



# ANNEX 3

# ASSESSMENT

## REGARDING POST REGISTRATION CHANGES

## EOL WIND POWER PROJECT

Report No: 10305-13/203

**Date: 2014-07-07**

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<b>Assessment Report</b> on post registration changes	<b>Report No.</b>	<b>Rev. No.</b>	<b>Date of 1<sup>st</sup> issue:</b>	<b>Date of this rev.</b>
	10305-13/203	0	2014-07-07	2014-07-07
<b>Project:</b>	<b>Title:</b>	<b>Registr. date:</b>	<b>UNFCCC-No.:</b>	
	Eolo Wind Power Project	2012-06-18	6143	
<b>Project Participant(s):</b>	<b>Name:</b>	<b>Party:</b>		
	Eolo de Nicaragua, S.A., Eolonica, S.A.	Nicaragua		
<b>Applied methodology/ies:</b>	<b>Title:</b>	<b>No.:</b>	<b>Scope:</b>	
	Consolidated baseline Methodology for grid connected electricity generation from renewable sources	ACM0002 ver.12.3.0	01/1.2	
<b>Post Registration Changes:</b>	<b>Type of requested changes</b>	<b>Number of changes</b>	<b>Prior Approval required</b>	
	<input type="checkbox"/> Temporary deviations from the MP	-	<input type="checkbox"/>	
	<input type="checkbox"/> Temporary deviations from the MM	-	<input type="checkbox"/>	
	<input checked="" type="checkbox"/> Corrections that do not affect the project	1	<input type="checkbox"/>	
	<input type="checkbox"/> Change to the start date of the crediting p.	-	<input type="checkbox"/>	
	<input checked="" type="checkbox"/> Permanent changes from the MP	1	<input type="checkbox"/>	
	<input type="checkbox"/> Permanent changes from the MM	-	<input type="checkbox"/>	
	<input type="checkbox"/> Design changes to the project activity/PoA	-	<input type="checkbox"/>	
<b>Revised PDD:</b>	<b>Title:</b>	<b>Attached in TC:</b>	<b>Attached clean:</b>	
	Eolo Wind Power Project	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<b>Assessment team / Technical Review and Final Approval</b>	<b>Assessment Team:</b>	<b>Technical review:</b>	<b>Final approval:</b>	
	Raul Gonzalez Mitre, TBD	Kunal Rami Martin Saalman	Martin Saalman	
<b>Assessment Opinion:</b>	<input type="checkbox"/>	The post registration changes require prior Approval by the Board		
	<input checked="" type="checkbox"/>	The post registration changes do <b>not</b> require prior Approval by the Board		
<b>Document information:</b>	<b>Filename:</b>	<b>No. of pages:</b>		
	2014_07_07_Annex_3_PRC_EOLO_oq_KR.doc	22		

## Abbreviations

<b>CA</b>	<b>Corrective Action / Clarification Action</b>
<b>CAR</b>	<b>Corrective Action Request</b>
<b>CDM</b>	<b>Clean Development Mechanism</b>
<b>CER</b>	<b>Certified Emission Reduction</b>
<b>CO<sub>2</sub></b>	<b>Carbon dioxide</b>
<b>CO<sub>2eq</sub></b>	<b>Carbon dioxide equivalent</b>
<b>CL</b>	<b>Clarification Request</b>
<b>CNDC</b>	<b>National Dispatch Center - "Centro Nacional de Despecho de Carga"</b>
<b>DVerR</b>	<b>Draft Verification Report</b>
<b>DVR</b>	<b>Draft Verification Report</b>
<b>ER</b>	<b>Emission Reduction</b>
<b>FAR</b>	<b>Forward Action Request</b>
<b>GHG</b>	<b>Greenhouse gas(es)</b>
<b>INE</b>	<b>Nicaraguan Institute of Energy</b>
<b>MARENA</b>	<b>Ministry for the Environmental "Ministerio del Ambiente y los Recursos Naturales" (DNA)</b>
<b>MP</b>	<b>Monitoring Plan</b>
<b>MR</b>	<b>Monitoring Report</b>
<b>NIS</b>	<b>National Interconnected System</b>
<b>N/A</b>	<b>Not Applicable</b>
<b>NIS</b>	<b>National Interconnected System</b>
<b>PA</b>	<b>Project Activity</b>
<b>PDD</b>	<b>Project Design Document</b>
<b>PP</b>	<b>Project Participant</b>
<b>PPA</b>	<b>Power Purchase Agreement</b>
<b>QA/QC</b>	<b>Quality Assurance / Quality Control</b>
<b>SCADA</b>	<b>Supervisory Control and Data Acquisition</b>
<b>UNFCCC</b>	<b>United Nations Framework Convention on Climate Change</b>
<b>VVS</b>	<b>Validation and Verification Standard</b>
<b>XLS</b>	<b>Calculation Spread Sheet</b>

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## 1 OBJECTIVE / SCOPE

Eolo de Nicaragua has commissioned the TÜV NORD JI/CDM Certification Program (CP) to assess post registration changes of the project

### ***“Eolo Wind Power Project”***

This report serves for all kind of post registration changes as defined in the CDM PS.

In this case it serves as an annex to the verification report.

## 2 GENERAL CHARACTERISTICS

### 2.1 Project Characteristics

As this assessment was carried out as part of the 1<sup>st</sup> verification of the project activity please refer to chapter 2 of the verification report.

For a detailed project description please refer to the registered PDD and/or the latest verification report (to which this report is attached).

### 2.2 Overview of Post Registration Changes

Within this report post registration changes as listed in Table 2-2 are assessed.

**Table 2-2:** Overview Post Registration Changes

#	Applicable as of / from - to	Type of post registration change <sup>1)</sup>	Description
1	2013-01-01	PCfrMP	Increase the accuracy of the main meter from (0.5%) to (at least 0.2%) to comply with the applicable regulation referred in the PPA.
2	2013-01-01	CrPDD	Change in the turbine towers height mentioned in the registered PDD from 67, 78, 100m to only 78m to comply with the actual hubs height.

- <sup>1)</sup>
- TDfrMP : Temporary deviation from registered monitoring plan
  - TDfMM : Temporary deviation from the monitoring methodology
  - CrPDD : Corrections to the registered PDD
  - ChSD : Change to the start date of the crediting period
  - PCfrMP : Permanent changes from registered Monitoring Plan
  - PCfMM : Permanent changes from Monitoring Methodology
  - CoPD : Changes to the project design of a registered project activity / PoA
  - CstAR : Changes specific to afforestation or reforestation

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## 2.3 Assessment team members and technical reviewers

As this assessment was carried out as part of the 1<sup>st</sup> verification of the project activity please refer to the main part of the verification report.

## 2.4 Assessment Steps

The *assessment of post registration changes* consisted of the following steps:

- Appointment of team members and technical reviewers
- A desk review of the registered and revised PDD<sup>/PDD/</sup> submitted by the client and additional supporting documents
- On-Site assessment (if required)
- Background investigation and follow-up interviews with personnel of the project developer and its contractors,
- Resolution of corrective actions (CARs / CLs) (if any)
- Final reporting
- Technical review
- Final approval.

In this case all activities were carried out as part of the 1<sup>st</sup> verification of this project activity.

## 2.5 Review of Documents

The registered as well as the revised PDD and supporting background documents related to the project design and the post registration changes were reviewed.

As far as required the assessment team used additional documentation by third parties like host party legislation, technical reports referring to the project design or to the basic conditions and technical data.

## 2.6 Follow-up Interviews

The validation team has carried out interviews in order to assess the information included in the project documentation and to gain additional information regarding the compliance of the project with the relevant criteria applicable for CDM.

During validation the validation team has performed interviews to confirm selected information and to resolve issues identified in the document review. The main topics of the interviews are summarized in table 2-4.

**Table 2-4:** Interviewed persons and interview topics

Interviewed Persons / Entities	Interview topics
Eolo de Nicaragua, S.A. Geo Ingenieria Ingenieros Consultores, S.A.	<ul style="list-style-type: none"><li>- Details of the project validation</li><li>- Project history</li><li>- Technical details of the plant</li><li>- Implemented changes from the previous project design</li><li>- Impact of changes on the additionality justification</li><li>- Impact on the monitoring of the project</li><li>- Editorial issues of the revised PDD</li><li>- PRC</li></ul>

A comprehensive list of all interviewed persons is part of section 7 'References'.

## 2.7 Resolution of Clarification and Corrective Action Requests

### 2.7.1 Definition

A **Corrective Action Request (CAR)** will be established where:

- mistakes have been made in assumptions, application of the methodology or the project documentation which will have a direct influence the project results,
- the requirements deemed relevant for validation of the intended / implemented changes,
- there is a risk that the changes cannot be approved by the UNFCCC or that emission reductions would not be able to be verified and certified after the implementation of the changes.

A **Clarification Request (CL)** will be issued where information is insufficient, unclear or not transparent enough to establish whether a requirement is met.

### 2.7.2 Assessment

After reviewing all relevant documents and taken all other relevant information into account, the assessment team issues all findings (in the course of a draft report, if applicable) and hands over the findings to the project proponent in order to respond on the issues raised and to revise the documentation accordingly.

The final reporting step starts after resolution of the raised CARs and CLs. In case the findings from CARs and CLs cannot be resolved by the project proponent or the



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proposed action related to the FARs raised cannot be assessed as adequate, no positive assessment opinion can be issued by the validation team.

The CAR(s) / CL(s) / FAR(s) are documented in the context of the respective chapters.

## **2.8 Technical review**

Before submission of the final assessment report a technical review 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 assessment opinion as prepared by the validation team leader may be confirmed or revised. Furthermore reporting improvements might be achieved.

## **2.9 Final approval**

After successful technical review of the final report an overall (esp. procedural) assessment of the requested post registration changes will be carried out by a senior assessor located in the accredited premises of TÜV NORD.

Only after this step the notification or the report can be forwarded to the UNFCCC (in case of a positive validation opinion).

### 3 CHANGES THAT DO NOT AFFECT THE PROJECT DESIGN

#### 3.1 Assessment of Changes

##### Requested Change #1

- Type of change(s):
- ☐ Temporary Deviation from Monitoring Plan
  - ☐ Temporary Deviation from Monitoring Methodology
  - ☐ Corrections that do not affect the project design
  - ☒ Permanent Change from Monitoring Plan
  - ☐ Permanent Change from Monitoring Methodology
  - ☐ Changes specific to afforestation or reforestation

##### A. Description of post registration change

<b>Start Date:</b> Please provide the start date of the change	2013-01-01	<b>End Date:</b> Please provide the end date of the change, if applicable	N/A
<b>Description:</b> Please give a detailed description of the changes	<p>Increase the accuracy of the main meter from (0.5%) to (at least 0.2%) to comply with the applicable regulation referred in the PPA.</p> <p>The registered PDD describes the electricity meters to have a minimum accuracy of 0.5%, nonetheless the meters which were installed have an accuracy of 0.2%. The decision to install meters with accuracy of 0.2 % was made to comply with the requirement stated in the PPA which requires a minimum accuracy of 0.2% for the main electricity meter and 0.5% for the backup meter.</p>		

##### B. Assessment of post registration change – Permanent Change from Monitoring Plan

<b>MM compliance:</b> Please check in case of changes to the registered MP, whether they are in compliance with the MM.	The changes are in compliance with the registered Monitoring Methodology.
<b>Later version of MM:</b> Please check in cases where compliance with a later version of the MM is demonstrated that the conservativeness of the monitoring and verification is not affected.	The changes are in compliance with the latest version of the Monitoring Methodology.

### Requested Change #1

<b>Accuracy:</b> Please give a detailed assessment whether the change is likely to lead to a reduction in the accuracy of the ER calculation.	Due to the installation of the Main meter with higher accuracy class the accuracy of ER would be more accurate.
<b>Conservative-ness:</b> Please give a detailed assessment whether conservative assumptions or discount factors have been applied to ensure that ER will not be overestimated.	The change in main meter accuracy class from lower to higher accuracy would not lead to any overestimation of ER.
<b>Appendix 1 PS:</b> Check if the changes fall under one of the scenarios of appendix 1 of the PS.	The changes fall under the §5(b) of appendix 1. The change in the accuracy class of the main power meter complies with the applicable regulation referred in the PPA and the changes are not in the control of project proponent.
<b>C. Revised PDD</b>	
<b>Rev. of PDD:</b> Check whether the changes have been fully addressed in a revised PDD.	<input checked="" type="checkbox"/> The changes have correctly been reflected in the revised PDD.  <input type="checkbox"/> A revision of the PDD is not required (in case of temp. changes).  <input checked="" type="checkbox"/> The revised PDD has been forwarded in (i) track-change and (ii) clean version.
<b>D. Prior Approval</b>	
<b>Prior approval:</b> Assess whether the change requires prior approval of the board	<input type="checkbox"/> <i>The post registration change requires prior approval</i>  <input checked="" type="checkbox"/> <i>The post registration change does not require prior approval</i>

## Requested Change #2

- Type of change(s):
- ☐ Temporary Deviation from Monitoring Plan
  - ☐ Temporary Deviation from Monitoring Methodology
  - ☒ Corrections that do not affect the project design
  - ☐ Permanent Change from Monitoring Plan
  - ☐ Permanent Change from Monitoring Methodology
  - ☐ Changes specific to afforestation or reforestation

### A. Description of post registration change

<b>Start Date:</b> Please provide the start date of the change	2013-01-01	<b>End Date:</b> Please provide the end date of the change, if applicable	N/A
<b>Description:</b> Please give a detailed description of the changes	Change in the turbine towers height mentioned in the registered PDD from 67, 78, 100m to only 78m to comply with the actual hubs height. The registered PPD mentioned the installation of wind generation towers with hub heights at 67, 78 and 100m, nonetheless the towers height considered at the validation time for the additionality analysis was 78 m, and furthermore the actual installed towers have hubs at 78 m.		

### B. Assessment of post registration change – Corrections

<b>Correctness:</b> Please assess whether the corrected information (incl. ex-ante values) is an accurate reflection of actual project information.	The correction reflect the actual situation of the PA by specifying the exact height hubs (78 m) of the installed towers which is in line with the ex-ante electricity values taken from the "Energy Assessment Report" from GL Garrad Hassan (Document no. 230125-ESZA-R-01). This Report considers turbines Gamesa G90 at 78m and a respective annual electricity generation of 162,322 MWh, which is in line with the additionality analysis and other technical documents used at validation time, such as the EPC contract which also considered Gamesa G90 at 78m.
<b>MP/MM Compliance :</b> Please check whether the corrected parameters are in accordance with the MM and/or MP	No parameters were corrected.
<b>Appendix 1 PS:</b> Check whether they affect the design of the PA.	The corrections do not affect the design of the PA, because at the validation time the documents used for the additionality analysis and elaboration of the PDD considered the hubs height of 78m and annual energy generation of 162,322 MWh. It was a mistake mentioning different hub heights in the PDD. According with this the correction fall under numeral 1 of Appendix 1 of the CDM project standard and does not require prior approval from the EB.

## Requested Change #2

### C. Revised PDD

**Rev. of PDD:**

Check whether the changes have been fully addressed in a revised PDD.

- ☒ The changes have correctly been reflected in the revised PDD.
- ☐ A revision of the PDD is not required (in case of temp. changes).
- ☒ The revised PDD has been forwarded in (i) track-change and (ii) clean version.

### D. Prior Approval

**Prior approval:**

Assess whether the change requires prior approval of the board

- ☐ *The post registration change requires prior approval*
- ☒ *The post registration change does not require prior approval*

## 3.2 Related Findings

No findings have been identified in this context.

#### **4 CHANGE TO THE START DATE OF THE CREDITING PERIOD**

The post registration changes do not fall under this category.

## **5 CHANGES TO THE PROJECT / PROGRAMME DESIGN**

The post registration changes do not fall under this category.

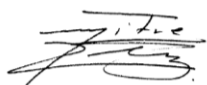
## 6 SUMMARY OF ASSESSMENT OPINIONS

The below listed changes have occurred after the registration of the project / PoA.

Type of Change occurred	Total No. of changes	No. of changes which require prior approval
<input type="checkbox"/> Temporary deviations from the MP	-	<input type="checkbox"/>
<input type="checkbox"/> Temporary deviations from the MM	-	<input type="checkbox"/>
<input checked="" type="checkbox"/> Corrections that do not affect the project	1	<input type="checkbox"/>
<input type="checkbox"/> Change to the start date of the crediting p.	-	<input type="checkbox"/>
<input checked="" type="checkbox"/> Permanent changes from the MP	1	<input type="checkbox"/>
<input type="checkbox"/> Permanent changes from the MM	-	<input type="checkbox"/>
<input type="checkbox"/> Design changes to the project activity / PoA	-	<input type="checkbox"/>
<input type="checkbox"/> Changes specific to AR projects	-	<input type="checkbox"/>

Non of the changes requires prior approval of the Board.

Essen, 2014-07-07



Raul Gonzalez Mitre  
TÜV NORD JI/CDM CP  
Assessment Team Leader

Essen, 2014-07-07



Martin Saalman  
TÜV NORD JI/CDM CP  
Final Approval



## 7 REFERENCES

All references are listed in the Verification Report to which this assessment is attached.

# APPENDIX

- A1:** Assessment of Financial Parameters
- A2:** Assessment of Barrier analysis
- A3:** Competence statements of involved personnel

## APPENDIX 1: ASSESSMENT OF FINANCIAL PARAMETERS

**Table A-1:** Assessment of Financial Parameters (VVS, v. 2.0, §§ 120, 121 / in case financial parameters stem from FSR §122)

<input type="checkbox"/>	No financial parameters are used for additionality justification					
<input checked="" type="checkbox"/>	Assessment of all financial parameters see below					
Parameter	Value applied	Unit	Source of Information (please indicate document and page)	Reference	DOE ASSESSMENT	
					Correctness of value applied	Comment
				//	<input type="checkbox"/>	
				//	<input type="checkbox"/>	
				//	<input type="checkbox"/>	
				//	<input type="checkbox"/>	
				//	<input type="checkbox"/>	
				//	<input type="checkbox"/>	
				//	<input type="checkbox"/>	

## APPENDIX 2: ASSESSMENT OF BARRIER ANALYSIS

**Table A-2:** Assessment of Barrier Analysis (VVS, v. 2.0, §§ 124-127)

<input checked="" type="checkbox"/>		No barrier parameters are used for additionality justification		
<input type="checkbox"/>		Assessment of barriers see below		
Kind of Barrier (invest, tech, other)	Description of Barrier	Evidence used	Assessment of validation team	
			Appropriateness of information source	Explanation of final result
			<input checked="" type="checkbox"/>	
			<input checked="" type="checkbox"/>	
			<input checked="" type="checkbox"/>	
			<input checked="" type="checkbox"/>	
			<input checked="" type="checkbox"/>	
			<input checked="" type="checkbox"/>	
			<input checked="" type="checkbox"/>	



APPENDIX 3: STATEMENTS OF COMPETENCE OF INVOLVED PERSONNEL

**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	Senior Assessor (Validation, Verification)	2015-06-27
VCS / ISO 14064-2	Senior Assessor	2015-06-27

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA
1.2	Renewable Energies
13.1	Waste handling and disposal

082 - Rev. 4, Date: 2012-08-16

082\_S01-F003\_2012-08-16\_rev4.doc

S01-F003 rev2 / 2012-04-05

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

**Mr. Oliver Quireza Campos**

SCHEME	STATUS	VALID UNTIL
CDM	Trainee	
VCS / ISO 14064-2	Trainee	

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA
1.2	Renewable Energies
13.1	Waste Handling and Disposal
13.2	Animal Waste Management

337 - Rev. 1, Date: 2013-10-09

337\_S01-VA060-F20\_2013-10-09\_rev1

S01-VA060-F20 rev3 / 2012-10-25



### Statement of Competence

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

**Mr. Martin Saalmann**

SCHEME	STATUS	VALID UNTIL
CDM	Senior Assessor (Validation, Verification) Technical Reviewer	2015-05-15
J1	Senior Assessor Technical Reviewer	2015-05-15
VCS / ISO 14064-2	Senior Assessor Technical Reviewer	2015-05-15

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA	TR SUBCATEGORIES
1.2	Renewable energies	1.2.4 Solar
13.1	Waste management and disposal	13.1.1 Waste management 13.1.2 Waste water management

022 – Rev. 4, Date: 2012-05-16

022-S01-F003\_2012-05-16 rev4

S01-F003 rev2 / 2012-04-05



### Statement of Competence

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

**Mr. Kunal Rami**

SCHEME	STATUS	VALID UNTIL
CDM	Senior Assessor (Validation, Verification) Technical Reviewer	2016-02-27
VCS / ISO 14064-2	Senior Assessor Technical Reviewer	2016-02-27

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
6.1	Construction	
13.1	Waste Handling and Disposal	13.1.1 Waste Management 13.1.2 Waste Water Management

224 – Rev. 4, Date: 2013-02-28

224\_S01-VA060-F20\_2013-02-28\_rev4.doc

S01-VA060-F20 rev3 / 2012-10-25