



VERIFICATION REPORT

- 3RD PERIODIC –

CONSORCIO EÓLICO AMAYO S.A.

AMAYO 40 MW WIND POWER PROJECT – NICARAGUA

UNFCCC REF. No. : 2315

Monitoring Period: 2010-09-01 to 2011-04-30
(incl. both days)

Report No: 8052 – 11/245 V03

Date: 2012-04-25

TÜV NORD CERT GmbH
JI/CDM Certification Program
Langemarckstraße, 20
45141 Essen, Germany
Phone: +49-201-825-3335
Fax: +49-201-825-3290
www.tuev-nord.de
www.global-warming.de

Verification Report:	Report No.	Rev. No.	Date of 1st issue:	Date of this rev.
	8052 – 11/245 V03	1	2012-03-07	2012-04-25
Project:	Title:	Registration date:	UNFCCC-No.:	
	Amayo 40 MW Wind Power Project – Nicaragua	2009-04-12	2315	
Project Participant(s):	Host party:	Other involved parties:		
	Nicaragua	n/a		
Applied methodology/ies:	Title:	No.:	Scope/TA:	
	Grid-connected electricity generation from renewable sources	ACM0002 ver. 7	1 / 1.2	
Monitoring:	Monitoring period (MP):	No. of days:	MP No.	
	2010-09-01 to 2011-04-30 - both days included	242	03	
Monitoring report:	Title:	Draft version:	Final version:	
	Amayo 40 MW Wind Power Project – Nicaragua	v. 01 2011-05-16	v.04 2012-02-07	
Verification team / Technical Review and Final Approval	Verification Team:	Technical review:	Final approval:	
	Ricardo Lopes TL Raul Gonzalez Mitre TM Abraham Garza TM Alvarez	Alexandra Nebel Emilio Martin	Alexandra Nebel	
Emission reductions: [t CO_{2e}]	Verified amount	As per draft MR:	As per PDD:	
	70,842 t	71,223 t	80,540 t /8 month	
Summary of Verification Opinion:	Consorcio Eólico Amayo S.A. has commissioned the TÜV NORD JI/CDM Certification Program to carry out the 3 rd periodic verification of the project: “Amayo 40 MW Wind Power Project – Nicaragua”, with regard to the relevant requirements for CDM project activities. The project reduces GHG emissions by displacement of conventional generated electricity in the Nicaraguan grid by renewable power from a wind farm. This verification covers the period from 2010-09-01 to 2011-04-30 (including both days).			
	In the course of the verification 5 Corrective Action Requests (CAR) and 4 Clarification Requests (CL) were raised and successfully closed. Furthermore, no FAR was raised. The verification is based on the draft monitoring report, revised monitoring report, the monitoring plan as set out in the registered PDD, the validation report, emission reduction calculation spreadsheet and supporting documents made available to the TÜV NORD JI/CDM CP by the project participant. As a result of this verification, the verifier confirms that: - all operations of the project are implemented and installed as planned and described in the validated project design document. - the monitoring plan is in accordance with the applied approved CDM methodology ,ie, ACM0002 ver.07: Grid-connected electricity generation from renewable sources. - the installed equipment essential for measuring parameters required for calculating emission reductions are calibrated appropriately. - the monitoring system is in place and functional. The project has generated GHG emission reductions. As the result of the 3 rd periodic verification, the verifier confirms that the GHG emission reductions are calculated without material misstatements in a conservative and appropriate manner. TÜV NORD JI/CDM CP herewith confirms that the project has achieved emission reductions in the above mentioned reporting period as follows: Emission reductions: 70,842 t CO _{2e}			
Document	Filename:			No. of pages:



information:	2012_04_25 FVReport_ Amayo 3MP CDM	112
---------------------	------------------------------------	-----

Abbreviations:

AMAYO	Amayo 40 MW Wind Power Project - Nicaragua
AMELEC	<i>“Asesoría y Materiales Electricos”</i> Company authorized by the CNDC to perform audits to the Commercial Measurement System (SIMEC)
CA	Corrective Action / Clarification Action
CAR	Corrective Action Request
CEA	Consorcio Eólico Amayo, S.A.
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CNDC	National Dispatch Center <i>“Centro Nacional de Despacho de Carga”</i>
CO₂	Carbon dioxide
CO_{2eq}	Carbon dioxide equivalent
CL	Clarification Request
ENATREL	National Company of Transmission of Electricity <i>“Empresa Nacional de Transmisión eléctrica”</i>
ER	Emission Reduction
FAR	Forward Action Request
GHG	Greenhouse gas(es)
INE	Nicaraguan Institute of Energy
MP	Monitoring Plan
MR	Monitoring Report
NIS	National Interconnected System
PDD	Project Design Document
MARENA	Ministry for the Environmental <i>“Ministerio del Ambiente y los Recursos Naturales”</i> (DNA)
PP	Project Participant
RfDev	Requests for deviations from the applied methodology
RfRevMP	Requests for revisions of the monitoring plan
SC-Commander	Software used for service operation and remote control on Suzlon SCS turbines
SIMEC	<i>Commercial Measurement System</i>
SCADA	Supervisory Control and Data Acquisition
QA/QC	Quality Assurance / Quality Control



UNFCCC	United Nations Framework Convention on Climate Change
XLS	Emission Reduction Calculation Spread Sheet

Table of Contents	Page
1. INTRODUCTION	8
1.1. Objective	8
1.2. Scope	8
2. GHG PROJECT DESCRIPTION.....	10
2.1. Project Characteristics	10
2.2. Project Verification History	10
2.3. Involved Parties and Project Participants	11
2.4. Project Location	11
2.5. Technical Project Description	11
3. METHODOLOGY AND VERIFICATION SEQUENCE	13
3.1. Verification Steps	13
3.2. Contract review	13
3.3. Appointment of team members and technical reviewers	14
3.4. Publication of the Monitoring Report	15
3.5. Verification Planning	15
3.6. Desk review	17
3.7. On-site assessment	17
3.8. Draft verification reporting	19
3.9. Resolution of CARs, CLs and FARs	19
3.10. Final reporting	19
3.11. Technical review	20
3.12. Final approval	20
4. VERIFICATION FINDINGS.....	21
5. SUMMARY OF VERIFICATION ASSESSMENTS.....	34
5.1. Implementation of the project	34
5.2. Project history	34
5.3. Special events	35
5.4. Compliance with the monitoring plan	36
5.5. Compliance with the monitoring methodology	37
The monitoring system is in compliance with the applied monitoring methodology (ACM0002, version 7).	37
5.6. Monitoring parameters	37
5.7. Monitoring report	37
5.8. ER Calculation	38



5.9.	Quality Management	38
5.10.	Comparison with ex-ante estimated emission reductions	38
5.11.	Overall Aspects of the Verification	38
5.12.	Hints for next periodic Verification	39
6.	VERIFICATION OPINION.....	40
7.	REFERENCES	41
ANNEX 1: VERIFICATION PROTOCOL		53
ANNEX 2: STATEMENTS OF COMPETENCE OF ALL INVOLVED PERSONNEL.....		111

1. INTRODUCTION

Consorcio Eólico Amayo S.A. has commissioned the TÜV NORD JI/CDM Certification Program (CP) to carry out the 3rd periodic verification of the project

“Amayo 40 MW Wind Power Project - Nicaragua”

with regard to the relevant requirements for CDM project activities. The verifiers have reviewed the implementation of the monitoring plan (MP) in the registered CDM project number 2315¹.

GHG data for the monitoring period covering 2010-09-01 to 2011-04-30 was verified in detailed manner applying the set of requirements, audit practices and principles as required under the Validation and Verification Manual^{/VVM/} of the UNFCCC.

This report summarizes the findings and conclusions of this 3rd periodic verification of the above mentioned UNFCCC registered project activity.

1.1. Objective

The objective of the verification is the review and ex-post determination by an independent entity of the GHG emission reductions. It includes the verification of the:

- implementation and operation of the project activity as given in the PDD,
- compliance with applied approved methodology and the provisions of the monitoring plan,
- data given in the monitoring report by checking the monitoring records, the emissions reduction calculation and supporting evidence,
- accuracy of the monitoring equipment,
- quality of evidence,
- significance of reporting risks and risks of material misstatements.

1.2. Scope

The verification of this registered project is based on the validated project design document^{/PDD/}, the monitoring report^{/MR/}, emission reduction calculation spreadsheet^{/XLS/}, supporting documents made available to the verifier and information collected through performing interviews and during the on-site assessment. Furthermore publicly available information was considered as far as available and required.

The verification is carried out on the basis of the following requirements, applicable for this project activity:

- Article 12 of the Kyoto Protocol^{/KP/},

¹ <http://cdm.unfccc.int/Projects/DB/SGS-UKL1227712726.26/view>



- guidelines for the implementation of Article 12 of the Kyoto Protocol as presented in the Marrakech Accords under decision 3/CMP.1 ^{/MA/}, and subsequent decisions made by the Executive Board and COP/MOP,
- other relevant rules, including the host country legislation,
- CDM Validation and Verification Manual ^{/VVM/},
- monitoring plan as given in the registered PDD ^{/PDD/},
- Approved CDM Methodology ACM0002 ver.07: Grid-connected electricity generation from renewable sources.

2. GHG PROJECT DESCRIPTION

2.1. Project Characteristics

Essential data of the project is presented in the following Table 2-1.

Table 2-1: Project Characteristics

Item	Data
Project title	Amayo 40 MW Wind Power Project – Nicaragua
Project size	☒ Large Scale ☐ Small Scale
Project Scope (according to UNFCCC sectoral scope numbers for CDM)	☒ 1 Energy Industries (renewable- /non-renewable sources)
	☐ 2 Energy distribution
	☐ 3 Energy demand
	☐ 4 Manufacturing industries
	☐ 5 Chemical industry
	☐ 6 Construction
	☐ 7 Transport
	☐ 8 Mining/Mineral production
	☐ 9 Metal production
	☐ 10 Fugitive emissions from fuels (solid, oil and gas)
	☐ 11 Fugitive emissions from production and consumption of halocarbons and hexafluoride
	☐ 12 Solvents use
	☐ 13 Waste handling and disposal
	☐ 14 Afforestation and Reforestation
	☐ 15 Agriculture
Applied Methodology	ACM0002 – Grid-connected electricity generation from renewable sources – version 7
Technical Area(s)	1.2 Renewable Energies
CDM registration No.	2315
Crediting period	☒ Renewable Crediting Period (7 y) ☐ Fixed Crediting Period (10 y)

2.2. Project Verification History

Essential events since the registration of the project are presented in the following Table 2-2.

Table 2-2: Project verification history

#	Item	Time	Status
1	Date of registration	2009-04-12	-
2	Start of crediting period	2009-04-12	-
3	1 st Monitoring period	2009-04-12 to 2009-09-30	Issued
4	Request for revision of the monitoring plan	2011-09-08	Approved
5	2 nd Monitoring period	2009-10-01 to 2010-08-31	Awaiting request for issuance
6	3 rd Monitoring period	2010-09-01 to 2011-04-30	Ongoing

2.3. Involved Parties and Project Participants

The following parties to the Kyoto Protocol and project participants are involved in this project activity (Table 2-3).

Table 2-3: Project Parties and project participants

Characteristic	Party	Project Participant
Host party	Nicaragua	Consorcio Eólico Amayo S.A.

2.4. Project Location

The details of the project location are given in table 2-4:

Table 2-4: Project Location

No.	Project Location
Host Country	Nicaragua
Region:	Rivas
Project location address:	129 Km south of Managua, south west coast of Lake Nicaragua
Latitude:	11° 19' 32" N
Longitude:	85° 43' 05" W

2.5. Technical Project Description

The Project is a 39.9 MW wind power project, expected to produce 169.51 GWh per year. The minimum expected operational lifetime is 20 years. The project consists in the installation of 19 turbines provided by SUZLON. Those turbines are a three-bladed rotor machine with a single fed induction generator. The line to be connected to the INE transformer will be a 230 kV, running from the wind farm control house to the INE transformer. The Project is located in the province of Rivas, approximately 129 km south of Managua, Nicaragua.

The key parameters for the project are given in table 2-5:

Table 2-5: Technical data of the plant

Parameter	Unit	Value
Total Power	MW	39.9 MW
No. of turbines	-	19
Rated Power per wind-generator	MW	2.1
Number of blades		3
Rotor conus angle	°	5.0
Swept area	m ²	6,082
Tip speed (at rated power)	m/s	72.0



Parameter	Unit	Value
Rotor diameter	m	88
Rotational speed	rpm	15.0-17.6

3. METHODOLOGY AND VERIFICATION SEQUENCE

3.1. Verification Steps

The verification consisted of the following steps:

- Contract review
- Appointment of team members and technical reviewers
- Publication of the monitoring report
- A desk review of the Monitoring Report^{/MR/} submitted by the client and additional supporting documents with the use of customised verification protocol^{/CPM/} according to the Validation and Verification Manual^{/VVM/},
- Verification planning,
- On-Site assessment,
- Background investigation and follow-up interviews with personnel of the project developer and its contractors,
- Draft verification reporting
- Resolution of corrective actions (if any)
- Final verification reporting
- Technical review
- Final approval of the verification.

The sequence of the verification is given in the table 3-1 below:

Table 3-1: Verification sequence

Topic	Time
Assignment of verification	2009-10-09
Uploading of Monitoring Report	2011-05-22
On-site visit	2011-06-13 to 2011-06-16
Draft reporting finalised	2011-06-27
Final reporting finalised	2012-02-10
Technical review finalised	2012-03-07
Revision after Incomplete	2012-04-25

3.2. Contract review

To assure that

- the project falls within the scopes for which accreditation is held,

- the necessary competences to carry out the verification can be provided,
- Impartiality issues are clear and in line with the CDM accreditation requirements

a contract review was carried out before the contract was signed.

3.3. Appointment of team members and technical reviewers

On the basis of a competence analysis and individual availabilities a verification team, consisting of one team leader and 2 additional team members, was appointed. The team was assisted by a Technical Expert. Furthermore also personnel for observation, the technical review and the final approval was determined.

The list of involved personnel, the tasks assigned and the qualification status are summarized in the table 3-2 below.

Table 3-2: Involved Personnel

	Name	Company	Function ¹⁾	Qualification Status ²⁾	Scheme competence ³⁾	Technical competence ⁴⁾	Verification competence ⁵⁾	Host country Competence	Team Leading competence
☒ Mr. ☐ Ms.	Ricardo Lopes	BRTUV, Brazil	TL	LA	☒	1.2	☒	☒	☒
☒ Mr. ☐ Ms.	Raul Gonzalez Mitre	BRTUV, Mexico	TM ^{A)}	LA	☒	1.2	☒	☒	☒
☒ Mr. ☐ Ms.	Abraham Garza Alvarez	BRTUV, Mexico	TM ^{B)}	TE	☐	1.2	☐	☒	☐
☒ Mr. ☐ Ms.	Emilio Martin	TÜV NORD, Germany	TR ^{B)}	LA	☒	1.2	☒	☐	☒
☐ Mr. ☒ Ms.	Alexandra Nebel	TÜV NORD, Germany	TR ³⁾ /FA	SA	☒		☒	☐	☒

¹⁾ TL: Team Leader; TM: Team Member; TR: Technical review; OT: Observer-Team; OR: Observer-TR; FA: Final approval

²⁾ GHG Auditor Status: A: Assessor; LA: Lead Assessor; SA: Senior Assessor; T: Trainee; TE: Technical Expert

³⁾ GHG auditor status (at least Assessor)

⁴⁾ As per S01-MU03 or S01-VA070-A2 (such as 1.1, 1.2, ...)

^{A)} Team Member: GHG auditor (at least Assessor status), Technical Expert (incl. Host Country Expert or Verification Expert), not ETE

^{B)} No team member

Statements of competence for the above mentioned team members are enclosed in annex 6 of this report.

3.4. Publication of the Monitoring Report

In accordance with the CDM M&P (§ 62) the draft monitoring report, as received from the project participants, has been made publicly available on the dedicated UNFCCC CDM website prior to the verification activity commenced. Comments received are taken into account in the course of the verification, if applicable.

3.5. Verification Planning

In order to ensure a complete, transparent and timely execution of the verification task the team leader has planned the complete sequence of events necessary to arrive at a substantiated final verification opinion.

Various tools have been established in order to ensure an effective verification planning.

Risk analysis and detailed audit testing planning

For the identification of potential reporting risks and the necessary detailed audit testing procedures for residual risk areas table A-1 is used. The structure and content of this table is given in table 3-2 below.

Table 3-2: Table A-1; Identification of verification risk areas

Table A-1: GHG calculation procedures and management control testing / Detailed audit testing of residual risk areas and random testing				
Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks	Additional verification testing performed	Conclusions and Areas Requiring Improvement (including Forward Action Requests)
<i>The following potential risks were identified and divided and structured according to the possible areas of occurrence.</i>	<i>The potential risks of raw data generation have been identified in the course of the monitoring system implementation. The following measures were taken in order to minimize the corresponding risks. The following measures are</i>	<i>Despite the measures implemented in order to reduce the occurrence probability the following residual risks remain and have to be addressed in the course of every verification.</i>	<i>The additional verification testing performed is described. Testing may include:</i> - Sample cross checking of manual transfers of data - Recalculation - Spreadsheet 'walk throughs' to check links and equations - Inspection of calibration and maintenance	<i>Having investigated the residual risks, the conclusions should be noted here. Errors and uncertainties are highlighted.</i>

Table A-1: GHG calculation procedures and management control testing / Detailed audit testing of residual risk areas and random testing

Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks	Additional verification testing performed	Conclusions and Areas Requiring Improvement (including Forward Action Requests)
	<i>implemented:</i>		<i>records for key equipment</i> <i>- Check sampling analysis results</i> <i>Discussions with process engineers who have detailed knowledge of process uncertainty/error bands.</i>	

The completed table A-1 is enclosed in the annex 1 (table A-1) to this report.

Project specific periodic verification checklist

In order to ensure transparency and consideration of all relevant assessment criteria, a project specific verification protocol has been developed. The protocol shows, in a transparent manner, criteria and requirements, means and results of the verification. The verification protocol serves the following purposes:

- It organises, details and clarifies the requirements a CDM project is expected to meet for verification
- It ensures a transparent verification process where the verifying DOE documents how a particular requirement has been proved and the result of the verification.

The basic structure of this project specific verification protocol for the periodic verification is described in table 3-3.

Table 3-3: Structure of the project specific periodic verification checklist

Table A-2: Periodic verification checklist				
Checklist Item	Reference	Verification Team Comments	Draft Conclusion	Final Conclusion
<i>The checklist items in Table A-2 are linked to the various requirements the monitoring of the project should meet. The checklist is organised in various sections as per the requirements of the topic and the individual project activity. It further includes guidance for the verification team.</i>	<i>Gives reference to the information source on which the assessment is based on.</i>	<i>The section is used to elaborate and discuss the checklist item in detail. It includes the assessment of the verification team and how the assessment was carried out. The reporting requirements of the VVM shall be covered in this section.</i>	<i>Assessment based on evidence provided if the criterion is fulfilled (OK), or a CAR, CL or FAR (see below) is raised. The assessment refers to the draft verification stage.</i>	<i>In case of a corrective action or a clarification the final assessment at the final verification stage is given.</i>

The periodic verification checklist (verification protocol) is the backbone of the complete verification starting from the desk review until final assessment. Detailed assessments and findings are discussed within this checklist and not necessarily repeated in the main text of this report.

The completed verification protocol is enclosed in the annex (table A-2) to this report.

3.6. Desk review

During the desk review all documents initially provided by the client and publicly available documents relevant for the verification were reviewed. The main documents are listed below:

- the last revision of the PDD including the monitoring plan^{/PDD/},
- the last revision of the validation report^{/VAL/},
- documentation of previous verifications^{/VER/}
- the monitoring report, including the claimed emission reductions for the project^{/MR/},
- the emission reduction calculation spreadsheet^{/XLS/}.

Other supporting documents, such as publicly available information on the UNFCCC website and background information were also reviewed.

3.7. On-site assessment

As most essential part of the verification exercise it is indispensable to carry out an inspection on site in order to verify that the project is implemented in accordance with the applicable criteria. Furthermore the on-site assessment is necessary to check the monitoring data with respect to accuracy to ensure the calculation of emission reductions. The main tasks covered during the site visit include, but are not limited to:

- The on-site assessment included an investigation of whether all relevant equipment is installed and works as anticipated.
- The operating staff was interviewed and observed in order to check the risks of inappropriate operation and data collection procedures.
- Information processes for generating, aggregating and reporting the selected monitored parameters were reviewed.
- The duly calibration of all metering equipment was checked.
- The monitoring processes, routines and documentations were audited to check their proper application.
- The monitoring data were checked completely.
- The data aggregation trails were checked via spot sample down to the level of the meter recordings.

The complete verification team attended the site visit.

Before and during the on-site visit the verification team performed interviews with the project participants to confirm selected information and to resolve issues identified in the document review.

Representatives of Consorcio Eólico Amayo S.A. were interviewed. The main topics of the interviews are summarised in Table 3-4.

Table 3-4: Interviewed persons and interview topics

Interviewed Persons / Entities	Interview topics
1. Projects & Operations Personnel, Consorcio Eólico Amayo S.A.	• General aspects of the project • Technical equipment and operation • Changes since validation / previous verification • Monitoring and measurement equipment • Remaining issues from validation/ previous verification • Calibration procedures • Quality management system • Involved personnel and responsibilities • Training and practice of the operational personnel • Implementation of the monitoring plan • Monitoring data management • Data uncertainty and residual risks • GHG emission reduction calculation • Procedural aspects of the verification • Maintenance • Environmental aspects

3.8. Draft verification reporting

On the basis of the desk review, the on-site visit, follow-up interviews and further background investigation the verification protocol is completed. This protocol together with a general project and procedural description of the verification and a detailed list of the verification findings form the draft verification report. This report is sent to the client for resolution of raised CARs, CLs and FARs.

3.9. Resolution of CARs, CLs and FARs

Nonconformities raised during the verification can either be seen as a non-fulfilment of criteria ensuring the proper implementation of a project or where a risk to deliver high quality emission reductions is identified.

Corrective Action Requests (CARs) are issued, if:

- Non-conformities with the monitoring plan or methodology are found in monitoring and reporting, or if the evidence provided to prove conformity is insufficient;
- Mistakes have been made in applying assumptions, data or calculations of emission reductions which will impair the estimate of emission reductions;
- Issues identified in a FAR during validation or previous verifications requiring actions by the project participants to be verified during verification have not been resolved.

The verification team uses the term Clarification Request (CL), which is issued if:

- information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met.

Forward Action Requests (FAR) indicate essential risks for further periodic verifications. Forward Action Requests are issued, if:

- the monitoring and reporting require attention and / or adjustment for the next verification period.

For a detailed list of all CARs, CLs and FARs raised in the course of the verification pl. refer to chapter 4.

3.10. Final reporting

Upon successful closure of all raised CARs and CLs the final verification report including a positive verification opinion can be issued. In case not all essential issues could finally be resolved, a final report including a negative verification opinion is issued.

The final report summarizes the final assessments w.r.t. all applicable criteria.

3.11. Technical review

Before submission of the final verification report a technical review of the whole verification procedure is carried out. The technical reviewer is a competent GHG auditor being appointed for the scope this project falls under. The technical reviewer is not considered to be part of the verification team and thus not involved in the decision making process up to the technical review.

As a result of the technical review process the verification opinion and the topic specific assessments as prepared by the verification team leader may be confirmed or revised. Furthermore reporting improvements might be achieved.

3.12. Final approval

After successful technical review an overall (esp. procedural) assessment of the complete verification will be carried out by a senior assessor located in the accredited premises of TÜV NORD.

After this step the request for issuance can be started.

4. VERIFICATION FINDINGS

In the following paragraphs the findings from the desk review of the monitoring report^{/MR/}, the calculation spreadsheet^{/XLS/}, PDD^{/PDD/}, the Validation Report^{/VAL/} and other supporting documents, as well as from the on-site assessment and the interviews are summarised.

The summary of CAR, CL and FAR issued are shown in Table 4-1:

Table 4-1: Summary of CAR, CL and FAR

Verification topic	No. of CAR	No. of CL	No. of FAR
A – General description of the project activity	0	1	0
B – Implementation of the project activity	0	2	0
C – Description of the monitoring system	0	0	0
D – Data and parameters monitored	4	1	0
E – Emission Reductions Calculation	1	0	0
SUM	5	4	0

The following tables include all raised CARs, CLs and FARs and the assessments of the same by the verification team. For an in depth evaluation of all verification items it should be referred to the verification protocols (see Annex).

Finding:	CL A1		
Classification	☐ CAR	☒ CL	☐ FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	Section A.7.: type of the crediting period (renewable) is missing.		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	The crediting period is renewable (the project choose 7 years*3 as crediting period as stated on the PDD). This information has been included in Section A.7.		

Finding:	CL A1
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-2. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	The verification team has checked the revised MR provided by the PP and it has been identified that the type of crediting period applicable to the project activity has been specified. It is stated that the project has a renewable crediting period; this is in accordance with the project information available at the UNFCCC website. The verification team concludes that section A.7 of the MR correctly includes the information of the Type and length of the crediting period applicable to the project activity. CL A1 is closed
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the next periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

Finding:	CL B1
Classification	☐ CAR ☒ CL ☐ FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	During site visit it could be confirmed that the physical location of the Nexus meters of Amayo II (cell 4 & cell 5) were changed. This information has not been included in section B1 of the MR. Furthermore please include the date of shutdown and restart of operation due to the change mentioned. Furthermore date of restart operation included in table 3 is incorrect. As informed during site visit it was 2011/03/20 (not 2010/03/20) Moreover date of approval of the revision of the monitoring plan has not been included in section B.2.
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	The information about the change of the physical location of the Nexus meters of Amayo II (cell 4 & cell 5) has been included in Section B.1 of the MR. The dates both of shutdown and restart of operation due the change has also been included in Section B.1. The restart date of operation included in table 3 has been corrected. It now is 2011/03/20. The date of approval of the revision of the monitoring plan has been included in Section B.2.

Finding:	CL B1
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-2. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	Section B1 of the revised MR has been checked by the verification team and it has been identified that the information regarding the change of location for the medium voltage side meters of Amayo Phase II performed on 2010/10/24 has been included. In addition, the restart date for the Wind Turbine Generator 5 has been corrected to 2011/03/20. The verification team has crosschecked this data against the changes and maintenance records^{/changes/} and all data was found correct. The information of all equipment changes occurred during the monitoring period has been properly included in Section B1. Hence, it is concluded that even though some equipment has been exchanged the project is still in line with the registered PDD and the revised monitoring plan. In addition, it is confirmed that these changes have been considered in the monitoring report and the emission reduction calculations. Furthermore, the PP has included in Section B.2. the date of 2011/09/08 as the date of approval of the revision of the monitoring plan. The verification team has checked this date against the UNFCCC website and the information was found correct. <u>CL B1 is closed.</u>
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the next periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

Finding:	CL B2
Classification	☐ CAR ☒ CL ☐ FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	Section B.1: Incidents: Explanation has not been provided about how the electricity has been calculated due to the failure on November 11th 2010. In addition, indication about the calculation approach for electricity generated on November 11th 2010 in the ER calculation spreadsheet is missing.

Finding:	CL B2
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	On November 11th 2010 the meters that measure the energy of Amayo Phase II at the 13.8 kv voltage side did not registered the energy generated in a period of hours from November 11th at 14:00 hours to November 12th at 3:15 due to a failure in their power input. In order to obtain a more conservative amount of CERs, the project is not taking into account the energy measured by the power meters of Phase I at 13.8kv and at 230 kv during that period of hours, and no calculation is applied to estimate the energy missing for Phase II. For instance all the energy registered by the 13.8 kv meters of Phase I and 230 kv meters was eliminated from the spreadsheet calculation of November for this period of hours. An explanation has been included in section B.1, point 3 of the monitoring report and the ER calculation spreadsheet.
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-2. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	The validation team has checked the revised ER calculation provided by the PP and it has been identified that the calculation of power electricity on November 11th 2010 was removed. Furthermore, from 2010/11/11 at 14:00 hours to 2010/11/12 at 03:15 hours the data was not considered for the ER calculation. The validation team has crosschecked this with the hourly generation/consumption data registered by the Nexus power meters at the low voltage side (13.8 kV) and it has been identified that no records are available from 2010/11/11 at 14:00 hours to 2010/11/12 at 03:15 hours. Therefore, it is concluded that it is appropriate to not consider any values for power generation or consumption for the period from 2010/11/11 at 14:00 hours to 2010/11/12 at 03:15 hours as no data has been recorded due to the failure in the power meters. In addition, it is correct to not calculate/estimate this data as this consideration will be against the revised MP which states that the power at the low voltage side shall be measured. Furthermore, the removal of this data is also considered conservative as it will result in less ER for the project activity resulting in 70,842 ton CO₂. The validation team has checked the revised MR and it has been confirmed that an explanation of this incident has been properly described in Section B.1 of the MR. Also, the ER calculation spreadsheet includes a comment explaining that in November 2010 no data was available for some hours. The MR so as the ER calculation spreadsheet have been updated with the final numbers of the revised ER calculation. Hence, it is confirmed that the failure in the low voltage power meters from Amayo Phase II have been properly and correctly considered in the monitoring report and the emission reduction calculations. The MR so as the ER calculation spreadsheet are assessed to be correct and traceable. Furthermore, it is confirmed that the most conservative assumptions theoretically possible have been made for calculating ERs. <u>CL B2 is closed.</u>

Finding:	CL B2
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the next periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

Finding:	CL D1
Classification	☐ CAR ☒ CL ☐ FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	The following corrections shall be applied for all parameters: • The table format used for every parameter is different than the table format stated in the guidelines for completing the MR form (EB54, Annex 34). Correction is necessary. • Please eliminate “see section B.7.2 below” (or rephrase) as the MR does not have such section. • The exact value (amount) of monitoring parameter shall be included. • Please include the complete serial number for all meters.
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	• Corrections have been made to the table format used for every parameter and now they are according to the guidelines for completing the MR form according to EB54, Annex 34. • The part “see section B.7.2 below” has been eliminated from the MR. • The exact value (amount) of each monitoring parameter has been included in Section D.2. • The complete serial number for all meters has been included in Section D.2.

Finding:	CL D1
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-2. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	The verification team has checked the revised MR provided by the PP and the following has been assessed: - The table format applied for each monitoring parameter in Section D.2 has been corrected. The verification team has checked the new monitoring tables and they are in accordance with the guidelines for completing the MR form (EB54, Annex 34). - The sentences referring to Section B.7.2 have been deleted from the MR. - The exact value of each monitored parameter has been included in Section D.2. The verification team has checked these value against the emissions reduction calculation spreadsheet^(XLS) and all values were found correct. No discrepancies or mistakes have been identified. - Serial numbers for all power meters (Nexus and ION) related to the project activity have been included in Section D.2. The verification team has crosschecked the serial numbers against the calibration certificates^{/CC_ION/ & /CC_nexus/} of all power meters and all information was found correct. Hence, the verification team concludes that the information of all monitoring parameters is correct and traceable. Furthermore, it is confirmed that all monitoring parameters are measured and determined in line with the revised monitoring plan of the PDD and the applied methodology <u>CL D1 is closed</u>
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the next periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

Finding:	CAR D1
Classification	☒ CAR ☐ CL ☐ FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	Parameter EG_y: Calibration evidence of the low voltage Landis power meters (main and back-up meters for Cells 3 and 6) was not available. The maximum permissible error shall be applied to the measured power generation values of September 2010 in accordance to the “Guideline for Assessing Compliance with the Calibration Frequency Requirements” as per EB 52 Annex 60.



Finding:	CAR D1
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	As there is no calibration evidence for the medium voltage meters for September 2010, the maximum permissible error of 0.2% has been applied, and it has been subtracted to the delivered electricity (electricity export) and added to the imported energy (consumed energy). This is in accordance to EB 52, Annex 60 - Guidelines for assessing compliance with the calibration frequency requirements. The application of the maximum 0.2% error in September can be checked in Table 1 and Table 2 of the spreadsheet CERs Calculation Sep10 – Apr11_v3. This explanation has also been included in Table 7 of the Monitoring Report.

Finding:	CAR D1
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-2. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	According to EB 52 Annex 60 paragraph 6 <i>“In cases where the results of the delayed calibration are not available, or the calibration has not been conducted at the time of verification, the DOE, prior to finalizing verification, shall request the project participant to conduct the required calibration and shall ensure that the project participant has calculated the emission reductions conservatively using the approach mentioned in paragraph 4 above.”</i> The monitoring period goes from 2010-09-01 to 2011-04-30 and during this period Landis power meters (which were installed since February 2010) were in operation at the low voltage side from 2010/09/01 to 2010/09/29. Nevertheless, at the time of the site visit (June 2011) these Landis power meters were already replaced and removed from the project site so the equipment is also not available. The PP has provided the reports^{/changes/} in which it is demonstrated that on September 29th, 2010 Amayo replaced all the Landis power meters at the low voltage side for both project phases. This same day a total of 4 sets of Nexus^{/CC_nexus/} power meters with their respective back-up meters have been installed, two for Amayo Phase I and the other two for Amayo Phase II. The replacement activities finalized on October 1st 2010. During the hours in which the meters replacement took place the project activity did not generated any electricity. All Nexus power meters have their respective calibration certificates^{/CC_nexus/} which demonstrate that since October 1st 2010 the power generation from the project activity has been performed with calibrated equipment. Therefore, as calibration information from the Landis power meters and the proper Landis power meters equipment were not available at the time of the site visit the only information available to perform the ER calculations was the maximum error as per the Landis power meters technical data sheet. The verification team confirmed that at the time of the site visit new Nexus power meters were installed and in operation with their respective calibration certificates^{/CC_nexus/}. The verification team checked the power generation invoices so as the confirmation letters of power delivered. In addition, the power generation data is continuously uploaded to the CNDC (National Dispatch Center)^{/DWS/} and therefore is continuously checked by the national authority. All these sources and evidences were checked and confirm that the measured values from the Landis power meters during the period of September 2010 were correct. Nevertheless, as no calibration evidence was available the error was applied. No delayed calibration can be performed by the PP because as stated before they no longer posses the old Landis power meters and therefore no calibration can be performed to equipment that is no longer available in the project site. Therefore, the verification team concludes that considering that all the provided evidences (invoices, confirmation letters and Dispatch data) demonstrate that the Landis power meters were properly operating the application of the maximum error as per the Landis technical data sheet is appropriate.

Finding:	CAR D1
	The revised emission reduction calculation spreadsheet^{/XLS/} has been reviewed by the verification team. The 0.2% error has been applied to both the energy delivered to the grid and the power consumed from the grid data of September 2010. For the power generation the 0.2% was subtracted and for the power consumption from the grid the 0.2% error was added. This consideration results in lower emission reductions for the project activity and is in accordance with EB 52 Annex 60 which request that the most conservative assumptions shall be applied. The verification team has confirmed the 0.2% error value based on the power meter technical data sheet^{/Landis/} and the value was found correct. In addition, the MR has been revised and the corrected amount of ER from the project activity has been updated in all required sections of the MR. Furthermore, the PP has provided an ER calculation spreadsheet which includes the information and calculation of the 0.2% error. No mistakes have been identified. Hence, it is concluded that for the period in which the meters were not calibrated the most conservative assumptions theoretically possible have been applied for calculating ERs. <u>CAR D1 is closed</u>
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the next periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

Finding:	CAR D2
Classification	☒ CAR ☐ CL ☐ FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	Parameter EG_y: Value of energy generation (17,895,990) of December 2010 differs from the value stated in the invoice (17,561,352). Clarification and correction is required.
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	The difference between the value calculated and the value invoiced is due an error made on the calculation of the invoice. It generated a difference of 335 MWh in comparison to the energy value calculated in the CERs calculation spreadsheet, which should have been the correct way to calculate the energy generation. As in this case arise a difference between the calculation and invoices, the most conservative value of energy is been used in order to calculate the emission reductions. In this case, the energy delivered value of the invoices is been used to calculate the emission reduction since it is the smallest value. The correction has been done in the CERs calculation spreadsheet and Monitoring Report.

Finding:	CAR D2
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-2. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	The PP has explained that the difference between the calculated power generation value (17,895,990 kWh) based on the power meters measurements against the total power generation invoice value (17,561,352 kWh) of December 2010 was due to an internal error made at the time of the calculation and issuance of the invoice. According to the revised MP the power generated by the project activity will be crosschecked against the power generation invoices and the most conservative value shall be applied. Hence, the PP has applied the power generation value from the invoice of December 2010 (17,561,352 kWh) for the calculations of the project emission reductions. This is in line with the revised MP and results in less emission reductions. Hence, this approach is considered conservative and correct. The verification team has verified the 17,561,352 kWh value of the invoice^{/EEG/} and it was identified to be correct. Furthermore, the revised emission reduction calculation spreadsheet was checked and all calculations were found correct. No mistakes or discrepancies have been identified. In addition, the MR has been revised by the PP and the corrected amount of ER from the project activity has been updated in all required sections of the MR. Hence, it is concluded that the value given in the monitoring report is correct or determined in a conservative manner. CAR D2 is closed.
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the next periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

Finding:	CAR D3
Classification	☒ CAR ☐ CL ☐ FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	Parameter EC^{13.8kV}_{PhaseII,y} & Parameter EG^{13.8kV}_{PhaseII,y}: the monitoring equipment description is not correct. Correction is necessary.
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	The monitoring equipment description has been corrected for parameter EC^{13.8kV}_{PhaseII,y} and Parameter EG^{13.8kV}_{PhaseII,y} in Section D.2 The description now shows the correct information of the meters at Cell 4 and Cell 5 that corresponds to the metering system at the medium voltage side for Phase II.

Finding:	CAR D3
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-2. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	The verification team has checked the revised MR provided by the PP and it has been identified that the information of the power meters (Cell 4 and Cell 5) has been corrected. The verification team has checked the serial numbers, calibration dates and all other relevant information from the Nexus power meters (Cell 4 and Cell 5) against the calibration certificates and the equipment technical data^{/CC_nexus/} and all information was found correct. Hence, the verification team concludes that the information of the monitoring equipment description used for the monitoring parameters EC^{13.8kV}_{PhaseII,y} & EG^{13.8kV}_{PhaseII,y} is correct. Furthermore, it is confirmed that these monitoring parameters are measured and determined in line with the revised monitoring plan of the PDD and the applied methodology CL D3 is closed
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the next periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

Finding:	CAR D4
Classification	☒ CAR ☐ CL ☐ FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	Parameter EC^{13.8kV}_{Phase I,y}: discrepancies have been identified for the following: - Value of September as per DTE (136.13) - Value of March as per DTE (7.86) - Value of April as per DTE is missing (17.68)
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	The correct values of the DTE for September, March and April have been included in the spreadsheet calculation. Necessary corrections has been also made in the MR.
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-2. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	Power consumption data of September 2010, March 2011 and April 2011 has been corrected. The verification team has crosschecked the data against the power consumption values included in the Economic Transaction Documents^{/DTE/} and the data was found correct. No discrepancies were identified. In addition, the verification team has checked the revised ER calculation and the revised MR and it has been confirmed that the corrected values of power consumption have been updated. The ER calculation spreadsheet was reviewed and no mistakes in the calculation have been identified. Hence, it is concluded that the value given in the monitoring report is correct or determined in a conservative manner. CAR D4 is closed.

Finding:	CAR D4
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the next periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

Finding:	CAR E1
Classification	☒ CAR ☐ CL ☐ FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	1. Data unit stated in the head lines of the emission reduction calculation is not correct MWh (not KWh) 2. Table C: head line of the column “Phase I as share of 230 kV meter readings (KWh)” is incorrect as the values correspond to the column “Conservative value (KWh)”
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	• The data unit stated in the head lines of the emission reduction calculation has been corrected and it now is MWh. • The headline has been changed as it now states “Conservative value”.
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-2. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	The PP has provided a revised MR. The verification team has reviewed the document and it has been identified that all required corrections have been properly performed. Hence, it is concluded that the MR is free of any editorial mistake and that all internal and external parameters and data used for calculation are applied consistently in the monitoring report and the calculation spreadsheet. Furthermore, it is confirmed that notations for all parameters in the PDD, MR and ER calculation spreadsheet are consistent. <u>CAR E1 is closed</u>
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the next periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

Minor Changes	Corrected
1. It is not included that “both days are included” in the monitoring period of page 2	☒ Yes ☐ No
2. Section A.1: Editorial mistake (space missing): are71,223 tCO ₂	☒ Yes ☐ No
3. Section C.: Figure 2: for phase II a connecting line between turbine and	☒ Yes



transformer is missing.	☐ No
4. Section D.2.: The complete calibration dates (from-to) have not been included for all parameters.	☒ Yes ☐ No
5. Section D.2.: Parameter EG ^{13.8kV} Phase I,y reference of table 1 is incorrect. It should be table 7.	☒ Yes ☐ No
6. Section D.2.: Specify more clearly for all parameter whether the calibration dates apply for all meters.	☒ Yes ☐ No
7. Section E.1.: Following paragraph is not correct: “ <i>Notice that before the implementation...</i> ”	☒ Yes ☐ No
8. Section E.4.: Last paragraph ER is incorrect 71,225 tCO ₂ .	☒ Yes ☐ No
9. Minor issue: 2nd page in header it is written 3er monitoring period (instead of 3rd).	☒ Yes ☐ No

5. SUMMARY OF VERIFICATION ASSESSMENTS

The following paragraphs include the summary of the final verification assessments after all CARs and CRs are closed out. For details of the assessments pl. refer to the discussion of the verification findings in chapter 4 and the verification protocol (Annex 1).

5.1. Implementation of the project

During the verification a site visit was carried out. On the basis of this site visit and the reviewed project documentation it can be confirmed that w.r.t. the realized technology, the project equipments, as well as the monitoring and metering equipment, the project has been implemented and operated as described in the registered PDD.

By means of document review and the on-site visit it was verified, that the project activity involves the installation of 19 wind turbines with a capacity of 2.1 MW each, totalling 39.9 MW as per registered PDD, even if the “title” of the project refers to 40 MW.

It could be verified during the site visit that the PP installed another wind farm “Amayo Wind Farm Phase II” with 11 turbines and 23 MW of total capacity next to Amayo Wind Power Project. At the moment of verification, Amayo Phase II was already in operation. Hence, this situation resulted in a modification of the project monitoring arrangement and a request for revision of the monitoring plan was required. The registered monitoring plan has been revised by the PP including corresponding monitoring parameters and related baseline emissions calculation. The request for revision of MP has been approved on 2011/09/08 by the UNFCCC.

5.2. Project history

As this is the 3rd periodic verification issues from former verifications are to be considered.

During the 2nd periodic verification the verifying DOE have raised issues that could not be closed or resolved during the verification stage. The verification DOE has raised 1 FAR regarding the validity and authorization of the method used by the PP to calculate the energy supplied to the grid.

Regarding this FAR, the PP has provided the reports^{/changes/} in which it is demonstrated that on September 29th, 2010 Amayo replaced all the Landis power meters at the low voltage side for both project phases. This same day a total of 4 sets of Nexus^{/CC_nexus/} power meters with their respective back-up meters have been installed, two for Amayo Phase I and the other two for Amayo Phase II. The replacement activities finalized on October 1st 2010. During the replacement period (2010/09/29 – 2010/10/01) the project activity did not generated any electricity.

In addition, an email from the CNDC^{/changes/} issued on 2011/04/13 was provided by the PP. This email demonstrates that the CNDC has access to the new Nexus power meters. Furthermore, the confirmation letters from DISNORTE and DISSUR were checked and it was identified that these letters accept the calculation procedure used to determine the power generation delivered.

The verification team has reviewed all the evidences and has concluded that the power measurements procedures performed by the project activity are in line with the approved PPA's^{/PPA1/, /PPA2/ & /PPA_A2/} and with the requirements from the local authority. Hence, FAR D1 was closed.

5.3. Special events

Several downtimes occurred during the monitoring period due to power meters replacement, WTG failures and other equipment problems and maintenance.

The failures and downtimes occurred during the monitoring period are as follows:

- The 8 power meters located at the low voltage side were replaced by new power meters on 2010/10/01
- The 8 power meters located at the low voltage side were shut down in order to perform electrical works on 2010/10/24. In this same date, the power meters at the medium voltage side of Amayo Phase II (Cells 4 and 5) were physically moved from the original metalclad to a new one, the metering point U3020 (Cell 4) is now metering point U3120, and metering point U3030 (Cell 5) is now point U3110.
- From December 2010 onwards, the formula used to calculate the proportion of energy corresponding to Phase I is applied hourly. This change in the calculation frequency was requested by the Dispatch Center.
- Power meters at the low voltage side (Cells 4 and 5) which measure the power from Amayo Phase II were shut down due to a failure in their power input on 2010/11/11.
- The WTG #5 was offline because it was hit by a lightning on 2010/08/26 and it restarted operation on 2011/03/20.

The verification team has identified that the implications of these incidents results in an inaccurate or lack of measurements of some of the project monitoring parameters. Hence, the PP has applied several actions and assumptions for the periods in which these failures and incidents occurred.

For the dates in which the power meters were replaced and checked (2010/10/01 and 2010/10/24) no power generation occurred during the hours when the electrical works were performed and therefore no CERs were claimed for these periods. In addition, even though there was a change in the power meters physical location for Cell 4 (from AMY-U3020 to AMY-U3120) and for Cell 5 (from AMY-U3030 to AMY-U3130) the measuring positions remain the same which are at the 13.8 kV bar.

Hence, the monitoring and measuring arrangements remain the same as in the revised Monitoring Plan.

Regarding the change in the calculation frequency for the power generation proportion from each wind farm (Amayo I and II) this does not affect any technical or operational issue of the project. Anyway, the PP has applied the lowest value between the calculated power generation and the invoices. Hence, all values applied in the ER calculation spreadsheet are conservative.

For the incident occurred on 2010/11/11, as no power generation/consumption data was recorded during several hours no CERs were claimed for these periods. Therefore, this assumption can be considered correct, conservative and appropriate.

Finally, regarding the WTG #5 as it was offline no power was generated from it and therefore less electricity and CERs were generated by the project activity during this monitoring period.

The verification team has checked the Operational Logbook^{/logbook/}, so as the downtime^{/downtime/} and equipment replacement records^{/changes/} and confirmed the information by interviewing operational personnel and cross-checking the information against operational raw data records^{/DWS/} for the periods of the incidents. The verification team identified that all incidents have been properly recorded and have been considered in the emission reduction calculation. It is concluded that the assumptions made by the PP for these periods are appropriate and conservative.

5.4. Compliance with the monitoring plan

Data source and collection, data compilation, emission calculation, emission data review and approval and finally record keeping were checked accordingly by the verification team.

The reporting procedures reflect the requirements of the monitoring plan. All relevant data are collected continuously and stored during the whole monitoring period. The monitoring consists in using meter equipment projected to registry and verifies the energy generated and consumed by the facility. All the energy invoices/EEG/ issued during the monitoring period were checked against the confirmation letters/EEG/ issued by DISNORTE and DISSUR, (for which it accepted to pay for). Also, the Economic Transaction Documents/DTE/ have been reviewed to confirm the power consumption from the grid.

The monitoring system and all applied procedures are completely in compliance to the registered/revised monitoring plan.

5.5. Compliance with the monitoring methodology

The monitoring system is in compliance with the applied monitoring methodology (ACM0002, version 7).

5.6. Monitoring parameters

During the verification all relevant monitoring parameters (as listed in chapter B.7.1 of the PDD) have been verified with regard to the appropriateness of the applied measurement / determination method, the correctness of the values applied for ER calculation, the accuracy, and applied QA/QC measures. The results as well as the verification procedure are described parameter-wise in the project specific verification checklist.

The verification team confirms that the internal procedure for monitoring the electricity is accurate having evidenced that the internal measurement procedure occurred in real time (without any interval of time) and that the calibration certificates of all meters is up to date. Nevertheless, it has been identified that there were no calibration evidences for the Landis^{/Landis/} power meters used on September 2010; hence CAR D1 was raised regarding this issue. The PP has successfully applied the procedures required by EB 52 Annex 60 and CAR D1 was closed.

Additionally it could be cross checked with the daily data extracted from the main and back up meter^{/ED/} against the monthly energy production report^{/MEPR/}. The electricity meters used are well known and state of the art. All measured data is collected continuously during the whole monitoring period. The ex-ante calculated grid emission factor as per registered PDD is fixed throughout the crediting period with 712.7 tCO₂e/GWh and this is the value used in the monitoring report^{/MR/}.

CAR D1, CAR D2 and CAR D4 were raised regarding measured energy during this monitoring period. The PP has carried out the requested corrections so that it can be confirmed that all monitoring parameters have been measured / determined without material misstatements and in line with all applicable standards and relevant requirements.

5.7. Monitoring report

A draft monitoring report was submitted to the verification team by the project participants. The team has made this report publicly available prior to the start of the verification activities. No comments were received.

During the verification, mistakes and needs for clarification were identified. CL A1, CL B1, CL B2, CL D1, CAR D3 and CAR E1 were raised regarding corrections and additional information required in the MR. The PP has carried out the requested corrections so that it can be confirmed that the Monitoring report is complete and transparent and in accordance with the registered PDD and other relevant requirements.

5.8. ER Calculation

According to ACM0002 Version 07 the project ERs are calculated multiplying the grid emission factor by the power supplied to the grid. As per ACM0002 Version 07 procedures the grid emission factor can be calculated ex-ante fixed throughout the crediting period. The PP has chosen this option and the fixed ex-ante calculated grid emission factor as per registered PDD is 712.7 tCO₂e/GWh and this is the value used in the monitoring report^{†/MR/}.

For the verified monitoring period the net amount of electricity supplied to the grid is 99,592 MWh resulting in a total emission reduction of 70,842 tCO₂e

During the verification mistakes in the ER calculation were identified. Corresponding CAR D1, CAR D2 and CAR D4 were raised. A revised ER calculation spreadsheet^{†/XLS/} was prepared by the PP and presented to the verification team. All raised issues were addressed appropriately so that all corresponding CARs could be closed out. Thus it is confirmed that the ER calculation is overall correct.

5.9. Quality Management

Quality Management procedures for measurements, collection and compilation of data, data storage and archiving, calibration, maintenance and training of personnel in the framework of this CDM project activity have been defined. The procedures defined can be assessed as appropriate for the purpose. No significant deviations thereof have been observed during the verification.

5.10. Comparison with ex-ante estimated emission reductions

The MR includes a comparison of the calculated actual emission reductions with the ex-ante calculated values in the registered PDD.

The calculated value was found to be proportionally lower than the ex-post determined value, thus no further justification was required.

5.11. Overall Aspects of the Verification

All necessary and requested documentation was provided by the project participants so that a complete verification of all relevant issues could be carried out.

Access was granted to all installations of the plant which are relevant for the project performance and the monitoring activities.

The verification team got access to all relevant documentation regarding the monitoring of the emission reduction calculation, like:

- technical data of the measuring equipment;
- meter readings;
- DISNORTE-DISSUR confirmation letters;
- Amayo sales electricity records;

- Economic Transaction Documents;
- calibration certificates;
- measurement devices;

All these documentation were checked and found to be consistent and of high quality.

No issues have been identified indicating that the implementation of the project activity and the steps to claim emission reductions are not compliant with the UNFCCC criteria and relevant guidance provided by the COP/CMP and the CDM EB (clarifications and/or guidance).

5.12. Hints for next periodic Verification

No FAR was raised during the 3rd monitoring period.

6. VERIFICATION OPINION

Consorcio Eólico Amayo S.A. has commissioned the TÜV NORD JI/CDM Certification Program to carry out the 3rd periodic verification of the project: “Amayo 40 MW Wind Power Project – Nicaragua”, with regard to the relevant requirements for CDM project activities. The project reduces GHG emissions by displacement of conventional generated electricity in the Nicaraguan grid by renewable power from a wind farm. This verification covers the period from 2010-09-01 to 2011-04-30 (including both days).

In the course of the verification 5 Corrective Action Requests (CAR) and 4 Clarification Requests (CL) were raised and successfully closed. Furthermore, no FAR was raised. The verification is based on the draft monitoring report, revised monitoring report, the monitoring plan as set out in the registered PDD, the validation report, emission reduction calculation spreadsheet and supporting documents made available to the TÜV NORD JI/CDM CP by the project participant.

As a result of this verification, the verifier confirms that:

- all operations of the project are implemented and installed as planned and described in the validated project design document.
- the monitoring plan is in accordance with the applied approved CDM methodology, ie, ACM0002 ver.07: Grid-connected electricity generation from renewable sources.
- the installed equipment essential for measuring parameters required for calculating emission reductions are calibrated appropriately.
- the monitoring system is in place and functional. The project has generated GHG emission reductions.

As the result of the 3rd periodic verification, the verifier confirms that the GHG emission reductions are calculated without material misstatements in a conservative and appropriate manner. TÜV NORD JI/CDM CP herewith confirms that the project has achieved emission reductions in the above mentioned reporting period as follows:

Emission reductions: **70,842** t CO_{2e}

Sao Paulo, 2012-04-25



Ricardo Lopes

TÜV NORD JI/CDM Certification Program

Verification Team Leader

Hannover, 2012-04-25



Alexandra Nebel

TÜV NORD JI/CDM Certification Program

Final Approval

7. REFERENCES

Table 7-1: Documents provided by the project participant(s)

Reference	Document
/CAI/	Connection Agreement (transmission line) between ENATREL and CEA - “ <i>Convenio de conexión entre ENATREL y Consorcio Eólico Amayo S.A</i> ” - number 46397, issued 2007/08/17 (without validity date).
/changes/	<u>Document related to meter changes:</u> - E-mail from Sergio Garcia (sgarcia@cndc.org.ni) from CNDC confirming access to the new 8 NEXUS meters located at Amayo substation, 2011/04/13. <u>AMAYO PHASE I</u> Measurement point AMY-U3010 (Cell 3): - Exchange Meters Report for the main meter Landis (class 2, serial No. 98423904) installing a new meter Nexus (class 2, serial No. 102-0053298330) and for the backup meter Landis (class 2 serial No. 87732080) installing the new meter Nexus class 0.2, serial No. 102-0053298431) issued by ENATREL (National Company of Electric Transmission) on September 2010 - Official Inspection Report by SIMEC, dated 2010/10/24 Measurement point AMY-U3040 (Cell 6): - Exchange Meters Report for the main meter Landis (class 2, serial No. 98423956) installing the new meter Nexus (class 2, serial No. 0053298936) and for the backup meter Landis (class 2 serial No.87732072) installing the new meter Nexus class 0.2, serial No. 0053299028) issued by ENATREL (National Company of Electric Transmission) on September 2010 - Official Inspection Report by SIMEC, dated 2010/10/24 <u>AMAYO PHASE II</u> Measurement point AMY-U3120 (Cell 4) – (before AMY-U3020): - Exchange Meters Report for the main meter Landis (class 2, serial No. 98423908) installing a new meter Nexus (class 2, serial No. 102-0053298532) and for the backup meter Landis (class 2 serial No. 98423954) installing the new meter Nexus class 0.2, No. 102-

Reference	Document
	0053298633) issued by ENATREL (National Company of Electric Transmission) on September 2010 ○ Official Inspection Report by SIMEC, dated 2010/10/24 <i>*Even though there was a change in the power meters physical location (from AMY-U3020 to AMY-U3120) the measuring position remains the same which is at the 13.8 kV bar. Hence, the monitoring and measuring arrangements remain the same as in the revised Monitoring Plan.</i> ● Measurement point AMY-U3130 (Cell 5) – (before U3030): ○ Exchange Meters Report for the main meter Landis (class 2, Serial No. 98423966) installing the new meter Nexus (class 2, serial No. 102-0053298734) and for the backup meter Landis (class 2 serial No. 98423955) installing the new meter Nexus class 0.2, serial No. 102-0053298835) issued by ENATREL (National Company of Electric Transmission) on September 2010 ○ Official Inspection Report by SIMEC, dated 2010/10/24 <i>*Even though there was a change in the power meters physical location (from AMY-U3030 to AMY-U3130) the measuring position remains the same which is at the 13.8 kV bar. Hence, the monitoring and measuring arrangements remain the same as in the revised Monitoring Plan.</i> <u>Document related to turbine changes (Turbine 5):</u> ○ Commissioning checklist S88-2.1 MW by Suzlon, Ver. 01, 2010/02/04. ○ Turbine Data: Turbine History Card
/CC_ION/	<u>Main meter:</u> Schneider Electric, Power Logic, ION 8600, s/n: PT-0901A531-01 (ZYY00901053100000) ● Conformity and Verification Certificate Num. 0497, 2010/10/29 by ENATREL (valid till 2012/10/28) ● Calibration record (single meter record) issued 2009/06/14 by AMELEC (Standard ID: RM-10-06 - Serial # 508071 & Calibrator ID: UTEC 441 - Serial # B0201), valid for 2 years, till 2011/06/13. ● Initial calibration record (single meter record) issued 2009/03/31 by AMELEC (Standard ID: RM-10-06 - Serial # 508071 & Calibrator ID: UTEC 441 - Serial # B0201). ● Certification of compliance and calibration by Schneider Electric # 70052-0225-03, issued 2009/01/30. ● Certificate of compliance and verification by Schneider Electric # 70052-0224-02 (without date).

Reference	Document
	<u>Back up meter:</u> Schneider Electric, Power Logic, ION 8600, s/n: PT-0901A532-01 (ZYY00901053200000) • <u>Conformity and Verification Certificate Num. 0498, 2010/10/29 by ENATREL (valid till 2012/10/28)</u> • Calibration record (single meter record) issued 2009/06/14 by AMELEC (Standard ID: RM-10-06 - Serial # 508071 & Calibrator ID: UTEC 441 - Serial # B0201) valid for 2 years, till 2011/06/13. • Initial calibration record (single meter record) issued 2009/03/31 by AMELEC (Standard ID: RM-10-06 - Serial # 508071 & Calibrator ID: UTEC 441 - Serial # B0201). • Certification of compliance and calibration by Schneider Electric # 70052-0225-03, issued 2009/01/30. • Certificate of compliance and verification by Schneider Electric # 70052-0224-02 (without date).
/CC_nexus/	<u>AMAYO PHASE I</u> • Measurement point AMY-U3010 (Cell 3): ○ <u>Main meter</u> E.I.G., type Nexus 1262, class 0.2, serial No. 102-0053298330: - Conformity and Verification Certificate Num. 0481, 2010/09/29 by ENATREL <u>(valid till 2012/09/28)</u> ○ <u>Back-up meter</u> E.I.G., type Nexus 1262, class 0.2, serial No. 102-0053298431: - Conformity and Verification Certificate Num. 0482, 2010/09/29 by ENATREL <u>(valid till 2012/09/28)</u> • Measurement point AMY-U3040 (Cell 6): ○ <u>Main meter</u> E.I.G., type Nexus 1262, class 0.2, serial No. 102-0053298936: - Conformity and Verification Certificate Num. 0487, 2010/09/30 by ENATREL <u>(valid till 2012/09/29)</u> ○ <u>Back-up meter</u> E.I.G., type Nexus 1262, class 0.2, serial No. 102-0053299028: - Conformity and Verification Certificate Num. 0488, 2010/09/30 by ENATREL <u>(valid till 2012/09/29)</u> <u>AMAYO PHASE II</u> • Measurement point AMY-U3120 (Cell 4) – (before AMY-U3020):

Reference	Document
	○ <u>Main meter</u> E.I.G., type Nexus 1262, class 0.2, serial No. 102-0053298532: - Conformity and Verification Certificate Num. 0483, 2010/09/30 by ENATREL - Conformity and Verification Certificate Num. 0494, 2010/10/24 by ENATREL (due to change of meter location) - <u>(valid till 2012/10/23).</u> ○ <u>Back-up meter</u> E.I.G., type Nexus 1262, class 0.2, serial No. 102-0053298633: - Conformity and Verification Certificate Num. 0484, 2010/09/30 by ENATREL - Conformity and Verification Certificate Num. 0496, 2010/10/24 by ENATREL (due to change of meter location) - <u>(valid till 2012/10/23).</u> ● Measurement point AMY-U3130 (Cell 5) - (before U3030): ○ <u>Main meter</u> E.I.G., type Nexus 1262, class 0.2, serial No. 102-0053298734: - Conformity and Verification Certificate Num. 0485, 2010/09/30 by ENATREL. - Conformity and Verification Certificate Num. 0491, 2010/10/24 by ENATREL (due to change of meter location) - <u>(valid till 2012/10/23).</u> ○ <u>Back-up meter</u> E.I.G., type Nexus 1262, class 0.2, serial No. 102-0053298835: - Conformity and Verification Certificate Num. 0486, 2010/09/30 by ENATREL. - Conformity and Verification Certificate Num. 0492, 2010/10/24 by ENATREL (due to change of meter location) - <u>(valid till 2012/10/23).</u>
/downtime/	● Downtimes excel spread sheet (evidence of all down times extracted by the SCADA system) ● Turbine outage 2009 – 2010 ● Letter/E-mail from DISNORTE-DISSUR to Amayo authorizing the method used to calculate the energy generation of Amayo II due to the shutdown occurred on 2010/11/11.
/IDR/	Daily generation calculation spread sheet “ <i>Amayo Daily Report</i> ” (Evidence of daily energy generation).
/DTE/	Economic Transaction Documents covering the monitoring period (extracted directly from the CNDC web site (acces route: Transacciones Economicas/DTE Oficiales/Transacciones Resumen/year)

Reference	Document
/DWS/	Dispatch Information Center web site: “Sistema de Información del Centro Nacional de Despacho de Carga” www.cndc.org.ni Usuarios autorizados/nombre de usuario/contraseña/INICIO/Subida de archivos Agentes/Comercial/SIMEC/AMAYO/2009 (Evidence of the energy data delivered and up loaded to the energy authority).
/EDI/	Electricity data extracted from the main and back up meters corresponding the monitoring period.
/EEG/	Evidences of energy generation: <u>AMAYO PHASE I - SALES ELECTRICITY RECORDS (INVOICES):</u> • Invoice num. 0103 (DISNORTE) and invoice num. 0104 (DISSUR) corresponding to September 2010, issued 2010/10/06. • Invoice num. 0106 (DISNORTE) and invoice num. 0107 (DISSUR) corresponding to October 2010, issued 2010/11/01. • Invoice num. 0108 (DISNORTE) and invoice num. 0109 (DISSUR) corresponding to November 2010, issued 2010/12/01. • Invoice num. 0110 (DISNORTE) and invoice num. 0111 (DISSUR) corresponding to December 2010, issued 2011/01/03. • Invoice num. 0115 (DISNORTE) and invoice num. 0116 (DISSUR) corresponding to January 2011, issued 2011/02/01. • Invoice num. 0117 (DISNORTE) and invoice num. 0118 (DISSUR) corresponding to February 2011, issued 2011/03/01. • Invoice num. 0121 (DISNORTE) and invoice num. 0123 (DISSUR) corresponding to March 2011, issued 2011/04/06. • Invoice num. 0124 (DISNORTE) and invoice num. 0125 (DISSUR) corresponding to April 2011, issued 2011/05/03. <u>AMAYO PHASE I - DISNORTE-DISSUR CONFIRMATION LETTERS:</u> • Letter # CE-342-10-2010, corresponding to Sept. 2010, issued 2010/10/12. • Letter # CE-366-11-2010, corresponding to Oct. 2010, issued 2010/11/05. • Letter # CE-394-12-2010, corresponding to Nov. 2010, issued 2010/12/06. • Letter # CE-005-01-2010, corresponding to Dec. 2010, issued 2011/01/07. • Letter # CE-029-02-2011, corresponding to Jan. 2011, issued 2011/02/07. • Letter # CE-054-03-2011, corresponding to Feb. 2011, issued 2011/03/07. • Letter # CE-104-04-2011, corresponding to Mar. 2011, issued 2011/04/12. • Letter # CE-130-05-2011, corresponding to Apr. 2011, issued 2011/05/09. <u>AMAYO PHASE I - ENERGY AND INVOICING REPORT</u> (Resumen de Energia AMYI & AMYII - /Factura Amayo month year.xls/): • Report corresponding to September 2010, issued 2010/10/06.

Reference	Document
	• Report corresponding to October 2010, issued 2010/10/06. • Report corresponding to November 2010, issued 2010/10/06. • Report corresponding to December 2010, issued 2010/10/06. • Report corresponding to January 2011, issued 2010/10/06. • Report corresponding to February 2011, issued 2010/10/06. • Report corresponding to March 2011, issued 2010/10/06. • Report corresponding to April 2011, issued 2010/10/06.
/IEEG_A2/	<u>AMAYO PHASE II SALES ELECTRICITY RECORDS (INVOICES):</u> • Invoice num. 028 (DISNORTE) and invoice num. 026 (DISSUR) corresponding to September 2010, issued 2010/10/06. • Invoice num. 030 (DISNORTE) and invoice num. 029 (DISSUR) corresponding to October 2010, issued 2010/11/01. • Invoice num. 033 (DISNORTE) and invoice num. 031 (DISSUR) corresponding to November 2010, issued 2010/12/01. • Invoice num. 040 (DISNORTE) and invoice num. 038 (DISSUR) corresponding to December 2010, issued 2011/01/03. • Invoice num. 043 (DISNORTE) and invoice num. 041 (DISSUR) corresponding to January 2011, issued 2011/02/01. • Invoice num. 044 (DISNORTE) and invoice num. 045 (DISSUR) corresponding to February 2011, issued 2011/03/01. • Invoice num. 052 (DISNORTE) and invoice num. 0051 (DISSUR) corresponding to March 2011, issued 2011/04/06. • Invoice num. 055 (DISNORTE) and invoice num. 054 (DISSUR) corresponding to April 2011, issued 2011/05/03.
/EGL/	Energy Generation License – “ <i>Contrato de Licencia de Generación de energía eléctrica</i> ” – number 29498, issued 2008/08/05 (valid for 30 years).
/EIA/	Environmental Impact Study, issued November 2006.
/EL/	• Environmental License – “Permiso ambiental” – number 01-2007, issued 2007/01/08 (without expiration date). • Document part of the Environmental License – “<i>Resolución Administrativa</i>” – number 08-99, issued 1999/05/18. • Letter stamped and signed by MARENA 2008/10/21 (Evidence that the Environmental License is still valid).
/Landis/	<u>Landis Power Meters Technical Data.</u> <u>AMAYO PHASE I</u> • Cell 3

Reference	Document
	○ Main meter: Landis, Type RXR, class 20. Serial No. 98423904. ○ Back-up meter: Landis, Type RXR, class 20. Serial No. 87732080 ● Cell 6 ○ Main meter: Landis, Type RXR, class 20. Serial No. 98423956. ○ Back-up meter: Landis, Type RXR, class 20. Serial No.87732072. <u>AMAYO PHASE II</u> ● Cell 4 ○ Main meter: Landis, Type RXR, class 20. Serial No. 98423908 ○ Back-up meter: Landis, Type RXR, class 20. Serial No. 98423954 ● Cell 5 ○ Main meter: Landis, Type RXR, class 20. Serial No. 98423966 ○ Back-up meter: Landis, Type RXR, class 20. Serial No. 98423955 ● Instruction/Technical Manual Bulletin 987, revision 4 by Landis+GyR, 2003. ● Technical Configuration from power meters. This information was taken directly from each power meter on 2010/10/01. This document evidences the type and serial code of each power meter. ● Picture from one of the power meter was provided to demonstrate that these were Class 20. ● Product Specification Sheet for Landis+Gyr power meters. This evidence demonstrates that for Class 20 power meters an accuracy of $\pm 0.2\%$ is obtained.
/logbook/	Logbook of Operations Amayo (covering the monitoring period).
/IM/	Installation Manual – S88-2.1 MW – Suzlon Windkraft GmbH, Doberaner Str. 115, 18057 Rostock Germany.
/INE/	Official letter signed and stamped by INE, Ref. DGE-MCV-0230-0302010, dated 2010/03/23 (evidence of the approval by the energy authority regarding the new method to calculate the energy supplied to the grid, valid till 2010/09/30).
/MCL/	Turbine logbook: ● Turbine specific data; ● Maintenance Check List / 500 hours - S88-2.1 MW; ● Maintenance Check List / Half-Yearly – 8S88-2.1 MW; ● Maintenance Check List / Yearly – 8S88-2.1 MW; ● Service works & ● Repairs
/MEP/	Monitoring Environmental Plan <u>2010</u> and <u>2011</u> “Plan de Monitoreo

Reference	Document
	<i>Ambiental</i> ” and its prove of receipt by MARENA on 2010/09/02 and 2011/06/02 respectively (bird impact monitoring, water quality monitoring, residual domestic water quality monitoring, sludge quality monitoring of the water treatment system, air quality monitoring, noise and hearing monitoring).
/MEPR/	Monthly Energy Production calculation spread sheet & Monthly Energy Production Report corresponding to the monitoring period (evidence of monthly energy generation).
/MoRe/	Monthly Report Amayo (Evidence of the operation data such as energy generation, operation statistics, incidents, etc.)
/MR/	• Draft Monitoring Report “Amayo 40 MW Wind Power Project – Nicaragua”, version 01, 2011/05/16. • Monitoring Report “Amayo 40 MW Wind Power Project – Nicaragua”, version 02, 2011/11/02. • Monitoring Report “Amayo 40 MW Wind Power Project – Nicaragua”, version 03, 2012/01/19. • Final Monitoring Report “Amayo 40 MW Wind Power Project – Nicaragua”, version 04, 2012/02/07.
/MS/	Turbines main specification S88, 60 Hz – Standard Temperature Version 80m, Tubular Tower.
/Mto/	Maintenance Forecast Program Amayo I, 2010-2012 by Suzlon.
/O&M/	Technical documentation - Maintenance Manual - S88-2.1 MW, number WD00114, issued 2008/04/07.
/OPI/	AMAYO Operational Procedures (relevant for the project activity): • Procedure for discharge the SCADA files of turbine generation (AMY1-OPE-P14). • Procedure to up load data to the CNDC web page (AMY1-OPE-P06). • ION meter readings (AMY1-OPE-P02) • NEXUS meter file data generation (AMY1-OPE-P19)
/OPL/	Operational Procedures List by AMAYO.
/OR/	Operational Regulation # 26-2000 “ <i>Normativa de Operación</i> ”, issued November 2000 by INE.
/PCC/	Procedures for carbon credits, October 2010 (procedures for monitoring parameters, troubleshooting procedures, and data management).

Reference	Document
/PPA1/	Power Purchase Agreement of Amayo Phase I – between (Empresa Distribuidora de electricidad del Sur (Dissur) and Consorcio Eólico Amayo, S.A. issued 2007/02/28 (valid for 15 years).
/PPA2/	Power Purchase Agreement Amayo Phase I – between (Empresa Distribuidora de electricidad del Norte (Disnorte) and Consorcio Eólico Amayo, S.A. issued 2007/09/03 (valid for 15 years).
/PPA_A2/	Power Purchase Agreement of Amayo Phase II – between (Empresa Distribuidora de Electricidad del Sur (Dissur) and Consorcio Eólico Amayo (Fase II), S.A. issued 2009/07/22 (valid for 15 years).
/SC/	SC-Comander User Manual, date 2008/06/19
/SCS/	Functional description SC-SCADA Reporting – Suzlon Energy A/S - issued 2009/04/01 Revision 00.
/Suzlon/	Suzlon Report (evidence of the change of generators). • Corrective Action Report “Suzlon S 88 Turbine, Generator Winding Failures” Version 0 issued by Suzlon on 2010/03/13
/TE/	Training evidence performed by Suzlon Wind Energy A/S Technical Training Center performed on 2011/02/01-2011/02/04: • HAILO safety cable • Inspection and certification • Emergency medical training • Rescue from heights • AVANTI service lift - operation. Training evidence performed by Fireman Department of Rivas performed on 2010/11/20: • Development of the wind park emergency plan (first aids & fire control and contingency, forest fire and fire drill Training evidence performed by a private safety consultancy performed on 2011/04/15: • Electricity risks in high and low tension • Lock out/Tag Out
/TSPI/	Alarm Description & Trouble Shooting S88 CSM88L28021, Version 01, issued 2008/09/30 by Suzlon.

Reference	Document
/XLS/	Emission reduction calculation spreadsheet
/45-94/	Environmental Impact Assessment Regulation number 45-94 “ <i>Reglamento de Permiso y Evaluación de Impacto Ambiental</i> ”, issued 1994/10/31. (Regulation that requires an EIA for any project implemented in Nicaragua)

Table 7-2: Background investigation and assessment documents

Reference	Document
/ACM0002/	Consolidated baseline methodology for grid-connected electricity generation from renewable sources ACM0002, version 07.
/CPM/	TÜV NORD JI / CDM CP Manual (incl. CP procedures and forms)
/IPPC/	1. 1996 IPCC Guidelines for National Greenhouse Gas Inventories: work book 2. 2006 IPCC Guidelines for National Greenhouse Gas Inventories: work book
/KPI/	Kyoto Protocol (1997)
/MA/	Decision 3/CMP. 1 (Marrakesh – Accords)
/PDD/	Project Design Document for CDM project: “ <i>Amayo 40 MW Wind Power Project - Nicaragua</i> ” version 3, dated 2008/10/31
/RfRevMPI/	Request for revision of the Monitoring Plan “ <i>Amayo 40 MW Wind Power Project - Nicaragua</i> ”, accepted by the UNFCCC on 2011/09/08.
/VAL/	Validation Report for CDM project “ <i>Amayo 40 MW Wind Power Project - Nicaragua</i> ” version 02, dated 2008/11/21
/VER/	2 nd Verification Report for CDM project “ <i>Amayo 40 MW Wind Power Project - Nicaragua</i> ” Report No. 7426 – 10/426 V02, Rev. No. 0, dated 2011/10/27
/VVM/	UNFCCC Validation and Verification Manual (Version 1.2, Annex 1; EB 55)

Table 7-3: Websites used

Reference	Link	Organisation
-----------	------	--------------

Reference	Link	Organisation
/cndc/	www.cndc.org.ni	Dispatch National Center web site: “Centro Nacional de Despecho de Carga - Nicaragua”
/dna-HP/	www.marena.gob.ni	DNA of Nicaragua
/ipcc/	www.ipcc-nggip.iges.or.jp	IPCC publications
/unfccc/	http://cdm.unfccc.int	UNFCCC

Table 7-4: List of interviewed persons

Reference	Mol ¹		Name	Organisation / Function
/IM01/	V	☒ Mr. ☐ Ms.	Manuel Cajellas M.	Plant Manager – Amayo
/IM01/	V	☐ Mr. ☒ Ms.	Mariana Barrios S.	Environmental and CDM Coordinator – Amayo
/IM01/	V	☒ Mr. ☐ Ms.	Nestor Gómez S.	Operation Chief - Amayo
/IM01/	V	☒ Mr. ☐ Ms.	Victor Centeno R.	Operator – Amayo
/IM01/	V	☒ Mr. ☐ Ms.	Guillermo Ayala	Land maintenance – Amayo
/IM01/	V	☒ Mr. ☐ Ms.	Raúl Siezar	Maintenance assistant – Amayo
/IM02/	V	☐ Mr. ☒ Ms.	Esperanza Pichardo M.	Local community representative – Rivas community

¹⁾ Means of Interview: (Telephone, E-Mail, Visit)

ANNEX

- A1:** Verification Protocol
- A2:** Appointment / Authorisation statements

ANNEX 1: VERIFICATION PROTOCOL

Table A-1: GHG calculation procedures and management control testing / detailed audit testing of residual risk areas and random testing

Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks	Additional verification testing	Conclusions and Areas Requiring Improvement (including <i>Forward Action Requests</i>)
Raw data generation				
• Installation of measuring equipment • Dysfunction of installed equipment • Maloperation by operational personnel • Downtimes of equipment • Exchange of equipment • Change of measurement equipment characteristic • Insufficient accuracy • Change of	• Installation of modern and state of the art equipment • Process control automation • Internal data review • Regular visual inspections of installed equipment • Only skilled and trained personnel operates the relevant equipment • Daily raw data checks • Immediate exchange of dysfunctional equipment	• Inadequate installation / operation of the monitoring equipment • Inadequate exchange of equipment • Change of personnel • Undetected measurement errors • Inappropriateness of Management system procedures w.r.t. monitoring plan requirements (e.g. substitute value strategies) • Non-application of management system procedures	• Site – visit (maintenance dept., gas supplier) • Check of equipment • Check of technical data sheets • Check of suppliers information / guarantees • Check of calibration records, if applicable • Check of maintenance records • Counter-check of raw data and commercial data • Check of CDM management system	• See Table A-2

Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks	Additional verification testing	Conclusions and Areas Requiring Improvement (including <i>Forward Action Requests</i>)
- technology - Accuracy of values supplied by Third Parties	- Stand-by duty is organized - Training - Internal audit procedures - Internal check of QA/QC measures of involved Third Parties	- Insufficient accuracy - Inappropriate QA/QC measures of Third Parties	- Check of CDM related procedures - Application of CDM management system procedures - Check of trainings - Check of responsibilities - Check of QA/QC documentation / evidences of involved Third Parties	
Raw data collection and data aggregation				
- Wrong data transfer from raw data to daily and monthly aggregated reporting forms - IT Systems - Spread sheet programming - Manual data transmission	- Cross-check of data - Plausibility checks of various parameters. - Appropriate archiving system - Clear allocation of responsibilities - Application of CDM Management system procedures	- Unintended usage of old data that has been revised - Incomplete documentation - Ex-post corrections of records - Ambiguous sources of information - Non-application of management system procedures	- Check of data aggregation steps - Counter-calculation - Data integrity checks by means of graphical data analysis and calculation of specific performance figures - Check of management system certification	See Table A-2

Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks	Additional verification testing	Conclusions and Areas Requiring Improvement (including <i>Forward Action Requests</i>)
- Data protection - Responsibilities	- Usage of standard software solutions (Spreadsheets) - Limited access to IT systems - Data protection procedures	- Manual data transfer mistakes - Unintended change of spread sheet programming or data base entries - Problems caused by updating/upgrading or change of applied software	- Check of data archiving system - Check of application of Management system procedures	
Other calculation parameters				
Emission factors, oxidation factors, coefficients	The values and data sources applied are defined in the PDD and monitoring plan	- Unintended or intended Modification of calculation parameters - Wrong application of values - Misinterpretations of the applied methodology and/ or the PDD - Missing update of applicable regulatory framework (e.g. IPCC values)	- Update-check of regulatory framework - Countercheck of the applied MP in the MR against the methodology and the PDD	See Table A-2
Calculation Methods				

Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks	Additional verification testing	Conclusions and Areas Requiring Improvement (including <i>Forward Action Requests</i>)
- Applied formulae - Miscalculation - Mistakes in spread-sheet calculation	- Advanced calculation and reporting tools - A CDM coordinator is in charge of the CDM related calculations - Usage of tested / counterchecked Excel spreadsheets - Involvement of external consultants	The danger of miscalculation can only be minimized.	- Countercheck on the basis of own calculation. - Spread sheet walk-through. - Plausibility checks - Check of plots	See Table A-2
Monitoring reporting				
- Data transfer to the author of the monitoring report - Data transfer to the monitoring report - Unintended use of outdated versions	- An experienced CDM consultant is responsible for monitoring reporting. - CDM QMS procedures are defined	- The danger of data transfer mistakes can only be minimized - Inappropriate application of QMS procedures	- Counter check with evidences provided. - Audit of procedure application	See Table A-2

Table A-2: Amayo 40 MW Wind Power Project – Nicaragua Periodic Verification Checklist

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
A. General Description of the project activity				
A.1. Brief description of the project activity (EB 54 Annex 34, A.1) Check if section A.1 of the MR includes the following: - Purpose of the PA and the measures taken to reduce GHG emissions - Brief description of the installed technology and equipments - Relevant dates for the project activity (e.g. construction, commissioning, continued operation periods etc. - Total emission reductions achieved in this monitoring period	/MR/	The verification team has checked section A.1 of the MR and confirms that the information provided is complete and correct with regards to the following: ☒ Purpose of the PA and the measures taken to reduce GHG emissions ☒ Brief description of the installed technology and equipments ☒ Relevant dates for the project activity (e.g. construction, commissioning, continued operation periods etc ☒ Total emission reductions achieved in this monitoring period No findings have been identified	OK	OK
A.2. Project Participants (EB 54 Annex 34, A.2) Check if section A.2 of the MR includes the following: All PPs as displayed on the UNFCCC website	/MR/	The verification team has checked section A.2 of the MR and confirms that the information provided is complete and correct with regards to the following: ☒ All PPs as displayed on the project related UNFCCC website are correctly listed No findings have been identified.	OK	OK
A.3. Location of the Project Activity	/MR/	The verification team has checked section A.3 of the MR and	OK	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
(EB 54 Annex 34, A.3) Check if section A.3 of the MR reflects correctly the following: - Address of the project location - Latitude and Longitude	/PDD/ /IM01/	confirms by means of comparison with the information given in the PDD and information gathered during the site visit that the information provided is complete and correct with regards to the following: ☒ The address has been correctly given in the MR ☒ Latitude and Longitude are in line with the information given in the PDD and reflects the actual location of the PA. No findings have been identified.		
A.4. Technical description of the project (EB 54 Annex 34, A.4) Check if section A.4 of the MR correctly describes / includes the following: - Detailed description of the technology applied - Diagrams	/MR/ /PDD/ /IM01/	The verification team has checked section A.4 of the MR and confirms by means of comparison with the information given in the PDD and information gathered during the site visit that the information provided is complete and correct with regards to the following: ☒ The description of the technology applied is complete and appropriate ☒ Appropriate diagrams have been included in the description No findings have been identified.	OK	OK
A.5. Title, reference and version of the baseline and monitoring methodology applied to the project (EB 54 Annex 34, A.5) Check if section A.5 of the MR correctly describes /	/MR/ /PDD/ /unfccc/	The verification team has checked section A.5 of the MR and confirms by means of comparison with the information given in the PDD and displayed on the UNFCCC website that the information provided is complete and correct with regards to the following: ☒ Name and version of the applicable CDM Methodology	OK	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<i>includes the following:</i> - Reference to the applicable version of the methodology - Reference to the applicable version(s) of relevant methodological tools - Relevant EB decisions, if applicable		☒ Name and version of applicable CDM methodological tools ☒ Relevant EB decisions No findings have been identified.		
A.6. Registration date of the project activity (EB 54 Annex 34, A.6) Check if section A.6 of the MR correctly includes the following: Registration date	/MR/ /unfccc/	The verification team has checked section A.6 of the MR and confirms by means of comparison with the information displayed on the UNFCCC website that the information provided is complete and correct with regards to the following: ☒ Registration date No findings have been identified.	OK	OK
A.7. Crediting period of the PA and related information (EB 54 Annex 34, A.7) Check if section A.7 of the MR correctly includes the following: Start date of the crediting period. In this context please check, if applicable, whether post registration changes to the start date have been accepted by the EB.	/MR/ /unfccc/	The verification team has checked section A.7 of the MR and confirms by means of comparison with the information displayed on the UNFCCC website that the information provided is complete and correct with regards to the following: ☒ Start date of the crediting period. ☐ Type and length of the crediting period The type and length of the crediting period is not specified in the MR. CL A1 was raised.	CL A1	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
Length and type of the crediting period		(CL A1) Section A.7.: type of the crediting period (renewable) is missing.		
A.8. Name of the responsible person(s) / entity/(ies) (EB 54 Annex 34, A.8) Check if section A.8 of the MR correctly includes the following: Contact information of the person(s)/entity(ies) responsible for completing the MR.	/IMR/ /IM/	The verification team has checked section A.8 of the MR and confirms by means of interviews with the PP that the information provided is complete and correct with regards to the following: ☒ Contact information of the person(s) / entity/(ies) responsible for completing the MR.. No findings have been identified.	OK	OK
B. Implementation of the project activity				
B.1. Implementation status of the project				
B.1.1. Initial project implementation (EB 55 Annex 1, §§ 182, 195-201) Assess whether the project has been implemented and operated as per the registered PDD and are all physical features of the project in place? Further focus on the potential phase wise implementation and check the reporting on the corresponding status and starting dates accordingly. Also, discuss – if applicable – any approvals of the necessary request of notification or request for approval of changes from the project activity as described in the registered PDD (EB 48 Annex	/IM01/ /PDD/ /TECH/	Description: at the registered PDD it is stated the technical features and equipment to be employed by the project activity, and what was verified by the verification team is that the project is indeed implemented with them. 19 Suzlon wind turbine generators of 2.1 MW model S88 were installed resulting in a wind farm of 39.9 MW generation capacity. Justification of evidences: during the site visit, the verification team had a full overview of all installation, equipment and operation of the wind farm. Conclusion: the project has been implemented in accordance with the registered PDD.	OK	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
66/67).				
B.1.2. Technical equipment changes (EB 55 Annex 1, § 187) <i>Check if relevant technical equipment of the project activity has been exchanged or modified during the monitoring period. Further ensure that consistent notations of key equipment (meters etc.) in PDD, MR and calculation spreadsheet are applied</i> <i>Consider e.g. interviews with operational personnel, QMS records, maintenance records, instrument specifications.</i> <i>In case of changes, check whether the project is still in line with the registered PDD and assure that these changes have been considered in the monitoring report and the emission reduction calculation.</i> <i>Also, discuss –if applicable- any approvals of the necessary request of notification or request for approval of changes from the project activity as described in the registered PDD (EB 48 Annex 66/67).</i>	/IM01/ /PDD/ /VAL/ /CC_nexus/ /logbook/ /changes/ /	<i>Description:</i> During the monitoring period the following equipment changes occurred: - On September 29th, 2010 Amayo replaced all the Landis power meters at the low voltage side for both project phases. Now a total of 4 sets of Nexus^{/CC_nexus/} power meters with their respective back-up meters have been installed, two for Amayo Phase I and the other two for Amayo Phase II. The replacement activities finalized on October 1st 2010. During the replacement period (2010/09/29 – 2010/10/01) the project activity did not generated any electricity. - Then, on 2010/10/24 the Nexus power meters for Amayo Phase II were relocated but not due to equipment failure. This change was performed in order to have separate arrangement of power measurements for each project phase. Originally Cell 4 and Cell 5 measuring points were U3020 and U3030 respectively and they were changed to U3120 for Cell 4 and U3110 for Cell 5. The removal and re-installation reports of the Nexus power meters were checked by the verification team. Also, in this same day the entire power metering system was evaluated to confirm that was properly operating. The Operational Logbooks^{/logbook/} were reviewed, these Logbooks includes the daily operational records, this are prepared manually by the project operators and then all this data	CL-B1	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
		is recorded in the Amayo Daily Reports. <i>Justification of evidences:</i> Interviews with the Amayo Operation Chief were performed. The operational logbooks/^{/logbook/} were reviewed so as the power meters replacement reports^{/changes/} and the power measurement system evaluation report. <i>Conclusion:</i> Although some equipment was changed the project is still in line with the registered PDD. These changes have been considered in the emission reduction calculation. Nevertheless all the information regarding these changes was not included in the MR. Therefore, CL B1 was raised. (CL B1) During site visit it could be confirmed that the physical location of the Nexus meters of Amayo II (cell 4 & cell 5) were changed. This information shall be included in section B1 of the MR. Furthermore please include the date of shutdown and restart of operation due to the change mentioned. Furthermore date of restart operation included in table 3 is incorrect. It should be 2011/03/20 (not 2010/03/20) Moreover date of approval of the revision of the monitoring plan shall be included in section B.2.		
B.1.3. Operation of the project activity (EB 55 Annex 1, § 195) <i>Check if relevant operation modes of the project activity have been exchanged or modified during the monitoring period.</i> <i>Consider e.g. interviews with operational personnel,</i>	/IM01/ /PDD/ /VAL/	<i>Description:</i> Amayo has complete control of the operation of the wind farm. SUZLON is responsible for the operation and maintenances of the wind park. A SCADA system (SC-Commander system) is implemented to control, collect, store, analyze and distribute all available data. The SC-SCADA Reporting server is a central Suzlon database	OK	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<i>operation log sheets, data management system records.</i> <i>In case of changes, check whether the project is still in line with the registered PDD and assure that these changes have been considered in the monitoring report and the emission reduction calculation.</i> <i>Also, discuss – if applicable – any approvals of the necessary request of notification or request for approval of changes from the project activity as described in the registered PDD (EB 48 Annex 66/67).</i>		where wind power project plant data is hosted for reporting. The SC-SCADA Reporting server is located in a central location and is operated and maintained by Suzlon. The verification team has identified that the mode of operation for the project activity have not been changed or modified during this 3rd monitoring period. <i>Justification of evidences:</i> By means of interviews with the operational personnel and technical information review it was evidenced, that the operation modes were not changed since 1st verification and they are in line with the approved PDD and the revised monitoring plan. <i>Conclusion:</i> No operation modes were changed. The PP has performed interviews and reviewed documents. No discrepancies were identified.		
B.1.4. Incidents (EB 55 Annex 1, § 187, 208a) <i>Identify if there have been any significant incidents, deviant operation modes and / or downtimes of the equipment?</i> <i>Consider e.g. interviews with operational personnel, operational log sheets, analysis of performance data.</i>	/IM01/ /changes / /downtime/	<i>Description:</i> During the monitoring period the following incidents occurred: - The Wind turbine generator #5 was out of operation since August 26th, 2010 because it was hit by a lightning. SUZLON replaced WTG #5 and it restarted operation on 2011/03/20. SUZLON documentation^{/Suzlon/} describing the activities performed for the repair of WTG #5 were checked by the verification team. - Finally, on 2010/11/11 the low voltage power meters of Amayo Phase II were shut down because to a failure in the power input. Hence, no power measurements were registered for several hours. At the time of site visit all the failures were successfully	CLB2	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
		corrected. Also, there is a document named “Downtime”^{/downtime/} which is directly downloaded from the SCADA System of Suzlon, This downtime document includes daily, monthly and annual data. This document details all the downtime activities, the duration, the type (scheduled or unscheduled), system component, etc. The downtimes are classified by component as follows: • Control system • Environment • Gearbox • Generator • Grid • Maintenance • Pitch System • Turbine electrical • Vibration • Wirebreak • Yaw system • Kiosk issue • Centro Nacional Despacho • Sistema Interconectado Nacional The Operational Logbooks^{/logbook/} were reviewed, these Logbooks includes the daily operational records, these are prepared manually by the project operators and then all this data is recorded in the Amayo Daily Reports^{/DR/}. <i>Justification of evidences:</i> An Interview with the Operation Chief from the wind park was performed to confirm the incidents		

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
		occurred during the 3rd monitoring period. The operational logbooks were reviewed so as the SUZLON repair documentation^{/changes/}. <i>Conclusion:</i> all incidents occurred during the monitoring period have been properly recorded and have been considered in the emission reduction calculation. Nevertheless, CL B2 was raised requesting further information in the MR about some of the incidents. (CL B2) Section B.1: Incidents: It shall be explained how the electricity has been calculated due to the failure on November 11th 2010. In addition, please indicate the calculation approach for electricity generated on November 11th 2010 in the ER calculation spreadsheet.		
B.1.5. Legislation Find out whether relevant legislation with effect on the project activity in the host country has been changed. Assess, in case of changes, whether consequences for the PA with regard to relevant CDM requirements have been accounted for. In case of changes data sources shall be referenced.	/IM01/ /EIA/ /MEP/ /EGL/ /EL/ /45-94/	<i>Description:</i> The approved Environmental Impact Study^{/EIA/} (EIA) of the project activity establishes that the PP has to provide reports regarding the following subjects: • Study of birds collision • Water quality analysis in lakes and rivers • CO emissions monitoring • Domestic waste water • Sludge from domestic waste water treatment system • Environmental Noise • Audiometric exams	OK	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
		The EIA defines that these reports have to be delivered and prepared annually. Two packages of Environmental reports have been previously sent to the authority, one covering the period of February 2009 – June 2009 and a second one for the period of July 2009 – June 2010. As the monitoring period covers only 8 months (September 2010 – April 2011) no environmental report is required for this period. Nevertheless, the PP provided the confirmation receipt letter from the authority demonstrating the delivery of the Environmental reports sent on 2011/06/02. This report covers the period from July 2010 – June 2011. A monitoring Environmental Plan^{/MEP/} is done annually to control the fulfilment of those requirements stated in the (EIA). Records of the fulfilment were checked. The environmental legislation applicable to the project activity is the Decree No. 45-94^{/45-94/} of 1994-10-31. Currently this legislation has been changed on December 2006, but since the approved EIA is dated on November 2006 the project activity is ruled by the Decree No. 45-94^{/45-94/}. <i>Justification of evidences:</i> The PP had provided annually reports to the environmental authority. The operational and environmental licenses, approved EIA, 2010 Environmental Plan and 2011 Environmental Plan have been reviewed. <i>Conclusion:</i> Relevant legislation was considered, no relevant changes since the 1st verification were identified.		
B.1.6. Open issues from validation	/VAL/	☒ There were no open issues addressed in the validation	OK	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
(EB 55 Annex 1, §§ 181-183, 188c, 190c) <i>Check (esp. in case of 1st periodic verification) whether there are any open issues indicated in the validation report (e.g. FAR)?</i>		report ☐ All open issues from the validation have been appropriately addressed. ☐ The following issues related to the validation have not yet been appropriately addressed:		
B.1.7. Open issues from previous verification (EB 55 Annex 1, § 193) <i>Check in case of further periodic verifications whether there are any open issues indicated in previous verification reports (FAR) and take into consideration the guidance as specified in VVM.</i>	/VER/ /changes/ / /PPA1/ /PPA_A2/ / /INE/	☐ There were no open issues addressed in the previous verification report ☒ All open issues from the previous verification have been appropriately addressed. ☐ The following issues related to the previous verification have not yet been appropriately addressed: N/A <i>Description: The verification DOE raised FAR D1 during the 2nd Monitoring Period:</i> (FAR D1) <i>During site visit it could be confirmed that the energy authority issued an official letter^{/INE/} authorizing to use the new method to calculate the energy supplied to the grid till 2010/09/30.</i> <i>It will be necessary to check in the next periodic verification that this new method to calculate the energy supplied to the grid is still valid to be used and authorized by the energy authority.</i> Regarding this FAR, the PP has provided the reports ^{/changes/} in which it is demonstrated that on September 29 th , 2010 Amayo replaced all the Landis power meters at the low voltage side for both project phases. This same day a total of 4 sets of Nexus ^{/CC_nexus/} power meters with their respective back-up	OK	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
		meters have been installed, two for Amayo Phase I and the other two for Amayo Phase II. The replacement activities finalized on October 1st 2010. During the replacement period (2010/09/29 – 2010/10/01) the project activity did not generated any electricity. In addition, an email from the CNDC^{/changes/} issued on 2011/04/13 was provided by the PP. This email demonstrates that the CNDC has access to the new Nexus power meters. Furthermore, the confirmation letters from DISNORTE and DISSUR were checked and it was identified that these letters accept the calculation procedure used to determine the power generation delivered. <i>Justification of evidences:</i> The PP had provided the PPA from Amayo Phase II. The approval letters from the INE so as the Nexus power meters installation reports and the CNDC email have been reviewed by the verification team. <i>Conclusion:</i> The verification team concludes that the power measurements procedures performed by the project activity are in line with the approved PPA's^{/PPA1/, /PPA2/ & /PPA_A2/} and with the requirements from the local authority. Hence, FAR D1 is closed.		
B.1.8. Publication of the Monitoring Report <i>Check if the monitoring report has been made publicly available on the UNFCCC website before the verification commenced.</i> <i>Check if comments have been received and if yes, how they have been addressed.</i>	/unfccc/	<i>Description:</i> the monitoring report submitted by project owner had been made publicly available on the UNFCCC website on 2011-05-22. <i>Justification of evidences:</i> the verification team has checked the UNFCCC website to confirm the report is publicly available for comments. <i>Conclusion:</i> The draft monitoring report, as received from the	OK	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.																																
		project participants, has been made publicly available prior to the start of the verification activities. No comments have been received.																																		
B.2. Requests for Revisions of MP (EB 55 Annex 1, §§ 201, 203, 219) <i>Check (i) if there have been any requests for revisions of the monitoring plan in the past.and/or (ii) if there is a need for a RfRev. Make sure that the monitoring report reflects the application of the revision as approved by the EB, where applicable. Check in case of approved revisions if the date of approval has been included.</i>	/unfccc/	<table><tr><td>☐</td><td colspan="2">No requests for revisions of the MP have been submitted to the UNFCCC prior to the current monitoring period</td></tr><tr><td rowspan="5">☒</td><td colspan="2">The following RfRev have been approved or are under approval by the UNFCCC</td></tr><tr><td>1</td><td><table><tr><td>Title</td><td>Request for revision of the monitoring plan of Amayo 40 MW Wind Power Project - Nicaragua (2315)</td></tr><tr><td>Status</td><td>☐ under approval; ☒ approved</td></tr><tr><td>Appr.date</td><td>2011/09/08</td></tr></table></td></tr><tr><td>2</td><td><table><tr><td>Title</td><td></td></tr><tr><td>Status</td><td>☐ under approval; ☐ approved</td></tr><tr><td>Appr.date</td><td></td></tr></table></td></tr><tr><td>☒</td><td colspan="2">During the verification of the current MP no need for a RfRev has been identified. The monitoring plan is in accordance with the approved methodology applied by the PA</td></tr><tr><td rowspan="2">☐</td><td colspan="2">The following revisions of the MP are to be requested from the EB for the current MP</td></tr><tr><td>1</td><td><table><tr><td>Issue</td><td>N/A</td></tr></table></td></tr></table>	☐	No requests for revisions of the MP have been submitted to the UNFCCC prior to the current monitoring period		☒	The following RfRev have been approved or are under approval by the UNFCCC		1	<table><tr><td>Title</td><td>Request for revision of the monitoring plan of Amayo 40 MW Wind Power Project - Nicaragua (2315)</td></tr><tr><td>Status</td><td>☐ under approval; ☒ approved</td></tr><tr><td>Appr.date</td><td>2011/09/08</td></tr></table>	Title	Request for revision of the monitoring plan of Amayo 40 MW Wind Power Project - Nicaragua (2315)	Status	☐ under approval; ☒ approved	Appr.date	2011/09/08	2	<table><tr><td>Title</td><td></td></tr><tr><td>Status</td><td>☐ under approval; ☐ approved</td></tr><tr><td>Appr.date</td><td></td></tr></table>	Title		Status	☐ under approval; ☐ approved	Appr.date		☒	During the verification of the current MP no need for a RfRev has been identified. The monitoring plan is in accordance with the approved methodology applied by the PA		☐	The following revisions of the MP are to be requested from the EB for the current MP		1	<table><tr><td>Issue</td><td>N/A</td></tr></table>	Issue	N/A	OK	OK
☐	No requests for revisions of the MP have been submitted to the UNFCCC prior to the current monitoring period																																			
☒	The following RfRev have been approved or are under approval by the UNFCCC																																			
	1	<table><tr><td>Title</td><td>Request for revision of the monitoring plan of Amayo 40 MW Wind Power Project - Nicaragua (2315)</td></tr><tr><td>Status</td><td>☐ under approval; ☒ approved</td></tr><tr><td>Appr.date</td><td>2011/09/08</td></tr></table>	Title	Request for revision of the monitoring plan of Amayo 40 MW Wind Power Project - Nicaragua (2315)	Status		☐ under approval; ☒ approved	Appr.date	2011/09/08																											
	Title	Request for revision of the monitoring plan of Amayo 40 MW Wind Power Project - Nicaragua (2315)																																		
	Status	☐ under approval; ☒ approved																																		
	Appr.date	2011/09/08																																		
2	<table><tr><td>Title</td><td></td></tr><tr><td>Status</td><td>☐ under approval; ☐ approved</td></tr><tr><td>Appr.date</td><td></td></tr></table>	Title		Status	☐ under approval; ☐ approved	Appr.date																														
Title																																				
Status	☐ under approval; ☐ approved																																			
Appr.date																																				
☒	During the verification of the current MP no need for a RfRev has been identified. The monitoring plan is in accordance with the approved methodology applied by the PA																																			
☐	The following revisions of the MP are to be requested from the EB for the current MP																																			
	1	<table><tr><td>Issue</td><td>N/A</td></tr></table>	Issue	N/A																																
Issue	N/A																																			

Checklist Item (incl. guidance for the verification team)	Refe- rence	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.																																						
		In this context the following findings have been identified: N/A																																								
B.3. Requests for Deviations applied to this MP (EB 55 Annex 1, §§ 203, 211-219) <i>Check (i) if there have been any requests for deviations in the past.and/or (ii) if there is a need for a RfDev. Make sure that the monitoring report reflects the application of the deviation as approved by the EB, where applicable. Check in case of approved deviations if the approval date and reference number has been included.</i> <i>Further check in case of approved RfDev whether the MR appropriately reflects the application of the EB guidance.</i>	/unfccc/	<table><tr><td>☒</td><td colspan="3">No requests for deviations have been submitted to the UNFCCC prior to the current monitoring period</td></tr><tr><td rowspan="8">☐</td><td colspan="3">The following RfDev have been approved or are under approval by the UNFCCC</td></tr><tr><td rowspan="4">1</td><td>Title</td><td></td></tr><tr><td>Status</td><td>☐ under approval; ☐ approved</td></tr><tr><td>Ref. No.</td><td></td></tr><tr><td>Appr.date</td><td></td></tr><tr><td rowspan="4">2</td><td>Title</td><td></td></tr><tr><td>Status</td><td>☐ under approval; ☐ approved</td></tr><tr><td>Ref. No.</td><td></td></tr><tr><td>Appr.date</td><td></td></tr><tr><td>☐</td><td colspan="3">In case of approved guidance of the EB: The monitoring report reflects the application of the EB guidance regarding the RfDev.</td></tr><tr><td>☐</td><td colspan="3">During the verification of the current MP no need for a RfDev has been indentified</td></tr><tr><td>☐</td><td colspan="3">The following deviations are to be requested from the</td></tr></table>	☒	No requests for deviations have been submitted to the UNFCCC prior to the current monitoring period			☐	The following RfDev have been approved or are under approval by the UNFCCC			1	Title		Status	☐ under approval; ☐ approved	Ref. No.		Appr.date		2	Title		Status	☐ under approval; ☐ approved	Ref. No.		Appr.date		☐	In case of approved guidance of the EB: The monitoring report reflects the application of the EB guidance regarding the RfDev.			☐	During the verification of the current MP no need for a RfDev has been indentified			☐	The following deviations are to be requested from the			OK	OK
☒	No requests for deviations have been submitted to the UNFCCC prior to the current monitoring period																																									
☐	The following RfDev have been approved or are under approval by the UNFCCC																																									
	1	Title																																								
		Status	☐ under approval; ☐ approved																																							
		Ref. No.																																								
		Appr.date																																								
	2	Title																																								
		Status	☐ under approval; ☐ approved																																							
		Ref. No.																																								
Appr.date																																										
☐	In case of approved guidance of the EB: The monitoring report reflects the application of the EB guidance regarding the RfDev.																																									
☐	During the verification of the current MP no need for a RfDev has been indentified																																									
☐	The following deviations are to be requested from the																																									

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.								
		<table><tr><td></td><td colspan="3">EB for the current MP</td></tr><tr><td>1</td><td>Issue</td><td colspan="2"></td></tr></table> In this context the following findings have been identified: N/A		EB for the current MP			1	Issue				
	EB for the current MP											
1	Issue											
B.4. Initial verification <i>In case an initial verification has been carried out, check if all FARs, recommendations etc. can be confirmed as existent for the periodic verification.</i>	/IM01/ /VER/ /unfccc/	☒ No initial verification has been carried out. ☐ There are no open issues, recommendations etc. pending from the initial verification ☐ The following issues related to the initial verification have to be addressed: Not applicable as no initial verification has been carried out.	NA	NA								
C. Description of the monitoring system												
C.1. Management System (EB 55 Annex 1, § 184 a (iii)) <i>Check if the GHG data monitoring system can be assessed as appropriate.</i> <i>In case reference is made to a (certified) company quality management system, check if all CDM related monitoring procedures have been fully integrated in the project participant's quality management system.</i> <i>In case of a stand-alone system, check how the GHG management system has been implemented and</i>	/IM01/ /OP/ /OPL/ /PCC/	<i>Description:</i> The PP has no certified quality management system. Amayo has developed and implemented operational procedures including procedures for extract data from the meters. There are procedures for operation and maintenance issued by Suzlon, which is the supplier of the wind turbines. There are also procedures for carbon credits developed by the PP and the consultancy firm which describe the responsibilities and procedures for data collection, calculation, reporting, and archiving. On November 2010 all the operational procedures ^{/OPL/ & /OP/} were reviewed. For each procedure a code, revision number and date	OK	OK								

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<i>effectiveness is ensured.</i>		has been included. Also, the procedures for carbon credits^{/PCC/} were updated on October 2010. This procedure includes the data management, QA/QC procedures, trouble shooting procedures (according to the applicable legislation) and calibration frequency. <i>Justification of evidences:</i> Last versions of the Operational Procedures and the carbon credits procedure were checked. <i>Conclusion:</i> All GHG monitoring system is included and integrated in the management system of the wind farm and it could be evidenced and confirmed during site visit that GHG management system is completely implemented in the wind farm.		
C.2. Metering diagram (EB 54 Annex 34, C) <i>Check first if the MR includes a metering diagram showing all relevant monitoring points.</i> <i>Check further if this diagram reflects the actual situation and is in line with the registered PDD and with the requirements of the applied methodology.</i>	/MR/ /ACM000 2/	<i>Description:</i> Section C of the MR includes a metering diagram showing relevant monitoring points (high and low voltage power measurements) related to the project activity. The verification team has been identified that the metering diagram is complete, all the monitoring points considered in the registered PDD and the applied methodology ACM0002 version 07 have been included. <i>Justification of evidences:</i> the validation team has checked the MR against the registered PDD and the applicable methodology ACM0002 version 07 <i>Conclusion:</i> the MR includes a metering diagram that shows all relevant monitoring points and reflects the actual situation of the project. The metering diagram is in line with the registered PDD and the applied methodology.	OK	OK
C.3. Roles and Responsibilities	/IM01/	<i>Description:</i> All responsibilities and roles are clearly defined in	OK	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
(EB 54 Annex 34, C) <i>Check if all roles and positions of each person in the GHG data management process are clearly defined and implemented as stated in the monitoring plan. Please consider the complete data trail from raw data generation to submission of the final data.</i> <i>Identify, if relevant personnel w.r.t. monitoring has been exchanged?</i> <i>If so, have appropriate training measures been carried out.</i> <i>In case of changes, assure that the implemented monitoring procedures have not been affected.</i>	/PCC/ /TE/	the Procedures for carbon credits. The main responsibilities are listed below: - Manuel Callejas is the plant manager and he is responsible to ensure calibrations and data quality. - Mariana Barrios is the Environmental Coordinator and she is responsible for input of raw data in the spread sheets and cross check data and corrects any discrepancies. - Nestor Gomez is the Operation Chief and he is responsible for report data gaps and errors and archiving data. It was verify by the verification team that only duly qualified personnel is involved in the monitoring procedures. For the 3rd monitoring period no changes have been made in the responsibilities and roles of each person in the GHG data management process. <i>Justification of evidences:</i> Last version of the Procedures for carbon credits^{/PCC/} was checked. <i>Conclusion:</i> It was verified by the verification team that only duly qualified personnel is involved in the monitoring procedures. Training evidence^{/TE/} of all personnel involved in the project was checked.		
C.4. Emergency procedures for the monitoring system (EB 54 Annex 34, C) <i>Check, as appropriate, whether relevant emergency procedures for the monitoring system have been</i>	/IM01/ /TSP/	<i>Description:</i> Troubleshooting procedures are described in the Alarm Description & Trouble Shooting Manual property of Suzlon. <i>Justification of evidences:</i> The Alarm Description & Trouble Shooting Manual was checked accordingly.	OK	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<i>included in the MR and assess whether these procedures have been implemented, when required</i>		<i>Conclusion:</i> The Operational Procedures includes Troubleshooting procedures based in the Alarm Description & Trouble Shooting Manual property of Suzlon. No discrepancies were identified.		
C.5. Data archive and data protection Check whether all records of monitoring parameters are archived according to the monitoring plan. Assess further whether appropriate measures have been taken in order to avoid unintended or intended manipulation or loss of the measured data.	/IM01/ /changes/ / /SC/ /SCS/ /CC_ION/ / /CC_nexus/ us/	<i>Description:</i> The turbines are interconnected with optical fiber to an Optical Fiber Center (central PLC) located in the wind farm. The Optical Fiber Center (central PLC) transmits to a VPN (Virtual Private Network) the information in real time (without any interval of time). A SCADA system (SC-Commander system)^{/SC/} & ^{/SCS/} is implemented to control, collect, store, analyze and distribute all available data. The SC-SCADA Reporting server is a central Suzlon database where wind power project plant data is hosted for reporting. The SC-SCADA Reporting server is located in a central location (Houston, USA) and is operated and maintained by Suzlon. Both ION meters^{/CC_ION/} and all the Nexus power meters^{/CC_nexus/} are sealed. CNDC is connected to the ION main meter (via modem) with 1 dedicated channel which transmit the information in real time (without any interval of time). Currently CNDC has access to the low voltage power meters via internet through the IP address^{/changes/} of each power meter. Amayo downloads daily the data from the ION and Nexus main and back-up meters. Every day (after 00:00 hrs.) Amayo uploads the data extracted directly from the ION and Nexus main and back up meter, to the dispatch web site^{/DWS/}.	OK	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
		Furthermore, the PP backs up monthly the data from the meters. There is a server in the wind farm which stores all the data of the wind farm operation, this server has a back-up which is performed automatically every day. In addition, back-up CD's are prepared frequently. There is also measurement equipment for each wind-generator on-line in the SCADA system. The data is archived in electronic way. Archived data is kept during the crediting period and two years later. <i>Justification of evidences:</i> It was checked during site visit that the ION meters located in the Protection, Control and Monitoring (PCYM) room of Amayo Substation so as the power meters located at the Medium Voltage room are in sealed cabinets. Interviews were performed to confirm data protection methods. Furthermore, the SCADA system manuals and procedures^{/SC/ & /SCS/} were also reviewed. <i>Conclusion:</i> All records of monitoring parameters are archived according to the monitoring plan. No discrepancies were identified. Energy data are protected and information could be obtained from different sources to avoid manipulation. Data protection methods are accepted by the verification team.		
D. Data and parameters monitored				
D.1. EG_y		Description: Electricity supplied to the grid by the project		
a) Measurement / Determination method	/IM01/ /MR/	<i>Description:</i> According to the registered MP this parameter is calculated by subtracting the project power consumption from	GLD1	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
(EB 55 Annex 1, §§ 184-185, 202-203) <i>Describe how the monitoring parameter was measured / determined.</i> <i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</i> <i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i>	/ACM 0002/ /OR/	the project gross electricity generation as follows: $EG_y = EG_{PhaseI,y}^{230kV} - EC_{PhaseI,y}^{230kV}$ As Amayo Phase I shares the substation and the commercial power meters at the 230 kV side with Amayo Phase II, the project power consumption ($EC_{PhaseI,y}^{230kV}$) and power gross electricity generation ($EG_{PhaseI,y}^{230kV}$) are calculated by the PP based on the total electricity from both wind farms measured at the 230 kV and the independent power generation and consumption measurements performed for each wind farm at the 13.8 kV. The formulas used for these calculations are: $EC_{PhaseI,y}^{230kV} = \frac{EC_{PhaseI,y}^{13.8kV}}{EC_{PhaseI,y}^{13.8kV} + EC_{PhaseII,y}^{13.8kV}} \cdot EC_{AMAYO,y}^{230kV}$ $EG_{PhaseI,y}^{230kV} = \frac{EG_{PhaseI,y}^{13.8kV}}{EG_{PhaseI,y}^{13.8kV} + EG_{PhaseII,y}^{13.8kV}} \cdot EG_{AMAYO,y}^{230kV}$ The detail measurement/determination method for each parameter considered in the formulas is explained in Section D. of the verification checklist. <i>Justification of evidences:</i> The registered MP has been checked by the verification team. Interviews were also performed with personnel from CEA to confirm the measure method. Also, the Operational Regulation^{/OR/} requirements were checked. <i>Conclusion:</i> the monitoring of this parameter is in line with the registered MP of the PDD and with the applied methodology. Nevertheless, some corrections are required regarding the		

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
		information included in Section D.2 for the monitoring parameters. CL D1 was raised. (CL D1) The following corrections shall be applied for all parameters: - The table format used for every parameter is different than the table format stated in the guidelines for completing the MR form (EB54, Annex 34). Correction is necessary. - Please eliminate “see section B.7.2 below” (or rephrase) as the MR does not have such section. - The exact value (amount) of monitoring parameter shall be included. - Please include the complete serial number for all meters.		
b) Accuracy (EB 55 Annex 1, §§ 205c, 206a) <i>In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.</i>	/CC_ION/ / /Landis/ /INE/ /cc_nexus/ /	<i>Description:</i> Both ION meters are state of the art and were properly calibrated by a certified organization. At the time of the site visit the Landis power meters located at the low voltage side were removed. The local authority approved^{/INE/} the utilization of the Landis power meters only for a period of 7 months (from March 2010 to September 2010) as an acceptance to the modification of the power generation measurement method requested by CEA. After this 7 months period Amayo replaced the low voltage power meters^{/Landis/} on October 1st 2010 by new Nexus power meters which now have been calibrated by AMELEC^{/CC_nexus/} and are included in the SIMEC. <i>Justification of evidences:</i> During site visit, the meters were checked. The ION power meters and the Nexus power meters are sealed and protected. Calibration certificates^{/CC_ION/ & /CC_nexus/}	CAR D1	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
		covering the monitoring period were provided. Regarding the Landis power meters^{/Landis/} it was not possible to confirm their conditions since they were removed by the time of the site visit and no calibration evidence was available. <i>Conclusion:</i> There is no significant inaccuracy expected for the ION and Nexus power meter measurements. Nevertheless, the accuracy of the power generation records from the Landis power meters have to be reviewed due to the lack of calibration evidence. CAR D1 was raised. (CAR D1) Parameter EG_y: Calibration evidence of the low voltage Landis power meters (main and back-up meters for Cells 3 and 6) was not available. The maximum permissible error shall be applied to the measured power generation values of September 2010 in accordance to the “Guideline for Assessing Compliance with the Calibration Frequency Requirements” as per EB 52 Annex 60.		
c) QA/QC Procedure (EB 55 Annex 1, §§ 184b (vii), 205c, 206) <i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration of the monitoring equipment has been carried out in line with the latest EB guidance.</i>	/IM01/ /ED/ /MEPR/ /EEG/ /ED/ /Landis/ /CC_ION/ / /CC_nexus/	<i>Description:</i> The QA/QC procedure is the cross-check of the daily data extracted from the main and back up meters^{/ED/} against the monthly energy production report^{/MEPR/} and the power generation invoices^{/EEG/}. The Operation Chief verifies daily both data from the main and back up meter in order to identify any differences between them. As the CNDC is connected to the main meter (via modem) with 1 dedicated channel, they check also daily the delivered energy. Furthermore DISNORTE-DISSUR checks the delivered energy and confirms^{/EEG/} it monthly. The calibration of the meters is done by a certified auditor and registered by CNDC. The verification team had checked the calibration certificates.	CAR D1	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
		Regarding the Landis power meters^{/Landis/} located at the Medium Voltage room, no documentation about their calibration certificate for the period of February 2010 – September 2010 was provided during the site visit. On October 1st 2010, the Landis power meters were replaced by new Nexus power meters which have been calibrated by AMELEC. <i>Justification of evidences:</i> The monitoring plan was reviewed. The PP had provided the power generation reports^{/MEPR/} and the sales electricity records^{/EEG/}. Calibration certificates had been also checked for the ION high voltage power meters^{/CC_ION/} and the current Nexus low voltage power meters^{/CC_nexus/}. <i>Conclusion:</i> The QA/QC procedure regarding energy generated is in line with the Monitoring Plan. The verification team had checked all documents which provided evidence of the net energy generation exported to the grid used for calculation of emission reduction. The calibration and maintenance of the ION and Nexus power meters is performed by competent personnel. For the case of the Landis power meter no calibration evidence was available. Therefore CAR D1 was raised, please refer to it.		
d) Correctness (EB 55 Annex 1, §§ 202, 206, 221e) <i>Determine whether the value given in the monitoring report is correct or determined in a conservative manner.</i> <i>In case of conservative approaches used in lieu of the</i>	/MR/ /XLS/ /EEG/ /ED/ /DWS/ /MEPR/	☐ Correct ☒ Not correct <i>Description:</i> The following tables summarize the corrected and approved values in the documents issued by DISNORTE-DISSUR and the corresponding final energy invoices issued by Amayo and evidenced during the on site visit:	CAR D2	OK

Checklist Item (incl. guidance for the verification team)	Refe- rence	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.			
<i>monitoring as per registered MP detailed assessment of the conservativeness of the approach used should be given.</i> <i>In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.</i>	/cndc/ /DTE/	Invoices^{/EEG/} (delivered energy): MWh					
		Invoice #	Month/year	DISNORTE		DISSUR	TOTAL
		103/104	September 2009	558.63		558.63	1,117.26
		106/107	October 2009	2,195.66		2,195.66	4,391.32
		108/109	November 2009	4,664.98		4,664.98	9,329.97
		110/111	December 2009	8,780.68		8,780.68	17,561.35
		115/116	January 2010	8,514.98		8,514.98	17,029.96
		117/118	February 2010	8,843.97		8,843.97	17,687.93
		121/123	March 2010	9,099.87		9,099.87	18,199.74
		124/125	April 2010	7,271.64		7,271.64	14,543.28
		Total		49,930.41		49,930.41	99,860.81
		Power delivery calculations^{/EEG/ & /ED/} (delivered energy): MWh					
		Month/year	Calculation*				
		September 2009	1,117.26				
		October 2009	4,391.32				
November 2009	9,329.97						
December 2009	17,895.99						
January 2010	17,029.48						
February 2010	17,687.39						
March 2010	18,199.26						

Checklist Item (incl. guidance for the verification team)	Refe- rence	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.																																						
		April 201014,542.94 Total100,193.61 Power consumption records^{/DTE/} (energy consumed): MWh <table><thead><tr><th>Month/year</th><th>DTE</th><th>Calculation*</th></tr></thead><tbody><tr><td>September 2009</td><td>136.13</td><td>131.94</td></tr><tr><td>October 2009</td><td>63.49</td><td>62.03</td></tr><tr><td>November 2009</td><td>26.79</td><td>26.19</td></tr><tr><td>December 2009</td><td>4.56</td><td>4.44</td></tr><tr><td>January 2010</td><td>6.06</td><td>1.26</td></tr><tr><td>February 2010</td><td>2.02</td><td>0.21</td></tr><tr><td>March 2010</td><td>7.86</td><td>2.57</td></tr><tr><td>April 2010</td><td>17.68</td><td>7.21</td></tr><tr><td>Total</td><td>264.59</td><td>235.86</td></tr></tbody></table> *Note: Gross power delivery and power consumption from the grid were calculated based on the power meters records. Net energy: MWh <table><thead><tr><th>Month/year</th><th>Energy delivered to grid^{/EEG/ /DWS/ /MEPR/}</th><th>Energy received from grid^{/DWS/ & /DTE/}</th><th>Net energy delivered^{/MR/ /XLS/}</th></tr></thead><tbody><tr><td>September 2009</td><td>1,117.26</td><td>136.13</td><td>981.13</td></tr></tbody></table>	Month/year	DTE	Calculation*	September 2009	136.13	131.94	October 2009	63.49	62.03	November 2009	26.79	26.19	December 2009	4.56	4.44	January 2010	6.06	1.26	February 2010	2.02	0.21	March 2010	7.86	2.57	April 2010	17.68	7.21	Total	264.59	235.86	Month/year	Energy delivered to grid ^{/EEG/ /DWS/ /MEPR/}	Energy received from grid ^{/DWS/ & /DTE/}	Net energy delivered ^{/MR/ /XLS/}	September 2009	1,117.26	136.13	981.13		
Month/year	DTE	Calculation*																																								
September 2009	136.13	131.94																																								
October 2009	63.49	62.03																																								
November 2009	26.79	26.19																																								
December 2009	4.56	4.44																																								
January 2010	6.06	1.26																																								
February 2010	2.02	0.21																																								
March 2010	7.86	2.57																																								
April 2010	17.68	7.21																																								
Total	264.59	235.86																																								
Month/year	Energy delivered to grid ^{/EEG/ /DWS/ /MEPR/}	Energy received from grid ^{/DWS/ & /DTE/}	Net energy delivered ^{/MR/ /XLS/}																																							
September 2009	1,117.26	136.13	981.13																																							



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)				Draft Concl.	Final Concl.	
		October 2009	4,391.32	63.49	4,327.83			
		November 2009	9,329.97	26.79	9,303.18			
		December 2009	17,561.35	4.56	17,556.79			
		January 2010	17,029.48	6.06	17,023.42			
		February 2010	17,687.39	2.02	17,685.37			
		March 2010	18,199.26	7.86	18,191.40			
		April 2010	14,542.94	17.68	14,525.26			
		TOTAL	99,858.97	264.59	99,594.38			
		DISNORTE-DISSUR is an entity which is under concession by INE to distribute and commercialize electrical energy. The official web site ^{/cndc/} was checked in order to verify the identity of DISNORTE-DISSUR.						
		Most of the energy delivery values given in the monitoring report and the corresponding Excel sheets are correct. In the case of December 2010 the net energy generation value included in the MR was 17,556.79 MWh. However, according to the power generation records the correct value should be 17,895.99 MWh.						
		Regarding the power consumption data, the PP has selected the most conservative value based on the DTE power consumption records, as these values represent higher power consumption resulting in lower emission reductions for the project. The verification team has identified that for September 2010, March 2011 and April 2011 the values applied are not in accordance to the DTE reports.						
		Justification of evidences: The electricity invoices ^{/EEG/} and the power consumption reports ^{/DTE/} so as the power generation						

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
		records ^{/MEPR/} were reviewed and crosschecked. Also the data uploaded to the energy authority was reviewed ^{/DWS/} . <i>Conclusion:</i> Mistakes have been found in the monitoring report and the emission reductions calculation spreadsheet regarding the net electricity generation, correction is required. Hence, CAR D2 was raised. (CAR D2) Parameter EG_y: Value of energy generation (17,895,990) of December 2010 differs from the value stated in the invoice (17,561,352). Clarification and correction is required.		
D.2. EG^{230kV}_{AMAYO,y}		Description: Quantity of electricity delivered to the grid (230 kV transmission line) by the entire wind farm (Phase I + Phase II)		
a) Measurement / Determination method (EB 55 Annex 1, §§ 184-185, 202-203) <i>Describe how the monitoring parameter was measured / determined.</i> <i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</i> <i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i>	/CC_ION/ /DR/ /DWS/ /MEPR/ /OR/	<i>Description:</i> The quantity of electricity delivered to the grid (230 kV transmission line) by the entire wind farm (Phase I + Phase II) is measured and recorded by one main meter ^{/CC_ION/} (ION 8600 s/n: PT-0901A531-01) and one back up ^{/CC_ION/} (ION 8600 s/n: PT-0901A532-01) located in the Protection, Control and Monitoring (PCYM) room of the wind farm at the high side voltage (230 kV Delivery Point) of the AMAYO Substation. Both meters are bi-directional and also calibrated ^{/CC_ION/} , sealed, and belong to Amayo. Calibration of the meters shall be done once every 2 years in agreement of the Operational Regulation ^{/OR/} (Annex III, section 7.3). The calibration records ^{/CC_ION/} of the power meters located at the delivery point were checked by the verification team. Both meters were calibrated on June 14 th 2009 and on October 29 th 2010. Therefore the calibration certificates are still valid for the 3 rd monitoring period. When a failure is detected in the main meter, the official	CL-D1	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
		measure will be taken from the back up meter (^{/OR/} section X/10). Extraordinary audits (including calibration) are possible if CNDC or Amayo detect any failure in the measurement (^{/OR/} Annex III, section 7.1/d). The audit shall be performed by an auditor certified by CNDC. INE defines the local standards and parameters to be followed in the electricity generation sector. Amayo download daily the data from the main and back up meters and monitors the total electricity generation^{/DR/}. Also, a monthly report^{/MEPR/} of total generation is elaborated. <i>Justification of evidences:</i> The registered MP has been checked by the verification team. Interviews were also performed with personnel from CEA to confirm the measure method. Also, the Operational Regulation^{/OR/} requirements were checked. <i>Conclusion:</i> the monitoring of this parameter is in line with the registered MP of the PDD and with the applied methodology. Nevertheless, some corrections are required regarding the information included in Section D.2 for the monitoring parameters. CL D1 was raised please refer to it.		
b) Accuracy (EB 55 Annex 1, §§ 205c, 206a) <i>In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.</i>	ICC_ION I	<i>Description:</i> Both ION meters are state of the art. The calibration of the meters is done by a certified auditor and registered by CNDC. The verification team had checked the calibration certificates. Both meters were calibrated on June 14th 2009 and on October 29th 2010. Therefore the calibration certificates are still valid for the 3rd monitoring period. <i>Justification of evidences:</i> During site visit, the meters were checked. The ION power meters are sealed and protected. New calibration certificates are not required yet because the	OK	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
		measurement equipment should be calibrated at least every two years ^{/CC_ION/} . <i>Conclusion:</i> There is no significant inaccuracy expected for the ION and Nexus power meter measurements.		
c) QA/QC Procedure (EB 55 Annex 1, §§ 184b (vii), 205c, 206) <i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration of the monitoring equipment has been carried out in line with the latest EB guidance.</i>	/ED/ /CC_ION/ /	<i>Description:</i> The QA/QC procedure is the cross-check of the daily data extracted from the main ION meter ^{/ED/} against the back-up ION meter. The Operation Chief verifies daily both data from the main and back up meter in order to identify any differences between them. As the CNDC is connected to the main meter (via modem) with 1 dedicated channel, they check also daily the delivered energy. The calibration of the meters is done by a certified auditor and registered by CNDC. The verification team had checked the calibration certificates. <i>Justification of evidences:</i> The monitoring plan was reviewed. Calibration certificates have been checked for the ION high voltage power meters ^{/CC_ION/} . <i>Conclusion:</i> The QA/QC procedure regarding energy generated is in line with the Monitoring Plan. The verification team had checked all documents which provided evidence of the net energy generation exported to the grid used for calculation of emission reduction. The calibration and maintenance of the power meters is performed by competent personnel.	OK	OK
d) Correctness (EB 55 Annex 1, §§ 202, 206, 221e) <i>Determine whether the value given in the monitoring</i>	/EEG/ /EEG_A2/ /	☒ Correct ☐ Not correct <i>Description:</i> The following tables summarize the calculated values of power generation from Amayo Phase I and Amayo	OK	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.																																																		
<i>report is correct or determined in a conservative manner.</i> <i>In case of conservative approaches used in lieu of the monitoring as per registered MP detailed assessment of the conservativeness of the approach used should be given.</i> <i>In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.</i>	/DWS/ /DTE/	Phase II based on the power meters measurements at the low voltage and high voltage side: Power measurements/calculations^{/EEG/} (delivered energy): MWh <table> <tr> <th>Month/year</th><th>Calculation Amayo I</th><th>Calculation Amayo II</th><th>Total Calculation</th><th>ION meter Records (230 kV side)</th></tr> <tr> <td>September 2009</td><td>1,117.26</td><td>846.09</td><td>1,963.35</td><td>1,963.35</td></tr> <tr> <td>October 2009</td><td>4,391.32</td><td>3,169.12</td><td>7,560.45</td><td>7,560.45</td></tr> <tr> <td>November 2009</td><td>9,329.97</td><td>6,645.18</td><td>15,975.14</td><td>15,975.14</td></tr> <tr> <td>December 2009</td><td>17,895.99</td><td>11,694.97</td><td>29,590.96</td><td>29,590.96</td></tr> <tr> <td>January 2010</td><td>17,029.48</td><td>11,680.54</td><td>28,710.02</td><td>28,710.02</td></tr> <tr> <td>February 2010</td><td>17,687.39</td><td>11,893.12</td><td>29,580.50</td><td>29,580.50</td></tr> <tr> <td>March 2010</td><td>18,199.26</td><td>12,239.98</td><td>30,439.24</td><td>30,439.24</td></tr> <tr> <td>April 2010</td><td>14,542.94</td><td>9,789.16</td><td>24,332.10</td><td>24,332.10</td></tr> <tr> <td>Total</td><td>100,193.61</td><td>67,958.15</td><td>168,151.76</td><td>168,151.76</td></tr> </table> The gross generation values from both wind farms were found correct. As a cross-check measurement the verification team has checked the power generation invoices^{/EEG/ & /EEG_A2/} and the DTE reports^{/DTE/}. No discrepancies were identified. <i>Justification of evidences:</i> The electricity invoices^{/EEG/ & /EEG_A2/} so as the power generation records^{/MEPR/ & /ED/} were reviewed and	Month/year	Calculation Amayo I	Calculation Amayo II	Total Calculation	ION meter Records (230 kV side)	September 2009	1,117.26	846.09	1,963.35	1,963.35	October 2009	4,391.32	3,169.12	7,560.45	7,560.45	November 2009	9,329.97	6,645.18	15,975.14	15,975.14	December 2009	17,895.99	11,694.97	29,590.96	29,590.96	January 2010	17,029.48	11,680.54	28,710.02	28,710.02	February 2010	17,687.39	11,893.12	29,580.50	29,580.50	March 2010	18,199.26	12,239.98	30,439.24	30,439.24	April 2010	14,542.94	9,789.16	24,332.10	24,332.10	Total	100,193.61	67,958.15	168,151.76	168,151.76		
Month/year	Calculation Amayo I	Calculation Amayo II	Total Calculation	ION meter Records (230 kV side)																																																		
September 2009	1,117.26	846.09	1,963.35	1,963.35																																																		
October 2009	4,391.32	3,169.12	7,560.45	7,560.45																																																		
November 2009	9,329.97	6,645.18	15,975.14	15,975.14																																																		
December 2009	17,895.99	11,694.97	29,590.96	29,590.96																																																		
January 2010	17,029.48	11,680.54	28,710.02	28,710.02																																																		
February 2010	17,687.39	11,893.12	29,580.50	29,580.50																																																		
March 2010	18,199.26	12,239.98	30,439.24	30,439.24																																																		
April 2010	14,542.94	9,789.16	24,332.10	24,332.10																																																		
Total	100,193.61	67,958.15	168,151.76	168,151.76																																																		

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
		crosschecked. Also the data uploaded to the energy authority was reviewed ^{/DWS/} . <i>Conclusion:</i> the values given in the monitoring report are correct and determined in a conservative manner.		
D.3. EG^{13.8kV} Phase I, y		Description: Gross electricity generation in year y by Phase I, as measured in the 13.8 kV meter		
a) Measurement / Determination method (EB 55 Annex 1, §§ 184-185, 202-203) <i>Describe how the monitoring parameter was measured / determined.</i> <i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</i> <i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i>	/DR/ /Landis/ /DWS/ /MEPR/ /PCC/ /CC_nexus/ /OR/	<i>Description:</i> according to the registered MP this parameter is measured by power meters and data shall be automatically and monitored on an hourly basis. The data is recorded and aggregated monthly. 2 sets of main and back-up power meters (Cells) are installed at the low voltage side (13.8 kV) collector of each project activity (Amayo Phase I and Amayo Phase II) located in the Substation Medium Voltage room. These collectors send the power generation from each phase to a common bus bar at the entrance of the low voltage side of the Amayo I Substation main transformer. During the month of September 2010 Landis power meters were used to monitor the power generation. Then on 2010/09/29 the Landis power meters ^{/Landis/} were replaced by new Nexus power meters ^{/CC_Nexus/} . All power meters are bi-directional. The calibration records of the power meters located at the delivery point were checked by the verification team. Both set of Nexus meters ^{/CC_Nexus/} were calibrated on September 30 th 2010. Therefore the calibration certificate is still valid for the 3 rd monitoring period. Nevertheless, for the Landis power meters no calibration certificates were available. Hence, a correction factor should be applied for the measurements performed 2010/09/01	GLD1	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
		to 2010/09/29. Calibration of the meters shall be done once every 2 years in agreement of the Operational Regulation^{/OR/} (Annex III, section 7.3). When a failure is detected in the main meter, the official measure will be taken from the back up meter (^{/OR/} section X/10). Extraordinary audits (including calibration) are possible if CNDC or Amayo detect any failure in the measurement (^{/OR/} Annex III, section 7.1/d). The audit shall be performed by an auditor certified by CNDC. INE defines the local standards and parameters to be followed in the electricity generation sector. Amayo download daily the data from the main and back up meter and monitors the total electricity generation^{/DR/}. Also, a monthly report^{/MEPR/} of total generation is elaborated. <i>Justification of evidences:</i> The registered MP has been checked by the verification team. Interviews were also performed with personnel from CEA to confirm the measure method. Also, the Operational Regulation^{/OR/} requirements were checked. <i>Conclusion:</i> the monitoring of this parameter is in line with the registered MP of the PDD and with the applied methodology. Nevertheless, some corrections are required regarding the information included in Section D.2 for the monitoring parameters. CL D1 was raised please refer to it.		
b) Accuracy (EB 55 Annex 1, §§ 205c, 206a) <i>In case of measured (or estimated) values, check whether the accuracy of equipment used for</i>	/MR/ /CC_nex us/ /Landis/	<i>Description:</i> Both sets of Nexus power meters are state of the art. The calibration of the meters is done by a certified auditor and registered by CNDC. The verification team had checked the calibration certificates.	CAR D1	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<i>monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.</i>		The Nexus power meters were calibrated on 2010/09/30. Therefore the calibration certificates are still valid for the 3rd monitoring period. Nevertheless, for the period of 2009/09/01 to 2010/09/29 Landis power meters were used to measure the project power generation. No calibration certificates were available for these power meters. <i>Justification of evidences:</i> During site visit, the meters were checked. The Nexus power meters are sealed and protected. New calibration certificates are not required yet because the measurement equipment should be calibrated at least every two years^{/CC_ION/}. <i>Conclusion:</i> There is no significant inaccuracy expected for the Nexus power meter measurements. However, for the case of the Landis power meters no calibration evidence was available. Therefore CAR D1 was raised, please refer to it.		
c) QA/QC Procedure (EB 55 Annex 1, §§ 184b (vii), 205c, 206) <i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration of the monitoring equipment has been carried out in line with the latest EB guidance.</i>	/MR/ /CC_nexus/ /Landis/	<i>Description:</i> The QA/QC procedure is the cross-check of the daily data extracted from the main Nexus meters^{/ED/} against the back-up Nexus meters. The Operation Chief verifies daily both data from the main and back up meter in order to identify any differences between them. As the CNDC is connected to the main meters (via IP address), they check also daily the delivered energy. The calibration of the meters is done by a certified auditor and registered by CNDC. The verification team had checked the calibration certificates. <i>Justification of evidences:</i> The monitoring plan was reviewed. Calibration certificates have been checked for the Nexus power	CAR D1	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
		meters ^{/CC_Nexus/} . <i>Conclusion:</i> The QA/QC procedure regarding energy generated is in line with the Monitoring Plan. The calibration and maintenance of the power meters is performed by competent personnel. Nevertheless, for the case of the Landis power meters no calibration evidence was available. Therefore CAR D1 was raised, please refer to it.		
d) Correctness (EB 55 Annex 1, §§ 202, 206, 221e) <i>Determine whether the value given in the monitoring report is correct or determined in a conservative manner.</i> <i>In case of conservative approaches used in lieu of the monitoring as per registered MP detailed assessment of the conservativeness of the approach used should be given.</i> <i>In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.</i>	/ MR / / ED / / XLS /	☒ Correct ☐ Not correct <i>Description:</i> the value given at the MR and the corresponding Excel sheet is correct. The verification team has checked the measured data from the Nexus and Landis main and back-up meters. No discrepancies were identified. Also, the power meters calibration certificates have been checked. <i>Justification of evidences:</i> the MR and excel spreadsheet were intensively checked. No deviations from registered PDD and MP have been detected. Power generation data from the power meters ^{/ED/} has been reviewed. <i>Conclusion:</i> the values given in the MR and the excel spreadsheet are consistent and justified.	OK	OK
D.4. EG^{13.8kV}_{PhaseII,y}		Description: Gross electricity generation in year y by Phase II, as measured in the 13.8 kV meter		
a) Measurement / Determination method (EB 55 Annex 1, §§ 184-185, 202-203) <i>Describe how the monitoring parameter was</i>	/ DR / / Landis / / DWS /	<i>Description:</i> according to the registered MP this parameter is measured by power meters and data shall be automatically and monitored on an hourly basis. The data is recorded and	GL-D1 CAR D3	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<i>measured / determined.</i> <i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</i> <i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i>	/MEPR/ /PCC/ /CC_nexus/ /OR/	aggregated monthly. 2 sets of main and back-up power meters (Cells) are installed at the low voltage side (13.8 kV) collector of each project activity (Amayo Phase I and Amayo Phase II) located in the Substation Medium Voltage room. These collectors send the power generation from each phase to a common bus bar at the entrance of the low voltage side of the Amayo I Substation main transformer. During the month of September 2010 Landis power meters were used to monitor the power generation. Then on 2010/09/29 the Landis power meters^{/Landis/} were replaced by new Nexus power meters^{/CC_Nexus/}. All power meters are bi-directional. The calibration records of the power meters located at the delivery point were checked by the verification team. Both set of Nexus meters^{/CC_Nexus/} were calibrated on September 30th 2010 and on 2010/10/24. Therefore the calibration certificate is still valid for the 3rd monitoring period. Nevertheless, for the Landis power meters no calibration certificates were available. Hence, a correction factor should be applied for the measurements performed 2010/09/01 to 2010/09/29. Calibration of the meters shall be done once every 2 years in agreement of the Operational Regulation^{/OR/} (Annex III, section 7.3). When a failure is detected in the main meter, the official measure will be taken from the back up meter (^{/OR/} section X/10). Extraordinary audits (including calibration) are possible if CNDC or Amayo detect any failure in the measurement (^{/OR/} Annex III, section 7.1/d). The audit shall be performed by an auditor certified by CNDC.		

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
		INE defines the local standards and parameters to be followed in the electricity generation sector. Amayo download daily the data from the main and back up meter and monitors the total electricity generation^{/DR/}. Also, a monthly report^{/MEPRI/} of total generation is elaborated. <i>Justification of evidences:</i> The registered MP has been checked by the verification team. Interviews were also performed with personnel from CEA to confirm the measure method. Also, the Operational Regulation^{/OR/} requirements were checked. <i>Conclusion:</i> the monitoring of this parameter is in line with the registered MP of the PDD and with the applied methodology. Nevertheless, some corrections are required regarding the information included in Section D.2 for the monitoring parameters. CL D1 was raised please refer to it. Furthermore, information about the monitoring equipment should be corrected, CAR D3 was raised. (CAR D3) Parameter EC^{13.8kV}_{Phasell,y} & Parameter EG^{13.8kV}_{Phasell,y}: the monitoring equipment description is not correct. Correction is necessary.		
b) Accuracy (EB 55 Annex 1, §§ 205c, 206a) <i>In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.</i>	/MR/ /CC_nexus/ /Landis/	<i>Description:</i> Both sets of Nexus power meters are state of the art. The calibration of the meters is done by a certified auditor and registered by CNDC. The verification team had checked the calibration certificates. The Nexus power meters were calibrated on 2010/09/30 and on 2010/10/24. Therefore the calibration certificates are still valid for the 3rd monitoring period. Nevertheless, for the period of 2009/09/01 to 2010/09/29 Landis power meters were used to measure the project power generation. No calibration certificates were available for these	CAR D1	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
		power meters. <i>Justification of evidences:</i> During site visit, the meters were checked. The Nexus power meters are sealed and protected. New calibration certificates are not required yet because the measurement equipment should be calibrated at least every two years^{/CC_ION/}. <i>Conclusion:</i> There is no significant inaccuracy expected for the Nexus power meter measurements. However, for the case of the Landis power meters no calibration evidence was available. Therefore CAR D1 was raised, please refer to it.		
c) QA/QC Procedure (EB 55 Annex 1, §§ 184b (vii), 205c, 206) <i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration of the monitoring equipment has been carried out in line with the latest EB guidance.</i>	/MR/ /CC_nexus/ /Landis/	<i>Description:</i> The QA/QC procedure is the cross-check of the daily data extracted from the main Nexus meters^{/ED/} against the back-up Nexus meters. The Operation Chief verifies daily both data from the main and back up meter in order to identify any differences between them. As the CNDC is connected to the main meters (via IP address), they check also daily the delivered energy. The calibration of the meters is done by a certified auditor and registered by CNDC. The verification team had checked the calibration certificates. <i>Justification of evidences:</i> The monitoring plan was reviewed. Calibration certificates have been checked for the Nexus power meters^{/CC_Nexus/}. <i>Conclusion:</i> The QA/QC procedure regarding energy generated is in line with the Monitoring Plan. The calibration and maintenance of the power meters is performed by competent personnel. Nevertheless, for the case of the Landis power meters no calibration evidence was available. Therefore CAR	~~CAR~~ D1	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
		D1 was raised, please refer to it.		
d) Correctness (EB 55 Annex 1, §§ 202, 206, 221e) <i>Determine whether the value given in the monitoring report is correct or determined in a conservative manner.</i> <i>In case of conservative approaches used in lieu of the monitoring as per registered MP detailed assessment of the conservativeness of the approach used should be given.</i> <i>In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.</i>	/ MR / / ED / / XLS /	☒ Correct ☐ Not correct <i>Description:</i> the value given at the MR and the corresponding Excel sheet is correct. The verification team has checked the measured data from the Nexus and Landis main and back-up meters. No discrepancies were identified. Also, the power meters calibration certificates have been checked. <i>Justification of evidences:</i> the MR and excel spreadsheet were intensively checked. No deviations from registered PDD and MP have been detected. Power generation data from the power meters ^{/ED/} has been reviewed. <i>Conclusion:</i> the values given in the MR and the excel spreadsheet are consistent and justified.	OK	OK
D.5. EC^{230kV}_{AMAYO,y}		Description: Quantity of electricity consumed from the grid at the 230 kV transmission line by the entire wind farm (Phase I + Phase II)		
a) Measurement / Determination method (EB 55 Annex 1, §§ 184-185, 202-203) <i>Describe how the monitoring parameter was measured / determined.</i> <i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination</i>	/ CC_ION / / DR / / DWS / / MEPR / / OR /	<i>Description:</i> The quantity of electricity consumed from the grid (230 kV transmission line) by the entire wind farm (Phase I + Phase II) is measured and recorded by one main meter ^{/CC_ION/} (ION 8600 s/n: PT-0901A531-01) and one back up ^{/CC_ION/} (ION 8600 s/n: PT-0901A532-01) located in the Protection, Control and Monitoring (PCYM) room of the wind farm at the high side voltage (230 kV Delivery Point) of the AMAYO Substation. Both meters are bi-directional and also calibrated ^{/CC_ION/} , sealed, and	GLD1	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<i>methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</i> <i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i>		belong to Amayo. Calibration of the meters shall be done once every 2 years in agreement of the Operational Regulation^{/OR/} (Annex III, section 7.3). The calibration records^{/CC_ION/} of the power meters were checked by the verification team. Both meters were calibrated on June 14th 2009 and on October 29th 2010. Therefore the calibration certificates are still valid for the 3rd monitoring period. When a failure is detected in the main meter, the official measure will be taken from the back up meter (^{/OR/} section X/10). Extraordinary audits (including calibration) are possible if CNDC or Amayo detect any failure in the measurement (^{/OR/} Annex III, section 7.1/d). The audit shall be performed by an auditor certified by CNDC. INE defines the local standards and parameters to be followed in the electricity generation sector. Amayo download daily the data from the main and back up meters and monitors the total electricity consumption^{/DR/}. Also, a monthly report^{/MEPR/} of total power consumption is elaborated. According to the registered MP this data is also crosschecked against the Economic Transaction Document (DTE) and the highest value is used as a conservative assumption. <i>Justification of evidences:</i> The registered MP has been checked by the verification team. Interviews were also performed with personnel from CEA to confirm the measure method. Also, the Operational Regulation^{/OR/} requirements were checked. <i>Conclusion:</i> the monitoring of this parameter is in line with the registered MP of the PDD and with the applied methodology. Nevertheless, some corrections are required regarding the information included in Section D.2 for the monitoring		

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
		parameters. CL D1 was raised please refer to it.		
b) Accuracy (EB 55 Annex 1, §§ 205c, 206a) <i>In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.</i>	/CC_ION I	<i>Description:</i> Both ION meters are state of the art. The calibration of the meters is done by a certified auditor and registered by CNDC. The verification team had checked the calibration certificates. Both meters were calibrated on June 14th 2009 and on October 29th 2010. Therefore the calibration certificates are still valid for the 3rd monitoring period. <i>Justification of evidences:</i> During site visit, the meters were checked. The ION power meters are sealed and protected. New calibration certificates are not required yet because the measurement equipment should be calibrated at least every two years^{/CC_ION/}. <i>Conclusion:</i> There is no significant inaccuracy expected for the ION and Nexus power meter measurements.	OK	OK
c) QA/QC Procedure (EB 55 Annex 1, §§ 184b (vii), 205c, 206) <i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration of the monitoring equipment has been carried out in line with the latest EB guidance.</i>	/ED/ /CC_ION I	<i>Description:</i> The QA/QC procedure is the cross-check of the daily data extracted from the ION meter^{/ED/} against the Economic Transaction Document (DTE). The Operation Chief verifies daily both data from the main and back up meter in order to identify any differences between them. As the CNDC is connected to the main meter (via modem) with 1 dedicated channel, they check also daily the energy consumed. The calibration of the meters is done by a certified auditor and registered by CNDC. The verification team had checked the calibration certificates. <i>Justification of evidences:</i> The monitoring plan was reviewed. Calibration certificates have been checked for the ION high	OK	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.																																								
		voltage power meters^{/CC-TON/}. The DTE reports have been checked by the PP. <i>Conclusion:</i> The QA/QC procedure regarding energy generated is in line with the Monitoring Plan. The verification team had checked all documents which provided evidence of the energy consumed from the grid used for calculation of emission reduction. The calibration and maintenance of the power meters is performed by competent personnel.																																										
d) Correctness (EB 55 Annex 1, §§ 202, 206, 221e) <i>Determine whether the value given in the monitoring report is correct or determined in a conservative manner.</i> <i>In case of conservative approaches used in lieu of the monitoring as per registered MP detailed assessment of the conservativeness of the approach used should be given.</i> <i>In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.</i>	/MR/ /DWS/ /ED/ /XLS/	☒ Correct ☐ Not correct <i>Description:</i> The following tables summarize the calculated values of power consumption for Amayo Phase I and Amayo Phase II based on the power meters measurements at the low voltage and high voltage side: Power consumption/calculations^{/ED/} (energy consumption): MWh <table> <tr> <th>Month/year</th><th>Calculation Amayo I</th><th>Calculation Amayo II</th><th>Total Calculation</th><th>ION meter Records</th></tr> <tr> <td>September 2009</td><td>131.94</td><td>5.84</td><td>137.77</td><td>137.77</td></tr> <tr> <td>October 2009</td><td>62.03</td><td>31.91</td><td>93.94</td><td>93.94</td></tr> <tr> <td>November 2009</td><td>26.19</td><td>14.04</td><td>40.23</td><td>40.23</td></tr> <tr> <td>December 2009</td><td>4.44</td><td>2.18</td><td>6.63</td><td>6.63</td></tr> <tr> <td>January 2010</td><td>1.26</td><td>0.82</td><td>2.09</td><td>2.09</td></tr> <tr> <td>February 2010</td><td>0.21</td><td>0.11</td><td>0.32</td><td>0.32</td></tr> <tr> <td>March 2010</td><td>2.57</td><td>1.27</td><td>3.84</td><td>3.84</td></tr> </table>	Month/year	Calculation Amayo I	Calculation Amayo II	Total Calculation	ION meter Records	September 2009	131.94	5.84	137.77	137.77	October 2009	62.03	31.91	93.94	93.94	November 2009	26.19	14.04	40.23	40.23	December 2009	4.44	2.18	6.63	6.63	January 2010	1.26	0.82	2.09	2.09	February 2010	0.21	0.11	0.32	0.32	March 2010	2.57	1.27	3.84	3.84	OK	OK
Month/year	Calculation Amayo I	Calculation Amayo II	Total Calculation	ION meter Records																																								
September 2009	131.94	5.84	137.77	137.77																																								
October 2009	62.03	31.91	93.94	93.94																																								
November 2009	26.19	14.04	40.23	40.23																																								
December 2009	4.44	2.18	6.63	6.63																																								
January 2010	1.26	0.82	2.09	2.09																																								
February 2010	0.21	0.11	0.32	0.32																																								
March 2010	2.57	1.27	3.84	3.84																																								

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.										
		<table> <tr> <td>April 2010</td><td>7.21</td><td>3.56</td><td>10.77</td><td>10.77</td></tr> <tr> <td>Total</td><td>235.86</td><td>59.73</td><td>295.59</td><td>295.59</td></tr> </table> The energy consumption values from both wind farms were found correct. As a cross-check measurement the verification team has checked the power consumption measurements from the power meters^{/ED/}. No discrepancies were identified. <i>Justification of evidences:</i> the power consumption records^{/MEPR/&/ED/} were reviewed and crosschecked. Also the data uploaded to the energy authority was reviewed^{/DWS/}. <i>Conclusion:</i> the values given in the monitoring report are correct and determined in a conservative manner.	April 2010	7.21	3.56	10.77	10.77	Total	235.86	59.73	295.59	295.59		
April 2010	7.21	3.56	10.77	10.77										
Total	235.86	59.73	295.59	295.59										
D.6. EC^{13.8kV}_{PhaseI,y}		Description: Electricity consumption in year y by Phase I, as measured in the 13.8 kV meter												
a) Measurement / Determination method (EB 55 Annex 1, §§ 184-185, 202-203) <i>Describe how the monitoring parameter was measured / determined.</i> <i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</i> <i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i>	/DR/ /Landis/ /DWS/ /MEPR/ /PCC/ /CC_nexus/ /OR/	<i>Description:</i> according to the registered MP this parameter is measured by power meters and data shall be automatically and monitored on an hourly basis. The data is recorded and aggregated monthly. 2 sets of main and back-up power meters (Cells) are installed at the low voltage side (13.8 kV) collector of each project activity (Amayo Phase I and Amayo Phase II) located in the Substation Medium Voltage room. During the month of September 2010 Landis power meters were used to monitor the power consumption. Then on 2010/09/29 the Landis power meters^{/Landis/} were replaced by new Nexus power meters^{/CC_Nexus/}. All power meters are bi-directional. The calibration records of the power meters were checked by	GLD1	OK										



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
		the verification team. Both set of Nexus meters^{/CC_Nexus/} were calibrated on September 30th 2010 and on 2010/10/24. Therefore the calibration certificate is still valid for the 3rd monitoring period. Nevertheless, for the Landis power meters no calibration certificates were available. Hence, a correction factor should be applied for the measurements performed 2010/09/01 to 2010/09/29. Calibration of the meters shall be done once every 2 years in agreement of the Operational Regulation^{/OR/} (Annex III, section 7.3). When a failure is detected in the main meter, the official measure will be taken from the back up meter (^{/OR/} section X/10). Extraordinary audits (including calibration) are possible if CNDC or Amayo detect any failure in the measurement (^{/OR/} Annex III, section 7.1/d). The audit shall be performed by an auditor certified by CNDC. INE defines the local standards and parameters to be followed in the electricity generation sector. Amayo download daily the data from the main and back up meter and monitors the total electricity consumption^{/DR/}. Also, a monthly report^{/MEPR/} of total power consumption is elaborated. According to the registered MP this data is also crosschecked against the Economic Transaction Document (DTE) and the highest value is used as a conservative assumption. <i>Justification of evidences:</i> The registered MP has been checked by the verification team. Interviews were also performed with personnel from CEA to confirm the measure method. Also, the Operational Regulation^{/OR/} requirements were checked. <i>Conclusion:</i> the monitoring of this parameter is in line with the		

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
		registered MP of the PDD and with the applied methodology. Nevertheless, some corrections are required regarding the information included in Section D.2 for the monitoring parameters. CL D1 was raised please refer to it.		
b) Accuracy (EB 55 Annex 1, §§ 205c, 206a) <i>In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.</i>	/MR/ /CC_nex us/ /Landis/	<i>Description:</i> Both sets of Nexus power meters are state of the art. The calibration of the meters is done by a certified auditor and registered by CNDC. The verification team had checked the calibration certificates. The Nexus power meters were calibrated on 2010/09/30. Therefore the calibration certificates are still valid for the 3rd monitoring period. Nevertheless, for the period of 2009/09/01 to 2010/09/29 Landis power meters were used to measure the project power consumption. No calibration certificates were available for these power meters. <i>Justification of evidences:</i> During site visit, the meters were checked. The Nexus power meters are sealed and protected. New calibration certificates are not required yet because the measurement equipment should be calibrated at least every two years^{/CC_ION/}. <i>Conclusion:</i> There is no significant inaccuracy expected for the Nexus power meter measurements. However, for the case of the Landis power meters no calibration evidence was available. Therefore CAR D1 was raised, please refer to it.	CAR D1	OK
c) QA/QC Procedure (EB 55 Annex 1, §§ 184b (vii), 205c, 206) <i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration of the</i>	/MR/ /CC_nex us/ /Landis/	<i>Description:</i> The QA/QC procedure is the cross-check of the daily data extracted from the power meters^{/ED/} against the DTE reports. According to the registered MP the highest value is used as a conservative assumption. The Operation Chief verifies daily both data from the main and	OK	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<i>monitoring equipment has been carried out in line with the latest EB guidance.</i>	/DTE/	back up meter in order to identify any differences between them. As the CNDC is connected to the main meters (via IP address), they check also daily the delivered energy. The calibration of the meters is done by a certified auditor and registered by CNDC. The verification team had checked the calibration certificates. The DTE reports for the monitoring period have been checked by the verification team. <i>Justification of evidences:</i> The monitoring plan was reviewed. Calibration certificates have been checked for the Nexus power meters^{/CC_Nexus/}. Also, the DTE reports were reviewed. <i>Conclusion:</i> The QA/QC procedure regarding energy generated is in line with the Monitoring Plan. The calibration and maintenance of the power meters is performed by competent personnel. Also, it has been identified that the power consumption values from the DTE reports which represent higher project emissions are being used for the emission reductions calculations.		
d) Correctness (EB 55 Annex 1, §§ 202, 206, 221e) <i>Determine whether the value given in the monitoring report is correct or determined in a conservative manner.</i> <i>In case of conservative approaches used in lieu of the monitoring as per registered MP detailed assessment of the conservativeness of the approach used should be given.</i>	/ED/ /DTE/ /XLS/	☐ Correct ☒ Not correct <i>Description:</i> The following tables summarize the calculated values of power consumption for Amayo Phase I based on the power meters measurements at the low voltage and high voltage side and the power consumption values determined by the DTE Reports: Power consumption/calculations^{/ED/} & ^{/DTE/} (energy consumption): MWh	CAR D4	OK

Checklist Item (incl. guidance for the verification team)	Refe- rence	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.	
In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.		Month/year	Calculation	DTE Report	
			Amayo I		
		September 2009	131.94	136.13	
		October 2009	62.03	63.49	
		November 2009	26.19	26.79	
		December 2009	4.44	4.56	
		January 2010	1.26	6.06	
		February 2010	0.21	2.02	
		March 2010	2.57	7.86	
		April 2010	7.21	17.68	
		Total	235.86	264.59	
		As it can be seen the power consumption for the project activity is lower than the power consumption values reported in the DTE documents. Nevertheless, as stated in the registered MP the PP applies the DTE values in order to be conservative.			
		However, it has been identified that the power consumption values for the months of September, March and April given in the monitoring report and the corresponding Excel sheets were not consistent according to the values reported in the DTE documents.			
Justification of evidences: The power consumption measurements ^{/ED/} so as the DTE reports have been checked by the verification team.					
Conclusion: it has been identified that some of the power consumption values from the DTE reports were not correct according to the provided evidences. Hence, CAR D4 was					

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
		raised. (CAR D4) Parameter EC^{13.8kV}_{Phase I,y} : correction is necessary as follow: 1. Value of September as per DTE (it shall be 136.13) 2. Value of March as per DTE (it shall be 7.86) 3. Value of April as per DTE is missing (it shall be 17.68)		
D.7. EC^{13.8kV}_{PhaseII,y}		Description: Electricity consumption in year y by Phase II, as measured in the 13.8 kV meter		
a) Measurement / Determination method (EB 55 Annex 1, §§ 184-185, 202-203) <i>Describe how the monitoring parameter was measured / determined.</i> <i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</i> <i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i>	/DR/ /Landis/ /DWS/ /MEPR/ /PCC/ /CC_nexus/ /OR/	<i>Description:</i> according to the registered MP this parameter is measured by power meters and data shall be automatically and monitored on an hourly basis. The data is recorded and aggregated monthly. 2 sets of main and back-up power meters (Cells) are installed at the low voltage side (13.8 kV) collector of each project activity (Amayo Phase I and Amayo Phase II) located in the Substation Medium Voltage room. During the month of September 2010 Landis power meters were used to monitor the power generation. Then on 2010/09/29 the Landis power meters ^{/Landis/} were replaced by new Nexus power meters ^{/CC_Nexus/} . All power meters are bi-directional. The calibration records of the power meters were checked by the verification team. Both set of Nexus meters ^{/CC_Nexus/} were calibrated on September 30 th 2010 and on 2010/10/24. Therefore the calibration certificate is still valid for the 3 rd monitoring period. Nevertheless, for the Landis power meters no calibration certificates were available. Hence, a correction factor should be applied for the measurements performed from	GL-D1 CAR D3	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
		2010/09/01 to 2010/09/29. Calibration of the meters shall be done once every 2 years in agreement of the Operational Regulation^{/OR/} (Annex III, section 7.3). When a failure is detected in the main meter, the official measure will be taken from the back up meter (^{/OR/} section X/10). Extraordinary audits (including calibration) are possible if CNDC or Amayo detect any failure in the measurement (^{/OR/} Annex III, section 7.1/d). The audit shall be performed by an auditor certified by CNDC. INE defines the local standards and parameters to be followed in the electricity generation sector. Amayo download daily the data from the main and back up meter and monitors the total electricity consumption^{/DR/}. Also, a monthly report^{/MEPR/} of total energy consumption is elaborated. According to the registered MP this data is also crosschecked against the Economic Transaction Document (DTE) and the highest value is used as a conservative assumption. <i>Justification of evidences:</i> The registered MP has been checked by the verification team. Interviews were also performed with personnel from CEA to confirm the measure method. Also, the Operational Regulation^{/OR/} requirements were checked. <i>Conclusion:</i> the monitoring of this parameter is in line with the registered MP of the PDD and with the applied methodology. Nevertheless, some corrections are required regarding the information included in Section D.2 for the monitoring parameters. CL D1 and CAR D3 were raised please refer to them.		

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
b) Accuracy (EB 55 Annex 1, §§ 205c, 206a) <i>In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.</i>	/IMR/ /CC_nex us/ /Landis/	<i>Description:</i> Both sets of Nexus power meters are state of the art. The calibration of the meters is done by a certified auditor and registered by CNDC. The verification team had checked the calibration certificates. The Nexus power meters were calibrated on 2010/09/30 and on 2010/10/24. Therefore the calibration certificates are still valid for the 3rd monitoring period. Nevertheless, for the period of 2009/09/01 to 2010/09/29 Landis power meters were used to measure the project power consumption. No calibration certificates were available for these power meters. <i>Justification of evidences:</i> During site visit, the meters were checked. The Nexus power meters are sealed and protected. New calibration certificates are not required yet because the measurement equipment should be calibrated at least every two years^{/CC_ION/}. <i>Conclusion:</i> There is no significant inaccuracy expected for the Nexus power meter measurements. However, for the case of the Landis power meters no calibration evidence was available. Therefore CAR D1 was raised, please refer to it.	CAR D1	OK
c) QA/QC Procedure (EB 55 Annex 1, §§ 184b (vii), 205c, 206) <i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration of the monitoring equipment has been carried out in line with the latest EB guidance.</i>	/IMR/ /CC_nex us/ /Landis/ /DTE/	<i>Description:</i> The QA/QC procedure is the cross-check of the daily data extracted from the power meters^{/ED/} against the DTE reports. According to the registered MP the highest value is used as a conservative assumption. The Operation Chief verifies daily both data from the main and back up meter in order to identify any differences between them. As the CNDC is connected to the main meters (via IP address), they check also daily the delivered energy.	OK	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
		The calibration of the meters is done by a certified auditor and registered by CNDC. The verification team had checked the calibration certificates. The DTE reports for the monitoring period have been checked by the verification team. <i>Justification of evidences:</i> The monitoring plan was reviewed. Calibration certificates have been checked for the Nexus power meters^{/CC_Nexus/}. Also, the DTE reports were reviewed. <i>Conclusion:</i> The QA/QC procedure regarding energy generated is in line with the Monitoring Plan. The calibration and maintenance of the power meters is performed by competent personnel. Also, it has been identified that the power consumption values from the DTE reports which represent higher project emissions are being used for the emission reductions calculations.		
d) Correctness (EB 55 Annex 1, §§ 202, 206, 221e) <i>Determine whether the value given in the monitoring report is correct or determined in a conservative manner.</i> <i>In case of conservative approaches used in lieu of the monitoring as per registered MP detailed assessment of the conservativeness of the approach used should be given.</i> <i>In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.</i>	/MR/ /ED/	☒ Correct ☐ Not correct <i>Description:</i> the value given at the MR and the corresponding Excel sheet is correct. The verification team has checked the measured data from the Nexus and Landis main and back-up meters. No discrepancies were identified. Also, the power meters calibration certificates have been checked. <i>Justification of evidences:</i> the MR and excel spreadsheet were intensively checked. No deviations from registered PDD and MP have been detected. Power generation data from the power meters^{/ED/} has been reviewed.	OK	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
		<i>Conclusion:</i> the values given in the MR and the excel spreadsheet are consistent and justified.		
E. Emission reductions calculation				
E.1. Traceability (EB 55 Annex 1, § 182) <i>Assess if the calculation is fully traceable. In case of complex calculations an Excel calculation spreadsheet shall be used. All applied formulae must be visible.</i>	/XLS/ /MP/ /PDD/	<i>Description:</i> the Excel calculation spreadsheet was checked and the calculations are traceable. The raw data and formulae applied are in line with MP and they are all visible. <i>Justification of evidences:</i> an unprotected Excel calculation spreadsheet has been provided and is completely visible. The formulas in the excel sheet were reviewed in detail against the MP, applied meth and tools. <i>Conclusion:</i> The calculation is completely traceable. All applied formulas are visible. No information gaps have been identified.	OK	OK
E.2. Parameter consistency (EB 55 Annex 1, § 186; EB 54 Annex 34 Pt.1) <i>Assess whether all internal and external parameters and data used for calculation are applied consistently in the monitoring report and the calculation spreadsheet?</i> <i>Consider only the correct data exchange between the monitoring report and the calculation spreadsheet (if any). Further ensure the consistency of notations for all parameters in the PDD, MR, calculation spreadsheet.</i>	/XLS/ /MR/	<i>Description:</i> all monitored parameters and data used for the calculations are applied consistently in the MR and ER calculation sheet. Nevertheless, some editorial mistakes in the data units and a missing parameter in section D.1 have been identified. <i>Justification of evidences:</i> the verification team performed a complete review of MR, ER calculations sheet, methodology and relevant reference documents. <i>Conclusion:</i> some editorial mistakes in the data units and a missing parameter in section D.1 have been identified. CAR E1 was raised. (CAR E1) 1. Please correct the data unit stated in the head lines of the	CAR E1	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
		emission reduction calculation as it should be in MWh (not KWh) 2. Table C: head line of the column “<i>Phase I as share of 230 kV meter readings (KWh)</i>” is incorrect as the values correspond to the column “<i>Conservative value (KWh)</i>”		
E.3. Parameter presentation (EB 54 Annex 34 Pt.1) Check if all values included in the MR are presented as per international standards - Format: Standard format (e.g. 1,000 representing one thousand and 1.0 representing one). - Units: Values shall be directly given in SI units – or additionally to original units transferred to SI. - Short scale naming system: (Only) million = 10⁶ and billion 10⁹ shall be used.	/MR/	<i>Description:</i> all values included in the MR are presented as per international standards <i>Justification of evidences:</i> the verification team performed a complete review of MR. <i>Conclusion:</i> all values included in the MR are presented as per international standards	OK	OK
E.4. Correctness of calculation (EB 55 Annex 1, §§ 204-206) Check if the applied formulae and methods for calculating baseline emissions, project emissions and leakage are in accordance with the monitoring plan and / or the approved methodology. Assess whether the provided calculations are complete and reflect all requirements of the monitoring plan. Check especially that no standard or old values have	/XLS/ /MP/ /PDD/	<i>Description:</i> All calculations are complete and reflect all requirements stated in the Monitoring Plan. <i>Justification of evidences:</i> Monitoring report and Excel calculation spreadsheet were checked accordingly and crosschecked with the monitoring plan. <i>Conclusion:</i> The calculation is completely traceable. No information or calculation gaps have been identified.	OK	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<i>been used for calculation where calculations based on up-to-date data is required.</i>				
E.5. Emission reductions table (EB 54 Annex 34, E.4) <i>Check if the MR includes a summary table of the emission reductions calculation specifying separately</i> • Total baseline emissions • Total project emissions: • Total leakage • Total emission reductions. <i>Assess whether the values are correct or need to be revised as a consequence of issues identified above.</i>	/MR/	☒ The MR includes in section E.4 a summary table of the emission reductions calculation. ☒ The summary table specified the total baseline, project and leakage emissions as well as the total emission reductions separately. ☐ The values as specified in the ER summary table are correct; no issues have been identified during the verification which require changes in the ER calculation. ☒ During the verification issues with impact on the ER calculation have been identified. Thus subject to the closure of above listed findings the summary table in E.4 needs to be revised. Please refer to CAR D1, CAR D2 and CAR D4 raised above	CAR D1 CAR D2 CAR D4	OK
E.6. Comparison with ex-ante determined emission reductions (EB 54 Annex 34, E.5; E.6) <i>Check if the MR includes a comparison of actual values of the monitoring period with the estimations in the registered PDD.</i> <i>Check further whether in case of an increase an appropriate explanation is included in the MR.</i> <i>Assess in case of a significant increase whether this is due to technical or organisational changes within or</i>	/XLS/ /MR/ /PDD/	<i>Description:</i> Section E.6 includes a comparison of the actual emission reduction values of the verified monitoring period with the emission reductions estimation stated in the registered PDD. The verification team has checked the comparison calculation and it has been found that the current ERs are lower than the estimated ER from the PDD. <i>Justification of evidences:</i> The MR and the registered PDD have been checked by the verification team. <i>Conclusion:</i> the MR includes a table with a comparison of actual values of the monitoring period with the estimations in the	OK	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<i>outside the control of the PP which might require a notification / approval of changes (as per EB 48 Annex 66/67).</i>		registered PDD. No increase in the current ERs respect to the ex-ante calculation of the registered PDD has been identified.		

ANNEX 2: STATEMENTS OF COMPETENCE OF ALL INVOLVED PERSONNEL



Statement of Competence
Appointment and authorization according to the procedures of the TÜV NORD JI/CDM Certification Program

Mr. Ricardo Lopes

SCHEME	STATUS	VALID UNTIL
CDM	Lead Assessor (Validation, Verification)	2013-11-04
VCS	Lead Assessor	2013-11-04

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA
1.2	Renewable Energy

077 – Rev. 2, Date: 2011-11-01

077_501-F003_2011-11-01_rev2 501-F003 rev3 / 2010-04-19



Statement of Competence
Appointment and authorization according to the procedures of the TÜV NORD JI/CDM Certification Program

Mr. Raul Gonzalez Mitre

SCHEME	STATUS	VALID UNTIL
CDM	Lead Assessor (Validation, Verification)	2014-06-27
VCS	Lead Assessor	2014-06-27

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA	TR SUBCATEGORIES
1.2	Renewable Energies	

082 – Rev. 2, Date: 2011-09-27

082_501-F003_2011-09-27_rev2 501-F003 rev1 / 2011-09-02



Statement of Competence
Appointment and authorization according to the procedures of the TÜV NORD JI/CDM Certification Program

Mr. Abraham Garza Alvarez

SCHEME	STATUS	VALID UNTIL
CDM	Trainee (Validation, Verification)	
VCS	Trainee	

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA
1.2	Renewable Energies
3.1	Energy Demand
4.1	Cement Sector
13.1	Waste Handling and Disposal

235 – Rev. 2, Date: 2011-08-08

235_501-F003_2011-08-08_rev2 501-F003 rev3 / 2010-04-19



Statement of Competence
Appointment and authorization according to the procedures
of the TÜV NORD JI/CDM Certification Program

Mr. Emilio Martin

SCHEME	STATUS	VALID UNTIL
CDM	Lead Assessor (Validation, Verification) Technical Reviewer	2013-11-30
VCS	Lead Assessor Technical Reviewer	2013-11-30

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA	TR SUBCATEGORIES
1.2	Renewable Energies	1.2.1 Hydro 1.2.2 Wind 1.2.3 Geothermal 1.2.4 Solar 1.2.5 Tidal
13.1	Waste handling and disposal	13.1.1 Waste management 13.1.2 Waste water management

157 – Rev. 2, Date: 2011-08-10

157_S01-F003_2011-08-10_rev2

S01-F003 rev1 / 2011-08-02



Statement of Competence
Appointment and authorization according to the procedures
of the TÜV NORD JI/CDM Certification Program

Ms. Alexandra Nebel

SCHEME	STATUS	VALID UNTIL
CDM	Senior Assessor (Validation, Verification) Technical Reviewer	2014-08-24
JI	Senior Assessor Technical Reviewer	2014-08-24
VCS	Senior Assessor Technical Reviewer	2014-08-24

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA
14.1	Forestry

095 – Rev. 3, Date: 2011-08-25

095_S01-F003_2011-08-25_rev3

S01-F003 rev0 / 2010-04-19