





**Validation report form for post-registration changes for
CDM project activities
(Version 02.0)**

BASIC INFORMATION

Title and UNFCCC reference number of the project activity	San Antonio El Sitio Wind Power Project UNFCCC Ref no. 6973
Process track	<input checked="" type="checkbox"/> Prior approval <input type="checkbox"/> Issuance <input type="checkbox"/> Renewal of crediting period
Version number of the validation report on PRCs	03
Completion date of the validation report on PRCs	17/07/2018
Type(s) of PRCs	<input type="checkbox"/> Temporary deviations from the registered monitoring plan, applied methodologies or applied standardized baselines <input type="checkbox"/> Corrections <input checked="" type="checkbox"/> Changes to the start date of the crediting period <input type="checkbox"/> Inclusion of a monitoring plan <input type="checkbox"/> Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines, or other applied standards or tools <input checked="" type="checkbox"/> Changes to the project design <input type="checkbox"/> Changes specific to afforestation and reforestation project activities
Version number of PDD to which this report applies	Version 04.3, dated 04/07/2018
Project participants	Eólico San Antonio El Sitio, S.A.
Host Party	India
Applied methodologies and standardized baselines	"Consolidated baseline methodology for grid-connected electricity generation from renewable sources" ACM0002, Version 12.3.0
Mandatory sectoral scopes linked to the applied methodology	Sectoral Scope 1 – Energy industries (renewable/ non-renewable sources),
Conditional sectoral scopes linked to the	N/A

applied methodologies	
Name and UNFCCC reference number of the DOE	 LGAI Technological Center, S.A. (Applus+ Certification) UNFCCC ref.No-E-0032
Name, position and signature of the approver of the validation report on PRCs	Name: Juan Sendín Caballero Position: Applus+ Certification B.U. Managing Director Signature: 

SECTION A. Executive summary

>>The project activity consists of 16 WTGs (3.45 MW capacity each), making the total installed capacity to be 55.2MW in Los Llanos village of the municipality of Villa Canales in Guatemala. The WTGs are supplied and maintained by Vestas. The First WTG has been commissioned on 19/04/2015. The commissioning certificate /13/ has been verified by assessment team.

All 16 WTGs are fully functional and the assessment team verified this during the desk review of documents.

The basic details of the project activity are mentioned below:

Project title	San Antonio El Sitio Wind Power Project
UNFCCC registration number	6973
Date of registration	24/08/2012
Sectoral scope	1 – Energy industries (renewable/ non-renewable sources).
Methodology/ies applied	Approved consolidated baseline methodology ACM0002, Version 12.3.0
Project participant	Eólico San Antonio El Sitio, S.A.
Location of Project Activity	Los Llanos village of the municipality of Villa Canales in Guatemala

Scope of validation

LGAI Technological Center, S.A. (hereafter referred to as Applus+ Certification) has been contracted by Eólico San Antonio El Sitio, S.A. to conduct the validation of project design change for the CDM project activity “San Antonio El Sitio Wind Power Project” (UN ref no. 6973) in Guatemala.

During the course of validation review of revised PDD version 04.3 dated 04/07/2018, the PP proposes Post Registration Changes to the project activity in order to address the actual implementation status of project. The scope of validation remains limited to the proposed changes to the registered PDD. This validation is an independent and objective review of the post registration changes proposed in the revised PDD against latest CDM Validation and Verification Standard (CDM VVS for PAs version 01.0), Project Standard (CDM PS for PAs version 01.0), Project Cycle Procedures (CDM PCP for PAs version 01.0) and other related requirements, as appropriate.

Validation process

The validation of PRC process is undertaken by validation team that involved the desk review of proposed changes as submitted by the PP, undertaking skype-call (teleconference), several interviews or interactions with the representative of PP, reporting and closure of findings, as appropriate, and preparing a draft validation report complying with the CDM requirements. An independent Technical Review team reviews the validation report prepared by the team. The final validation report accepted by Technical Reviewer is then approved on behalf of Applus+ Certification and processed further as per CDM procedures.

Conclusion

The description in the revised PDD, Version 04.3 dated 04/07/2018 meets all relevant UNFCCC requirements for the CDM and correctly applies the selected baseline and monitoring methodology.

This report is the assessment opinion for all the changes that are proposed in the registered PDD, the changes are permanent in nature and therefore there is no temporary deviation from the registered monitoring plan and request is submitted as prior approval track. The proposed changes of the start date of crediting period of a registered CDM project activity is between one and two years and so in application of the PS v01 Para 235 it does not fall under this Para conditions, so request for prior approval is needed as per next i.e. Para 236 of PS v01. .

This report also confirms that the start date of crediting period is changed from 01/11/2013 to 19/04/2015 in section C.3.2 of the PDD version 4.3 dated 04/07/2018, the changes are accordance to CDM VVS for PA v01.0 Para 290 to 291 and Project Standard for PA v01.0 Para 236.

SECTION B. Validation team, technical reviewer and approver

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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	Interviews	Validation findings
1.	Team Leader	OR	Ahirwar	Vivek Kumar	GCEES	Y	N	Y	Y
2.	Technical Expert (TA1.2)	OR	Ahirwar	Vivek Kumar	GCEES	Y	N	Y	Y
3.	Financial/ Other Expert	OR	Ahirwar	Vivek Kumar	GCEES	Y	N	Y	Y
4.	Technical Expert Trainee and Observer as Auditor in Training	IR	Calle de Miguel	Agustín	Applus+ Certification	Y (as trainee)	N	Y (as trainee)	N

B.2. Technical reviewer and approver of the validation report on PRCs

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	Cortés	Miguel	Applus+ Certification
2.	Technical Expert (TA1.2)	EI	Cortés	Miguel	Applus+ Certification
3.	Approver	IR	Sendín	Juan	Applus+ Certification

SECTION C. Means of validation**C.1. Desk/document review**

>>Applus+ Certification conducted a desk review as under:

- A review of the data and information presented to verify their completeness;
- A review of the monitoring plan, the monitoring methodology including applicable tool(s) and, where applicable, the applied standardized baseline, paying particular attention to the frequency of measurements, the quality of metering equipment including calibration requirements, and the quality assurance and quality control procedures;

- An evaluation of data management and the quality assurance and quality control system in the context of their influence on the generation and reporting of emission reductions;

In addition to the monitoring documentation, Applus+ Certification has reviewed;

- The registered PDD Version 03 dated 15/06/2012, revised PDD version 04.3, dated 04/07/2018 and the monitoring plan, including its intermediate versions;
- The applied monitoring methodology (ACM0002 Version 12.3.0);
- The monitoring report (all versions) to verify that it is as per the standardized format;
- Any other information and references relevant to the project activity's emission reductions (e.g. IPCC reports, data on electricity generation in the national grid or laboratory analysis and national regulations).

The complete list of documents reviewed is included under Appendix 3.

C.2. On-site inspection

The on-site inspection is found not mandatory for presented changes in the PDD as assessed accordance to Para 301 and Para 124 which is further followed the guidelines of Para 30 (a) & 30 (b) of CDM VVS for PAs version 01.0, as total estimated annual average of greenhouse gas (GHG) emission reductions or net anthropogenic GHG removals is 81,392 t CO₂eq which is less than 100,000 t CO₂eq; and also there is no such pre-project information that is relevant to the requirements for registration of the project activity and may not be traceable after the registration. As it is justified that change in project capacity (as project design change) and change in start date of the crediting period, is not require on-site inspection. Therefore, the assessment team has done Skype-call (teleconference) and several interviews and interactions with project participant's representative and following point has been covered during these call and interactions as followed the guidance to Para 31 of CDM VVS for PAs version 01.0.

Duration of interview call:22/02/2018				
No.	Activity performed	Site location*	Date	Team member
1.	Confirm the implementation and operation of the project;	WTG project site at Los Llanos village of the municipality of Villa Canales in Guatemala (*Please note: Site Location mentioned for discussion purpose and there is no visit of site conducted , however interview was done over Skype-call (teleconference))	22/02/2018	Vivek & Agustín
2.	Review the data flow for generating, aggregating and reporting the monitoring parameters;		22/02/2018	Vivek & Agustín
3.	Confirm the correct implementation of procedures for operations and data collection;		22/02/2018	Vivek & Agustín
4.	Cross-check the information provided in the PDD documentation with other sources; Start date of crediting period		22/02/2018	Vivek & Agustín
5.	Review the calculations and assumptions used to obtain the GHG data and ER;		22/02/2018	Vivek & Agustín
6.	Identify if the quality control and quality assurance procedures are in place to prevent or correct errors or omissions in the reported parameters.		22/02/2018	Vivek & Agustín

C.3. Interviews

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Aguirre	Isabel	Legal Representative Eolico San Antonio El Sitio S.A.	22/02/2018	Project Activity Description, implementation and operation of the project. Start date of crediting period Calculations and assumptions used to obtain the GHG data and ER.	Vivek & Agustín

C.4. Sampling approach

>>Not applicable

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

Areas of validation findings	No. of CL	No. of CAR	No. of FAR
Compliance with PDD form	-	-	-
Temporary deviations from the registered monitoring plan, applied methodologies or applied standardized baselines	-	-	-
Corrections	-	-	-
Changes to the start date of the crediting period	1	1	-
Inclusion of a monitoring plan	-	-	-
Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines, or other applied standards or tools	-	-	-
Changes to the project design	-	1	-
Changes specific to afforestation and reforestation project activities	-	-	-
Others (please specify)	-	-	-
Total	1	2	-

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

Means of validation	The project participants used a later version of the PDD form for the revised PDD than the version of the PDD form of the registered PDD. By means of checking updated PDD with the latest applicable and available PDD template form, version 10.1, the DOE can confirm that the information transferred to the later version of the PDD form is materially the same as that in the registered PDD besides those
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	changes highlighted and assessed under this report.
Findings	No finding was raised
Conclusion	The updated PDD is in line with the latest applicable PDD from.

D.2. Temporary deviations from the registered monitoring plan, applied methodologies or applied standardized baselines

Means of validation	Not applicable
Findings	Not applicable
Conclusion	Not applicable

D.3. Corrections

Means of validation	Not applicable
Findings	Not applicable
Conclusion	Not applicable

D.4. Changes to the start date of the crediting period

Means of validation	<p>In revised PDD version 4.3 dated 04/07/2018; the start date of crediting period is changed from 01/11/2013 to 19/04/2015 in section C.3.2 of the PDD. The project start date was changed due to a delay in the financial closure i.e. new start date of crediting period is 19/04/2015 which is date of first WTG commissioned as per commissioning certificate /13/. The assessment team has cross-checked the new start date of crediting period from publically available report/12/ "MINISTERIO DE ENERGÍA Y MINAS República de Guatemala" wherein page 08 confirm commissioning of project activity "Parque Eólico San Antonio El Sitio" as 19/04/2015.</p> <p>The PP has justified the requirement of CDM Project Standard for PA v01.0 Para 236, which says "<i>If the proposed change to the start date of the crediting period of a registered CDM project activity is between one and two years, or between two and four years for a registered CDM project activity hosted by a least developed country, the project participants shall:</i></p> <p>(a) <i>Demonstrate that no changes have occurred to the project activity that would result in a less conservative baseline, or update the baseline using conservative data;</i></p> <p>(b) <i>Demonstrate that substantive progress has been made by the project participants to start the project activity.</i>"</p> <p>The PP has applied latest version of baseline Methodology ACM0002, Version 12.3.0 "Consolidated baseline methodology for grid-connected electricity generation from renewable sources". Accordingly, the PP has demonstrated that the grid emission factor for a baseline must be changed and updated. Hence, the baseline emission factor has been updated in the revised PDD. Based on review of the revised PDD and assumption provided by the PP, the Combined margin emission factor is calculated as</p> <table border="1"> <tr> <td>$EF_{grid,OM-adj,2012-2014}$</td><td>0.681</td></tr> <tr> <td>ω_{OM}</td><td>0.75</td></tr> <tr> <td>$EF_{grid,BM,2014}$</td><td>0.358</td></tr> <tr> <td>ω_{BM}</td><td>0.25</td></tr> <tr> <td>$EF_{grid,CM}$</td><td>0.6</td></tr> </table> <p>Therefore annual estimated emission reduction is calculated as $ER_{ex-ante} = 135,654.59 \text{ MWh} * 0.6 \text{ tCO}_2/\text{MWh} = 81,392 \text{ tCO}_2\text{e}$ per year (after rounding down). Total estimated emission reduction from project during 10 years of crediting period = $813,920 \text{ tCO}_2\text{e}$. This is found to be appropriate, hence accepted.</p>	$EF_{grid,OM-adj,2012-2014}$	0.681	ω_{OM}	0.75	$EF_{grid,BM,2014}$	0.358	ω_{BM}	0.25	$EF_{grid,CM}$	0.6
$EF_{grid,OM-adj,2012-2014}$	0.681										
ω_{OM}	0.75										
$EF_{grid,BM,2014}$	0.358										
ω_{BM}	0.25										
$EF_{grid,CM}$	0.6										

	<p>The PP has further demonstrated that the project has made substantive progress to start the project activity, as is shown in project timeline in Table 4 "Implementation schedule" of PDD document.</p> <table> <tr> <th>Milestone</th><th>Conclusion expected by</th></tr> <tr> <td>1. Environmental Study /14/</td><td>08/2013</td></tr> <tr> <td>2. Sign EPC /15/</td><td>12/2013</td></tr> <tr> <td>5. Financial Due Diligence and Closing/16/</td><td>03/2014</td></tr> <tr> <td>3. Issue Notice to Proceed /17/</td><td>04/2014</td></tr> <tr> <td>4. Turbine Commissioned /13/</td><td>02/2015</td></tr> <tr> <td>5. Turbines Ship and deliver /13/</td><td>03/2015</td></tr> <tr> <td>6. Transmission Line Construction /13/</td><td>05/2015</td></tr> <tr> <td>7. Testing and Commissioning /13/</td><td>05/2015</td></tr> <tr> <td>8. Commercial Operations Date /13/</td><td>05/2015</td></tr> </table> <p>This has been verified with relevant document provided by the PP and found to be correct, hence, accepted.</p>	Milestone	Conclusion expected by	1. Environmental Study /14/	08/2013	2. Sign EPC /15/	12/2013	5. Financial Due Diligence and Closing/16/	03/2014	3. Issue Notice to Proceed /17/	04/2014	4. Turbine Commissioned /13/	02/2015	5. Turbines Ship and deliver /13/	03/2015	6. Transmission Line Construction /13/	05/2015	7. Testing and Commissioning /13/	05/2015	8. Commercial Operations Date /13/	05/2015
Milestone	Conclusion expected by																				
1. Environmental Study /14/	08/2013																				
2. Sign EPC /15/	12/2013																				
5. Financial Due Diligence and Closing/16/	03/2014																				
3. Issue Notice to Proceed /17/	04/2014																				
4. Turbine Commissioned /13/	02/2015																				
5. Turbines Ship and deliver /13/	03/2015																				
6. Transmission Line Construction /13/	05/2015																				
7. Testing and Commissioning /13/	05/2015																				
8. Commercial Operations Date /13/	05/2015																				
Findings	CAR#2 and CL#1 raised and closed.																				
Conclusion	The start date of crediting period is changed from 01/11/2013 to 19/04/2015 in section C.3.2 of the PDD, the changes are in accordance to CDM Project Standard for PA v01.0 Para 31 to 33 and Project Standard for PA v01.0 Para 236.																				

D.5. Inclusion of a monitoring plan

Means of validation	Not applicable
Findings	Not applicable
Conclusion	Not applicable

D.6. Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines, or other applied standards or tools

Means of validation	Not applicable
Findings	Not applicable
Conclusion	Not applicable

D.7. Changes to the project design

Means of validation	<p>The registered Project Activity design changes in the effective output capacity due to increased installed capacity of each WTG. There was an increase in the installed capacity of the project from the installation of 16 Nos of Vestas V112 wind turbine generators with each capacity of 3 MW to the installation of 16 Nos of Vestas V112 wind turbine generators with each capacity of 3.45 MW. The PP has provided technical details of WTG/20/ which has been confirmed and found to be correct. Furthermore, the technology employed has been cross-checked from the report /12/available publically, "MINISTERIO DE ENERGÍA Y MINAS República de Guatemala" wherein page 08 confirm technical details of WTG and project. The capacity addition was made possible by an update available in the equipment; all other technical specifications remain constant. A power up-grade contract/15/ was signed 06/12/2012 since the owner wanted to improve the production of each WTG. After reviewing a full "Wind Power Plant Assessment Report" /14/ it was determined that the up-grade would prove beneficial to the project and would outweigh the increase in investment.</p>
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	<p>In accordance to the CDM project standard for project activities, version 01.0, section 8.3.5 changes to project design: <i>“Changes to a registered CDM project activity may include but are not limited to changes to the effective output capacity due to increased installed capacity or increased number of units, or installation of units with lower capacity or units with a technology which is less advanced than that which is described in the PDD.”</i></p> <p>Therefore, the project participant has been reported in the revised PDD the impacts of the proposed or actual changes to the registered CDM project activity on the following:</p> <ul style="list-style-type: none"> a) The applicability and application of the applied methodologies and, where applicable, the applied standardized baselines, with which the project activity has been registered; b) The compliance of the monitoring plan with the applied methodologies and, where applicable, the applied standardized baselines; c) The level of accuracy and completeness in the monitoring of the project activity compared with the requirements contained in the registered monitoring plan; d) The additionality of the project activity; e) The scale of the project activity. <p>The PP has demonstrated that the increase in capacity does not affect any of the above. The project activity remains additional as no other wind energy projects were commissioned prior to its implementation. The project was the first in the applicable geographical area as country “Republic of Guatemala” that applies a WTG technology for power generation. No power plants of any scale currently use wind resources to generate electricity in Guatemala. This was confirmed from report/12/ available publically, “MINISTERIO DE ENERGÍA Y MINAS República de Guatemala” wherein page 07 mentioned graph of power generation from Wind power generation plant, there are two plants mentioned in year 2015 in which project activity is first which is commissioned in 19/04/2015 and other wind project commissioned in 06/12/2015. The PP has demonstrated in revised PDD as per guidelines on additionality of first-of-its-kind project activities (v 01.0)/19/. Therefore the project is still identified as a first-of-its-kind project activity as per the original PDD and as per Methodological tool Additionality of first of its kind project activities, the same has been checked and verified with all supporting and found to be correct, hence accepted as in accordance to CDM project standard for project activities, version 01.0, section 8.3.5.</p>
Findings	CAR#1 was raised and closed
Conclusion	The changes in project design is found to justified as accordance to the CDM project standard for project activities, version 01.0, section 8.3.5, hence accepted.

D.8. Changes specific to afforestation and reforestation project activities

Means of validation	Not applicable
Findings	Not applicable
Conclusion	Not applicable

SECTION E. Internal quality control

>>As a final step of validation, the final documentation including the validation report has to undergo an internal quality control by the Technical Reviewer. Each report has to be finally approved either by the DOE's Technical Manager or the Deputy. In case one of these two persons is part of the assessment team, the approval can only be given by the person who is not a part of the assessment team. If the documents have been satisfactorily approved, the Request for Issuance is submitted to the CDM-EB along with the relevant documents.

SECTION F. Validation opinion

>>Applus+ Certification has performed the validation of the post registration changes of the project activity 6973 "San Antonio El Sitio Wind Power Project". The validation was performed on the basis of rules and requirements defined by UNFCCC for the CDM project activities. The review of the revised PDD, supporting documentation and subsequent follow-up actions (including skype-call/interviews), have provided Applus+Certification with sufficient evidence to determine the fulfilment of stated criteria. The changes proposed are summarized in section D.4 and D.7 of this report.

The description in the revised PDD, Version 04.3 dated 04/07/2018 meets all relevant UNFCCC requirements for the CDM and correctly applies the selected baseline and monitoring methodology. This report is the assessment opinion for all the changes that are proposed in the registered PDD, the changes are permanent in nature and therefore there is no temporary deviation from the monitoring plan. The proposed changes to the registered PDD are covered under paragraph 1 of Appendix of the CDM Project Standard for project activities version 01.0 and hence post-registration changes can be submitted for approval under issuance track.. However, there is a change in start date of crediting period of a registered CDM project activity between one and two years, therefore, the revised PDD is submitted together with request for change in start date of crediting period as per Para 236 of PS v01 and post registration changes as per Para 241-242 of PS v01.

Appendix 1. Abbreviations

Abbreviations	Full texts
ABT	Availability Based Tariff
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CDM PCP	Clean Development Mechanism Project Cycle Procedure
CDM PS	Clean Development Mechanism Project Standard
CDM VVS	Clean Development Mechanism Validation and Verification Standard
CEA	Central Electricity Authority
CER	Certified Emission Reduction
CL	Clarification Request
DNA	Designated National Authority
DOE	Designated Operational Entity
EB	Executive Board
EF	Emission Factor
ER	Emission Reductions
FAR	Forward Action Request
GCEES	Green Carbon Energy & Environment Services
GHG	Greenhouse Gas(es)
IPCC	Intergovernmental Panel on Climate Change
MP	Monitoring Plan
MWh	Megawatt hour
O&M	Operation and Maintenance
PDD	Project Design Document
PP	Project Participant
PPA	Power Purchase Agreement
PRC	Post Registration Changes
PS	Project Standard
TR	Technical Review
UNFCCC	United Nations Framework Convention on Climate Change
VVS	Validation and Verification Standard
WTG	Wind Turbine Generator

Appendix 2. Competence of team members and technical reviewers

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 the 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	Qualification	Coverage of scope	Coverage of technical Area	Financial aspect	Attendance to the On-Site Assessment
Vivek Kumar Ahirwar	Lead Auditor and Technical Expert (LA/TE)	Yes (1)	Yes (1.2)	N/A	No
Agustín Calle de Miguel	AiT (as Observer) and TEiT	No	No	N/A	No
Miguel Cortés	Technical Reviewer (TR)	Yes (1)	Yes (1.2)	N/A	N/A

The curricula vitae of the DOE's validation team members are provided below:

Vivek Kumar Ahirwar is a BEE-Certified Energy Auditor by Govt. of India with over eight years of relevant experience in energy efficiency, energy audit, thermal and electrical energy generation technology from renewable source and energy conservation in energy intensive industries, designated consumers and commercial buildings, implementation of energy conservation building codes, research, process and green building projects. He is a certified lead auditor for ISO 14001 EMS and 14064. He has experience under various categories of projects stating from renewable to waste to supercritical projects and WCD. He has successfully audited more than 100 GHG (CDM/VCS/GS) projects in different states across the India. He has done Master in Technology (Energy Management) from a premier institute, School of Energy & Environmental Studies, DAVV, Indore (M.P.), India and Bachelor of Engineering (Mechanical Engineering)

Miguel Cortés holds a Bachelor Science Degree on Civil and Environmental Engineering, being specialized on Hydric Resources. He has worked as CDM and environmental consultant for different industries of multidisciplinary sectors world widely. Miguel counts with several years of CDM experience, working and being qualified as Lead Auditor and Technical Reviewer for different DOE's world widely. Furthermore, he has focused his professional CDM portfolio career within LATAM, developing projects in Argentina, Mexico, Panama, Colombia and Chile among others.

Mr. Agustín Calle is Master in Environmental Control and Management in Companies and Bachelor's Degree in Environmental Sciences. His experience covers eight years acting as sustainability & GHG consultant (among other consultancy services) and audit services (internal and second party, for private entities and public entities as well), as well as Quality and Environmental Management Systems Responsible and implementation consultant. Also he has participated into National Standardization Committees about sustainability issues as Vocal and as Coordinator for Sustainability Indicators Working Group within the review of Spanish Sustainability in Mining Management Standards. He has been consultancy project manager for CDM projects in South America in CDM technical area 1.2.

Appendix 3. Documents reviewed or referenced

No	Author	Title	References to the document	Provider
1	PP	Revised PDD (Final)	Version 04.3 ,Dated 04/07/2018	Other
2	PP	Registered PDD	Version 05 ,Dated 14/09/2012	Other
3	PP	Revised PDD(intermediate)	Version 03.1, dated 21/11/2017 Version 03.2 ,Dated 20/02/2018 Version 04.0 ,Dated 20/04/2018 Version 04.1 ,Dated 02/05/2018 Version 04.2 ,Dated 28/05/2018	Other
4	TUV Nord	Validation Report	Report No: 8000408062 – 12/227,dated 06/08/2012	Other
5	UNFCCC	Approved Consolidated Methodology ACM0002	Version 12.3.0	Other
6	UNFCCC	CDM VVS for project activities	Version 01	Other
7	UNFCCC	CDM PS for project activities	Version 01	Other
8	UNFCCC	CDM PCP for project activities	Version 01	Other
9	UNFCCC	UNFCCC webpage for the project activity ¹	-	Other
10	UNFCCC	Project design document form for CDM PAs	Version 10.1, dated 28/06/2017	Other
11	PP	A declaration from the bank on the financial closure	-	Other
12	PP	Report “MINISTERIO DE ENERGÍA Y MINAS” República de Guatemala	Dated 15/02/2017	Other
13	PP	Project Commissioning Certificate (Transmission Line Construction , Testing and Commissioning , Commercial Operations Date)	05/2015	Other
14	PP	Environment Study (Wind Power Plant Assessment Report)	08/2013	Other
15	PP	Signed EPC (Contract)	12/2013	Other
16	PP	Financial Due Diligence and Closing	03/2014	Other
17	PP	Issue Notice to Proceed	04/2014	Other
18	PP	ER sheet	Version 02, dated 28/05/2018	Other
19	UNFCCC	Guidelines on additionality of first-of-its-kind project activities	Version 01.0	Other
20	PP	Technical details of WTGs	-	Other
21	PP	ER sheet	Version 01	Other

¹<https://cdm.unfccc.int/Projects/DB/RWTUV1344719367.74/view>

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

Table 1. CLs from this validation

CL ID	01	Section no.	D.4 and D.7	Date: 20/02/2018
Description of CL				
Based on review of revised PDD version 3.1 dated 21/11/2017, assessment team observed that The change that have been implemented is the increased capacity of the project activity from 16 WTGs 3MW Vestas V112 to 16 WTGs 3.45 MW Vestas V112, thus the total project capacity change from 48 MW to 55.2 MW. Therefore, the investment has been also increased due to the increase in capacity.				
The PP requested to clarify the followings:				
<ol style="list-style-type: none"> 1. Why the PP has preferred to opt for the increased capacity of each WTG, as more investment is needed? 2. As the baseline is fixed at the time of decision making, and the same baseline needs to be considered continue, the PP is requested to clarify/justify how the emission factor has been modified in revised PDD. 				
Project participant response				Date: 19/03/2018
The PP preferred to opt for the increased capacity as the cost was low compared to the additional energy capacity created since the increase was based on a system optimization and not a change in infrastructure. Emission factor has not been modified.				
Documentation provided by project participant				
Revised PDD version 3.2 dated 20/02/2018				
DOE assessment				Date: 20/03/2018
The PP has submitted the revised PDD and same have been reviewed by the assessment team. Based on review of revised PDD, it is confirm that the no. of WTGs are still same and whereas latest WTG with higher capacity is used during implementation of project activity which result overall capacity of project. The emission reduction calculation is also revised accordingly.				
DOE assessment				Date: 16/04/2018
However, further the PP is requested to clarify why grid emission factor shall not be updated in revised PDD. As if any changes in the output size; then it should be guarantee a conservative baseline emission which is through a conservative grid emission factor. So, kindly please demonstrate and correct the base line grid emission factor.				
Project participant response				Date: 20/04/2018
An updated baseline grid emission factor has been calculated to guarantee a conservative baseline emission for the project.				
Documentation provided by project participant				
Revised PDD San Antonio_3.1_V4 Revised PDD San Antonio_3.1_V4_TC EF-2014 Econegocios				
DOE assessment				Date: 27/04/2018

The PP has submitted revised PDD with correction in baseline grid emission factor. However further following information need to be further clarified:

1. Based on review of Emission Factor calculation, it is not clearly mentioned about project boundary for National Inter-connected System, as the Guatemala share grid connection with their neighbours as confirmed in the CEEN website (http://www.cnee.gob.gt/wp/?page_id=97). Furthermore, the PP is requested to provide Public or legal evidence to demonstrating the specific date of enters of operation.
2. The PP has not demonstrated that the project is still identified as a first-of-its-kind project activity as per step wise procedure of Tool "Additionality of first-of-its-kind project activities".
3. Page 11 in **track change PDD**: project start date referred to as 19/04/2015; however it is not reflected in track change, as the same has been updated during current submission of PDD to UNFCCC. Similarly, other revised section (e.g. appendix 7) of the **track change PDD**; not shown current revision against registered PDD. Therefore, the PP is requested to submit the track change PDD with showing all revision against registered PDD.
4. There are some section of the PDD like Appendix 2, 3, 5 and 6 are not complete or no information has been provided, the PP is requested to provide relevant information if applicable or to mention clearly "Not Applicable".
5. In Appendix 7, the PP is currently applying to Para 237 of the PS 01.0. The change on the start date of CP is between one and two years, (originally 01/11/2013, changed 19/04/2015 (i.e. before 01/11/2015, two years). The PP is requested to clarify why the Para 237 of the PS 01.0 has been applied (as it is for changes of more than two years) instead of Para 236 of the PS 01.0.
6. In revised PDD page 24; Table 11, the year is not updated, please clarify
7. Appendix 4 of revised track changes PDD, some figure and table overlap, please corrects the same.

Project participant response	Date: 02/05/2018
<ol style="list-style-type: none"> 1. Further clarification has been added to the PDD. 2. The project activity remains additional as no other wind energy projects were commissioned prior to its implementation. The proposed project is still identified as a first-of-its-kind project activity as per the original PDD and as per Methodological tool Additionality of first of its kind project activities, version 01.0. The project was the first in the applicable geographical area that applies a technology that is different from any other technologies able to deliver the same output and that have started commercial operation in the applicable geographical area before the start date of the project and the project participant selected a crediting period of 10 years with no option of renewal. The step wise procedure is given in section B.5. Demonstration of additionality. 3. All track changes were not included in previous PDD however they are now reflected in PDD with track changes. 4. Not applicable has been added to annexes that do not require further explanations. 5. The correct paragraph has been incorporated in annex 7. 6. The table had an error in regards to the dates provided, these have been updated. 7. These have been corrected. 	
Documentation provided by project participant	
Revised PDD San Antonio_V4.1	
Revised PDD San Antonio_V4.1_TC	
DOE assessment	Date: 04/05/2018
The PP has submitted the revised PDD and following information has been verified as	
<ol style="list-style-type: none"> 1. The baseline emission factor has been modified and justified in revised PDD, same is found to correct. 2. The PP has provided the step wise procedure is given in section B.5. Demonstration of additionality. This has been found to correct, hence accepted. 3. The PDD with track changes has been provided. 4. The appendix information corrected now. 5. The correct paragraph has been incorporated in annex 7. 6. The table had an error in regards to the dates provided, these have been updated. 7. These have been corrected. 	
DOE assessment	

1. There is some found in with BM calculation (last 5 power plants -SET5-units) in table No.10 value of BM emission factor and Table No. 11. Please clarify.
2. There are further discrepancies between PDD and the official statistical sources with BM. Please check and confirm the same.
3. ER spreadsheet has some wrong references with 2010 year. Please clarify.

Project participant response	Date :04/07/2018
<ol style="list-style-type: none"> 1. There are no errors – Table 11 makes reference to values in table 10 only for the EF grid, BM, 2014, which has the same value in both tables (.358). Other values mentioned in table 11 make reference to OM and weighted default values. 2. Error was corrected although it does not affect the overall outcome of PDD. The statistics were retrieved from official documents from the AMM (amm.org.gt) under Resultados de Operaciones – Anuales – Capacidad Instalada 2015. HidroeléctricaTuto dos and Biomass were not used as they do not have any recorded generation for the 2014 period under Generación Mensual por Planta. 3. These values were updated accordingly 	
Documentation provided by project participant	
PDD version 4.3, dated 04/07/2018 and ER sheet version 02	
DOE assessment	Date:17/07/2018
<p>The PP has submitted the revised PDD and ER sheet and following information has been verified :</p> <ol style="list-style-type: none"> 1. The clarification has been provided by the PP and same is found to be correct. 2. The discrepancies between PDD and the official statistical sources with BM have been corrected in revised PDD. 3. ER spreadsheet has been corrected by the PP. <p>Based on review of above information, the revised PDD and ER are found to be correct, hence accepted. The CL#1 is closed satisfactorily.</p>	

Table 2. CARs from this validation

CAR ID	01	Section no.	B	Date:20/02/2018
Description of CAR				
Based on review of section C.3.2 of the revised PDD version 3.1 dated 21/11/2017; the start date of project activity is changed from 01/11/2013 to 19/04/2015. The PP is requested to provide reason for this change and also provide supporting document to justify the start date of project activity as per requirement of CDM Project Standard for PA v01.0 Para 31 to 33.				
Project participant response				Date: 19/03/2018
<i>The start date was changed due to a delay in the financial closure. Attached a declaration from the bank on the financial closure.</i>				
Documentation provided by project participant				
<i>Revised PDD version 3.2 dated 20/02/2018 and declaration from the bank on the financial closure</i>				
DOE assessment				Date:20/03/2018
The PP has submitted the revised PDD and same have been reviewed by the assessment team. Based on review of revised PDD and supporting documents for financial closure, it is appropriately justify the delay in start date of project activity. Therefore CAR#1 satisfactorily closed.				

CAR ID	02	Section no.	B.6	Date:20/02/2018
Description of CAR				

Based on review of the revised PDD version 3.1 dated 21/11/2017; it was observed that the Changes to the start date of the crediting period in section C.3.2 is changed from 01/11/2013 to 19/04/2015.

Therefore, the PP is requested to justify the requirement of CDM Project Standard for PA v01.0 Para 236, which says *"If the proposed change to the start date of the crediting period of a registered CDM project activity is between one and two years, or between two and four years for a registered CDM project activity hosted by a least developed country, the project participants shall:*

(a) Demonstrate that no changes have occurred to the project activity that would result in a less conservative baseline, or update the baseline using conservative data;

(b) Demonstrate that substantive progress has been made by the project participants to start the project activity."

Furthermore, the Appendix 7 of the revised PDD has not provided the following details, please clarify :

1. The change is between one and two years and so the PP shall demonstrate the above two points under Appendix 7.
2. The explanation of the each point (a) and (b) in Appendix and also how the project activity complies with these requirements.

In additionally, the PDD not demonstrates clearly and there is no reference of CDM relevant guidelines. Please clarify?

Project participant response	Date: 19/03/2018
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Reference to the CDM relevant guidelines has been included in the PDD.

The grid emission factor for a standardized baseline must only be changed to a conservative one (updated) in case that the standardized baseline is impacted. Since the standardized baseline remains the same for this project, the emission factor does not need to be updated.

The project has made substantive progress to start the project activity, as is shown in project timeline in PDD document.

Documentation provided by project participant
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Revised PDD version 3.2 dated 20/02/2018

DOE assessment	Date: 20/03/2018
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The PP has submitted the revised PDD and same has been reviewed by the assessment team. Based on review of revised PDD and supporting documents, it was verified that relevant section of the PDD is appropriately justify and modified the change in project activity. Therefore CAR#2 satisfactorily closed.

Table 3. FARs from this validation

FAR ID	XX	Section no.	Date: DD/MM/YYYY
Description of FAR			
N/A			
Project participant response			Date: DD/MM/YYYY
Documentation provided by project participant			
DOE assessment			Date: DD/MM/YYYY

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Document information

Version	Date	Description
02.0	31October2017	Revision to align with the requirements in the “CDM validation and verification standard for project activities” (version 01.0).
01.0	23March 2015	Initial publication.
Decision Class: Regulatory		
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