

Terms of Reference

Site-Specific Environmental and Social Impact Assessment

Bat Assessment Study

Cumulative Effects Assessment

Spring and Autumn 2022

for

ACWA Power BOO Wind Power Plant 1100 MW in Egypt



Regional Center for Renewable Energy and Energy Efficiency
المراكز الإقليمي للطاقة المتجددة وكفاءة الطاقة

January 2022

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Technical Proposal Submission Form

To: **Regional Center for Renewable Energy and Energy Efficiency**
Address: **Hydro Power Building (7th Floor) Block 11 - Piece 15, Melsa District**
Ard El Golf, Nasr City, Cairo, Egypt
Date: **11th January 2022**

Ladies/Gentlemen:

PROPOSAL: SITE-SPECIFIC ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT, BAT ASSESSMENT STUDY AND CUMULATIVE EFFECTS ASSESSMENT FOR ACWA POWER BOO WIND POWER PROJECT 1100 MW

We, the undersigned, offer to provide the consulting services for "Site-Specific Environmental And Social Impact Assessment (ESIA), Bat Assessment Study and Cumulative Effects Assessment" (the "Assignment") for The Regional Center for Renewable Energy and Energy Efficiency (RCREEE) (the "Client") who is for and on behalf of ACWA Power (the "Beneficiaries") BOO Wind Power Plant 1100 MW at the Gulf of Suez (GoS) or West of Nile (WoN) in accordance with your Request for Proposal dated January 2022 based on the necessity to complete the Site-Specific Environmental And Social Impact Assessment at ACWA Power site for spring and autumn 2022. We are hereby submitting our Proposal, which includes this Technical and Financial Proposals.

This proposal is valid and capable of acceptance for 3 months from the Deadline for Receipt of Proposals, being [1st April 2022] (the "Proposal Validity Date").

We shall not be entitled to amend or withdraw our Proposal before that date and, if RCREEE accepts this Proposal, we shall not be entitled to amend any part of our Proposal except as may be expressly agreed by RCREEE during contract finalization.

If the Contract for the provision of the services is entered into within one month of the Proposal Validity Date we undertake to make available staff based on proposed qualifications. Our Proposal is binding upon us, subject to any modifications and clarifications resulting from Contract finalization.

If our Proposal is chosen, we will execute the Contract within 3 working days of being called on to do so, after the period of Contract finalization and standstill concludes.

We understand you are not bound to accept any Proposal you receive.

Yours sincerely,

[Name Authorised Signatory]
[Title/Position]
[Date]
[Signature]

1 Introduction

The energy sector is a key driver for the socio-economic development of Egypt, representing around 13% of current GDP and thus making economic growth in the country contingent upon the security and stability of energy supply.

Since 2007, Egypt has experienced an energy supply deficit due to the rapid increase in energy consumption and the depletion of domestic oil and gas resources, shifting its position as a net hydrocarbon exporter for the last three decades to that of a net importer.

This has brought a set of challenges to the energy sector, including electricity shortages, caused in part by the decline of domestic gas production, as natural gas is the main source of electricity, accompanied by highly subsidized energy prices, with negative financial implications for already dwindling government revenues.

In response, the Government of Egypt (GoE) has taken bold steps to adopt an energy diversification strategy with increased development of renewable energy and implementation of energy efficiency, including assertive rehabilitation and maintenance programs in the power sector (IRENA, 2018).

To this extent, in 2013, the Arab Republic of Egypt (through the Ministry of Electricity and Renewable Energy) had developed and adopted the Integrated Sustainable Energy Strategy (ISES) 2015 – 2035, which provides an ambitious plan to increase the contribution of renewable energy to 20% of the electricity generated by the year 2022, of which 12% of wind power plants is foreseen, mostly in the Gulf of Suez (GoS) due to the wind characteristics in the area.

In that respect, the GoE issued the Renewable Energy Law (Decree Law 203/2014) to support the creation of a favourable economic environment for a significant increase in renewable energy investment in the country. The law sets the legal basis for the Build, Own and Operate (BOO) scheme to be implemented. Through the BOO mechanism, the Egyptian Electricity Transmission Company (EETC) invites private investors to submit their offers for solar and wind development projects, for specific capacities and the award will be made to that bidder with the lowest Kilowatt Hour (kWh) price. In addition, the GoE (through the New and Renewable Energy Authority (NREA)) provides the land for the investors.

Through the BOO mechanism, a direct proposal was submitted by ACWA Power to EETC for the development of a 1100-Megawatt (MW) Wind Power Project in GoS or WoN (hereafter referred to as 'the Project'). The direct proposal was accepted pursuant to the Council of Ministers approval in the Cabinet held in 2021.

ACWA Power will establish a Special Purpose Vehicle (SPV) wind energy farm, owned by ACWA Power and other partners, responsible for the development, execution, and ownership of the Project.

The Bird Migration Protocol signed among RCREEE, EEAA, EETC and NREA in 2015 enhances the common interest between qualified investors and the aforementioned parties through the development of a strategic framework for economic construction and operation of wind-power plants in the area with the least possible damage to the migratory soaring birds and the environment. RCREEE for and on behalf the ACWA Power (hereafter referred to as "the

Beneficiaries") will be managing the process of conducting Site-Specific Environmental And Social Impact Assessment (ESIA) for Spring and Autumn 2022 at the ACWA Power site.

2 Project Description

The Egyptian Government has made land available for the ACWA Power for the 1100MW Wind Power Project including step-up MV/HV substation within the site ("the Project"). The Project is located either at GoS or at WoN as presented in the figure 1. The final Project Area and/or its coordinates at GoS or WoN will be determined by 1st February 2022. The coordinates of two options are shown in the annex.

In addition, it is important to note that the Project area at GoS or WoN is part of Areas of Strategic Environmental and Social Assessment SESAs conducted by NREA for wind farm development Projects.



Figure 1: Option 1: Project Site at GoS (212 km²)



Figure 2: Option 2: Project Site at WoN (579 km²)

2.1 Key Stakeholders

The main stakeholders involved in this Bird Migration study are the Regional Center for Renewable Energy and Energy Efficiency (RCREEE) and Siemens Gamesa Renewable Energy.

2.1.1 Regional Center for Renewable Energy and Energy Efficiency (RCREEE)

The Regional Center for Renewable Energy and Energy Efficiency (RCREEE) is an intergovernmental organization with diplomatic status that was set up based on Cairo Declaration that was signed in June, 2008 by government representatives from Arab countries. The declaration outlined the following two core objectives for establishing the center:

- To diffuse the implementation of cost-effective renewable energy and energy efficiency policies, strategies and technologies in the Arab region.
- To increase the share of renewable energy and energy efficiency products and services in the Arab region and their share of global market.

RCREEE acquired its legal status in August, 2010 as an independent an intergovernmental organization with diplomatic status through a Host Country Agreement with the government of Egypt.

As the technical arm of the League of Arab States in renewable energy and energy efficiency, RCREEE strives to serve better its Member States while ensuring it's the effectiveness public service nature and mandate. Therefore, a number of new and innovative initiatives have been implemented or under-development to enable and increase the adoption of renewable energy and energy efficiency practices in the Arab region.

2.1.2 ACWA Power

ACWA Power is a fast-growing developer, owner and operator of renewable, thermal power projects and water desalination projects across Africa, the Middle East and Asia. It has built a strong pipeline of projects across various technologies and at different stages of development in frontier and emerging markets and is led by a highly experienced team with extensive and diversified international experience in business development, project finance, technical, legal and operations, and a successful track record in project execution.

ACWA Power is creating innovative and tailored solutions aimed at meeting the growing needs of the markets it serves. ACWA Power team has also developed a deep understanding of the political and regulatory frameworks in its target countries and is experienced in structuring projects to meet best-in-class industry standards in order to mitigate emerging market risks. Consequently, ACWA Power team is uniquely positioned to deploy its resources, expertise and capital in a fast, efficient and responsible manner.

3 Study Objectives

The specific objectives of the study are to:

- (a) assess the potential environmental and social impacts of the Project;
- (b) conduct an ornithological survey and analysis at the Project Area;
- (c) compare the impacts in relation to relevant national and international requirements and guidelines;
- (d) develop an environmental management plan for the mitigation of the potentially negative impacts and for monitoring compliance with the relevant environmental laws;

(e) Appropriate follow-up plans and systems such as monitoring plans, environmental management plans and capacity building programs to cover any identified gaps in the capacity of the implementing agencies regarding environmental and social measures.

The environmental and social consultant team will, therefore, have to:

- ✓ Compile baseline data and existing studies to present the potential environmental and social sensitivities in the project area. The Consultant shall, firstly, rely on existing data and published reports, then compliment that with a targeted field investigation program as needed to cover any gaps in the data.
- ✓ Assess the relevant existing legal framework pertaining to the Project activities, including but not limited to the Egyptian Environmental Law and its guidelines for ESIA preparation, along with the relevant safeguard Operational Policies (OP's) of the Word Bank.
- ✓ Describe the Project components and activities anticipated during all Project phases, including planning, design, construction, and operation.
- ✓ Analyze the alternatives for the proposed Project in terms of environmental and social impacts.
- ✓ Assess the potential impacts of the proposed Project on the physical, biological, ornithological, and social spheres encompassing the area of influence of the Project.
- ✓ Address the potential issue of cumulative effects or impacts of the activities to be carried out under the Project.
- ✓ Carry out an ornithological bird study encompassing the area of influence of the Project.
- ✓ Prepare Environmental and Social Impact Assessment (ESIA) Reports, including an Environmental and Social Management Plan (ESMP).
- ✓ Consult with the various stakeholders on the Project during the ESIA preparation (at the scoping phase and after the draft report is prepared) and ensure that all comments are documented and incorporated into the study.

The ESIA of 1100 MW BOO wind farm in the GoS or in the WoN shall follow the Egyptian Environmental laws, regulations and guidelines and shall be complied in accordance with Egyptian E&S Policy (2014), with European Union Strategic Environmental Assessment Directives, with Egyptian Law no. 4/1994 for the Protection of the Environment Amended by Law 9/2009 complemented by the 2010 Environmental Impact Assessment (EIA) guidelines issued by the Egyptian Environmental Affairs Agency (EEAA) and with the Environmental Impact Assessment Guidelines and Monitoring Protocols for Wind Energy Development Projects along the Rift Valley/Red Sea Flyway (EEAA 2013). At the same time, this study shall keep the minimum standards of the Equator Principles are kept. This is to fulfil financing conditions of relevant international financing institutes that have committed themselves to keep the Equator Principles as minimum environmental standards. The Project has been classified as a Category A project, according to World Bank ES Framework, and other banks including EBRD, AfDB, JICA and the ESIA shall take into consideration the Environmental and Social Framework (ESF) of the World Bank, the relevant Egyptian laws and/or regulations on environmental reviews and impact assessment, and any other pertinent environmental requirements, as they relate to this Project. For further information on the World Bank's Environmental and Social Policies and Standards can be

obtained from the World Bank's website <http://www.worldbank.org/en/projects-operations/environmental-and-social-framework>).

Besides, the ESIA should include an analysis of the potential positive and negative physical, biological, socio-economic and cultural property impacts from the proposed Project. It should identify and evaluate both direct and indirect impacts in the broad area of influence.

The Consultant is expected to capitalize on the information which will be available from the Project's feasibility study, and other relevant documents prepared during the Project preparation stage.

4 Applicable Requirements

The Assignments will be carried out in accordance with:

- Applicable local and national Laws, Regulations and Guidelines requirements, including those related with environmental and social impact assessments; particularly Egyptian E&S Policy (2014), with Egyptian Law no. 4/1994 for the Protection of the Environment Amended by Law 9/2009 complemented by the 2010;
- Egyptian Environmental Impact Assessment Guidelines and Monitoring Protocols for Wind Energy Development Projects - Environmental Impact Assessment Guidelines and Monitoring Protocols for Wind Energy Development Projects along the Rift Valley/Red Sea Flyway with a particular reference to wind energy in support of the conservation of Migratory Soaring Birds (MSB) -Migratory Soaring Birds Project - Ministry of State for Environmental Affairs - Egyptian Environmental Affairs Agency – October 2013;
- Bird Migration Protocol on the Executive Framework for the Strategic Cumulative, Environmental & Social Assessment & Program of Ornithological monitoring and Active Turbine Management for Wind Energy Developments in the Gulf of Suez (signed by RCREEE, EEAA, NREA and EETC);
- Review and guidance on use of “shutdown-on-demand” for wind turbines to conserve migrating soaring birds in the Rift Valley/Red Sea Flyway developed by Migratory Soaring Bird Project – Birdlife - UNDP;
- The Equator Principles IV(July 2020)
- The Word Bank Environmental and Social Framework;
- IFC’s Good Practice Handbook on Cumulative Impacts Assessment and Management;
- The EBRD’s Environmental and Social Policy (2019) (and the incorporated Performance Requirements (“PRs”)), and relevant European Union (“EU”) requirements (including, but not limited to, the EU EIA Directive and SEA Directive);
- EIB Environmental and Social Standards;
- JICA Guidelines for Environmental and Social Considerations;
- AfDB Environmental and Social Safeguard Policies, Procedures and Guidelines
- WBG Environmental, Health, and Safety Guidelines for Wind Energy (2015); and
- Relevant international conventions and protocols relating to environmental and social issues, as transposed into national legislation.

The Consultant shall note the implications of the above requirements with respect to biodiversity, particularly if the critical habitat has the potential to be impacted.

5 Scope of Works and Specific Tasks

5.1 Environmental and Social Aspects

The Consultant shall consider the major environmental and social aspects during the construction and operation phases of the proposed Project and that are expected to impact the environment shall include, but are not limited to the following:

- Air and noise disturbance: There may be dust from topsoil removal, excavation and backfilling from the construction and from storage of excavated soil. There may also be noise from construction (e.g., vehicles and equipment, materials loading and offloading, etc) which may cause nuisance where near to homes and businesses. An air and noise baseline measurements should be conducted for at least 6 points at the site, 24 Hrs. for each.
- Cultural heritage: Potential impacts on historic or cultural heritages sites, must be assessed prior to final selection of areas to be connected. Procedures to deal with chance finds will be developed.
- Land acquisition and involuntary resettlement: Project elements may require the acquisition of tracts of land. Suitable land is often a limited resource, and facility footprint may require resettlement of both titled landowners and squatters and/or the taking of agricultural land.
- Potential impacts of the wind farm operation: These impacts may include noise from the wind turbines, visual impact from the wind masts, and avian mortality upon impact with the wind turbine and/or overhead powerlines by birds and/or bats.
- Social impact on workers: necessary measures will be taken to ensure that the companies in charge of the construction of the wind farm, as well as the operator of the wind farm when completed, implement satisfactory labor and working conditions, in line with the International Labour Organization (ILO) fundamental conventions.

The Consultant shall draw on the findings from previous studies conducted at GoS or WoN.

The Consultant shall identify all relevant options and techniques for implementing the ESIA in the Project Site to ensure the least negative environmental and social impacts when developing wind energy in the Project Area. This will include:

- Presentation of the wind energy potential at Project Area from existing data and incorporation of this in the planning process.
- Performing a comprehensive review of available data in the Project Area on:
 - Natural values: Distribution of migrating and resident birds, vulnerable species of other species groups, vulnerable habitats and protected areas (e.g. National Parks, Important Bird Areas and other protected areas). The distribution of birds will be based on information from previous studies during previous years in the GoS or WoN areas, fieldwork conducted and also from a thoroughly update of published information from the scientific literature (in particular studies using satellite-based tracking of a number key species).
 - Generic issues: Human settlements, grid connection availability, sites of cultural/historical value.
- Conducting a data gap analysis, based on the review of available data, in order to identify what data is needed for the ESIA.

- Identifying all relevant stakeholders' capacity building needs.
- Determining the likely extent (spatial, temporal and thematic) of the ESIA, the level of detail that will be needed for the assessment, and identifying what information will be included in the ESIA report.

The Consultant shall assess the following possible impacts from the Project at the Project Area:

- Habitat loss, habitat fragmentation, habitat degradation or disturbance/displacement of vulnerable species.
- Evaluate possible impact on migratory birds through a sampling from entire Project Area with same methodology, the migration across the entire Project area with a description of key-characteristics: Species composition and the variation in numbers and flight-altitude both from north to south and from east to west. The evaluation must give input for an evaluation of the cumulative effects of all projects surrounding the Project Site. See section 5.2 for detailed input from field study during spring and autumn 2022.
- Identify important roosting and breeding sites/habitats for vulnerable and/or endangered animal species and map all relevant flora.
- Cumulative impacts of environmental and/or socio-economic effects, for instance Project development, migrating birds, landscape and visual impact, that result from the incremental impact, on areas or resources used or directly impacted by the Project, from other existing, planned or reasonably defined developments at the time the risks and impacts identification process is conducted. For more information, see IFC's Good Practice Handbook on Cumulative Impacts Assessment and Management.
- Possible impacts for local communities and individuals within the Project Area; their economic activities, possible economic displacement and possible impact on cultural heritage whether tangible or non-tangible. Economic and social baseline is a key part of the ESIA to be developed.
- Land characteristics and uses
- Landscape characteristics and existing views
- Flora and fauna
- Noise and Flicker levels
- Water quality; water resources and waste water.
- Flash flood
- Geomorphology and soil
- Climate
- Air quality
- Ornithological survey which should include and not limited to the following:
 - Collect and review the available literature about soaring bird migration through the Project Area.
 - Describe main soaring bird species migrating through the area, numbers, migration routes, timing of migration (each species individually), conservation status and including any other pertinent information.
 - Identify, describe and map main migration routes for soaring birds through the Project Area.

- Analyze and prioritize gaps in existing knowledge about species, migration routes.
- Identify and describe the main threats to migratory soaring birds in the Project Area, and specify and describe the (existing or planned) risks and concerns for migratory soaring birds from the Project.
- Map and zone areas of the risks for soaring birds in the Project Area in addition to identifying the areas for greatest potential conflict with the Project.
- Identify and map the sites at the Project Area needing further survey and assessment.
- Provide an overall map of the migration flyways of migratory soaring birds inside the Project Area.
- Critical passes for birds into the Project Area
- study the correlation between the bird migration patterns and weather conditions
- Habitat degradation, impact on migratory birds, impact on vulnerable species, which for the regions with potential for wind energy also will include the impact on birds (both migratory and resident), economic, social and cultural (tangible and non-tangible) impact on resident communities and individuals within the Project Area.
- Social, cultural and economic context; settlements, land use and existing infrastructure; social and economic environment; ambient noise levels; archaeological, historical and cultural heritage
- Public Consultation Process
 - Outreach activities to inform the public about the Project.
 - Public consultation Meeting on the draft ESIA report prior to finalization and submission
- Existing utilities infrastructure and its usage
- The recommended maximum height of wind turbines based upon findings of the baseline bird study.
- Prohibited areas for installing wind turbines at the Project Area.

5.2 Field Surveys for the Baseline Flora, Fauna, Birds and Habitats Study

The objective of the baseline flora, fauna and birds study for spring and autumn 2022 is to provide field-based documentation of the overall patterns of migration of soaring migrants, plants and animals (except birds i.e. mammals, reptiles, insects and spiders) and to evaluate the possible collision risks for migrating birds by the wind turbines and OHTL at the Project Area. The focus of the baseline study will be on soaring migrants (identifying species, numbers, flying routes and roosting sites, etc...), since they are most at risk of colliding with wind turbines and OHTL in the Project Area. However, during the fieldwork, important breeding and roosting areas for birds as well as the occurrence of other animals and plants of interest should be identified. The field surveys and investigations on habitats, flora and fauna as well as bird monitoring in spring and autumn 2022 will feed directly into the EISA, and should cover the entire spring migration season (20th February – 20th May) and autumn migration season (10th August – 10th November) 2022. The ornithological surveys will be carried out via, for instance, at least 20 Vantage Points (VPs) covered by at least ten teams over two bird migration seasons.

5.3 Scoping

At the beginning of the work, scoping sessions with a sample of the concerned parties in the Project Area and/or national authorities and/or entities will focus on the scope (i.e., the TORs) of the ESIA. A thorough discussion with representatives of various competent authorities and/or entities and stakeholders will be conducted. This scoping will consist of a meeting (or series of meetings, as necessary) to explain potential impacts and the sensitivities of the surrounding environment as well as the similarities and differences between the present Project and other similar projects implemented in Egypt or elsewhere. These meetings will be arranged by the Consultant in coordination with the concerned relevant authorities and/or entities. The scoping session is also aimed at identifying, early on in the process, any environmental and social aspects that may not have been included in the scope of work which the stakeholders raise. This process will provide a basis for reviewing the issues that should be considered in the ESIA. It is essential to properly document these scoping sessions and identify the issues raised by the stakeholders, as this will constitute an integral part of the final ESIA report.

5.4 Data collection

Coincident with scoping for the environmental and social impact assessment, data will be compiled on the characteristics of the Project Area in terms of its sensitivity to adverse and beneficial environmental and social impacts. The Consultant shall utilize, to the extent possible, existing data and information. Data gaps should be supplemented through targeted, representative, field analyses, as necessary.

Data collection will be done only for the purpose of assessing the environmental and social sensitivities of the Project Area. Every effort should be made to minimize the collection of superfluous data or those that may not have direct impact on the assessment.

Furthermore, the Consultant shall represent the data compiled, as much as possible, in a geo-referenced manner to facilitate analysis and review.

5.5 Analysis

Subsequent to gathering of data, the environmental and social issues will be assessed in terms of the environmental and social risks and benefits associated with the Project. The Consultant shall provide an overview of the anticipated safeguards issues, both environmental and social, for the Project Area.

The ESIA shall address the issue of alternatives based on existing data by summarizing and referencing the alternatives in a manner consistent with national and international guidance. The analysis will include the benefits and impacts expected from the Project, and other technical and economical alternatives, including the “no action” alternative, and evaluate the environmental and social advantages and disadvantages of each alternative.

The Consultant shall develop an Environmental and Social Management Plan (ESMP), to detail the management measures for environment and social issues, roles and responsibilities for implementation and supervision, and cost. Furthermore, an environmental monitoring plan will be developed, indicating parameters to be monitored, their location, frequency of monitoring, roles and responsibilities, and cost.

The Consultant shall also assess the ability of the implementing agencies and/or entities to implement the proposed environmental management and monitoring plan, and develop the institutional arrangement and capacity building programs necessary to ensure successful implementation.

5.6 Ornithological Analysis

The Consultant shall assess the potential impacts of the Project during construction and operation phases on bird life. Therefore, the ornithological part of the Environmental Study will include, but is not limited to the following:

- Brief general outline about the potential impact of wind farms on bird life especially drawing upon relevant experience made so far internationally as well as in the region (i.e. Egypt).
- Investigation on bird migration in the GoS or WoN and analysis whether the proposed Project is laying in regional bird migration corridors (desk study based on available international and national publications).
- Overview and investigation about the avifauna, occurrence and distribution of birds (resident and migratory) in the Project Area with focus on rare and endangered species that shall be implemented by the ornithological.
- Analysis of potential cumulative impacts to birds, for instance collision with wind turbine blades, collision with OHTL, barrier effects and loss of habitat.
- In case negative impacts on birds cannot be excluded the Consultant will provide a detailed description of further field studies to be undertaken at the Project Area.

5.7 Public Stakeholders and Public Involvement

The Consultant shall implement the stakeholder engagement and public consultation that play an important role in the site-specific ESIA process to meet the requirements of Egyptian law and international Donors. The Consultant shall conduct the Stakeholder Engagement Plan (SEP) that identifies all the external and internal Project stakeholders, which are directly or indirectly affected by the Project, as well as those who may have reasonable interests in the Project and/or the ability to influence its outcome, either positively or negatively. Stakeholder engagement will be an ongoing process throughout the full lifetime of the Project. Public comments and consultation shall be achieved through Information disclosure and consultation and participation in public hearing. Grievance Mechanism shall be established during planning, construction and operation of the Project.

5.8 Wind Farm ESIA Report

An Environmental and Social Impact Assessment (ESIA) reports for the Project will be prepared in a manner complying with the requirements of the EEAA and IFIs. The consultant should undertake a fully comprehensive ESIA study. The main text should focus on findings, conclusions and recommended actions, supported by summaries of the data collected and citations of any references used in interpreting those data. Any additional or background materials used in the study can be delegated to annexes. An executive summary will also be prepared by the Consultant, to use as a stand-alone document, in a manner that can be accessible to the non-technical reader, both in English and in Arabic languages.

A draft report will be issued for review and comment by the concerned Stakeholders and the Donors after which a final report will be issued.

The Consultant shall prepare the following sections that indicate the main outputs expected from the analysis to be included in the ESIA report.

1.0 Non-Technical Summary

The non-technical summary shall contain sections/paragraphs on:

- title and location of the Project;
- name of the Project worker;
- name of the organization preparing the ESIA report;
- a brief outline and justification of the proposed Project;
- brief description of the project environment;
- names of Project stakeholders and their involvement in the ESIA process;
- description of the major significant impacts;
- recommendations and plan for mitigation/compensation measures;
- proposed monitoring and auditing plans; and
- summary of recommendations and conclusions.

This section will state also the purpose of the terms of reference, identify the Project to be assessed and explain the executing arrangements for the environmental and social impact assessment. It shall include Background Information which provides a brief description of the major components of the proposed Project, a statement of the need for it and the objectives it is intended to meet, the implementing agency, a brief history of the Project (including alternatives considered), its current status and timetable, and the identities of any associated projects. Summary of the general scope of the environmental impact assessment shall be included.

1.1 Project Description

This section will provide a description of the relevant parts of the Project, using maps (at appropriate scale) where necessary, and including all the relevant information available at the time of the analysis, including strategic approach, prioritization methodology, technical design, community mobilization processes, and institutional arrangements proposed.

1.2 Project Stakeholders and Public/NGO Consultation

This section shall identify all the Project stakeholders and their interests in the Project (both positive and negative, if any). A report of how these groups were involved in the preparation of the ESIA shall be included. This shall include a description of public involvement in the ESIA process, and how the interests of the public and different stakeholders have led to changes in Project design and development of mitigation measures for adverse impacts.

This section will describe also the process that will result in coordinating the ESIA with other government agencies/entities, obtaining the views of local NGO's and affected groups, and keeping records of meetings and other activities, communications, and comments and their disposition. The process of consultation shall meet the requirements of the World Bank and EEAA. The Consultant will initiate such consultations as early as possible. The Consultant will consult these groups twice: (a) shortly after environmental screening and before the terms of reference for the ESIA are finalized; and (b) once a draft ESIA report is prepared. The consultations should be recorded in the ESIA.

1.3 Policy, Legal and Administrative Framework

This section will describe the pertinent regulations and existing codes of practice and standards governing environmental, health and safety, protection of sensitive areas, siting, land use control, etc., at international, national, regional and local levels.

This section will also include assessment of the EEAA and IFIs Environmental and Social Standards, identifying which of these would be triggered.

1.4 Analysis of Alternatives to the Project

This section will describe alternatives that were examined in the course of developing the proposed Project and identify other alternatives which would achieve the same objectives. The concept of alternatives extends to siting, design, technology selection, construction techniques and phasing, and operating and maintenance procedures. It will compare alternatives in terms of potential environmental and social impacts and suitability under local conditions.

1.5 The Existing Physical, Biological and Social Environment

This section will assemble and evaluate data on the relevant environmental and social characteristics of the Project Area. It will include information on any changes anticipated before the Project commences, including physical, biological, especially ornithological, and socio-cultural environments.

1.6 Impact Assessment

Environmental: The Consultant will assess the potential impacts of Project activities such as physical, biological, social environment as well as cumulative impacts during construction, operation, maintenance and decommission phases.

Social: The Consultant will also assess:

- Demographic impacts such as changes in population numbers and characteristics (such as sex ratio, age structure, in-and-out migration rates and resultant demand for social services, hospital beds, school places, housing etc.);
- Culture impacts including changes to shared customs, traditions religious or ritual significance;
- Community impacts including changes in social structures, organizations and relationships and their accompanying effect on cohesion, stability, identity and provision of services;
- Socio-psychological impacts including changes to individual quality of life and well-being, sense of security or belonging and perceptions of amenity or hazard;
- Economic Effects i.e. employment, investments, direct & indirect expenditures, economic activities, etc. and value systems (e.g. language, address, religious beliefs and rituals) archaeological, historical and cultural artifacts and to structures and environmental features;

The Consultant will:

- determine rural community perspectives on previous and ongoing energy system developments and operation and maintenance (O&M) interventions;
- discuss community conditions and readiness for accepting and participating in the projected management systems; and
- analyze the labor conditions of the workers during construction and operation phase.

In addition, positive and negative (if any) social impacts on the Project shall be discussed, on communities in general and on various community sub-groups (women and men, the poor,

youth) in particular. Recommendations can be provided for ways to address any negative social impacts.

1.7 Mitigation Measures of Environmental and Social Impact

Mitigation measures shall be considered throughout all Project's phases; planning, project design, construction, operation, maintenance and Decommissioning.

1.8 Environmental and Social Management Plan (ESMP)

This section will provide details on the management initiatives and on the measures to be implemented during both the construction and operational phases of the Project. The ESMP is to: (i) outline the procedures for the environmental and social impact assessment of the wind plant and the codes of practices to be applied; (ii) ensure an appropriate level of consultation and disclosure takes place; (iii) to ensure systems and resources are in place for the successful monitoring of the management program; and (iv) a risk management matrix. The consultant should determine ESMP implementation indicators in the ESIA report. Also, wherever possible the costs of the mitigation and compensation measures will be included.

The ESMP will have three main components:

I. Mitigation measures

This section will identify the mitigation measures for the environmental and social impacts, so as to bring them to acceptable levels. The mitigation measures will be developed and accompanied by a thorough risk management for the construction, operation, maintenance and decommission phases, and will include roles and responsibilities for implementation and supervision, cost, timing, etc.

II. Monitoring program

This section will include a detailed plan to monitor the implementation of mitigating measures and continuously monitor the impacts of the Project during construction, operation, maintenance and decommission phases. Costs of the monitoring facilities will be estimated, as well as roles and responsibilities, parameters to be monitored, frequency of monitoring, and standards. Monitoring program shall aim toward achieving the optimal operation performance as consistently as possible.

III. Institutional arrangements

This section will review the authority and capability of institutions at local, regional, and national levels and recommend steps to strengthen or expand them so that the management and monitoring plans in the environmental and social assessment can be implemented. The costs and sources of funds for the proposed measures and any training requirements for capacity building in the field of environmental and social safeguards should be specified.

The Consultant will present the environmental and social management plan in a tabular format similar to the following:

A. Mitigation

Project Activity	Potential Environmental Impacts	Proposed Mitigation Measures	Institutional Responsibilities (incl. enforcement & coordination)	Cost Estimates	Comments (e.g. secondary impacts)
Pre-Construction Phase (incl. Bidding and planning phase, detailed planning and construction phase, etc.)					
Construction Phase					
Operation and Maintenance Phase					
Decommission Phase					

B. Monitoring

Project Activity	Parameters to be monitored	Location	Measurements (incl. methods & equipment)	Frequency of Measurement	Responsibilities (incl. review & reporting)	Cost (equipment & individuals)
Pre-Construction Phase						
Construction Phase						
Operation and Maintenance Phase						
Decommission Phase						

C. Institutional Strengthening and Training for Implementation

Institutional Strengthening Activity	Phases	Position(s)	Scheduling	Responsibility(ies)	Cost Estimates
Training Activity	Participants	Types of Training	Content (modules, etc.)	Scheduling	Cost Estimates

1.9 Summary and Conclusion

This conclusion will be summarized in a series of brief statements referring to relevant sections of the ESIA report. The section will focus on significant impacts, the measures proposed to avoid or mitigate and the impact management proposals during Project implementation.

1.10 Appendices

These shall include information needed for reference or detailed/in-depth review by technical experts. These could include:

- References;
- Abbreviations used in text;
- Sources of data and information;
- Detailed data reduced for use in the main body of the report;
- Detailed technical analysis of particular impacts (e.g. pollution dispersion, soil erosion demands for social services);
- Names of individuals and organizations consulted or involved in study; and
- Details of when and where study was undertaken.

5.9 Consultation and Information Disclosure

Due to the Project is category A project according to the IFIs Performance Standards, the "Developer" will engage with other Project stakeholders throughout the Project life cycle. Therefore the Consultant shall consult with project-affected parties, other interested parties and local nongovernmental organizations (NGOs) about the Project's environmental and social aspects and take their views into account. This consultation shall be done at least twice: (a) shortly after; and (b) once a draft ESIA report is prepared. In addition, the Consultant shall consult with such groups throughout Project implementation as necessary to address ESIA-related issues that affect them.

The Consultant shall ensure that newspaper announcement for the consultation session(s) will take place at least two weeks in advance of the event. In addition, the Consultant shall make available to participants relevant materials, and documents (in English and Arabic languages) that will be used during the consultation session(s).

Site specific consultation efforts shall include all concerned stakeholders – be they persons/households affected by the Project activities, civil society organizations representing the interest of the community, or regulatory and governmental bodies who will play a role in facilitating or regulating the implementation of Project activities.

The Consultant will decide on the most appropriate consultation tool to reach out to the different stakeholders. Well-publicized public consultation sessions are a must for this Project and additional consultation efforts (for example through focus group discussions, in-depth meetings, and interviews) shall be solicited to reach the most vulnerable and difficult to reach community members. Additionally, the Consultant shall resort to conducting surveys in the different sites.

The Consultant shall classify the stakeholders under the following groups (to be revised during preparation of the site-specific ESIAAs):

- Direct beneficiaries, interested parties, and Project affected persons;
- Local Governmental authorities/entities;
- Other governmental authorities/entities;
- Donors;
- Media;
- NGOs working on environmental and social related aspects;
- Universities and Educational institutes;
- Local Community;

- Petroleum and Natural Gas companies; and
- Other.

The draft ESIA, including a non-technical summary, will, once approved by the Client, be translated into Arabic by the Consultant and disclosed online for a period of 60 calendar days (through the websites of Client, Beneficiaries, and Donors) and locally in English and Arabic through a public meeting in the GoS or WoN. The Consultant will be responsible for procuring the public meeting venues and presenting the ESIA at the meetings. Once the 60-day disclosure period is complete, the Consultant will present a Final Recommendation Report on the outcomes of the disclosure process including key concerns and comments raised from the consultations, etc. If significant issues are raised which would necessitate a change or update to the ESIA this will be undertaken by the Consultant. After the Client, Beneficiaries, and Donors approvals, the following documents will be disclosed online through the websites of Client, Beneficiaries, and Donors:

- ESIA (Full version – English Language);
- ESIA (Full version – Arabic Language);
- ESIA (Executive Summary – English Language); and
- ESIA (Executive Summary – Arabic Language).

The Consultant will be responsible for receiving and responding to comments and queries on the ESIA and for submitting the ESIA to EEAA for review and approval.

5.10 Cumulative Effects Assessment

A Cumulative Effects Analysis (CEA) at the GoS region is a multi-layered analysis approach that aims at identifying and analysing the impacts of a set of projects on a pre-defined set of ecological elements; habitats and species. The CEA comes into context for the ACWA Power Project 1100 MW project since it is located in an area that includes multiple wind farms at GoS while being also located along a major bird migratory flyway, namely the Rift Valley Red Sea flyway. Although the impact of wind power project infrastructure on Migratory Soaring Birds (MSBs) is well documented, it should be highlighted that the CEA will not be limited to this context and will also take into consideration other ecological elements, including habitats and volant mammals (bats).

The CEA follows a series of multi-layered steps that would eventually identify the potential cumulative impacts of the projects of concern in order to eventually provide monitoring and mitigation measures that would be applied through an adaptive management approach. These steps would follow the approach that was developed under the Cumulative Effects Assessment for the Red Sea Wind Energy (RSWE 500MW), NIAT 500MW, Masdar IPH 200MW, AMUNET 500MW projects, which RCREEE has taken part in. These steps, in summary, are as follows:

- **Scoping**, which includes an initial review of existing data, preliminary engagement with stakeholders, including national experts, determining spatial and temporal boundaries of the CEA, and conducting a screening process to select Valued Social and Environmental Components (VECs).
- **Collection of supplementary data**, a huge amount of data has been collected over the years in the project area and its vicinity.
- **CEA Framework**, will be applied using a risk-based approach for birds, bats and habitats. The objective of which would be to identify priority VECs at highest risk of cumulative effects from the wind power projects so that mitigation and monitoring measures are put

in place to implement an adaptive management approach. The framework will follow a five-step approach as follows:

- a. *Identification of species populations that are potentially at risk,*
- b. *Evaluate the sensitivity of these species (relative importance and vulnerability),*
- c. *Assess the cumulative Likelihood of Effect (LoE) on each species population, resulting in the identification of priority VECs,*
- d. *Determine fatality thresholds for each priority VEC,*
- e. *Produce a Mitigation and Monitoring Plan.*

Access to Data, Consultant will access all available data collected at GoS region and vicinity sites during the previous spring and the autumn migration seasons, in addition to all available data of the ecological assessment that was collected as part of the ESIA for the project.

Timeline, the CEA will be presented as separate stand-alone documents. The Consultant is committed to providing a final CEA report by 15th of December 2022.

5.11 Bat Assessment Study

The Consultant shall propose a bat survey methodology and approach to be applied at GoS or WoN via route-transects that will be distributed throughout the Project Area. The survey will be undertaken from the months of April until August 2022 given that bats become active after the hibernation which may last from December to March.

If bat activity is encountered, the coordinates would be recorded and the data will be recorded automatically by the bat detector¹ provided by Client for further in-depth desktop analysis. The survey will start one hour before sunset and continue during nighttime as bats usually rest and sleep during the day and are active during night as they search for prey to feed on.

The Consultant shall analysis and compare recordings of the sound waves with a comprehensive database for the sound waves of all bats species known to match and determine the species of the recorded bat accordingly. The bat assessment that will be carried out by Consultant shall provide quantitative and qualitative data about bats in terms of followings:

- Species identification;
- Categorization of species;
- Speculations on height. This will be based on field observations that will aim to identify to the extent possible the height at which the bat was recorded but also based on review of published papers and literature for recorded species;
- Activity index (the significant of bat activity is based on the concept of activity index which is the number of bat contracts per surveying hour);
- Map with locations of detected bats within the area;
- Weather conditions and its effect on bat activity. The bat recorder that will be used automatically records temperature, and wind speed and other meteorological data could be obtained from met mast data; and

¹ Song Meter SM4BAT FS Bioacoustics Recorder Number S4U1154 and SMM-U2 Ultrasonic Microphone Number MU211543

- Significance of bat activities for the project including degree of bat activity and species encountered (if any) and identification of any further recommendations to be considered if required (e.g. monitoring at height).

6 Work Schedule and Deliverables

The Consultant shall submit the Deliverables (D), Minutes of Meetings (M) and PowerPoint Presentation (P) to the Client with respect to the Implementation of the "Site-Specific Environmental and Social Impact Assessment, Bat Assessment Study and Cumulative Effects Assessment" for the Project in development by the Beneficiary for the sites at GoS or WoN for spring and autumn 2022 as follows:

Table 1 Reports related to the Option 1 at GoS

Reports	Deadline
Minutes of kick-off Meeting (M1)	February 6, 2022
Inception Report (D1)	February 14, 2022
Scoping Report for ESIA, BAS and CEA (D2)	March 24, 2022
1st Bimonthly Report (D3)	April 20, 2022
Stakeholder Engagement Plan (SEP) (D4)	May 20, 2022
E&S Sensitivity Mapping Report (D5)	June 1, 2022
1st PowerPoint Presentation (P1)	June 6, 2022
Ornithological Field Monitoring Report in spring 2022 (D6)	June 30, 2022
Minutes of kick-off Meeting (M2)	July 28, 2022
Inception Report (D7)	August 1, 2022
2nd Bimonthly Report (D8)	October 10, 2022
Draft Bat Assessment Study Report (D9)	October 16, 2022
ES Management System Manual (ESMS) (D10)	October 31, 2022
Draft EIA OHTL Report for the Project (D11)	October 31, 2022
2nd PowerPoint Presentation (P2)	November 28, 2022
Draft ESIA Wind Farm Report (D12)	December 1, 2022
Draft CEA Report (D13)	December 1, 2022
Final Bat Assessment Study Report (D14)	December 1, 2022
Final ESIA Wind Farm Report (D15)	December 15, 2022
Final CEA Report (D16)	December 15, 2022
EEAA Permit (D17)	February 1, 2023

Table 2 Reports related to the Option 2 at WoN

Reports	Deadline
Minutes of kick-off Meeting (M1)	February 6, 2022
Inception Report (D1)	February 14, 2022
Scoping Report for ESIA and BAS (D2)	March 24, 2022
1st Bimonthly Report (D3)	April 20, 2022
Stakeholder Engagement Plan (SEP) (D4)	May 20, 2022

E&S Sensitivity Mapping Report (D5)	June 1, 2022
1st PowerPoint Presentation (P1)	June 6, 2022
Ornithological Field Monitoring Report in spring 2022 (D6)	June 30, 2022
Minutes of kick-off Meeting (M2)	July 28, 2022
Inception Report (D7)	August 1, 2022
2nd Bimonthly Report (D8)	October 10, 2022
Draft Bat Assessment Study Report (D9)	October 16, 2022
ES Management System Manual (ESMS) (D10)	October 31, 2022
Draft EIA OHTL Report for the Project (D11)	October 31, 2022
2nd PowerPoint Presentation (P2)	November 28, 2022
Draft ESIA Wind Farm Report (D12)	December 1, 2022
Final Bat Assessment Study Report (D13)	December 1, 2022
Final ESIA Wind Farm Report (D14)	December 15, 2022
EEAA Permit (D15)	February 1, 2023

The Consultant will discuss report structure and presentation of the reports with the Client at an early stage. The Client will have 10 days for commenting and - if necessary - the Consultant will present adjusted report structure within two weeks.

The Consultant will submit 4 hard copies of the final versions of the above-mentioned reports highlighted in Table 1 and Table 2 in English and Arabic languages. Additionally, the executive summary to be included in each report has to be provided in Arabic.

At the end of the assignment the Consultant will provide a CD with the final reports (including all annexes and spreadsheets, tables graphs and pictures used/elaborated during the assignment) in process able formats (word, excel, jpeg, etc).

7 Team Composition & Qualification Requirements for the Key Experts

A Project Manager will run the overall Assignment. Technical expert inputs on key topics of the project as wind resources, field surveys of birds and bats must have more than 10 years of experience within their field and no less than 5 years of experience in similar required activities. An environmental and ornithological experts should be registered or accredited with EEAA or initiate the process upon the Contract signature. A multi-disciplinary team of RCREEE will manage and follow up the whole project.

Key Expert 1

Project Manager (Senior), with overall responsibility for managing the Assignments, managing the relationship with RCREEE, and for the technical outputs of the Assignment as well as day-to-day management of the project including contact with RCREEE.

Qualifications and Skills

University degree (or equivalent) in Environmental Science (e.g. Biology, Environmental Management & Planning, Natural Resource Use) or in a related field. Good command of spoken and written English and Arabic.

Professional Experience

- At least 10 years' work experience in project management especially environmental projects;
- At least 10 years' experience of working with interaction between birds and renewables, in particular studies of migratory birds (especially so-called soaring migrants);
- Experience in preparation of environmental impact studies of RE projects including pre- and post-construction monitoring;
- Experience in development of mitigation measures and public participation;
- At least 5 years' experience working in the Middle East; and
- Familiar with international donor's projects.

Key Expert 2

EIA Expert

Qualifications and Skills

University degree (or equivalent) in Environment or in a related field. Good command of spoken and written in English and Arabic languages.

Professional Experience

- At least 10 years' experience in EIA preparation.
- At least 5 years' experience in EIA of renewable energy projects
- Very good working knowledge about local and international guidelines for EIA.
- Knowledge about bird Monitoring Protocols for Wind Energy Development Projects will be an advantage;
- At least 3 years' professional experience of work in the Middle East; and
- Familiar with international donor's projects.

Key Expert 3

Biodiversity Expert

Qualifications and Skills

University degree (or equivalent) in Biology or in a related field. Good command of spoken and written in English and Arabic languages.

Professional Experience

- At least 10 years' experience in survey of biological environments, including ornithological survey of migratory birds and habitats;

- At least 5 years' experience in data analysis and interpretation of biological data;
- At least 5 years' working experience in EIA of renewable energy projects;
- At least 5 years' experience in pre-construction bird monitoring in wind farms;
- Very good working knowledge about local and international guidelines for EIA;
- At least 3 years' professional experience of work in the Middle East; and
- Familiar with international donor's projects.

Key Expert 4

Statistical Analysis Expert

Qualifications and Skills

University degree (or equivalent) in Biology. Good command of spoken and written English and some knowledge of Arabic will be an advantage.

Professional Experience

- Preferably 10 years' experience working in conducting multivariate statistical analysis, experimental design and data modeling;
- Experience of collision risk modelling in relation to birds and wind farms; and
- Experience in the Middle East.

Key Expert 5

Bats Expert

Qualifications and Skills

University degree (or equivalent) in Ecology or in a related field. Good command of spoken and written in English and Arabic languages.

Professional Experience

- At least 7 years' experience in survey of biological environments, including bat surveys and habitats;
- At least 5 years' experience in data analysis and interpretation of bats data;
- At least 5 years' working experience in EIA of renewable energy projects;
- Very good working knowledge about local and international Good Practice Guidelines for bat surveys and assessment;
- At least 3 years' professional experience of work in the Middle East; and
- Familiar with international donor's projects.

Non-Key Expert

Beside the Consultant key experts, the Consultant shall involve other Non-Key experts such as:

- Ornithological/Bat Field Surveys

- Solid waste / hazardous waste management;
- Archaeological, Historic and Cultural Heritage;
- Occupational Health, Environment and Safety issues;
- Socio-economic development;
- Entomology;
- Landscape Ecology;
- Habitat;
- GIS
- Legal issues

8 Facilities to be provided by the Client

- The Client will provide the Consultant in due time with access to, or copies of all available information/data/reports with regards to the Assignments;
- The Client will help in facilitating all security permits needed for working in the Project Area;
- The Client will coordinate with concerned government entities and Beneficiary to help in providing available relevant studies, wind and topographical data for wind farm projects in the Project Area by the start of the project;
- The Client will provide professional relevant multi-disciplinary personnel to work with the Consultant's team for the follow up on the Project implementation;
- The Client will coordinate with concerned government entities the formation of specialized committee to supervise the initiating of the bird/bat monitoring field work well as the bird/bat monitoring study in Project Area;
- The Client will host technical workshops relevant to the assignment in Cairo.

9 Facilities to be provided by the Consultant

- The Consultant will be responsible for the fees and costs associated with implementing the Assignments and submitting the related ESIA to the NREA and EEAA for review and approval.
- The Consultant will report on all aspects of the Assignments to the Client.
- Consultant is responsible for arranging its internal office space including office equipment, desks, access to internet, consumables and all other office facilities in Cairo and/or site location as well as all related to the fieldwork including all logistics, translation, staff recruitment, accommodation, transport.
- The Consultant will be expected to work with a variety of stakeholders through Client and the Beneficiary including, EETC, EEAA, NREA and lenders.
- The Consultant will be responsible for the provision of Personal Protective Equipment (PPE) in the field and it will be checked daily by Beneficiaries' Health, Safety, Security and Environment (HSSE) Officer/Manager (if any needed).
- The Consultant shall submit all database related to the Assignment.

10 Data Management

10.1 Compilation of Storage

The Consultant will establish a database to store, retrieve, and organize field data. Data from field forms will be keyed into electronic data files, and all field data forms, field notebooks, and electronic data files will be retained.

10.2 Quality Assurance / Quality Control (QA /QC)

The Consultant shall implement QA/QC measures at all stages of monitoring including field data collection, data entry, data analysis, and report preparation. At the end of each survey day, each surveyor will inspect his or her data forms for completeness, accuracy, and legibility. Periodically, the study team leader will review data forms to insure completeness and legibility, and detected problems will be corrected. Any changes made to the data forms will be initialed and dated by the person making the change. Data will be checked thoroughly for data entry errors. Any errors will be corrected by referencing the raw data forms and/or consulting with the observer(s) who collected the data. Any irregular codes detected, or any data suspected as questionable, will be discussed with the observer and study team leader. Any changes made to the raw data will be documented for future reference.

Annex

ACWA Power Windfarm GoS Coordinates (Option1)

Point	Latitude	Longitude
Plot 1		
1	28°36'55.68"N	32°41'50.82"E
2	28°35'57.30"N	32°42'54.83"E
3	28°35'42.03"N	32°43'43.34"E
4	28°31'0.40"N	32°44'4.11"E
5	28°30'55.84"N	32°44'59.27"E
6	28°29'54.87"N	32°45'0.08"E
7	28°29'55.06"N	32°48'2.83"E
8	28°27'0.17"N	32°48'3.17"E
9	28°26'58.73"N	32°46'10.39"E
10	28°24'6.55"N	32°46'7.01"E
11	28°24'0.33"N	32°46'58.50"E
12	28°23'0.06"N	32°47'5.56"E
13	28°22'59.69"N	32°49'7.22"E
14	28°26'6.78"N	32°49'5.99"E
15	28°26'3.22"N	32°50'1.49"E
16	28°23'3.46"N	32°50'37.10"E
17	28°20'58.18"N	32°50'29.00"E
18	28°20'58.58"N	32°52'1.75"E
19	28°19'56.55"N	32°52'0.04"E
20	28°19'58.02"N	32°52'59.36"E
21	28°19'30.87"N	32°53'1.77"E
22	28°18'25.27"N	32°47'28.85"E
Plot 2		
23	28°17'28.15"N	32°48'22.13"E
24	28°17'40.43"N	32°50'0.72"E

25	28°12'56.36"N	32°56'55.53"E
26	28°12'17.98"N	32°55'51.63"E
Plot 3		
27	28° 3'25.00"N	33° 9'24.02"E
28	28° 3'14.38"N	33°15'0.73"E
29	27°59'59.28"N	33°13'26.78"E
30	28° 0'16.16"N	33°11'29.46"E
31	28° 3'2.04"N	33° 9'25.98"E

ACWA Power Wind Farm WoN Coordinates (Option 2)

Point	Latitude	Longitude
1	28°43'41.93"N	30° 8'6.08"E
2	28°43'42.53"N	30°16'59.06"E
3	28°39'45.78"N	30°22'3.75"E
4	28°36'51.72"N	30°22'15.33"E
5	28°35'30.96"N	30°15'31.30"E
6	28°21'39.27"N	30° 8'41.04"E
7	28°28'35.73"N	30° 1'14.92"E
8	28°30'55.28"N	30° 7'14.40"E