
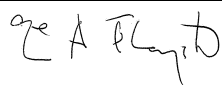





## Validation opinion

### Revision of the monitoring plan

Title of project activity:			
Poechos I Project			
CDM reference number:		DNV project No.:	
0086		PRJC-368923-2012-CCS-NOR	
Type of revision:	<input type="checkbox"/> Proposed revision only includes the request by the CDM EB <input type="checkbox"/> Proposed revision includes not only the request by the CDM EB but also additional revisions proposed by the PP/DOE <input checked="" type="checkbox"/> Proposed Revision includes revisions proposed by the PP/DOE		
Date	Work carried out by:	Work verified by:	Approved by:
25 April 2012	 Felipe Antunes	 Ole A. Flagstad	 Ole A. Flagstad

## 1 Description of the changes to the monitoring plan

The project proponent implemented a second hydropower plant – Poechos II project (UNFCCC 1836) – delivering electricity to the same Sullana substation where Poechos I (UNFCCC 0086) delivers. Before Poechos II implementation on 22 May 2009, the 0.2 class electricity meter at the substation was measuring the electricity delivered from Poechos I only. From May 2009 to March 2010 what was declared as Poechos I generation invoice is the difference between the electricity generation measured at Sullana substation (which corresponds to total generation from both Poechos I and Poechos II) and data from SCADA system at Poechos II (gross electricity generation before internal consumption and transmission losses), as described in the deviation I-DEV0424 that was submitted and approved by UNFCCC on 15 September 2011. A separate 0.2 class meter for Poechos II was finally installed in 27 March 2010. As a result of the installation of the meter at Poechos II, electricity generated by Poechos I is no longer directly measured, but calculated as the difference between the electricity generated measured at Sullana substation and the meter that measures Poechos II generation.

As a result, the revised Monitoring Plan presents the three parameters listed below:

a) Net electricity supplied to the grid by both Poechos I and Poechos II (E1)

This corresponds to the net electricity supplied to the grid from both power plants Poechos I and Poechos II, measured by one 0.2 class electricity meter. Therefore the Sullana substation meters the both hydro plants electricity.

b) Net Electricity supplied to the grid by Poechos II Hydroelectric Plant (E2)

As a part of the implementation of Poechos II, the project participant installed another meter 0.2 class on 27 March 2010, at this hydroelectric plant to measure the net electricity supplied to the grid by this plant.

c) Net Electricity supplied by the project to the grid (EGy)

The net electricity delivered to the grid from the project activity, Poechos I, is now calculated based on the difference between the meters readings of E1 and E2 with the following formula:

$$EGy = E1 - E2$$

## 2 Assessment of the revision of the monitoring plan

*The proposed revision of the monitoring plan ensures that the level of accuracy or completeness in the monitoring and verification process is not reduced as a result of the revisions*

The proposed revision of the monitoring plan is related with the change in the procedure of how the net energy delivered to the grid by the project activity, Poechos I, is obtained.

The net electricity supplied to the grid by Poechos I (EGy) is:

The electricity metered at Sullana substation (E1) minus the energy metered at Poechos II plant (E2). The formula is:  $(EGy) = E1 - E2$ .

The project participant uses a 0.2 class meter at both Sullana substation and Poechos II plant, which means that the readings could have 0.2% of error. This accuracy corresponds to the level of accuracy that was in place before the revision of the monitoring plan. Hence the proposed revision of the monitoring plan ensures that the level of accuracy of the meters is not reduced as a result of the revision.

*The proposed revision of the monitoring plan is in accordance with the approved monitoring methodology applicable to the project activity whilst ensuring the conservativeness of the emission reductions calculation*

The proposed revision of the monitoring plan is in accordance with the approved methodology as the Emission Factor of the Grid ( $EF_y$ ), Operating Margin emission factor of the grid ( $EF_{OM,y}$ ) and the Building Margin emission factor of the grid ( $EF_{BM,y}$ ) are yearly calculated accordingly with methodology and with official data available month by month. The conservativeness for the emission reductions calculation is ensured through verifying the gross electricity generation for both Poechos I and Poechos II and the fact that the calculation starts from E1 that measures the total generation for both projects. Through this it is ensured that any additional uncertainty added by the additional meter E2 is not included in the final emission for Poechos I and Poechos II together. Thereof the conservativeness of the emission reductions calculation is ensuring and in accordance with the approved methodology applicable to the project.

*The findings of previous verification reports, if any, have been taken into account*

This revision of the monitoring plan takes into account the CAR 3 of the previous verification report that mentioned the implementation of Poechos II and the fact that the meter at Sullana substation is metering the total electricity delivered from both hydroelectric plants; due to this a Request of Deviation I-DEV0424 was issued and was approved by the EB on 15 September 2011. In that approved Request for Deviation it was stated that "A separate request for change in the monitoring plan will be submitted to address the fact that Poechos I is no longer

directly measured, but calculated as the difference between the electricity generated measured at Sullana substation and the meter that measures Poechos II generation.” Thereof the findings of previous verification reports have been taken into account.

### **3 Validation opinion**

DNV recommends the approval of the revised monitoring plan submitted by the project participants.

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