CDM VALIDATION REPORT

Eco Power Uganda Ltd and C-Quest Capital LLC

VALIDATION OF THE PROJECT ACTIVITY:

Ishasha 6.6 MW Small Hydropower Project

AENOR REFERENCE: 2009/052/CDM/01

VERSION: 02

VALIDATION REPORT
"**Ishasha 6.6 MW Small Hydropower Project**"

Validation Report:	AENOR Reference No.:		Version of this report:	Date:
	2009/052/CDM/01		**02**	**2012/05/25**
PDD:	Title:		GSC publication date:	Comments received:
	Ishasha 6.6 MW Small Hydropower Project		**2009/08/15**	☐ **Yes*** ☒ **No**
Parties involved:	Host Party:		Other involved Parties:	
	Uganda		**The Netherlands**	
Project Participant(s):	In host Party:		In other involved Parties:	
	Eco Power Uganda Ltd		**C-Quest Capital LLC**	
Size of the project activity:	☒ Small scale ☐ Large scale			
Applied methodology/ies:	Title:		Code:	No. version / Scope:
	Grid connected renewable electricity generation		**AMS.I.D.**	**17** / **1**
Applied tools:	Title:		Version:	
	Tool to calculate the emission factor for an electricity system		**02.2.1**	
	Title:		Version:	
Emission reductions (ER): ☒ **Annual average of the ER (tCO_2e)** ☐ **Total ER (tCO_2e)**	GSC PDD:		Final PDD:	
	20,759		**19,621**	
Previous versions of this document:			Version:	Date:
			1	**2012/03/18**
			2	
			3	
			4	
Report prepared by:	Climate Change Unit. AENOR			

* The comments are detailed in Section 4 of this Validation Report

Abbreviations

AMS.I.D	Small Scale methodology for grid connected renewable electricity generation
BM	Build margin
CAR	Corrective action requested
CL	Clarification
CDM	Clean Development Mechanism
CER	Certified emission reductions
DECISION 3/CMP.1	Modalities and Procedures for a Clean Development Mechanism as Defined in Article 12 of the Kyoto Protocol
DNA	Designated National Authority
DOE	Designated Operational Entity
EB	Executive Board of the CDM of the Kyoto Protocol
EIA	Environmental impact assessment
ERA	Electricity Regulatory Authority of Uganda
ESIA	Environmental and Social Impact Assessment Study
FMO	Netherlands Development Finance Company
GHG	Greenhouse gasses
IFC	International Finance Cooperation
IPCC	Intergovernmental Panel on Climate Change
LDC	Least Developed Country
LoA	Letter of approval
MP	Monitoring Plan
MWh	Megawatt hour
NEMA	National Environmental Agency
OM	Operating margin
PDD	Project design document

PP	Project Participant
UETCL	Uganda Electricity Transmission Company Limited
tC	Carbon tonnes
ODA	Official development aid

Table 1: Abbreviations

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1 INTRODUCTION

This validation concerns a project implemented by Eco Power Uganda LTD. and C-Quest Capital LLC. in Uganda to reduce emissions of CO_2 by generating renewable energy from hydraulic resources. The objectives of the validation exercise are to confirm that the project meets the necessary CDM criteria, that the project follows the approved methodology, AMS.I.D (version 17), and that the proposals presented by Eco Power Uganda LTD. and C-Quest Capital LLC. in the PDD will lead to a realistic determination of the emissions reductions.

The scope of the validation covers the additionality assessment (barrier analysis), environmental approval and the stakeholder consultation. In addition it covers the baseline methodology, the calculation of the emission factor and the monitoring methodology to quantify the emissions reductions during the operational life of the project.

The project implies the installation of a 6.6 MW hydroelectric project on Ishasha River, Kanungu district in the Western region of Uganda with the dam/weir being constructed 500 metres downstream from the border of the Bwindi Impenetrable National Park. This plant will generate electric energy that would otherwise continue to be generated with fossil fuel power plants.

1.1 Objective

C-Quest Capital LLC have commissioned AENOR to validate the **"Ishasha 6.6 MW Small Hydropower Project"**. The purpose of a validation is to have an independent, third-party assessment of the project design. In particular, the project's baseline, the Monitoring Plan (MP) and the project's compliance with relevant UNFCCC and host country criteria are validated in order to confirm that the project design as documented is sound and reasonable and meets the stated requirements and identified criteria.

Validation is a requirement for all CDM projects and it is considered necessary in order to provide assurance of the quality of the project and its intended generation of certified emission reductions (CERs).

UNFCCC criteria refer to the Kyoto Protocol criteria and the CDM rules and modalities as agreed in the Bonn Agreement and the Marrakech Accords.

1.2 Scope

The scope of the validation is to assess all aspects of GHG reduction involved in the project, including the project design, the baseline, the determination of the grid's emission factor and the procedures proposed for monitoring emissions reductions in the future.

The following documents were reviewed as part of the scope of the activity:

- PDD /1/ /2/, including baseline study and Monitoring Plan.
- Approved methodology: AMS.I.D (versions 14 and 17) /3//4/
- Decision 3/CMP.1 and relevant decisions and guidelines from the EB.
- Validation and Verification Manual (version 01.2) /5/
- Associated documentation (EF calculations, environmental requirements, barrier analysis, etc.)

The validation scope is defined as an independent and objective review of the project design document, the project's baseline study, monitoring plan and other relevant documents. The information in these documents is reviewed against Kyoto Protocol requirements, UNFCCC rules and associated interpretations. AENOR, based on the Instruction for Validation, Verification and Certification of CDM Project Activities (IE-DTC-039), and the Validation and Verification Manual, has used a risk-based approach in the validation, focusing on the identification of significant risks for project implementation and the generation of CERs.

The validation is not meant to provide any consultancy services to the Client. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the PDD.

2 METHODOLOGY

The validation of the project began in August 2009. The validation was performed in the manner of an audit, in which a desk review of the PDD *(*version 01*)* was first undertaken using the approved methodology and CDM and other relevant criteria. The desk review was followed by a site visit to the Ishasha Hydroelectric power plant, NEMA *(*environmental authority*)*, the DNA and key stakeholders in Uganda.

In order to ensure transparency, a validation protocol was customised for the project according to Instruction IE-DCT-039. The protocol shows, in a transparent manner, criteria *(*requirements*)*, means of verification and the results from validating the identified criteria. The validation protocol serves the following purposes*:*

- It organises, provides details, and clarifies the requirements a CDM project is expected to meet.
- It ensures a transparent validation process during which the validator will document how a particular requirement has been validated and the result of the validation.

The validation protocol consists of two tables. The completed validation protocol is enclosed in appendix A to this report.

The sequence of the validation is given in the table below*:*

Topic	Date
Submission of PDD for global stakeholder consultation process	**2009/08/15**
On-site visit	**2009/11/3-5**
Validation protocol *(*version 01*)*	**2009/12/15**
Final validation report	**2012/05/25**

Table 2: Sequence of the main validation activities

Appointment of team members and technical reviewers

The list of involved personnel and the qualification status are summarized in the table below:

Name	Qualification	
	Position on the team	Technical areas
Pablo Taboada Utrera	Chief Validator	T.A 1.2
Luis Javier Arribas	Validator	T.A 1.2
Mercedes García Madero	Validator	TA 1.2
Jose Antonio Gesto Vilacoba	Technical reviewer	T.A 1.2

Table 3: List of the personnel involved

Technical areas (TA) mentioned above correspond to the following:

TA code	Technical area
TA 1.1	Thermal energy generation from fossil fuels and biomass including thermal electricity from solar (COMPLEX)
TA 1.2	Energy generation from renewable energy sources
TA 2.1	Electricity distribution
TA 2.2	Heat distribution
TA 3.1	Energy demand
TA 4. 1	Cement sector (COMPLEX)
TA 4.2	Aluminum (COMPLEX)
TA 4.3	Iron and steel (COMPLEX)
TA 4.4	Refinery (COMPLEX)
TA 5.1	Chemical process industries (COMPLEX)
TA 6.1	Construction
TA 7.1	Transport
TA 8.1	Mining and mineral processes, excluding those included in TA 8.2 below
TA 8.2	Oil and gas industry, coal mine methane recovery and use (COMPLEX)
TA 9.1	Metal production

TA 10.1	Mining and mineral processes, excluding those included in TA 10.2 below
TA 10.2	Oil and gas industry, coal mine methane recovery and use (COMPLEX)
TA 11.1	Chemical process industries (COMPLEX)
TA 11.2	GHG capture and destruction
TA 12.1	Chemical process industries (COMPLEX)
TA 13.1	Waste handling and disposal
TA 13.2	Animal waste management
TA 14.1	Forestry
TA 15.1	Agriculture
TA 15.2	Animal waste management

Tabla 4: List of technical areas

2.1 Document review

The Project Design Document submitted by Eco Power Uganda LTD. and C-Quest Capital LLC was reviewed against the approved methodology and against CDM and other relevant criteria. Additional background documents related to the project design and baseline were also made available before and during the on-site visit in Uganda. These additional background documents were also reviewed.

To address the corrective actions and clarification requests that arose from the desk review and on-site visit, Eco Power Uganda LTD. and C-Quest Capital LLC. revised the project design document several times before developing a final version (version 08) that was dated on 18 March 2012.

The final validation findings are presented in this report on the project, as described in final version of the project design document.

The reviewed documents used during the entire validation process are detailed in Chapter 6 of this report.

2.2 Follow-up actions

AENOR validators Pablo Taboada Utrera and Luis Javier Arribas conducted interviews with project developers in Uganda to confirm selected information and to resolve issues identified in the document review.

From 03 November 2009 to 05 November 2009, representatives from Eco Power Uganda LTD, Uganda DNA,

NEMA and main stakeholders were interviewed: Local Community of Huasahuasi and representatives from the Environmental Authority were also interviewed.

The main topics of the interviews are summarised in Table 6.

Interviewed organisation Person/Position	Interview topics
EcoPower Uganda Limited – EPUL - Kampala • Samanakoon Bandara – Senior Manager – Civil Engineering • Romesh Bandaranaike (EPUL – Sri Lanka) **Econoler (Local consultancy).** • Alexander Komakech – team Assistant - Uganda	✓ Project design. ✓ Additionality assessment (barrier analysis). ✓ EIA approval and related conditions. ✓ Monitoring of environmental impacts.
Electricity Regulatory Authority ERA - Kampala, Uganda • Declane Kabuzire Centenary. Assistant project manager. • Mbaga Tuzinde – Economist.	✓ Operation of the country's Electricity system. ✓ Data analysis for the Emission Factor of the national grid. ✓ Baseline determination: OM & BM (power plants, electricity production, start of operation, fuels, efficiencies and most recent data).
Uganda DNA - Ministry of Water and Environment (Climate Change Unit) Kampala (Uganda) • Chebet Maikut – Principal Programme Officer – Mitigation **Ministry of Energy and Mineral Development** • James Baanabe Isingoma – Ag. Comm. Energy Resources Department	✓ Project's sustainable development contribution. ✓ Monitoring of environmental impacts. ✓ Consultation with municipality's authorities, landowners and other stakeholders. ✓ DNA's opinion.
National Environment Management Agency (NEMA) - Kampala (Uganda) ✓ Waiswa Ayazika Arnold – Environmental Impact Assessment Coordinator	✓ Knowledge of the environmental impacts. ✓ Benefits for the community. ✓ Consultation with municipality's authorities, land owners and other stakeholders. ✓ EIA approval process and related conditions. ✓ Monitoring of environmental impacts.

Interviewed organisation Person/Position	Interview topics
Kanyantorogo subcounty representatives • Tumuhamye Keneth • Bikonomuhonj Kletus • Emily Akampurira • Oreshaba Javourate	✓ Compliance with applicable law. ✓ Opinions about the project. ✓ Knowledge of the environmental impacts. ✓ Benefits for the community. ✓ Landowners' current socioeconomic situation. ✓ Consultation with municipality's authorities, landowners and other stakeholders.

Table 6. Organisations and people interviewed.

2.3 Findings

The objective of this validation phase was to resolve the requests for corrective actions and clarifications and any other outstanding issues that needed to be clarified for AENOR's positive conclusion regarding project design. The corrective action requests *(*CARs*)* and clarification requests *(*CLs*)* raised by AENOR were resolved during communications with the project participants. To guarantee the transparency of the validation process, the concerns raised and responses given are described in this report and also documented in the validation protocol in Appendix A.

Since modifications to the Project design were necessary to resolve AENOR's concerns, the Client decided to revise the documentation and finally resubmitted the project design document *(*version 08*)*. After reviewing the revised and resubmitted project documentation, AENOR issued this final validation report and opinion.

2.4 Internal Quality Control

Following the completion of the assessment process by the validation team, all documentation undergoes internal quality control, through a technical review, before submission to the CDM-EB. The technical reviewer is a qualified member of AENOR, independent from the team that carried out the validation of the project activity. The technical reviewer or the team appointed for the technical review are qualified in the technical area and sectoral scope of the project activity.

3 VALIDATION FINDINGS

3.1 Approval

CAR 1 was raised in relation with the Letters of Approval. The CAR was resolved once the LOAs were received and it was confirmed that they were in accordance with the UNFCCC requirements. For further information see Appendix A of this report.

The project participants for "Ishasha 6.6 MW Small Hydropower Project" are Eco Power Uganda LTD from Uganda the host country and C-Quest Capital LLC from The Netherlands.

Eco Power Uganda LTD from the host country Uganda meets all relevant participation requirements detailed in the following:

- Uganda has confirmed that is a party of the Kyoto Protocol (2002, 25th March)
- Uganda has confirmed its voluntary participation and the project's contribution to sustainable development through national approval of the project (dated 22 June 2010)[6]. The authenticity of the Letter of Approval was checked through interviews with the people in charge of the approval.

The project's contribution to the sustainable development of Uganda was confirmed by the DNA of the host country.

The validation did not reveal any information that indicates that the project can be seen as a diversion of ODA funding towards Uganda.

As stated above, the Annex I Party is C-Quest Capital LLC from The Netherlands. The Annex I Party also meets all relevant participation requirements as detailed below:

- The Netherlands has confirmed that it is Party to the Kyoto Protocol (31 May 2002).
- The Netherlands has confirmed its voluntary participation in the project through a letter of approval [7]. The Netherlands' letter of approval was obtained on 26 October 2009 and is in accordance with the requirements established in the UNFCCC Validation and Verification Manual.

The PPs provided the validation team with the letters of approval from Uganda and The Netherlands.

The LoAs does not refer to a specific version of the PDD or validation report. The corresponding references included in the LoAs, PDD and validation report are consistent.

AENOR ensures that the LoAs have been issued by the respective Parties designated national authorities and does not doubt the authenticity of the letters of approval received from the PPs. Hence, AENOR confirms that the LoAs are in compliance with paragraphs 45-48 of the VVM v.1.2.

3.2 Participation

The participation of C-Quest Capital LLC has been approved in a separate specific letter of approval of participation /8/ issued on 06 December 2010 and the participation of Eco Power Uganda LTD has been approved in the letter of approval from Uganda obtained on 22 June 2010.

All project participants have been listed in a consistent manner in the project documentation, and their participation in the project activity has been approved by a Party to the Kyoto Protocol. The project participants listed in tabular form in section A.3 of the PDD, are consistent with the contact details provided in Annex 1 of the PDD.

No entities other than those approved as project participants are included in these sections of the PDD. In addition, the approval of participation has been issued by the relevant DNAs.

AENOR's validation team states that the participation of the project participants has been approved by a Party to the Kyoto Protocol. This situation has been checked against a separate letter from The Netherlands DNA specifically to approve participation and the letter of approval from the Uganda DNA.

3.3 Project Design Document

The final version of the PDD of the "**Ishasha 6.6 MW Small Hydropower Project**" has been prepared in accordance with the applicable template (version 03 – Annex 34 EB 28) and guidance from the CDM Executive Board.

3.4 Project description

"Ishasha 6.6 MW Small Hydropower Project" is a 6.6 MW run-of-river project with an annual production of 29.404 GWh. The project installed capacity is 6.6 MW. The generation of renewable electricity partly displaces electricity generation based on fossil fuels supplied to Uganda National Grid.

The project design engineering reflects good practise. As the plant will supply generated electricity to the grid, the project is eligible to be considered a renewable energy project / renewable electricity generation for a grid.

The main technical characteristics are detailed below:

Technical characteristics	Project Activity
Installed capacity (MW)	6.6 MW
Expected electricity generation	29.404 GWh
Turbine type	Francis/2
Generator Capacity	4.0 MVA
Power factor	0.825

Table 7. Main technical characteristics of Ishasha hydropower project.

As it is established in the PDD, the project will harness water from the Ishasha River and deposit the water approximately 90 metres through a mild steel penstock of 1,140 metres to run two turbines located in a power house at the end of the penstock. The electricity generated will be transmitted to the Uganda Electricity Transmission Company Limited (UETCL), which operates the national grid system. The primary objective of the project is to supply affordable electricity and contribute to environmental and economical sustainability for the population of Uganda. The electricity grid in Uganda supplies only a small fraction of the population and relies partly on fossil fuels. The project will further help Uganda to stimulate and commercialise the use of grid connected renewable energy technologies.

As was checked during the on-site interviews, its operation will provide direct financing to the municipalities that are directly affected, which will allow them to assume the development of their own projects, thus contributing directly to the improvement of the standard of living of the communities affected.

The validation team has primarily checked the project design against the Contract Agreement signed with Turboinstitu for Supply, Transport, Installation and Commissioning of the equipment for HPP Ishasha –./9/. The Certificate for Approval of Environmental Impact Assessment granted by NEMA /10/, and the Licence for Generation and Sale of Electricity issued by the Electricity Regulatory Authority (ERA) /11/ were also used to crosscheck the technical description of the project activity.

All the characteristics included in the PDD were checked during the on-site visit and against the maps and the documentation submitted by Eco Power Uganda LTD and C-Quest Capital LLC.

The last version of the PDD details the project's design in a precise manner, in accordance with the accuracy and completeness principles required for the CDM process.

AENOR's validation team states that the description of the proposed CDM project activity as contained in the PDD sufficiently covers all relevant elements, is accurate and that it provides the reader with a clear understanding of the nature of the proposed CDM project activity.

In conclusion, AENOR confirms that the project description, as included in the PDD, is sufficiently accurate and complete in order to comply with the requirements of the CDM.

3.5 Baseline methodology

The final PDD describes the baseline methodology, which is in conformance with the approved methodology AMS.I.D *(*version 17*)* "Grid connected renewable electricity generation". The key conclusions about the correct application are summarised below.

The PDD, version 1, submitted to AENOR for public comments applied version 14 of the methodology. This version expired on 29 June 2010. Therefore, during the validation the project participant updated the PDD and the calculations using version 17.

The methodology is applicable because the installation involves hydroelectric power plant with a run-of-river reservoir that supply electricity to the national grid. The project activity results in a new reservoir and the power density of the power plant is greater than 4 W/m^2. Based on the on-site visit assessment and relevant documents provided by the project participant during the validation process, and detailed in section 3.5.1 of this validation report, AENOR checked the applicability of the methodology to the project activity.

The "Ishasha 6.6 MW Small Hydropower Project" will supply electricity to Uganda National Grid. The system boundaries include the project power plant and all power plants connected physically to the electricity system that Ishasha hydropower plant is connected to. This requirement is in accordance with the AMS.I.D methodology, version 17.

The grid's data source is Electricity Regulatory Authority *(*ERA*)* and Uganda Electricity Company Limited *(*UETCL*)*.

Following sources of data were taken into account:

- Electricity Regulatory Authority (ERA).
- Uganda Electricity Transmission Company Limited (UETCL).
- 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Vol. 2, Chapter 1.Table 1.2 Pg. 1.18. /13/.

AENOR confirms that the baseline and monitoring methodology selected by the project participants comply with the methodologies previously approved by the CDM Executive Board, that the selected methodology is applicable to the project activity and that the PP has correctly applied the selected methodology.

3.5.1 Applicability of the selected methodology to the project activity

The selected methodology for the **"Ishasha 6.6 MW Small Hydropower Project"** is AMS.I.D, version 17. The selected baseline and monitoring methodology previously approved by the CDM Executive Board are applicable to the project activity, and the version used is the latest one.

The applicability of the selected methodology to the proposed CDM project activity has been assessed in the following way:

1.This methodology comprises renewable energy generation units, such as photovoltaic, hydro, tidal/wave, wind, geothermal and renewable biomass: (a) Supplying electricity to a national or a regional grid; or (b) Supplying electricity to an identified consumer facility via national/regional grid through a contractual arrangement such as wheeling.;

• The Ishasha Small 6.6 MW Run-of-River Hydro power project is a grid-connected renewable power generation project that adds electricity capacity from only hydro power sources with no use of fossil fuels, and which will supply electricity to and displaces electricity from an electricity distribution system that is supplied by at least one fossil fuel fired generating unit. This has been checked against the Licence for Generation and Sale of Electricity granted by ERA.

2. This methodology is applicable to project activities that: (a) Install a new power plant at a site where there was no renewable energy power plant operating prior to the implementation of the project activity (Greenfield plant); (b) Involve a capacity addition;3 (c) Involve a retrofit of (an) existing plant(s); or (d) Involve a replacement5 of (an) existing plant(s).;

The Ishasha 6.6 MW Small Hydropower Project is a new hydropower plant. This issue was checked during the on-site visit. The project activity does not involve capacity additions, retrofits or replacements.

3. In case of hydro power plants, one of the following conditions must apply:

• The project activity is implemented in an existing reservoir with no change in the volume of reservoir;

This applicability condition of the project did not apply to the Ishasha 6.6 MW Small Hydropower Project.

• The project activity is implemented in an existing reservoir, where the volume of reservoir is increased and the power density of the project activity, as per definitions given in the Project Emissions section, is greater than 4 W/m^2;

This applicability condition of the project did not apply to Ishasha 6.6 MW Small Hydropower Project.

• The project activity results in new reservoirs and the power density of the power plant, as per definitions given in the Project Emissions section, is greater than 4 W/m^2.

The project activity results in a very small reservoir with a total area of approximately 9,608 m^2 and a resulting power density of 686.93 W/m^2, which is significantly greater than the requirement of 4 W/m^2 or less for consideration of Project Emissions from the reservoir associated with the Ishasha hydropower project. This data has been assessed during the on-site visit and against the data of the Feasibility Report /14/, provided to the validation team.

4. The methodology is not applicable to:

- Project activities that involve switching from fossil fuels to renewable energy sources at the site of the project activity, since in this case the baseline may be the continued use of fossil fuels at the site;
- Biomass fired power plants;
- Hydro power plants that result in new reservoirs or in the increase in existing reservoirs where the power density of the power plant is less than 4 W/m^2.

This applicability condition of the project did not apply to Ishasha 6.6 MW Small Hydropower Project. The project activity does not involve switching from fossil fuels to renewable energy sources. The project activity is not a biomass fired power plant. The power density of the proposed hydropower plant is greater than 4 W/m^2.

5. In the case of project activities that involve the addition of renewable energy generation units at an existing renewable power generation facility, the added capacity of the units added by the project should be lower than 15 MW and should be physically distinct from the existing units.

• The project involves construction of new units in a new plant, and does not involve the addition of renewable energy generation units at an existing renewable power generation facility, nor does it seek to retrofit or modify an existing facility for renewable energy generation.

6. In the case of retrofit or replacement, to qualify as a small-scale project, the total output of the retrofitted or replacement unit shall not exceed the limit of 15 MW.

• The unit added has only renewable components of total maximum production capacity of 6.6 MW, which does not exceed the eligibility limit *(*15 MW*)*. EPUL does not plan to upgrade the plant capacity during the crediting period and will also not be able to do so due to the limitations of water availability.

AENOR confirms the applicability of the selected methodology to the "Ishasha 6.6 MW Small Hydropower Project".

The project activity is not expected to result in emissions other than those allowed by the methodology, and there are no greenhouse gas emissions occurring within the proposed CDM project activity boundary as a result of the implementation of the proposed CDM project activity which are expected to contribute more than 1% of the overall expected average annual emissions reductions, which are not addressed by the applied methodology.

3.5.2 Project boundary

The project boundary of the project activity is as per methodology AMS.I.D definition: "The spatial extent of the project boundary includes the project power plant and all power plants connected physically to the electricity system10 that the CDM project power plant is connected to."

"Ishasha 6.6 MW Small Hydropower Project" will supply electricity to the Uganda National Grid.

Ishasha's project boundary is the water intake structure, the power house, the concession area and the auxiliary facilities.

In addition, all emission sources and gases related to the baseline scenario, project scenario, and leakage are clearly identified and described in a complete manner. CO_2 is the main emission source and is included in the baseline, but not CH_4 and N_2O, in compliance with the methodology. CO_2, N_2O and CH_4 are not included in the project activity as an emission source.

AENOR has validated the project boundary of the project during the on-site visit and with the Approval of the EIA and the electricity generation licence.

Therefore, the validation team states that the identified boundary and selected sources and gases are justified for the project activity.

3.5.3 Baseline identification

The PDD describes the baseline methodology, which is in conformance with the approved small-scale baseline methodology AMS.I.D *(*Version 17*)* for grid-connected electricity generation from renewable sources.

The project is a run-of-river hydroelectric power plant; of 6.6 MW, below the established threshold of 15 MW for small-scale grid connected electricity projects. As established in Section 3.2, the capacity included in the PDD is in accordance with the Licence for Generation and Sale of Electricity so the small- scale methodology is correctly used.

Since the project activity is the installation of a new, grid-connected renewable power plant, the baseline scenario is one where the electricity supplied by the project to the Uganda National Grid would be generated by the operation of the plants that are currently connected to the network and by new plants added to the System, based on the current trends in the sector. This definition is in accordance with AMS.I.D methodology and has been correctly applied in the final version of the PDD.

The assumptions and data used in the identification of the baseline scenario are appropriately justified, supported by evidence and can be deemed reasonable. In addition, relevant national and/or sectoral policies and circumstances are included in the final PDD.

The PDD identifies the baseline for the proposed CDM project activity as the scenario that reasonably represents the anthropogenic emissions by sources of GHGs that would occur in the absence of the proposed CDM project activity.

3.5.4 Algorithms and/or formulae used to determine emission reductions

The methodology for calculating emissions reductions is transparently documented and complies with existing good practise. According to the simplified baseline AMS.I.D methodology, the baseline emissions are calculated in the following way:

$$BE_y = EG_{BL,y} * EF_{CO_2,grid,y}$$

$EG_{BL,Y}$ corresponds to the quantity of net electricity supplied to the grid as a result of the implementation of the CDM project activity in year y *(*MWh*)*. The emission factor of the grid *(*$EF_{CO2,grid,y}$*)* has been calculated ex-

ante in accordance with the "*Tool to calculate the emission factor for an electricity system*" according to the methodology AMS.I.D. Two spreadsheets /15/ have been prepared for those calculations. The Operational Margin (OM) and the Build Margin (BM) emission factors have been calculated and combined to obtain the Baseline Emission factor in accordance with following steps:

Step 1. Identify the relevant electricity systems.

Ishasha's relevant electricity system is the Uganda National Grid. This has been checked against the UETCL website.

For the purpose of determining the OM emission factor, the emission factor of 0 tCO_2/MWh is applied to net import from Rwanda. Electricity exports to Kenya are not subtracted from electricity generation data used for calculating and monitoring the electricity emission factors. For the purpose of determining the build margin emission factor, as per the guidance in the tool, the spatial extent is limited to the project electricity system.

Step 2. Choose whether to include off-grid power plants in the project electricity system (optional).

Option I: only grid power plants are included in the calculation of the operating and build margin emission factor.

Step 3. Select a method to determine the operating margin (OM).

For the calculation of the OM emission factor, the **simple adjusted OM emission factor** calculation method is selected. Option A1 has been selected because specific fuel data for each plant is available, and thus, the project participants can use the net electricity generation of all the power plants considering the fuel types and volumes consumed in the project electricity system.

It has been validated that the most recent data available at the time of submission of the PDD to the DOE for validation (2006-2007-2008), has been selected for the project. The ex-ante option is used to calculate the emissions factor for this project activity.

Step 4. Calculate the operating margin emission factor according to the selected method.

It has been validated that the simple adjusted method is a variation of the simple OM, where the power plants/units (including imports) are separated in low-cost/must-run power sources (k) and other power sources (m). Option A1 is used because plant specific fuel consumption data is available from the national utility regulating agency. Under this option, for both low cost/must-run resources (k) and other units (m), the emissions factor of each power plant is calculated using the formula outlined in Step 4 below.

Power plants registered as CDM project activities have been included in the sample group used to calculate the operating margin if the criteria for including the power source apply.

The lambda factor has been calculated using the Excel file provided by the UNFCCC (EB 63 Annex 19), and the final $EF_{grid,OM-adj,y}$ is calculated as **0.6735 tCO_2e/MWh**. Calculations have been reproduced and AENOR

deems that they are in compliance with the methodology, the emission factor tool and relevant EB guidance. Data received from Ministry of Energy and Mineral Development were also checked to confirm that the calculated value of $EF_{grid,OM-adj,y}$ was correct.

The emission factors of the fuels adopted were obtained from the 2006 IPCC Guidelines for National Greenhouse Gas Inventories: Workbook. The lower values of the 95% confidence intervals are used for the emission factors of the fuels employed, which is a conservative approach in the emission factor calculation context.

Formulae and factors used to calculate the operating margin are properly described in the final PDD and they are considered correct and transparent.

Step 5. Calculate the build margin (BM) emission factor.

Option 1 of the applicable methodology has been chosen in terms of vintage of data, i.e., for the first (and fixed) crediting period the BM emission factor shall be calculated ex-ante based on the most recent available information, i.e., 2008 generation data.

For the proposed project activity the sample group of power units m used to calculate build margin is defined as the set of power units that started to supply electricity to the grid most recently and that comprise 20% of the annual electricity generation of the project electricity system ($SET_{>20\%}$), instead of the set of the five power units that started to supply electricity to the grid most recently ($SET_{5\text{-units}}$). This option comprises the larger annual generation of 456.8 GWh ($AEG_{SET>20\%}$).

$EF_{grid,BM,y}$ is calculated as **0.6611** tCO_2e/MWh in the final version of the PDD for the year 2008. The formula used to obtain emissions data is:

Build Margin = Net quantity of electricity generated and delivered to the grid (MWh) by power unit m * CO_2 emission factor (tCO_2/MWh) of power unit m / Net quantity of electricity generated and delivered to the grid (MWh) by power unit m

Calculations have been reproduced and AENOR deems that they are in compliance with the methodology and the emission factor tool.

Step 6. Calculate the combined margin (CM) emissions factor.

According to the "*Tool to calculate the emission factor for an electricity system*" the default weights: OM=0.5 for operating margin and BM=0.5 for build margin are adopted in the fixed crediting period of hydropower projects.

As per baseline methodology AMS.I.D and the "T*ool to calculate the emission factor for an electricity system*", the emission reduction ERy during the crediting period is the difference between baseline emissions, project emissions and leakage emissions.

These are:

1) Baseline emissions: baseline emissions (BEy in tCO_2) are equal to the baseline emission factor ($EF_{grid,CM,y}$, in tCO_2/MWh) times the net electricity supplied to the grid (EGy in MWh).

2) Project emission: according to applied methodology project emissions to be considered are emissions from water reservoirs, so $PEy=PE_{HP,y}$. As the resulting power density of the reservoirs is 686.93 W/m^2, i.e., much greater than 10 W/m^2, then PEy=0.

3) No leakage emissions have been considered for the proposed project activity according to the applicable methodology.

4) Emission reductions: $ERy= BEy – PEy – LEy = BEy= EF_{grid,CM,y} \times EGy$

With reference to the "*Tool to calculate the emission factor for an electricity system*", the Simple Adjusted OM emission factor ($EF_{grid,OM-Adj,y}$) is calculated as **0.6735** tCO_2e/MWh. Similarly, the build margin emission factor ($EF_{grid,BM,y}$) is calculated ex ante as **0.6611** tCO_2e/MWh.

Therefore the combined baseline emission factor is determined ex-ante.

$EF_{grid,CM,y}$ =**0. 6735** ×0.5 +**0. 6611** ×0.5=**0.6673** (tCO_2e/MWh)

The project participant has used two spreadsheets:

One Excel file including separate worksheets designed to automate the process for the calculation of the emission factor.

The description of the validation activities of each worksheet is detailed below:

- **Ishasha Lambda Calculations:** includes the lambda factor calculation in accordance with the table provided by the UNFCCC.
- **Ishasha EF calculations:** contains the OM and BM calculation and the emissions reductions.

The average annual emissions reductions to be achieved by the project are **19,621** tCO_2/year.

As stated in section 3.5, in order to validate the data and results included in the PDD, information regarding the Uganda National Grid was checked by AENOR. Spreadsheet calculations have been reproduced by the validation team and the same results have been obtained, achieving the transparency, accuracy and consistency principles required for the CDM projects.

Thus, AENOR validation team confirm:

- The baseline emission factor included in the final PDD has been determined with the ex-ante option according to the six steps stated in "*Tool to calculate the emission factor of an electricity system*",

version 02.2.1 /12/. The Operational Margin (OM) and the Build Margin (BM) have been calculated and combined to obtain the Baseline Emission Factor.

- The method selected to calculate the operating margin ($EF_{grid,OM}$) emission factor was the Simple Adjusted OM, called "Option 2" from "*Tool to calculate the emission factor of an electricity system*". The method has been chosen because specific data for each plant is available.
- For the calculation data from 2006 to 2008 has been used, as these data was the most recent data available of the time of submission of the PDD to the DOE for validation. This matter has been cross-checked with Data received from Ministry of Energy and Mineral Development.
- The procedure followed for the calculation of the operating margin emission factor ($EF_{grid,OM}$) was correctly described in the PDD 3, and was assessed by the validation team against the methodology and the tool. The chosen option was an *ex-ante* approach for the operating margin emission factor, so it will be fixed during the crediting period.
- The determination of the Build Margin emission factor ($EF_{grid,BM}$) has been calculated ex ante as the generation-weighted average emission factor of the most recently built power plants accounting for 20% of the system generation. The total generation of the power plants comprising the 20% of the system is 456.8 GWh compared with the 116.5 GWh of the 5 most recently units built up to year 2008. Thus, option b of the tool is chosen, as comprises the larger annual generation.
- In terms of vintage of data, the chosen option is 1, i.e., for the first (fixed) crediting period the build margin emission shall be fixed.
- As it is mentioned above, during the validation process the baseline calculation has been updated to be in compliance with the latest version (02.2.1) of the tool and version 17 of applicable methodology AMS.I.D. All steps of the tool and methodology have been addressed in the final version of the PDD, and assumptions and formulae applied in an appropriate way.
- The values of all plants in operation have been provided by the project participant, and they were checked by the audit team against the UETCL.
- Moreover, calculation spreadsheets along with the official information of UETCL have been provided to the AENOR validation team. Thus, AENOR has validated that data and assumptions considered in PDD and spreadsheet calculations are consistent with official data. Furthermore, AENOR has reproduced the calculation in a clear and transparent manner to obtain the same results.
- The formulae included in the spreadsheets were checked and they were in accordance with the methodology, using the same values and variables.

Therefore, AENOR confirms that all assumptions and data used by the PP are listed in the PDD, including their references and sources. Furthermore, all documentation used by project participant as the basis for

assumptions and source of data is correctly quoted and interpreted in the PDD and all values used in the PDD are considered reasonable in the context of the proposed CDM project activity.

3.6 Additionality

3.6.1 Starting date of the project activity and prior consideration of the CDM

In the final version of the PDD the starting date has been defined as 28 December 2008, when the project developer signed the Supply, Transport, Installation and Commissioning of the equipment for the HPP Ishasha /16/. The starting date was determined in compliance with latest version of the Glossary of CDM Terms /17/, since the identified starting date was the earliest date at which either the implementation or construction or real action of a project activity begins.

Regarding prior consideration of the CDM and taking into account the "*Guidance on the demonstration and assessment of prior consideration of the CDM*" /18/, as the project starting date is after 02 August 2008 and the PDD was not submitted for global stakeholder consultation before the project starting date, the PP needs to inform the host Party's designated national authority (DNA) and the UNFCCC secretariat in writing of the commencement of the project activity or of their intention to seek CDM status. That notification was made just to the DNA on 22 May 2009 since the requirement to notify both DNA and UNFCCC was approved by the EB on 17 July 2009 /19/. For these reasons, and in order to be conservative, the validation team asked for the demonstration of the importance of the CDM incentive to develop the project activity. The timeline of the project activity was checked by the validation team in order to analyse its consistency with the notification and it is following detailed:

Date	Project Milestone	Evidence
15/12/2005	EPUL Certificate of Incorporation	Copy of Certificate of Incorporation from Registrar of Companies /20/
13/12/2006	EPUL Certificate of Approval of Environmental Impact Assessment	Copy of Certificate from National Environmental Management Authority /21/
15/02/2007	EPUL Investment Licence from Uganda Investment Authority	Copy of Investment Licence from UIA /22/
16/07/2007	EPUL Licence for Generation and Sale of	Copy of Licence from Electricity Regulatory

	Electricity	Authority /23/
17/08/2007	EPUL Power Purchase Agreement with Uganda Electricity Transmission Company Limited.	Copy of signature page from PPA /24/
01/02/2008	Feasibility Report for Ishasha Small Hydropower Project	Copy of Feasibility Report
26/02/2008	EPUL Board Resolution recognising need for CDM to meet threshold returns and requesting appointment of International Resources Group (IRG) to assist in the validation and registration of the project	Copy of Eco Power (Pvt) Ltd. Board document /25/
13/03/2008	EPUL letter to International Resources Group (IRG) requesting assistance for CDM Validation	Copy of EPUL letter to IRG /26/
21/11/2008	EPUL Term Sheet for ERPA signed by CQC	Copy of Term Sheet (Confidential Information) /27/
28/12/2008 Start Date	**EPUL contract executed with TurboInstitut d.d. of Slovenia for supply, transport, installation and commissioning of the equipment for the Ishasha hydropower project.**	**Copy of Contract Agreement between EPUL and TurboInstitut No. 196/08 (Confidential Information). This contract was finally modified. /28/**
30/04/2009	EPUL ERPA executed with CQC	Copy of ERPA (Confidential Information) /29/
22/05/2009	EPUL Letter of Notification to DNA	Copy of Letter of Notification
06/07/2009	CQC signed contract signed with AENOR for validation of Ishasha Small Hydropower Project.	Copy of signed agreement /30/
24/07/2009	Initial LOA from Uganda DNA	Copy of executed LOA /31/
12/08/2009	CQC Request to Netherlands for LOA for	Copy of letter of request for LOA to

	Ishasha Small Hydropower Project	SenterNovem, Netherlands. /32/
26/10/2009	Initial LOA from Netherlands SenterNovem	Copy of LOA from SenterNovem /33/

3.6.2 Analysis of the additionality

The approach used in the project activity has been assessed initially through the document review followed by on-site discussions. Finally, the data, rationales, assumptions, justifications, and documentation provided have been verified using local knowledge as well as sectoral and financial expertise.

As the project activity applies the small scale methodology, the additionality has been demonstrated using the guidance given in Attachment A to Appendix B' of the "*Simplified modalities and procedures for small-scale CDM project activities*" /34/.

According to the "*Guidelines for objective demonstration and assessment of Barriers (Version* 01.0)" /35/, para. 10. Guideline 7, it is sufficient to transparently describe the relevant barriers. Uganda is one of the poorest countries in the world and remains a Least Developed Country (LDC) in accordance with information provided by UN Office of the High Representative for the LDC, Landlocked Developing Countries and Small Island Developing States webpage (http://www.unohrlls.org/en/ldc/25/). Therefore, since the project activity is developed in an LDC, the validation team deems sufficient and transparently described the relevant barrier as follows:

- Barriers to access to financial resources

Availability and access to financial services is one of the major constraints to investment. The validation team during the on-site visit could check through the interviews the lack of sufficient financial services infrastructure required to deliver appropriate or effective financial services across the country. In Uganda, borrowing takes place through informal networks with limited ties to formal credit or finance risk. Uganda ranked as number 113 out of 183 countries on "getting credit" in 2010. This was evidenced from the World Bank report /18/: http://www.doingbusiness.org/rankings. /36/

The lack of financial markets and availability of financial resources is a strong barrier to private participation in long-term investments such as hydropower plants, and Uganda still relies largely on foreign aid rather than private-sector investors, as evidenced by a recent report from www.allafrica.com. Therefore, a private investor, such as the project participant, needs to raise capital from outside Uganda, and has to assure its creditors that all investment risks have been minimised.

Initially, the project participant approached the International Finance Cooperation (IFC) and the Netherlands Development Finance Company (FMO) for debt financing totalling $8 million. Upon subsequent review of the project's financial risks, the IFC and FMO declined financing for the project as evidenced by both Mandate Letters /(37/ and /38/). After being refused by a number of other potential sources for debt financing, the project participant subsequently approached a consortium of commercial banks in Sri Lanka. This consortium of Sri Lankan commercial banks was provided the project feasibility studies, which clearly indicated the need for CDM revenues to support the financial viability of the project. The consortium of Sri Lankan banks ultimately agreed, on the basis of the financial analysis in the feasibility report, to provide debt to the project at an interest rate of LIBOR plus 4% with a floor interest rate of 8% . This has been evidenced with the Syndicated Financial Agreement signed between EPUL and Commercial Bank of Ceylon PLC /39/.

AENOR validation team has assessed the available evidence and it has undertaken interviews with relevant individuals (including government officials, DNA, etc) to determine whether the Barrier to access to financial resources mentioned in the PDD exists. AENOR validation team has been able to ensure that existence of the barrier is substantiated by independent sources of data such as, surveys of local conditions and national or international statistics. AENOR validation team has checked that the existence of the barrier is not only substantiated by the opinions of the project participants, since Public study and the evidence from the banks corroborate the assumptions made. AENOR validation team considers, on the basis of its sectoral or local expertise that the barrier is real and it is supported by sufficient evidence:

- Presentation titled "Investment Opportunities in the Power Sector in Uganda", given by Godfrey R. Turyahikayo, the Executive Director of the Rural Electrification Agency of Uganda on 02 October 2008 (provided to AENOR as a supporting document during desk review) /40/
- "The Renewable Energy Policy for Uganda" published by Government of Uganda in November 2007 /41/
- "Uganda – Energy for Rural Transformation Project: Project Appraisal Document" published by the World Bank's Africa Regional Office in March 2001 /42/

AENOR validation team has applied its local and sectoral expertise to judge whether the barrier has been transparently described. According to this analysis AENOR validation team deems that a potential alternative scenario, defined by the implementation of the less costly, better known, and more available ILB is not prevented by this barrier.

The barrier identified above can be overcome by registering the project activity as CDM. Revenues from the sale of emissions reductions will help EPUL to recover a portion of the financial resources for the operational costs resulting from the construction of the hydroelectric power plant. Based on the aforementioned approach, AENOR confirms that the proposed project activity is additional.

3.7 Monitoring Plan

The project uses the monitoring methodology AMS.I.D. Grid Connected Renewable Electricity Generation version 17*)* to monitor the emissions reduction from grid-connected renewable electricity generation.

Applicability of this methodology is justified in the final version of the PDD as it involves grid-connected renewable power generation using hydropower energy.

The combined margin emission factor is determined ex-ante based on the most recent information available. As stated in the "*Tool to calculate the emission factor for an electricity system*", in the methodology AMS.I.D and in the PDD *(*version 08*)*, the main monitoring parameters are as follows*:*

1. **EG_y***:* Quantity of net electricity generation supplied by the project plant to the grid in year y*:* This data shall be measured with electricity meters. All measurements should be conducted with calibrated measurement equipment according to relevant industry standards.

Regarding the project emissions, they are calculated and monitored in accordance with the methodology ACM0002*:*

2. **Cap_{PJ}***:* Installed capacity of the hydropower plant after the implementation of the project activity. monitored annually.
3. **A_{PJ}***:* Area of the reservoir measured in the surface of the water, after the implementation of the project activity, when the reservoir is full*:* This data is monitored annually.

Leakage emissions are not produced, so the Monitoring Plan is not applicable to this issue.

Also, training, archiving, measuring and calculation procedures, equipment details, calibration frequency and maintenance needs are clearly mentioned. Therefore, in the opinion of AENOR's validation team the PPs will be able to implement the Monitoring Plan.

3.7.1 Compliance of the monitoring plan with the approved methodology

As stated above, the **"Ishasha 6.6 MW Small Hydropower Project"** will continuously measure the net electricity generated by the project plant per year via electricity meters calibrated in accordance with relevant industry standards. These measurement results will be cross-checked with sales reports from UETCL and it is considered in accordance with the methodology AMS.I.D.

In addition, all necessary parameters required by the selected approved methodology ACM0002 *(*used for the project emissions*)* are contained in the Monitoring Plan of the latest PDD, and they are clearly described.

Therefore, AENOR confirms that the parameters required by the selected approved methodologies and tool have been stated in the Monitoring Plan of the PDD, that the monitoring plan contains all necessary

parameters, which are clearly described, and that the means of monitoring described in the plan complies with the methodology's requirements.

3.7.2 Implementation of the Monitoring Plan

The project participant has developed a complete Monitoring Plan in order to compile the guidelines for the emission reduction calculation detailed in the applied methodology. In accordance with this plan, the responsibilities are defined, and the people in charge of the emission reduction calculations will gather all the parameters and indicators used to calculate the emissions reductions. The project Manager and the Operational Manager will monitor electricity generation both as dispatched from the EPUL generators and recorded at the redundant dual check meters of the electricity purchaser, UETCL. A double check is built in to the system as an always in use function. Electricity generation is the main input variable for the calculation of emissions reductions.

After the review of evidence provided by the PP, the interview and communications with PP, AENOR confirms that monitoring arrangements described in the monitoring plan are feasible within the project design and that the means considered for the implementation, including data management, quality and assurance control procedures, are sufficient to ensure that the emission reductions achieved resulting from the proposed CDM project activity can be reported ex post and verified.

Therefore, in opinion of the AENOR validation team the PP will be able to implement the Monitoring Plan.

3.8 Comments by Local Stakeholders

As a part of the Environmental and Social Impact Assessment study, a public consultation process was carried out in April 2007 involving all of the relevant stakeholders and in particular the indirectly and directly involved population in the Kanungu District in southwest Uganda. Additional stakeholder meetings were held on 7 June 2008 and 23 August 2008. Government meetings were usually carried out on a one on one basis while community meetings were public affairs. In addition the ERA while reviewing an electricity generation licence has specific procedures for public consultations and hearings that have environmental and social review aspects which were considered in planning the public consultation process.

Therefore, local stakeholders were invited by the PP, through letters and notes, prior to the publication of the PDD on the UNFCCC website. The PP provided the DOE team with the evidence /43/ from the different meetings conducted during the process and the Resettlement Action Plan. AENOR checked all the related documents and may confirm that the consultation was appropriate. A summary of the comments from the local stakeholders and the agreements achieved between the local communities and the PP has been provided in the PDD.

Furthermore, during the on-site visit, the validation team interviewed representatives of the Ministry of Water and Environment, NEMA, Ministry of Energy and Mineral Development and representatives of the villages affected in order to confirm that the aforementioned meetings took place.

The social benefits were checked through the meeting with the Uganda DNA and the people of the local community of Kanyantorogo. No negative feedback was received and feedback was checked during the on-site interview with the local community. Main conclusions of the meetings and opinions collected are included in the PDD, section E.2. A complete summary of the comments received during the process is included in the PDD. But also, the information in section E.3 of the PDD gives a summary of how the comments received from local stakeholders were considered.

AENOR states that the local stakeholder consultation was adequate and accurate.

3.9 Environmental Impacts

According to Uganda National Regulation, full Environmental and Social Impact Assessment (ESIA) studies according to World Bank standards are required and have been conducted for the project activity. The report prepared by Ema Consult Limited Plot 244 /44/ was made available for the validation. The project has received the approval for the ESIA and the project /45/ from the National Environmental Management Authority, NEMA.

The negative environmental impacts and the positive social impacts as detailed in the ESIA Report are included in the PDD. Therefore, AENOR confirms that environmental information in PDD is consistent with the resolution of NEMA and that the PP has followed a correct analysis of environmental impacts in accordance with procedures as required by the host party.

The final version of the PDD is in line with the environmental impact study and NEMA approval. These requirements are described in the PDD (section D.2) and were checked by the audit team during the on-site visit and the interview with NEMA and DNA.

In addition, AENOR confirms that the host party's DNA confirmed the project's contribution to the sustainable development of Uganda during the on-site visit and through the approval letter.

4 COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

According to Decision 3/CMP.1, the validator shall make the PDD publicly available and receive comments on the validation requirements from parties, stakeholders and UNFCCC-accredited NGOs , within 30 days,, and must also make those comments publicly available.

AENOR published the first PDD *(version 1)* on the CDM website on 15 August 2009 and invited comments by parties, stakeholders and non-governmental organisations. No comments were received during this period.

5 VALIDATION OPINION

AENOR has performed the validation of the **"Ishasha 6.6 MW Small Hydropower Project"** in Uganda. The validation process was performed on the basis of all UNFCCC issues and criteria for CDM projects, the host country criteria and also on the criteria given to provide for consistent project operations, monitoring and reporting. The conclusions of this report show that the project, as described in the project documentation, is in line with all criteria applicable for the validation.

The validation consisted of the following three phases: i) a desk review of the project design, the baseline and the monitoring plans; ii) follow-up interviews with project stakeholders; iii) the resolution of outstanding issues and the issuance of the final validation report and opinion. In the course of the validation process, 13 corrective actions and 14 clarifications were raised; all have been successfully closed.

The project participant used the guidance given in Attachment A to Appendix B' of the "*Simplified modalities and procedures for small-scale CDM project activities*" and the "*Guidelines for objective demonstration and assessment of Barriers*" to demonstrate the additionality of the project based on the demonstration that there is one barrier identified that can be overcome by registering the project activity as CDM. The latest "Too*l to calculate the emission factor for an electricity system*" (version 02.2.1) was also applied to determine the emission factor of the Uganda National Grid, and the baseline and monitoring methodology AMS.I.D (version 17) has been used to calculate the emissions reductions.

The review of the project design documentation and additional documents related to baseline and monitoring methodology, and the subsequent background investigation, follow-up interviews and review of comments by parties and stakeholders have provided AENOR with sufficient evidence to validate the fulfilment of the stated criteria.

The conclusions can be summarised in detail as follows:

- The project is in line with all relevant host country criteria of Uganda DNA, with the letter of approval from The Netherlands and with all relevant UNFCCC requirements for CDM. The LoA from Uganda is dated 22 June 2010 and The Netherlands LoA is dated 16 October 2009.

- The project additionality is sufficiently justified in the PDD.

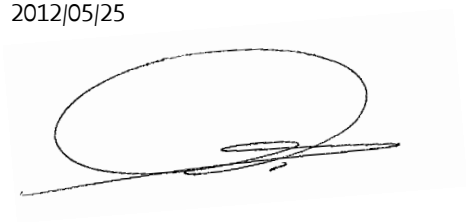
- The monitoring plan is transparent and adequate.

- The calculation of project emission reductions has been carried out in a transparent and conservative manner, so that the annual average calculated emission reductions of 19,621 tCO_2e are very likely to be achieved within the fixed crediting period *(* 10 years*)*.

In the validation team opinion, the project correctly applies and meets the relevant UNFCCC requirements for the CDM and the relevant host country criteria. The validation is based on the information made available to us and the engagement conditions detailed in this report.

The validation has been performed using a risk-based approach, as described above. The only purpose of this report is its use during the registration process as part of the CDM project cycle. Hence, AENOR cannot be held liable by any party for decisions made or not made based on the validation opinion, which would go beyond the purpose.

2012/05/25



Luis Robles Olmos

Climate Change Unit manager

2012/05/25

Pablo Taboada Utrera

Validation Team Leader

6 CORRECTIVE ACTION REQUESTS, CLARIFICATIONS AND FORWARD ACTION REQUESTS

PROJECT ACTIVITY	**Ishasha 6.6 MW Small Hydropower Project**		
FINDING	**CAR 1**		
Classification	**CAR** ☒	**CL** ☐	**FAR** ☐
Description of finding *Describe the finding in unambiguous style; address the context (e.g., section).*	Letters of Approval from the Uganda and The Netherlands Designated National Authorities have to be obtained.		
PP RESPONSE #1	*This section shall be filled by the PP.*		
It shall, address the corrective action taken in details.	A new host country LoA has been requested. Upon receipt of the letter, it will be provided to AENOR. Annex I LoA from the Netherlands (Ref #01) has been received and provided to AENOR.		
It shall provide and indentify the evidence proposed (if applicable).	LOA of The Netherlands. LOA of Uganda.		
DOE Assessment #1 *The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	LoA from Uganda is OK. LoA from the Netherlands has not included exactly the same name of the project than in the PDD. This CAR is still open.		
PP RESPONSE #2	*This section shall be filled by the PP.*		
Corrective action	A new LOA has been obtained from the Netherlands with the same name of the project that is in the PDD. Please see New Ref #01.		
Evidence proposed			
DOE Assessment #2	The two LOAs have been provided and they are considered in accordance with the requirements. The title of the project is precise, and coincides with the title included in the PDD, thus, CAR 1 is		

	resolved.	
Conclusion *Tick the appropriate checkbox*	**CAR/CL CLOSED** ☒	To be checked during the periodic verification ☐

PROJECT ACTIVITY	**Ishasha 6.6 MW Small Hydropower Project**		
FINDING	**CAR 2**		
Classification	**CAR** ☒	**CL** ☐	**FAR** ☐
Description of finding *Describe the finding in unambiguous style; address the context (e.g., section).*	The format of the PDD used (Version 03.1) is not exactly in accordance with the last format published on the UNFCCC web page.		
PP RESPONSE #1	*This section shall be filled by the PP.*		
It shall address the corrective action taken in details .	Reference to Annex 5 has been removed, and the PDD includes the number of pages. Previously PDD noted that a letter issued by the Kanungu District to EPUL relating to payment of compensation dated 22 December 2008 (Ref #02) stating that compensation has been paid in full was included in Annex 5. Instead, this letter has been provided to AENOR.		
It shall provide and indentify the evidence proposed (if applicable).			
DOE Assessment #1 *The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	Since the last PDD has been modified and the last form has been used, this CAR 2 is resolved.		
Conclusion *Tick the appropriate checkbox*	**CAR/CL CLOSED** ☒	To be checked during the periodic verification ☐	

PROJECT ACTIVITY	**Ishasha 6.6 MW Small Hydropower Project**		
FINDING	**CAR 3**		
Classification	**CAR** ☒	**CL** ☐	**FAR** ☐
Description of finding *Describe the finding in unambiguous style; address the context (e.g., section).*	The start date of the crediting period shall be stated as a specific date, and in accordance with the real situation of the project activity.		
PP RESPONSE #1	*This section shall be filled by the PP.*		
It shall address the corrective action taken in details .	The project is expected to be commissioned in the first quarter of 2011. It is hoped that registration of the project will be completed by 30 June 2011. Thus, the start date of crediting period is set for 01 July 2011		
It shall provide and indentify the evidence proposed (if applicable).			
DOE Assessment #1 *The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	This CAR is still open since 01 July 2011 is not a realistic date to be registered as CDM project activity because the resolution of CARs has been extended. This date shall be updated to a forecasted date of registration. CAR 3 is open..		
PP RESPONSE #2	*This section shall be filled by the PP.*		
Corrective action	The starting date has been updated, or the date of registration, whichever is later.		
Evidence proposed			
DOE Assessment #2	The final version of the PDD has modified the starting date of the crediting period. is an appropriate forecasted date, or the date of registration, whichever is later, thus, CAR is closed.		
Corrective action			

Conclusion *Tick the appropriate checkbox*	**CAR/CL CLOSED** ☒	To be checked during the periodic verification ☐

PROJECT ACTIVITY	**Ishasha 6.6 MW Small Hydropower Project**		
FINDING	**CAR 4**		
Classification	**CAR** ☒	**CL** ☐	**FAR** ☐
Description of finding *Describe the finding in unambiguous style; address the context (e.g., section).*	The last version of the "*Tool to calculate the emission factor of the electric system*" shall be used for the emission factor of the grid calculation. The justification of the use of the OM method shall be also clarified.		
PP RESPONSE #1	*This section shall be filled by the PP.*		
It shall address the corrective action taken in details .	New version of the tool has been used to calculate the emission factor.		
It shall provide and indentify the evidence proposed (if applicable).			
DOE Assessment #1 *The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	Version 02 of the tool is not correctly followed in the PDD (i.e., the calculation of the Simple Adjusted OM). Explanations of the different options chosen are not included.		
PP RESPONSE #2	*This section shall be filled by the PP.*		
Corrective action	The PDD has been revised to correctly follow the last version of the tool.		
Evidence proposed			
DOE Assessment #2	The PDD has correctly included option b) for the calculation of the Build Margin: nevertheless, the chosen option ex-ante is not mentioned. Furthermore, it has been detected that the description of the methodological choices is not exactly as it is in the tool: • Page 13: The description of the calculation of the emission factor (paragraph 3) • Page 13: the description of the option A and B (paragraph		

	14*)*. • Page 13*:* description of the simple adjusted method *(*paragraph 17*)*. • The option chosen is not mentioned. Thus, this CAR is still open.	
PP RESPONSE #3	A final PDD has been edited using the version 02.2.1 of the "Tool to calculate the emission factor of an electricity system". All the options chosen have been justified.	
Corrective action		
DOE Assessment #3	The corrections have been made in the final version of the PDD, all the options are clearly justified, and the default values chosen are correctly applied. Thus, CAR 4 is closed.	
Conclusion *Tick the appropriate checkbox*	**CAR/CL CLOSED** ☒	To be checked during the periodic verification ☐

PROJECT ACTIVITY	**Ishasha 6.6 MW Small Hydropower Project**		
FINDING	**CAR 5**		
Classification	**CAR** ☒	**CL** ☐	**FAR** ☐
Description of finding *Describe the finding in unambiguous style; address the context (e.g., section).*	Detailed information of the power generation and type of fuel of all power plants of the Uganda grid shall be included in the PDD and provided to the validation team.		
PP RESPONSE #1	*This section shall be filled by the PP.*		
It shall address the corrective action taken in details .	Detailed description of power generation and fuel type of all power plants of the Uganda grid, using the data received from the Ministry of Energy and Mineral Development (Ref #03), is provided in Table 5 in Section B.6.3.		
It shall provide and indentify the evidence proposed (if applicable).			
DOE Assessment #1 *The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	A detailed description of disaggregated annual power generation from hydropower stations has to be included in PDD. Furthermore, it has been detected that the value chosen for the Net Calorific Value of the residual fuel oil is not in accordance with the IPCC 2006 Standard. Furthemore, the emission factors of the fuels are neither in accordance with the lower value IPCC 2006 Standard. And, there is an inconsistency regarding this value between page 23 and Annex 3. Thus, this CAR is still open.		
PP RESPONSE #2	*This section shall be filled by the PP.*		

Corrective action	The PDD has been revised to disaggregate the annual power generation from hydropower stations and to correct the mistakes detected by the DOE.	
Evidence proposed		
DOE Assessment #2	The PDD has been revised to address the required issues, and the data have been provided. The final version of the PDD has corrected the issues required. The emission factors and the NCV values are correctly used, thus, CAR 5 is closed.	
Conclusion *Tick the appropriate checkbox*	**CAR/CL CLOSED** ☒	To be checked during the periodic verification ☐

PROJECT ACTIVITY	**Ishasha 6.6 MW Small Hydropower Project**		
FINDING	**CAR 6**		
Classification	**CAR** ☒	**CL** ☐	**FAR** ☐
Description of finding *Describe the finding in unambiguous style; address the context (e.g., section).*	The input data used for the calculation of lambda for the emission factor of the grid shall be provided to the validation team. The supply/demand information from the period included in the OM calculation shall be also provided.		
PP RESPONSE #1	*This section shall be filled by the PP.*		
It shall address the corrective action taken in details	Data received from Ministry of Energy and Mineral Development (Ref #03), which was used to calculate the factor lambda of the emission factor, has been provided.		
It shall provide and indentify the evidence proposed (if applicable).	Power supply and demand information (Ref #03) in an Excel spreadsheet has been also provided to AENOR.		
DOE Assessment #1 *The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	The raw data for the calculation of the load curve have to be included in the spreadsheet provided. The calculation of lambda factor has to be detailed more in depth (i.e., data to plot the horizontal line included in footnote 15 don't match with the spreadsheet). Furthermore, the lambda calculation is not transparently included in the spreadsheet since the cells do not include any formulae. The methodology to calculate the lambda factor is not in accordance with the referred tool. This CAR is still open		
PP RESPONSE #2	*This section shall be filled by the PP.*		
Corrective action	The PDD has been revised to address this CAR.		
Evidence proposed			
DOE Assessment #2	The input data have been provided and the PDD has been modified accordingly. A new version of the spreadsheets has been provided, and the table published by the UNFCCC has been used for the lambda calculation. Therefore, this CAR 6 is closed.		
Conclusion	**CAR/CL CLOSED**	To be checked during the	☐

Tick the appropriate checkbox	☒	periodic verification

PROJECT ACTIVITY	**Ishasha 6.6 MW Small Hydropower Project**		
FINDING	**CAR 7**		
Classification	**CAR** ☒	**CL** ☐	**FAR** ☐
Description of finding *Describe the finding in unambiguous style; address the context (e.g., section).*	The complete spreadsheets shall be provided to the validation team, and the cells shall be stated in open format.		
PP RESPONSE #1	*This section shall be filled by the PP.*		
It shall address the corrective action taken in details .	Revised Excel spreadsheets showing actual formulae used to calculate numbers referred in the PDD have been provided to AENOR (Ref #04).		
It shall provide and indentify the evidence proposed (if applicable).			
DOE Assessment #1 *The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	This CAR is closed since the spreadsheets have been provided. The resolution issues are detailed in CAR 6.		
Conclusion *Tick the appropriate checkbox*	**CAR/CL CLOSED** ☒	To be checked during the periodic verification ☐	

PROJECT ACTIVITY	**Ishasha 6.6 MW Small Hydropower Project**		
FINDING	**CAR 8**		
Classification	**CAR** ☒	**CL** ☐	**FAR** ☐
Description of finding *Describe the finding in unambiguous style; address the context (e.g., section).*	The inconsistency regarding the period used to calculate the Operating Margin and the Build Margin Emission Factor detected in Section B.6.1 shall be clarified.		
PP RESPONSE #1	*This section shall be filled by the PP.*		
It shall address the corrective action taken in details .	The period used to calculate the OM and the BM is the three year period between 2006 and 2008. The PDD now consistently refers to this period.		
It shall provide and indentify the evidence proposed (if applicable).			
DOE Assessment #1 *The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	The period used to calculate the OM and the BM is the three year period between 2006 and 2008. The last PDD is consistent referring to this period. Thus, this CAR is resolved		
Conclusion *Tick the appropriate checkbox*	**CAR/CL CLOSED** ☒	To be checked during the periodic verification ☐	

PROJECT ACTIVITY	**Ishasha 6.6 MW Small Hydropower Project**		
FINDING	**CAR 9**		
Classification	**CAR** ☒	**CL** ☐	**FAR** ☐
Description of finding *Describe the finding in unambiguous style; address the context (e.g., section).*	The start date of the project shall be stated in accordance with the last version of the *Glossary of terms*. The operational lifetime shall be also clearly defined.		
PP RESPONSE #1	*This section shall be filled by the PP.*		
It shall address the corrective action taken in details	The start date of the project activity has been stated as the date of the signing of the Agreement for the Supply, Transport, Installation and Commissioning of the equipment for the HPP Ishasha, 28 December 2008..		
It shall provide and indentify the evidence proposed (if applicable).			
DOE Assessment #1 *The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	The start date of the project activity has been stated as the date of the signing of the Agreement for the Supply, Transport, Installation and Commissioning of the equipment for the HPP Ishasha, 28 December 2008. The evidence was provided to the validation team and it is considered that the starting date is reliable and in accordance with the *Glossary of terms*.		
Conclusion *Tick the appropriate checkbox*	**CAR/CL CLOSED** ☒	To be checked during the periodic verification ☐	

PROJECT ACTIVITY	**Ishasha 6.6 MW Small Hydropower Project**		
FINDING	**CAR 10**		
Classification	**CAR** ☒	**CL** ☐	**FAR** ☐
Description of finding *Describe the finding in unambiguous style; address the context (e.g., section).*	The barrier analysis shall be reinforced in accordance with "*Guidelines for objective demonstration and assessment of Barriers*" using official documentation and the evidence shall be submitted to AENOR.		
PP RESPONSE #1	*This section shall be filled by the PP.*		
It shall address the corrective action taken in details	Documents used in the barrier analysis and provided to AENOR are as follows: • Presentation titled "*Investment Opportunities in the Power Sector in Uganda*", given by Godfrey R. Turyahikayo, the Executive Director of the Rural Electrification Agency of Uganda on October 2, 2008 (provided to AENOR as a supporting document during desk review). • "*The Renewable Energy Policy for Uganda*" published by Government of Uganda in November 2007 (Ref #05) • "*Uganda – Energy for Rural Transformation Project: Project Appraisal Document*" published by the World Bank's Africa Regional Office in March 2001 (Ref #06)		
It shall provide and indentify the evidence proposed (if applicable).			
DOE Assessment #1 *The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	Investment Barriers: Main financial data and parameters have to be included in the PDD. A valid financial benchmark has to be evidenced and derived from those appearing in the "Tool for the demonstration and assessment of additionality". Input values used in all investment analysis should be valid and applicable at the time of the investment decision taken by the project participant. PDD shall clearly state the time when investment decision took place. Evidence about the appropriateness of the input values used (techno-economic parameters and assumptions) in the investment analysis shall be provided i.e. tariff, power supply, electricity generation,		

	investment costs, taxes, operational lifetime, depreciation, cost escalation, salvage value, etc... Spreadsheets used for the IRR calculations and sensitivity analysis contains a circular reference. In addition, sensibility analysis shall include an individual analysis of main parameters representing more than 20% of either total costs or total revenues. Current analysis only includes energy output, project costs and interest rate. Access to finance Barriers: It would be advisable to provide to the DOE as stated in the PDD, the evidence which shows how either the loan approval or the lenders takes the CDM revenues into account. Barriers due to prevailing practise: Source of data of Table 3 has to be provided to the DOE. Ishasha cannot be consider "first of its kind" since there are already a small scale registered project as stated in the PDD and in addition there are other small-scale hydros (as stated in table 3). References and sentences regarding this issue should be clarified. Oral communications are not enough proof of evidence since they cannot be checked/validated by the DOE, therefore they are not valid references and shall be either deleted or replaced. Institutional barriers: Evidence/sources about armed conflict and lack of enforcement of the rule of law has to be provided and cited in the PDD. Hydrological barriers: Evidence/sources about hydrological conditions have to be provided and cited in the PDD. Current explanation is generic and does not refer to Ishasha River therefore additional data and evidence has to be included in order to strength the barrier, otherwise it shall be removed. This CAR is still open.
PP RESPONSE #2	*This section shall be completed by the PP.*
Corrective action	The "*barrier analysis*" for the project has been revised to demonstrate that the "*access-to-finance barrier*" is the principal barrier to the development of the project. Due to the high risks associated with the project, the lack of similar projects previously undertaken in Uganda, the absence of project financing options within Uganda and the rejection of project financing by the IFC and FMO, the project developer had to seek sources of financing from outside Uganda and had to rely on the demonstrating that the expected project revenues including revenues from CERs were sufficient to cover all operational expenses and service debt while providing an adequate risk adjusted return on investment. Without this assurance, financing for the project would not have been secured. Please see mandate and letters from IFC and FMO in New Ref #03. The section on "*Investment barrier*" has been deleted. The section on "*Barriers due to prevailing practise*" has been edited to resolve the issues raised by the validator. The section of "*Institutional barriers*" has been edited and footnotes added as requested by the Validator.

	The section on "Hydrological barriers" has been deleted.	
Evidence proposed	• Mandate and letters from IFC and FMO. • Loan approval documentation.	
DOE Assessment #2	The consideration of the project as "*first of its kind*" shall be clarified since: • There are hydropower projects in commercial operation in the same country (same geographical area. • There is another hydropower project activity registered as CDM in Uganda. Therefore, this CAR is still pending.	
PP RESPONSE #3	Since the project activity is small scale, just one barrier is needed, thus, the consideration of the first of its kind has been removed.	
Corrective action		
Evidence proposed		
DOE Assessment #3	The removal is considered appropriate and in accordance with the guidelines of the UNFCCC. The justification is transparently included in the PDD and the evidence has been provided, thus, CAR is closed.	
Conclusion *Tick the appropriate checkbox*	**CAR/CL CLOSED** ☒	To be checked during the periodic verification ☐

PROJECT ACTIVITY	**Ishasha 6.6 MW Small Hydropower Project**		
FINDING	**CAR 11**		
Classification	**CAR** ☒	**CL** ☐	**FAR** ☐
Description of finding *Describe the finding in unambiguous style; address the context (e.g., section).*	The annex 4 of the PDD including the monitoring plan information is incomplete.		
PP RESPONSE #1	*This section shall be filled by the PP.*		
It shall address the corrective action taken in details	Annex 4: Monitoring Plan has been revised to include more information.		
It shall provide and indentify the evidence proposed (if applicable).			
DOE Assessment #1 *The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	In the last PDD, the Annex 4 has been revised and reinforced to include precise information of the monitoring activities. This Annex enable a better understanding of the monitoring activities. Therefore, CAR 11 is resolved.		
Conclusion *Tick the appropriate checkbox*	**CAR/CL CLOSED** ☒	To be checked during the periodic verification ☐	

PROJECT ACTIVITY	**Ishasha 6.6 MW Small Hydropower Project**		
FINDING	**CAR 12**		
Classification	**CAR** ☒	**CL** ☐	**FAR** ☐
Description of finding *Describe the finding in unambiguous style; address the context (e.g., section).*	The indication of a date when the baseline and monitoring was determined shall be included in the PDD and this section shall be edited in accordance with "*Guidelines for Completing the Project Design Document (CDM-PDD) and the Proposed New Baseline and Monitoring Methodologies (CDM-NM)*".		
PP RESPONSE #1	*This section shall be filled by the PP.*		
It shall address the corrective action taken in details	The PDD has been modified.		
It shall provide and indentify the evidence proposed (if applicable).			
DOE Assessment #1 *The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	The last version of the PDD includes the mentioned information. Thus, CAR 12 is resolved		
Conclusion *Tick the appropriate checkbox*	**CAR/CL CLOSED** ☒	To be checked during the periodic verification ☐	

PROJECT ACTIVITY	**Ishasha 6.6 MW Small Hydropower Project**		
FINDING	**CAR 13**		
Classification	**CAR** ☒	**CL** ☐	**FAR** ☐
Description of finding *Describe the finding in unambiguous style; address the context (e.g., section).*	The approved baseline and monitoring methodology AMS I.D. has to be updated to the last one approved by the EB since the version 13 has expired.		
PP RESPONSE #1	*This section shall be filled by the PP.*		
It shall address the corrective action taken in details	The baseline monitoring methodology has been updated to version 17 in the PDD		
It shall provide and indentify the evidence proposed (if applicable).			
DOE Assessment #1 *The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	Since the version of the methodology is the last one, this CAR 13 is resolved.		
Conclusion *Tick the appropriate checkbox*	**CAR/CL CLOSED** ☒	To be checked during the periodic verification ☐	

PROJECT ACTIVITY	**Ishasha 6.6 MW Small Hydropower Project**		
FINDING	**CL 1**		
Classification	**CAR** ☐	**CL** ☒	**FAR** ☐
Description of finding *Describe the finding in unambiguous style; address the context (e.g., section).*	Technical documentation of the equipment to be installed *(*turbines, electricity meters, diesel generator, etc.*)* shall be provided to the validation team.		
PP RESPONSE #1	*This section shall be filled by the PP.*		
It shall address the corrective action taken in details *It shall provide and indentify the evidence proposed (if applicable).*	Following information was provided to AENOR*:* • The Feasibility Report. • Electromechanical specifications. • Contract for the Supply of the turbines.		
DOE Assessment #1 *The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (*#2, #3, *etc.) shall be added.*	The Contract Agreement signed with Turboinstitut for Supply, Transport, Installation and Commissioning of the equipment for HPP Ishasha, the Certificate for Approval of Environmental Impact Assessment granted by NEMA and the Licence for Generation and Sale of Electricity issued by the Electricity Regulatory Authority *(*ERA*)* have been provided, and the description included in the PDD is considered in accordance with the cited documentation.		
Conclusion *Tick the appropriate checkbox*	**CAR/CL CLOSED** ☒	To be checked during the periodic verification ☐	

PROJECT ACTIVITY	**Ishasha 6.6 MW Small Hydropower Project**		
FINDING	**CL 2**		
Classification	**CAR** ☐	**CL** ☒	**FAR** ☐
Description of finding *Describe the finding in unambiguous style; address the context (e.g., section).*	There has been detected an inconsistency regarding the length of the transmission line between the power plant and the switch station.		
PP RESPONSE #1	*This section shall be filled by the PP.*		
It shall address the corrective action taken in details .	The inconsistency corresponds to a mistake in the edition of the PDD.		
It shall provide and indentify the evidence proposed (if applicable).	• Feasibility Report. • Environmental and Social Impact Assessment Study.		
DOE Assessment #1 *The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	Since the mistake has been corrected in the last version of the document and stated in accordance with the technical documentation provided (Feasibility Report and ESIA) it is considered that the information of the documentation provided is consistent with the description included in the final version of the PDD.		
Conclusion *Tick the appropriate checkbox*	**CAR/CL CLOSED** ☒	To be checked during the periodic verification ☐	

PROJECT ACTIVITY	**Ishasha 6.6 MW Small Hydropower Project**		
FINDING	**CL 3**		
Classification	**CAR** ☐	**CL** ☒	**FAR** ☐
Description of finding *Describe the finding in unambiguous style; address the context (e.g., section).*	All the licences, contracts and ownership shall be provided to the validation team, among others: • The permit to develop the Power Plant granted by the Electricity Regulator Authority (ERA). • Concession for the project activity by the Ministry of Energy.		
PP RESPONSE #1	*This section shall be filled by the PP.*		
It shall address the corrective action taken in details	Permit from ERA was provided to AENOR. The Electricity Regulatory Authority (ERA) of Uganda defines and implements the electricity project development process in Uganda with formal applications for licences/permits to develop projects from a published list of potential project sites. Hydroelectric project less than 20 MW is one of the categories covered by the ERA. EPUL simply followed the process dictated by the ERA for private small hydroelectric project developers.		
It shall provide and indentify the evidence proposed (if applicable).	Permit from ERA.		
DOE Assessment #1 *The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	Since the documentation has been provided, and the information included on it is consistent with data detailed in the PDD, CL 3 is clarified.		
Conclusion *Tick the appropriate checkbox*	**CAR/CL CLOSED** ☒	To be checked during the periodic verification ☐	

PROJECT ACTIVITY	**Ishasha 6.6 MW Small Hydropower Project**		
FINDING	**CL 4**		
Classification	**CAR** ☐	**CL** ☒	**FAR** ☐
Description of finding *Describe the finding in unambiguous style; address the context (e.g., section).*	Provisions regarding the training and maintenance are not clearly defined in the PDD.		
PP RESPONSE #1	*This section shall be filled by the PP.*		
It shall address the corrective action taken in details .	The training for operating the equipment will be given by the equipment supplier after commissioning. The plant operators will be also present during the commissioning process to become familiar with the equipment. As far as civil works are concerned, there is minimal maintenance necessary and the manager will be someone seconded from Eco Power Sri Lanka, a company associated with EPUL that has wide experience in managing projects of this type. Project participant believes that this manager will not require any further training as he is already experienced.		
It shall provide and indentify the evidence proposed (if applicable).	--		
DOE Assessment #1 *The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	There is an inconsistency between the PDD and the explanations provided by the PP.		
PP RESPONSE #2	*This section shall be filled by the PP.*		
Corrective action	The PDD has been revised to include the training and maintenance plans for the project.		
Evidence proposed	Final version of the PDD.		

DOE Assessment #2	Since the PDD has been reinforced in this issue, this CL 4 is clarified.	
Conclusion *Tick the appropriate checkbox*	**CAR/CL CLOSED** ☒	To be checked during the periodic verification ☐

PROJECT ACTIVITY	**Ishasha 6.6 MW Small Hydropower Project**		
FINDING	**CL 5**		
Classification	**CAR** ☐	**CL** ☒	**FAR** ☐
Description of finding *Describe the finding in unambiguous style; address the context (e.g., section).*	The inclusion or not of the transmission line inside the physical project boundary shall be clarified.		
PP RESPONSE #1	*This section shall be filled by the PP.*		
It shall address the corrective action taken in details	According to AMS I.D., the project boundary encompasses the physical, geographical site of the renewable generation source. In the "*Tool to calculate the emission factor for an electricity system*" (version 01), the physical project boundary is defined as the spatial extent of the power plants that are physically connected through transmission and distribution lines to the project activity (e.g., the renewable power plant location or the consumers where electricity is being saved) and that can be dispatched without significant transmission constraints. The spatial extent of the project boundary therefore includes the project power plant, all the other power plants connected physically to the project electricity system, the transmission line, and switch stations within the project electricity system. The geographical boundary for small-scale CDM project activities are defined as all structures related to the project. According to the above guidance, it is justifiable that the project boundary for this project activity is the Ugandan national grid. Although the Ugandan national grid is connected to that of Rwanda and Kenya and there is both import and export of electricity to and from the Uganda grid, the physical boundary for this project activity is limited to the Ugandan national grid. The Ugandan national grid is the boundary only for the calculation of the emission factor as per the tool.		
It shall provide and indentify the evidence proposed (if applicable).	--		
DOE Assessment #1 *The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be*	The project proponent has to identify the boundary of the project in such a way to clarify if the transmission line is included in it or not, and where the measure of the electricity delivered to the grid will be done. This CL is still open.		

added.		
PP RESPONSE #2	*This section shall be filled by the PP.*	
Corrective action	The PDD has been revised to reflect the definition of the project boundary in accordance with AMS-I-D. See section B.3 of the revised PDD.	
Evidence proposed		
DOE Assessment #2	The final PDD has modified the definition of the boundaries and it is stated in accordance with the last version of the baseline methodology AMS.I.D version 17. The National Electricity Grid is correctly included.	
Conclusion *Tick the appropriate checkbox*	**CAR/CL CLOSED** ☒	To be checked during the periodic verification ☐

PROJECT ACTIVITY	**Ishasha 6.6 MW Small Hydropower Project**		
FINDING	**CL 6**		
Classification	**CAR** ☐	**CL** ☒	**FAR** ☐
Description of finding *Describe the finding in unambiguous style; address the context (e.g., section).*	The justification of the chosen method for the operating margin emission factor shall be included in the PDD.		
PP RESPONSE #1	*This section shall be filled by the PP.*		
It shall address the corrective action taken in details	PP chooses option *(a)* "a combined margin *(*CM*)*, consisting of the combination of operating margin *(*OM*)* and build margin *(*BM*)* according to the procedures prescribed in the "Tool to calculate the emission factor for an electricity system" and the AMS I.D. This was chosen because it will give a more accurate emission factor for the entire crediting period and the data of the year in which project generation occurs *(*i.e., requirement in option b*)* is not publicly available.		
It shall provide and indentify the evidence proposed (if applicable).	--		
DOE Assessment #1 *The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	The justification has been transparently included in the final version of the PDD, thus, CL 6 is clarified.		
Conclusion *Tick the appropriate checkbox*	**CAR/CL CLOSED** ☒	To be checked during the periodic verification ☐	

PROJECT ACTIVITY	**Ishasha 6.6 MW Small Hydropower Project**		
FINDING	**CL 7**		
Classification	**CAR** ☐	**CL** ☒	**FAR** ☐
Description of finding *Describe the finding in unambiguous style; address the context (e.g., section).*	All the footnotes shall be written in clear language, **particularly** , footnote No. 4.		
PP RESPONSE #1	*This section shall be filled by the PP.*		
It shall address the corrective action taken in details	This reference was originally used to cite where PP obtained information regarding the fuel type and consumption per individual power plants in the Ugandan national grid. This reference is now moved from Section B.4 to Section B.6.3, Step 4. The reference document (Ref #03) has been provided to AENOR.		
It shall provide and indentify the evidence proposed (if applicable).	--		
DOE Assessment #1 *The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	This reference has been clearly included in Section B.6.3. The reference document has been provided to Validation team, and it is considered appropriate and consistent. The rest of the footnotes are considered correctly included and referenced, thus CL 7 is clarified.		
Conclusion *Tick the appropriate checkbox*	**CAR/CL CLOSED** ☒	To be checked during the periodic verification ☐	

PROJECT ACTIVITY	**Ishasha 6.6 MW Small Hydropower Project**		
FINDING	**CL 8**		
Classification	**CAR** ☐	**CL** ☒	**FAR** ☐
Description of finding *Describe the finding in unambiguous style; address the context (e.g., section).*	The sources of information referred in the PDD shall be provided to the validation team, among others: • Annual Report 2006 of the Ministry of Energy and Mineral Development. • Standardised power purchase agreement for small-scale hydro projects in Uganda. • Hydrological evaluation of the project referenced in the Investment Barrier analysis. • World Bank Indicator for the Ugandan's Ranking. • Reference of diesel taxes.		
PP RESPONSE #1	*This section shall be filled by the PP.*		
It shall address the corrective action taken in details	Hydrological evaluation of the project (in investment barrier section); World Bank "Doing Business" indicators for Uganda and OECD report (in access to finance barrier section); and citation regarding the diesel tax (in prevailing practise barrier section) are all clearly referenced in the PDD. Hydrological evaluation of the project (in investment barrier section); World Bank "Doing Business" indicators for Uganda and OECD report (in access to finance barrier section); and citation regarding the diesel tax (in prevailing practise barrier section) are all clearly referenced in the PDD.		
It shall provide and indentify the evidence proposed (if applicable).	--		
DOE Assessment #1 *The assessment shall encompass all open issues. In case of non-closure*	The documentation has been provided to the validation team. For all these reasons, the CL 8 is clarified. The detail of the Barrier analysis is detailed in CAR 10.		

additional corrective action and DOE assessments (#2, #3, etc.) shall be added.		
Conclusion *Tick the appropriate checkbox*	**CAR/CL CLOSED** ☒	To be checked during the periodic verification ☐

PROJECT ACTIVITY	**Ishasha 6.6 MW Small Hydropower Project**		
FINDING	**CL 9**		
Classification	**CAR** ☐	**CL** ☒	**FAR** ☐
Description of finding *Describe the finding in unambiguous style; address the context (e.g., section).*	The location of the electricity meters shall be clarified since the parameter to be monitored shall be the net electricity generation.		
PP RESPONSE #1	*This section shall be filled by the PP.*		
It shall address the corrective action taken in details .	A metering system, consisting of main and check meters, will be installed at the electricity delivery points so that the volume of electricity supplied to the Uganda Electricity Transmission Company Limited (UETCL, a national grid operator) can be determined.		
It shall provide and indentify the evidence proposed (if applicable).	--		
DOE Assessment #1 *The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	The exact location shall be detailed since it is not clear if it is located after the transformer station near the power house or after the transmission line. This CL is still open		
PP RESPONSE #2	*This section shall be filled by the PP.*		
Corrective action	The PDD has been revised to indicate the location of the installation of the electric meter. The meter is installed after the transformer and before the connection to the Ugandan national grid.		
Evidence proposed			

DOE Assessment #2	The PDD has been revised to clearly indicate the location of the installation of the electric meter. The parameter included in the PDD is the net electricity generation, thus, it is stated in accordance with the applied methodology. Furthermore, two monitoring parameters have been included in accordance with the last version of the applied methodology, A_{pj} and CAP_{pj}. Therefore, CL is clarified.	
Conclusion *Tick the appropriate checkbox*	**CAR/CL CLOSED** ☒	To be checked during the periodic verification ☐

PROJECT ACTIVITY	**Ishasha 6.6 MW Small Hydropower Project**		
FINDING	**CL 10**		
Classification	**CAR** ☐	**CL** ☒	**FAR** ☐
Description of finding *Describe the finding in unambiguous style; address the context (e.g., section).*	The double check process of the net electricity generation shall be clarified.		
PP RESPONSE #1	*This section shall be filled by the PP.*		
It shall address the corrective action taken in details	There will be a redundant (i.e., double check) metering system, consisting of main and check meters installed at the electricity delivery points to determine the volume of electricity supplied to the grid. This is described in Section A.2 and B.7.2.		
It shall provide and indentify the evidence proposed (if applicable).	--		
DOE Assessment #1 *The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	The process has been clarified in the PDD and it is considered in accordance with the applied methodology, thus, **CL 10 is clarified.**		
Conclusion *Tick the appropriate checkbox*	**CAR/CL CLOSED** ☒	To be checked during the periodic verification ☐	

PROJECT ACTIVITY	**Ishasha 6.6 MW Small Hydropower Project**		
FINDING	**CL 11**		
Classification	**CAR** ☐	**CL** ☒	**FAR** ☐
Description of finding *Describe the finding in unambiguous style; address the context (e.g., section).*	Provisions regarding the monitoring data adjustments and uncertainties, internal reviews, corrective and preventative actions and audits should be included in the Monitoring Plan of the PDD.		
PP RESPONSE #1	*This section shall be filled by the PP.*		
It shall address the corrective action taken in details	These issues are now included in both Section B.7.2 and Annex 4.		
It shall provide and indentify the evidence proposed (if applicable).	--		
DOE Assessment #1 *The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	The Monitoring Plan has been reinforced and stated in accordance with the applied methodology. Thus, CL 11 is clarified.		
Conclusion *Tick the appropriate checkbox*	**CAR/CL CLOSED** ☒	To be checked during the periodic verification ☐	

PROJECT ACTIVITY	**Ishasha 6.6 MW Small Hydropower Project**		
FINDING	**CL 12**		
Classification	**CAR** ☐	**CL** ☒	**FAR** ☐
Description of finding *Describe the finding in unambiguous style; address the context (e.g., section).*	The Resettlement Action Plan, the Environmental and Social Impact Assessment (ESI) and its approval by the National Environment Management Agency (NEMA) shall be provided to the Validation Team.		
PP RESPONSE #1	*This section shall be filled by the PP.*		
It shall address the corrective action taken in details .	RAP and ESI were provided to AENOR.		
It shall provide and indentify the evidence proposed (if applicable).	Resettlement Action Plan.		
DOE Assessment #1 *The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	Since the documentation has been provided, and the PDD is in accordance with it, CL 12 is clarified.		
Conclusion *Tick the appropriate checkbox*	**CAR/CL CLOSED** ☒	To be checked during the periodic verification ☐	

PROJECT ACTIVITY	**Ishasha 6.6 MW Small Hydropower Project**		
FINDING	**CL 13**		
Classification	**CAR** ☐	**CL** ☒	**FAR** ☐
Description of finding *Describe the finding in unambiguous style; address the context (e.g., section).*	Evidence or/and registers of the stakeholder consultations and of the comments received shall be provided to AENOR		
PP RESPONSE #1	*This section shall be filled by the PP.*		
It shall address the corrective action taken in details	Available information regarding the stakeholder consultations were given to AENOR by the project participant during its visit to the project site.		
It shall provide and indentify the evidence proposed (if applicable).	--		
DOE Assessment #1 *The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	The documentation has been provided, and the PDD is considered in accordance with it, thus CL is clarified.		
Conclusion *Tick the appropriate checkbox*	**CAR/CL CLOSED** ☒	To be checked during the periodic verification ☐	

PROJECT ACTIVITY	**Ishasha 6.6 MW Small Hydropower Project**		
FINDING	**CL 14**		
Classification	**CAR** ☐	**CL** ☒	**FAR** ☐
Description of finding *Describe the finding in unambiguous style; address the context (e.g., section).*	The dates of the events should be included in a consistent way in the PDD, thus, the table included in section E.1 of the PDD shall be completed.		
PP RESPONSE #1	*This section shall be filled by the PP.*		
It shall address the corrective action taken in details .	There were several stakeholder consultations. One of the earlier consultations was during the Resettlement Action Plan (RAP) preparation, for which report was completed in April 2007 (please note that this was previously provided to AENOR). Then once again on 07 June 2008, EPUL representatives held a meeting with all local people including the local authorities.		
It shall provide and indentify the evidence proposed (if applicable).	Minutes from these meetings are provided to AENOR (Ref #08a, #08b)		
DOE Assessment #1 *The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	The PDD has been revised to include the dates of the consultation events, and the evidence has been provided. The information is consistent, thus, CL is clarified.		
Conclusion *Tick the appropriate checkbox*	**CAR/CL CLOSED** ☒	To be checked during the periodic verification ☐	

7 REFERENCES

Documents provided by the project proponents that relate directly to the GHG components of the project. These have been used as direct sources of evidence for the determination conclusions.

Background documents related to the design and/or methodologies employed in the design or other reference documents..

Ref	Document Name	Date	Author/Competent Authority
1	PDD Ishasha 6.6 MW Small Hydropower Project. Version 01.	2009/06/16	C-Quest Capital LLC
2	PDD Ishasha 6.6 MW Small Hydropower Project. Version 08.	2012/03/18	C-Quest Capital LLC
3	AMS.I.D version 14 – "Grid connected renewable electricity generation"	2009/07/17	CDM - EXECUTIVE BOARD
4	AMS.I.D version 17 – "Grid connected renewable electricity generation"	2011/06/03	CDM - EXECUTIVE BOARD
5	Validation and Verification Manual (version 01.2)	2010/07/30	CDM - EXECUTIVE BOARD
6	Letter of approval from Uganda	2010/06/22	Uganda DNA
7	Letter of approval from The Netherlands	2009/10/26	The Netherlands DNA
8	Letter of Authorisation from The Netherlands	2010/12/06	The Netherlands DNA
9	Contract Agreement for Supply, Transport, Installation and Commissioning of the equipment for HPP Ishasha –. Turboinstitut.	2008	Turboinstitut/Eco Power Uganda Limited
10	Certificate for Approval of Environmental Impact Assessment	2006/12/13	National Environment Management Agency (NEMA) – Environmental Competent Authority
11	Licence for Generation and Sale of Electricity	2007/07/1	Electricity Regulatory Authority ERA
12	"Tool to calculate the emission factor for an electricity system" - version 02.2.1	2011/09/29	CDM - EXECUTIVE BOARD
13	2006 IPCC Guidelines for National Greenhouse Gas Inventories	2006	IPCC
14	Feasibility Report	2008	EcoPower Global

Ref	Document Name	Date	Author/Competent Authority
15	Emission Factor and Lambda calculation spreadsheets	2012	C-Quest Capital LLC
16	Contract for Supply, Transport, Installation and Commissioning of the equipment for the HPP Ishasha	2008/12/28	Eco Power Uganda Ltd
17	Glossary of CDM Terms	2012/03/02	CDM - EXECUTIVE BOARD
18	Guidance on the demonstration and assessment of prior consideration of the CDM	2011/07/15	CDM - EXECUTIVE BOARD
19	Copy of Letter of Notification to the Uganda DNA	2009/05/22	Eco Power Uganda Ltd
20	Copy of Certificate of Incorporation from Registrar of Companies	2005/12/15	Eco Power Uganda Ltd
21	Copy of Certificate from National Environmental Management Authority	2006/12/13	Eco Power Uganda Ltd
22	Copy of Investment Licence from UIA	2007/02/15	Eco Power Uganda Ltd
23	Copy of Licence from Electricity Regulatory Authority	2007/07/16/	Eco Power Uganda Ltd
24	Copy of signature page from PPA	2007/08/17	Eco Power Uganda Ltd
25	Copy of Eco Power (Pvt) Ltd. Board document	2008/02/26	Eco Power Uganda Ltd
26	Copy of EPUL letter to IRG	2008/03/13	Eco Power Uganda Ltd
27	Copy of Term Sheet	2008/11/21	Eco Power Uganda Ltd
28	Copy of Initial Contract Agreement for Supply, Transport, Installation and Commissioning of the equipment for the HPP Ishasha	2008/12/28	Eco Power Uganda Ltd
29	Copy of ERPA (Confidential Information)	2009/04/30	Eco Power Uganda Ltd
30	Copy of signed agreement with AENOR for validation of Ishasha Small Hydropower Project.	2009/07/06	Eco Power Uganda Ltd
31	Copy of initial LOA from Uganda	2009/07/24	Eco Power Uganda Ltd

Ref	Document Name	Date	Author/Competent Authority
32	Copy of letter of request for LOA to SenterNovem, Netherlands	2009/08/12	Eco Power Uganda Ltd
33	Copy of LOA from SenterNovem	2009/10/26	Eco Power Uganda Ltd
34	Attachment A to Appendix B' of the *Simplified modalities and procedures for small-scale CDM project activities*	29 September 2011	CDM - EXECUTIVE BOARD
35	Guidelines for objective demonstration and assessment of Barriers	16 October 2009	CDM - EXECUTIVE BOARD
36	World Bank report "*Doing business*": www.doingbusiness.org/rankings	--	WORLD BANK
37	IFC Mandate Letter	2007	IFC - International Finance Cooperation
38	FMO Mandate Letter	2007	Netherlands Development Finance Company
39	Syndicated Financial Agreement signed between EPUL and Commercial Bank of Ceylon PLC	2010	Eco Power Uganda Ltd
40	Presentation titled "Investment Opportunities in the Power Sector in Uganda", given by Godfrey R. Turyahikayo, the Executive Director of the Rural Electrification Agency of Uganda on October 2, 2008 (provided to AENOR as a supporting document during desk review).	2008	Eco Power Uganda Ltd
41	The Renewable Energy Policy for Uganda" published by Government of Uganda in November 2007 (Ref #05)	2007	Eco Power Uganda Ltd
42	"Uganda – Energy for Rural Transformation Project: Project Appraisal Document" published by the World Bank's Africa Regional Office in March 2001 (Ref #06)	2001	Eco Power Uganda Ltd
43	Minutes of the social consultation meetings and Resettlement Action Plan.	2007-2009	Eco Power Uganda Ltd and C-Quest Capital LLC
44	ESIA Report prepared by Ema Consult Limited Plot 244	2006	Eco Power Uganda Ltd and C-Quest Capital LLC
45	NEMA Certificate of approval of the ESIA	2006/12/13	NEMA

VALIDATION PROTOCOL

PROJECT: "**Ishasha 6.6 MW Small Hydropower project**"

PROJECT PARTICIPANT:

C-Quest Capital LLC

Eco Power Uganda Limited

Validation Type	
☒ Validation of a Project Activity	
Validation Team: Pablo TABOADA UTRERA *(Chief Validator)* Luis Javier ARRIBAS ALONSO *(Validator)* Mercedes GARCÍA MADERO *(Validator)*	
Version of this Validation Protocol: 08	Date: 2012/05/25

ANNEX 1: CDM VALIDATION PROTOCOL

CHECKLIST TOPIC / QUESTION	MoV/Ref.*	COMMENTS	Draft Conclusion	Final Conclusion
A. GENERAL DESCRIPTION OF PROJECT ACTIVITY				
A.1. Approval				
A.1.1 Have all the Parties involved in the project activity provided a written Letter of Approval of the project activity?	DR I	Not all the Parties have provided the Letters of Approval. **CAR 1 - Letters of Approval from the Uganda and The Netherlands Designated National Authorities have to be obtained**. Both documents have been obtained nevertheless, the Letter of Approval of The Netherlands does not include the same name than in the PDD. Thus, this CAR is still open. The two Letters of Approval have been obtained finally and the validation team has been provided with them, thus, this CAR is resolved.	**CAR 1**	OK

A.1.2 Do the Letters of Approval confirm that: • The Party is a Party to the Kyoto Protocol • The participation is voluntary • The CDM project activity contribute to the sustainable development (host Party) • The title of the project activity is precise and coincides with the title included in the PDD?	DR	To be assessed once **CAR 1** be solved. Yes, both documents confirm the required issues. The title of the project is precise, and coincides with the title included in the PDD.	**CAR 1**	OK
A.1.3 Has the Letter of Approval be obtained from the project participants or directly from the DNA? In case that it has been obtained from the project participant, how has been assessed its authenticity?	DR I	To be assessed once **CAR 1** be solved. The Letters of Approval have been obtained from the project participants. The authenticity of the LoA from Uganda was assessed during the on site visit in the interview with the representatives of the DNA. Regarding the LoA from The Netherlands, the validation team does not doubt of its authenticity.	**CAR 1**	OK
A.1.4. If either LoA contains additional specification or conditions of the project activity, then, has the request for registration been based on the documents specified in the LoA?	DR	To be assessed once **CAR 1** be solved. No additional specification is included in either of the Letters of Approval.	**CAR 1**	OK
A.1.5. If the LoA references a specific version of the Validation Report or PDD and this version cannot be submitted, then has either of the following been submitted? a) a statement indicating final LoA has not been received, or b) an updated Validation Report/ PDD	DR	To be assessed once **CAR 1** be solved. No specification of versions of documents is included in either of the Letters of Approval.	**CAR 1**	OK

A.2. Project participants				
A.2.1. Is the form of required for the indication of project participants correctly applied in the PDD?	DR	Yes, the form used for the indication of the project participants is the last one for required by the UNFCCC.	OK	OK
A.2.2. Is the participation of all project participants approved by a Party to the Kyoto Protocol?	DR	To be assessed once **CAR 1** be solved. Yes, the participation of both project participants is approved in both LOAs.	**CAR 1**	OK
A.2.3. Is all information on participants / Parties provided in consistency with details provided by further chapters of the PDD (in particular annex 1)?	DR	Yes, the information of the project participants is consistent in all parts of the PDD.	OK	OK
A.2.4. Are any other project participants approved but not listed in the PDD?	DR	No, the only two project participants are correctly detailed in the PDD, and approved their participation by the DNAs of both countries.	OK	OK
A.3. Project Design Document				
A.3.1. Does the used project title clearly enable to identify the unique CDM project activity? Is it consistent in all section of the PDD and in all documents?	DR	Yes. The project title enables to know about the project activity and it is consistent in all sections of the PDD. Nevertheless, the title included in the LOA of the Netherlands is not the same as in the PDD. See section A.1.1 – **CAR 1** The new LOA includes the correct title, thus, it is considered that the title of the project activity is consistent in all documents.	**CAR 1**	OK

A.3.2. Is there any indication concerning the version number and the date of the version?	DR	Yes. The PDD published for global stakeholder consultation process has version number 01 and is dated 2009/06/16. During validation activities, the version number and the date of the PDD have been updated.	OK	OK
A.3.3. Is this consistent with the time line of the project's history?	DR	Yes, the date and version of the PDD is consistent with the timeline of the project activity. Nevertheless, the starting date of the project activity shall be revised. See Section B.5.1 – **CAR 9**. Once the starting date has been correctly chosen it is considered that the date of the PDD is consistent with project's history.	**CAR 9**	OK
A.3.4. Is the PDD prepared in accordance with the latest template and requirements from the CDM Executive Board?	DR	No, the PDD is not prepared in accordance with the last approved form. **CAR 2 - The format of the PDD used (Version 03.1) is not exactly in accordance with the last format published in the UNFCCC web page.** Since the last PDD has been modified and the last form has been used, this **CAR is resolved**.	**CAR 2**	OK
A.3.5. Has the PDD published for Global Stakeholder Consultation (GSC) in UNFCCC website?	DR	Yes, the project design document has been made publicly available on 2009/08/15 on UNFCCC web site.	OK	OK
A.3.6. Have there been any comments during the GSC process?	DR	No comments have been received during the public information period.	OK	OK
A.3.7. Have them correctly addressed by the validation team?	DR	Not applicable since no comments were received (see section A.3.6)	OK	OK

A.4. Description of the project activity The PDD *(*section A.2*)* shall contain a clear description of the project activity that provides the reader with a clear understanding of the precise nature of the project activity.				
A.4.1. Is the description delivering a transparent overview of the project activities? Is the description of the proposed CDM project activity as contained in the PDD sufficiently covers all relevant elements, is accurate and that it provides the reader with a clear understanding of the nature of the proposed CDM project activity?	DR I	As it is established in the PDD, Section A.2, the hydroelectric project will consist in a dam 15 meters above the water level in the Ishasha River, an intake structure, a penstock 1,140 meters long, the power house with two Francis turbines with a horizontal axis with an installed power of 3.3 MW each one. The total installed capacity of the hydroelectric plant will be 6.6 MW. Switch station and a 10 kilometers 33Kv Transmission line. See Section A.4.2 – **CL 1.** Once the CL has been solved it is considered that the description of the project activity included in the PDD is transparent.	**CL 1**	OK
A.4.2. What proof is available demonstrating that the project description is in compliance with the actual situation or planning?	DR I	The validation team has not been provided with any documented evidence regarding the technical description. **CL 1 - Technical documentation of the equipment to be installed *(*turbines, electricity meters, diesel generator, etc..*)* shall be provided to the validation team.** The Contract Agreement signed with Turboinstitut for Supply, Transport, Installation and Commissioning of the equipment for HPP Ishasha, the Certificate for Approval of Environmental Impact Assessment granted by NEMA and the Licence for Generation and Sale of Electricity issued by the Electricity Regulatory Authority *(*ERA*)* have been provided, and the description included in the PDD is considered in accordance with the cited documentation.	**CL 1**	OK

A.4.3. Is the information provided by these proofs consistent with the information provided by the PDD?	DR	To be assessed once CL 1 be solved. **CL 2 - An inconsistency has been detected regarding the length of the transmission line between the power plant and the switch station.** The inconsistency corresponds to a mistake in the edition of the PDD, and it has been corrected in the last version of the document and stated in accordance with the documentation referred in previous section. Therefore, it is considered that the information of the documentation provided is consistent with the description included in the final version of the PDD.	**CL 2** **CL 1**	OK
A.4.4. Has the validation team conducted a physical site inspection to confirm the description of the PDD? If not, justify.	DR	Yes. The validation team conducted interviews with project developers in Uganda and other relevant stakeholders on 2009/11/3-5 to confirm selected information and to resolve issues identified in the document review.	OK	OK
A.4.5. If the proposed CDM project activity involves the alteration of an existing installation or process, does the project description clearly state the differences resulting from the project activity compared to the pre-project situation?	DR	No, the project activity is considered as a greenfield project activity.	OK	OK

A.4.6. In the case of greenfield project activity, is the project design described sufficiently by means of specifications, drawings and manuals?	DR	To be assessed once **CL 1** be solved. The Feasibility Report has been provided, and it includes drawing of the design of the project activity. The technical description of the hydropower plant and the description of the equipment are included in the same document. Furthermore, the Contract Agreement for Supply, Transport, Installation and Commissioning of the equipment, the Certificate for Approval of Environmental Impact Assessment and the Licence for Generation and Sale of Electricity have been provided as it has been stated in previous section. On the other hand, during the on-site visit, it was requested the technical specification of electro mechanical equipment. The document was provided, and it is considered that the technical description of the PDD is in accordance with this document.	**CL 1**	OK
A.4.7. Does the PDD explain how the proposed project activity reduces greenhouse gas emissions *(*i.e., what type of technology is being employed, what measures are undertaken as part of the project activity, etc.*);*	DR	Yes, the employed technology is sufficiently explained in the PDD.	OK	OK
A.5. Technical description of the project activity The PDD *(*section A.4*)* shall contain a clear description of the project activity that provides the reader a clear understanding of the technical aspects of its implementation.				
A.5.1. Location of the project activity				

A.5.1.1. Does the information provided on the location of the project activity allow for a clear identification of the site(s)? Are the latitude and longitude on the site indicated (decimal points)?	DR I	The Ishasha Small Hydropower plant is located on Ishasha River, Kanungu district in the Western region of Uganda with the dam/weir being constructed 500 meters downstream of the border of the Bwindi Impenetrable National Park. The coordinates of the project detailed in the PDD are following described: Weir/Diversion Intake • N: -0.935556 • E: 29.668611 Power House/Tailrace • N: -0.878611 • E: 29.657500 The location was checked against a GPS device, and the interview to the majors of the Municipalities located in the area during the on site visit, thus, it is considered that a clear identification of the site is made and detailed in the PDD.	OK	

A.5.1.2. How is it ensured and/or demonstrated that the project proponents can implement the project at this site (ownership, licences, contracts, etc.)?	DR I	The validation team has not been provided with documentation. **CL 3 – All the licences, contracts and ownerships shall be provided to the validation team, among others:** • **The permit to develop the Power Plant granted by the Electricity Regulator Authority (ERA)** • **Concession for the project activity by the Ministry of Energy.** The documentation referred to has been provided and they ensure that the project developer is able to construct the hydropower plant. The exact location is included in the Feasibility Report, and the coordinates coincide with those taken in situ during the on-site visit.	**CL 3**	OK
A.5.2. Category of the project activity				
A.5.2.1. Does the project qualify as a small scale CDM project activity as defined in paragraph 6 (c) of decision 3/CMP.1 on the modalities and procedures for the CDM?	DR	In accordance with "*Simplified modalities and procedures for small-scale clean development mechanism project activities*" the project activity qualifies as Type I: Renewable Energy Projects (Category I.D.: Grid connected renewable electricity generation). Section A.4.2 of the PDD correctly indicates the category of the project activity.	OK	OK

A.5.2.2. To which category(ies) does the project activity belonging to? Is this category correctly identified and indicated?	DR	Yes. In accordance with "*Simplified modalities and procedures for small-scale clean development mechanism project activities*" the project activity qualifies as small scale category since the installed capacity will be 6.6 MW, less than 15 MW (the threshold stated for this type of small-scale project activity)	OK	OK
A.5.2.3. Does proposed project activity confirm to one of the project categories defined for small scale CDM project activities?	DR	Yes. This category is stated in section A.5.2.1 and detailed in the PDD.	OK	OK
A.5.2.4. In the case of a small scale project activity, is it justified that it is not a debundled component of a larger project activity?	DR	In accordance with the PDD, the project activity is not a debundled component of a larger activity according to Appendix C of the Simplified Modalities and Procedures for Small Scale CDM project activity. For the proposed project activity, the project participant does not own any other hydropower projects registered within the previous 2 years whose boundary project is within 1 km. This issue has been checked against the UNFCCC website, by the validation team.	OK	OK

A.5.2.5. In case of small-scale project activities, is the estimate of emissions reductions increasing during the crediting period? In affirmative case, have project participants demonstrated in the CDM-SSC-PDD that the project activity characteristics are defined in a way that precludes project activities to go beyond the limits for SSC Project activities (as stipulated in paragraph 3 of the General Guidelines to SSC CDM methodologies)?	DR	No, the estimate of emissions reductions is not increasing during the crediting period since the installed capacity will be the same during the ten years of the crediting period .	OK	OK
A.5.3. Technology to be employed by the project activity				
A.5.3.1. Does the description of the technology to be applied provide sufficient and transparent input/information to evaluate its impact on the greenhouse gas balance? And, is the explanation how the project will reduce greenhouse gas emission transparent and suitable?	DR	The description stated in the PDD is not considered completely transparent since several inconsistencies have been detected. See Section A.4.3 – **CL 2** and **CL 3** The last PDD has been reinforced and it is considered that the description of the technology is transparent, and the impact on the greenhouse gas balance is clear.	**CL 2** **CL 3**	OK

A.5.3.2. Does the project require extensive initial training and maintenance efforts in order to be carried out as scheduled during the project period? If so, does the project make provisions for meeting training and maintenance needs?	DR I	Yes, the project would require initial training and maintenance efforts for the hydro power plant. **CL 4 - Provisions regarding the training and maintenance are not clearly defined in the PDD.** The training for operating the equipment will be given by the equipment supplier after commissioning. On the other hand, as far as civil works is concerned there is minimal maintenance necessary and the manager will be someone seconded from Eco Power Sri Lanka, a company associated with EPUL that has wide experience in managing projects of this type. Since these explanations have been taken into account in the edition of the final PDD, this **CL 4 is considered clarified**.	**CL 4**	OK
A.5.3.3. Is a schedule available for the implementation of the project and are there any risks for delays? Is the schedule consistent with the starting date of the crediting period?	DR	No schedule has been provided. **CAR 3 – The starting date of the crediting period shall be stated as a specific date, and in accordance with the real situation of the project activity.** The final PDD has included a realistic date for the starting of the crediting period.	**CAR 3**	OK
A.5.4. Estimated amount of emission reductions over the chosen crediting period				
A.5.4.1. Is the form required for the indication of projected emissions reductions correctly applied?	DR	The correct form has been used for the emissions reductions.	OK	OK
A.5.4.2. Are the figures provided consistent with other data presented in the PDD?	DR	Yes. The figures are consistent.	OK	OK
A.5.5. Public funding of the project activity				

A.5.5.1. In case of public funding from Annex I Parties is it confirmed that such funding does not result in a diversion of official development assistance?	DR	There is no Official Development Assistance in this project and the project will not receive any public funding from Parties included in Annex I.	OK	OK
A.5.5.2. Is all information provided consistent with the details given in remaining chapters of the PDD (in particular annex 2)	DR	Yes, information provided is consistent.	OK	OK
B. BASELINE AND MONITORING METHODOLOGY				
B.1. Title and reference of the approved baseline and monitoring methodology				
B.1.1. Are reference number, version number, and title of the approved baseline and monitoring methodology clearly indicated?	DR	Yes, the project applies approved small scale methodology AMS.I.D "Grid connected renewable electricity generation (version 13)". The AMS.I.D is complemented with the version 01 of the "Tool to calculate the emission factor of the electric system". **CAR 4 – The last version of the "*Tool to calculate the emission factor of the electric system*" shall be used for the emission factor of the grid calculation. The justification of the use of the OM method shall be also clarified.** During validation activities the version of the applied methodology has been updated, and the version of the tool as well. The final version of the PDD includes the calculations made in accordance with the last version of the referred documentation. It is clearly indicated in the PDD.	**CAR 4**	OK

B.1.2. Is the applied version the most recent one and / or is this version still applicable?	DR	No. As it is detailed in Section B.1.1 the last version of the tool is not applied. During validation activities, the version 13 of the AMS.I.D has been expired. Thus, the calculations shall be updated. **CAR 13 - The approved baseline and monitoring methodology AMS I.D. has to be updated to the last one approved by the EB since the version 13 has been expired.** The final PDD has been updated, and the methodology used for the emission reduction calculations is number 17, valid at the moment of the request for registration.	**CAR 13**	OK
B.1.3. Does the PDD refer to the corresponding tools with their latest approved versions?	DR	To be assessed once CAR 4 is resolved. Yes, the final PDD refers the last version of the tool.	**CAR 4**	OK
B.1.4. Have any sources of greenhouse gas emissions been identified by the DOE ,within the project boundary following project implementation, which are expected to contribute more than 1% of the overall expected average annual emissions reductions, and which are not addressed by the applied methodology?	DR	Yes, all the sources of greenhouse gas emissions have been correctly identified in the PDD.	OK	OK
B.2. Applicability of the selected methodology to the project activity				
B.2.1. Are the chosen tools considered applicable in accordance with the design of the project and the provisions of the applied methodology?	DR	Yes, the chosen tool is "*Tool to calculate the emission factor for an electricity system*". It is considered applicable since the project activity is going to generate electricity connected to the national electricity grid.	OK	OK

B.2.2. Is the choice of the methodology correctly justified by the PDD and is the project in conformance with all applicability criteria of the applied methodology?	DR	Yes. As it is established in Section B.2 of the PDD, approved baseline methodology AMS.I.D is applicable to the generation activities that use renewable sources and several conditions detailed in the PDD in accordance with the approved methodology. Three main characteristics of Ishasha hydropower project imply the use of the AMS-I.D methodology: • Run of river hydro power project. Is a grid-connected renewable generation project • Generation capacity of 6.6 MW. • The project involves construction of new units. The justification is considered transparent and in accordance with the design of the project.	OK	OK
B.2.3 Has been applied the specific guidance provided by the CDM Executive Board in respect to the approved methodology?	DR	No, there is not any additional guidance applicable to this project activity.	OK	OK
Fill in the required amount of sub checklists for applicability criteria as given by the methodology applied and comment at least every line answered with "No"				

<table>
<tr>
<td>B.2.4. Criterion 1 – ''This category comprises renewable energy generation units, such as photovoltaic, hydro, tidal|wave, wind, geothermal and renewable biomass that supply electricity to a national or a regional grid"</td>
<td>DR</td>
<td><table>
<tr><th>Applicability checklist</th><th>Yes/No</th></tr>
<tr><td>Criterion discussed in the PDD?</td><td>Yes</td></tr>
<tr><td>Evidence provided?</td><td>Yes</td></tr>
<tr><td>Compliance verified?</td><td>Yes</td></tr>
</table></td>
<td>OK</td>
<td>OK</td>
</tr>
<tr>
<td>B.2.5. Criterion 2 – "This methodology is applicable to project activities that (a) install a new power plant at a site where there was no renewable energy power plant operating prior to the implementation of the project activity (Greenfield plant)".</td>
<td>DR</td>
<td><table>
<tr><th>Applicability checklist</th><th>Yes/No</th></tr>
<tr><td>Criterion discussed in the PDD?</td><td>Yes</td></tr>
<tr><td>Evidence provided?</td><td>Yes</td></tr>
<tr><td>Compliance verified?</td><td>Yes</td></tr>
</table></td>
<td>OK</td>
<td>OK</td>
</tr>
</table>

<table>
<tr><td>B.2.6. Criterion 3 – "Hydro power plants with reservoirs that satisfy following condition are eligible to apply this methodology:
• The project activity results in new reservoirs and the power density of the power plant, as per definitions given in the Project Emissions section, is greater than 4 W/m^2"</td><td>DR</td><td><table><tr><th>Applicability checklist</th><th>Yes/No</th></tr><tr><td>Criterion discussed in the PDD?</td><td>Yes</td></tr><tr><td>Evidence provided?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table></td><td>OK</td><td>OK</td></tr>
<tr><td>B.2.9. Was there a request for clarification, revision or deviation made for the adopted methodology in relation to the proposed project activity?
If so, were the correct procedures provided by the CDM EB followed?</td><td>DR</td><td>No, there was not any request for clarification.</td><td>OK</td><td>OK</td></tr>
<tr><td colspan="5">B.3. Description of the Project Boundary</td></tr>
<tr><td>B.3.1 Are all the sources and gases included in the project boundary of the project activity (baseline scenario, project scenario and leakage) in accordance with the applied methodology?</td><td>DR</td><td>Yes, the PDD correctly addresses all sources and gases included in the project boundary.</td><td>OK</td><td>OK</td></tr>
<tr><td>B.3.2. Are the inclusion or exclusion of the sources of gases correctly justified?</td><td>DR</td><td>Yes, the sources of gases are correctly justified.</td><td>OK</td><td>OK</td></tr>
</table>

B.3.3. Do the spatial and technological boundaries as verified on-site comply with the discussion provided by the PDD?	DR	During the on site visit the location of the project activity was visited, nevertheless, it has been detected an inconsistency regarding the transmission line. **CL 5 – The inclusion or not of the transmission line inside the physical project boundary shall be clarified.** The last PDD has been revised to reflect the definition of the project boundary in accordance with AMS.I.D.	**CL 5**	OK
B.3.4. In case of grid connected electricity projects, is the relevant grid correctly identified in accordance with EB guidance and the underlying methodology?	DR	Yes, according to the "*Tool to calculate the emission factor for an electricity system*", the physical project boundary is defined as the spatial extent of the power plants that are physically connected through transmission and distribution lines to the project activity (e.g. the renewable power plant location or the consumers where electricity is being saved) and that can be dispatched without significant transmission constraints. The spatial extent of the project boundary therefore includes the project power plant, all the other power plants connected physically to the project electricity system, the transmission line, and switch stations within the project electricity system. According to the above guidance, it is justifiable that the project boundary for this project activity is the Ugandan national grid.	OK	OK

B.4. Description of the baseline scenario identification				
B.4.1. Is the baseline scenario clearly described?	DR	As it established in the PDD Section B.4, the baseline scenario is one where the electricity supplied by the project to the Uganda grid would be generated by the operation of the plants that are currently connected to the network and by new plants added to the System, based on the current trends in the sector. According to the general guidance for SSC project activities, the project itself is not a likely baseline scenario and it is justified through the demonstration of its additionality due to the existence of one or more barriers listed in attachment A to Appendix B of the simplified modalities and procedures for small-scale CDM project activities and annex 34 "*Non-binding best practise examples to demonstrate additionally for SSC project activities*".	OK	OK
B.4.2. Have there been other alternative scenarios considered? Is it justified the selected scenario as the most likely one?	DR	In accordance with the applied methodology, other alternative scenarios are not considered.	OK	OK

B.4.3. Does the PDD follow the steps to determine the baseline scenario required by the methodology?	DR	The baseline has not been calculated in accordance with the applied methodology and tool. **CAR 5 – Detailed information of the power generation and type of fuel of all power plants of the Uganda grid shall be included in the PDD and provided to the validation team.** The PDD has been revised to address the required issues, and the data have been provided. Nevertheless, it has been detected that the value chosen for the Net Calorific Value of the residual fuel oil is not in accordance with the IPCC 2006 Standard. Furthermore, there is an inconsistency regarding this value between page 23 and Annex 3. The final PDD has been reedited, and the mistakes have been corrected. Thus, **CAR 5 is resolved**. **CAR 6 – The input data used for the calculation of lambda for the emission factor of the grid shall be provided to the validation team. The supply/demand information from the period included in the OM calculation shall be also provided**. The input data have been provided. Nevertheless, in order to calculate the lambda factor, the hourly generation data of each one of the power units shall be used. Furthermore, the lambda calculation is not transparently included in the spreadsheet since the cells do not include any formulae. The final version of the spreadsheets has been revised and the table published by the UNFCCC has been used for the lambda calculation. Therefore, **CAR 6 is closed**. **CAR 7 – The complete spreadsheets shall be provided to the validation team, and the cells shall be stated in open format.** The spreadsheets have been provided in an open format to the validation team. They have been analysed, thus, **CAR 7 is closed**.	**CAR 5** **CAR 6** **CAR 7** **CAR 8** **CL 6**	OK

		CAR 8 – The inconsistency regarding the period used to calculate the Operating Margin and the Build Margin Emission Factor detected in Section B.6.1 shall be clarified. The period used to calculate the OM and the BM is the three year period between 2006 and 2008. The last PDD consistently refers to this period. CAR 8 is closed. **CL 6 - The justification of the chosen method for the operating margin emission factor shall be included in the PDD.** The justification has been transparently included, thus, **CL 6 is clarified**. Therefore, it is considered that the PDD follow the steps to determine the baseline scenario required by the methodology and they are documented with the spreadsheets prepared for the calculations.		
B.4.4. Has the baseline scenario been determined using conservative assumptions when possible?	DR	All the assumptions are made in accordance with the applied methodology and tool.	OK	OK
B.4.5. Does the baseline scenario sufficiently take into account relevant national and/or sectoral policies? *(Note: refer Annex 3 EB 22)*. Are they listed in the PDD?	DR	The baseline scenario has sufficiently taken into account relevant national and/or sectoral policies, macro-economic trends and political aspirations since the emission reductions are calculated using the national electricity generation.	OK	OK

B.4.6 If alternatives are excluded: a.- Is sufficient evidence/ justification provided to support every exclusion of alternatives? Is it reasonable? b.- Is it shown that at least one credible and feasible alternative does not face a barrier? Is this reasonable?	DR	Not applicable. The baseline methodology AMS.I.D does not require to consider other alternative scenarios if the project activity is the installation of a new grid-connected renewable power plant/unit.	OK	OK

B.4.7 Is the baseline scenario determination compatible with the available data and are all literature and sources clearly referenced?	DR	**CL 7 – All the foot notes shall be written in a clear language, among others, footnote No. 4.** This reference has been clearly included in Section B.6.3. The reference document has been provided to Validation team, and it is considered appropriate and consistent, thus **CL 7 is clarified**. **CL 8 – The sources of information referred in the PDD shall be provided to the validation team, among others:** • **Annual Report 2006 of the Ministry of Energy and Mineral Development.** • **Standardized power purchase agreement for small-scale hydro projects in Uganda.** • **Hydrological evaluation of the project referenced in the Investment Barrier analysis.** • **World Bank Indicator for the Ugandan's Ranking.** • **Reference of diesel taxes.** Hydrological evaluation of the project (in investment barrier section); World Bank "Doing Business" indicators for Uganda and OECD report (in access to finance barrier section); and citation regarding the diesel tax (in prevailing practise barrier section) are all clearly referenced in the PDD. The documentation has been provided to the validation team. For all these reasons, the **CL 8 is clarified**. Therefore, the baseline scenario detailed in the final version of the PDD is compatible with the available data.	**CL 7** **CL 8**	OK
B.5. Description of how the anthropogenic emissions of GHG by sources are reduced below those that would have occurred in the absence of the registered CDM project activity (assessment and demonstration of additionality):				

B.5.1 Is the start date defined in accordance with the "Glossary of CDM terms"? What evidence is provided to verify that this was the official start date? Is this considered reliable and reasonable?	DR	According to section C.1.1 of the PDD the starting date of the project activity is expected to be April 1, 2009 as expected commissioning date, having an expected operational lifetime of the project of 20-30 years. Thus, it is not considered in accordance with the "Glossary of Terms". **CAR 9– The start date of the project shall be stated in accordance with the last version of the Glossary of terms. The operational lifetime shall be also clearly defined.** The start date of the project activity has been stated as the date of the signing of the Agreement for the Supply, Transport, Installation and Commissioning of the equipment for the HPP Ishasha, 28-Dec-2008. The evidence was provided to the validation team and it is considered that the starting date is reliable and in accordance with the Glossary of terms.	**CAR 9**	OK
B.5.2 Is it a new project activity *(*start date on or after August 2008*)* or an existing project?	DR	~~Taken into account the PDD published for GSC, the project activity is considered as new project activity, since the starting date is April 1, 2009. Nevertheless, as it has been previously detailed, this date is not correctly stated, thus, this issue will be reassed once CAR 9 be solved.~~ To be re-assessed once CAR 9 is resolved. In accordance with the last version of the PDD, the project activity is not considered as "*existing project*" since the starting date is 28-12-2008.	**CAR 9**	OK

B.5.3 For a new project which does not require a new methodology and has not published its PDD for stakeholder comments prior to the start date, then: a. Have the project proponents informed the DNA and/or UNFCCC secretariat in writing? How has this notification been verified (i.e., confirmation from the DNA or UNFCCC)? b. Was the notification made within 6 months of the project activity start date? c. Does the letter/notification indicate the precise geographic location and provide a brief description of the proposed project? d. Have the project proponents informed the DNA and/or UNFCCC secretariat of the progress of the project activity every two years since the initial notification?	DR	~~To be assessed once the CAR 9 be solved.~~ Yes, the project participant has notified the DNA the prior consideration of the CDM in May 2009, thus, within 6 months. The UNFCCC was not notified since the requirement was approved by the EB after the first notification.	**CAR 9**	OK

B.5.4 For an existing project which has a start date prior to the publication of the PDD for global stakeholder comments, has the project proponent provided the following: a. Evidence of awareness of the CDM prior to the project activity start date and that the benefits of the CDM was a decisive factor in the decision to proceed with the project? (e.g. Board minutes, notes, etc.) Is this sufficient? b. Reliable evidence that demonstrates real actions were taken to secure CDM status in parallel with the project's implementation? (e.g., contracts with consultants for CDM/PDD/methodology services, ERPAs, correspondence with CER buyers, DOEs, DNAs or the UNFCCC). Is this sufficient?	DR	Not applicable since the project activity is not considered as "existing project activity".	OK	OK

B.5.5. Is the project additionality assessed according to the applicable methodology? Detail the Tool used to demonstrate the Additionality of the project activity.	DR	The additionality demonstration has been performed according to the general guidance for SSC project activities, due to the existence of one or more barriers listed in attachment A to Appendix B of the simplified modalities and procedures for small-scale CDM project activities and annex 34 "*Non-binding best practise examples to demonstrate additionally for SSC project activities*". Nevertheless, the barrier analysis is not complete. **CAR 10 – The barrier analysis shall be reinforced using official documentation and the evidence shall be submitted to AENOR.** The barrier analysis for the project has been revised to demonstrate that the "access-to-finance barrier" is the principal barrier to the development of the project. Due to the high risks associated with the project, the lack of similar projects previously undertaken in Uganda, the absence of project financing options within Uganda and the rejection of project financing by the IFC and FMO, the project developer had to seek sources of financing from outside Uganda and had to rely on the demonstrating that the expected project revenues including revenues from CERs were sufficient to cover all operational expenses and service debt while providing an adequate risk adjusted return on investment. Without this assurance, financing for the project would not have been secured. The section on "Investment barrier" and "Hydrological barriers" have been deleted. And the section on "Barriers due to prevailing practise" and "Institutional barriers" have been also reinforced. **Nevertheless, the consideration of the project as "*first of its kind*" shall be clarified in accordance with the guidelines of the UNFCCC (Note EB34 Annex 10) since:** • **There is hydropower project in commercial operation in the same country (same geographical area.** • **There is another CDM project activity in Uganda.** Taking into consideration the guidelines of the UNFCCC the barrier titled "first of its kind" has been removed from the PDD. Therefore, **CAR 10 is resolved**. Therefore, it is considered that the project additionality has been assessed according to the applicable methodology.	**CAR 10**	OK

B.5.6. In the case of a small-scale project activity, is the additionality justified according to the applicable CDM requirements specific for small scale project activities?	DR	Yes, as it has been previously detailed, the additionality demonstration has been made according to the general guidance for SSC project activities, due to the existence of one or more barriers listed in attachment A to Appendix B of the simplified modalities and procedures for small-scale CDM project activities and annex 34 "*Non-binding best practise examples to demonstrate additionally for SSC project activities*".	OK	OK
B.5.7 Have realistic and credible alternatives been identified providing comparable outputs or services?	DR	No other alternatives have been taken into account since the project activity is a small scale one.	OK	OK
B.5.8. Is the project activity without CDM included in these alternatives?	DR	Not applicable as it is detailed in Section B.5.7.	OK	OK
B.5.9. Is a discussion provided for all identified alternatives concerning the compliance with applicable laws and regulations?	DR	Not applicable since Barrier analysis has been chosen for the additionality demonstration.	OK	OK
B.5.10. In case of using a FSR as a basis of the decision, is this analysis made in accordance with the EB Guidance?	DR	Not applicable since FSR is not used for the demonstration of the additionality.	OK	OK
B.5.11. In case the PDD argues that specific laws are not enforced in the country or region: Is evidence available concerning that statement?	DR	Not applicable since all the specific laws are enforced.	OK	OK

B.5.12. In case of applying step 2 / investment analysis of the additionality tool: Is the analysis method identified appropriately?	DR	Not applicable since investment analysis is not performed.	OK	OK
B.5.13. In case of Option I (simple cost analysis): Is it demonstrated that the activity produces no economic benefits other than CDM income? a. Are the assumptions for all alternatives compared consistent (including discount rates if applicable)?	DR	Not applicable.	OK	OK
B.5.14. In case of Option II (investment comparison analysis): Is the most suitable financial indicator clearly identified (IRR, NPV, cost benefit ratio, or (levelised) unit cost)? a. Are the assumptions for all alternatives compared consistent (including discount rates if applicable)?	DR	Not applicable.	OK	OK

B.5.15. In case of Option III *(*benchmark analysis*)*: Is the most suitable financial indicator clearly identified *(*IRR, NPV, cost benefit ratio, or *(*levelised*)* unit cost*)*? a. If an IRR indicator is used, is the choice of benchmark appropriate to the type of IRR calculated? b. Is the choice of benchmark or discount rate justified with supporting evidence for its appropriateness?	DR	Not applicable.	OK	OK
B.5.16 If risk premiums are applied in the development of the benchmark, are they reasonable and justified?	DR	Not applicable.	OK	OK
B.5.17 Do the project participants justify the period of assessment in the context of the underlying project activity?	DR	Not applicable.	OK	OK
B.5.18 Is the period of assessment appropriate?	DR	Not applicable.	OK	OK
B.5.19 Is any residual value of the project activity assets included in the analysis? Are residual value calculations reasonable and justified and consistent with local accounting rules or international best practise?	DR	Not applicable.	OK	OK

B.5.20 Are depreciation and other non-cash items related to the project activity deducted from net profits used for calculating the financial indicator (e.g. IRR, NPV)?	DR	Not applicable.	OK	OK
B.5.21 Is the treatment of taxation consistent with the chosen benchmark? (i.e., taxation should only be treated as an expense in the IRR/NPV calculation if the chosen benchmark is intended for post-tax calculations?	DR	Not applicable.	OK	OK

B.5.22 Recommenced project: If the implementation of the project ceased and then recommenced due to consideration of the CDM, then: a. Are input values valid and applicable at the time of making the decision to recommence the project? b. Are capital costs incurred prior to the revised project activity start date input as the recoverable value of the assets (limited to the potential reuse/ resale of tangible assets)? c. How has the fair market value of the capital expenditures been calculated and validated? (e.g., by chartered specialists). Is this fair market value reasonable and justified? d.- Is the book value as well as the expectation of the potential profit or loss included in the fair value calculation?	DR	Not applicable.	OK	OK
B.5.23 Has the project participant supplied unprotected and traceable spreadsheet versions of all investment analysis?	DR	Not applicable.	OK	OK

B.5.24From the investment analysis provided, is it possible to reproduce the results?	DR	Not applicable.	OK	OK
B.5.25 Costs of financing expenditures (i.e. loan repayments and interest) should only be included in the cash flow as costs if an equity IRR is used, not if a project IRR is used. Are interest payments taken into account in the calculation of tax, if the benchmark is for after-tax comparison?	DR	Not applicable.	OK	OK
B.5.26 If an Equity IRR has been used, is the debt portion of the investment cost included as a cash outflow? (i.e., as well as interest costs and principle repayments – double counting)	DR	Not applicable.	OK	OK

B.5.27 Sensitivity analysis: a. Are all variable and critical costs and revenues in the analysis included in the sensitivity analysis? b. Is the assessed range of variations reasonable in light of the reliability of the estimated input values and the likely range? c. Is the sensitivity analysis possible to reproduce?	DR	Not applicable.	OK	OK
B.5.28 Are **input values** used in all the investment analysis valid and applicable at the time of the investment decision taken by the project participant? Is the time of investment decision appropriately justified by evidence?	DR	Not applicable.	OK	OK
B5.29 Does the PDD present the investment analysis in a transparent manner and provide all the relevant assumptions (preferably in the CDM-PDD form, or in separate annexes to the CDM-PDD)	DR	Not applicable.	OK	OK
B.5.30 Have the listed input values been consistently applied in all calculations?	DR	Not applicable.	OK	OK

B.5.31 Are all references made in the investment analysis correctly referenced/ sourced? Have these sources been verified?	DR	Not applicable.	OK	OK
B.5.32 Have financial calculations been verified by: assessing all parameters and assumptions against the available evidence and expertise; crosschecking the parameters against 3rd party or publicly available sources; reviewing feasibility reports, public announcements and annual financial reports; assessing the correctness of computations and the sensitivity analysis?	DR	Not applicable.	OK	OK

B.5.33 Have values from a feasibility study report (FSR) approved by national authorities been used? If so: a. Has the FSR been the basis of the decision to proceed with the investment in the project? How has this been verified? b. Are the values used in the PDD and associated annexes valid and consistent with the FSR? c. At the time of the investment decision, are the input values from the FSR valid and applicable (based on specific local and sectoral expertise and knowledge)?	DR	Not applicable since the FSR is not used for the additionality assessment.	OK	OK
B.5.34. In case of applying step 3 (barrier analysis) of the additionality tool: Is a complete list of barriers developed that prevent the different alternatives to occur?	DR	Yes, the list is considered complete: nevertheless, the barrier analysis shall be reinforced as it is explained in Section B.5.5 – **CAR 10.** The final PDD includes a correct analysis of barrier.	**CAR 10**	OK
B.5.35. Do any such identified barriers have a clear and direct impact on the financial returns of the project activity? (these are not barriers and should be assessed in the investment analysis)	DR	To be assessed once **CAR 10** be solved. There are one barrier identified: "*access to finance*" and it does not have a clear impact in the financial returns of the project activity.	**CAR 10**	OK

B.5.36 Are the identified barriers real and substantiated by independent sources of data such as relevant national legislation, surveys of local conditions and national or international statistics?	DR	To be assessed once **CAR 10** be solved. Yes. The barrier is substantiated by independent sources of data as Uganda Government, World Bank Reports, Rural Electrification Agency of Uganda, among others.	**CAR 10**	OK
B.5.37. Is it clearly explained how approval of the project in the CDM would enable the proposed project activity to surmount the barrier? Is the rationale reasonable and justified with evidence?	DR	To be assessed once **CAR 10** be solved. Yes, it is clearly indicated in the PDD.	**CAR 10**	OK
B.5.38. Does the review of relevant background information on the nature of the company(ies) and entity(ies) involved in the financing and implementation of the project sufficiently justify that the barriers related to the lack of access to capital, technologies and skilled labour are real?	DR	To be assessed once **CAR 10** be solved. Yes, the information provided justify the barrier of access to finance.	**CAR 10**	OK
B.5.39 Has common practise analysis been undertaken?	DR	No, the common practise analysis is not undertaken, and it is considered appropriate.	OK	OK
B.5.40 Is the geographical and temporal scope of the common practise analysis appropriate for the assessment related to the project activity's technology or industry type?	DR	Not applicable since the common practise analysis is not undertaken.	OK	OK

B.5.41 Have all comparable projects been included in the common practise analysis If some projects have been excluded as non comparable, is the exclusion reasonable and justified?	DR	Not applicable.	OK	OK
B.5.42 Have similar and operational projects other than CDM project activities been undertaken in the region?	DR	Not applicable.	OK	OK
B.5.43 Are these widely observed and commonly carried out? If so: a. How have the essential distinctions with the proposed CDM project activity been assessed? b. Are such distinctions justified with sufficient evidence? c. If inaccessibility of data is the reason why some projects have not been included in the analysis, is justification of this claim provided?	DR	Not applicable.	OK	OK
B.5.44 Overall, is the proposed CDM project activity considered common practise?	DR	Not applicable.	OK	OK

B.5.45. Is it demonstrated/justified that the project activity is not a likely baseline scenario?	DR	According to the general guidance for SSC project activities, the project itself is not a likely baseline scenario and it is justified through the demonstration of its additionality due to the existence of one or more barriers listed in attachment A to Appendix B of the simplified modalities and procedures for small-scale CDM project activities and annex 34 "Non-binding best practise examples to demonstrate additionally for SSC project activities".	OK	OK
B.6. Emissions reductions				
*B.*6.1. *Explanation of methodological choices*				
B.6.1.1. Is it explained how the procedures provided in the methodology are applied by the proposed project activity?	DR	Not all the procedures used to calculate the emission reductions are detailed in the PDD. To be reassessed once **CAR 4** be solved. See Section B.1.1 The final version of the PDD has been revised, and the choices of the applied methodology and tool are clearly indicated.	**CAR 4**	OK
B.6.1.2. Is every selection of options offered by the methodology correctly justified and is this justification in line with the situation verified on-site?	DR	Not all the options are correctly justified in the PDD. See Section B.1.1 – **CAR 4.** Yes, all the chosen options are clearly justified in the final version of the PDD.	**CAR 4**	OK

B.6.1.3. Are the formulae required for the determination of emissions reductions correctly presented and used? *(Open excel, traceability of data, etc)*	DR	No. The Excel spreadsheets are not prepared in an open format. See Section B.4.3 – **CAR 7.** New spreadsheets have been prepared and they are prepared in open format.	**CAR 7**	OK
B.6.1.4 Are all the data and assumptions listed in the PDD and are appropriate and calculations result in a conservative estimate of emissions reductions?	DR	Not all the data have been listed and taken into account in the PDD. See Section B.4.3 – **CAR 5** and **CAR 6** The final PDD includes a complete list of assumptions and data used for the emission reduction calculation.	**CAR 5** **CAR 6**	OK
B.6.2. Data and parameters that are available at validation				
B.6.2.1. Is the list of parameters presented in chapter B.6.2 considered to be complete with regard to the requirements of the applied methodology? Is all the information required for each parameter included?	DR	Yes, the list of parameters available at the validation stage is considered complete and in accordance with the "*Tool to calculate the emission factor of the grid*".	OK	OK

B.6.2.2. Are all the data derived from official data sources or replicable records and have been correctly quoted?	DR	To be assessed once the CAR 4 and CAR 5 be solved (Section B.1.1 and B.4.3) The revised PDD has been provided. Nevertheless, as it has been previously detailed, it has been detected that the value chosen for the Net Calorific Value of the residual fuel oil is not in accordance with the IPCC 2006 Standard. Furthermore, there is an inconsistency regarding this value between page 23 and Annex 3. See Section B.1.1 – **CAR 4** See Section B.4.3 – **CAR 5** The final version of the PDD includes all official data sources, and they are considered correctly chosen and quoted.	**CAR 4** **CAR 5**	OK
B.6.2.3. For each parameter: a. Title in line with Methodology? b. Data unit correctly expressed? c. Appropriate description? d. Source clearly referenced? (and appropriate?) e. Correct value provided? f. Has this value been verified? g. Choice of data correctly justified? h. Measurement method correctly described?	DR	To be assessed once the CAR 4 and CAR 5 be solved (Section B.1.1 and B.4.3) The last version of the PDD includes the most of the required information of each one of the parameters. Nevertheless, the value chosen for residual fuel oil is not in accordance with the IPCC 2006 Standard. See Section B.1.1 – **CAR 4** See Section B.4.3 – **CAR 5** The Section B.6.2 of the final version of the PDD is complete and in accordance with the applied methodology and tool. All the parameters are clearly described and include all the information required by the applied methodology and tool.	**CAR 4** **CAR 5**	OK

B.6.2.4. Will the data and parameters result in a conservative estimate of emissions reductions	DR	To be assessed once the CAR 4 and CAR 5 be solved *(*Section B.1.1 and B.4.3*)* Yes. The values chosen for the Emission Factor and the Net Calorific Values of the fuels are considered conservative since the lower data of the confidence interval has been chosen. Nevertheless, it has been detected a mistake in the factor for the residual fuel oil, as it has been detailed. See Section B.1.1 – **CAR 4** See Section B.4.3 – **CAR 5** As it has been previously detailed all the values of the parameters are chosen in accordance with the requirements of the applied methodology and tool, and result in a conservative estimate of the emissions reductions.	**CAR 4** **CAR 5**	OK
*B.*6.3 *Calculation of GHG Emission Reductions – Baseline Emissions* *It is assessed whether the baseline emissions are stated according to the methodology and whether the argumentation for the choice of default factors and values – where applicable – is justified.*				
B.6.3.1 Are the calculations documented according to the approved methodology and in a complete and transparent manner?	DR	Not all the calculations have been made in accordance with the approved methodology AMS.I.D as it has been detailed in previous sections. See B.4.3 – **CAR 5, CAR 6, CAR 7, CAR 8** and **CL 6** The PDD has been revised to address the required issues, and the data have been provided. The spreadsheets published by the UNFCCC have been used to calculate the lambda factor. Thus, it is considered that all the calculations are made according to the applied methodology and tool..	**CAR 5** **CAR 6** **CAR 7** **CAR 8** **CL 6**	OK

B.6.3.2. Have conservative assumptions been used when calculating the baseline emissions?	DR	To be assessed once the CAR 4 and CAR 5 be solved (Section B.1.1 and B.4.3) See Section B.1.1 – **CAR 4** See Section B.4.3 – **CAR 5** The new calculations are considered conservative since the values chosen for the Emission Factor and the Net Calorific Values of the fuels are the lower data of the confidence interval, in accordance with provisions stated in the relevant tool.	**CAR 4** **CAR 5**	OK
B.6.3.3 Are uncertainties in the baseline emission estimates properly addressed?	DR	No uncertainities have been detected. The new calculations are not considered in accordance with the relevant Tool since the lambda calculation is not transparently prepared. See B.4.3 – **CAR 5** and **CAR 6** Once the CARs have been solved it is considered that the uncertainties have been correctly addressed.	~~OK~~ **CAR 5** **CAR 6**	OK
B.6.3.4. Is additional background information on baseline data provided in Annex 3 of the PDD? Is this information consistent with data presented by other sections of the PDD?	DR	Yes, Annex 3 contains background information regarding the baseline calculation. To be assessed once the CAR 4 and CAR 5 be solved (Section B.1.1 and B.4.3) This information is considered consistent.	**CAR 4** **CAR 5**	OK
B.6.4 Calculation of GHG Emission Reductions – Project Emissions *It is assessed whether the project emissions are stated according to the methodology and whether the argumentation for the choice of default factors and values – where applicable – is justified.*				

B.6.4.1 Are the calculations documented according to the approved methodology and in a complete and transparent manner?	DR	Not applicable since no project emissions have been taken into account in accordance with the relevant methodology.	OK	OK
B.6.4.2. Have conservative assumptions been used when calculating the project emissions?	DR	Not applicable.	OK	OK
B.6.4.3 Are uncertainties in the project emission estimates properly addressed?	DR	Not applicable.	OK	OK
B.6.5. Calculation of GHG Emission Reductions – Leakage *It is assessed whether leakage emissions are stated according to the methodology and whether the argumentation for the choice of default factors and values – where applicable – is justified.*				
B.6.5.1 Are the leakage calculations documented according to the approved methodology and in a complete and transparent manner?	DR	Not applicable since no leakages have been taken into account in accordance with the relevant methodology.	OK	OK
B.6.5.2. Have conservative assumptions been used when calculating the leakage emissions?	DR	Not applicable.	OK	OK
B.6.5.3. Are uncertainties in the leakage emission estimates properly addressed?	DR	Not applicable.	OK	OK
B.6.6. Ex-ante calculation of emissions reductions				

B.6.6.1. Are the GHG calculations documented in a complete and transparent manner? Are all the calculations correct?	DR	To be assessed once the CAR 4 and CAR 5 be solved *(*Section B.1.1 and B.4.3*)* The calculation of the ex-ante emissions reductions is considered transparent and completely documented since the spreadsheets have been provided. Nevertheless, the calculations are not considered correct as it has been detailed in previous sections. See B.4.3 – **CAR 5** and **CAR 6.** Once the CARs have been solved, it is considered that the calculation of the emissions reductions is complete and correctly documented.	**CAR 5** **CAR 6**	OK
B.6.6.2. Is the data provided in this section consistent with data as presented in other chapters of the PDD?	DR	To be assessed once the CAR 4 and CAR 5 be solved *(*Section B.1.1 and B.4.3*)* There has been detected in the last version of the PDD an inconsistency regarding the NCV value of a fuel. See B.4.3 – **CAR 5** and **CAR 6.** Yes, data provided are consistent in all sections of the PDD.	**CAR 5** **CAR 6**	OK
B.6.7. Summary of the ex-ante estimation of emissions reductions				
B.6.7.1. Will the project result in fewer GHG emissions than the baseline scenario?	DR	The project will result in fewer GHG emissions than the baseline scenario as it is demonstrated in the Section B.6 of the PDD.	OK	OK

B.6.7.2. Are the emissions reductions projected in line with the envisioned time schedule for the project' implementation and the indicated crediting period?	DR	As it has been detailed in Section B.4.3 there has been detected an inconsistency regarding the period of time used for the calculation of the emission reductions. See Section B.4.3 – **CAR 8**. The last version of the PDD has been corrected and the emissions reductions projected are in line with the envisioned time schedule for the project.	**CAR 8**	OK
B.7. Application of the monitoring methodology and description of the monitoring plan				
B.7.1. Description of the monitoring plan				
B.7.1.1 Is the monitoring plan documented according to the approved methodology and relevant tools and in a complete and transparent manner?	DR	Yes, the selected monitoring methodology is the AMS.I.D "*Grid connected renewable electricity generation*" and the "*Tool to calculate the emission factor of the grid*" and they are clearly referenced in the PDD. According to UNFCCC, the methodology and tool are applicable to hydroelectric projects connected to the grid as Ishasha hydroelectric project activity. The appropriateness of the methodology is justified in the PDD.	OK	OK

B.7.1.2. Does the monitoring methodology provide a consistent approach in the context of all parameters to be monitored and further information provided in the PDD?	DR	According to the AMS.I.D, the main considered parameter to monitor the emissions reductions is the annual electricity generation of the Ishahsa small hydropower plant. The PDD published for Global Stakeholder Consultation included that a diesel generator may be installed at the plant to provide emergency power to the power house in the event of main grid black-outs. But, during validation activities the PP decided to modify the design of the power plant, and it has been removed from the PDD. See Section B.7.2.1 – **CL 9.** Once the CL 9 has been clarified it is considered that the monitoring plan is consistent and in accordance with the applied methodology.	**CL 9**	OK
B.7.1.3. Does the monitoring plan provide a clear description of the organisation structure involved in monitoring activities and their responsibilities?	DR	Yes, the monitoring plan states a real and clear description of the organisational structure since it has been allocated a CDM Manager and a Operational Manager in order to manage the Monitoring Plan.	OK	OK
B.7.1.4. If applicable: Does annex 4 provide useful information enabling a better understanding of the envisioned monitoring provisions?	DR	Yes, Annex 4 provides additional information of the Monitoring Plan, nevertheless, it is not considered complete. **CAR 11 - The annex 4 of the PDD including the monitoring plan information is incomplete.** In the last PDD, the Annex 4 has been revised and reinforced to include further information of the monitoring activities. This Annex enables a better understanding of the monitoring activities.	**CAR 11**	OK
B.7.1.5. Is the registration, monitoring, measurement and reporting procedure defined?	DR	Yes, procedures have been defined for the monitoring and reporting activities in the Monitoring Plan of the PDD.	OK	OK

B.7.2 Compliance of the monitoring plan with the approved methodology				
B.7.2.1 Is the list of parameters considered to be complete with regard to the requirements of the applied methodology? Are all of them clearly described in the monitoring plan and in accordance with the methodology and tools?	DR	There are two parameters to be monitored, the net electricity generation and the operating hours of a diesel generator. Nevertheless, several issues shall be clarified. **CL 9 – The location of the electricity meters shall be clarified since the parameter to be monitored shall be the net electricity generation.** The PDD has been revised to clearly indicate the location of the installation of the electric meter. The meter is installed after the transformer and before the connection to the Uganda national grid. Once **CL 9 has been clarified** it is considered that the list of the monitoring parameters is complete and in accordance with the applied monitoring methodology.	**CL 9**	OK
B.7.2.2. Does the monitoring plan provide for the collection and archiving of all relevant data necessary for estimation or measuring the emission reductions within the project boundary during the crediting period?	DR	As it has been previously detailed, the only parameter to be monitored, in accordance with the applied methodology *(*taken into account that the emission factor of the grid is fix ex-ante*)* is the electricity generation of the power plant. The collection of the data, as well as it archiving is detailed in the Monitoring plan of the PDD. Nevertheless, several issues shall be clarified, as it has been previously detailed. See section B.7.2.1 – **CL 9.** Once CL 9 is clarified it is considered that the monitoring plan provides for the collection and archiving of all relevant data.	**CL 9**	OK

B.7.2.3. For each parameter, is the: a. Title in line with methodology? b. Data unit correctly expressed? c. Parameter appropriately described? d. Source clearly referenced? e. Correct value provided for the purpose of PDD estimations? f. Has this value been verified? g. Measurement methods correctly described and in line with the methodology/tools? h. Correct reference to standards (i.e. for calibration and maintenance)? i. Indication of accuracy provided? j. QA/QC procedures described? k. QA/QC procedures appropriate?	DR	As it has been previously detailed, there are two parameters to be monitored, the net electricity generation and the operating hours of a diesel generator. Furthermore, the title of the electricity generation is not in line with the applied methodology and tool. See Section B.7.2.1 – **CL 9.** The final version of the PDD details the monitoring parameters in accordance with the applied methodology. Furthermore, its description and the information of them are correctly expressed and complete.	**CL 9**	OK
B.7.3 Implementation of the Monitoring Plan				

B.7.3.1 Do the means of monitoring of each of the parameters included in the plan complies with the requirements of the methodology?	DR	Not all the monitoring activities are clearly explained in the PDD. **CL 10 – The double check process of the net electricity generation shall be clarified.** There will be a redundant *(*i.e., double check*)* metering system, consisting of main and back up meters installed at the electricity delivery points to determine the volume of electricity supplied to the grid. This is further described in Section A.2 and B.7.2. of the final PDD.	**CL 10**	OK
B.7.3.2. Is the measurement equipment described and deemed appropriate?	DR	The metering system is described in the PDD. Nevertheless, the location of the meters and the double check process shall be clarified as it has been previously detailed. See section B.7.2.1 and B.7.3.1 – **CL 9** anc **CL 10.** The final version of the PDD details in a complete manner the measurement equipment.	**CL 9** **CL 10**	OK
B.7.3.3. Are procedures identified for maintenance of monitoring equipment and installations? Are provisions regarding the calibration intervals included in the monitoring plan?	DR	In accordance with the PDD, the measurement equipment will be calibrated according to relevant industry standards of Uganda. Nevertheless, the monitoring plan shall be reinforced. **CL 11 - Provisions regarding the monitoring data adjustments and uncertainties, internal reviews, corrective and preventative actions and audits should be included in the Monitoring Plan of the PDD.** The Monitoring Plan Section has been reinforced including all the required issues.	**CL 11**	OK

B.7.3.4. Is the measurement accuracy addressed and deemed appropriate? Are procedures in place on how to deal with erroneous measurements or lack of data?	DR	No, there are not detailed procedures to address the accuracy of the data. See Section B.7.3.3 – **CL 11** The final version of the PDD details procedures to address the accuracy of the data.	**CL 11**	OK
B.7.3.5. Is the monitoring Plan sufficient to ensure the verification of a proper implementation of the monitoring plan?	DR	To be assessed once the **CL 9, CL 10** and **CL 11** be solved. Once the CLs are clarified, it is considered that the monitoring plan is sufficient to ensure the verification of the monitoring of the emission reductions.	**CL 9** **CL 10** **CL 11**	OK
B.8. Date of completion of the application of the baseline study and monitoring methodology and the name of the responsible person(s)/entity(ies)				
B.8.1. Is there any indication of a date when the baseline and monitoring was determined?	DR	No, there is not any indication regarding the date when the baseline and monitoring was determined. **CAR 12 – The indication of a date when the baseline and monitoring was determined shall be included in the PDD and this section shall be edited in accordance with "*Guidelines for Completing the Project Design Document (CDM-PDD) and the Proposed New Baseline and Monitoring Methodologies (CDM-NM)*".** The last version of the PDD includes the required information.	**CAR 12**	OK
B.8.2. Is this consistent with the time line of the PDD history?	DR	To be assessed once the CAR 12 be solved. The date stated in the last PDD is consistent with the timeline of the PDD since is the same date of the PDD.	**CAR 12**	OK

B.8.3. Is the information on the person(s)/entity(ies) responsible for the application of the baseline and monitoring methodology provided consistent with the actual situation?	DR I	To be assessed once the CAR 12 be solved. The information of the people involved is included in the PDD and it is considered consistent since it corresponds to one of the PP.	**CAR 12**	OK
B.8.4. Is information provided whether this person / entity is also considered a project participant? *(Guidelines for Completing the Project Design Document (CDM-PDD) and the Proposed New Baseline and Monitoring Methodologies (CDM-NM)*	DR	To be assessed once the CAR 12 be solved. Yes, information regarding whether this person / entity is also considered a project participant is included in this section, thus **CAR 12 is closed**.	**CAR 12**	OK
C. DURATION OF THE PROJECT ACTIVITY / CREDITING PERIOD				
C.1. Duration of the project activity				
C.1.1. Are the project's starting date and operational lifetime clearly defined and reasonable?	DR	According to section C.1.1 of the GSC PDD the starting date of the project activity is expected to be 01 April 2009 as expected commissioning date, having an expected operational lifetime of the project of 20 to30 years. See Section B.5.1 – **CAR 9** As detailed in section B.5.1, the start date detailed in the last version of the PDD,...	**CAR 9**	OK
C.2. Choice of the crediting period and related information				

C.2.1. Is the assumed crediting period clearly defined and reasonable (a maximum renewable crediting period of 7 years with the potential for 2 renewals or maximum fixed crediting period of 10 years)? And, is the starting date of the corrected crediting period considered?	DR	The project has chosen a fixed crediting period of 10 years. See Section A.5.3.3. – **CAR 3** The final PDD has included a realistic date for the starting date of the crediting period, or the registration date, whichever is later.	**CAR 3**	OK
D. ENVIRONMENTAL IMPACTS				
D.1. Documentation on the analysis of the environmental impacts, including transboundary impacts				

D.1.1. Has the analysis of the environmental impacts of the project activity been sufficiently described in the PDD?	DR	Yes, the Environmental Impact Assessment Study has been summarised in Section D of the PDD. As is indicated in PDD section D.1 and E.1, an Environmental and Social Impact Assessment (ESIA) and a Resettlement Action Plan (RAP) were required by the Ugandan regulations. The project has received the approval from the National Environmental Management Authority (NEMA). Due to this permit, the project company has committed itself to participate in Environmental Management and Monitoring Plans. Elements of the plan are contained in the ESIA report as approved. **CL 12 - The Resettlement Action Plan, the Environmental and Social Impact Assessment (ESI) and its approval by the National Environment Management Agency (NEMA) shall be provided to the Validation Team.** The documentation has been provided to the validation team, and it is considered that the description of the environmental impacts is consistent with those documents.	**CL 12**	OK

D.1.2. Are there any Host Party requirements for an Environmental Impact Assessment (EIA), and if yes, has an EIA been approved?	DR	See section D.1.1 – **CL 12** Yes, as it is indicated in PDD section D.1 and E.1, an Environmental and Social Impact Assessment (ESIA) and a Resettlement Action Plan (RAP) were required by the Ugandan regulations. The project has received the approval from the National Environmental Management Authority (NEMA). Due to this permit, the project company has committed itself to participate in Environmental Management and Monitoring Plans. Elements of the plan are contained in the ESIA report as approved.	**CL 12**	OK
D.1.3. Will the project create any adverse environmental effects? Has any environmental impact identified as significant?	DR	See section D.1.1 – **CL 12** The identified potential negative social impacts reported in the ESIA are included in the PDD section D.2. The main issues detected are the use of land, the potential resettlement of local inhabitants, the reduction of river flow and some aspects or safety.	**CL 12**	OK
D.1.4. Are trans-boundary environmental impacts identified in the analysis?	DR	See section D.1.1 – **CL 12** Due to the nature of the project, there are no trans-boundary environmental impacts.	**CL 12**	OK
D.1.5. Does the project comply with any other environmental legislation in the host country?	DR	During the on-site visit, the DNA of Uganda was interviewed and they confirmed that the project activity complies with the current environmental legislation.	OK	OK

D.2. If environmental impacts are considered significant by the project participants or the host Party, please provide conclusions and all references to support documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the host Party.				
D.2.1. Have the identified environmental impacts been addressed in the PDD sufficiently?	DR	Yes, the PDD includes a summary of the impacts of the project activity. This issue is considered sufficient and appropriate managed in the PDD.	OK	OK
E. STAKEHOLDERS' COMMENTS				
E.1. Brief description how comments by local stakeholders have been invited and compiled				
E.1.1. Have relevant local stakeholders been consulted prior to the publication of the PDD? Is the exact date of the consultation process included in the PDD?	DR	Yes, stakeholder consultations have been done at local and national levels, and they are described at the section E of the PDD. The exact dates are included in the text of the section E.1 of the PDD. **CL 13 - Evidence or/and registers of the stakeholder consultations and of the comments received shall be provided to AENOR.** The evidence has been provided to the validation team and the information included in the PDD is in accordance with the referred documentation. **CL 14 - The dates of the events should be included in a consistent way in the PDD, thus, the table included in section E.1 of the PDD shall be complete.** The Section E.1 has been accordingly completed.	**CL 13** **CL 14**	OK
E.1.2. Have appropriate media been used to invite comments by local stakeholders?	DR I	Yes, the media is considered appropriate.	OK	OK

E.1.3. If a stakeholder consultation process is required by regulations/laws in the host country, has the stakeholder consultation process been carried out in accordance with such regulations/laws?	DR I	Yes. The consultation was made in accordance with the regulation as it has been confirmed during the on site visit in the interview with the DNA.	OK	OK
E.1.4. Is the undertaken stakeholder process that was carried out described in a complete and transparent manner?	DR I	The process has been performed in a complete and transparent manner.	OK	OK
E.2. Summary of the comments received				
E.2.1. Is a summary of the stakeholder comments received provided?	DR I	Yes, a summary has been included in the PDD.	OK	OK
E.3. Report on how due account was taken of any comments received				
E.3.1. Has due account been taken of any stakeholder comments received?	DR I	All the questions were answered and the way to take into account is included in the PDD.	OK	OK