

## Environmental and Social Data Sheet

### Overview

Project Name:	<i>IREDA-RE &amp; EE FL MYTRAH VAYU GODAVARI</i>	
Project Number:	<i>2016-0056</i>	
Country:	<i>India</i>	
Project Description:	<i>The project is an allocation under the IREDA RENEWABLE ENERGY AND ENERGY EFFICIENCY FL (2013-0338). The loan will contribute to the financing of a 98.7 MW wind farm in Telangana state to replace electricity generation from fossil-fuel based plants. The project consists of 47 units of Suzlon S97 wind turbine of 120 m hub height.</i>	
EIA required:		yes
Project included in Carbon Footprint Exercise <sup>1</sup> :		yes

### Environmental and Social Assessment

#### Environmental Assessment

The project comprises 47 wind turbines with a unit capacity of 2.1 MW and a hub height of 120m (hybrid) each, overhead lines at 33 kV level from the turbines to a nearby 33/132 kV converter station (pooling station), overhead lines at 132 kV level from the pooling station to a public substation which is around 5-6 km distant from the wind park, the widening of existing roads, and installation of new access roads to the turbines.

The project is spread across a length of about 17 km along the North to South direction and about 10 km along the West to East direction. The 47 WTGs are arranged in a scattered layout.

There are no other wind turbines installed in the project area.

The project area is characterised by a rural setup. Much of it is modified habitat, mainly in the form of farmlands, roadside plantations, pasturelands, scattered villages and roads. The land for the proposed project comprises of private agricultural land and fallow land. No forest land or protected land is involved.

The closest protected areas of high biodiversity value are Mrugavani National Park, located approximately 42 km from the project area, and Manjira wildlife sanctuary, a reservoir located approximately 56 km from the project area, being the nearest Important Bird Area (IBA).

The entire Indian subcontinent, including study-area, is situated within the limits of the Central Asian Flyway (CAF).

<sup>1</sup> Only projects that meet the scope of the Pilot Exercise, as defined in the EIB draft Carbon Footprint Methodologies, are included, provided estimated emissions exceed the methodology thresholds: above 100,000 tons CO<sub>2</sub>e/year absolute (gross) or 20,000 tons CO<sub>2</sub>e/year relative (net) – both increases and savings.

The project, if located inside the EU, would fall under Annex II of the EIA Directive 92/2011/EU leaving to the competent authority the decision as to whether an Environmental Impact Assessment (EIA) is required or not. According to applicable Indian law, wind power projects generally do not require an EIA. Consequently, no screening took place. However under the conditions established by the Bank under the related Framework Loan the final beneficiary was required to carry out an Environmental and Social impact Assessment (ESIA) study for the project.

A comprehensive ESIA study including an Environmental and Social Management Plan has been produced by an external consultant and completed in November 2015. It covers the entire project scope. The project was already at an early construction stage at the time of impact assessment. The ESIA concludes that the project has no significant negative environmental and social impacts if the recommended mitigation measures are implemented. The latter are listed in a detailed Environmental and Social Management Plan (ESMP) that was partially implemented during construction and that still needs to be fully implemented by the promoter and its key contractors over loan life time.

The ESIA study is considered to be sufficiently in line with international standards with one exception. The bird impact assessment is based upon insufficient site-specific data. After thorough analysis of the ESIA study and consultation with its authors, the Bank concludes that the project site does not feature significant bird risks when proper mitigation measures are applied. The project is located substantially distant to areas of high biodiversity value.

The Bank explicitly requests, that all bird risk mitigation measures as suggested in the ESMP must be fully implemented by the promoter. This comprises, amongst others, the installation of visibility enhancement objects on transmission lines, the painting of vane tips of the wind turbines with orange color to avoid bird hits, and to undertake periodic bird carcass survey during operation phase.

In addition, the Bank considers the implementation of additional site-specific bird surveys important to verify project-related impacts on critically endangered, endangered, and vulnerable bird species as well as on migratory birds and to verify the appropriateness of the mitigation measures proposed. This goes beyond current ESMP recommendations. Corresponding undertakings and reporting requirements are proposed.

### **EIB Carbon Footprint Exercise**

The project has no direct greenhouse gas (GHG) emissions. Estimated GHG emissions savings in a standard year of operation are 236 kT of CO<sub>2</sub> equivalent per year compared to a baseline comprising the current fleet of thermal power plants, new coal power plants, and new renewable energy installations.

For the annual accounting purposes of the EIB Carbon Footprint, the project emissions will be prorated according to the EIB lending amount signed in that year, as a proportion of project cost.

## **Social Assessment**

The project contributes to improving the electricity supply of India on the basis of renewable resources. In addition, the project offers benefits to local communities through employment opportunities during project implementation and operation as well as through the improvement of existing and installation of new roads.

The project has neither involuntary resettlement nor indigenous people's issues. There are no culturally important sites in or around the project.

The land being procured for the project predominantly comprises of private agricultural land which is being cultivated only during rainy season and for rest part of the year is used for grazing activity. The promoter has procured the land from 47 private land owners on a 'willing buyer/willing seller' basis. Consultations pursued during ESIA with 13 land sellers confirmed that the process was managed to their satisfaction and that compensation above prevailing market values had been paid. The conversion of private agricultural land to non-agricultural land (NA) for industrial purpose requires permission from state authorities. The financial intermediary (FI) is following this up.

The land around the turbines remains open for agricultural use and grazing activities. Only the pooling station is fenced off for safety reasons. The project neither comprises economic nor physical involuntary resettlement.

Local people are employed by the promoter's contractors for works and services that do not require specialist skills. Besides local people, 30-35 skilled workers for mechanical works were hired from outside. They were accommodated in rented accommodation in nearby villages; hence no labour camps were erected.

Child labour is forbidden by national law and not an issue in the project. The same applies to bonded labour. Full compliance with national law is a loan undertaking of the FI.

Occupational health and safety (OHS) standards are deemed satisfactory. The key contractor in charge of turbine installation, operation and maintenance is ISO 9001, ISO 14001 and OHSAS 18001 certified. It applies internationally accepted OHS standards. The contractor's project-related HSE protocol lists multiple trainings, low numbers of injuries and no fatalities. The Bank's impression of OHS standards when visiting the construction site was good.

During ESIA a few receptors have been identified that are located close to wind turbines and may consequently suffer from noise levels above recommended threshold levels, particularly at night and high wind speeds. Consequently, the ESMP contains noise monitoring campaigns to follow this risk up. Shadow flicker risks are limited to few receptors but remain below internationally accepted levels. Effective mitigation measures such as implementation of hedges, constructive measures at receptor buildings, or temporary curtailments of individual turbines are available if in individual cases too high noise and/or shadow flicker levels were measured after project implementation.

Mitigation measures are suggested in the ESMP, addressing all key issued including occupational health and safety, community health and safety, noise, shadow flicker etc. Importantly, a formal and effective grievance redress mechanism for community people still has to be implemented by the promoter.

## **Public Consultation and Stakeholder Engagement**

There is no requirement by law to pursue public consultation for wind farm projects in India. The project spreads across 16 villages. Village citizens are generally represented by the Sarpanch (elected head) of their respective Gram Panchayat. Although not required by law, the promoter has collected non-objection certificates (NOC) from all respective Gram Panchayats.

The promoter had further pursued informal consultations with land owners during project development. However, no formal consultations have taken place yet.

Further public consultations were carried out as part of the ESIA with several land sellers and a few Sarpanch(s) of the Gram Panchayats. They confirm that these people were sufficiently informed about the project and are generally supportive to the project. Conversations of Bank staff during site visit with a land seller and a farmer support this view.

## **Other Environmental and Social Aspects**

Consultations made during ESIA indicate that local people have additional expectations on the project regarding enhancement of quality of electricity supply, water supply, healthcare and education. Targeted measures of this type may be addressed under the promoter's Corporate Social Responsibility (CSR) programmes which are required by law but not necessarily on a project-specific basis. To date, a needs assessment has been carried out by an external specialist in the project area. The promoter in collaboration with an NGO has initiated first site specific CSR and community development activities on the basis of this assessment.

The FI pursues a yearly Environment & Social Monitoring and Review of the project over loan lifetime and may issue specified recommendations emanating from the ESMR report.

## **Conclusions and Recommendations**

The project is deemed acceptable for the Bank under environmental and social aspects under the following conditions:

- Promoter to fully implement the mitigation measures defined in the ESMP for the project to the satisfaction of the Bank.
- Promoter to carry out additional targeted bird surveys and related impact analyses for the project site, satisfactory to the Bank. The relevant ESMP shall be updated accordingly.
- Promoter to carry out Corporate Social Responsibility (CSR) measures in the project region over loan lifetime on a best effort basis and in consultation with the local people.
- Promoter to fulfil the Bank's project-specific E&S information and reporting requirements.