

Environmental and Social Data Sheet

Overview

Project Name:	IIFCL - OSTRO MADHYA & ANANTPUR WIND FARMS
Project Number:	2016-0425
Country:	India
Project Description:	The project is composed of two allocations under the IIFCL ENERGY SUSTAINABILITY & CLIMATE ACTION FL (2013-0339). The allocations are to finance two wind farms , developed by the same promoter. One wind farm (100 MW) is located in Andhra Pradesh and one (92MW) in Madhya Pradesh.
EIA required:	Yes
Project included in Carbon Footprint Exercise ¹ :	Yes

Environmental and Social Assessment

Environmental Assessment

This operation comprises of two wind farms:

Lahori Wind Farm:

The wind farm in Madhya Pradesh consists of 46 wind turbines (WTG) with a unit capacity of 2 MW and a hub height of 92 m & rotor diameter of 100 m each. Each WTG location is connected to a pooling substation by a 33 kV overhead line. The pooling station is situated in the vicinity of the project. A 220 kV transmission line is used for evacuating the power to the Madhya Pradesh State Government Grid situated approximately 4.5 km from the pooling substation. The project is spread across several villages, mainly in Lahori, Shajapur District, in Madhya Pradesh. The land of the wind farm area can be mainly categorized as barren, cultivable, and agricultural.

Nimbagallu Wind Farm:

The wind farm in Andhra Pradesh consists of 50 wind turbines with a unit capacity of 2 MW and a hub height of 104 m & rotor diameter of 97 m each. Each WTG location is connected to a pooling substation by a 33 kV overhead line. The pooling station is situated in the vicinity of the project. Power will be evacuated from 33/220 kV wind farm pooling substation to APTRANSCO's 220 kV Uravakonda substation which is at distance of 12 km from the project site.

¹ 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 CO₂e/year absolute (gross) or 20,000 tons CO₂e/year relative (net) – both increases and savings.

The projects, 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 including grid connection infrastructure 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.

Two comprehensive ESIA studies including Environmental and Social Management Plans (ESMP) have been produced by external consultants and completed in December 2015 (Lahori) and August 2015 (*Nimbagallu*), respectively. During December 2015, supplementary bird and bat studies were carried out by the same consultants for the Lahori site. These studies articulate the potential adverse and beneficial impacts of the project on environment, resources, biodiversity, labours and community in principle in line with the requirements set by EIB (but following the structure of the IFC standards). Mitigation measures are proposed to avoid or minimise negative impacts.

The Bank's services carried out site visits to both wind farm sites to make an assessment of the implementation status of ESMP stated in ESIA report and other E&S aspects associated with the project sites. The promotor is considered capable of implementing the Bank's E&S standards.

The major observations and recommendations are summarised below:

Lahori Wind Farm.

The project has all the necessary permits and approvals from various regulatory bodies. (Wind Power is classified as "White Category" under the classification scheme for the Indian industrial sectors, established by the Central Pollution Control Board (CPCB) and therefore is exempted from the requirement to obtain the Consent to Establish and the Consent to Operate from the State Pollution Control Board.

As per Central Ground Water Board (CGWB), Shajapur district has been notified as a semi-critical category with a negative ground water balance hence the project promoter has not used any ground water during the construction stage. The water was procured through tankers purchased from villagers thus creating additional source of income for them. Moreover, the promoter has not used any water from the "Chillar Dam" for project activity which is a shared source of water for local community and project.

No part of the project activity falls either under forest land, protected land or Important Bird Areas (IBAs) designated by Birdlife International and Indian Bird Conservation Network (IBCN). However, Chillar Lake is an important bird habitat area. The closest turbines are in approximately 2 km from that lake.

As part of the ESIA, a limited bird survey was conducted during April – May 2015. A supplementary bird and bat survey was pursued in December 2015 during migration period. Whilst bats were not spotted at all, around 20 migratory bird species were

encountered in winter. In addition, around 10 (predominantly resident) bird species with protection status under national law were observed. 3 of them are IUCN_Red listed with risk levels above “least concern”. The expert studies conclude that project-related risks for birds and bats are not significant. Certain parts of the project (high voltage line, certain turbine locations), however, are identified as representing an elevated collision risks for birds. The ESMP comprises mitigation and monitoring measures that need to be fully implemented. The Bank will monitor this activity closely.

The ESIA reports a total of 7 WTG sites causing more than 30 hours/year of shadow flicker on nearby dwellings. As a mitigation measure all the identified WTG locations were shifted post ESIA. The ESMP recommends that a detailed shadow flicker assessment has to be carried out during the operational phase and shadow flicker management strategies should be monitored and reviewed in case the impact of shadow flickering still persists.

The ESIA further reports that there were in total four WTG locations causing noise levels (under worst case scenarios) at residential buildings which are above the permissible limits set by Ministry of Environment, Forest and Climate Change (MoEF). These turbines are amongst those relocated for shadow flicker reasons.

Residual risks of disturbance by shadow flicker or noise and related mitigation/compensation measures should be particularly addressed through the grievance redressal mechanisms.

Three WTGs were also relocated due to risk of flooding.

Nimbaqallu Wind Farm

The initial project developer developed a large wind farm project comprising of 150 WTGs (300 MW) and has sold a part (50 WTG, 100 MW) to the promoter (Ostro). The Bank is financing only this part of the project through this operation. The current ESIA study was carried out however for all 150 WTGs locations.

The project has all the necessary permits and approvals from various regulatory bodies.

No part of the project activity falls under forest land and there is no protected area, wild life sanctuary or national park within 10 km of the project site. There is a resident population (about 50 families) of Black Buck in the project region which is protected and conserved under the Indian Wildlife Protect Act (WPA). These animals are protected as per Schedule I of WPA while according to IUCN classification they are classified as ‘Near Threatened’ species. The project promoter informed the Bank that a “Black Buck Management Programme” is developed as recommended in ESMP. The Bank requests the promoter to implement the relevant protection measures.

As part of the ESIA, a limited bird and bat survey was conducted during the summer season, i.e. outside migration period. Around a local reservoir a flock of Painted Stork (IUCN listed as near threatened) was observed. A more detailed study related to effects on birds & bats shall be carried out during migration period. The Bank will

follow-up this activity closely and request, if necessary, appropriate mitigation and monitoring measures to be adopted into the ESMP to protect birds and bats.

The ESIA identifies four WTG locations within the larger 300 MW wind farm with a distance of 220 to 300 m to receptors potentially influenced by shadow flicker and noise risks above relevant thresholds. According to the project promoter, the 50 WTG sites were selected in a way to avoid excessive shadow flickering and increased noise levels at nearby receptors. Nevertheless, if disturbances should appear during the operation phase of the selected 50 WTGs, it will be addressed through effective implementation of the grievance redressal system.

EIB Carbon Footprint Exercise

The operation of the wind farms has no direct greenhouse gas (GHG) emissions. Estimated GHG emissions savings in a standard year of operation are 414 kT of CO₂ 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 two wind farms have neither involuntary resettlement nor indigenous people's issues. There are no reported archaeological or heritage site in the project areas.

In line with the recommendations made under both ESMPs, local people are employed for works and services that do not require specialist skills, e.g. security. Besides local people (who represent the majority of workers), skilled workers were hired from outside.

Adherence to the child labour policy was found satisfactory at the sites as per the requirements of 'The Child Labour (Prohibition and Regulation) Act, 1986'.

Lahori Wind Farm:

The project land comprises of private agricultural land and Revenue/Government land. During the discussions with the promoter it was confirmed that the private land is procured on "willing to buy and willing to sell" basis at land rates about 2 - 2.5 times than the government circle rates. No land is purchased from any vulnerable groups, scheduled caste or scheduled tribes. It was also confirmed by the promoter that promoter has taken due consideration of the fact that no private land owner becomes landless due to the land procurement for the project.

Revenue/Government land was allotted to the project for the purpose of wind farm erection through the state government's Land Revenue Department.

Luxembourg, CA meeting 15 November 2016

During the ESIA study it was observed that there were a few cases of encroachment of cultivation (but no settlements) over revenue land. The encroachers do not have any legal rights, however, the promoter kept provision of compensation for the lost income through the village level committee.

During the site visit it was observed that workers are wearing personal protective equipment (PPE). Mock drills are being conducted and corrective actions are implemented based on the outcomes of mock drills.

After discussion with the project developer during the site visit it was concluded that a grievance redressal mechanism is established by the project promoter at the project site. Under this grievance mechanism a Grievance register is maintained by the main contractor to record grievances on day to day basis and promoter is overall responsible to manage the functionality of the grievance mechanism.

Nimbaqallu Wind Farm.

The project is built on private agricultural land. During the discussions with the promoter it was confirmed that the private land is procured through land aggregators on "willing to buy and willing to sell" at rates about 2 times the market rates. The land acquisition process does not involve any forceful acquisition of land. Land owners of private land are willing to sell their land because it is very dry. The land is cultivated only once during monsoon and hence not generating any significant income.

During implementation, a labour camp was temporarily established at the project site. Regular internal audits were conducted by the promoter to minimise associated E&S risks. Corresponding audit reports do not reveal significant issues.

The main contractor's incident reports were available at the site for review. The Bank's impression of OHS standards when visiting the wind farm site was satisfactory.

A grievance redressal mechanism is established at the site by the promoter and to be maintained by the EPC contractor. It is deemed essential that villagers and other stakeholders are aware of the system and using it.

Public Consultation and Stakeholder Engagement

There is no requirement by law to pursue public consultation for wind farm projects in India. The developer consulted predominantly Panchayats (village council) and land owners during project development. The collection of Non-Objection Certificates (NOCs) from Gram panchayats is not legally required (neither in AP nor in MP), but deemed business best practice by the Bank.

Additional consultations were carried out as part of the ESIA's.

Lahori Wind Farm:

Non-objection certificates (NoCs) from Panchayat were not received at the time of ESIA but during the site visit it was confirmed that NoCs are received by promoter. The Bank requests the promoter to submit all NoCs received from Panchayats.

Consultations during ESIA were conducted with primary stakeholders, e.g. Gram Panchayat whose major concerns were local employment generation and support through adequate Corporate Social Responsibility (CSR) activities. Consultation was also conducted with secondary stakeholders, e.g. local community whose major concerns are adequate employment generation and targeted community development activities, vulnerable communities whose major concerns were targeted support to their families.

Nimbagallu Wind Farm:

The land acquisition process is not yet completed. Non-Objection Certificates (NoCs) from most village Panchayats are not yet available. Only the NoC from Nimbagallu village was available for verification. The Bank encourages the promoter to submit the NoCs of all villages which are affected by the project's 50 WTGs, once the land acquisition is completed.

Regular transparent communication between the project promoter and the communities is a very critical element to keep positive relationships between them. During the site visit it was observed that no formal engagement mechanism is in place with community people. Therefore ESMP advises the promoter to establish a Community Liaison Plan. Full ESMP implementation is a requirement of the Bank.

Consultations during ESIA with diverse stakeholder groups revealed that the region offers little employment to people. Many people migrate to other cities like Hyderabad, Bangalore and other states from the project area for jobs, but some vulnerable groups like physically handicapped and widows live in every consulted village.

It was also observed that there was no demarcated grazing land in the consulted village area. Health care facilities are not adequate in the villages, doctors are mostly not available, basic services are provided through village health sub centre and regular visits of ANM's.

Many of the highlighted concerns are already taken up either through the measures laid out in the ESMP or currently running Corporate Social Responsibility (CSR) programs.

Other Environmental and Social Aspects

Implementation of the ESMP is monitored by the promoter on a monthly basis. The progress is submitted in a prescribed format to management for review. The corrective actions are planned based on the output of the review by management.

The project promoter has not acquired the IMS (Integrated Management Systems: ISO 9001, ISO 14000 & ISO 18000) but planning to get certified in near future. The main contractor of the Nimbagallu wind farm is certified with IMS while the main contractor of the Lahori wind farm is having only ISO 9001 certification and is planning to acquire ISO 14001 and ISO 18001.

Conclusions and Recommendations

The project is deemed acceptable for the Bank under the following conditions:

Conditions relating to both wind farms:

- Promoter to submit to the Bank, on a best effort basis, Non-Objection certificates from all project-relevant village councils (Gram Panchayats).
- Promoter to fully implement the mitigation measures defined in the ESMPs for the wind farms to the satisfaction of the Bank.
- Promoter to improve the community and stakeholder participation and the grievance redressal system particularly to address also the potential impacts caused by noise and shadow flicker.
- Promoter to carry out Corporate Social Responsibility (CSR) measures in project regions 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.

Site specific conditions for Nimbagallu wind farm only:

- Promoter to carry out supplementary site-specific bird and bat surveys to verify the project-related impacts on critically endangered, endangered, and vulnerable species as well as on migratory birds and to verify the appropriateness of the mitigation and monitoring measures proposed.
- Promoter to fully implement its "Black Buck Management Programme" in line with ESMP recommendations.