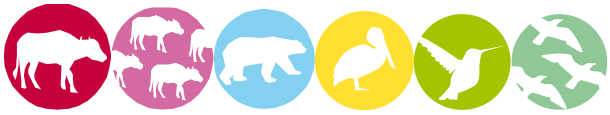
ANNEX R – PASSPORT TEMPLATE

CONTENTS



SECTION A. Project Title

Title: Wind Power Project in Tinwari, Rajasthan

Date: 24/08/2017

Version no.: 1

SECTION B. Project description

Wind world (India) Limited[1] (hereafter referred as "WWIL") has developed 20MW[2] wind power project at Jodhpur district of Rajasthan, India. The purpose of the project activity is to harness energy from the renewable source "wind" and generate clean electricity by utilizing Wind Energy Converters (WECs) throughout the project lifetime. The clean and green electricity supplied by the project is an aide in sustainable growth in the region.

The Project activity is consists of 25 Wind Energy Converters (WECs) of Enercon make E-53 type WEGs of 800kW capacity each. The WECs generates 3-phase power at 400V, which is stepped up to 33 kV and further transmitted to WWIL Sub-station. From WWIL substation electricity is further evacuated to the Rajasthan regional electricity grid which is part of the NEWNE (Northern, Eastern, Western and North-Eastern) grid in India. Wind world (India) Limited is the project owner and project participant for the project activity.

The technology employed for the project is well proven and safe. WWIL is the equipment supplier and the Operation and Maintenance contractor for the Project as well.

Technology Diagram

[1] Previous name – Enercon (India) Limited.

[2] The description of the project activity & amount of estimated GHG emission reduction per annum is provided in line with the registered CDM PDD, UNFCCC Ref. 6160 and date of registration was 25/07/2012. https://cdm.unfccc.int/Projects/DB/DNV-CUK1335949463.75/view

The project activity has been contributing towards reduction of greenhouse gas (GHG) emission from the atmosphere, which is estimated to be approximately 32,415 tCO2e[3] per year, by displacing an equivalent amount of electricity generation through the operation of existing fuel mix in the grid comprising mainly of fossil fuel based power plants[4]. Whereas the electricity generation from operation of Wind Energy Convertors (WEC's) is emission free.

As per the applicable methodology the baseline scenario for the project activity is the grid based electricity system, which is also the pre-project scenario.

Contribution to the sustainable development:
The Project harnesses renewable resources in the region, thereby displacing fossil fuel dominating natural resources and leading to sustainable economic and environmental benefits.

- ✓ Project activity contributes in conserving natural resources (Land, forest, minerals, water & ecosystem) by generating green & clean electricity. Thus, the project causes no negative impact on the surrounding environment and contributes to environmental well-being.
- ✓ Project activity contributes in development of infrastructure for road network in project vicinity and granted access to the rural people as well. Also, helped in development of the local economy and created jobs & employment, particularly in rural areas, which is a priority concern for the Government of India;
- ✓ Contributing in penetration of renewable energy power generation technology in the state of Rajasthan. Thus, supporting in implementation of state government renewable energy power generation development policy aim.
- ✓ The project has been generating electricity utilizing renewable source like wind, thus it has increased the contribution of renewable based power generation in the region and has also helped in reducing the demand - supply gap of the respective grid.
- ✓ Being a renewable power generation project, avoids emissions of GHG gases and thus contributes in global aim of CO_2 abatement and reduction of greenhouse gas emissions through development of renewable technology;

In addition to this, the project proponent (PP) remains committed to contribute 2% of the CDM revenue realized from the CDM project activity for sustainable development including society / community development.

Estimated project start date:
Date of issuance of official circular for executing the project (i.e. 07/05/2011) has been considered as the project start date. The first machine under the project activity was commissioned on 30/09/2011

[3] The description of the project activity & amount of estimated GHG emission reduction per annum is provided in line with the registered CDM PDD, UNFCCC Ref. 6160.
[4] CEA Database ver 12, Dated: May 2017; Refer Table 1 – It is evident that the total installed capacity is predominantly coal based and there-fore, is a major source of carbon dioxide emissions in India. http://www.cea.nic.in/reports/others/thermal/tpece/cdm_co2/user_guide_ver12.pdf

and last machine under the project activity was commissioned on 09/11/2011. The expected operational lifetime of the project is for 20 years.

Details of previous CDM verification period & issuance are as follows:

Issuance no.	Period covered	CER issued	
First Issuance	01/08/2012 to 28/02/2013 (Inclusive of both days)	12,777	(8258 from CP1)

As per Gold Standard guidelines, project activity is eligible to earn labels for the (already realized) emission reductions up to two years prior to Gold Standard registration. The CDM reference number of the project is 6160 and date of registration was 25/07/2012.

SECTION C. Proof of project eligibility

C.1. Scale of the Project

Project Type	Large	Small
	✓	☐
	☐	☐
	☐	☐
	☐	☐
	☐	☐

	☐

C.2. Host Country

India

C.3. Project Type

Project type	Yes	No
Does your project activity classify as a Renewable Energy project?	✓	☐
Does your project activity classify as an End-use Energy Efficiency Improvement project?	☐	✓
Does your project activity classify as waste handling and disposal project?	☐	✓

Please justify the eligibility of your project activity:

The project activity is a large scale (20MW) grid-connected renewable (Wind) power generation project which involves installation of 25 WECs of capacity 800kW each at a site where no renewable power plant was operated prior to the implementation of the project activity (i.e. a greenfield plant); thus, as per Annex C of Gold Standard meets the definition of the eligible project type – Renewable Energy Supply category.

GS Tool kit ref	Eligibility	Requirement
1.2.1	Scale of project	Project activity falls under large scale category; as installed capacity is 20 MW which is higher than small scale project limit of 15 MW.
1.2.2	Host Country	The project activity is located in India which is a non-Annex I country as defined by the UNFCCC.
1.2.3	Type of Project	Project activity is eligible under "The renewable energy supply category" as the generation and delivery of energy services (i.e. electricity) from non-fossil and non-depletable energy sources
1.2.4	Greenhouse Gases (GHGs)	The project activity reduce the emission of greenhouse gases (CO_{2e}) by replacing electricity generated from fossil fuel fired power plants with zero emissions electricity from a wind power plant.
1.2.5	Official Development Assistance (ODA)	Not Applicable; as there is no ODA funding for the project activity.
1.2.6	Project Timeframe	Project activity falls under the Retroactive Registration & crediting criteria as the project activity has already implemented & operational under CDM mechanism.

Project activity contributes to sustainable development and results in real, measureable and verifiable permanent emission reductions.

Sectoral Scope & Applied Methodology:
Sectoral Scope: 1, Energy industries (renewable/ non-renewable sources)
Reference: Approved consolidated CDM baseline methodology ACM0002 (Version 17.0, EB 58)
Title: Large Scale Consolidated methodology for "Grid-connected electricity generation from renewable sources"
UNFCCC web reference of methodology:
https://cdm.unfccc.int/filestorage/D/5/Y/D5YFS9I3VKBT18MQNGX0LPZ6U7AWCO/ACM0002_%28v17%200%29_clean.pdf?t=amh8b3Vuczh2fDBAIPuKzt5E1SZD7q1GWSTH

As per the GS requirement, the differences in the applicability criteria of the applied methodology ACM0002 between version 12.2.0 (applied in the registered CDM PDD) and latest version 17 with respect to project activity are as follows:

S.No	Applicability Conditions as per ACM0002, version 12.2.0	Applicability Conditions as per ACM0002, version 17	Conclusion/difference
1.	This methodology is applicable to grid-connected renewable power generation project activities that • Install a new power plant at a site where no renewable power plant was operated prior to the implementation of the project activity (greenfield plant); • Involve a capacity addition; • Involve a retrofit of (an) existing plant(s); or • Involve a replacement of (an) existing plant(s).	This methodology is applicable to grid-connected renewable energy power generation project activities that: • Install a Greenfield power plant; • Involve a capacity addition to (an) existing plant(s) • Involve a retrofit of (an) existing operating plants/units; • Involve a rehabilitation of (an) existing plant(s) /unit(s); or • Involve a replacement of (an) existing plant(s)/unit(s)	Criteria satisfied as the project activity is Greenfield power project. Hence, revision in applicability criteria will not have any impact on project activity.
2.	The project activity is the installation, capacity addition, retrofit or replacement of a power plant/unit of one of the following types: hydro power plant/unit (either with a run-of-river reservoir or an accumulation reservoir), wind power plant/unit, geothermal power plant/unit, solar power plant/unit, wave power plant/unit or tidal power plant/unit;	The project activity may include renewable energy power plant/unit of one of the following types: hydro power plant/unit with Or without reservoir, wind power plant/unit, geothermal power plant/unit, solar power plant/unit, wave power plant/unit or tidal power plant/unit;	Project activity involves the installation of wind power plant (capacity 20 MW). Thus Satisfies the criterion.
3.	In the case of capacity additions, retrofits or replacements	In the case of capacity additions, retrofits,	This criterion is not applicable in both the

	(except for capacity addition projects for which the electricity generation of the existing power plant(s) or unit(s) is not affected): the existing plant started commercial operation prior to the start of a minimum historical reference period of five years, used for the calculation of baseline emissions and defined in the baseline emission section, and no capacity addition or retrofit of the plant has been undertaken between the start of this minimum historical reference period and the implementation of the project activity;	rehabilitations or replacements (except for wind, solar, wave or tidal power capacity addition projects the existing plant /unit started commercial operation prior to the start of a minimum historical reference period of five years, used for the calculation of baseline emissions and defined in the baseline emission section, and no capacity expansion, retrofit, or rehabilitation of the plant/unit has been undertaken between the start of this minimum historical reference period and the implementation of the project activity	versions of methodology, as the project activity does not involve any capacity addition, replacement etc.
4.	In case of hydro power plants: • The project activity is implemented in an existing single or multiple reservoirs, with no change in the volume of any of the reservoirs; or • The project activity is implemented in an existing single or multiple reservoirs, where the volume of any of reservoirs is increased and the power density of each reservoir, • as per the definitions given in the Project Emissions section, is greater than 4 W/m2 after the implementation of the project activity; or • The project activity results in new single or multiple reservoirs and the power density of each reservoir, as per the definitions given in the Project Emissions section, is greater than 4 W/m2 after the implementation of the project	In case of hydro power plants, one of the following conditions Shall apply: • The project activity is implemented in existing single or multiple reservoirs, with no change in the volume of any of the reservoirs; or • The project activity is implemented in existing single or multiple reservoirs, where the volume of the reservoir(s) is increased and the power density calculated using equation (3), is greater than 4 W/m2; or • The project activity results in new single or multiple reservoirs and the power density, calculated using equation (3), is greater than 4W/m2; or	This Criterion is not relevant to the project activity in either version of methodology.

	activity.		
5.	In case of hydro power plants using multiple reservoirs where the power density of any of the reservoirs is lower than 4 W/m2 after the implementation of the project activity all of the following conditions must apply: • The power density calculated for the entire project activity using equation 5 is greater than 4 W/m2; • All reservoirs and hydro power plants are located at the same river and were designed together to function as an integrated project1 that collectively constitutes the generation capacity of the combined power plant; • The water flow between the multiple reservoirs is not used by any other hydropower unit which is not a part of the project activity; • The total installed capacity of the power units, which are driven using water from the reservoirs with a power density lower than 4 W/m2, is lower than 15 MW; • The total installed capacity of the power units, which are driven using water from reservoirs with a power density lower than 4 W/m2, is less than 10% of the total installed capacity of the project activity from multiple reservoirs.	The project activity is an integrated hydro power project involving multiple reservoirs, where the power density for any of the reservoirs, calculated using equation (3), is lower than or equal to 4W/m2, all of the following conditions shall apply: • The power density calculated using the total installed capacity of the integrated project, as per equation (4), is greater than 4 W/m2. • Water flow between reservoirs is not used by any • Other hydropower unit which is not a part of the project activity; • Installed capacity of the power plant(s) with power density lower than or equal to 4W/m2 shall be: - Lower than or equal to 15 MW; and - Less than 10 per cent of the total installed capacity of integrated hydro power project.	This Criterion is not relevant to the project activity in either version of methodology.
6.		In the case of integrated hydro power projects, project proponent shall: • Demonstrate that water flow from upstream power plants/units spill directly to the	This Criterion is not relevant to the project activity in version 17 of methodology.

		downstream reservoir and that collectively constitute to the generation capacity of the integrated hydro power project; or • Provide an analysis of the water balance covering the water fed to power units, with all possible combinations of reservoirs and without the construction of reservoirs. The purpose of water balance is to demonstrate the requirement of specific combination of reservoirs constructed under CDM project activity for the optimization of power output. This demonstration has to be carried out in the specific scenario of water availability in different seasons to optimize the water flow at the inlet of power units. Therefore this water balance will take into account seasonal flows from river, tributaries (if any), and rainfall for minimum five years prior to implementation of CDM project activity.	
7.	The methodology is not applicable to the following: • Project activities that involve switching from fossil fuels to renewable energy sources at the site of the project activity, since in this case the baseline may be the continued use of fossil fuels at the site;	The methodology is not applicable to: • Project activities that involve switching from fossil fuels to renewable energy sources at the site of the project activity, since in this case the baseline may be the continued use of fossil	This Criterion is not relevant to the project activity in either version of methodology.

	• Biomass fired power plants; • A hydro power plant2 that results in the creation of a new single reservoir or in the increase in an existing single reservoir where the power density of the reservoir is less than 4 W/m2.	fuels at the site; • Biomass fired power plants/units.	
	In the case of retrofits, replacements, or capacity additions, this methodology is only applicable if the most plausible baseline scenario, as a result of the identification of baseline scenario, is "the continuation of the current situation, i.e. to use the power generation equipment that was already in use prior to the implementation of the project activity and undertaking business as usual maintenance	In the case of retrofits, rehabilitations, replacements, or capacity additions, this methodology is only applicable if the most plausible baseline scenario, as a result of the identification of baseline scenario, is "the continuation of the current situation, that is to use the power generation equipment that was already in use prior to the implementation of the project activity and undertaking business as usual maintenance"	This Criterion is not relevant to the project activity in either version of methodology.
As explained above, the differences between two versions of methodologies do not have any impact on existing baseline and quantity of net electricity generation supplied by project activity. The impact due to change in baseline emission factors has been discussed in section H.2 of GS passport.			

Pre Announcement	Yes	No
Was your project previously announced?	✓	☐
Explain your statement on pre announcement The project has been already registered under CDM of UNFCCC, with UNFCCC Ref. number 6160. Hence, it has been previously announced. However, the project was never announced to be commissioned without consideration of Carbon Credit revenues, which is properly demonstrated and justified under the registered CDM PDD under section B.5. https://cdm.unfccc.int/filestorage/g/m/6TBNAVZO3RP5LW89CJG2MISQEUHD1Y.pdf/6160-20120725-PDD.pdf?t=VEl8b3VyaHhvfDC-IbjTDSl7uWDVQYZYFhS0		

C.4. Greenhouse gas

Greenhouse Gas	
Carbon dioxide	✓
Methane	☐
Nitrous oxide	☐

C.5. Project Registration Type

[See Toolkit 1.2.f]

Project Registration Type	
Regular	☐

	Retroactive projects (T.2.5.1)	Preliminary evaluation (eg: Large Hydro or palm oil-related project) (T.2.5.2)	Rejected by UNFCCC (T2.5.3)
Pre-feasibility assessment	✓	☐	☐

If Retroactive, please indicate Start Date of project activity dd/mm/yyyy: 07/05/2011[5]

[5] WWIL official circular (Dated: 07/05/2011) for implementing the project activity. Material transferred to the project site within 10 days of the official circular i.e. on 16/05/ 2011 and completed on 31/08/2011. Subsequently, project has been commissioned in Nov 2011 as well.

SECTION D. Unique project identification

D.1. GPS-coordinates of project location

	Coordinates
Latitude	26.42828 N to 26.51170 N
Longitude	72.77689 E To 72.87424 E

Explain given coordinates

The Project activity is located across the Salodi, Chensingh Nagar, Bari, Malunga, Bada Kotacha, Digadi Dhani, Balrva & Beru villages of Jodhpur district in Rajasthan.

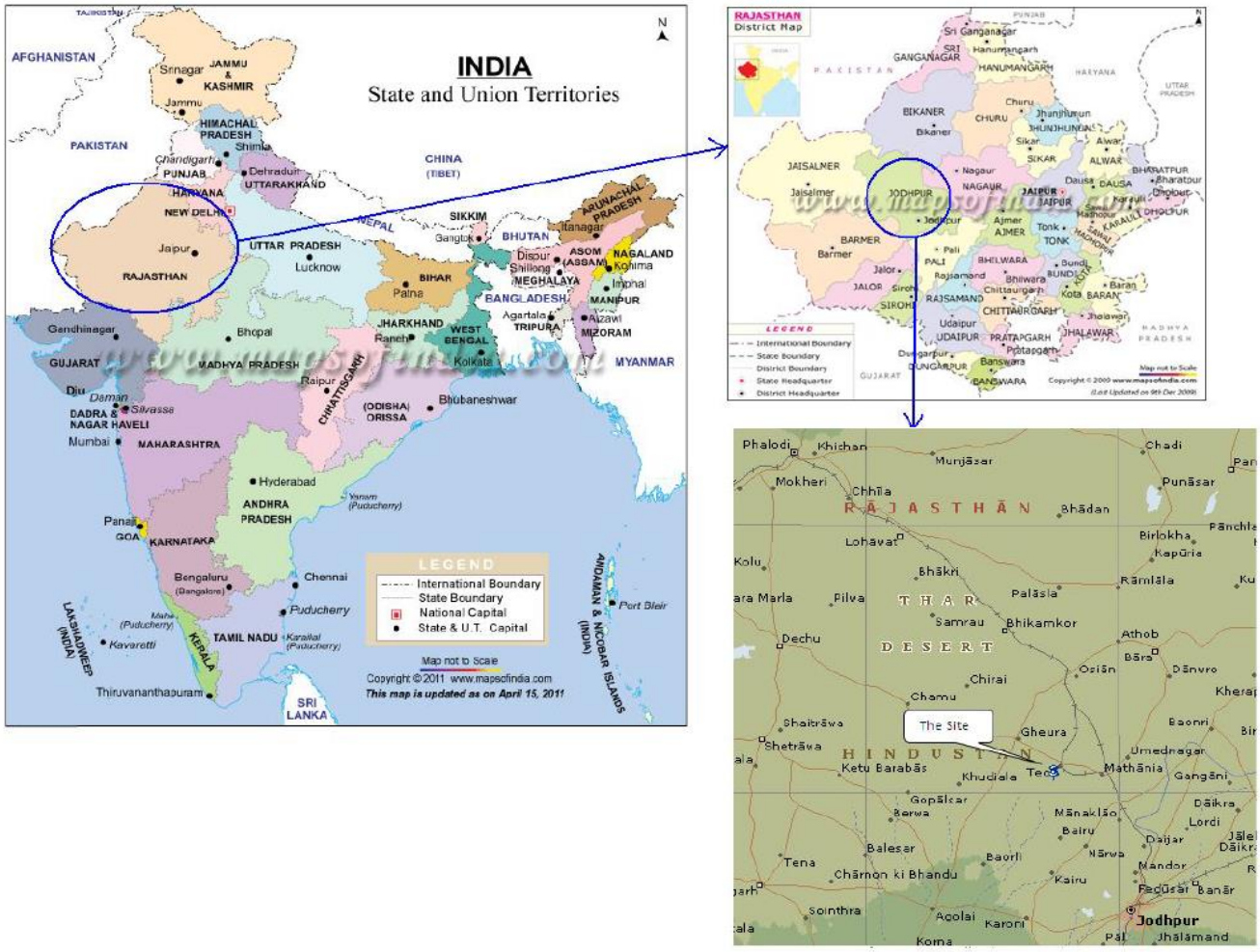
The detailed individual WECs location numbers and coordinates of project activity are provided below:

S.No.	WEG Loc No.	Village	Latitude (N)	Longitude (E)
1	9	SALODI	26.42828	72.80512
2	48	Chain singh Nagar/Balrva	26.45382	72.87220
3	49	Chain singh Nagar/Balrva	26.45383	72.86990
4	50	Chain singh Nagar/Balrva	26.45661	72.87060
5	51	Chain singh Nagar/Balrva	26.45580	72.86707
6	53	Chain singh Nagar/Balrva	26.45745	72.86628
7	82	Bari	26.47798	72.83214
8	83	Bari	26.47596	72.82855
9	112	Malunga	26.45374	72.77689
10	113	Malunga	26.45609	72.77677
11	114	Malunga	26.45756	72.77531
12	115	Malunga	26.46012	72.77523
13	116	Malunga	26.45891	72.77188
14	129	Digadi Dhani (Malunga)	26.49696	72.79726
15	130	Bada Kotacha	26.50309	72.80070

16	131	Bada Kotacha	26.50395	72.79868
17	133	Bada Kotacha	26.50955	72.79788
18	134	Bada Kotacha	26.51170	72.79732
19	136	Digadi Dhani (Malunga)	26.50604	72.79201
20	137	Digadi Dhani (Malunga)	26.50539	72.79512
21	501	Chain singh Nagar/Balrva	26.45836	72.86488
22	504	Beru	26.42481	72.87424
23	515	Digadi Dhani (Malunga)	26.50039	72.79619
24	516	Digadi Dhani (Malunga)	26.50245	72.79325
25	517	Digadi Dhani (Malunga)	26.50828	72.79092

D.2. Map

Geographical Location map of the project activity:



SECTION E. Outcome stakeholder consultation process

E.1. Assessment of stakeholder comments

In accordance with the GS toolkit V2.2 para 1.7, "stakeholder consultation process has two main events: an initial stakeholder consultation including a 'live' meeting and the stakeholder feedback round". It states that "the first consultation includes a discussion of the design and consequent impacts of your project. This consultation is comparable with the required stakeholder consultation by the UNFCCC".

As the project is retroactive project and is already registered under CDM of UNFCCC, hence no separate Stakeholder Consultation has been conducted for the initial round. The earlier stakeholder consultation conducted during the CDM registration cycle has been considered as the initial consultation process. However, for the second event, i.e. stakeholders' feedback round, a detailed consultation will be organized including a physical meeting.

Details of the Stakeholder consultation conducted in accordance with the UNFCCC requirements:
The comments from local stakeholders were invited through a local stakeholder meeting conducted at Jodhpur on 23rd July 2011 in the state of Rajasthan. A local newspaper advertisement was placed in Nafa Nuksan on 5th July 2011 inviting the local stakeholders for the meeting. There were no stakeholders comments received through email. The local stakeholder consultation meeting had representatives from the nearby villages and CDM representative of WWIL and O&M contractor.

The meeting was presided over by Mr. Rajesh Sahani (Customer Support -WWIL), Mr. Saujanya Kumar (CDM representative of WWIL).

Key Agenda of meeting for the project activity were as follows:

- ✓ Welcome address and introduction
- ✓ Company profile & project description
- ✓ CDM - social issues and environmental issues
- ✓ Queries from the stakeholders and response by respective authorized persons
- ✓ Vote of thanks

The main purpose of the stakeholders' meeting was to:

- ✓ Describe the project activity and its benefits to the local villagers
- ✓ Interactive session for clarifying the doubts/issues raised by the stakeholders
- ✓ Get feedback about the project activity from the stakeholders, who were present in the meeting.

Summary of comments received during the stakeholder meeting:

- ✓ Whether the local people will get work opportunities?
- ✓ How the project is going to benefit the local people?
- ✓ Did villagers may get the electricity from the project activity?

Report on consideration of comments received:
During the meeting, no adverse comments were received and the meeting has ended on a positive note. Mr. Roop Singh, the chairperson of meeting briefed the advantages of the wind farm. The project will provide the employment opportunities to the local people as the result of which may

result in increase of the income of local people as is the case of Jodhpur where the WWIL Projects has provided the employment opportunities to the local people. He also praised WWIL for their decision to invest in district of Jodhpur.

There were a few queries with some of the local stakeholders, which were addressed satisfactorily. The examples of few comments and their responses are provided below.

Sl. No.	Comments/Queries/ Views	Response
1	Mr. Bhairo Singh enquired can local people will get works relating to the project	Mr. Rajesh Sahani clarified that there will be opportunities for the vicinity people of project by a proper selection process.
2	Mr. Deva Ram how the project is useful for the villagers.	Mr. Saujanya Kumar clarified that by establishing the wind power projects, village development takes place and by this, the towns and the states. Also told that the job opportunities, scarcity of electricity, improved distribution of power will be of importance to the nearby villages.
3	Mr. Manohar Singh enquired that villagers will get the electricity generated from the project?	Mr. Rajesh sahani informed that the electricity generated will be supplied to the state electricity grid which further distributes the electricity as per the state policy.

The detailed minutes of the meeting are available with the PP, which were already submitted to and validated by DOE during the CDM registration.

Thus, the overall outcome of the initial stakeholder consultation was positive and concluded on positive note.

E.2. Stakeholder Feedback Round

Please describe report how the feedback round was organized, what the outcomes were and how you followed up on the feedback.

The comments from local stakeholders will be invited through a local stakeholder meeting at Jodhpur.

E. 3. Discussion on continuous input / grievance mechanism

Discuss the Continuous input / grievance mechanism expression method and details, as discussed with local stakeholders.

	Method Chosen (include all known details e.g. location of book, phone, number, identity of mediator)	Justification

Continuous Input / Grievance Expression Process Book	**Methods:** ✓ A suggestion cum complaint box and a grievance register will be kept at the project sites (at substation offices, accessible to the local villager). The stakeholders will be able to provide their inputs and raise their grievance expressions at any point of time. **Contacts:** ✓ The contact details of the concerned official will be made available to the local villagers. **Internal review:** ✓ Grievances, complaints or suggestions would be continuously reviewed and appropriate action would be initiated accordingly. ✓ It is proposed that the suggestions box will be checked on monthly basis and comments will be addressed by the responsible/concerned official as per their priority.	✓ The use of internet or any electronic media does not seem to be common practice in the regions, especially for the villagers and local communities. So an input register at the site office is an appropriate communication channel for input. ✓ This will ensure an appropriate reporting practice and a non-interruptive continuous process, thereby help avoiding communication gap.
Telephone access	A telephone number for making comments will be provided to the stakeholders during stakeholder consultation. Also, it is proposed that calls will be logged on a form similar to table 2.1 in Annex W for records and reference.	For stakeholders who are not close to the site office or do not live in the direct vicinity of the project site, telephone access is an appropriate communication channel for input.
Internet/email access	An email address will be provided to stakeholders during stakeholder consultation where they would be able to send comments at any point of time. Emails received will be recorded in similar way as that for telephone calls and on the same form,	It is a convenient way of communication for stakeholders with good internet connectivity and knowledge.

	prescribed in table 2.1 in Annex W.	
Nominated Independent Mediator (optional)	Not yet nominated as the above means of input mechanism are found suitable and accessible to all level of stakeholders.	

SECTION F. Outcome Sustainability assessment

F.1. 'Do no harm' Assessment

Safeguarding principles	Description of relevance to my project	Assessment of my project risks breaching it (low/medium/high)	Mitigation measure
Human Rights			
1. The project respects internationally proclaimed human rights including dignity, cultural property and uniqueness of indigenous people. The project is not complicit in Human Rights abuses.	Project respects internationally proclaimed human rights. India has ratified the Universal Declaration of Human rights (UDHR) and all projects operational in India have to recognise and respect the Human Rights prescribed under the declaration. Reference: Govt. Of India, Ministry of Home Affairs[6]	Low	None
2. The project does not involve and is not complicit in involuntary resettlement	The project installation is as per the legislation followed by Government of India. The project has been developed on barren land approved and awarded by concerned Government authority for wind power project development. Thus, it is explicit that there is no involuntary resettlement involved due to the project	Low	None

[6] http://www.mha.nic.in/hindi/Human_Rights_Division

	activity.		
3. The project does not involve and is not complicit in the alteration, damage or removal of any critical cultural heritage.	The project is located on barren land approved and awarded by concerned Government authority for wind power project development. Also the host country Government has its own legislation that prohibits any kind of damage to the cultural property/ heritage. Therefore, the particular safeguarding principle is well addressed.	Low	None
Labour Standards			
4. The project respects the employees' freedom of association and their right to collective bargaining and is not complicit in restrictions of these freedoms and rights.	The project is located in the host country India where "employee's freedom" and "right to collective bargaining" are greatly supported. The Indian Government has not ratified the ILO Convention 87 and 984. However, the project fully respects the provisions of ILO conventions requiring large labour force. Thus the project activity does not limit employees' freedom of association and their right to collective bargaining.	Low	None
5. The project does not involve and is not complicit in any form of forced or compulsory labour.	Project operates in compliance with the required laws and regulations of government of India. Also, India has ratified ILO convention 29 and 105 on	Low	None

	elimination of forced and compulsory labour[7]. Therefore, project does not involve and complicit any form of forced or compulsory labour.		
6. The project does not employ and is not complicit in any form of child labour.	India strictly follows the safeguarding of child labour, under the Child labour polices, Ministry of Labour & Employment. India has not ratified ILO convention 138 (minimum age) and convention 182 (worst form of child labour). But, India has its own Child Labour (Prohibition & Regulation) Act, which prohibits employment of children. [8] Additionally as per the 'Right to Free and Compulsory Education Act 2009', law guarantees that every child of the age of 6 to 14 years shall have the right to free and compulsory education in a neighbourhood school till completion of elementary education. The project is established in accordance with the applicable laws and regulations of India, hence it does not & will not employ any form of child labour at all stages of the project across its lifetime.	Low	None
7. The project does not involve and is not	The project does not involve and is not complicit in	Low	None

7 http://labour.nic.in/upload/uploadfiles/files/footergallery_pdf/List%20ofILO%20Conventions%20Ratified%20by%20India.pdf

8 http://labour.nic.in/content/division/labour-policies.php

complicit in any form of discrimination based on gender, race, religion, sexual orientation or any other basis.	discrimination of any form. India has ratified ILO Convention 100 (equal remuneration) and Convention 111 (discrimination in employment/occupation). Thus, the project safeguards the particular principle in all aspects.		
8. The project provides workers with a safe and healthy work environment and is not complicit in exposing workers to unsafe or unhealthy work environments.	Project activity is wind power generation project which are considered as clean and environment friendly activities. This technology does not involve any chemical fuel or toxic/hazardous materials. Hence, it does not account any unsafe or unhealthy work environments for workers. No accident, unsafe or unhealthy situation has been reported so far during the construction and operation of the project activity. The technology provider (Wind World (India) Ltd., which is responsible for construction, erection & commissioning of WEGs) is an ISO 9001:2008 certified company and follows all safety measures as per national safety rules under Labour Law that covers work safety. Hence, the project safeguards the particular principle in all aspects.	Low	None
Environmental Protection			

9. The project takes a Precautionary approach in regard to environmental challenges and is not complicit in practices contrary to the precautionary principle.	The project has strictly adhered to Laws and Regulations of environmental protection prevalent in the Host country (India) [9] and takes a precautionary approach with regard to environmental aspects. As per Schedule 1 of MoEF (Government of India) notification dated January 27, 1994 and EIA Notification (S.O 1533) dated 14th September, 2006, a list of activities that require undertaking environmental impact assessment studies has been provided. According to those notifications, Environmental Impact Assessment (EIA) is not a regulatory requirement in India for wind energy projects as wind project does not expect any adverse impacts on environment. Thus, project being a Wind Power generation activity does not have any adverse environmental impact and is not complicit in practices contrary to the precautionary principle	Low	None
10. The project does not involve and is not complicit in significant conversion or degradation of critical natural habitats,	The project WECs installation has been done on barren unhabituated land which has been awarded (leased) by the government. Thus, the project is not associated with any	Low	None

[9] http://envfor.nic.in/legis/eia/so1533.pdf

including those that are (a) legally protected, (b) officially proposed for protection, (c) identified by authoritative sources for their high conservation value, or (d) recognized as protected by traditional local communities.	conversion or degradation of natural habitats by any means.		
Anti-Corruption			
11. The project does not involve and is not complicit in corruption.	The project does not involve any kind of corruption. India has ratified the UN Convention against corruption and also has it National Prevention of Corruption Act, 1988.	Low	None
Additional relevant critical issues for my project type	**Description of relevance to my project**	**Assessment of relevance to my project (low/medium/high)**	**Mitigation measure**
1. Labour Standard	The Project developer M/s Wind World (India) Limited is registered under the Companies Act, 1956, hence is well acquainted with the requirements of the labour standard. Hence, the project adheres to the Labour Standard laid down by the Central and concerned State Government.	Low	None
2. Shadow flicker	Shadow flicker is the flickering effect caused due to the rotating wind turbine blades periodically cast shadows through constrained openings	Low	None

	such as the windows of neighboring properties. However, the project is located in barren unhabituated land, where no habitation is within the vicinity. Hence, no such impact is generated at site.		
3. Electromagnetic interference and radiation (EMI)	Wind power project does not involve in generation of any Electromagnetic radiation. Furthermore, the project is located in barren unhabituated land, where no habitation is within the vicinity. Hence, the impact due to electromagnetic interference and radiation (EMI) is not applicable to the project activity.	Low	None
4. Species mortality	The project is installed on barren land where no human habitation is present. Additionally, project location is not in vicinity of any animal or bird sanctuary and doesn't fall within the path of migratory birds. Hence, project activity does not involve any barrier to the living pattern of the birds/species. Additionally, project doesn't have any adverse impact on the sparse animal/birds species in the region. Therefore there is no threat to species mortality	Low	None
5. Landscape and visual impact	As the project is installed on barren land and there are no other establishments and houses in the vicinity, there are	Low	None

	no landscape and visual impacts.		
6. Dust Emission	Being a renewable (Wind) power generation project, does not involve any dust emission.	Low	None
7. Impact to biodiversity	The project is located on barren land where the plant, bird and animal species are sparse. Moreover, the construction as well as operation of the project has not resulted in any adverse activity such as deforestation, water contamination, release of chemical or toxic waste etc. that can lead to a loss of biodiversity.	Low	None

F.2. Sustainable Development matrix

Insert table as in section D3 from your Stakeholder Consultation report (Sustainable Development matrix).

Indicator	**Mitigation measure**	**Relevance to achieving MDG**	**Chosen parameter and explanation**	**Preliminary score**
Gold Standard indicators of sustainable development.	**If relevant copy mitigation measure from "do no harm" – table, or include mitigation measure used to neutralise a score of '–'**	Check **www.undp.or/mdg** and **www.mdgmonitor.org** **Describe how your indicator is related to local MDG goals**	**Defined by project developer**	Negative impact: score '-' in case negative impact is not fully mitigated score 0 in case impact is planned to be fully mitigated No change in impact: score 0 Positive impact: score '+'
Category – "Environment"				
Air quality	Not Required	This indicator is	Parameter(s):	+

		relevant to **MDG-7: Ensure Environment Sustainability**	Avoidance NOx, SOx, CO emissions and other suspended particulate matters **Explanation:** Project activity replaces an equivalent amount of electricity at grid which would have been otherwise generated by conventional power plants mainly fossil fuel dominated. Thus, due to avoidance of fossil fuel combustion, these emissions are reduced in parallel to reduced CO2. Also, the emission of SOx & NOx reduced up to certain level. Thus, the project activity marks a positive impact as compared to the baseline scenario.	
Water quality and quantity	Not Required	This indicator is relevant to **MDG-7: Ensure Environment Sustainability**	**Parameter(s):** Amount of wastewater to be discharged to the environment by project activity. **Explanation:**	+

			Project activity is a wind power project and therefore does not required water for its operation like thermal power generation plant. Hence, discharge of waste water generation is avoided by the project activity. Also, will not affect quality & quantity of water in any manner. Therefore, this indicator has been scored positive impact as compared to its baseline scenario.	
Soil condition	Not required.	This indicator is relevant to **MDG-7: Ensure Environment Sustainability**	**Parameter(s):** Pollutants released to Soil and level of Soil erosion. **Explanation:** Thermal power plants (which form the baseline scenario) release many pollutants (mainly due to water discharge and smog to air) that can contaminate soil and can also lead to soil erosion in the form	+

			of direct discharge and acid rains. Whereas the project activity does not discharge any pollutants to both air & water that can contaminate soil by any means. Thus, project has positive impact on the soil condition as compared to baseline scenario.	
Other pollutants	Not required.	This indicator is relevant to **MDG-7: Ensure Environment Sustainability**	**Parameter(s):** Noise level during the operation of the project activity. **Explanation:** The wind Energy Converters generate (WECs) negligible sound due to the rotation of the blades in air in comparison to the baseline scenario fossil fuel based power plants. However, this noise does not create any impact to the surroundings. Nevertheless, conservatively it is considered as neutral.	0
Biodiversity	Not Required	This indicator is relevant to **MDG-7: Ensure**	**Parameter(s):** Number of endangered species (Birds, plants etc.) or	0

		Environment Sustainability	habitats affected by the project. **Explanation:** The project activity is not having any adverse effect on any species plants & birds. Project also does not affect migratory patterns of the birds. Hence, the impact on biodiversity is considered as neutral.	
Category – "Social Development"				
Quality of employment	Necessary Health & Safety Trainings given to all the employees during construction & operation phase of the power plant by the Project Developer.	This indicator is relevant to **MDG-1: Eradicate extreme poverty and hunger**	**Parameter(s):** i) Labour conditions ii) Health & Safety and O&M trainings. **Explanation:** Project developer ensures high standard of health and safety conditions for the employees and provides required safety and periodic Health & Safety trainings. Also, Operation and Maintenance Trainings impart high quality skills to the employees for performing their job safely and efficiently	+

			Also, the local villagers are offered appropriate employment in the project leading to income generation, thus poverty and hunger conditions are alleviated. Hence, there is positive impact associated with the indicator.	
Livelihood of the poor	No mitigation measures required	This indicator is relevant to **MDG-1: Eradicate extreme poverty and hunger**	**Parameter(s):** Alleviation of Poverty. **Explanation:** Project activity has generated direct & indirect job opportunities for the poor people of the project surrounding area during the construction & operation phase. This eventually leads to creation of additional livelihood opportunities for the local people and thereby helps in their quality of life & overcoming poverty to the some extent. Nevertheless, improving livelihood	0

			and alleviating poverty are gradual processes and can't be quantified at this stage. Hence conservatively the impact is considered as neutral.	
Access to affordable and clean energy services	No mitigation measures required	This indicator relevant to **MDG-7: Ensure Environment Sustainability**	**Parameter(s):** Change in Energy Use and accessibility at specific consumer level. **Explanation:** Being a renewable (wind) grid connected power generation project activity helps in reducing the dependency on the fossil fuel based energy generation up to a certain extent. Increase in renewable energy generation share supports nation to withstand for national energy security & energy use. However, the project does not directly change the energy use pattern of the nearby villages as it is a grid connected and	0

			cannot be assigned to specific consumers and therefore not be monitored. Hence, project gives access to clean & affordable energy services but only at a regional grid level. Hence the impact is considered as neutral.	
Human and institutional capacity	No mitigation measures required.	This indicator is relevant to **MDG-2: "Achieve Universal Primary Education"**	**Parameter(s):** Total number of programmes organized to strengthen key aspects of Human and Institutional Capacity; primarily Health and Education. **Explanation:** Project developer has undertaken various initiatives to contribute to these thematic areas. These initiative lead to several tangible as well as intangible benefits for the local community. These initiatives are a part of long term intervention plan of the project developer and would have a positive impact on the	+

			Human and Institutional capacity of the stakeholders residing in the project vicinity. Hence, this parameter has been scored positive.	
Quantitative employment and income generation	No mitigation measures required.	This indicator relevant to **MDG-1: "Eradicating extreme poverty and hunger"**	**Parameter(s):** Number of direct & indirect employment generated by the project activity. **Explanation(s):** The project activity has generated many direct & indirect job opportunities for the local people during construction phase and operation phase as per their appropriateness for the required job. Thus, overall employment generation has led to more income generation for local people which helps eradicating extreme poverty and hunger. Hence, this parameter has been scored positive.	+
Category "Economic & Technological Development"				
Balance of payments and investment	No mitigation measures required.	This indicator is in relevance to **MDG-8: "Develop a Global Partnership for Development"**	**Parameter(s):** Saving in foreign currency resulting from reduction of fossil fuel imports as a result of contribution of renewable energy	0

			share at regional grid by the project activity. **Explanation:** Indian power grid has major share of fossil fuel based power generation which clearly depicts that coal has to be imported as well along with the in-house reserves of coal. Thus, the project activity being a renewable energy project helps in marginally mitigating the dependence on imported fossil fuel which creates a positive impact on the net foreign currency. However, it is difficult to quantify its effect on balance of payments and other investments. Hence, conservatively the impact can be considered as neutral.	
Technology transfer and technological self-reliance	No mitigation measures required.	This indicator is in relevance to **MDG-8: "Develop a Global Partnership for Development"**	**Parameter(s):** The imported technology and the technology developed within the country. **Explanation:** The project activity employed Wind Turbines locally	0

			manufactured and assembled at a plant in Daman, India. The diffusion of wind energy technology is very prominent in India. Therefore, project activity does not lead to any technology transfer or introduction of new technology from outside or inside the country. Thus, project is associated with the positive impact of technology transfer and technological self-reliance. However, such impacts are part of a long term continual process and hence the impact can be considered neutral with respect to the project activity.	

Justification choices, data source and provision of references

Air quality	The project activity displaces power at grid which is predominated by fossil fuel based power plants which causes significant emissions of the air pollutants listed as parameters. Hence, it scores "+". The parameters are chosen based on the respective suggestion in the GSv2.2 toolkit. This indicator and its parameters are not included for monitoring. The current score allocated is based on baseline scenario compared with project scenario.
Water quality and quantity	The Project activity does not use water nor does it discharge any waste water because of its operation as compared to the baseline scenario. Thus, helps in reducing water consumption and contamination with regard to both ground and surface waters, because water will be used only for daily consumptions of

	the workers and not be used for operation of wind farm. Thus, there is a positive benefit in terms of direct water saving and also due to "no waste water" attribute, the project does not adversely impact the surface water and underground water conditions. Hence, it scores "+". The parameters are chosen based on the respective suggestion in the GSv2.2 toolkit. This indicator and its parameters are not included for monitoring. The current score allocated is based on baseline scenario compared with project scenario.
Soil condition	The project activity does not discharge any waste that can contaminate the soil, whereas in baseline scenario the thermal power plants generate waste and their discharge may degrade the soil condition. Hence it scores "+". The parameters are chosen based on the respective suggestion in the GSv2.2 toolkit. This indicator and its parameters are not included for monitoring. The current score allocated is based on baseline scenario compared with project scenario.
Other pollutants	Neutral score has been chosen for this category as noise is defined as relevant parameter with respect to the project activity. The parameter is chosen because it represents a typical factor and is also discernible in wind power projects. However, the project is located on barren land away from the settlement area, no negative impact of noise of the project activity to the habitants is expected during both construction and operation period. Nevertheless, this indicator and its parameters are not included for monitoring.
Biodiversity	The project activity is not having any adverse effect on flora & fauna and bird species and thus retains the baseline condition of the biodiversity. Additionally, as confirmed by the Ministry of Environment & Forest (Government of India) wind power projects does not have any adverse impact on environment for which no EIA is required . This also strengthens the fact that wind power projects don't adversely impact the environment or the biodiversity of the region. The parameters are chosen based on the respective suggestion in the GSv2.2 toolkit.

	This indicator and its parameters are not included for monitoring. The current score is "neutral" allocated, which is based on baseline scenario compared with project scenario.
Quality of employment	The project activity provides numbers of employment opportunities to the local people with adequate health and safety standards. Project developer ensures high standard health and safety conditions for the employees and provides Health & Safety Trainings to employees. Operation and maintenance training is also imparted to the staff members. Health & Safety Trainings help to mitigate occupational risk and Operation and Maintenance Trainings help employees to learn high quality skills. Since, the impact of the parameter to this indicator is scored positive, training/camps organised for awareness related to safety, Operation and Maintenance will be monitored. This indicator and its parameters are included for monitoring.
Livelihood of the poor	The proposed project activity has some positive effects on livelihood in terms of providing employment and income generation. However, these positive impacts are difficult to quantify and hence, this indicator has been chosen as neutral as project is not objectively linked to absolute poverty eradication. However, the income effects on the livelihood are gradual processes and therefore can't be quantified. The chosen parameter is adequate as it is directly related to the indicator. This indicator and its parameters are not included for monitoring.
Access to affordable and clean energy services	The project activity helps in enhancing access to affordable and clean energy services at a broader level, but it is difficult to assign a specific set of consumers to the clean energy generated by the project as the electricity is routed through the regional grid and is distributed as per regional grid's distribution plan. Hence, score is chosen neutral for this parameter. The chosen parameters are adequate as they are directly related to the indicator. This indicator and its parameters are not included for monitoring
Human and institutional capacity	Access to basic education and health are two basic factors parts to facilitate human and institutional capacity development, various initiatives are undertaken by the project developer to contribute to these thematic areas. These initiatives lead to several tangible as well as intangible benefits for the local community. Since, the impact of the parameter to this indicator is scored positive, initiatives undertaken by the project developer to enhance

	the access of local community to basic education and health facilities would be monitored. This indicator and its parameters are included for monitoring.
Quantitative employment and income generation	The project has created many direct employment opportunities for local people from nearby villages. Local people were employed during construction as well as operation of the project for appropriate jobs. The chosen parameter is adequate, as it represents the project's impact respective to the indicator. Also, it is directly related to "household income generated by the project" which is a parameter suggested in the GSv2.2 toolkit. This indicator and its parameters are included for monitoring.
Balance of payments and investment	The project activity has positive impact on the net foreign reserve in the country as it reduces dependency on imported fuels which are predominantly used at baseline. However, such positive effect is generally realizable in long run and difficult to quantify at this stage. Hence, considered neutral score. This indicator and its parameters are not included for monitoring.
Technology transfer and technological self-reliance	The project use existing technology, locally manufactured and supplied. Also the penetration of wind energy in India is significant across the states, which reflects technological self-reliance within the country. Thus, effect of technology transfer is negligible. Hence, the impact is considered neutral. This indicator and its parameters are not included for monitoring

Accumulation of scores:
As per the pare 8 of GS version 2.2 Toolkit, "Add up your scores. All indicators have the same weight. Add the scores per main category of sustainable development impacts, thus per Environment, Social Development and Economic & Technological Development. To be eligible under The Gold Standard your project must contribute positively to at least two of the three categories and neutral to the third category. If this is the case, you have completed the detailed impact assessment and are ready for the stakeholder consultation meeting. If not, you will have to alter your project design or implement additional mitigation measures."

The scores added across the broad categories are as follows:

Category	**Scores**
Environment	+++
Social Development	+++
Economic and technological development	0

Thus, the current project activity is appropriate under GS track and does not require design change or additional mitigation measures.

SECTION G. Sustainability Monitoring Plan

No		01
Indicator		**Quality of Employment**
Mitigation measure		Not applicable
Repeat for each parameter		
Chosen parameter		Health & Safety and other O&M trainings record.
Current situation of parameter		All applicable laws and regulations related to labour standards, health & safety etc. are adequately followed. The staff is provided proper safety gear and undergoes periodic health and safety trainings. Accordingly, project ensures a safe working condition across all the sites.
Estimation of baseline situation of parameter		The project is a green field activity. Due to the project activity new jobs have been created. Therefore, the current employment generated by the project activity and quality of such employments are not referenced to any specific baseline situation. Furthermore, project developer has comprehensive internal systems in place wherein all essential norms pertaining to safety, occupational health and working conditions are being followed.
Future target for parameter		All aspects of occupational health and working conditions would be strengthened through training, capacity building and awareness generation activities. Skill enhancement exercises would be undertaken for the local staff by providing them training on the technical aspects of the project operation.
Way of monitoring	How	Documentation pertaining to training programmes, awareness generation activities etc. , photographs , interviews etc
	When	Annually
	By who	Project Developer

No	2

Indicator		**Human and Institutional capacity**
Mitigation measure		Not applicable
Repeat for each parameter		
Chosen parameter		Total number of initiatives, events and programmes organized to strengthen key aspects of Human and Institutional Capacity, primarily Health and Education
Current situation of parameter		Several initiatives in the form of health camps, infrastructure support for schools etc. may be undertaken to facilitate better access to health and education for the local populace. These initiatives are a part of long term intervention plan.
Estimation of baseline situation of parameter		The project is a green field activity in that region. Prior to the project, no such activities (i.e. indicative to the chosen parameters) were being pursued in the villages. Therefore, baseline situation of chosen parameters have made the current situation visible and hence the current situation is comparable to a prominent baseline situation.
Future target for parameter		Initiatives, events and programs to strengthen Human and Institutional capacity through better access to Health and Education would be continued throughout the lifetime of the project activity.
Way of monitoring	How	Records of such organized events, photographs, proof of payments etc.
	When	Annually
	By who	Project Developer.

No	03
Indicator	**Quantitative employment and income generation**
Mitigation measure	Not applicable
Repeat for each parameter	
Chosen parameter	Number of direct & indirect employment generation by the project.
Current situation of parameter	People from the nearby villages have been employed with the project activity.
Estimation of baseline situation of parameter	The project is a green field activity in that region. Due to the project activity new jobs have been created which has paved the way for more income generation for families. Prior to the project activity, many local people were not having a full time

		employment and were mostly involved in agricultural activities which are seasonal. With the generation of jobs at the wind farms, the number of earning members in families has increased which has created additional incomes for the families.
Future target for parameter		Continuation of the current situation.
Way of monitoring	How	Employment records, attendance sheets etc.
	When	Annually
	By who	Project Developer

Additional remarks monitoring

Not Applicable

SECTION H. Additionality and conservativeness

This section is only applicable if the section on additionality and/or your choice of baseline does not follow Gold Standard guidance

H.1. Additionality

Additionality assessment of the project activity has been performed in accordance to the "Tool for demonstration and assessment of additionality", version 5.2 approved by CDM Executive Board. Details are available in the validated CDM PDD, UNFCCC Ref. 6160 and date of registration was 25/07/2012. https://cdm.unfccc.int/Projects/DB/DNV-CUK1335949463.75/view.

H.2. Conservativeness

The conservativeness approach has been maintained throughout the assumptions and estimations made in the PDD. For example, the assessment of additionality was based on conservative data assumptions and estimation of emission reductions were also made with conservative approach. The same can be verified from the registered CDM PDD and DOE validation report.

The weblink to the CDM project interface is:
https://cdm.unfccc.int/Projects/DB/DNV-CUK1335949463.75/view.

Reference related to conservativeness in emission reduction:
The registered version of ER calculation is based on CER database, version 6. The emission factor as per registered PDD is 0.94881 tCO_2e/MWh. Whereas the current version 12 of CEA database is available, however, in the recent CEA database version government of India has introduced integrated Single Indian Grid (NEWNE and Southern are now synchronized) which results into an emission factor of 0.9701 tCO_2e/MWh.

Thus, the registered version of EF is conservative as compared to the latest version.[10]

ANNEX 1 ODA declaration

The Project Owner declares that the project has not directly or indirectly received or benefited from official development assistance.

An ODA declaration (i.e. GS Annex D) will be provided at validation.

[10] Emission Factor calculation will be shared during the validation.