



**Validation report form for renewal of crediting period for  
CDM project activities  
(Version 02.0)**

*Complete this form in accordance with the instructions attached at the end of this form.*

**BASIC INFORMATION**

<b>Title and UNFCCC reference number of the project activity</b>	51 MW wind power project of ONGC at Surajbari, Gujarat in India (UNFCCC reference number-2856 <sup>1</sup> )
<b>Number and duration of the next crediting period</b>	Second crediting period (Duration- 7 Years Renewable) 01/03/2017 to 29/02/2024
<b>Version number of the validation report for RCP</b>	02
<b>Completion date of the validation report for RCP</b>	10/01/2019
<b>Version number of PDD to which this report applies</b>	06
<b>Project participants</b>	M/s Oil and Natural Gas Corporation Ltd. (ONGC)
<b>Host Party</b>	India
<b>Applied methodologies and standardized baselines</b>	Methodology: ACM0002 "Grid-connected electricity generation from renewable sources" (Version 19.0 )
<b>Mandatory sectoral scopes linked to the applied methodologies</b>	1
<b>Conditional sectoral scopes linked to the applied methodologies</b>	NA
<b>Estimated amount of annual average GHG emission reductions or GHG removals by sinks in the next crediting period</b>	90,540 tCO <sub>2</sub> e / annum
<b>Name and UNFCCC reference number of the DOE</b>	LGAI Technological Center, S.A. (Applus+ Certification). UNFCCC reference number: E-0032
<b>Name, position and signature of the approver of the validation report for RCP</b>	Juan Sendín Caballero, LGAI Technological Center, S.A. (Applus+ Certification). B.U. Managing Director

<sup>1</sup> <https://cdm.unfccc.int/Projects/DB/DNV-CUK1249377814.84/view>

## SECTION A. Executive summary

The proposed CDM project activity comprises of installation and operation of thirty four numbers of Suzlon Make of S82-1500 kW Wind turbine Generators (WTGs) having a combined wind power generation capacity of 51 MW at villages Jakhau and Village Budiya in Taluka Abdasa in Surajbari, District Kutch in Gujarat. The project is located in one of the wind rich areas of the country.

The proposed grid connected wind power project would displace the fossil fuel based grid electricity that presently feeds the existing ONGC assets based at Ankleshwar, Kadi, Cambay, Ahmedabad, Gandhar, Mehsana and Vadodara. Power wheeling arrangements for the transfer of electricity from the proposed project to the various ONGC assets are being put in place as checked by the assessment during the 2<sup>nd</sup> CP onsite visit.

The project activity is also responsible for sustainable economic growth and conservation of environment through use of Wind power energy as a renewable source of energy.

**Validation Scope:** The scope is defined as an independent and objective review of the project design document (PDD). The PDD is reviewed against the criteria stated in Article 12 of the Kyoto Protocol, the CDM modalities and procedures as agreed in the Marrakech Accords and the relevant decisions by the CDM Executive Board, including the approved baseline and monitoring methodology ACM0002 version 19.0. The validation was based on the requirements in the Validation and Verification Standard (VVS version 02) for project activity

The validation is not meant to provide any consulting towards the project participants. However, stated requests for clarifications and/or corrective actions may have provided input for improvement of the project design document.

**Validation Process:** The project assessment is based on the “Clean Development Mechanism Validation and Verification Standard version 02.0 for project activity and is conducted using standard auditing techniques to assess the correctness of the information provided by the project participants. Before the assessment begins, members of the team covering the technical scope(s), sectoral scope(s), and relevant host country experience for evaluating the CDM project activity are appointed.

Once the project is made available for the global stakeholder consultation process, the members of the assessment team carried out:

- I A desk review of the project design documentation;
- II Follow-up interviews with project stakeholders;
- III The resolution of outstanding issues and the issuance of the final validation report and opinion.

The prepared validation report and other supporting documents then undergo an internal quality control at the HQ (Accredited office) before being submitted to the CDM-EB.

In order to ensure transparency, assumptions must be clear and stated explicitly and background material must also be referenced. Applus+ Certification has developed a specific Checklist customized for the project. The checklist demonstrates, in a transparent manner, the project criteria (requirements), discussion on each criterion by the assessment team, and the results from validating the identified criteria.

### **Appointment of the assessment team**

According to the sectoral scope / technical area and experience in the sectoral or national business environment, Applus+ Certification has composed a project assessment team in accordance with the appointment rules in the internal Quality Management System of Applus+ Certification.

The composition of audit team shall be approved by Applus+ Certification ensuring that the required skills are covered by the team.

The four qualification levels for team members that are assigned by formal appointment rules are as presented below:

- Lead Auditor (LA).
- Auditor (A) / Auditor in Training (AiT).

- Technical Expert (TE).
- Technical Reviewer (TR).

The sectoral scope / technical area knowledge linked to the applied methodology/ies shall be covered by the assessment team.

Name	Role	SS Coverage	TA Coverage	Financial aspect	Host country experience
Mr. Sukanta Das	LA/TE	YES	YES	YES	YES
Mr. Denny Xue	TR	YES	YES	YES	NA

The complete list of CVs is included as Appendix 2 of this report.

### **Document review**

The Project Design Document submitted by the Client was reviewed against the approved methodology and other relevant criteria to verify the correctness, credibility, and interpretation of the presented information. Furthermore, a cross-check between information provided and information from other sources like 3<sup>rd</sup> party Government documents has been done. A complete list of all documents and evidence material reviewed is included in Appendix 3 of this report.

### **Follow-up interviews**

A site visit is conducted by Applus+ Certification performed interviews, telephone conferences, and physical site inspection with project stakeholders to confirm selected information and to resolve issues identified in the document review. The detail is provided in section C.2 and C.3 of this report.

### **Resolution of Clarification and Corrective Action Request**

The objective of this phase of the validation was to resolve the requests for corrective actions and clarification and any other outstanding issues which need to be clarified for Applus+ Certification positive conclusion on the project design. The Corrective Action Requests and Clarification Requests raised by Applus+ Certification were resolved during communications between the Client and Applus+ Certification to guarantee the transparency of the validation process, the concerns raised and responses given are summarized in Appendix 4 below.

The final PDD version 06 submitted by PP on 10/01/2019 serves as the basis for the final assessment presented. Additional changes to the project during the validation process are not considered to be significant with respect to the main CDM objectives. The two CDM main objectives are the reduction of anthropogenic GHG emissions and the contribution of sustainable development to the host country.

### **Internal quality control**

As final step of a validation of the final documentation including the validation report and the checklist have to undergo an internal quality control by the technical review committee, i.e. each report has to be finally approved either by the head of the technical review committee or the deputy. In case one of these two persons is part of the assessment team approval can only be given by the other one to avoid any conflict of Interest.

After confirmation of the PP the validation opinion and relevant documents are submitted to the EB through the UNFCCC web-platform.

### **Conclusion**

Applus+ Certification has performed a validation of the “51 MW wind power project of ONGC at Surajbari, Gujarat in India”. The validation was performed on the basis of UNFCCC criteria and host country criteria, as well as criteria, e.g. ACM0002 version 19.0, given to provide for consistent project operations, monitoring and reporting.

The review of the project design documentation and the subsequent follow-up interviews have provided Applus+ Certification with sufficient evidence to determine the fulfillment of stated criteria. In our opinion, the project meets all relevant UNFCCC requirements for the CDM and all relevant host country criteria. The project will hence be recommended by Applus+ Certification for registration with the UNFCCC.

Applus+ Certification has received a confirmation from the host Party that the project activity assists it in achieving sustainable development.

By displacing fossil fuel-based electricity with electricity generated from a renewable source, the project results in reductions of CO<sub>2</sub> emissions that are real, measurable and give long-term benefits to the mitigation of climate change. An analysis of the positive list of renewable project demonstrates that the proposed project activity is not a likely baseline scenario. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity. Given that the project is implemented as designed, the project is likely to achieve the estimated amount of annual emission reductions of 90,540 tCO<sub>2e</sub>.

The validation has been performed following the requirements of the latest version of the CDM VVS version 02 and on the basis of the contractual agreement. The single purpose of this report is its use during the registration process as part of the CDM/UNFCCC project cycle.

## SECTION B. Validation team, technical reviewer and approver

### B.1. Validation team member

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)	Involvement in			
						Desk/document review	On-site inspection	Interview(s)	Validation findings
1.	Lead Auditor Technical Expert	OR	DAS	SUKANTA	True Quality Certifications Private Limited- Outsourced entity	YES	YES	YES	YES

### B.2. Technical reviewer and approver of the validation report for RCP

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)
1.	Technical Reviewer	EI	Xue	Denny	Applus+ Certification
2.	Approver	IR	Sendín Caballero	Juan	Applus+ Certification

## SECTION C. Means of validation

### C.1. Desk/document review

The details of the document observed during desk review /validation process are listed below in Appendix 3 of this report.

**C.2. On-site inspection**

Duration of on-site inspection: 03/07/2018				
No.	Activity performed on-site	Site location	Date	Team member
1.	Assessment team checked the implementation of the project, Baseline emission, Emission reduction calculation, technical description of the project and Monitoring.	The project activity is located in the Surajbari creek near the village Jakhau and Village Budiya in Taluka Abdasa in Surajbari.	03/07/2018	Mr. Sukanta Das

**C.3. Interviews**

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Kumar	Krishna	PP representative	03/07/2018	As described above in section C.2 of this report	Mr. Sukanta Das

**C.4. Sampling approach**

The assessment team did not apply any sampling approach for the project activity. The site visit was conducted for complete power plant implemented in the locations as mentioned in the PDD.

**C.5. Clarification requests (CLs), corrective action requests (CARs) and forward action requests (FARs) raised**

Area of validation findings	No. of CL	No. of CAR	No. of FAR
Compliance with PDD form	00	01	00
Application and selection of methodologies and standardized baselines	00	01	00
Validity of original baseline or its update	00	00	00
Estimated emission reductions or net anthropogenic removals	00	01	00
Validity of monitoring plan	00	01	00
Crediting period	00	00	00
Project participants	00	00	00
Post-registration changes	00	00	00
Others (please specify)- Validity of the operational lifetime of the project	00	01	00
<b>Total</b>	00	05	00

**SECTION D. Validation findings****D.1. Compliance with PDD form**

<b>Means of validation</b>	Assessment team checked the PDD version 10.1 forms supplied by the project participant and found that the latest form applicable in the UNFCCC web site is used for the presentation of the PDD.
<b>Findings</b>	CAR 01 was raised during the validation process and closed successfully.
<b>Conclusion</b>	<p>The PDD mentions all the criteria as detailed out in PDD form version 10.1 properly and found correct by the assessment team.</p> <p>The proposed CDM project activity comprises of installation and operation of thirty four numbers of Suzlon Make of S82-1500 kW Wind turbine Generators (WTGs) having a combined wind power generation capacity of 51 MW at villages Jakhau and Village Budiya in Taluka Abdasa in Surajbari, District Kutch in Gujarat. The project is located in one of the wind rich areas of the country.</p>

Assessment team also checked the commissioning details and found the same to be correct. The actual commissioning dates are checked from the 3<sup>rd</sup> party Government documents and found to be accurate. The details are as below:

Number of Machine installed	Total Capacity in MW	Commissioning dates
03	4.5 MW	31/03/2008
07	10.5 MW	31/05/2008
24	36.0 MW	29/09/2008
Total: 34	Total: 51 MW	

The total project activity got commissioned on 29/09/2008 as checked by the assessment team from the 3<sup>rd</sup> party documents as well from the 1<sup>st</sup> Periodic verification report (<https://cdm.unfccc.int/Projects/DB/DNV-CUK1249377814.84/view>) and found the same to be correct.

The technical details were checked by the assessment team from the details available from the manufacturers and also during the onsite visit. The details are as below:

1	Nominal Output (KW)	1500
2	Power Regulation	Independent electromechanical pitch system for each blade and via Suzlon-Flexi-Slip-System
3	Cut – in (m/s)	4
4	Cut – out (m/s)	20
5	Survival wind speed (m/s)	52.5
6	Tip speed (m/s)	70 (at rated power)
7	Rotor speed (rpm)	16.30 (at rated power)
8	Hub height (m)	78.5 (including 1m foundation height)
	Rotor	
9	Rotor diameter (m)	82
10	Rotor orientation (upwind/downwind)	Upwind
11	Number of blades	3
	Brake System	
12	Aerodynamics	3 independent systems with blade pitching mechanism
13	Mechanical	Hydraulic disc brake, activated by hydraulic pressure and mechanical rotor lock
14	Yaw system	Slide bearing with gear ring & automatic greasing system along with active electric yaw drive having electric motor with brake, gearbox and pinion
	Generator	
15	Voltage (V)	3 Phase 690 V AC
16	Frequency ( Hz)	50
	Tower	
17	Type	Lattice

18	Mast Height (m)	78.5
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Assessment team checked the geographical coordinate of the project activity with GPS meter and cross checked the same with the google Map. The latitude and longitude as mentioned in the registered PDD for 1st crediting period is found correct. The details are as below:

The exact project location is as under:

Sl. No.	Location No.	Northing	Easting
1.	M-631	N23Deg 10Min 03.3Sec	E68Deg 43Min 04.7Sec
2.	M-636	N23Deg 09Min 52.1Sec	E68Deg 43Min 36.0Sec
3.	M-637	N23Deg 10Min 32.3Sec	E68Deg 44Min 37.6Sec
4.	M-638	N23Deg 10Min 08.3Sec	E68Deg 44Min 08.3Sec
5.	M-639	N23Deg 09Min 55.9Sec	E68Deg 44Min 16.7Sec
6.	M-707	N23Deg 11Min 39.4Sec	E68Deg 40Min 42.2Sec
7.	M-708	N23Deg 11Min 27.3Sec	E68Deg 40Min 50.5Sec
8.	M-709	N23Deg 11Min 16.5Sec	E68Deg 40Min 59.9Sec
9.	M-710	N23Deg 11Min 02.2Sec	E68Deg 41Min 03.1Sec
10.	M-711	N23Deg 10Min 51.8Sec	E68Deg 41Min 06.6Sec
11.	M-712	N23Deg 10Min 36.8Sec	E68Deg 41Min 13.5Sec
12.	M-713	N23Deg 10Min 24.4Sec	E68Deg 41Min 19.8Sec
13.	M-714	N23Deg 10Min 12.0Sec	E68Deg 41Min 26.9Sec
14.	M-715	N23Deg 09Min 59.5Sec	E68Deg 41Min 33.7Sec
15.	M-716	N23Deg 09Min 47.1Sec	E68Deg 41Min 40.5Sec
16.	M-717	N23Deg 11Min 46.2Sec	E68Deg 41Min 06.6Sec
17.	M-730	N23Deg 11Min 24.7Sec	E68Deg 41Min 14.9Sec
18.	M-731	N23Deg 11Min 12.5Sec	E68Deg 41Min 22.0Sec
19.	M-734	N23Deg 10Min 34.8Sec	E68Deg 41Min 38.6Sec
20.	M-735	N23Deg 10Min 22.6Sec	E68Deg 41Min 46.5Sec
21.	M-736	N23Deg 10Min 10.7Sec	E68Deg 41Min 50.5Sec
22.	M-737	N23Deg 09Min 53.0Sec	E68Deg 42Min 01.8Sec
23.	M-738	N23Deg 10Min 23.0Sec	E68Deg 42Min 46.6Sec
24.	M-739	N23Deg 09Min 35.1Sec	E68Deg 42Min 06.4Sec
25.	M-740	N23Deg 09Min 22.5Sec	E68Deg 42Min 12.7Sec

	26.	M-752	N23Deg 11Min 10.4Sec	E68Deg 41Min 46.5Sec
	27.	M-753	N23Deg 10Min 57.9Sec	E68Deg 41Min 52.6Sec
	28.	M-754	N23Deg 10Min 45.9Sec	E68Deg 42Min 02.5Sec
	29.	M-756	N23Deg 10Min 09.9Sec	E68Deg 42Min 26.0Sec
	30.	M-757	N23Deg 09Min 45.3Sec	E68Deg 42Min 25.9Sec
	31.	M-758	N23Deg 09Min 32.9Sec	E68Deg 42Min 33.4Sec
	32.	M-766	N23Deg 11Min 22.7Sec	E68Deg 41Min 38.8Sec
	33.	M-767	N23Deg 10Min 39.4Sec	E68Deg 42Min 23.7Sec
	34.	M-776	N23Deg 10Min 40.3Sec	E68Deg 43Min 27.3Sec
<p>No post registration changes is envisaged for the 2<sup>nd</sup> CP as the project is implemented as per the registered PDD of 1<sup>st</sup> CP and in continuous operation apart from scheduled maintenance (as per manufacturer specification) and thus there is no scenario observed which can alter the requirement of the methodology. The project activity complies with the applicability criteria of the large scale CDM Project activity category. The capacity of the proposed project is 51 MW, which is more than the maximum qualifying Type I capacity of 15 MW. There is no change in installed capacity of the project as mentioned in registered PDD for 1<sup>st</sup> CP. The same is checked by the assessment team during onsite visit and found correct.</p>				

## D.2. Application and selection of methodologies and standardized baselines

<b>Means of validation</b>	<p>The assessment team has validated the documentation referred to in the revised PDD for renewable of crediting period and verified the documentation content for verifying the justification of the applicability of the methodology ACM0002 version 19.0 and confirmed that the documentation referred to in the PDD is correctly quoted and interpreted. The assessment team has also cross-checked the information provided in the registered PDD of 1<sup>st</sup> CP with the documentation other than from the PDD based on the local and sectoral knowledge of the assessment team. Following documentation has been reviewed by the assessment team:</p> <ul style="list-style-type: none"> <li>- Site visit</li> <li>- Interview with the concerned person mentioned in this report</li> <li>- Technical detail analysis of the power plant from the documents submitted by the manufacturer.</li> <li>- Commissioning certificates of the turbines</li> </ul> <p>The assessment of the project's compliance with the applicability criteria of ACM0002 version 19.0 are documented in detail in section B.2 of the PDD.</p>
<b>Findings</b>	<p>Applicability criteria were explained properly as per the requirement of the applied approved methodology for the present crediting period. However CAR 02 was raised during the validation process and closed successfully.</p>
<b>Conclusion</b>	<p>The applied baseline methodology is justified as it has been demonstrated that the proposed project activity is:</p> <p>Applicability 1: The project activity is installation of a new grid connected Wind power plant (Option 1 (A)) at a site where no renewable power plant was operated prior to the implementation of the project activity (Greenfield plant) and hence this criterion is applicable.</p> <p>Applicability 2: The proposed project activity is an installation of a new grid connected wind power plant and hence this condition is met. The option (a) of applicability criteria 2 is applicable as project is renewable energy power plant/unit.</p> <p>Applicability 3: The project is installation of new wind energy-based electricity</p>



	<p>generation plants (not a hydro power plant). Hence this criterion is not applicable.</p> <p>Applicability 4: The project is wind power project and thus the criterion is not applicable to this project activity.</p> <p>Applicability 5: The project is wind power project and thus the criterion is not applicable to this project activity.</p> <p>Applicability 6: The project is wind power project and thus the criterion is not applicable to this project activity.</p> <p>Applicability 7: The project activity is installation of a new grid connected wind power project and does not involve switching from fossil fuel to renewable energy and hence this criterion is not relevant to the project activity.</p> <p>&amp;</p> <p>This is a wind power plant and not a biomass fired plant and hence this applicability criterion is not applicable to the project activity.</p> <p>Applicability 8: The project activity is a new grid connected wind power plant and not a retrofits, replacement or capacity additions and therefore this criterion is not applicable to the project activity.</p> <p>Applicability 9: Please refer below</p> <p><b><u>Applicability conditions of “Tool to calculate the emission factor for an electricity system”</u></b></p> <ul style="list-style-type: none"> <li>• OM, BM and CM are estimated using the tool for calculating baseline emissions.</li> <li>• The project activity is grid connected and thus emission factor is calculated and thus OM, BM and CM are estimated using the tool for calculating baseline emissions.</li> <li>• The project activity is located in India, a non-Annex I country. Therefore, tool is applicable for the project activity.</li> <li>• The project is a wind power project and there is no involvement of biofuels. Therefore, this criterion is not applicable for the project activity.</li> </ul> <p>(Applus+ Certification) confirms that the application of the baseline methodology is transparent and conservative and confirms that the chosen baseline and monitoring methodology i.e. ACM0002 version 19.0 is applicable to the project activity.</p> <p>The total installed capacity of project activity is more than 15 MW which is applicable as per large scale project activities methodology ACM0002 version 19.0. The project capacity will be always remain the same and hence the project activity will always be large scale project activities throughout the 2<sup>nd</sup> crediting period and thereafter.</p>
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### D.3. Validity of original baseline or its update

<b>Means of validation</b>	The baseline scenario as depicted in the PDD version 05 is checked during the validation site visit and also during the interview with the plant official.
<b>Findings</b>	The baseline is selected as per the requirement of the approved methodology ACM 0002 version 19.0 for the present Crediting period. However, CAR 03 was raised during the validation process and closed successfully.
<b>Conclusion</b>	<p>Assessment team referred “Methodological tool (EB 66, Annex 47) “Assessment of the validity of the original / current baseline and update of the baseline at the renewal of the crediting period.” (Version 03.0.1)” and VVS version 02 for the project activity” to check the originality of the baseline. Following are the observation of the assessment team regarding selected baseline for the project activity in this present 2<sup>nd</sup> renewable crediting period:</p> <p><u>Step 1.1 (EB 66, Annex 47): Assess compliance of the current baseline with relevant mandatory national and/or sectoral policies</u></p>

The baseline for the project activity is the electricity delivered to the grid by the project activity which would have otherwise been generated by the operation of grid connected power plants and by the addition of new generation sources into the grid. The project activity is claiming the emission reductions from the net exported electricity to the grid only. In absence of project activity this quantity of electricity would have been generated from the electricity grid mix (mainly fossil fuel). The Government of India enacted the Electricity Act in the year 2003 to harmonize and rationalize the provisions in the then existing laws. The Act consolidated the laws relating to generation, transmission, distribution, trading and use of electricity. With the Enactment of the act, the then existing laws viz, The Indian Electricity Act 1910, The Electricity Supply Act, 1948 and The Electricity Regulatory Commissions Act, 1998 were repealed. The Electricity Act 2003 was in force at the time of the completion of the baseline study during first crediting period.

The baseline remains unchanged for the present crediting period since there is no policy been revised and/or is currently in force as well, therefore the baseline scenario is still in compliance with all the relevant mandatory national and/or sectoral policies.

Step 1.2 (EB 66, Annex 47) : Assess the impact of circumstances

There are no new circumstances that can impact the original baseline. The baseline emission factor value is however updated based on the current data available for the grid.

Step 1.3 (EB 66, Annex 47): Assess whether the continuation of the use of current baseline equipment(s) or an investment is the most likely scenario for the crediting period for which renewal is requested

As per the "Tool to determine the remaining lifetime of equipment", the remaining lifetime of the equipment is the time for which the existing equipment can continue to operate before it has to be replaced/discarded. As per this Tool, Project participant can use one of the following options to determine the remaining lifetime of the equipment:

- (a) Use manufacturer's information on the technical lifetime of equipment and compare to the date of first commissioning;
- (b) Obtain an expert evaluation;
- (c) Use default value

The project activity started commercial operation on 29/09/2008 and since commissioning, the project activity is running satisfactorily. As per Manufacturer specification, the technical lifetime of Turbines is 20 years. Thus considering the start of operation of project activity, the technical lifetime is up to 2028 which is well within the end date of 2<sup>nd</sup> crediting period. Thus the remaining lifetime of equipment's exceeds the crediting period for which renewal is requested. Thus as per manufacturers information, the remaining lifetime of equipment is exceeds crediting period as per option 1 of Tool to determine the remaining lifetime of the Equipment. Assessment team also checked the declaration letter from the OEM (= **Original equipment manufacturer**) group Suzlon dated 01/11/2018 and retreat the above statement that remaining lifetime of equipment exceeds the length of 2<sup>nd</sup> crediting period.

The below conditions are fulfilled. (i)The equipment has been operated and maintained according to the recommendations of the equipment supplier; (ii) There are no periodic replacement schedules or scheduled replacement practices specific to the industrial facility, that require early replacement of equipment before the expiry of the technical lifetime; and (iii) The equipment has no design fault or defect and did not have any industrial accident due to which the equipment cannot operate at rated performance levels.

An per option (a), evaluating the remaining lifetime for the type of equipment has

been approached and requested to determine the remaining lifetime of the equipment. The assessment of remaining life time of the equipment's had been done and confirmed that the remaining technical lifetime of the equipment of the project activity exceeds the crediting period for which renewal is requested. As the remaining technical lifetime of the equipment is not less than the end of the crediting period or which renewal is requested, the current baseline holds good for this crediting period too.

Step 1.4(EB 66, Annex 47): Assessment of the validity of the data and parameters

This step stipulates that "Where emission factors, values or emission benchmarks are used and determined only once for the crediting period, they should be updated, except if the emission factors, values or emission benchmarks are based on the historical situation at the site of the project activity prior to the implementation of the project and cannot be updated because the historical situation does not exist anymore as a result of the CDM project activity."

The project chosen **ex-ante default value i.e. Emission Factor**. As per the Guidance given in Tool the emission factor is updated as follows:

1. The operating margin is calculated as per the latest version of CEA (Version 13) available to the project participant. The operating margin calculation is checked by the assessment team and found correct.
2. The build margin is considered from CEA database version 13 as per "Tool to calculate the emission factor for electricity system" version 07. The value considered is checked by the assessment team and found correct
3. The Combined margin calculation is carried out as per "Tool to calculate the emission factor for electricity system" version 07. The value considered is checked by the assessment team and found correct

The emission factor is fixed ex-ante and thus will be used for the complete 2<sup>nd</sup> renewable crediting period and for entire verification conducted under 2<sup>nd</sup> renewable crediting period.

**Application of Steps 1.1, 1.2, 1.3 and 1.4 confirmed that the current baseline is valid for the Second crediting period but data and parameters needs to be updated. Therefore step 2 is used**

**Step 2.1: Update the current baseline**

This step is applicable since the Steps 1.1, 1.2, 1.3 and/or 1.4 showed that the current baseline needs to be updated. As evident from the explanation provided above the baseline scenario remains unchanged.

Updated the baseline emissions based on the latest approved version of the methodology applicable to the project activity for the subsequent crediting period, without reassessing the baseline scenario.

**Step 2.2: Update the data and parameters**

The updated Data and/or parameter are followed for estimating the baseline emissions

Hence as per ACM 0002 version 19.0 (latest Methodology), the baseline of the project is as follows:

*Project activity is the installation of a Greenfield power plant, the baseline scenario is electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources, as reflected in the combined margin (CM) calculations described in the "Tool to calculate the emission factor for an electricity system".*

	The above selected baseline is correct and thus applicable to the project activity and in line with approved methodology.
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#### D.4. Estimated emission reductions or net anthropogenic removals

<b>Means of validation</b>	The emission reduction sheet, CEA database version 13.0 (Latest applicable) and PDD version 05 is checked by the assessment team.
<b>Findings</b>	CAR 04 is raised during the validation process. The same is closed successfully.
<b>Conclusion</b>	<p>The baseline emissions as discussed in section B.6.1 will include emissions that would have occurred in the absence of the project activity. The emission reduction calculation has been done as per the ACM 0002 version 19.0</p> <p><b><u>Baseline Emission (BE<sub>y</sub>):</u></b></p> $BE_y = EG_{\text{facility},y} * EF_{\text{grid},CM,y} \text{-----}(1)$ <p>Where  BE<sub>y</sub> = Baseline Emissions in year y; (tCO<sub>2</sub>)  EG<sub>facility,y</sub> = Quantity of net electricity supplied to the grid as a result of the implementation of the CDM project activity in year y (MWh)  EF<sub>grid,CM,y</sub> = Grid emission factor (MWh/tCO<sub>2</sub>)</p> <p>PP has estimated the baseline energy generation considering the capacity of the project activity, yearly generation hour and plant load factor and deducting the transmission loss. The project activity involves installation of 51 MW grid connected power plant in the state of Gujarat. Validation team assessed the technical specification of the promoters of the project activity, Commissioning certificate and found that installed capacity of this project activity is correct.</p> <p>Baseline emission factor is calculated as combined margin, consisting of a combination of operating margin (OM) and build margin (BM) factors according to the procedure prescribed in the "Tool to calculate the emission factor for an electricity system" version 07.0 which is sourced from CEA version 13.0, Govt. of India and forms the part of emission reduction calculation. The baseline emission factor calculation is checked by the validation team and found that the calculation is transparent and conservative.</p> $BE_y = 95,557 * 0.9475 = 90,540 \text{ tCO}_{2e}$ <p><b><u>Project Emissions:</u></b>  As per the latest applied methodology for Wind power project PE<sub>y</sub> = 0.</p> <p><b><u>Leakage Emissions:</u></b>  As per the Methodology requirement Leakage emission is not applicable for renewable project.</p> <p><b><u>Emission Reductions:</u></b>  The project activity reduces carbon dioxide emissions through displacement of grid electricity generation with predominantly fossil fuel based power plants<sup>2</sup> by renewable electricity. The emission reduction (ER<sub>y</sub>) due to project activity during a given year y is calculated as the difference between baseline emissions (BE<sub>y</sub>), project emissions (PE<sub>y</sub>) as per the formulae given below:</p> $ER_y = BE_y - PE_y$ $ER_y = 90,540 \text{ t CO}_{2e} - 0 \text{ t CO}_{2e}$ $ER_y = 90,540 \text{ (Rounded Down)}$

	<p>Therefore,  <math>ER_y = BE_y - PE_y = 90,540 \text{ t CO}_{2e}</math> (Estimated value for the current 2<sup>nd</sup> crediting period)</p> <p>Where,  <math>BE_y</math> = Baseline emissions in the year y in <math>\text{tCO}_{2e}</math>  <math>PE_y</math> = Project emissions in the year y.</p>
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### D.5. Validity of monitoring plan

Means of validation	Assessment team checked the monitoring practice onsite and also checked the requirement of ACM0002 version 19 and procedure mentioned in the registered PDD of 1 <sup>st</sup> CP.
Findings	Monitoring practice followed onsite is as per the requirement of the applied latest methodology. However, CAR 05 is raised during the validation process. The same is closed successfully.
Conclusion	<p><b><u>Parameters determined ex-ante:</u></b></p> <ol style="list-style-type: none"> <li>1. <b><math>EF_{\text{grid,OM},y} = (0.9726 \text{ tCO}_2/\text{MWh})</math></b> = Operating Margin emissions factor for grid connected power generation in year y calculated using the latest version of "Tool to calculate the emission factor for an electricity system version 07." <math>EF_{\text{grid,OM},y}</math> is computed using the Simple Operating margin <math>\text{CO}_2</math> emission factor. Simple Operating margin <math>\text{CO}_2</math> emission factor is calculated from 3-year generation weighted average using data for the years 2014-2015, 2015-2016 &amp; 2016-17 <math>\text{CO}_2</math> emissions per unit net electricity generation of all power plants serving the system, not including low-cost / must-run. This is in agreement with the guidance provided in the Tool to calculate the emission factor for an electricity system. <b>The value is considered from CEA version 13.</b> The value is fixed ex-ante for the entire duration of 2<sup>nd</sup> crediting period. As the value is sourced from CEA (publicly available document) no further analysis is required</li> <li>2. <b><math>EF_{\text{grid,BM},y} = (0.8723 \text{ tCO}_2/\text{MWh})</math></b> Build Margin emissions factor for grid connected power generation in year y calculated using the latest version of "Tool to calculate the emission factor version 07 for an electricity system. Build margin emission factor is the generation-weighted average emission factor of all power plants <math>m</math> during the most recent year <math>y</math> for which generation data is available. <b>The value is considered from CEA version 13.</b> The value is fixed ex-ante for the entire duration of 2<sup>nd</sup> crediting period. As the value is sourced from CEA (publicly available document) no further analysis is required</li> <li>3. <b><math>EF_{\text{grid,CM},y} = (0.9475 \text{ tCO}_2/\text{MWh})</math></b> Combined Margin emissions factor for grid connected power generation in year y calculated using the latest version of "Tool to calculate the emission factor for an electricity system version 07." Combined Margin is computed using the official data sources and is in-line with the guidance provided in the tool. <b>The value is considered from CEA version 13.</b> The combined margin emissions factor is calculated as follows: <p style="text-align: center;"> <math>EF_{\text{grid,CM},y} = EF_{\text{grid,OM},y} * W_{\text{OM}} + EF_{\text{grid,BM},y} * W_{\text{BM}}</math> </p> <p>Where:</p> <p><math>EF_{\text{grid,BM},y}</math> = Build margin <math>\text{CO}_2</math> emission factor in year y (<math>\text{tCO}_2/\text{MWh}</math>)</p> <p><math>EF_{\text{grid,OM},y}</math> = Operating margin <math>\text{CO}_2</math> emission factor in year y (<math>\text{tCO}_2/\text{MWh}</math>)</p> <p><math>W_{\text{OM}}</math> = Weighting of operating margin emissions factor (%) = 75%</p> <p><math>W_{\text{BM}}</math> = Weighting of build margin emissions factor (%) = 25%</p> </li> </ol> <p>The above weighing is as per "Tool to calculate the emission factor for an electricity system", version 07.0.0 for other projects (wind in this case) and for second crediting period. The value is fixed ex-ante for the entire duration of 2<sup>nd</sup> crediting period. As the value is sourced from CEA (publicly available document) no further analysis is required.</p>

**Parameters determined ex-post:**

$EG_y = EG_{\text{facility},y}$ : Quantity of net electricity generation supplied by the project plant/unit to the grid in year y (MWh/yr)

The parameter is sourced from primary source i.e. Certificate for share of electricity generated for the Wind Farm by state official. The Certificate for share of electricity as given by GETCO provides the Values of Net electricity supplied by individual WTGs. The practice is as per the registered PDD and approved methodology. The ABT meter reading reflects the net electricity supplied by the wind farm (both export and import), including the project activity.

The power generation determined in this manner is net of the transmission & distribution losses within the premises of the wind power project. This also takes into account any consumption of power from the grid within the wind power project premises, for running of the common facilities. The net power uploaded into the grid by the project proponent's wind turbines is reflected in the monthly receipt generated by GETCO (=Gujarat Energy Transmission Corporation Limited) in the name of the project proponent. The electricity meters are under the custody of the electricity board and calibrated by electricity board as per their standard procedures. The meters are calibrated in line with Indian grid code regulations for such installations.

At the first level, the generation from each WTG is recorded by an energy meter installed near each machine. This meter provides monthly generation data from individual WTGs and the records are maintained on paper and electronically for reference. The individual meters are calibrated periodically i.e. Once in a year.

The calibration of the main and check meter at the substation - **Substation meter** will be carried out once in a 3 year at Substation end. JMRs are taken at the Substation end by the local electricity utility (GEDA= **Gujarat Energy Development Agency**) and representative of Suzlon. The JMR readings can be further broken in to the individual turbine generation with the help of generation data from the Energy meter installed at yard by GETCO official and PP has no say on it. The main and check meters shall be periodically tested (once in a 3 year) and calibrated by the concerned licensee in the presence of other party involved. Main and check meters shall be sealed by both parties. Defective meter shall be replaced immediately. Reading of main and check meters shall be taken periodically at appointed day and hour by authorized officer of the concerned licensee, the generator and the open access user or his representative, as the case may be. Meter reading shall be communicated to SLDC (=State Load dispatch centre), the open access user and the generating company or trader, as the case may be, by the licensee, within 12 hours of meter reading. Readings of the check meters shall be considered when main meters are found to be defective or stopped. Both the main meter and check meter shall be tested for accuracy if difference between the readings of main and check meters vis-à-vis main meter reading exceed twice the percentage errors permissible for relevant accuracy class. The meter found defective shall be replaced immediately.

In case of no generation, the power consumed by the individual WTG is recorded in energy meter installed at yard. Moreover this parameter is also registered at the meter installed at substation end where JMR is taken by Electricity utility.

As per Para 68 of ACM 0002 version 19,  $EG_{\text{facility},y} = EG_{PJ,y}$  and  $EG_{PJ\_Add,y}$  should be determined as per "TOOL05: Baseline, project and/or leakage emissions from electricity consumption and monitoring of electricity generation". As per the tool for captive use the Net electricity exported is cross checked with records for sold electricity where relevant. For the present project activity the project is utilizing the power for its own usage in their manufacturing unit and thus there are no records of Sold electricity. Hence the cross check criteria are not applicable for the present project. However, to be on conservative side PP will cross check the data on the JMR sheet with the daily generation log sheets from the CMS. Assessment team

	checked the process and found it appropriate and conservative. The cross check approach will be used for verification of entire 2 <sup>nd</sup> crediting period.			
	The detail of the meters as checked by the assessment team are as below:			
	1.Tri-vector meters details:			
	Name	Line 1	Line 2	Line 3
	Location	On Transformer 1	On Transformer 2	On Transformer 3
	Make (Main and check meter)	Secure meter Limited	Secure meter Limited	Secure meter Limited
	Serial Number (main meter)	GJB00669	GJB00667	MSE64370
	Serial Number (Check meter)	GJB00670	GJB00668	GJU04622
	Type of meter	E3M021	E3M021	E3M021
	Accuracy class	Class: 0.2s	Class: 0.2s	Class: 0.2s
	2. ABT meter at the sub-station			
	Name	Line 1- Main Meter	Line 2-Check meter	
	Location	On Transformer 1	On Transformer 2	
	Make	L&T	L&T	
	Serial Number	GJ0703A	GJ0704A	
Type of meter	HT (3P4W)	HT (3P4W)		
Accuracy class	Class: 0.2s	Class: 0.2s		

#### D.6. Crediting period

<b>Means of validation</b>	The crediting period is checked as per UN home page (reference number : 2856) and discussion with Client.
<b>Findings</b>	No CAR was raised regarding crediting period.
<b>Conclusion</b>	This is 2 <sup>nd</sup> renewable crediting period and the duration is 7-year renewable (2 <sup>nd</sup> CP duration:01/03/2017 to 29/02/2024).

#### D.7. Project participants

<b>Means of validation</b>	The project participant names were checked from UN homepage <a href="https://cdm.unfccc.int/Projects/DB/DNV-CUK1249377814.84/view">https://cdm.unfccc.int/Projects/DB/DNV-CUK1249377814.84/view</a>		
<b>Findings</b>	No CAR was raised regarding project participant.		
<b>Conclusion</b>	Following are the details of PP (host country) and Annex 1 country. The same is correct and in line with PDD registered under 1st Crediting period as well as MOC obtained from UN home page. The details are true for the 2 <sup>nd</sup> Crediting period as well.		
	<b>Parties involved</b>	<b>Project participants</b>	<b>Indicate if the Party involved wishes to be considered as project participant (Yes/No)</b>
	Government of India (host party)	M/s Oil and Natural Gas Corporation Ltd. (ONGC)	No

#### D.8. Post-registration changes

Type of post-registration changes (PRCs)	Confirmation (Y/N)	Validation report for PRCs	
		Version	Completion date
Temporary deviations from the registered monitoring plan, applied methodologies or applied standardized baselines	N	NA	NA
Corrections	N	NA	NA
Change to the start date of the crediting period of the project activity	N	NA	NA

Inclusion of a monitoring plan	N	NA	NA
Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines, or other applied standards or tools	N	NA	NA
Changes to the project design	N	NA	NA
Changes specific to afforestation and reforestation project activities	N	NA	NA

## SECTION E. Internal quality control

As final step of a validation of the final documentation including the Renewable crediting period validation report and the checklist have to undergo an internal quality control by the technical review committee, i.e. each report has to be finally approved either by the head of the technical review committee or the deputy. In case one of these two persons is part of the assessment team approval can only be given by the other one to avoid any conflict of Interest.

After confirmation of the PP the validation opinion and relevant documents are submitted to the EB through the UNFCCC web-platform.

## SECTION F. Validation opinion

Applus+ Certification has performed a validation of the renewable crediting period for the project entitled "51 MW wind power project of ONGC at Surajbari, Gujarat in India". The validation for renewable crediting period was performed on the basis of UNFCCC criteria and host country criteria, as well as criteria, e.g. ACM0002 version 19.0, given to provide for consistent project operations, baseline, monitoring and reporting.

The review of the project design documentation for renewable crediting period and the subsequent follow-up interviews have provided Applus+ Certification with sufficient evidence to determine the fulfilment of stated criteria. In our opinion, the project meets all relevant UNFCCC requirements for the CDM and all relevant host country criteria. The project will hence be recommended by Applus+ Certification for registration with the UNFCCC.

By displacing fossil fuel-based electricity with electricity generated from a renewable source, the project results in reductions of CO<sub>2</sub>e emissions that are real, measurable and give long-term benefits to the mitigation of climate change. An analysis of the investment demonstrates that the proposed project activity is not a likely baseline scenario. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity. Given that the project is implemented as designed, the project is likely to achieve the estimated amount of annual emission reductions of 90,540 tCO<sub>2</sub>e.

The validation has been performed following the requirements of the latest version of the CDM VVS version 02 for the project activity and on the basis of the contractual agreement. The single purpose of this report is its use during the registration process as part of the CDM/UNFCCC project cycle.



## Appendix 1. Abbreviations

Abbreviations	Full texts
BM	Build Margin
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction(s)
CEA	Central Electricity Authority
CL	Clarification request
CMS	Central Monitoring system
CP	Crediting period
CM	Combined Margin
CMS	Central Monitoring system
CO <sub>2</sub>	Carbon dioxide
CO <sub>2</sub> e	Carbon dioxide equivalent
DNA	Designated National Authority
DOE	Designated Operational Entity
DR	Document Review
EF	Emission Factor
ER	External Resource
EIA	Environmental Impact Assessment
ER	Emission Reductions
FAR	Forward Action Request
GHG	Greenhouse gas(es)
GWP	Global Warming potential
GETCO	Gujarat Energy Transmission Corporation Limited
GEDA	Gujarat Energy Development Agency
IR	Internal Resource
OR	Outside resource
OEM	Original Equipment manufacturer
OM	Operating Margin
PP	Project Participant

## Appendix 2. Competence of team members and technical reviewers

1. Mr. Sukanta DAS, has done M. SC in (Electronics and Photonics) and M. Tech in (Energy technology) from Tezpur Central University/ Indian Institute of technology Bombay in India. He is a certified lead auditor for ISO 14001 EMS LA and ISO 9001 QMS LA from International registry for Certified Auditors (IRCA) and Certified Lean Management practitioner from Quality Council of India (QCI). He has more than eight years of working experience at TUV NoRD/ Re-consult/CRA/APPLUS certifications under various categories of projects stating from Renewable to waste to supercritical projects. He was JI/ CDM Lead Assessor in TUV NoRD and was involved in more than 100 CDM validation and verifications activities in Gold Standard, VCS, CDM projects as a team leader/technical reviewer / validator / verifier covering the sectoral scope 1, 13 technical areas 1.2/1.1/13.1. Currently he is associated with True Quality Certifications Private Limited and is empanelled with APPLUS certification to carry out GHG audit.
2. Hanshen (Denny) Xue (Master Degree in Environmental Engineering, Bachelor Degree in Thermal Engineering) is an Auditor appointed by Applus+ LGAI for the GHG project assessment. He is based on Shanghai. He has 1.5 years of work experiences in CDM project development. Before he joined Applus+ LGAI, he has been worked for Shanghai Chuanji Investment and Management which is a CDM consultancy company as a project manager for CDM project development.

### Appendix 3. Documents reviewed or referenced

No.	Author	Title	References to the document	Provider
1	NA	Contract of the project participant with the DOE	Contract document signed between PP and DOE	Project participant
2	NA	Technical specifications of turbine	Manufacturer technical specifications	Project participant
3	NA	1st PDD version 05  PDD based on which opinion is provided- Version 06	09/01/2019  10/01/2019	Project participant
4	NA	Estimated Emission reduction calculation sheet- version 01 Estimated Emission reduction calculation sheet- version 02	09/01/2019  10/01/2019	Project participant
5	NA	The operational lifetime of the project activity from the manufacturer=(Technical specifications)	Technical lifetime certificate from Manufacturers	Project participant
6	NA	ACM 0002 version 19	UNFCCC CDM web site	UNFCCC
7	NA	Ministry of Environment and forest: <a href="http://www.envfor.nic.in">www.envfor.nic.in</a>  UNFCCC <a href="http://www.cdm.unfccc.int">www.cdm.unfccc.int</a>  CEA: Central electricity authority <a href="http://www.cea.nic.in">www.cea.nic.in</a>	Reference link is provided.	Independent Search
8	NA	Tools/ guidelines used in the project activity: <ul style="list-style-type: none"> <li>Clarification on national and/or sectoral policies Para 27 EB 55.</li> <li>Tool to determine the remaining lifetime of the project activity in line with Annex 15 EB 50.</li> <li>Tool to calculate project or leakage CO<sub>2</sub> emissions from fossil fuel combustion, Version 3.</li> <li>Tool to calculate the emission factor for an electricity system version 07.</li> <li>Glossary of CDM terms version 09.1.</li> <li>Guideline for completing the PDD form for small scale CDM project</li> </ul>	UNFCCC CDM web site	UNFCCC

		activity version 10.1.  <ul style="list-style-type: none"> <li>Assessment of the validity of the original / current baseline and update of the baseline at the renewal of the crediting period.” (Version 03.0.1).</li> </ul>		
9	NA	Commission Certificate for WTGs	Commissioning certificate as provided by 3 <sup>rd</sup> party	Project participant
10	NA	OEM letter for remaining lifetime	OEM certificate dated 01/11/2018 for remaining lifetime	Project participant
11	NA	Acknowledgement email from UNFCCC dated 10/10/2016 regarding receiving intimation for 2 <sup>nd</sup> CP.	Acknowledgement email from UNFCCC dated 10/10/2016 regarding receiving intimation for 2 <sup>nd</sup> CP.	Project participant

## Appendix 4. Clarification requests, corrective action requests and forward action requests

Table 1. CL from this validation

CL ID	xx	Section no.	Date: DD/MM/YYYY
<b>Description of CL</b>			
<b>Project participant response</b>			<b>Date: DD/MM/YYYY</b>
<b>Documentation provided by project participant</b>			
<b>DOE assessment</b>			<b>Date: DD/MM/YYYY</b>

Table 2. CAR from this validation

CAR ID	01	Section no.	D.1	Date: 03/07/2018
<b>Description of CAR</b>				
The technical details are mentioned in the PDD, however the supporting are not submitted to the assessment team. CAR is thus raised.				
The feeder details of the power plant are missing in the revised PDD.				
<b>Project participant response</b>				<b>Date: 09/01/2019</b>
<i>The technical detail as per manufacturer specification is now submitted to the DOE.</i>				
<i>The feeder details as per the onsite practice are now submitted to the DOE.</i>				
<b>Documentation provided by project participant</b>				
1. Technical specification. 2. Feeder details as per onsite practice				
<b>DOE assessment</b>				<b>Date: 09/01/2019</b>
The technical specification are checked and found correct. The feeder details as per onsite practice are found correct. CAR is thus closed.				

CAR ID	02	Section no.	D.2	Date: 03/07/2018
<b>Description of CAR</b>				
The latest methodology available on UN web site is ACM 002 version 18.1, however PP applied version 18. Corrective action is sought for the same in the relevant section of the PDD.				
<b>Project participant response</b>				<b>Date: 09/01/2019</b>
<i>PDD has been revised as per latest Methodology ACM002 Version 19.0.</i>				
<b>Documentation provided by project participant</b>				
<i>Revised PDD</i>				
<b>DOE assessment</b>				<b>Date: 09/01/2019</b>
The latest methodology is now used for the project activity as per the requirement of UN. CAR is thus closed.				

CAR ID	03	Section no.	D.3	Date: 03/07/2018
<b>Description of CAR</b>				
The remaining operational lifetime of the Plant is not described in the PDD as per the Tool to calculate the remaining lifetime of the equipment. Corrective action is sought and Supporting of the same is also missing				
<b>Project participant response</b>				<b>Date: 09/01/2019</b>
<i>Supporting documents (letter from OEM) for operational life of the plant equipment is attached. The remaining lifetime as per the requirement "Tool to calculate the remaining lifetime of the equipment" is now submitted to the DOE and the same is updated in the revised PDD.</i>				
<b>Documentation provided by project participant</b>				
<i>Letter from OEM</i>				

<b>DOE assessment</b>			<b>Date:</b> 09/01/2019
The remaining lifetime letter from OEM dated 01 /11/2018 is checked by assessment team and confirm that project has operational lifetime available for 2 <sup>nd</sup> crediting period. CAR is thus closed.			
<b>CAR ID</b>	04	<b>Section no.</b>	D.4
<b>Date:</b> 03/07/2018			
<b>Description of CAR</b>			
The estimated emission reduction sheet is not submitted to the assessment team. The estimated value is thus reserved till submission of further documents			
Moreover, the supporting's for PLF as considered in section B.6.3 is not submitted to the assessment team. CAR is thus raised			
CEA is now revised emission factor.			
<b>Project participant response</b>			<b>Date:</b> 09/01/2019
The Following corrections done as below:			
<ol style="list-style-type: none"> <li>1. The estimated emission reduction is now corrected and submitted to the DOE</li> <li>2. The PLF used in the estimated data as per the 1<sup>st</sup> crediting period is used for the project</li> <li>3. CEA database version 13 is now applied and the PDD is corrected for the same,</li> </ol>			
<b>Documentation provided by project participant</b>			
<ol style="list-style-type: none"> <li>1. Revised ER Calculation Sheet- Version 02</li> <li>2. Estimated PLF as per the registered PDD for 1<sup>st</sup> CP</li> <li>3. CEA database</li> </ol>			
<b>DOE assessment</b>			<b>Date:</b> 09/01/2019
Following are the observation of the DOE:			
<ol style="list-style-type: none"> <li>1. The estimated emission reduction sheet is found correct</li> <li>2. The PLF as mentioned in the registered PDD of the 1<sup>st</sup> CP is checked and found correct by the assessment team. The same PLF is used for estimated emission reduction calculation for the 2<sup>nd</sup> CP.</li> <li>3. The latest CEA version is checked and found correct. CAR is thus closed.</li> </ol>			

<b>CAR ID</b>	05	<b>Section no.</b>	D.5
<b>Date:</b> 03/07/2018			
<b>Description of CAR</b>			
The Monitoring onsite practice is as per the previous registered PDD. However JMR sheets is not provided to assessment team to confirm the same.			
Corrective action is sought for the same.			
<b>Project participant response</b>			<b>Date:</b> 09/01/2019
The Monitoring practice as mentioned in the registered PDD for 1 <sup>st</sup> Cp is continuing in the 2 <sup>nd</sup> CP as well. The JMR sheets are now submitted to the DOE for further check.			
<b>Documentation provided by project participant</b>			
Copy of invoice and JMR sheets is now submitted to the DOE			
<b>DOE assessment</b>			<b>Date:</b> 09/01/2019
The monitoring practice followed onsite is as per the requirement of latest methodology. There is no change in monitoring practice from the 1 <sup>st</sup> Crediting period and thus the same is acceptable to the assessment team. CAR is thus closed.			

Table 3. FAR from this validation

<b>FAR ID</b>	xx	<b>Section no.</b>	
<b>Date:</b> DD/MM/YYYY			
<b>Description of FAR</b>			
<b>Project participant response</b>			<b>Date:</b> DD/MM/YYYY

Documentation provided by project participant	
DOE assessment	Date: DD/MM/YYYY

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**Document information**

<i>Version</i>	<i>Date</i>	<i>Description</i>
02.0	31 October 2017	Revision to align with the requirements of the “CDM validation and verification standard for project activities” (version 01.0).
01.0	23 March 2015	Initial publication.
Decision Class: Regulatory Document Type: Form Business Function: Renewal of crediting period Keywords: crediting period, project activities, validation report		