



RED SEA WIND ENERGY WIND POWER PLANT AT THE GULF OF  
SUEZ (GOSII 500 MW + 150 MW EXTENSION)

**NON-TECHNICAL SUMMARY (NTS) IN ENGLISH**

13 February 2024

REV 4

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## 1. INTRODUCTION

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 2020, 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 Renewable Energy Law (Decree Law 203/2014) was issued 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 in which private investors are invited to submit their offers for solar and wind development projects.

Through the BOO mechanism, the Consortium that is incorporating Red Sea Wind Energy (RSWE) (hereafter referred to as ‘the Developer’), has been selected for the development of a 500MW Wind Power Project in the GoS (hereafter referred to as ‘the GoSII 500MW Project’).

As of this year, 2024, the Project received governmental approval for an extension to the GoSII 500MW project of 150 MW (GoSII 150MW). As such, the project has a revised generation capacity of 650 MW (i.e. RSWE GoSII 500 MW + 150 MW extension).

In accordance with the Egyptian Environmental Affairs Agency’s (EEAA) requirements as stipulated by the “Law No. 4 of 1994”, a project of this nature and scale is classified as “Category C”, which requires the preparation of a comprehensive Environmental and Social Impact Assessment (ESIA) before an environmental permit is granted. In addition, the Developer will be seeking financing for the Project from prospective lenders, including International Financial Institutions (IFIs). Therefore, the Developer wishes to design and manage the project in accordance with good international industry practice and standards, including Environmental and Social (E&S) requirements. For the purpose of the ESIA, this has therefore been developed in accordance with the “International Finance Corporation (IFC) Performance Standards in Environmental & Social Sustainability” (IFC, 2012) and “European Bank for Reconstruction and Development (EBRD) Environmental and Social Policy and associated Performance Requirements” (EBRD, 2019).

This document (the Non-Technical Summary (NTS)) provides a summary in non-technical language of the findings contained in the ESIA Report. The ESIA Report contains more detailed information on the Project and the environmental and social issues considered (refer to ‘Section 7’ for details on disclosure of the ESIA report). It includes a description of the need for the Project; details of the Project and the main alternatives considered; the assessment of the potential effects from the proposed development upon the environment and community; and details of any required procedures to mitigate significantly adverse environmental effects. It includes an Environmental and Social Management Plan (ESMP) which describes the monitoring and mitigation requirements for the duration of the project, including responsibilities and any legal requirements. The Developer commits to the ESMP.

Information about the Project is made accessible to stakeholders and the general public through a disclosure package that includes the following key documents, available publicly in Arabic and English language. Section 7 provides details on the disclosure package.

- Environmental and Social Impact Assessment (ESIA) for the RSWE Wind Farm
- Environmental and Social Impact Assessment (EIA) for the associated Overhead Transmission Line (OHTL)
- Non-Technical Summary (NTS)
- Stakeholder Engagement Plan (SEP)
- Cumulative Effect Assessment (CEA)
- Critical Habitat Assessment (CHA)

- Environmental and Social Management System (ESMS) Manual
- Environmental and Social Action Plan (ESAP)

## 2. PROJECT DESCRIPTION

### 2.1 Project Setting

The Project is located in the Red Sea Governorate of Egypt, around 200km to the southeast of the capital city of Cairo. More specifically, the Project is located near the Red Sea shoreline and within the Ras Ghareb Local Governmental Unit of the Red Sea Governorate, where the closest villages include Ras Ghareb (located 40km to the southeast) and Zaafarana (45km to the north).

The Project is located within a 1220 km<sup>2</sup> area that has been allocated by the GoE to NREA for development of wind farms. Within this, an area of approximately 75.8 km<sup>2</sup> (presented in red in Figure 1 below) has been allocated to the Developer by NREA for the development of this Project.

The GoSII 500MW layout is expected to provide around 2,200 GWh – 2,400-Gigawatt Hour (GWh) of electricity per year. The Project will result in crucial positive environmental and economic impacts on the strategic, national, and local level.

***With the project extension of the GoSII 150MW layout, the estimated electricity generation for the Project Site, in total, is to be 2,700-GWh – 3,000 GWh, on average.***

Such positive impacts underpin rationale for the Project include:

- The enhancement of sustainable development being illustrative of the commitment of the GoE to realizing its energy strategy by meeting the targets established for renewable energy sources;
- The promotion of energy security by proliferating an indigenous, inexhaustible and mostly import-independent energy resource.
- *The expected electricity generation from the Project will serve the annual electricity needs of more than 800,000 local households (GoSII 500MW layout) and as many as 1M – 1.1 M households with the project's GoSII 150MW extension.*
- Generating electricity through wind power is nearly a pollution-free during operation. Compared with the conventional means of energy production in Egypt, the clean energy produced from the intended wind farm is expected to reduce the consumption of liquid fuels, whereby reducing greenhouse gas emissions as well as air pollutant emissions. *The GoSII 500MW layout will likely displace more than 1 million metric tons of CO<sub>2</sub> annually and the GoSII 150MW extension – 1.3 million metric tons of CO<sub>2</sub> cumulatively.*

However, it is important to note that the construction activities of the Project will result in greenhouse gas emissions related to use of equipment and machinery. The estimated emissions during the construction phase (expected to be around 32 months) is approximately 30,000 tons.



Figure 1: Project Site and Closest Villages

## 2.2 Project Components

Wind turbine technology relies on harvesting the kinetic energy in wind (i.e. movement of wind) and turning it into mechanical energy which in turn is used for electricity generation. The key components of the Project include the following:

- **Wind Turbines:** a typical wind turbine is presented in the figure below. For this Project this will include 104 wind turbines.

Of these 104 turbines, 84 wind turbines will each have a generation capacity of 6 MW, a hub-height of 97.5 m, rotor diameter of 165 m and therefore a tip height of 180 m as part of the GoSII 500MW layout.

The other 20 turbines comprising the GoSII 150MW extension are characterized by a rated power of 7.5 MW each, hub-height of 110m, rotor diameter of 182, and a tip height of 200m.

**Note:** In 2020 a previous ESIA study was submitted by the ESIA Consultant to EEAA and IFIs that included different turbine characteristics than that presented above. The previous turbine characteristics included a total of 173 turbines with a rated power of 2.9MW and a tip height of 120m. In July 2022 new governmental approvals have been issued allowing an increase in tip height up until 220m, where previously due to various governmental restrictions the allowed tip height was set at 120m (as noted above). Based on that, all wind farm developers within the GoS are currently assessing installing such bigger turbines (including the RSWE). Therefore, the Developer has opted at this point for the selection of such new turbine characteristics for technical and economical/financial reasons.

**Note:** In 2024, the project received new governmental approvals for the 150 MW extension (the GoSII 150MW layout).

- **Supporting infrastructure and utility** elements for the Project which will include:
  - Cables that will connect the turbines to an onsite substation
  - Substation that converts the output from the turbines to a voltage that is appropriate for connection with the National Grid

- Onsite building infrastructure that will include an administrative building (offices) and a warehouse for storage of equipment and machinery
- Road network for ease of access of various project components throughout the site
- Associated facilities which will mainly include an Overhead Transmission Line (OHTL) that will connect from the substation onsite to the National Grid for a length of about 36 km. A standalone ESIA has been undertaken for the OHTL – refer to “Section 5” for additional details.

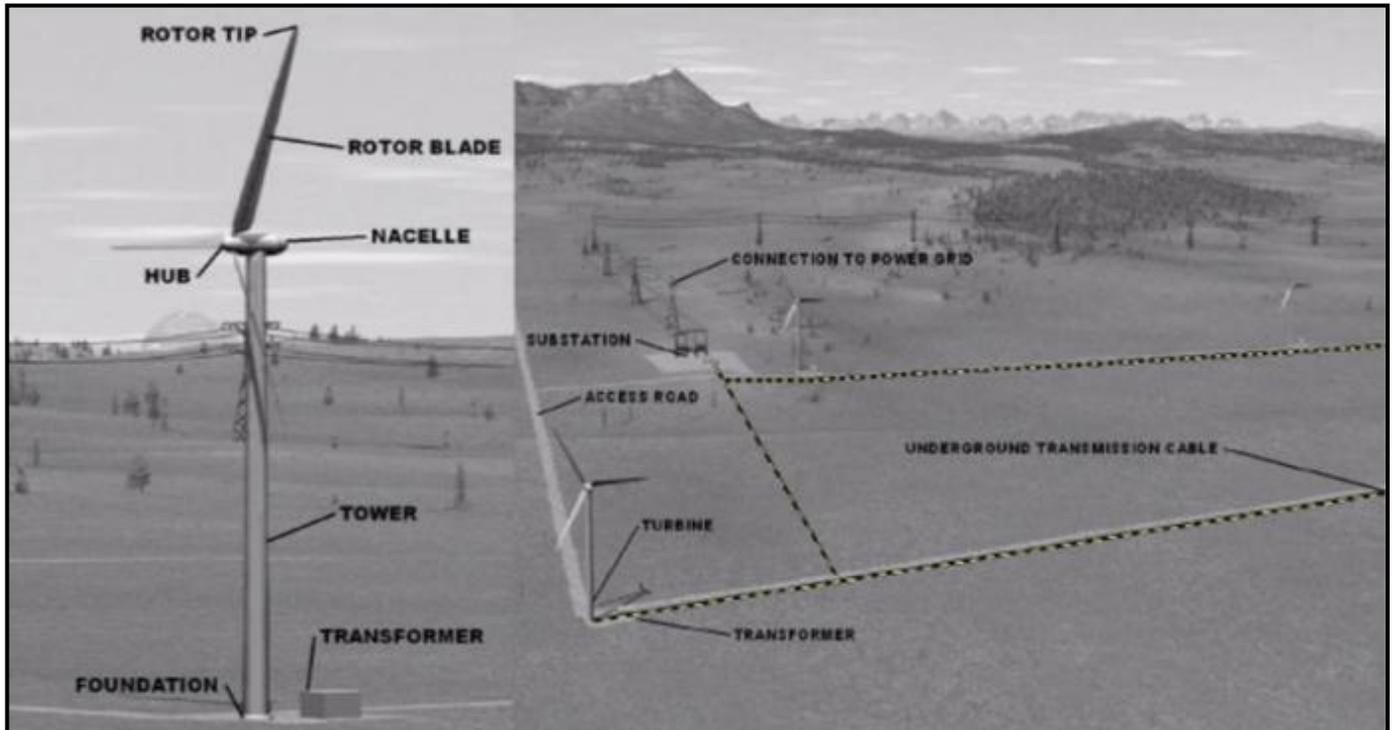


Figure 2: (a) Typical Structural Components of a Wind Turbine, (b) Typical Components of a Wind Farm

### 2.3 Project Phases

The Project will include 3 distinctive phases as follows:

- Design and Construction Phase that will include: (i) preparation of the detailed design, (ii) transportation of components to the site, (iii) site preparation activities (land clearing, excavations, etc.), and (iv) installation of components.
- Operation Phase that will include the normal daily operation of the wind farm and the undertaking of maintenance activities as required.
- Decommissioning Phase that will include the dismantling of the various Project components at the end of the lifetime.

According to the current timeline information available by the Developer, construction of the Project commenced by the end of 2022 and will require approximately 32 months for construction and commissioning. The operational phase of the Project is anticipated to commence in Q3 of 2025 for a period of 25 years based on the PPA signed.

**Note:** The 32 months for construction and commissioning includes the work for the GoSII 150MW extension with no anticipated change to the start of operations of the Project by Q3 of 2025.

### 3. SUMMARY OF ENVIRONMENTAL AND SOCIAL BASELINE CONDITIONS & IMPACTS

#### 3.1 Introduction

The Environmental and Social Impact Assessment (ESIA) comprised environmental and social baseline studies and an assessment of impacts. Mitigation measures, which are included in the ESMP, were identified for potential significant effects and the significance of residual effects determined. The impact assessment followed an assessment methodology developed to reflect current best practice. The key baseline and impact assessment findings are further discussed below.

#### 3.2 Environmental & Social Baseline Conditions & Impacts

##### *(i) Landscape and Visual*

The Project site in general can be classified as a desert area with soil that is formed from sand and rocks. In addition, the site is characterised of being composed of large flat areas with some relatively small hills in some parts.

In terms of visual characteristics, no sensitive visual receptors were identified within the Project area and relevant radius surrounding the site (up to 15km). Project site is located within an industrial area where several activities are noted (as discussed in more details in Section (ii) below).

The key impacts from the Project development are limited to the operation phase and which include impacts from Project visibility. Visual impacts associated with wind energy projects typically concern the turbines themselves (e.g. colour, height, and number of turbines) and impacts relating to their interaction with the character of the surrounding landscape and the visual receptor which might be present.

Nevertheless, such impacts are considered not significant given that there are no key sensitive visual receptors within the area that could be affected. In fact, the Project is located within an industrial area which also includes several other wind farm developments, for which aesthetical value loses some importance.

##### *(ii) Land Use*

The Project site location does not conflict with any environmental land use planning such as areas of critical environmental concern – in particular, the Project site is not located within environmental protectorates or Important Bird Areas (IBAs).

Additionally, the Project site is located within a 1220 km<sup>2</sup> area that is under ownership of the GoE and which has been allocated to NREA for development of wind farms.

The ESIA also investigated the actual land use of the Project area through a land use survey. The only land use activities noted include the following:

- An existing petroleum storage facility which includes lagoons for petroleum, pumping station, storage tanks; and tankers.
- An oil rig and four (4) oil rig stations that are located just outside of the Project boundary.

Apart from those receptors identified above, the area in general is uninhabited and vacant with no indication or evidence of any physical or economical land use activities undertaken by the local communities or other stakeholder groups (such as grazing, agriculture, nomadic settlements, etc.).

Land use activities in the surrounding area were also investigated. In general, the Project site is located within an industrial area. Key activities noted include the following as presented in the figure below: (i) Air Force Defence Unit located 3.4km to the east; (ii) several existing petroleum activities the closest of which is 4.6km to the north; (iii) other oil rig stations; (iv) touristic resort located at 17km to the north; (v) sand quarry sites located around 20km from the Project site to the west; and (vi) other wind farm projects.

The area in which the Project site is located is under the “Ghaffra System” of Bedouin Groups (although they have no physical or economical activities within the site), which entails involving such Bedouin groups in the Project (through jobs, services, etc.) for their support.

Overall, *there are no physical or economical displacement impacts anticipated from the development of the Project and no key issues of concern are expected.* Nevertheless, the ESIA identifies mitigation measures to be implemented by RSWE at the planning stage to include:

- Coordination, via NREA, with any relevant entity (such as General Petroleum Company) to agree on any specific requirements to be taken into account as part of the detailed design for existing facilities such as the petroleum storage facility and oil rig, amongst other requirements; and
- Coordination with the Bedouin Groups by ensuring that they are included in employment opportunities during construction and operation to promote local support and positive engagement with the Project site and its operations.

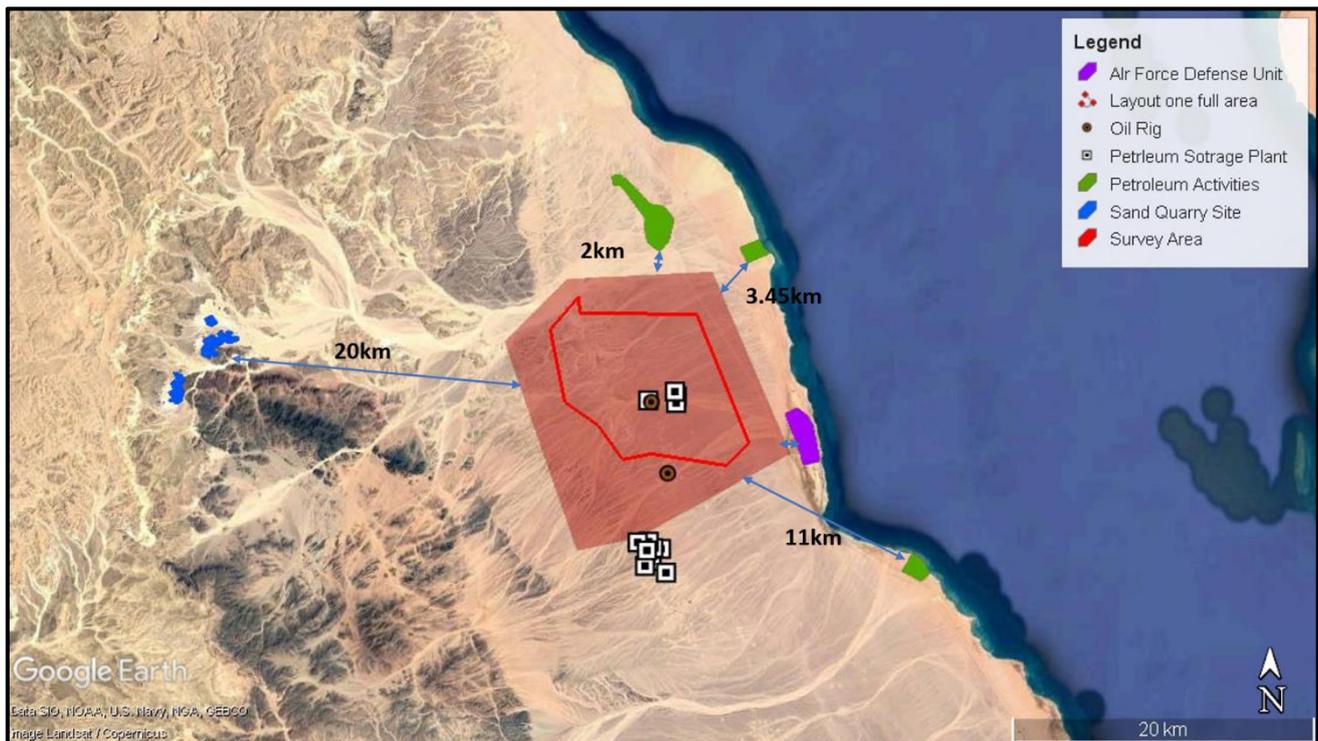


Figure 3: Land Use Activities within the Project Area and Surroundings

### (iii) Hydrology and Hydrogeology (Soil and Groundwater)

From a hydrological perspective, the Project site is located within a low relief area that is characterized with a complete absence of any deep drainage lines or Wadi systems. From a hydrogeological perspective, the site is located within an area of moderate to low productive aquifers with insignificant surface recharge and limited sub-surface recharge.

Key impacts related to the Project include potential for flood risks which could affect the Project site during the rainy season and especially during flash flood events. Nevertheless, a preliminary flood risk assessment was undertaken as part of the ESIA which concludes that there are no flood risks anticipated onsite.

Other potential impacts are mainly from improper housekeeping practices during construction and operation (such as illegal disposal of waste to land) which could contaminate and pollute soil which in turn could pollute groundwater resources. The ESIA has identified adequate mitigation measures which aim to control such impacts and ensure proper conduct, waste management and housekeeping practices are implemented. With the implementation of such measures the impact is considered not significant.

**(iv) Biodiversity**

The biodiversity baseline assessment concludes that the Project site in general is barren and of low ecological significance and sensitivity. The assessment identified several flora and fauna species within the Project site most of which are considered of least concern and common to such area habitats. There are no sensitive habitats recorded within the Project site.

The main impacts on biodiversity are mainly from improper conduct and housekeeping practices by workers (i.e. hunting of animals, discharge of hazardous waste to land, etc.) during the construction and operation phase. The ESIA has identified adequate mitigation measures which aim to control such impacts and ensure proper conduct and housekeeping practices are implemented. With the implementation of such measures the impact is considered not significant.

**(v) Birds (avi-fauna)**

A baseline assessment was undertaken that included an avi-fauna survey that studied the use of the migratory and resident soaring birds of the Project site, while providing a detailed analysis of the durations that these species use the site and the elevations at which they are present, which would eventually provide an in-depth understanding of the predicted impact of the Project on bird species.

The survey was undertaken through eight (8) observation points that covered the autumn 2019, spring 2020, autumn 2020 and spring 2021 migration seasons. On average, each observation point was covered for a total of 360 degrees during each season, making up a total of around 5,213 hours of observation in autumn and around 4,432 hours in spring seasons.

Based on the autumn 2019 survey, a total of 11,071 individual birds were recorded while during autumn 2020 a total of 19,351 individual birds were recorded. The majority of birds recorded belong to species of Least Concern while species of local and global significance (threatened) were recorded in low numbers.

During spring 2020 survey a total of 309,330 individual birds were recorded while during spring 2021 a total of 262,911 individual birds were recorded. During spring, significant numbers were recorded and further analysis was undertaken showing records of globally threatened species and also numbers of global significance for Least Concern species. Since birds are considered as a key issue, including all soaring birds in the project area, which are protected by both national and international laws and regulations, regardless of their conservation status, a special focus should be given on all species where all species should be recorded and all species that are significant and local levels are important for the area, regardless their numbers.

Key impacts anticipated on birds is during the operation phase and mainly related to risk of bird strikes and collisions with rotors of the operating wind turbines. To assess such impacts, quantitative collision risk modelling was undertaken which concludes the following:

- The collision risk generally is lower in the autumn compared with the spring migration period
- Overall, predicted impact seems similar for the higher turbines, but there is a trade-off in the predicted fatalities between an increase in turbine tip height, number and spacing of turbines
- For the majority of migratory birds passing through the project site airspace during spring and autumn migration as individuals, the risk of collision is low
- However, those species flying in flocks have higher predicted collisions and include the Black kites, Honey and Steppe buzzards, and White Stork.

The outcomes of the model predicts the impact without mitigation and makes includes avoidance rates (i.e. expected rates of collision avoidance). To further reduce and avoid collision impacts, an Active Turbine Management Program (ATMP) will be implemented during the operation phase which will include:

- Avifauna Monitoring and On-Demand Turbine Shutdown where during the migration seasons, daily onsite monitoring will be undertaken to shutdown turbine during risky situations to migrating birds to avoid collisions; and

- Avifauna Carcass Search that will demonstrate the effectiveness of mitigation measures such as turbine shut down and allow an estimation of the annual number of bird deaths caused by the turbines.

**(vi) Bats**

A baseline assessment was undertaken based on secondary data review as well as onsite survey and monitoring through the use of bat detectors. The monitoring procedure entailed the establishment of observation points to record any bat activity. The assessment concluded that the site is of low significance as a habitat for bat populations. While the literature review indicated the potential presence of several bat species of “least concern” and native to the general GoS area, the on-site monitoring survey recorded no bat activity, likely due to the vicinity’s arid nature and low vegetation coverage.

Key impacts anticipated on bats is during the operation phase and mainly related to risk of bat strikes and collisions with rotors of the operating wind turbines. Such impacts are anticipated to be not significant due to low activity expected.

**(vii) Archaeology and Cultural Heritage**

An archaeological baseline survey has been carried for the Project site. The assessment concludes that there are no records of any sites of interests or significance within the Project area.

The main impact anticipated is during the construction phase from site preparation activities. As noted earlier there are no archaeological remains on the surface of the Project site, and therefore there are no anticipated impacts. However, there is a chance that throughout construction activities, archaeological remains buried in the ground are discovered. Improper management (if such sites are discovered) could potentially disturb or damage such sites. Nevertheless, the ESIA requires the implementation of chance find procedures if such remains in the ground be discovered throughout the construction phase. With the implementation of such measures the impact is considered not significant.

**(viii) Air Quality and Noise**

An air quality and noise baseline was undertaken for the Project area. The Baseline consisted of a 4-day monitoring program targeting key pollutants for a total duration of 96 hours. The baseline concluded that all pollutant levels are significantly lower than the maximum allowable ambient air levels indicated within the legal limits, and no exceedances recorded.

Construction and operation activities of wind power project are passive in nature and do not result in any key air emissions or significant noise sources. However, construction activities may increase level of dust and particulate matter emissions, which will temporarily impact ambient air quality. Moreover, the use of machinery and equipment are expected to be a source of noise and vibration within the Project site and its surroundings.

As part of the ESIA, appropriate mitigation measures have been identified for dust suppression and noise control and which will be implemented during the construction phase. This includes for example regular watering of all active construction areas, proper management of stockpiles, the use of well-maintained mufflers and noise suppressants for high noise generating equipment and machinery, etc. With the implementation of such measures the impact is considered not significant.

**(ix) Infrastructures and Utilities**

Water Resources and Utilities – the Project is expected to require approximately 90,000m<sup>3</sup> of water throughout the construction phase – equivalent to around 140m<sup>3</sup>/day. This will include water for construction requirements (concrete works, minimize dust, etc.) and potable use (drinking, washing, etc.). Similarly, during the operation phase, water will mainly be required for potable use of onsite staff at the Wind farm but is expected to be

minimal and insignificant. The Contractor and Operator are required to coordinate with Ras Ghareb Water Company to secure water requirements for the Project, most likely through tankers.

Waste Utilities – solid waste, wastewater and hazardous waste generated during the construction and operation phase will be minimal and is expected to be managed and disposed through coordination with relevant authorities for disposal of waste streams (e.g. Ras Ghareb Water Company and Ras Gharib City Council).

Road Networks: Given the increasing size, weight, and length of components of the wind turbines, proper transportation and logistical solutions could be required for managing the heavy-load long-haul requirements. If improperly planned and managed, trucks hauling the various heavy Project components may damage existing roads, highways, bridges, utility lines (e.g. electricity lines), and could also be a public safety concern for other vehicles on the road. The Contractor will be required to prepare a Traffic and Transport Plan before commencement of any transportation activities to ensure that process is properly and adequately managed.

Aviation and Telecommunication: Improper planning and site selection of the Project could impact and affect infrastructure elements related to aviation, telecommunication and television & radio links in the surrounding area. ESIA requires establishing coordination with relevant entities to provide information on the Project and include any specific requirements to be considered as part of the detailed design, if required.

**(x) Socio-economic Conditions**

The main impact anticipated on socio-economic conditions is related to potential job opportunities for local communities from the Project during construction and operation. However, such impacts are limited taking into account the nature of activities. No details are available at this stage on the number of job opportunities targeted to local communities, type of jobs, duration, etc.

Taking the above into account, RSWE is committed to ensuring that priority for job opportunities are targeted for local community members to the greatest extent possible throughout the construction and operation phase for skilled and unskilled jobs.

At a later stage, a local recruitment procedure will be developed by the Contractors and Operator, under supervision from RSWE. The procedure will identify the number of job opportunities targeted for local communities and recruitment process will be undertaken through the Governorate's Labor Office. Based on that, the recruitment procedure will also include a selection process that is fair, transparent and provides equal opportunities for all including females.

In addition, RSWE will also implement a Social Responsibility Program that will be implemented for the local communities based on their needs and requirements.

**(xi) Occupational Health and Safety and Worker Accommodation**

During the construction and operation phase there will be generic occupational health and safety risks to workers, such as working on construction sites, exposure electric shock hazards during maintenance activities, working at heights, etc. The ESIA requires that the Contractor and Operator prepare an Occupational Health and Safety Plan (OHSP) tailored to the Project's site and activities. Such plans aim to ensure the health and safety of all personnel in order to concur and maintain a smooth and proper progress of work at the site and prevent accident which may injure personnel. With the implementation of such measures the impact is considered not significant.

In addition, the Contractors will prepare a worker accommodation plan, which will define the minimum health and safety standards and principles for worker accommodation and ensure impacts on community health and safety from worker influx are managed and controlled. This could include impacts related to pressure on infrastructure, services and utilities, introduction of new reservoirs of diseases, inappropriate code of conduct by workers towards local communities, possible increase in social vices, and other.

**(xii) Community Health, Safety, and Security**

During construction and operation phase the main impacts on community health, safety and security include the following:

- Wind turbines produce noise during operation. In addition, operating turbines also produce shadow flicker effects which occur when the sun passes behind the turbine and casts a shadow away from the turbine's location. As the rotor blades rotate, shadows pass over the same point causing an effect known as 'shadow flicker'. Both noise and shadow flicker could be a source of nuisances and disturbances. However, within the Project site and surrounding there are no sensitive receptors that could be affected by such impacts and therefore this is considered irrelevant.
- Trespassing of unauthorized personnel into the Project site and which could result in potential risks from several hazards of the various Project components. Nevertheless, it is expected that as part of the detailed design the security measures to prevent unauthorized access to the Project site will be identified which in turn will control any such impacts. This could include onsite security guards, fencing of some Project components (substation area), onsite surveillance and other.
- Inappropriate management of security issues and incidents by security personnel towards local communities could result in resentment, distrust and escalation of events. Nevertheless, a Security Management will be prepared which will identify appropriate measures for hiring, rules of conduct, training, equipping, and monitoring of security personnel to control and manage such issues.

#### **4. ENVIRONMENTAL & SOCIAL MANAGEMENT**

The ESIA includes an Environmental and Social Management Plan (ESMP) which provides a high-level outline plan for managing and monitoring the environmental and social impacts during construction, operation and decommissioning of the Project. The ESMP identifies the mitigation measures which aim to eliminate and/or reduce the potential impact to acceptable levels and monitoring actions to ensure that the identified mitigation measures are implemented.

In addition, the development and implementation of an Environmental and Social Management System (ESMS) during the construction and operation is considered a key requirement under EBRD and IFC requirements. Therefore, RSWE also prepared an ESMS Manual which includes the following:

- Identification of the overall structure and outline for the ESMS that will be implemented for the Project during both construction and operation;
- Identification and outline of the key procedures and plans to be developed at a later stage by the Contractors and Operator that will handle the key impacts and risks during construction and operation (e.g. air quality management plan, waste management plan, etc.)
- Identification of an institutional framework to ensure that such plans and procedures are implemented effectively and efficiently. This includes identification of roles and responsibilities, training requirements, monitoring and reporting requirements, and other as applicable;
- Identify approach for periodically auditing entities involved during the construction and operation phase to ensure that ESMS requirements are implemented effectively;
- Identification of a high-level framework for labour management that should be adhered to during the construction and operation phase; and
- Identification of a strategy and commitment in relation to local hiring and community support initiatives.

#### **5. ESIA FOR THE OHTL**

As discussed earlier, the electricity generated from the Project will be connected from the substation to the National Grid through an Overhead Transmission Line (OHTL) that will be developed by Egyptian Electricity Transmission Company (EETC).

The main component of the OHTL is the transmission towers which will transport the electricity from a substation located within the Project site to the High Voltage National Grid. The OHTL will consist of around 107

towers that will be distributed throughout the route. The height of each tower will around 50m. The total route of the OHTL is around 35km.

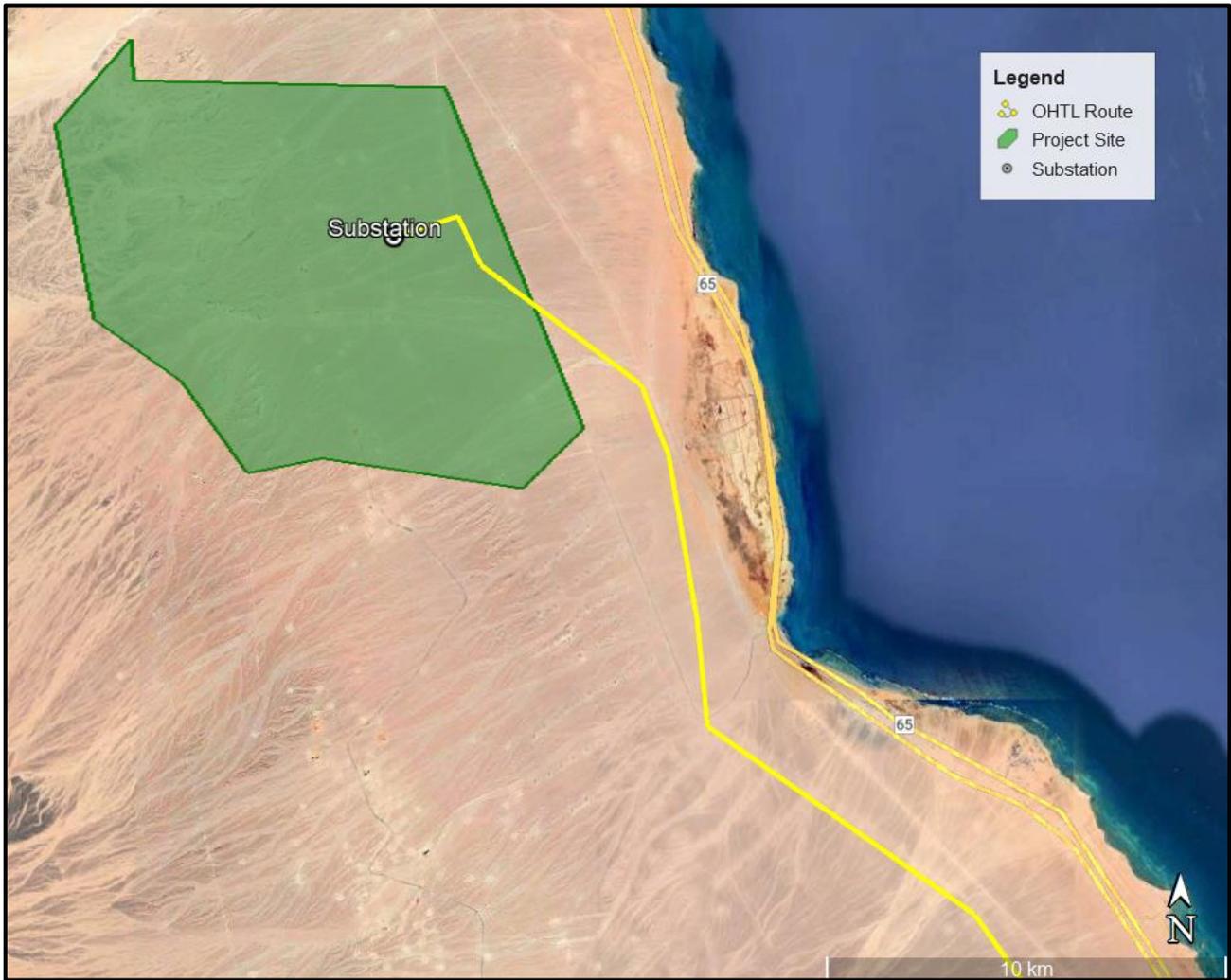
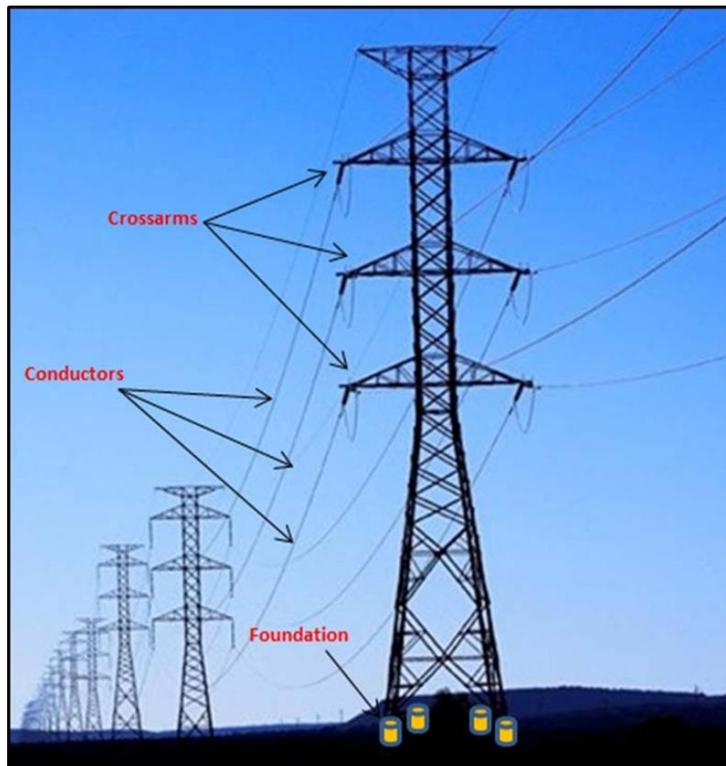


Figure 4: Layout of the OHTL Route



**Figure 5: Typical Structural Components of towers**

A standalone Environmental and Social Impact Assessment (ESIA) has been undertaken for the OHTL. The ESIA in general concludes that there are no key issues of concern. The key outcomes are as follows:

- The southernmost section of the OHTL enters into the Important Bird Area (IBA) of Gebel EL Zeit for less than 400 meters (refer to figure above – the IBA is presented in green). The OHTL ESIA has elaborated on the fact that the OHTL does not interfere with the main ecological functions that the IBA was identified for. These include the saltpan habitats of Sabkhet Ras Shikheir and the topography of Gebel El Zeit itself which forms a narrow corridor for migratory soaring birds. The OHTL ESIA has shown that both are located further south from the OHTL and the installation of the OHTL will not have impact on either. ESIA recommends that bird diverters are installed on the OHTL to reduce collisions during operation. In addition, ESIA also recommends that on-site avifauna fatality monitoring implemented as part of the Active Turbine Management Plan (ATMP) discussed earlier.
- The Critical Habitat Assessment (CHA) undertaken for the project site has identified a Critical Habitat (CH) in the vicinity of the project site, which is Gebel EL Zeit IBA. Globally-important concentrations of ten bird species migrate over the project site. There is, however, no evidence from surveys that these species regularly use the area as a stop-over site in normal circumstances, or that this area is a particular bottleneck within the already-restricted flyway. The area appears to broadly be Natural Habitat. Overall, one reptile and 11 migratory bird species are considered to be Priority Biodiversity Features.
- The OHTL route runs within a key Wadi system in the area (Wadi Hawashiya). Therefore, ESIA recommends that a flood risk assessment is undertaken for the OHTL route to determine any design measures to be taken into account.
- Similar to Wind farm area, OHTL route also runs within an area with high bird migration especially during spring season. ESIA recommends that bird diverters are installed on the OHTL to reduce collisions during operation. In addition, ESIA also recommends that on-site avifauna fatality monitoring implemented as part of the Active Turbine Management Plan (ATMP) discussed earlier.
- Several road and electricity networks were noted near and/or intersect with the OHTL route. Therefore, ESIA recommends that discussions are undertaken between EETC and relevant entity to discuss OHTL route design and identify appropriate buffer distance requirements.

- Routine mitigation and management measures for waste management, dust and noise control, occupational health and safety, and chance find procedures to be implemented during construction and operation as applicable.

It is important to note that EETC is considered a governmental entity which RSWE has limited or no influence on and therefore the ability to manage impacts of the associated facility will be limited and RSWE will liaise and interact with the EETC to try to influence and have some key mitigations implemented, as those identified above.

### **Cumulative Effect Analysis (CEA)**

A cumulative effect analysis (CEA) was carried out for the project site taking into consideration a wider area that includes the whole wind farm development area along the western coast of the Gulf of Suez. The analysis has identified 14 species, which had an Overall Risk of Major or Moderate, are considered priority bird VECs for the Projects in the study area. Building on the findings of the CEA, mitigation measures and monitoring actions are proposed, to be adopted by RSWE project, and others that are proposed to be undertaken collectively and collaboratively by all wind energy developers across the study area. These mitigation and monitoring actions focus on the potential impacts to the 14 priority VECs are based on industry good practice while building on the already existing experience of adaptive management at operational wind farms along the Gulf of Suez.

## **6. STAKEHOLDER ENGAGEMENT PLAN (SEP)**

A Stakeholder Engagement Plan (SEP) has also been developed for the Project that will be implemented by RSWE. The SEP identifies in details the stakeholders that are relevant to the Project to include local communities, national governmental and permitting authorities, local government, Non-Governmental Organizations (NGOs) and other. The SEP identifies previous stakeholder engagement activities undertaken for the Project and the key outcomes of such engagement activities. This included in particular several entities such as Red Sea Governorate, Ras Gharib City Council, Bedouin Groups, General Petroleum Company and other. In addition, it also describes the outcomes of a public disclosure session that was undertaken in Ras Gharib City with local communities and other key local governmental entities.

The SEP also identifies in detail a future stakeholder engagement strategy and plan which identifies activities that will be undertaken throughout the Project duration, which provides an opportunity for all stakeholders, including local communities, to express their views and interact with the Project.

The SEP also includes a stakeholder grievance mechanism that is responsive to any concerns and complaints from affected stakeholders and communities.

## **7. ESIA DISCLOSURE & CONTACT DETAILS**

It is of utmost necessity to ensure that stakeholders are kept well informed about the Project throughout its life cycle, thus information will be accessible to the public, key stakeholders, and local communities through dissemination of related documents.

The disclosure package will include the following key documents that are available publicly in Arabic and English language.

- Environmental and Social Impact Assessment (ESIA) for the RSWE Wind Farm
- Environmental and Social Impact Assessment (EIA) for the associated Overhead Transmission Line (OHTL)
- Non-Technical Summary (NTS)
- Stakeholder Engagement Plan (SEP)
- Cumulative Effect Assessment (CEA)

- Critical Habitat Assessment (CHA)
- Environmental and Social Management System (ESMS) Manual
- Environmental and Social Action Plan (ESAP)

The above documents are available at the following avenues:

- EBRD website ([www.ebrd.com](http://www.ebrd.com))
- Developer Website (<http://www.rswe.co/about-us/>). The documentation above will remain at the website for the life of the project.
- Hard copies available at Red Sea Governorate and Ras Ghareb Local Governmental Unit

**Ras Ghareb City Council**

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- Soft copies can also be made available to stakeholders via email to [gawhara.abdelrahman@rasgharebwind.com](mailto:gawhara.abdelrahman@rasgharebwind.com)