

BHUJ 1 PROJECT

I N D I A

HARNESSING WIND ENERGY IS AN ECO-FRIENDLY PROCESS, INEXHAUSTIBLE AND POSSESSES A MINIMAL ENVIRONMENTAL FOOTPRINT.

There are no fuel requirements or large quantities of water for operation of the plant. Wind energy scores over other forms of energy generation as it has a low gestation time: a short lead time is needed to design, install, and start-up (up to a maximum of 2 months after micro siting, approvals and land purchase) a wind farm. Wind power Projects are environment friendly with minimal greenhouse gas emissions, and Alfanar's 300 MW Bhuj-I project is estimated to project with emission reductions of 846,450 t CO₂/year.



Project Background

Solar Energy Corporation of India Ltd (hereinafter called "SECI") is a Government of India Enterprise under the administrative control of the Ministry of New & Renewable Energy (MNRE). One of the main objectives of the Company is to assist the Ministry and function as the implementing and facilitating arm of the National Solar Mission (NSM) for development, promotion and commercialization of solar energy technologies in the country.

Ministry of Power (MoP) has issued "Guidelines for Tariff Based Competitive Bidding Process for Procurement of Power from Grid Connected Wind Power Projects" vide Gazette Resolution dated 08.12.2017. These Guidelines have been formulated for procurement of wind power through transparent process of bidding under Section 63 of the Electricity Act, 2003. For long-term procurement of electricity through competitive bidding process, by the 'Procurer(s)', from grid connected Wind Power Projects ('WPP'), having (a) individual size of 5 MW and above at one site with minimum bid capacity of 25 MW for intra-state projects; and (b) individual size of 50 MW and above at one site with minimum bid capacity of 50 MW for inter-state projects.

This Request for Selection document (hereinafter called RFS) has been prepared in line with the guidelines issued by MoP dated 08.12.2017. As part of the above scheme, SECI hereby invited proposals for setting up of ISTS connected Wind Power Projects in India (TRANCHE III), on "Build Own Operate" basis for an aggregate capacity of 2000 MW. SECI has been designated as Trader for purchase and sale of wind power from such projects. SECI shall enter Power Purchase Agreement (PPA) with the successful bidders selected based on this RFS and Power Sale Agreement with the interested Buying Entities.

M/s Alfamar Energy Private Ltd. (AEPL) participated and was declared a successful bidder under RFS document for scheme for setting up of 2000 MW ISTS connected wind power projects bearing RFS no. SECI/C&P/WPD/2000MW/T3/RFS/11/2017 dated January 12, 2018 ("RFS") issued by SECI through tariff based commutative bidding at a tariff of Rs. 2.45 per unit.

The Project

The Project site is developed around the villages of Nakhatrana and Lakhpatt Taluk in Kutch District in the State of Gujarat, India. Project consist of 22 numbers of Senvion Make M-120 Wind Turbine Generators (WTGs) of 2.3 MW rated capacity with 120 m hub height and 120 m Rotor diameter and 114 numbers of Siemens Gamesa make SGRE-122 Wind Turbine Generators (WTGs) of 2.2 MW rated capacity with 122 m hub height and 120 m Rotor diameter. The power from the Project is being evacuated through a transmission network of 33 kV lines connecting WTGs to the 33/220 kV Pooling Substation (PSS) at Project Site, a single circuit 220 kV extra high voltage (EHV) Transmission line is connected from the Pooling Substation (PSS) to Power Grid Corporation of India Limited (PGCIL) Substation at Bhuj (Receiving Substation).



300 MW
BHUJ-1 PROJECT



846,450 T
CO2/YEAR EMISSION REDUCTION

Harnessing wind energy is an eco-friendly process, inexhaustible and possesses a minimal environmental footprint. There are no fuel requirements or large quantities of water for operation of the plant. Wind energy scores over other forms of energy generation as it has a low gestation time: a short lead time is needed to design, install, and start-up (up to a maximum of 2 months after micro siting, approvals and land purchase) a wind farm. Wind power Projects are environment friendly with minimal greenhouse gas emissions, and Alfanar's 300 MW Bhuj-I project is estimated to project with emission reductions of 846,450 t CO2/year. Wind energy projects are also non-polluting energy generation projects which are site specific and dependent on the availability of wind resource. Wind resource mapping and power potential assessment for the Project was done by C-WET, based on which potential areas are notified by C-WET. Although, the option of choosing an alternative area is not available to a project developer; but being a responsible firm, Alfanar Power has taken all possible measures in avoiding ecological sensitivities such as dense vegetative cover, major wetlands and Forest areas as well as by not procuring lands from poor and marginal farmers for establishing its first wind power project of 300 MW. MNRE guidelines have been fully followed during the micro siting and designing process



Identifying and engaging the stakeholders at the project siting and designing stage was one of the primary tasks of Alfanar team and in this regard a land aggregator was appointed to do so. For a Wind power project, site selection, identification of potential land parcels, developing access roads to the Turbines, engagement of locals as labour force, finding out skilled workforce from the project area, engaging locals as contractors/sub-contractors are the important as well as relevant aspects those need to be focussed.



The stake holder meeting through a communicative method with local villagers, Panchayat leaders, NGOs and government officials has enabled Alfanar to find out the potential local resources such as availability of land parcels, local labour force as well as civil contractors along with construction equipment. Through the stakeholder meetings, the project management team has also undertaken an overall project risk assessment and identified the areas of potential negative impacts from the project and who would be directly or indirectly impacted. During the public consultation and stakeholder meetings at village level, the objective of the meeting and proposed project informally informed with the village Sarpanch, and local community. The community was informed on the Site Office/camp office premises and the concerned person to contact and was free to get in touch whenever required.

The Study

The main occupation of the study area is agriculture and livestock rearing (Cow, buffalo, Sheep, goat, camel etc.) and more than 53% people depend on agriculture or as agricultural labourers. Main crops grown in the region are cotton, ground nut, pomegranate, castor, maize, sesame, lentils etc. which depends on rainwater. Average land holding size of the study area is 3 to 30 acre per family. The average income of the study area is INR. 6,000 to INR. 50,000 per month and most part of the income is spent on food.



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There are very few avenues for job and non-agricultural works are far and few, most of the men migrate to the nearby towns/city as Bhuj, Ahmadabad, Surat, Mumbai for better job opportunities. Few farmers have changed their traditional agriculture and has invested in cash giving plantation lime pomegranate and ground nut.

This semi-arid part of Gujarat may not be suitable for farming, but the nature has gifted immense treasure in this region with several minerals and of course wind. There are several wind power developers have been operating wind power projects in this region since last 8/9 years. The locals are not new to this kind of development and also equally cooperative towards the developers. Alfano has complied with all regulatory requirements and obtain all requisite consents. The process of deciding the rate of land was transparent and well informed to the concerned community. A handsome amount of compensation against their not so yielding, rainfed land parcels besides getting short term benefits from construction work and allied services has been proved to be a blessing in disguise for the locals since the inception of renewable power projects in the talukas of Lakhpat, Abdasa and Nakhatrana. The fast development of RE projects in these villages also brought a boom of several infrastructures that directly and indirectly benefitted the locals.

Unless Solar power projects, the wind power projects do not block the access to grazing area passing through the Wind power developed land parcels and this concern is a non-issue as no prohibition is made by Alfano to trespass its owned land parcels from grazing and movement. The Gram Panchayats were found to be supportive of the project. They felt that the land being sought for the project was not serving good because of the topography and lack of irrigation and sufficient rainfall. They wanted greater engagement of local community and employment opportunities to local people. Village Panchayat expect local benefits like enhancement the local infrastructure, targeted social investment programme through CSR initiatives. During construction phase, local resources were explored to benefit the locals as much as possible. In O & M phase, there is a limited scope of job opportunity in wind Power Project. However, un-skilled and security related job has been provided to local community. Local contractors were engaged by the EPC contractors and that also generated revenue for the local villagers.

Alfano has its own corporate and site specific ESMS and Stakeholder Engagement Plan (SEP) & Grievance Redressal Mechanism (GRM) are the part of ESMS. Alfano site team has been practicing external GRM to engage the local community in project implementation and respect their suggestions. The O&M cum GRM Manager has been taking care of the GRM issues at the site.



Corporate Social Responsibility

The CSR activity has been initiated at the project site through installing a Medical Oxygen Plant in Nakhatrana town during the covid-19 pandemic. A set of other community engagement has also been undertaken at the covid-19 affected villages by distributing medicines and food materials.

It has been emphasised that the project site team would have a two-way communication with all the stakeholders during the entire project life cycle, to ensure smooth functioning and limited social impact of the project.

Contacts of grievances officers of Alfanoar and Tata Cleantech Capital:

Details of GRM officers (Alfanar and TCCL) are as follows:

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