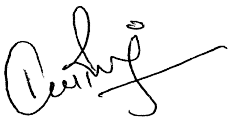
Validation report form for post-registration changes for CDM project activities

(Version 02.0)

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

BASIC INFORMATION	
Title and UNFCCC reference number of the project activity	SHP MORRO AZUL CDM PROJECT (JUN1164) UNFCCC ref. #: 8879
Process track	☐ Prior approval ☒ Issuance ☐ Renewal of crediting period
Version number of the validation report on PRCs	02.0
Completion date of the validation report on PRCs	12/11/2018
Type(s) of PRCs	☐ Temporary deviations from the registered monitoring plan, applied methodologies or applied standardized baselines ☐ Corrections ☒ Changes to the start date of the crediting period ☐ 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 ☐ Changes specific to afforestation and reforestation project activities
Version number of PDD to which this report applies	Version 3
Project participants	Risaralda Energía S.A.S. E.S.P.
Host Party	Colombia
Applied methodologies and standardized baselines	ACM0002 version 13 - Consolidated baseline methodology for grid-connected electricity generation from renewable sources
Mandatory sectoral scopes linked to the applied methodology	Sectoral Scope 1 – Energy Industries (Renewable / Non-renewable Sources)
Conditional sectoral scopes linked to the applied methodologies	N/A
Name and UNFCCC reference number of the DOE	Earthood Services Private Limited (ESPL) (ref E- 0066)

Name, position and signature of the approver of the validation report on PRCs	 Dr. Kaviraj Singh Managing Director

SECTION A. Executive summary

Brief summary of the project activity

The project activity consists in generating renewable energy through the construction of a small hydro power plant (SHP) with installed capacity of 19.9 MW. The SHP project also comprehends a small reservoir of 0.027 km².

The project activity reduces the GHG emissions through dispatching GHG-free electricity to the Colombian National Interconnected System.

The SHP is located in the Risaralda River, Cauca River basin, in the municipalities of Belén de Umbria and Anserma – Risaralda and Caldas Departments, Colombia.

The operation start date of the SHP is on 10/09/2016/12/ (Start of commercial operation).

Scope of validation

Risaralda Energía S.A.S. E.S.P. has contracted Earthood Services Private Limited to conduct the verification and certification of emission reductions reported for the CDM project activity "SHP MORRO AZUL CDM PROJECT (JUN1164)" for the period from 10/09/2016 to 30/06/2018 (including both days). Moreover, the DOE will be conducting the validation of this post registration change.

The verification is the periodic independent review and ex post determination of the monitored reductions in GHG emissions that have occurred due to the registered CDM project activity during the defined monitoring period.

The validation of the Post registration changes is the independent review of the deviations from the project monitoring plan that have occurred due to the registered CDM project activity during the defined monitoring period.

The scope of the validation is to establish/verify that:

- the changes proposed for the project activity (change of project design and change of start date of crediting period) are in accordance with applied version of the CDM Project Standard for PA, CDM Validation and Verification Standard for PA, applied methodology and tools.

Validation process

The validation of this Post Registration Change is part of the verification process of this Project Activity. For the details on this process, please refer to the Verification Report to which this report is attached. This Post registration change will be requested in the issuance track, as it does not involve prior approval by the board.

Conclusion

Earthood Services Private Limited has performed the validation of the correction of project information and change of start date of crediting period of the CDM PA "SHP MORRO AZUL CDM PROJECT (JUN1164)".

The validation team has confirmed that this deviation request complies with all eligibility criteria for the Post registration Changes in the registered CDM PA and that the proposed change in the project design and change of start date aims uniquely inform the actual data and current situation of the project activity.

The validation team concluded that the proposed deviation complies with all relevant CDM procedures/standards/guidance.

SECTION B. Validation team, technical reviewer and approver

This process is part of the verification process of this PA. For details, please refer to the section B of the Verification Report to which this report is attached.

SECTION C. Means of validation

C.1. Desk/document review

A desk review was conducted by the validation team that included:

a. a review of the data and information presented to verify its completeness;

b. a review of installed equipment of all SHPs;

c. A review of all applicable Standards, Guidelines and Procedures related to CDM PA.

A complete list of documents/evidences reviewed is included as Appendix 3.

C.2. On-site inspection

This process is part of the verification process of this PA. For details, please refer to the section D.2 of the Verification Report to which this report is attached.

C.3. Interviews

This process is part of the verification process of this PA. For details, please refer to the section D.3 of the Verification Report to which this report is attached

C.4. Sampling approach

Not applicable as no sampling has been used during the validation

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		1	
Changes to the start date of the crediting period		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			
Changes specific to afforestation and reforestation project activities			
Others (please specify)			
Total	-	2	-

SECTION D. Validation findings

D.1. Compliance with PDD form

The revised PDD has applied the latest available CDM-PDD-Form version 10.1. All information were correctly transferred from registered PDD version 2 to this revised new version 3. Information updated due to the proposed design change and change of start date have been changed. Moreover, some minor editorial corrections have been done and information regarding the PA approval and authorization have been included. The revised PDD was completed in accordance with instructions for completing the PDD form version 10.1.

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

Not applicable to this Validation

D.3. Corrections

Not applicable to this Validation

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

Means of validation	It has been observed that the project activity did not start its operation on the date forecasted in the registered PDD. Thus, the project participants requested the change of start date of crediting period in accordance with provisions from PS for PA version 01.0. The proposed change on start date of crediting period is from 01/02/2015 to 10/09/2016 (1 year and seven months approximately). Thus, the following paragraph of PS is applicable: *236 - 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.* As per item (a) above, it could be observed that changes occurred to the project activity: the number of generation units reduced from 3 to 2. Consequently the assured energy was updated and so was the Estimated emission reductions. The Estimated energy generated is given by the multiplication of Assured energy (MW average) by the period of time. When changing from 3 to 2 generation sets in project, new electricity generation studies were carried out/18/. This study demonstrated that the assured energy guaranteed for this project activity is 13.07 MW average instead of the 14.17 MW average validated in the registered PDD. Thus the estimated emission reductions were updated. This update resulted in more conservative estimated emission reductions. Thus, apart from this change of starting date of crediting period, change in the project design was also requested. Refer to section D.7 below for further details. As per item (b) above, delays occurred due to issues during construction phase and change in the number of generation units. The proof that substantive progress has been made is that the project already started its operation on 10/09/2016. Thus, it is proved that the project activity did not postpone the start date without having real intention of start the PA's operation.
Findings	CAR 2 *The project activity has not being monitored from the start date of its crediting period.*

Conclusion	The start date has been defined as the commercial start date of the Hydro power plant. The evidence provided informs that the power plant starts its operations at 0:00 hs of the 10/09/2016, unlike stated originally in the PDD. The change of start date of crediting period follows the provisions of PS for PA version 01.0 para 236 (a) and (b) as they demonstrate that no changes have occurred to the project activity that would result in a less conservative baseline and that substantive progress has been made by the project participants to start the project activity. The request is being made in accordance with PCP for PA version 01.0 para 129, where it is said that "*The DOE, after validating that the changes to the registered CDM project activity meet all applicable requirements for post-registration changes in the "CDM project standard for project activities" by following the applicable provisions of the "CDM validation and verification standard for project activities" and other applicable CDM rules and requirements, shall submit a request for approval by the Board of changes to the registered CDM in accordance with paragraphs 133 and 134 below (prior-approval track) or together with the next request for issuance of CERs in accordance with section 8.1.1 below (issuance track). The choice of whether the DOE submits the request for approval via the prior-approval track or the issuance track shall be at the discretion of the project participants."* This request is being made under issuance track as per paragraph above.

D.5. Inclusion of a monitoring plan

Not applicable to this Validation

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

Not applicable to this Validation

D.7. Changes to the project design

Means of validation

Description:
A change in project design has been requested as the number of generator/turbine set has changed from 3 to 2 prior the start of operation of the Project activity.

Generators

Characteristic	Unit	value
Manufacturer/model		WEG/ SH10 1120
Quantity	-	2
Serial Numbers	-	1030028785 1030009633
Type		Synchronic
Apparent power[1]	kVA	11,250
Cos ϕ	-	0.90
Frequency	Hz	60

Turbines

Characteristic	Unit	value
Manufacturer		Hisa

[1] It is important to state that the effective power of the hydropower plant is equal to 19.9 MW which was given by discounting the internal generator losses from the nameplate installed capacity. This value was validated in the PDD and is reported in official sources/20/ as being the installed capacity of SHP. This value has no influence in the estimated calculations as the electricity generated is obtained by the assured energy (MW average) X the number of operation hours.

Quantity	-	2
Serial Numbers	-	2265 2266
Power	MW	10.260
Flow	m^3/s	8.80
Rotation	rpm	720
Head	m	127.22

As consequence, in the PDD, the assured energy (MW average) was updated. For its consequences, refer to paragraphs below. Moreover, the river flow was also updated as per information provided in the hydrological study/30/ from 15.27 m^3/s to 18.22 m^3/s with no influence in the baseline calculations
Below, the validation team assessed the impacts of the proposed change as per VVS for PA para 303 and PS for PA para 243 as follows:

(a) The applicability and application of the applied methodologies and, where applicable, the applied standardized baselines, with which the project activity has been registered;

The change in the number of generation sets does not influence the applicability of the applied methodology as the project activity remains as the installation of a greenfield hydro power plant with a new single reservoir.

(b) The compliance of the monitoring plan with the applied methodologies and, where applicable, the applied standardized baselines;

No change in the monitoring plan occurred due to this change. The monitoring plan remains in compliance with applied methodology. The monitored parameters remained unaltered.

(c) The level of accuracy and completeness in the monitoring of the project activity compared with the requirements contained in the registered monitoring plan;

The level of accuracy and completeness in the monitoring plan does not change as the same meters, located at the substation would be used to measure the electricity generated by the project activity if this change would not occur.
The information stated in the PDD is now accurate and reflects the current design of the project activity. However this change influenced the Estimation of emission reductions. Thus, the estimated baseline emissions were updated in the PDD.
The Estimated energy generated is given by the multiplication of Assured energy (MW average) by the period of time. When changing from 3 to 2 generation sets in project, new electricity generation studies were carried out/18/. This study demonstrated that the assured energy guaranteed for this project activity is 13.07 MW average instead of the 14.17 MW average validated in the registered PDD. Thus the estimated emission reductions were updated/19/. The annual estimated ERs are now equal to 42,107 tCO2e instead of the former 45,489 tCO2e.

Conservativeness:
It is important to highlight that by reducing the assured energy, the estimated emission reductions for the project will also reduce. Thus, the application of this new value is considered conservative by the validation team.

(d) The additionality of the project activity;

The proposed change did not resulted in changes in additionality. For the additionality assessment, the PP kept using the assured energy equal to 14.17 MW average likewise occurred during validation phase for calculation of electricity generation. The maintenance of this value is considered conservative in terms of additionality as more electricity is estimated to be generated, and consequently higher is the IRR (closer to the benchmark). On the other hand, if the assured energy would be updated for additionality determination to the new value (13.07

	MW average), smaller would be the electricity generated and consequently the income, and lower would be the IRR, thus, further from the benchmark and less conservative in the point of view of additionality. Thus, the validation team understands that the measure of keeping the former value of assured energy in the additionality determination does not adversely impact the additionality as it is more conservative, thus, correct. **(e) The scale of the project activity.** The project activity remained with the exact the same installed capacity when compared to the validation phase. It remained as large scale project activity. **Prior Approval** This change does not require prior approval as per Appendix of the CDM Project Standard for PA version 01.0, paragraph 1d). *1)d)Changes to the project design of a registered CDM project activity that do not adversely impact any of the following:* (i) The applicability and application of the applied methodologies and, where applicable, the applied standardized baselines with which the project activity has been registered; (ii) The additionality of the project activity; (iii) The scale of the project activity. The condition above is fulfilled as the change in the number of generation set from 3 to 2 does not adversely impact the application of methodology, the additionality and the scale of the project activity. Details of each item can be observed above.
Findings	CAR 1 *The number of generators stated in the PDD is not in accordance with actual installed generators observed during site visit.*
Conclusion	The change in the project's design was assessed in accordance with applicable validation requirements related to the corrections from the registered PDD in the VVS. Thus, it is concluded that this change falls under Appendix of Project Standard version 01.0 paragraph 1d) and can be requested under issuance track (without prior approval). Both versions of the PDD (clean and tracking changes) have been provided to the validation team. All information was correctly transferred from version 2 (registered PDD) to version 3 (revised PDD) without changes, apart from the ones proposed by this PRC. Moreover, the PDD has been updated to the latest version of the CDM-PDD form, version 10.1.

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

Not applicable to this Validation

SECTION E. Internal quality control

The assessment of Post Registration Changes that is prepared by validation team is reviewed by an independent technical review team (one or more members) to confirm if the internal procedures established and implemented by ESPL were duly complied with and such opinion/conclusion is reached in an objective manner that complies with the applicable CDM rules/requirements.

The technical review team is collectively required to possess the technical expertise of all the technical area/sectoral scope to which the project activity is related. All members of technical review team are independent of the verification team.

During the technical review process, additional findings may be identified or the closed out findings may be opened, which needs to be satisfactorily resolved before the request for issuance is

submitted to UNFCCC. The independent technical reviewer may either approve the report as such or reject/return the same in such case providing the comments/findings/issues that needs to be resolved by the verification team. The decision taken by the technical reviewer is final and is authorized on behalf of ESPL

SECTION F. Validation opinion

The following changes were requested during this verification process.

- Change in the start date of crediting period to be postponed from 01/02/2015 to 10/09/2016.
- Change of project design by correcting the number of units of generator/turbines set stated in the registered PDD to be in accordance with actual information.

The first change was requested in accordance with PS para 236 (a) and (b) and was requested under issuance track as per provisions of the PCP for PA para 129, where it is said that "(…)*The choice of whether the DOE submits the request for approval via the prior-approval track or the issuance track shall be at the discretion of the project participant"*.
The second change does not require prior approval by the Board as it falls under Appendix of the Project Standard version 01.0 paragraph 1d) as it corresponds to change of project design that does not adversely impact the application and applicability of methodology, additionality and scale of the project activity.

Appendix 1. Abbreviations

Abbreviations	Full texts
BE	Baseline Emission
BM	Build Margin
CAR	Corrective Action Request
CARDE	Environmental Agency of Risaralda (Corporacion Autonoma Regional de Risaralda)
CDM	Clean Development Mechanism
CL	Clarification Request
CM	Combined Margin
CME	Coordinating/Managing Entity
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
CP	Crediting Period
CREG	Commission of Gas and Energy Regulation
DNA	Designated National Authority
DOE	Designated Operational Entity
EB	Executive Board
EIA	Environmental Impact Assessment
ESPL	Earthood Services Private Limited
FAR	Forward Action Request
GHG	Green House Gas
GSC/GSP	Global Stakeholder Consultation Process
GW	Giga Watt
GWh	Giga Watt hour
IPCC	Intergovernmental Panel on Climate Change
KP	Kyoto Protocol
kW	kilo Watt
kWh	kilo Watt hour
LoA	Letter of Approval/Authorization
MME	Ministry of Mines and Energy from Colombia
MoC	Modalities of Communication
MoV	Means of Validation
MP	Monitoring Plan
MW	Mega Watt
MWh	Mega Watt hour
OM	Operating Margin
PA	Project Activity
PCP	Project Cycle Procedure
PDD	Project Design Document
PE	Project Emission
PP	Project Participant
PS	Project Standard
tCO_2e	Tonnes of Carbon di oxide equivalent
UNFCCC	United Nations Framework Convention on Climate Change
VT	Verification Team
VVS	Validation and Verification Standard

Appendix 2. Competence of team members and technical reviewers

Competence Statement			
Name	Marcelo Sebben		
Country	Brazil		
Education	M.Sc. (Sustainable Energy System) B. Eng. (Chemical Engineering)		
Experience	12.5 Years		
Field	Chemical process industry, CDM, Energy, Climate Change		
Approved Roles			
Team Leader	Yes		
Validator	Yes		
Verifier	Yes		
Methodology Expert	Yes (ACM0001, ACM0002, ACM0006, AM0065, AMS ID)		
Local expert	Brazil, Chile, Honduras		
Financial Expert	No		
Technical Reviewer	Yes		
TA Expert	Yes (TA 1.1, 1.2, 5.1, 13.1)		
Reviewed by	Abhishek Mahawar	**Date**	01/03/2018
Approved by	Ashok Kumar Gautam	**Date**	01/03/2018

Competence Statement			
Name	Ricardo Lopes		
Country	Brazil		
Education	Technical Diploma in Data Processing		
Experience	12 years		
Field	CDM, Energy, Environment		
Approved Roles			
Team Leader	Yes		
Validator	Yes		
Verifier	Yes		
Methodology Expert	Yes (ACM0001, ACM0002, AM0026, AMS ID, AMS IIIH)		
Local expert	Brazil, Argentina, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, Honduras, Mexico, Nicaragua, Uruguay		
Financial Expert	NO		
Technical Reviewer	Yes		
TA Expert	Yes (1.2, 13.1)		
Reviewed by	Abhishek Mahawar	**Date**	22/02/2018
Approved by	Ashok Kumar Gautam	**Date**	22/02/2018

Competence Statement	
Name	Sergio Bonanno Cruz
Country	Brazil

Education	Post Graduate Diploma in Environment		
Experience	25 Years		
Field	Environmental Law, CDM, Energy, Climate Change		
Approved Roles			
Team Leader	Yes		
Validator	Yes		
Verifier	Yes		
Methodology Expert	Yes (ACM0001, ACM0002, AM0026, ACM0006, AMS ID)		
Local expert	Brazil, Chile		
Financial Expert	No		
Technical Reviewer	Yes		
TA Expert	Yes (TA 1.2, 13.1)		
Reviewed by	Abhishek Mahawar	**Date**	01/03/2018
Approved by	Ashok Kumar Gautam	**Date**	01/03/2018

Appendix 3. Documents reviewed or referenced

No.	Author	Title	References to the document	Provider
1.	UNFCCC	Standard: CDM PS for PA	version 01.0	Others
2.	UNFCCC	Standard: CDM PCP for PA	version 01.0	Others
3.	UNFCCC	Standard: CDM VVS for PA	version 01.0	Others
4.	UNFCCC	Form: CDM-MR-FORM	version 6.0	Others
5.	UNFCCC	Form: CDM-PDD-FORM	version 10.1	Others
6.	UNFCCC	Form: CDM-PRCV-FORM	version 02.0	Others
7.	PP	Monitoring Report (draft)	Rev 0 – 10/07/2018	PP
8.	PP	Monitoring Report (revised/final)	Rev 1 - 05/10/2018	PP
9.	PP	ER Spreadsheet (draft)	Rev 1	PP
10.	PP	ER Spreadsheet (revised/final)	Rev 3	PP
11.	PP	Registered PDD	version 2 – 12/11/2012	Others
12.	PP	Revised PDD (clean and tracking changes)	version 3 – 05/10/2018	PP
13.	PP – Operational Start date	1. Declaration of Operation Start date issued by Risaralda Generación de Energía (GC-008 2016 XM Declaración en Operación Comercial PCH Morro Azul 19.9 MW - Firma G	1. Issue: 09/09/2016	PP

	MME XM	Comercial) – Operation start date on 10/09/2016 2. Decree 869 from 24/05/2018 stating that the operation start date was on 10/09/2016 issue by Mines and Energy Ministry 3. SHP list where it is stated the start date of each SHP	2. http://es.presidencia.gov.co/normativa/normativa/DECRETO%20869%20DEL%2024%20DE%20MAYO%20DE%202018.pdf 3. http://paratec.xm.com.co/paratec/SitePages/generacion.aspx?q=lista	
14.	MME XM La Patria	Installed capacity evidences 1. Resolution 227 issued in 29/07/2013 by the Ministry of Mines and Energy of Colombia regarding the installed capacity of the SHP Morro Azul 2. XM website where it is stated the nominal capacity of the plant. Lapatria website	1. https://www.minminas.gov.co/documents/10180//23517//20281-10572.pdf 2. http://paratec.xm.com.co/paratec/SitePages/generacion.aspx?q=lista http://www.lapatria.com/economia/morro-azul-cumple-normas-ambientales-carder-186062	Others
15.	UNFCCC	Methodology: ACM0002 Consolidated baseline methodology for grid-connected electricity generation from renewable sources	version 13	Others
16.	UNFCCC	Tool to calculate the emission factor for an electricity system	version 02.1.1	Others
17.	UNFCCC	UNFCCC	http://cdm.unfccc.int	Other
18.	MEK HATCH	Report regarding the new value of assured energy (MW average) for calculation of Estimated Emission Reductions (13.07 MW average) - **Power and energy Evaluation – Main characteristics of SHP Morro Azul issued by MEK &HATCH ref # H347219-0000-00-223-0001**	Issued on Dec/2014	PP
19.	PP	Ex-ante estimated Emission reductions (CERs_MA_v3.xls)	Version 3	PP

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

Table 1. CLs from this validation

Not applied

Table 2. CARs from this validation

CAR ID	01	**Section no.**	D.7	**Date :**19/09/2018
Description of CAR				
The number of generators stated in the PDD is not in accordance with actual installed generators observed during site visit.				
Project participant response				**Date :**05/10/2018
The number of generators were adjusted accordingly in the PDD version 3 and MR version 2. *2 generators instead of 3 originally planned. The Net Installed Capacity remains the same with 19.90 MW (on the generators output terminals).*				
Documentation provided by project participant				
Pictures (obtained during site visit) *PDD version 3* *MR version 2* *MZL-NT2P-GEG00-0001-5 estudio energia y potencia.pdf*				
DOE assessment				**Date:** 08/10/2018
The number of turbines and generators were updated in the PDD in order to refer to the actual situation of the project activity where there are two sets of generator/turbines. The MR section B.2.6 was filled accordingly and the Estimated emission reductions were duly updated in the PDD and MR using the updated assured energy data[30]. For further details please refer to Validation Report on PRC, attached to this report. **CAR is closed**				

CAR ID	02	**Section no.**	D.4	**Date :**19/09/2018
Description of CAR				
The project activity has not being monitored from the start date of its crediting period.				
Project participant response				**Date :** 24/09/2018
The PA monitoring start date shall be 10/09/2016 instead of 01/02/2015 due to the SHP construction delay (see document "GC-008 2016 XM Declración en Operación Comercial PCH Morro Azul 19.9 MW - Firma G Comercialpdf"). *By this way a Post registration change shall be provided to the DOE defining the new crediting period: 10/09/2016 until 09/09/2013 (first 7 year) - renewable twice, 21 years on total.*				
Documentation provided by project participant				
GC-008 2016 XM Declración en Operación Comercial PCH Morro Azul 19.9 MW - Firma G Comercialpdf"				
DOE assessment				**Date:** 28/09/2018
The start date has been defined as the commercial start date of the Hydro power plant. The evidence provided informs that the power plant starts its operations at 0:00 hs of the 10/09/2016, unlike stated originally in the PDD. Thus, the PP is being requesting the adjustment of the start date of the crediting period. A PRC has been requested. However, as per as per the PS for PA, para 236 "if the proposed change to the start date of the crediting period of a registered CDM project activity is between one and two years…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; and (b) Demonstrate that substantive progress has been made by the project participants to start the project activity. These demonstrations were not provided. **CAR remains open**				
Project participant response				**Date :** 05/10/2018

The project activity had an adjustment in the project design after the project activity CDM registration. *The generation set was reduced from 3 to 2 set units. By this way the Assured Energy (MW average) parameter was reduced from 14.12 MW average to 13.07 MW average (-7.4%).* *See evidence: "**MZL-NT2P-GEG00-0001-5 estudio energia y potencia.pdf**" Table 3.3.4-3 on page 53.* *Based on the above explanation the baseline was updated accordingly (from 45,489 CER/year to 42,107 CER/year).* *See also: "**CERs_MA_v3.xls**" spreadsheet* *And besides the delay on operation start (when compared with original SHP construction schedule) the project activity had started operation on September 2016, so this fact demonstrates that the project participant made substantive progress to start the PA.*
Documentation provided by project participant
"MZL-NT2P-GEG00-0001-5 estudio energia y potencia.pdf */18/* ***"CERs_MA_v3.xls*** */19/*
DOE assessment — **Date:** 08/10/2018
As change in the start date is between 1 and 2 years, the PPs had to update the baseline using conservative data and had to demonstrate that substantive progress has been made by the project participants to start the project activity. The PPs had to update the baseline emissions/19/ as the assured energy was updated due to change in the number of generation sets (proposed change of project design) as a result of a new generation study/18/ . The update was conservative as it resulted in reduction of annual estimated Emission reductions. Regarding substantive progress, it is important to point out that delays occurred due to several technical issues during the construction phase that delayed the start of operation. However, the operation start date of the project activity has already occurred on 10/09/2016. Thus it is demonstrated that progress has been made for start the operation of the PA. For further details, please refer to Assessment on post registration changes attached to this report. **CAR is closed**

Table 3. FARs from this validation

Not applied

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Document information

Version	*Date*	*Description*
02.0	31 October 2017	Revision to align with the requirements in 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: Registration
Keywords: post-registration change, project activities, validation report