

ANNEX R – PASSPORT TEMPLATE

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SECTION A. Project Title

[See Toolkit 1.6]

Title: **Wind Power Project in Madhya Pradesh by OBWPPL**

Date: 11/06/2018~~19/03/2018~~

Version no.: 5.04.0

SECTION B. Project description

[See Toolkit 1.6]

The project activity is installation of 50 MW wind power project, promoted by Orange Bercha Wind Power Private Limited. The purpose of the project activity is to generate clean electricity with utilization of wind energy.

The purpose of the project activity is to generate electrical power using wind energy through operation of Wind Turbine Generators (WTGs), there by displacing non-renewable fossil resources resulting to sustainable, economic and environmental development. In the absence of the project activity equivalent amount of power generation would have taken place through fossil fuel dominated power generating stations. Thus the renewable energy generation from the project will result in reduction of the greenhouse gas emissions.

The project consists of 25 numbers of Gamesa G97 Wind Turbine Generators (WTGs) of 2.0 MW capacities each. The project proponent is installing WTGs at in and around the village of Sandla in Ratlam district of Madhya Pradesh in India. The export of power to the Integrated Indian Grid will support stabilization of local grid. The annual GHG emission reduction through this project activity is 107,058 tCO₂e.


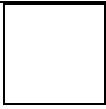
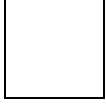


The project activity has been commissioned on 05/05/2016.

SECTION C. Proof of project eligibility

C.1. Scale of the Project

[See Toolkit 1.2.a]

Please tick where applicable:

Project Type	Large	Small
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	✓	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>

	<input type="checkbox"/>
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C.2. Host Country

[See Toolkit 1.2.b]

India

C.3. Project Type

[See Toolkit 1.2.c and Annex C]

Please tick where applicable:

Project type	Yes	No
Does your project activity classify as a Renewable Energy project?	✓	<input type="checkbox"/>
Does your project activity classify as an End-use Energy Efficiency Improvement project?	<input type="checkbox"/>	✓
Does your project activity classify as waste handling and disposal project?	<input type="checkbox"/>	✓

Please justify the eligibility of your project activity:

The proposed project activity meets the definition of the project type – renewable energy as the project activity is a large scale renewable energy project, utilizing wind energy for generation and supply of electricity as per Annex C of Gold Standard version 2.2, “GUIDANCE ON PROJECT TYPE ELIGIBILITY,” which defines three eligible project types: renewable energy supply, end-use energy efficiency and waste handling and disposal.

There are no additional specific eligibility criteria for wind power projects as per the annex AD and annexure C of the gold standard version 2.2.

The project meets the eligibility criteria as per the GS requirements as tabulated below:

GS Tool Kit No	Eligibility Criteria	Requirement
1.2.1	Scale of project	The project activity involves installation of 25 numbers of horizontal axis wind turbine generators with power output of 2000 kW each. Thus, the total capacity is 50 MW, therefore the project is defined as large scale activity as per the UNFCCC guidelines and GS toolkit chapter 1.2.1.
1.2.2	Host country or state	The project is located in India which is a non-annex I country as defined by UNFCCC.
1.2.3	Type of project	The proposed project activity meets the definition of the project type – “The Renewable Energy Supply” category, as the project activity is a large scale renewable energy project, utilizing wind

		energy for generation and supply of electricity as per Annex C of Gold Standard version 2.2, "GUIDANCE ON PROJECT TYPE ELIGIBILITY".
1.2.4	Greenhouse gases	Project activity displaced CO ₂ emissions resulting from generation of electricity from the conventional grid connected power plants (primarily fossil fuel based power plants)
1.2.5	Official Development Assistance (ODA)	There is no public funding for the project activity
1.2.6	Project timeframe	<ul style="list-style-type: none"> • Previous announcement check: The Project is a green field project and was not announced to be going ahead without the revenues from carbon credits. • Retroactive registration: The project implementation was already started and hence the project applies under retroactive registration. As the PP could not conduct stakeholder consultation meeting before the start date, a physical stakeholder feedback round as per the requirement of GS toolkit para 2.10 was conducted. • Retroactive crediting: The project is a retroactive project and going for renewable crediting period of one to three periods of 7 years and not eligible for retroactive crediting. • Parallel submission: The project is going only for GS VER.
1.2.7	Other Certification Schemes	The project is not involved in any emission trading schemes and is going only for Gold Standard VERs.

As per the above criteria the project is eligible for GS VERs.

Pre Announcement	Yes	No
Was your project previously announced?	<input type="checkbox"/>	√
As per guidance under para 1.2.6 of the GS toolkit v2.2, the project has never been announced to be going ahead without revenue from carbon credits. It is evident from the board resolution as well. The project proponent has also met the "prior consideration guideline" of CDM and had intimated UNFCCC and host country DNA of the intention to secure carbon credit benefits. Further, to clarify; the project was announced earlier but to be clearly going ahead with the benefits of carbon credits.		

C.4. Greenhouse gas

[See Toolkit 1.2.d]

Greenhouse Gas	
Carbon dioxide	√
Methane	<input type="checkbox"/>
Nitrous oxide	<input type="checkbox"/>

C.5. Project Registration Type

[See Toolkit 1.2.f]

Project Registration Type	
Regular	<input type="checkbox"/>

Pre-feasibility assessment	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)
	√	<input type="checkbox"/>	<input type="checkbox"/>

If Retroactive, please indicate Start Date of project activity dd/mm/yyyy: 24/01/2016 ,

SECTION D. Unique project identification

D.1. GPS-coordinates of project location

[See Toolkit 1.6]

S. No	WTG ID	Latitude N	Longitude E	District	Village	State
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1	B 16	52.2298	25.7294	Ratlam	Jhar	Madhya Pradesh
2	B 4	52.3946	25.7375	Ratlam	Sandala	Madhya Pradesh
3	B 1	52.1672	25.7515	Ratlam	Sandala	Madhya Pradesh
4	B 72	52.3437	25.7426	Ratlam	Jhar	Madhya Pradesh
5	B 90	52.5259	25.7525	Ratlam	Jhar	Madhya Pradesh
6	B 92	52.7864	25.7393	Ratlam	Jhar	Madhya Pradesh
7	B 89	52.5573	25.7325	Ratlam	Sandala	Madhya Pradesh
8	B 86	52.5976	25.7415	Ratlam	Sandala	Madhya Pradesh
9	B 73	52.8737	25.7434	Ratlam	Sandala	Madhya Pradesh
10	B 79	52.8032	25.7356	Ratlam	Sandala	Madhya Pradesh
11	B 38	52.5999	25.7551	Ratlam	Dhanesra	Madhya Pradesh
12	B 87	52.4506	25.7245	Ratlam	Dhanesra	Madhya Pradesh
13	B 80	52.608	25.737	Ratlam	Dhanesra	Madhya Pradesh
14	B 82	52.7876	25.7563	Ratlam	Dhanesra	Madhya Pradesh
15	B 91	52.608	25.737	Ratlam	Dhanesra	Madhya Pradesh
16	B 33	52.6708	25.7399	Ratlam	Dhanesra	Madhya Pradesh
17	B 71	52.8647	25.7629	Ratlam	Kamed	Madhya Pradesh
18	T1	52.7818	25.7614	Ratlam	Kamed	Madhya Pradesh
19	T2	52.7876	25.7563	Ratlam	Kamed	Madhya Pradesh
20	B 77	52.8648	25.7588	Ratlam	Kamed	Madhya Pradesh
21	B 83	52.8737	25.7434	Ratlam	Kamed	Madhya Pradesh
22	B 78	52.8747	25.7401	Ratlam	Kamed	Madhya Pradesh
23	B 85	52.8032	25.7356	Ratlam	Kamed	Madhya Pradesh
24	B 75	52.7864	25.7393	Ratlam	Kamed	Madhya Pradesh
25	B 84	52.735	25.7416	Ratlam	Kamed	Madhya Pradesh

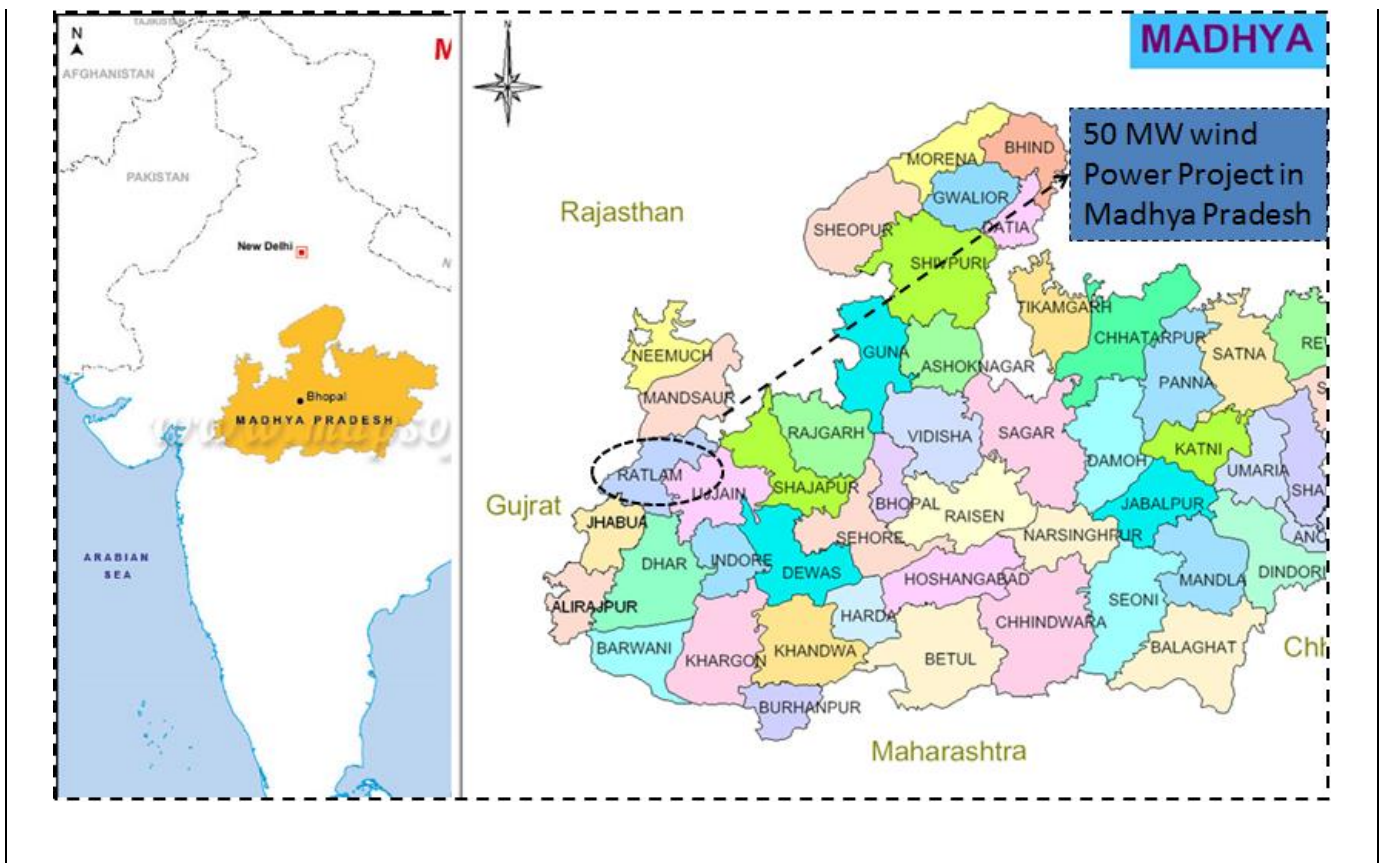


Explain given coordinates

The project is located in and around the villages Jhar, Sandala, Dhanesra, Kamed villages of Ratlam district, in the state of Madhya Pradesh, India. The coordinates of all WTGs are provided in the table above.

D.2. Map

[See Toolkit 1.6]



SECTION E. Outcome stakeholder consultation process

E.1. Assessment of stakeholder comments

The local stakeholder consultation meeting was applicable as the project is retroactive registration project. The table 2.8 of the GS toolkit was used to identify the stakeholders. The identified stakeholders were the ones local people impacted by the project and then were local NGOs, International NGOs, GS representatives and local govt etc. All the relevant stakeholders listed in the section E.2 were invited. The communication about the meeting were through personal invitations, pamphlets, banners in local language. The comments received from the stakeholders were mostly about the benefits from the project activity. Some were curious to get clarification about a few myths related to wind power projects. All the clarifications raised by the communities were cleared during the stakeholder’s meeting. As the comments given by the stakeholders do not alter any ratings of parameters in SD matrix.

E.2. Stakeholder Feedback Round

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

[See Toolkit 2.11]

The stakeholder feedback Round was conducted through physical meeting on 23/02/2016 at 11.00 hrs and the venue of the consultation was at “Gram Panchayat, Village Sandla, Tehsil & Distt- Ratlam, Madhya Pradesh. The planning for carrying out this consultation has been initiated about one month in advance by factoring the convenience of local stakeholders.

The proponents have given advance notice to the local stakeholders by giving newspaper notifications and by placing notices in Panchayat Bhavans of all the concerned villages. Similarly all NGO’s were invited by giving them the same notice period so as to facilitate them in attending the meeting. The non-technical summary of the project was prepared one month in advance and the same has been translated into local language for distribution among stakeholders.

List of Invitees

Category Code	Organisation (if relevant)	Name of invitee	Way of invitation	Date of invitation	Confirmation received? Y/N
A	Local Villagers	All the Stakeholders are invited and the participants list is enlist	Through News Paper Advertisement & Invitation pasted in Gram Panchayat Office and Banners	11 th to 19 th /02/2016	Local Stakeholders attended the meeting.
B	District Administration	Collector	Personal Letter	15/02/2016	No
B	Tahsil Administration	Tahsildar	Personal Letter	15/02/2016	No
B	Gram Panchayet Sandla Village (Village Administration)	Sarpanch	Personal Letter	12/02/2016	Yes
B	Gram Panchayet Laptiya (Village Administration)	Sarpanch	Personal Letter	12/02/2016	Yes
B	PHC, Bhat Pachiage	Medical Officer	Personal Letter	12/02/2016	
B	State Electricity Board	Executive Engineer	Personal Letter	11/02/2016	Yes
B	Police Department	SHO	Personal Letter	11/02/2016	Yes
C	Indian DNA	National CDM Authority	Email	12/02/2016	No
E	Local Area Expert Gold Standard	Ms. Neha Rao	Email	18/02/2016	No
E	Local Area Expert	Ms. Ayushi	Email	18/02/2016	No

	Gold Standard	Jain			
E	DOE	Mr. Kanal	Phone	12/02/2016	Yes
F	Carbon Watch	Mr. Deepak	Email	18/02/2016	No
F	Winrock international India	Mr. Debajit	Email	18/02/2016	No
F	Development Alternatives	Tara	Email	18/02/2016	No
F	EnerGHG India	Mr. Parchuri Narendra	Email	18/02/2016	No
F	NERDs Society	Ms. Kamaraj	Email	18/02/2016	No
F	Rural Education for Development Society (REDS)	Mr. MC.Raj Ms. Jyothi Raj	Email	18/02/2016	No
F	SKG Sangha	Mr. Vidyasagar Devbhakthuni	Email	18/02/2016	No
F	HELIO International	Mr. Helene O'Connor-Lajambe	Email	16/02/2016	No
F	Mercy Corps	Mr. David Nicholas	Email	16/02/2016	No
F	REEEP	Katrin Harvey	Email	16/02/2016	No
F	World Vision Australia	Dr. Dean C Thomas	Email	16/02/2016	No
F	WWF International	Bella Roscher	Email	16/02/2016	No
F	Planetair	Karine Oscarson	Email	16/02/2016	No

The stakeholder consultation was initiated as per the agenda with registration, supply of feedback forms and SD matrix. Mr. Pavan Kumar Gupta of Orange Bercha Wind Power Pvt Ltd gave the welcome address. He explained briefly about the purpose of the meeting by outlining concept of carbon credits, non-technical summary of the project and requirements of Gold Standard registration of the project including demonstration of the project's contribution to sustainable development. In the interests of larger stakeholder participation entire proceedings of the consultation was carried out in local language. After welcoming the dignitaries on the dais as well as all the participants from different interests Mr. Vamsi Krishna M, Kosher Climate India (P) Ltd explained about the reality of climate change as well as the causes and consequences of it. He stressed the need for every individual and organization to make positive contribute towards this cause. He has also explained briefly about the purpose of the meeting by outlining concept of carbon credits, non-technical summary of the project and requirements of Gold Standard registration of the project including demonstration of the project's contribution to sustainable development.

Mr. Radhe Shyam Maliwal, Head Master of Govt School, Sandla, thanked the company for its effort to

set up wind power project in their region. On behalf of the villagers he pointed out the key problems in the village and requested the company to assist in local development. He welcomed the efforts of the company through their project which augments the living standard as well as earning capacity of the people in the project area. He said that the wind project will help the local population for their all-round development apart from giving clean energy. Ms. Kanchan Kuvar Sahika thanked the promoters of wind power project for conducting the meeting and particularly inviting women participant. She added that the gathering clarified many misconceptions of the public about Wind Power Projects. It was now clear that the wind power projects do not harm the environment in any way. Ms Krishna Devi congratulated the company's efforts and thanked the company for extending aid for local area development.

Mr. Pareveen Negi, Orange Bercha Power Pvt Ltd; thanked all the stakeholders for attending the meeting. Addressing the concerns raised by Mr. Radhe Shyam Maliwal, Headmaster, he informed that the baseline socio-economic data from the village Panchyat has been already gathered. The points raised will also be put across to management for addition in the activities being planned as part of CSR. He further explained that the project documents along with Phone number, email ID and address of the project proponent will be available at the gram panchayet office along with a register to convey grievances (if any) regarding the project . He explained that the project proponent will actively take part in conducting welfare activities in the project area.

Subsequently with Mr. Vamsi Krishna, requested the participants to fill the feedback form and blind Sustainable development matrix circulated to all the stakeholders at the time of registration. He explained the importance of the forms and explained companies stand on all the parameters in the matrix. The participants have filled in questionnaires as groups and same were collected. Assistance was given to the stakeholders who cannot write. He then requested the stakeholders to express their views about the project. The stakeholders thanked the proponents for their efforts. Mr. Manohar Singh, Sarpanch, Sandla thanked the project proponents and said that the project will boast to stable electricity supply in the region and will help in local area with jobs and development.

Mr. Pavan, on behalf of the project proponents addressed the comments on jobs for local people and gave vote of thanks for all the stakeholders and dignitaries who have extended their support in terms of time in conducting the local stakeholder consultation smoothly and effectively. A total of 50 stakeholders attended the meeting.

Post meeting completion; all the villagers interacted with Gamesa and Orange team and were clarified doubts on individual level. All the project documents like Project Design Document, Passport etc were made available at village panchayats of identified villages for a period of over two months from 01/01/2016 to 28/02/2016 for public comments. Post the stakeholder consultation, the revised passport was kept available for over another two months' time. However, the NTS (Non-technical summary) of the project has been kept available at all times for reference.

The comments received and the action taken on the comments are given below:

Stakeholder comment	Was comment taken into account (Yes/ No)?	Explanation (Why? How?)
Does to project draw water from	Clarified	The project runs on natural wind density and flow. It does not draw any water from the ground.

underground		
What does the project plans to do for the village	Clarified	The project has already contacted all the panchayat in the project region and collected baseline data. Social Survey is being conducted to understand local issues. The sustainable development plan for the project is being developed in consultation with villagers and will be shared at the earliest
Does the project supply free electricity	Clarified	Farmers get subsidized electricity from government. We supply electricity to government and help improve power availability.
Will the fans create wind	Clarified	The WTGs utilizes natural wind flow to generate electricity.
Will the local people get jobs from the project	Clarified	Project proponent ensures that local workforce will be given priority for temporary and permanent jobs that arise from the project.

All the comments received from the stakeholders are just clarification request which are clarified to them. No negative comments received from stakeholders.

E. 3. Discussion on continuous input / grievance mechanism

[See Annex W]

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	A book is placed in Sandla Panchayat office to convey grievances regarding the project activity. The address of the panchayat is: Gram Panchayat, Village Sandla, Tehsil & Distt- Ratlam, Madhya	This is most appropriate as the Sandla panchayat bhavan is accessible to all the stakeholders and the book will be reviewed monthly and grievances (if any) will be addressed accordingly.

	Pradesh	
Telephone access	+91-9560540654	Phone number of the contact person is circulated along with the NTS in the stakeholder meeting and is also available in Sandla Panchayat Office.
Internet/email access	pavangupta@orangerenewable.net	Email ID of the contact person is circulated along with the NTS in the stakeholder meeting and is also available in Panchayat Bhavan.
Gold Standard Foundation	info@goldstandard.org +41 (0) 22 788 7080	Email ID of Gold Standard Foundation can be intimated about grievances regarding Environment Social Sustainability aspects of the project
Nominated Independent Mediator (optional)	Vamsi Krishna M +91-9945343475 vamsi2kris@gmail.com	Phone number of the GS Consultant as well is made available in the grievance register. This is available at the panchayat offices and Gamesa's site office.

All issues identified during the crediting period through any of the Methods shall have a mitigation measure in place. The identified issue should be discussed in the revised Passport and the corresponding mitigation measure should be added to sustainability monitoring plan in section G.

SECTION F. Outcome Sustainability assessment

F.1. 'Do no harm' Assessment

[See Toolkit 2.4.1 and Annex H]

Safeguarding principles	Description of relevance to my project	Assessment of my project risks breaching it (low, medium, high)	Mitigation measure
1. The project respects internationally	During construction and operation of the project the project proponent	Low	Not Required

<p>proclaimed human rights including dignity, cultural property and uniqueness of indigenous people. The project is not complicity in human rights abuses.</p>	<p>respects all the human rights. The India has ratified the United Nations Human Rights Rules and regulations. The India ratified the same as per web link¹ given below. The project adheres to the host country's commitment to Universal Declaration of Human Rights (UDHR) International Covenant on Economic, Social and Cultural Rights, India Accession 10/04/795². International Covenant on Civil and Political Rights India Accession 10.04.796³ The project is not in any kind of conflict with the livelihood of local people. Project proponent had conducted a stakeholders consultation and sought their opinion.</p>		
<p>2. The project does not involve and is not complicit in involuntary resettlement</p>	<p>The proponent obtained necessary clearances from nodal agencies and NOC from all the Gram Panchayats for establishing the plant. The project does not involve and is not complicit in involuntary resettlement in any way. Further, as per the Ministry of Rural development has the "The National Rehabilitation and Resettlement Policy, 2007⁴, the project activity have does not have any major impact on land use patterns.</p>	<p>Low</p>	<p>Not Required</p>
<p>3. The project does not involve and is not complicit in the alteration, damage or removal of any critical</p>	<p>The project is does not alter, damage or remove any cultural heritage .The site below gives the list of cultural heritage sites in India by UNESCO from which it is clear that the project site does not a</p>	<p>Low</p>	<p>Not Required</p>

¹ http://tbinternet.ohchr.org/_layouts/TreatyBodyExternal/Treaty.aspx?CountryID=79&Lang=EN

² <http://hrlibrary.umn.edu/research/ratification-india.html> and

http://tbinternet.ohchr.org/_layouts/TreatyBodyExternal/Treaty.aspx?CountryID=79&Lang=EN

³ <http://hrlibrary.umn.edu/research/ratification-india.html> and

http://tbinternet.ohchr.org/_layouts/TreatyBodyExternal/Treaty.aspx?CountryID=79&Lang=EN

⁴ <http://www.dolr.nic.in/nrrp2007.pdf>

cultural heritage.	cultural heritage site. Source: http://whc.unesco.org/en/statesparties/in		
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 proponent conforms that all the fundamental rights of the employees will be respected and there will be no restrictions on freedom of association and right to collective bargaining. The rights of industrial trade unions and their members have been protected by law in India since 1926. The Trade Unions Act, 1926: http://msmestartupkit.com/sites/default/files/knowledge_base/policies_and_regulations/the_trade_unions_act_1926.pdf	Low	Not Required
5. The project does not involve and is not complicit in any form of forced or compulsory labour	The proponent assures that there will be no bonded or forced labour during construction and operation of the project activity. Uniform policy will be implemented for all employees. The host country has robust laws in place prohibiting forced and compulsory labour. http://labour.nic.in/content/	Low	The project proponent has ensured that standard labour laws of the strictly followed
6. The project does not employ and is not complicit in any form of child labour	Child labour is strictly prohibited in the country .The proponent assures that no child labour will be employed during construction and operation of the plant. The project proponent has a set mechanism to ensure the age of all the temporary/ permanent employees during the life time of the project. Source:	Low	Not Required

	<p>http://www.indianchild.com/child_lab_our_law_in_india.htm</p> <p>Further, India ratified the International Convention on the Elimination of All Forms of Racial Discrimination on 03/12/1968 with certain reservation⁵.</p>		
7. The project does not employ and is not complicit in any form of discrimination based on gender, race, religion, sexual orientation or any other basis	<p>The project will not employ any personnel based on gender, race, religion, sexual orientation or any other basis. As the Constitution of the host country prohibits discrimination on the basis of a person's race, sex, religion, place of birth, or social status.</p> <p>The host country has signed the Convention 100 (equal remuneration) and convention 111 (Discrimination in employment /occupation) under the ILO Declaration on Fundamental Principles and rights.</p> <p>http://www.mfcindia.org/main/bgpapers/bgpapers2013/am/bgpap2013c.pdf</p>	Low	Not Required
8. The project provides workers with a safe and healthy work environment and is not complicit in exposing workers to unsafe and unhealthy work environments.	<p>The proponent assures to follow all the safety measures and create healthy working conditions during construction & operation too. The project proponent respects all the acts on health and safety and will follow them.</p> <p>http://www.legalserviceindia.com/articles/occ.htm</p> <p>The project proponent also has a Health and Safety and Environment policy to ensure safe and healthy work environment for all its employees, contractors and all stakeholders.</p>	Low	Not Required
9. The project takes a precautionary approach with regard to	The Project is in compliance with all relevant local and national laws. The project does not threaten human	Low	None

⁵ http://nhrc.nic.in/documents/india_ratification_status.pdf

<p>environmental challenges and is not complicit in practices that are contrary to the precautionary principle.⁶</p>	<p>health or environment.</p> <p>The environmental benefits of wind power project are due to its displacement of electricity generation that uses fossil fuels there by displacing the adverse environmental effects of those sources. As further discussed in the sustainability Development matrix using toolkit 2.2 and Annex G. Wind energy plants produce no air pollutants and greenhouse gasses and have very few/ negligible negative impacts on the surrounding areas.</p> <p>The project proponent has taken considerable steps to mitigate impacts that may arise during construction phase, laying transmission lines, internal roads like usage of using existing roads and lanes, reuse of water for sprinkling in unpaved roads, reuse of soil for foundation, avoiding construction and maintenance during times when soil is drenched, installing an exclusion fencing to keep livestock away from construction activities.</p>		
<p>10. The project does not involve and is not complicit in significant conversion or degradation of critical natural habitats, including those that are (a) legally protected, (b) officially proposed for protection, (c) identified by authorities' sources for their high conservation value or (d) recognized as</p>	<p>It is confirmed that the project is not in the proximity of any critical natural heritage site on the World Heritage list or key national scenic area, national nature reserves or national parks.</p> <p>Host country ratification of the World Heritage Convention (1977): http://whc.unesco.org/en/statesparties/</p> <p>Further, the project site is not in the</p>	<p>Low</p>	<p>None</p>

⁶ Definition of precautionary principle: "When an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically." (Source: The Wingspread Conference on the Precautionary Principle [1998]).

protected by traditional local communities.	<p>proximity of ecologically-sensitive or biodiversity hotspot as the project is situated at a designated wind site identified by government agency considering all the necessary factors for developing wind projects</p> <p>The project has been developed with transparent communication with local communities. Stakeholder consultation.</p>		
11. The project does not involve and is not complicit in corruption.	<p>The proponent conforms that there is no corruption involved in the project activity.</p> <p>The host country has strict laws and robust arrangements to prevent such activities.</p> <p>http://cbi.nic.in/The DOE has been provided with company internal policies and it is clear that it has laid provisions to prevent/identify any corruption.</p>	Low	None

F.2. Sustainable Development matrix

[See Toolkit 2.4.2 and Annex I]

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' assessment, and include mitigation measure used to neutralise a score of '-'	<p>Check www.undp.org/mdg and www.mdgmonitor.org</p> <p>Describe how your indicator is related to local MDG goals</p>	Defined by project developer	<p><u>Negative impact:</u> score '-' in case negative impact is not fully mitigated, score '0' in case impact is planned to be fully mitigated</p>

				<u>No change in impact:</u> score '0' <u>Positive impact:</u> score '+'
Air quality	<p>Construction Phase: The impact of Dust emissions during construction phase of the project was minimal and the same was neutralised by taking precautionary measures listed.</p> <p>Operation Phase: There is almost no dust emission during operation phase as there are no activities which may generate dust.</p>	<p>Ensure Environmental Sustainability (Goal 7) Target 7.A - Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources</p>	<p>Wind Power generation is one of the cleanest form of energy generation compared to fossil fuel fired power plants there by avoids emissions. The fossil fuel fired power plants results in emissions of NO_x, SO_x, and other pollutants. Thus, due to generation of clean energy without emissions, this parameters is considered to be "+"</p>	+
Water quality and quantity	<p>The runoff storm water will be diverted to green belt near fencing.</p>	<p>Ensure Environmental Sustainability (Goal 7) target C "Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation.</p>	<p>The chosen parameters are release of pollutants and changes in water balance and availability in ground- and surface water.</p> <p>Construction Phase: The construction phase includes excavation and possibility of runoff water going</p>	0

			<p>to nearby water bodies. However, there are no major water bodies in the vicinity of the project and PP has taken appropriate measures to ensure no excavation is left for prolonged period.</p> <p>Operation Phase: As project is a wind project Water quality and quantity are not affected by the project. The project does not discharge any effluents that pollute ground/surface waters. The proponent aims at zero discharge by reuse of water for sprinkling.</p> <p>As there is no adverse effect to the water quality by the project this is considered to be neutral.</p>	
Soil condition	None	Ensure Environmental Sustainability (Goal 7) 7.A Integrate the principles of sustainable development into country policies and	Construction Phase: The soil condition is not impacted due to the project as the only physical change that occurs to soil is during excavation. The soil is reused and is	0

		<p>programmes and reverse the loss of environmental resources</p> <p>7. B Reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss</p>	<p>not left in pile for long. Soil erosion is explained later under this same table.</p> <p>Operational Phase: During the operation; wind power project does not release any pollutants into or change the organic matter content of the soil.</p> <p>As there is no impact of this parameter it is considered to be neutral.</p>	
Other pollutants	None	<p>Ensure Environmental Sustainability</p> <p>7. B Reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss</p>	<p>The parameters chosen are landscape, visual impact, and noise <u>and transmission line effect</u>.</p> <p>Construction Phase: <u>Noise:</u> Noise occurs mostly during the construction phase of the project. The construction activities were temporary in nature and lasts for not more than 12-20 days for a particular turbine site.</p> <p><u>Landscape and visual Impact:</u> For keeping the landscape</p>	0

undisturbed, construction is carried out only where required. Even access roads are laid only if there is no other pre-established route for transport of machinery.

Transmission Line Effect:

The project activity used private lands for construction of a total 21kms of internal transmission lines.

The construction of transmission line has minimalistic impact due to, very limited land need and time needed for construction. Hence both the impact of land use and Health & Safety are limited to construction period. For internal lines:

- a) Each line is erected in matter of hours.
- b) Land used is negligible
- c) Top soil is restored after any construction completion.

The construction was contracted to Gamesa which is an 14001 certified company and

				<p><u>adheres to best practices for “environment management”</u></p> <p>Operational Phase:</p> <p><u>Noise:</u> As the project is placed in areas that have been designated by the local government as appropriate wind zones. The little noise caused by wind will die down with distance.</p> <p><u>Landscape and visual impact:</u> <u>The WTGs of the project do not use any reflective material. These have uniform visual characteristics such as color, size, design and are erected away from settlements. The project does not engage in unnecessary hoardings and any signs except for safety instructions.</u></p> <p><u>Transmission Line:</u> <u>During the operation phase the transmission lines are only required to be inspected at frequent intervals.</u></p>	
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			<u>Gamesa team responsible for operation has set EHS procedure to ensure safety of workers.</u>	
Biodiversity	Existing roads are used to the extent possible and access roads are laid only at location deemed necessary. This is to avoid any need to clear vegetation. The sites have been chosen to avoid any loss to flora in the region. This choice of WTG locations has led to almost no clearing of vegetation required.	Ensure Environmental Sustainability (Goal 7) 7. B Reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss	<p>The project will not affect genetic diversity, alter or destruct natural habitat or deplete stocks of renewable resources. The proposed project does not involve forest land, and there are no notified wildlife sanctuary and national park within the 25 km radius of project site.</p> <p>The project has taken around 100 acres of land for WTGs, access roads, pooling station and transmission lines. No rare or threatened species of vegetation grow along the WTGs and right of way for the access roads.</p>	0
Quality of employment	None	Eradicate Extreme Poverty and Hunger (Goal 1) One of the three	The improvement in the quality of employment will be achieved through regular training of staffs.	+

		<p>targets of the Goal 1 is: To achieve full and productive employment, as well as decent work for all, including young people and women</p>	<p>This will improve the quality of the environment of the staffs and hence help in providing better wages.-</p> <p>So, the selected parameters is: Number of training/workshop conducted to the O&M staffs.</p> <p>There is no difference in this indicator during construction & operation.</p>	
Livelihood of the poor	None	<p>Eradicate Extreme Poverty and Hunger (Goal 1) 1.A.Halve, between 1990 and 2015, the proportion of people whose income is less than \$1 a day</p> <p>The project proponent will do CSR activities in the project villages. This will help village people in Eradicate Extreme Poverty and Hunger</p>	<p>The Project proponent is planning CSR activities in the project villages. Hence the following parameter is selected as per the PP's commitment:</p> <p>1. Health Camps, Drinking water, distribution of infrastructure to schools, sanitation of school going girls etc.</p> <p>Construction Phase: There is no active CSR activity by PP during construction phase and the livelihood impacts are limited to indirect benefits</p>	+

			<p>like increase to local businesses through increased footprints in the region and award of contracts to local business.</p> <p>Operation Phase: The listed activities under CSR will be implemented in the operational phase.</p>	
Access to affordable and clean energy services	None	<p>Ensure Environmental Sustainability (Goal 7) Target 7.A - Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources The wind energy project will produce clean energy and supply to southern grid. So, the utilities connected southern grid will get more clean energy. Hence the project will help in achieving the MDG goal: Ensure environmental</p>	<p>The wind energy based power generation is considered to be clean energy since there are no emissions released by this. This is contributing to increasing the share of renewable energy electricity generation in the country. So, to ensure the share of clean electricity supplied from the project activity the following parameter is selected: 1. Net electricity supplied to grid Further, the Indian grid is has deficit energy and hence adding more clean energy power plants will hence narrow the power deficit and ultimately helping reduce power cuts.</p>	+

		sustainability.	As there is possible benefit of generation of clean energy & drop in power deficit, this parameter has been considered “+”	
Human and institutional capacity	None	MDG-1: Eradicate extreme poverty & hunger MDG Goal 2: “Achieve Universal Primary Education” MDG 3: Promote gender equality and empower women MDG 4: Reduce child mortality MDG 5: Improve maternal health MDG 6: Combat HIV/AIDS, Malaria and other major diseases	Total number of beneficiaries of the initiatives undertaken by the project developer to enhance the human and institutional capacity of the local stakeholders. The project proponent plans to implement various social activities in the project region in the area of education, hygiene, sanitation and gender equality. However, the activities are yet to be finalized and benefits may be difficult to quantify at this point. Further, there is no negative impact from the project on the indicator and hence the same considered neutral.	0
Quantitative employment and income generation	None	Eradicate extreme poverty and hunger (Goal 1) Target 1.B –	To monitor the quantitative employment & income generation the following	+

		<p>Achieve full and productive employment and decent work for all, including women and young people</p> <p>The project will employ staffs in operation & maintenance of the WTG. The employment generation will help in achieving the MDG goal: Eradicate extreme poverty & hunger</p>	<p>parameters are selected:</p> <ol style="list-style-type: none"> 1. Cost spent for O&M 2. Number of O&M staffs involved in the project <p>Construction Phase: The activity resulted in employment of over 50 workers for a period of 6 months during the construction phase.</p> <p>Post construction the project has resulted in employment of over 12 site personnel through O&M contracts, security contracts and 2 direct project representatives.</p> <p>The average pays to the project employees as considerably higher than the local level. The jobs at local level are mostly field laborers who are paid just the minimum wage.</p> <p>The staff is also trained on LM blade repair, Breaker Training, Transformer</p>	
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			training, ICDS Panel, HUB Training, Rescue from height, Basic Safety Training, First Aid & fire fight, OHASAS and chemical & waste segregates yearly/based on requirement and duty of the particular staff.	
Balance of payments and investment	None	Develop a Global Partnership for Development (Goal 8) 8.D. Deal comprehensively with the debt problems of developing countries through national and international measures in order to make debt sustainable in the long term.	As per the Gold Standard Toolkit (version 2.2) the chosen parameters are: <ul style="list-style-type: none"> • Net foreign currency savings • Investment into an unfamiliar foreign technology There is no investment involved in foreign currency or investment from any other country. All investments for the project activity have been envisaged to be met domestically.	0
Technology transfer and technological self-reliance	None	Develop a Global Partnership for Development (Goal 8) Target F: In	The chosen parameter is: Activities that build usable and sustainable know-how in a region/country for	0

		<p>cooperation with the private sector, make available the benefits of new technologies, especially information and communications</p> <p>The O&M staffs will be recruited locally and trained by the O&M operator. So, the project will help the staffs to know a new technology.</p>	<p>a technology, where know-how was previously lacking.</p> <p>The penetration of wind energy technology is prominent in India and there is not technology transfer involved for the project activity. Hence considered to be neutral.</p>	
Soil Erosion	<p>Precautionary measures for possible soil erosion during construction phase include</p> <ul style="list-style-type: none"> - Keep open areas of excavation to a minimum and construction activities restricted to dry months to avoid heavy rainfalls; - Using existing roads and lanes used by land owner. - Stockpiles of materials placed away from drainage lines and formed with sediment control structures placed immediately down slope; - Construction debris and excavated material were cleared 	Soil condition	<p>The chosen parameters are pollutants, organic matter content, and erosion.</p> <p>Construction of wind power plant and generation of wind power doesn't lead to any significant alteration of the soil condition.</p> <p>The project does not release any pollutants into or change the organic matter content of the soil.</p> <p>Project proponent has an active HSE (Environmental Health & Safety) team which monitors all the</p>	0

	<p>up at regular intervals</p> <ul style="list-style-type: none"> - Excavated material stock piled and used for backfilling of foundations, platforms etc. - Minimization of traffic in construction zones and use of a dedicated parking area, i.e. site compound; - Re-vegetation taken up as necessary after construction, in order to reduce the risk of soil erosion. <p>Specific mitigation measures followed in the operational phase of the project:</p> <ul style="list-style-type: none"> -Waste oil generated shall be stored separately in containers in a secured location in the maintenance room. The storage location and the containers are properly marked. -A hazardous waste inventory is maintained as per the provisions of the Hazardous Waste (Management, Handling and Trans-boundary Movement) Rules, 2008. 		<p>parameters (with + or – score) listed under SD matrix. Any feedback either related to environment, health or safety is implemented with immediate effect.</p>	
Dust Emission	Precautionary measures for Dust emissions during construction phase	<ol style="list-style-type: none"> 1. Air Quality 2. Safeguarding 	The impact of Dust emissions during construction and	0

	<p>include</p> <ul style="list-style-type: none"> -Spraying water and covering material trucks' body to minimize dust; -Reuse of water for sprinkling of unpaved roads. - Imposition of speed controls for vehicles and unpaved site roads; - Well-maintained diesel-powered mechanical equipment to avoid black smoke emissions; - Shut-down of diesel-powered mechanical equipment or trucks inside the worksites when they are not in operation. 	<p>Principle no.8</p> <p>3. Quality of Employment</p>	<p>operation phase of the project was minimal and the same was neutralised by taking precautionary measures.</p>	
<p>Worker health and safety</p>	<ul style="list-style-type: none"> -Along with induction training staff are also trained Rescue from height, Basic Safety Training, First Aid & fire fight, OHSAS and chemical & waste segregation. -Every staff member has a personal safety kit which has a helmet & safety shoes. For those working at site have safety net, rubber/insulated gloves, safety belts etc -Every visitor is provided with safety gear before getting anywhere in vicinity 	<p>1. Quality of employment</p> <p>2. Safeguarding Principle No. 8</p>	<p>The working conditions at site are kept safe by following established safety mechanisms. The parameter chosen are employees EHS training and drill. Readiness of emergency preparedness plan.</p>	<p>0</p>

	<p>of the location of WTG or construction.</p> <p>-Every WTG, pooling station, substation, construction & other vehicles are equipped with medical and fire safety kit.</p> <p>-PP and O&M team both have a dedicate EHS team who carry out safety drills and explain emergency preparedness plan to the staff.</p> <p>The staff & workers are provided with hygienic living conditions and access to clean drinking water.</p>			
<p>Landscape and visual impact</p>	<p>During the project siting activity it is ensured that there are no structures in the site. In case of presence of trees, alongside the activity of construction, the activities are carried out avoiding the trees.</p> <p>The WTGs used in the project activity are painted with non-reflective paint and does not cause interference with the visual aspect of the region.</p> <p>No non-essential construction or structures are kept at the site.</p> <p>Excavated earth is reused within matter of days is construction</p>	<p>1. Potential comment during a LSC</p> <p>2. Other Pollutants</p>	<p>The construction is carried out in hardly a fraction of the total land procured (~100 acres) for wind farm establishment and the remaining land is left as it is. Post construction there are no aspects of landscape effected or altered except for visual aesthetics. Landscape and visual impacts depends on perception of the viewer. All the wind turbines have uniform visual characteristics such</p>	<p>0</p>

	of WTG platform.		as color, size, design. The access road is laid only if there is no other pre-established route for transport of machinery.	
Noise	<p>During the construction period; transport of heavy vehicles was confined to day time.</p> <p>Periodical maintenance of construction machinery and equipment was carried out to ensure noise emissions are maintained at design levels.</p> <p>Movement of vehicles confined to predefined routes/access roads.</p>	<p>1. Other pollutants</p> <p>2. Quality of employment</p> <p>3. Biodiversity</p>	Noise occurs mostly during the construction phase of the project. The construction activities were temporary in nature and lasted for not more than 12-20 days for a particular turbine site. The noise levels during construction were estimated to be within acceptable limits; noise generated during the construction phase had no significant impact on existing ambient noise levels. Therefore, the impact from construction noise is deemed to be negligible.	0
Damage to protected areas, natural habitats and	During the project siting it was ensured that there are no sensitive zones related to natural	Safeguarding Principle No.3 & safeguarding Principle No. 10	The construction is carried out in hardly a fraction of the total land	0

cultural heritage	habitats and cultural heritage. The detailed ESIA report reflects that the project has not disturbed any protected areas natural habitats or places of cultural heritage.		procured (~100 acres) for wind farm establishment and the remaining land is left as it is.	
Species Mortality	<p>During the project siting it was ensured that the project location is away from forests and wildlife. Trees are left as it is in cases it falls in the project land. Existing roads are used to the extent possible and access roads are laid only at location deemed necessary.</p> <p>None of the WTGs are too closely planned. There is an adequate space between two turbines for movement of birds which would reduce the potential for accidental collision</p> <p>-In case of nay any dead animals/carcass shall be removed in time from the site so that it does not attract movement of scavenger birds.</p> <p>The sites have been chosen to avoid any loss to flora in the region. This choice of WTG locations has led to no or minimal</p>		<p>There are no wildlife sanctuaries in the project area. Bird Strikes: Bird strikes and bat strikes are monitored continuously and from the past data it is established that there is no actual damage to fauna.</p> <p>A record book is maintained by the O&M team at site to account for any incidents of bird strikes or wildlife encounter.</p>	0

	clearing of vegetation required. Any area is re-vegetated if vegetation has been cleared for access road or WTG erection.			
Shadow Flicker	The siting of the project activity was done keeping in view of the possible impact of shadow flicker. Detailed ESIA study covers the assessment of Shadow flicker impact		The project WTGs uses non reflective paint. The grievance register is available at the site for any complaints from locals about any aspect of the project operation.	0
Electromagnetic interference and radiation (EMI)	There is no airport in vicinity of the project site which can cause interference to radar screens. Being a rural area the presence of telecommunication systems is minimal at best. The WTGs are well distributed and cannot cause a cumulative effect.		The project is operational and there has been no complaints related to interference with any signals (television or radio). The grievance register is available at the site for any complaints from locals about any aspect of the project operation.	0
<p>Justification choices, data source and provision of references</p> <p>A justification paragraph and reference source is required for each indicator, regardless of score</p>				
Air quality	This clean energy project will not produce any pollutants such as CO ₂ ,SO _x and NO _x to the atmosphere. As the project supplies electricity to a grid system that is highly reliant on fossil fuels, it will help to reduce SO _x and NO _x emissions that			

	<p>would occur without the project activity, and thus can have a positive impact on air quality. The dust emissions during construction measures have minimal impact and precautionary measures will be taken for mitigation.</p> <p>Source :Wind Power Development in India by G.M.Pillai</p>
Water quality and quantity	<p>There will be small quantities of construction waste water released during the construction period. This water mainly contains grit and contains no environmental pollutants. There are no bodies of water in close proximity of the project, hence no contamination of water bodies will occur during or after the construction activities. Windmill operation does not pollute water as it discharges no effluents.</p> <p>Source: Contour Map & Hydrology Survey Map</p>
Soil condition	<p>The project is designed to limit its impact on soil condition and to ensure soil conservation. There will be no discharge of soil pollutants during construction and operation of the project. The soil excavated to install the turbines will be re-used to support the foundation. Construction activities related with the project may have an effect on soil condition to a limited extent. The excavated earth during the construction were re-used to build internal roads for the project site, to fill the turbine foundations and for levelling purposes & in platforms.</p> <p>Excavated earth was not be stored outside the project area. The Excavation wastes were used for environmental/ landscape arrangement and correction of rough areas in the region.Hence, the project will not result in soil degradation or erosion.</p> <p>Source: Site Pictures, Civil Work Records</p>
Other pollutants	<p>The project may result in some noise during the construction period. As the project is not located in the vicinity of residential or urban areas, disturbance caused by this temporary source of noise are negligible and well under the designated noise levels of 75 dB in industrial regions to 55 dB in residential regions</p> <p>The change in landscape does not affect the local population as they are located away from residential areas and the aesthetics are good as the site area is kept clean and well maintained.</p> <p>Source:</p>

	<p>http://cpcb.nic.in/NewItem_19_PollutionControlLaw.pdf</p> <p>Page 585 Schedule III</p> <p>http://cpcb.nic.in/NewItem_19_PollutionControlLaw.pdf</p>
Biodiversity	<p>The project will not have any effect on the biodiversity of the region as the location of the project does not impinge on any biodiversity hotspots, nature reserves, national parks, or habitat for rare plants and/or animals.</p> <p>Choice of WTGs location was finalized keeping in view of terrain and flora in the region. Hence, resulting in minimal vegetation clearance.</p> <p>The project site was identified and categorised under locations appropriate for wind power development by CWET. The Centre for Wind Energy Technology is a technical focal point for wind energy technologies established by the union Ministry of New and Renewable Energy. C-WET, a knowledge based institution of high quality and dedication, offers services and seeks to find total solutions for the major stakeholders across the entire spectrum of the wind energy sector.</p> <p>Source: Interaction with local stakeholders</p> <p>Source: Project ESIA Report http://www.cwet.tn.nic.in/Docu/WindMonitoringStations.pdf</p>
Quality of employment	<p>The project will create approximately 12 new and permanent jobs for the maintenance and operation of the wind turbines, requiring qualified and skilled staff. This includes 12 Gamesa O&M staff & security personnel. Apart from this it also includes 2 of project proponent's site team</p> <p>As experience with wind power generation is limited in India, local employees will have to be trained to gain the skills and certifications necessary to operate and maintain the systems. Further, these employees will have the opportunity to work under the employ of an internationally-renowned wind power company. This will provide the employees with valuable experience and significantly increase their career opportunities in the energy sector. All the staff are trained in Health and safety procedures, fire fighting systems and provided with all the necessary equipment like ear plugs, facemasks, hand gloves, safety shoes and helmets. Fire fighting systems is installed in all the major points.</p> <p>Source: Equipment supplier and O & M Contractors Hiring Records</p>

Livelihood of the poor	<p>During the construction period, the project will provide some work opportunities to local unskilled labourers. However, the number of positions will be limited and the jobs will be short term. During the operational phase only locals are employed as security personnel by the O&M contractor.</p> <p>The project proponent has committed to local area development, for health care, sanitation, providing drinking water etc., to improve the livelihood of the local population through CSR activities.</p> <p>Source: PDD</p>
Access to affordable and clean energy services	<p>Wind Energy based power generation would help in providing access to clean energy since it would increase the share of renewable electricity share in total electricity generation profile of the country.</p> <p>Source: Monthly Generation Records</p>
Human and institutional capacity	<p>Setting up of the wind mills will contribute to the development of local area in terms of creation of awareness on utilization of natural resources for power generation. Local people can be enthused to get trained in wind operations so that employment opportunities are opened up. However, the project does not involve promotion of local education, and/or significant employment of local women. Hence, the impact is considered neutral.</p>
Quantitative employment and income generation	<p>This project activity creates employment opportunities (direct and indirect) for members of the local community. A total of over 50 labour (skilled/unskilled) were employed during the construction phase. All the labour will be paid adhering to labour laws and local and national wage index. In addition, it involves 12 permanent positions for plant operation maintenance and security. Because these are skilled labour positions, they generate significantly higher incomes than the local average.</p> <p>Source: Employment Records</p>
Balance of payments and investment	<p>There is no investment involved in foreign currency or investment from any other country. All investments for the project activity have been envisaged to be met domestically. Hence, the impact is considered neutral.</p>
Technology transfer and technological self-reliance	<p>Through the establishment of this project activity, technical skills are imparted at the local level, thereby improving the capability of the local population to use this technology to harness the significant but largely unutilized wind resource</p>

	in the region. However, there is no particular technology transferred involved in the project and hence, the impact is considered neutral.
Soil Erosion	<p>Possibility of soil erosion due to project is mainly during the construction period which is limited to 2-3 weeks at each site, during which appropriate measures were taken to avoid soil erosion.</p> <p>Source: ESIA</p>
Dust Emission	<p>Dust emission only happens from movement of vehicles at site and from excavated soil. Appropriate measures as explained earlier are taken to ensure control.</p> <p>Sources: Site Pictures, Civil Work Records</p>
Worker health and safety	<p>The project proponent and O&M has dedicated EHS teams who look after every health and safety aspect of the workers. There was presence of EHS representatives from both PP & Contracts even during the construction phase.</p> <p>Sources: Site Pictures & EHS policy.</p>
Landscape and visual impact	<p>The impact on landscape and visual aesthetics are subjected and personal opinions and hence are not considered to have no impact.</p> <p>Source: ESIA Report & Interview with locals</p>
Noise	<p>The WTGs are located at distance from settlements and will not have any negative impact. The modern WTGs do not have high noise pollutions.</p> <p>Source: Interview with locals</p>
Damage to protected areas, natural habitats and cultural heritage	<p>There is no natural habitat within 10 kms of project location. None of the project WTGs, access road or transmission line interferes with any structure of cultural heritage</p> <p>Source: ESIA & interviews with locals</p>
Species Mortality	<p>Bird strikes and impact of wildlife are monitored at site and from historic data it is clear that there is negative impact from the project activity. The ESIA of the project also covered this aspect.</p> <p>Sources: ESIA & Site register</p>
Shadow Flicker	<p>The project has WTGs erected away from settlements and hence there is no objectionable shadow flicker impact. The</p>

	ESIA report covers detailed study. Sources: ESIA & site interview with locals
Electromagnetic interference and radiation (EMI)	The EMI impact of the project is non-existent as the project WTGs are spread across. Further, there has never been any complaint from locals about interference in signal to their televisions, radio or phones. Source: Interview with locals.

SECTION G. Sustainability Monitoring Plan

[See Toolkit 2.4.3 and Annex I]

No	1
Indicator	Air quality
Mitigation measure	In order to reduce dust emissions during the construction phase, the following dust suppression measures stipulated and implemented: -Spraying water and covering material trucks' body to minimize dust; -Reuse of water for sprinkling of unpaved roads. - Imposition of speed controls for vehicles and unpaved site roads; - Well-maintained diesel-powered mechanical equipment to avoid black smoke emissions; - Shut-down of diesel-powered mechanical equipment or trucks inside the worksites when they are not in operation.
Chosen parameter	Electricity generation and equivalent of PM, NO _x and SO _x avoided and dust generation
Current situation of parameter	Equivalent electricity supplied by Indian grid which is generated by the operation of grid-connected power plants and by the addition of new generation sources into the grid.
Estimation of baseline situation of parameter	In the baseline situation, equivalent amount of associated SO _x , NO _x will be emitted from the operation of grid-connected power plants. Ex-ante and baseline is the same thing.
Future target for parameter	N/A

Way of monitoring	How	Project logbook, or interview with maintenance staff
	When	Once each monitoring period
	By who	Project/Plant Manager

No	2
Indicator	Quality of employment
Mitigation measure	None
Chosen parameter	<u>Details of Trainings & workshops conducted (& its relevance) for employees and O&M staffs</u>
Current situation of parameter	<p><u>The project proponent & the O&M contractor both provide training to their respective employees. The training activities are focused to improve skill level of employees and also help them perform their duties with efficiency and ease. Some of the training being conducted by the PP are:</u></p> <p><u>Work at height, Primavera, Quit Smoking, Ride Safe Program, Ergonomics Session, Emergency Responder Training, Structured Query Language, Communication & Presentation Skills, Basic First Aid Training, Gender Sensitization Workshop, Advance Excel etc.</u></p> <p>In ex-ante situation, no trainings or workshops are conducted and local people have no such opportunities to be trained on the technology and the monitoring of the plant operation, and the emergency and safety procedures.</p>
Estimation of baseline situation of parameter	In absence of the project activity no trainings or workshops will be conducted and local people have no such opportunities to be trained on the technology and the monitoring of the plant operation, and the emergency and safety procedures. Ex-ante and baseline is the same thing.
Future target for parameter	<p>The project proponent proposes to train the employees to improve skill sets in employees to efficiently achieve their daily tasks and help them in personality development. The areas of training considered are:</p> <ol style="list-style-type: none"> 1) Effective verbal & written communication 2) Environmental Health & Safety training to all employees who are deployed at site 3) Inter departmental knowledge sharing

		<p><u>4) Skill development workshops for efficient & ease of job handing</u></p> <p><u>Regular trainings/workshops conducted to O&M staffs as well.</u></p>
Way of monitoring	How	Training Records, HSE & HR Records
	When	Yearly once
	By who	O & M Contractor

No		3
Indicator		Livelihood of the poor
Mitigation measure		None
Chosen parameter		Health Camps, Knowledge and information dissemination regarding natural disasters <u>through seminars-</u>
Current situation of parameter		No CSR activities done by PP -
Estimation of baseline situation of parameter		No CSR activity carried out in the absence of the project activity.
Future target for parameter		Health Camps, Knowledge and information dissemination regarding natural disasters are done by PP based on the requirement in the project location.
Way of monitoring	How	Health camps will be conducted and seminars on environmental impacts will be organized. <u>Details of how it has impacted the local community will also be recorded.</u>
	When	Yearly once
	By who	Project Coordinator

No		4
Indicator		Access to affordable and clean energy services
Mitigation measure		None
Chosen parameter		Net electricity supplied to grid
Current situation of parameter		No electricity is generated
Estimation of baseline situation of parameter		Equivalent electricity supplied by Indian grid which is generated by the operation of grid-connected power plants and by the

		addition of new generation sources into the grid.
Future target for parameter		The project at 25% PLF will generate 109.5000 GWh units of electricity supplied to grid annually by the project activity. With increased generation of clean energy production the project helps in narrowing the power deficit and ultimately may impact in reduction of power cuts in the project region. However, this is not feasible to monitor and hence net electricity supplied is monitored.
Way of monitoring	How	Monitored through energy meter. Net electricity will be calculated by DISCOM and O&M operator on monthly basis and provided in the share certificate.
	When	Continuously monitored & recorded monthly
	By who	DISCOM and O&M operator

No		5
Indicator		Quantitative employment and income generation
Mitigation measure		None
Chosen parameter		1. Cost spent for O&M 2. Number of O&M staffs involved in the project
Current situation of parameter		Over 14 new jobs due to project operation-
Estimation of baseline situation of parameter		No new jobs from the project activity
Future target for parameter		The project will generate employment in rural areas and the project employs project staff directly and indirectly, during construction & operation phases. During the operation phase there are around 14 permanent jobs, of which 12 are through O&M contract and 2 direct site employees from the project developer.. During the months long construction phase, through contractors and sub-contractors; the project resulted in temporary employment of over 50 workers.
Way of monitoring	How	Plant employment records
	When	Yearly once
	By who	O & M Contractor

No	6	
Indicator	Soil Erosion	
Mitigation measure	<p>General soil erosion and sediment control measures would include:</p> <ul style="list-style-type: none"> - Keep open areas of excavation to a minimum and construction activities restricted to dry months to avoid heavy rainfalls; - Using existing roads and lanes used by land owner. - Stockpiles of materials placed away from drainage lines and formed with sediment control structures placed immediately down slope; - Construction debris and excavated material were cleared up at regular intervals - Excavated material stock piled and used for backfilling of foundations, platforms etc. - Minimization of traffic in construction zones and use of a dedicated parking area, i.e. site compound; - Re-vegetation taken up as necessary after construction, in order to reduce the risk of soil erosion. <p>Specific mitigation measures followed in the operational phase of the project:</p> <p>Waste oil generated shall be stored separately in containers in a secured location in the maintenance room. The storage location and the containers are properly marked.</p> <p>The waste / used waste oil from the WTGs to be disposed off to a CPCB/SPCB authorized vendor.</p> <p>A hazardous waste inventory is maintained as per the provisions of the Hazardous Waste (Management, Handling and Trans-boundary Movement) Rules, 2008.</p>	
Chosen parameter	Any Project Related Activities Altering Soil Condition	
Current situation of parameter	No soil erosion due to project operations	
Estimation of baseline situation of parameter	No soil erosion from the project activity	
Future target for parameter	No soil erosion from the project activity	
Way of monitoring	How	Project logbook, or interview with maintenance staff
	When	Yearly once
	By who	Project/Plant Manager

No	7	
Indicator	Maintenance of Landscape visual impact	
Mitigation measure	<p>General landscape maintenance measures would include:</p> <ol style="list-style-type: none"> 1. Detailed ESIA study conducted to understand if any of the location needs to be altered. 2. Locals were consulted where ever a WTG location or access road was in vicinity to a settlement. 3. The WTGs are painted with non-reflect paints and are not glary. 4. Re-vegetation taken up as necessary after construction, in order to reduce the risk of soil erosion. 	
Chosen parameter	Aesthetics	
Current situation of parameter	No negative visual impact from project operations-	
Estimation of baseline situation of parameter	No negative visual impact from the project activity	
Future target for parameter	Minimalistic visual impact/No stakeholders' complaints	
Way of monitoring	How	Project Grievance register, or interview with local villagers
	When	Yearly once
	By who	Project/Plant Manager

No	8
Indicator	Bird & Bat Deaths
Mitigation measure	<p>The mitigation measures <u>are followed as per the ESIA study. To prevent any towards</u> incidents relating to birds mortality in the project region, <u>project does take necessary actions: would include:</u></p> <ol style="list-style-type: none"> 1. During the micro-siting activity (selection of WTG locations) it was ensured that there are no water bodies beside WTGs. 2. Water pits are not allowed around the WTGs. 3. None of the area of WTGs erection or transmission lines are under sensitive or under areas of conservation importance 4. The transmission lines wherever required has reflectors 5. Storm water control around within 100m of every WTG

Chosen parameter		Bird carcass
Current situation of parameter		No impact to birds & bats due to location-
Estimation of baseline situation of parameter		No impact to birds & bats from the project activity
Future target for parameter		Prevent & control any bird strikes
Way of monitoring	How	Bird Strike register, or interview with local villagers
	When	Yearly once
	By who	Project/Plant Manager

<u>No</u>		<u>9</u>
<u>Indicator</u>		<u>Involuntary Resettlement & expropriation</u>
<u>Mitigation measure</u>		<p><u>The project activity does not involve in any involuntary resettlement. Further all the land purchased is private land purchased from on mutual consent. The project proponent ensured the following during land purchase:</u></p> <ol style="list-style-type: none"> <u>1. No land with existing structures was purchased</u> <u>2. No land from any marginalized farmers was purchased</u> <u>3. No WTG land was within vicinity of settlements</u> <u>4. All the purchase process followed national and state laws for land purchase.</u> <p><u>As the purchase of land is a voluntary process it does not involve "The National Rehabilitation and Resettlement Policy, 2007",</u></p>
<u>Chosen parameter</u>		<u>Resettlement or Grievance</u>
<u>Current situation of parameter</u>		<u>No resettlement or grievance</u>
<u>Estimation of baseline situation of parameter</u>		<u>No resettlement involved in absence of the project activity.</u>
<u>Future target for parameter</u>		<u>No resettlement or grievance</u>
<u>Way of monitoring</u>	<u>How</u>	<u>Interview with local villagers & Grievance register</u>
	<u>When</u>	<u>Yearly once</u>
	<u>By who</u>	<u>Project/Plant Manager</u>

⁷ <http://www.dolr.nic.in/nrrp2007.pdf>

<u>No</u>		<u>10</u>
<u>Indicator</u>		<u>Safety of workers</u>
<u>Mitigation measure</u>		<u>The EHS team is responsible for ascertaining the safety procedures are followed, some being:</u> <ul style="list-style-type: none"> - <u>Proper training to all the workers at site</u> - <u>Safety gear mandatory while Working at heights and inside the site location</u> - <u>Job card in conformity with safety protocol released before taking up any task by O&M team</u> - <u>Implementation of Loading & Unloading protocols</u> - <u>Use of vehicles with PUC & proper maintenance of vehicles</u> - <u>Control speed of vehicles</u>
<u>Chosen parameter</u>		<u>Safety procedures followed:</u> <ul style="list-style-type: none"> • <u>Operating staffs are provided with helmet, shoes & gloves</u> • <u>Conduct safety training to the O&M staffs yearly</u>
<u>Current situation of parameter</u>		<u>In ex-ante, no wind turbine was there. Hence not applicable</u>
<u>Estimation of baseline situation of parameter</u>		<u>Ex-ante & baseline are same</u>
<u>Future target for parameter</u>		<u>The safety procedures are followed</u>
<u>Way of monitoring</u>	<u>How</u>	<u>Records of helmet, shoes & gloves distributed to staffs & Records of safety training</u>
	<u>When</u>	<u>Yearly once</u>
	<u>By who</u>	<u>Project/Plant Manager</u>

Additional remarks monitoring

None

SECTION H. Additionality and conservativeness

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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

[See Toolkit 2.3]

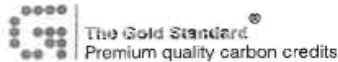
Additionality assessment is performed in accordance to the latest version of “Tool for demonstration and assessment of additionality”, approved by UNFCCC.

H.2. Conservativeness

[See Toolkit 2.2]

A conservative approach has been followed in calculating the baseline emission factors and investment analysis sections using the latest applicable tools.

ANNEX 1 ODA declaration



ANNEX D - OFFICIAL DEVELOPMENT ASSISTANCE DECLARATION

Date: [19/04/2017]

The Gold Standard Foundation

79 Avenue Louis Casai

Geneva Cointrin, CH-1216

Switzerland

RE: Declaration of Non-Use of Official Development Assistance by Project Owner of [GS 5799]

[Orange Mamatkhedha Wind Private Limited]

As Project Owner of the above-referenced project, and acting on behalf of all Project Participants, I now make the following representations:

[Mr. Sudhir Nunes]

I hereby declare that I am duly and fully authorized by the Project Owner of the above-referenced project to act on behalf of all Project Participants and make the following representations:

I. The Gold Standard Documentation

I am familiar with the provisions of The Gold Standard Documentation relevant to Official Development Assistance (ODA). I understand that the above-referenced project is not eligible for Gold Standard registration if the project receives or benefits from Official Development Assistance with the condition that some, or all, of the carbon credits [CERs, ERUs, or VERs] coming out of the project are transferred to the ODA donor country. I hereby expressly declare that no financing provided in connection with the above-referenced project has come from or will come from ODA that has been or will be provided under the condition, whether express or implied, that any or all of the carbon credits issued as a result of the project's operation will be transferred directly or indirectly to the country of origin of the ODA.

II. Duty to Notify Upon Discovery

If I learn or if I am given any reason to believe at any stage of project design or implementation that ODA has been used to support the development or implementation of the project, or that an entity providing ODA to the host country may at some point in the future benefit directly or indirectly from the carbon credits generated from the project as a condition of investment, I will notify The Gold Standard immediately using the Amended ODA Declaration Form provided below.

III. Investigation





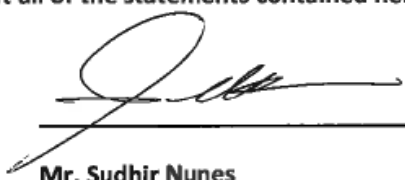
The Gold Standard reserves the right to conduct an investigation into any project it reasonably believes may be receiving ODA with the condition that some or all of the carbon credits from the project will be transferred to the ODA donor country.

IV. Sanctions

I am fully aware that the sanctions identified in The Gold Standard Terms and Conditions may be applied to me or the above-referenced project in the event that any of the information provided above is false or I fail to notify The Gold Standard of any changes to ODA in a timely manner.

I swear that all of the statements contained herein are true to the best of my knowledge.

Signed:



Name: **Mr. Sudhir Nunes**

Title: **Authorised Signatory**

On behalf of: **Orange Mamatkhedha Wind Private Limited**

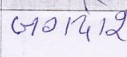

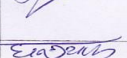
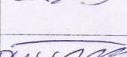
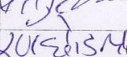
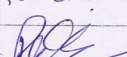
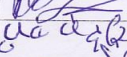
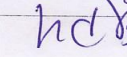
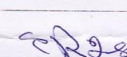
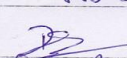
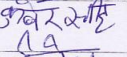
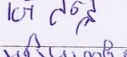
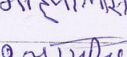
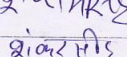
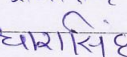
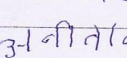



Place: **New Delhi**



Annex 2: Stakeholder Feedback Round Attendance List

50 MW Wind Power Project in Madhya Pradesh by Orange Bercha

Participant Tracking Table:

Participant for Local Stakeholder Consultation				
Date & Time: 23 rd February 2016, 11:00 AM				
Location: Gram Panchayat, Village Sandla, Tehsil & Dist- Ratlam, Madhya Pradesh				
Name of the Participant	Male/ Female	Signature	Organization (if Relevant)	Contact Details
1 Jagdish	M		village sandla	
2 नारायण चौधरी	M		Sandla-Local	
3 धनराज	M		Sandla-Local	
4 नारायण	M			810372610
5 वापूलाल जाट	M			9098731875
6 राम शर्मा	M			
7 कुबराज	M			
8 कुपेन्द्र सिंह	M			
9 महेन्द्र सिंह सोनगरी	M		nd 160 सिकारा	9098560128
10 हरीशचन्द्र सिंह	M			8959168703
11 धामेन्द्र सिंह	M		9691408331	8959168703
12 कुबेर सिंह	M		9770107070	
13 जितेन्द्र	M		8135924242	
14 महिमाल सिंह	M		8305241856	
15 शाम सिंह	M			
16 शंकर सिंह	M			
17 धारा सिंह	M			
18 अमिता कुवर	F			
19 रेशम जाट	F			

50 MW Wind Power Project in Madhya Pradesh by Orange Bercha

Participant Tracking Table:

Participant for Local Stakeholder Consultation				
Date & Time: 23 rd February 2016, 11:00 AM				
Location: Gram Panchayat, Village Sandla, Tehsil & Dist- Ratlam, Madhya Pradesh				
Name of the Participant	Male/ Female	Signature	Organization (if Relevant)	Contact Details
20				
21				
22	M			
23	M			
24	M			
25	M		Kosher Climate India Pvt Ltd	
26	F			
27	F			
28	F			
29	M		Orange Renewable	
30	M		Orange	
31	M		Orange	
32	M		Cutsncamera	
33	F			
34	F			
35	F			

Annex 2: Sample of Invitations Sent

To,
Medical officer,
Village - Bhat Pacholane
Tehsil - Badnagar, Madhya Pradesh

M/s Orange Bercha Wind Power Pvt Ltd is installing wind power projects in and around Bercha village, Ratlam District of Madhya Pradesh state. The purpose of the project activity is to generate electrical power using wind energy through operation of Wind Electric Generators (WEG's). The total installed capacity of the project activity is 50 MW comprising of 25 Gamesa wind turbines of 2000 kW capacity each.

The Project activity utilises the velocity of the wind for power generation. Wind Energy projects are environmentally friendly as there are no emissions of greenhouse gases. The project reduces greenhouse gas (GHG) emission by displacing equivalent electricity generation in the Southern Grid of India, which predominantly uses fossil fuels for power generation. The proponents undertook the project for registration under Gold Standard.

In this regard M/s Orange Bercha Wind Power Pvt Ltd is conducting a public meeting at Gram Panchayat, Village Sandla, Tehsil & Distt- Ratlam, Madhya Pradesh, on 23.02.2016 at 11.00 am.

We extend you an invitation to attend the stakeholder meeting and offer your views on the project's social and environmental impacts. The non-technical summary is available in Panchayat office and open for comments.

Kindly contact us for any further information on the subject at the address given below. You may find the Non-Technical Summary attached.

Accessibility Details-

Nearest Town: Ratlam
Nearest Airport: Indore Airport
Nearest Railway Station: Ratlam Station, Madhya Pradesh

Our Contact Details:

Name: Pavan Kumar,
Phone: 09560540654, +91 9945343475
Email: pavangupta@orangerenewable.net
Address: Orange Bercha Wind Power Pvt Ltd.,
2nd floor, Rajendra Tower,
Dobatti chowk, Rajendra Prashad Marg,
Ratlam - 457001, Madhya Pradesh,

Best Regards,

M/s Orange Bercha Wind Power Pvt Ltd

Received by *Medical Officer*
P.H.G. Bhat Pacholane

Officer
Dr. Anil
Medical officer

Annex 3: Public Notice through Newspaper

PUBLIC NOTICE

M/s Orange Bercha Wind Power Pvt Ltd Is installing wind power project (25 Nos. of 2.0 MW WTGs each) in and around the village of Bercha, In Ratlam District of Madhya Pradesh, India. In this regard the project developers are conducting a local stakeholders meeting (public meeting) at Gram Panchayat, Village Sandla, Tehsil & Dist- Ratlam, Madhya Pradesh on 23.02.2016 at 11.00 am to take their views/ suggestions on the project's social and environmental impacts.

All the concerned are invited to attend the meeting. For any clarifications on the project activity, please contact the address as following:

Our Contact Details:

Name: Pavan Kumar,

Phone: 09560540654,

Email: pavangupta@orangerenewable.net

Address:

Orange Bercha Wind Power Pvt Ltd.,

2nd floor, Rajendra Tower,

Dobatti chowk, RajendraPrashad

Marg, Ratlam - 457001,

Madhya Pradesh.