMMONWEALTH OF THE

NORTHERN MARIANA ISLANDS



U.S. Department of Energy
Golden Service Center
Office of Energy Efficiency and Renewable Energy
DOE/EA-1923

ACRONYMS AND ABBREVIATIONS

AMC	Adaptive Management Committee
CFR	Code of Federal Regulations
DOE	U.S. Department of Energy
EA	environmental assessment
ESA	Endangered Species Act
FONSI	finding of no significant impacts
MAP	mitigation action plan
NEPA	National Environmental Policy Act
USFWS	U.S. Fish and Wildlife Service

1.0 Introduction

The United States Department of Energy (DOE) has issued a Final Environmental Assessment (EA) and a Finding of No Significant Impact (FONSI) for Green Energy School Wind Project in Saipan, on the Commonwealth of the Northern Mariana Islands (CNMI). The EA for this Project was completed in compliance with the National Environmental Policy Act (NEPA) as required by 40 Code of Federal Regulations (CFR) 1508.18. The Final EA and the FONSI are available at:

http://www.eere.energy.gov/golden/NEPA_FEA_FONSI.aspx.

Through the environmental review process, DOE determined, via consultations with the United States Fish and Wildlife Service (USFWS) that there may be potential environmental impacts from the Project that will require mitigation to assure that the impacts will not become significant. Therefore, DOE prepared this Mitigation Action Plan (MAP) to establish conditions for issuing the FONSI as required by 10 Code of Federal Regulations (CFR) 1021.322, which stipulates that:

(b) In addition to the requirements found at 40 CFR 1508.13, a DOE FONSI shall include the following:

(1) Any commitments to mitigations that are essential to render the impacts of the proposed action not significant, beyond those mitigations that are integral elements of the proposed action, and a reference to the Mitigation Action Plan prepared under 1021.331 of this part

The potential impacts requiring commitments and mitigation relate to the following:

Endangered Species – Uncertainty of effects due to potential collisions of species listed and protected under the Endangered Species Act (ESA) occurring within the project area.

Measures to reduce the potential impacts to these resources are defined as:

- **Applicant Committed Measures** – DOE defines applicant committed measure as activities or actions established as integral practices as part of the applicants proposed project plan or scope of work of the Green Energy School Wind Project.
- **Mitigation Measures** - Mitigation measures are activities or actions that will be taken in addition to or to enhance applicant committed measures and, therefore, are not integral to the design, deployment, and operation of the proposed Project.

DOE and CNMI completed two documents that analyzed the potential impacts to biological resources that may result from the Project. These documents include 1) Final EA DOE/EA 1923 and 2) Project Biological Assessment. These documents provide comprehensive discussion of applicant committed measures implemented by the Department of Public Works (DPW) and the CNMI Department of Education and Public School System (PSS) as part of their Project. Readers are directed to these documents for specific information on the Project, detailed descriptions of potentially affected biological

resources, and the Biological Opinion issued by the USFWS. These documents are hereby incorporated by reference.

1.1 Purpose of the Mitigation Action Plan

The purpose of this MAP is to specify the methods for implementing mitigation measures that address the potential environmental impacts identified in DOE/EA 1923 and by the USFWS Biological Opinion issued to DOE on February 1, 2012, in accordance with the Endangered Species Act (ESA) (16 U.S.C.1531 et seq.). The development of these measures and an implementation plan, are a necessary condition for the DOE FONSI, as described by 40 CFR 1021.331(b) Mitigation action plans, as follows:

(b) In certain circumstances, as specified in §1021.322(b)(2), DOE shall also prepare a Mitigation Action Plan for commitments to mitigations that are essential to render the impacts of the proposed action not significant. The Mitigation Action Plan shall address all commitments to such necessary mitigations and explain how mitigation will be planned and implemented. The Mitigation Action Plan shall be prepared before the FONSI is issued and shall be referenced therein.

Mitigation measures identified herein shall be binding on CNMI and incorporated and enforceable through the National Environmental Policy Act Requirements clause of CNMI's financial assistance award. DOE will require CNMI to demonstrate successful metrics for the criterion identified in this MAP. CNMI shall return to DOE any federal funds used for the construction, deployment or operation of the Project if they fail to meet the conditions of this MAP by the deadlines specified. Failure to follow the conditions of the MAP will be considered a material failure to comply with the terms and conditions of the award as enforced through 10 CFR 600.243.

DOE will require CNMI to demonstrate successful metrics for each criterion identified in this MAP. In the event that any of the metrics identified are not met successfully, DOE will require CNMI to propose and implement additional mitigation measures until success is demonstrated.

The MAP is intended to be a living document and DOE may revise or reissue this MAP to reflect new understandings of the interaction of the project with the natural environment.

1.2 Structure of the Mitigation Action Plan

This MAP is organized as follows:

- Section 1 presents the introduction, purpose and structure;
- Section 2 presents the potential impacts, mitigation measures, metrics for defining success or failure of the mitigation measures, and monitoring methods for the potential impacts to biological resources.

2.0 Biological Resources

This section of the MAP presents the potential impacts, mitigation measures, metrics for defining success or failure of the mitigation measures, and monitoring methods for biological resources, including ESA-listed species.

Mitigation measures discussed below will be applied to protect biological resources and ensure impacts are less than significant as a result of:

- Construction and collisions

2.1 Potential Impacts

There are currently no operating small-scale wind turbines operation on Saipan that have conducted field studies analyzing all potential environmental effects at the Project site, and therefore there is a lack of information in which to determine the level of effects that may result in potential impacts to biological resources through the following pathways: (1) construction and collisions.

Construction and Collisions

For purposes of this MAP, the project analyzed consists of the construction of one 2.4 kW wind turbine and six 20 kW wind turbines between Saipan Southern High School and Koblerville Elementary School. The Mariana Swiflet and the Nightingale Reed Warbler could be impacted by the construction of and collision with operating wind turbines.

2.2 Mitigation Measures

The following is CNMI's compliance with the thresholds, mitigations, and notifications as outlined in the USFWS Biological Opinion and Applicant Committed Measures found in Chapter 2 of the DOE Final EA.

Construction and Collision

As recommended in the Biological Opinion, CNMI will conduct conservation recommendations. And follow the following Terms and Conditions:

- CNMI Public School System maintenance crews and janitors at the five schools will be trained in carcass detection and the Mortality Monitoring Program.
- The CNMI Public School System will provide the USFWS with the name and contact information for one person at each Public School System school with a wind turbine who is lead for each year for the Mortality Monitoring Program.
- An annual report for the Mortality Monitoring Program will be prepared and submitted to the USFWS and the CNMI Division of Fish and Wildlife by December 31 of each year. In addition, an initial report will be submitted six months after turbine operations begins.

- Dead Marian swiftlets found under a wind turbine will be collected by and given to the CNMI Divisions of Fish and Wildlife to send to Dr. Thierry M. Work at the National Wildlife Health Center, Honolulu Field Station (U.S. Geological Survey-Biological Resource Discipline) for necropsy. The method of shipment and preservation will be determined in coordination with Dr. Work.
- The CMNI Public School System will notify the CNMI Division of Fish and Wildlife and the USFWS of all wildlife mortalities found under the turbines.

The following conservation measures, developed in coordination with the USFWS, will avoid or minimize effects to the nightingale reed-warbler and Mariana swiftlet. They are considered part of the project description. Any changes to, modifications of, or failure to implement these conservation measures may result in a need to reinitiate consultation with the USFWS.

- The CNMI government will donate one CNMI Government Credit in the Saipan Upland Mitigation Bank prior to any site disturbance at Saipan Southern High School. In accordance with the Nightingale Reed-Warbler Programmatic Consultation and Saipan Upland Mitigation Bank Agreement and Addendum, the agreed-upon credit transfer will be as follows:
 - Prior to the start of any vegetation clearing or earth-moving activities at the project site, the CNMI Public School System shall secure one CNMI Government Credit at the Saipan Upland Mitigation Bank that is intended to provide 1.75 nightingale reed warbler territories within the Bank boundary.
 - Upon written notification that the credit has been secured (i.e., a CNMI Government Transfer Document has been signed by all necessary authorities and copy has been sent to the USFWS), the USFWS will provide acknowledgement to the DOE and CNMI Public School System indicating the credit obligation has been fulfilled and on-site project activities may begin as outlined in the project description above and the remainder of the conservation measures listed below.
- Clearing of vegetation adjacent to Saipan Southern High School will only occur between October through December or April through June, when nesting activity is not at its peak.
- Adequate plastic construction fencing will be placed and maintained around any habitat that is to be avoided (including buffer areas and adjacent parcels) to prevent impacts to habitat from construction equipment and personnel.
- All on-site construction personnel will receive instruction regarding the presence of listed species and the importance of avoiding and minimizing impacts to these species and their habitat.
- The CNMI Public School System will ensure that no unauthorized take of nightingale reed-warbler or destruction of their habitat occurs. The CNMI Public School System and DOE will have the authority to stop all activities that may result in such take or destruction until appropriate corrective measures have been completed. The CNMI Public School System and DOE will be required to report immediately any unauthorized impacts to the USFWS and CNMI Division of Fish and Wildlife.

- All construction equipment arriving from Guam will have proper brown treesnake (*Boiga irregularis*) inspection conducted by CNMI Customs or Quarantine personnel under established CNMI procedures. All on-site personnel will receive instruction to kill any brown treesnake and to contact the CNMI Division of Fish and Wildlife immediately upon a sighting.
- A litter-control program will be implemented during construction. All tools, gear, and construction scrap will be removed upon completion of work in order to prevent the attraction of non-native pests (e.g., rats).
- All workers will ensure their food scraps, paper wrappers, food containers, cans, bottles, and other trash from the project area are deposited in covered or closed trash containers. The trash containers shall be removed from the project area and disposed of off-site at an approved landsite at the end of each working day.
- No contamination (trash or debris disposal, non-native species introductions, attraction of non-native pests, etc.) of adjacent habitats will result from project-related activities.
- No invasive plant species other than tangantangan (*Leucaena leucocephala*) shall be planted and every measure should be taken to ensure these species are not established on the property.
- Studies have indicated that painting one blade black and the other two white increases the visible perception of the rotating blades (Hodos 2003). However, the actual effectiveness of the improved blade visibility in decreasing bird collision has not been well established yet. The CNMI Public School System and its contractor will ensure that, prior to erection and installation of the turbines, one blade will be painted black and two blades painted white in an effort to improve visibility during daylight hours.
- Because suitable nightingale reed-warbler habitat exists around the project locations, annual surveys will be conducted adjacent to each school to determine whether reed-warblers have established territories near the project sites. Currently, the Southern Saipan High School is the only site with a known nightingale reed-warbler territory. Surveys will be conducted by qualified individuals from the CNMI Division of Fish and Wildlife. If nightingale reed-warblers are detected in the future near project locations, appropriate management actions will be cooperatively determined by the CNMI Public School System, CNMI Division of Fish and Wildlife, and the USFWS. Results of surveys will be shared with the Service.
- The CNMI Public School System, in coordination with the CNMI Division of Fish and Wildlife, will implement predator control program at Mariana swiftlet caves on Saipan. Within six months of turbine operation, the CNMI Public School System and CNMI Division of Fish and Wildlife will work with the USFWS to develop and implement the predator control program.

The metrics for determining success will be the submission of the following documents by CNMI to the assigned DOE Golden Service Center Project Officer and NEPA Specialist for review and approval:

1. The CNMI Public School System and Division of Fish and Wildlife will be responsible for reporting monitoring data to the USFWS. Any mortality of a threatened or endangered species

will be reported immediately to the USFWS's Pacific Islands Fish and Wildlife Office. A Mortality Monitoring Program annual report will be prepared and submitted to the USFWS by December 31 of each year. For the first year, a report will also be submitted six months after turbine operation begins. This report will be used as the basis for evaluating the monitoring program and for making decisions regarding continuation of monitoring or modification of procedures. USFWS will provide CNMI the specific information to be included in the reports.

The metrics for determining failure will be CNMI's failure to submit the above referenced documents, additional documents as referenced in 2.2 mitigation measures, and to provide notifications to DOE for events as described in 2.2 by the dates indicated, unless prior approval from DOE has been permitted.

2.4 Monitoring Techniques for Mitigation Measures

The Annual Report will be submitted to the assigned DOE Golden Service Center Project Officer and NEPA Specialist for review and approval.

Monitoring of mitigation measures will be accomplished through DOE's review of the reports, studies, and verifications submitted by CNMI as metrics for determining success or failure as identified in Section 2.3. No additional monitoring measures are anticipated

2.5 Reinitiation:

As required in 50 CFR § 402.16, reinitiation of consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operation causing such take must cease pending reinitiation.

As stated in the Conclusion (above), the Service's finding of non-jeopardy is based in large part on the conservation measures. Should there be a failure to carry out any or all of the described measures, or if the measures are not effective, or if these measures are modified in any way without Service coordination, reinitiation of consultation will be required.