



VALIDATION REPORT ICF INTERNATIONAL

VALIDATION OF THE “REFURBISHMENT OF ENGURI HYDRO POWER PLANT, GEORGIA”

REPORT NO. UKRAINE-VAL/0283/2011

REVISION NO. 04

BUREAU VERITAS CERTIFICATION

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VALIDATION REPORT

BUREAU
VERITAS

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Client: ICF International	Client ref.: Mark Allington

Summary:

Bureau Veritas Certification has made the validation of the "Refurbishment of Enguri Hydro Power Plant, Georgia" project of ICF International located in Gali Region of Abkhazia, Georgia on the basis of UNFCCC criteria for the CDM, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 12 of the Kyoto Protocol, the CDM rules and modalities and the subsequent decisions by the CDM Executive Board, as well as the host country criteria.

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, and consisted of the following three phases: i) desk review of the project design and the baseline and monitoring plan; ii) follow-up interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final validation report and opinion. The overall validation, from Contract Review to Validation Report & Opinion, was conducted using Bureau Veritas Certification internal procedures.

The first output of the validation process is a list of Clarification and Corrective Actions Requests (CL and CAR), presented in Appendix A. Taking into account this output, the project proponent revised its project design document.

In summary, it is Bureau Veritas Certification's opinion that the project correctly applies the baseline and monitoring methodology ACM0002 "Consolidated baseline methodology for grid-connected electricity generation from renewable sources" version 12.1.0 and meets the relevant UNFCCC requirements for the CDM and the relevant host country criteria.

Report No.: UKRAINE-val/0283/2011	Subject Group: CDM
Project title: "Refurbishment of Enguri Hydro Power Plant, Georgia"	
Work carried out by: Ivan Sokolov – Team Leader, Climate Change Lead Verifier Leonid Yaskin – Team Member, Climate Change Lead Verifier Kateryna Zinevych – Team Member, Climate Change Verifier Denis Pishchalov – Financial Specialist	
Internal Technical Review carried out by: Ashok Mammen – Internal Technical Reviewer	
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Work approved by:

Flavio Gomes – Operational Manager

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1 INTRODUCTION

ICF International has commissioned Bureau Veritas Certification to validate its CDM project "Refurbishment of Enguri Hydro Power Plant, Georgia" (hereafter called "the project") at Gali Region of Abkhazia, Georgia.

This report summarizes the findings of the validation of the project, performed on the basis of UNFCCC criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

1.1 Objective

The validation serves as project design verification and is a requirement of all projects. The validation is 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 is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of certified emission reductions (CERs).

UNFCCC criteria refer to Article 12 of the Kyoto Protocol, the CDM rules and modalities and the subsequent decisions by the CDM Executive Board, as well as the host country criteria.

1.2 Scope

The validation scope is defined as an independent and objective review of the project design document, the project's baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against Kyoto Protocol requirements, UNFCCC rules and associated interpretations.

The validation is not meant to provide any consulting towards the Client. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the project design.

1.3 Validation team

The validation team consists of the following personnel:

FUNCTION	NAME	CODE HOLDER*	TASK PERFORMED
Lead Verifier	Ivan Sokolov	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> DR <input checked="" type="checkbox"/> SV <input type="checkbox"/> RI
Verifier	Leonid Yaskin	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> DR <input type="checkbox"/> SV <input type="checkbox"/> RI
Verifier	Kateryna Zinevych	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> DR <input checked="" type="checkbox"/> SV <input checked="" type="checkbox"/> RI
Financial	Denis Pishchalov	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> DR <input type="checkbox"/> SV <input type="checkbox"/> RI

**Specialist****Internal**

Ashok Mammen

Technical**Reviewer (ITR)**☒ Yes ☐ No ☐ DR ☐ SV ☒ RI

*DR = Document Review; SV = Site Visit; RI = Report issuance

2 METHODOLOGY

The overall validation, from Contract Review to Validation Report & Opinion, was conducted using Bureau Veritas Certification internal procedures.

In order to ensure transparency, a validation protocol was customized for the project, according to the version 01.2 of the Clean Development Mechanism Validation and Verification Manual, issued by the Executive Board at its 55th meeting on 30/07/2010. The protocol shows, in a transparent manner, criteria (requirements), means of validation and the results from validating the identified criteria. The validation protocol serves the following purposes:

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

The completed validation protocol is enclosed in Appendix A to this report.

2.1 Review of Documents

The Project Design Document (PDD) submitted by ICF Consulting on 24th of May 2011 and additional background documents related to the project design and baseline, i.e. country Law, Guidelines for Completing the Project Design Document (CDM-PDD), Approved methodology, Kyoto Protocol, Clarifications on Validation Requirements to be Checked by a Designated Operational Entity were reviewed.

To address Bureau Veritas Certification corrective action and clarification requests, ICF International revised the PDD and resubmitted it on 23rd of June 2011, 30th of June 2011 and 20th of July 2011. After issuing the ITR conclusion PDD developer has issued new version of PDD as of 05 dated 01/09/2011.

The validation findings presented in this report relate to the project as described in the PDD versions 1, 2, 3, 4, 5 and 6.

2.2 Follow-up Interviews

On 26.05.2011 - 27.05.2011 Bureau Veritas Certification performed site visit interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of Engurhesi Limited, ICF International were interviewed (see References). The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

Interviewed organization	Interview topics
Engurhesi Limited	<ul style="list-style-type: none"> ➤ Project history ➤ Project approach ➤ Project boundary ➤ Implementation schedule ➤ Organizational structure ➤ Responsibilities and authorities ➤ Training of personnel ➤ Quality management procedures and technology ➤ Rehabilitation/Implementation of equipment (records) ➤ Metering equipment control ➤ Metering record keeping system, database ➤ Technical documentation ➤ Monitoring plan and procedures ➤ Permits and licenses ➤ Local stakeholder's response
CONSULTANT: ICF International	<ul style="list-style-type: none"> ➤ Baseline methodology ➤ Monitoring plan ➤ Additionality proofs ➤ Prior consideration ➤ Calculation of emission reductions

2.3 Resolution of Clarification and Corrective Action Requests

The objective of this phase of the validation is to raise the requests for corrective actions and clarification and any other outstanding issues that needed to be clarified for Bureau Veritas Certification positive conclusion on the project design.

Corrective Action Requests (CAR) is issued, where:



- (a) The project participants have made mistakes that will influence the ability of the project activity to achieve real, measurable additional emission reductions;
- (b) The CDM requirements have not been met;
- (c) There is a risk that emission reductions cannot be monitored or calculated.

The validation team may also use the term Clarification Request (CL), if information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met.

To guarantee the transparency of the verification process, the concerns raised are documented in more detail in the verification protocol in Appendix A.

2.4 Internal Technical Review

The validation report underwent an Internal Technical Review (ITR) before requesting registration of the project activity.

The ITR is an independent process performed to examine thoroughly that the process of validation has been carried out in conformance with the requirements of the validation scheme as well as internal Bureau Veritas Certification procedures.

The Lead Verifier provides a copy of the validation report to the reviewer, including any necessary validation documentation. The reviewer reviews the submitted documentation for conformance with the validation scheme. This will be a comprehensive review of all documentation generated during the validation process.

When performing an Internal Technical Review, the reviewer ensures that:

The validation activity has been performed by the team by exercising utmost diligence and complete adherence to the CDM rules and requirements.

The review encompasses all aspects related to the project which includes project design, baseline, additionality, monitoring plans and emission reduction calculations, internal quality assurance systems of the project participant as well as the project activity, review of the stakeholder comments and responses, closure of CARs, CLs and FARs during the validation exercise, review of sample documents.

The reviewer compiles clarification questions for the Lead Verifier and Validation Team and discusses these matters with Lead Verifier.



After the agreement of the responses on the 'Clarification Request' from the Lead Verifier as well as the PP(s) the finalized validation report is accepted for further processing such as uploading on the UNFCCC webpage.

3 VALIDATION CONCLUSIONS

In the following sections, the conclusions of the validation are stated.

The findings from the desk review of the original project design documents and the findings from interviews during the follow up visit are described in the Validation Protocol in Appendix A.

The Clarification and Corrective Action Requests are stated, where applicable, in the following sections and are further documented in the Validation Protocol in Appendix A. The validation of the Project resulted in 38 Corrective Action Requests (CARs) and 7 Clarification Requests (CLs).

The CARs and CLs were closed based on adequate responses from the Project Participant(s) which meet the applicable requirements. They have been reassessed before their formal acceptance and closure.

The number between brackets at the end of each section correspond to the VVM paragraph.

3.1 Approval (49-50)

A letter of approval has been received from the Host Party (Georgia) by the Minister of Environment Protection and Natural Resources of Georgia #08-01-12/4149 dated 28th of December 2007.

Bureau Veritas Certification received this letter from ICF International and does not doubt its authenticity since it has all the signs of the authenticity (signature, reference number, contact data etc), which are easy to trace.

The title and contents of the letter of approval refer to the precise proposed CDM project activity title in the PDD being submitted for registration.

Bureau Veritas Certification considers the letters are in accordance with paragraphs 45 - 48 of the VVM.

3.2 Participation (54)

The participation for each project participant has been approved by a Party of the Kyoto Protocol.



The validation team concluded this by seeing the authentic Letter of Approval by Georgian DNA (#08-01-12/4149 dated 28th of December 2007).

3.3 Project design document (57)

The validation team hereby confirms that the PDD complies with the latest forms of the guidance documents for completion of PDD.

3.4 Changes in the Project Activity

During the site visit following changes were observed in project as compared to details mentioned in webhosted PDD:

1. The CDM project activity includes the corresponding rehabilitation activities include improvements to the dam structure and reduction in leakages from the high pressure pipeline.
2. Repair of the water gates at the dam site.
3. Completion of the grouting work at the dam galleries and pressure tunnel.

During the site visit it was revealed that all the abovementioned actions described in the PDD version 1 dated 09/05/2011 were not parts of the CDM project implementation but of the investment project conducted separately. It was evidenced on-site and with the help of supporting documentation (see Reference), which helped to describe project boundaries.

The final PDD ver 4 has following changes as compared to PDD ver 1 that was webhosted.

3.5 Project description (64)

The process undertaken to validate the accuracy and completeness of the project description included on site checking (see References for the documents collected and pictures taken) and supporting documentation review.

The CDM project activity includes the full-scale rehabilitation of four units of the Enguri HPP (Unit #1, #2, #4, #5). The proposed CDM project activity will increase the overall output from the Enguri HPP, thereby allowing Enguri HPP to produce more electricity without the need to construct an additional power plant. The CDM project will reduce the need to use electricity based on fossil fuel combustion. The overall reduction of GHG during the crediting period is estimated at an average of 730,478 tonnes of CO₂ equivalent (CO_{2eq}) per year or 7,304,785 tonnes of CO_{2eq} over a ten year crediting period (1 October 2011 to 30 September 2021), by offsetting more carbon-intensive electricity production from the Georgian electric grid.



The DOE hereby confirms that the project description in PDD version 4 dated 20/08/2011 is accurate and complete in all respects and that there are no changes to the project activity/design or boundary as compared to the webhosted PDD.

3.6 Baseline and monitoring methodology

3.6.1 General requirement (76-77)

The steps taken to assess the relevant information contained in the PDD against each applicability condition are described below. Project applies approved consolidated methodology ACM0002 (Version 12.1.0). According to this methodology following applicability conditions and their assessment was provided:

Applicability condition (a) "This methodology is applicable to grid-connected renewable power generation project activities that (a) install a new power plant at a site where no renewable power plant was operated prior to the implementation of the project activity (greenfield plant); (b) involve a capacity addition; (c) involve a retrofit of (an) existing plant(s); or (d) involve a replacement of (an) existing plant(s)": The refurbishment of Enguri hydro power plant is a renewable power generation project activity connected to the Georgian power grid. The project activity belongs to type (c), i.e. it involves a retrofit of the existing plant. During site visit to Enguri HPP validation team observed already rehabilitated Unit#2 and Unit#4 as long as the documents, which prove commissioning dates for the mentioned Units and states that only rehabilitation took place (Operational Acceptance Certificate dated 03/03/2008 related to Unit #2; Operational Acceptance Certificate dated 15/08/2009 related to Unit #4). Validation team states that applicability condition (a) is met.

Applicability condition (b) "The project activity is the installation, capacity addition, retrofit or replacement of a power plant/unit of one of the following types: hydro power plant/unit (either with a run-of-river reservoir or an accumulation reservoir), wind power plant/unit, geothermal power plant/unit, solar power plant/unit, wave power plant/unit or tidal power plant/unit": The refurbishment of Enguri hydro power plant is retrofit of hydro power plant with an accumulation reservoir, which was observed on site by validation team. Validation team states that applicability condition (b) is met.

Applicability condition (c) "In the case of capacity additions, retrofits or replacements (except for wind, solar, wave or tidal power capacity addition projects which use Option 2: on page 11 to calculate the parameter $EG_{PJ,y}$): the existing plant started commercial operation prior to the start of a minimum historical reference period of five years, used for the calculation of baseline emissions and defined in the baseline emission section, and no capacity expansion or retrofit of the plant has been undertaken between the start of this minimum historical reference period and the implementation of the project activity": The refurbishment of Enguri hydro power plant is at the units that have been in operation since 1978-1980. No capacity expansion or retrofit of the plant has been undertaken between the start of the historical reference period and the implementation of the project activity, which was seen on site by the validation team and can be proved by relevant documentation (see References). Validation team states that applicability condition (c) is met.



Applicability condition (d) “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; - 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/m²; - 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/m²”: The project includes an existing reservoir whose volume will not be increased during or after the project implementation. This information is stated in the “*Enguri Dam and Hydroelectric Power station, Georgia. Feasibility study for rehabilitation. Part 1. Technical and economic studies*”. Thus, the condition no.1 is applicable in the case of Enguri project activity, i.e. the project activity is implemented in an existing reservoir, with no change in the volume of reservoir, which was seen on site by the validation team and can be proved by relevant documentation (see References). Validation team states that applicability condition (d) is met.

Applicability condition (e) “This methodology is not applicable to project activities that involve switching from fossil fuels to renewable energy at the site of the project activity, since in this case the baseline may be the continued use of fossil fuels at the site”: The refurbishment of Enguri hydro power plant does not involve switching from fossil fuels to renewable energy at the site, which was seen on site by the validation team and can be proved by relevant documentation (see References). Validation team states that applicability condition (e) is met.

Applicability condition (f) “Biomass fired power plants”: The refurbishment of Enguri hydro power plant does not involve biomass fired power plants which was seen on site by the validation team and can be proved by relevant documentation (see References). Validation team states that applicability condition (f) is met.

Applicability condition (g) “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/m²”: The refurbishment of Enguri hydro power plant does not involve any increase in existing reservoir, which was seen on site by the validation team and can be proved by relevant documentation (see References). Validation team states that applicability condition (g) is met.

Applicability condition (h) “The geographic and system boundaries for the relevant electricity grid can be clearly identified and information on the characteristics of the grid is available”: The boundaries for the Georgian grid system are clearly identified. As per the Georgian DNA, the whole Georgian electricity grid has been considered to calculate the emission factor for Georgia. Hence, in this project, the Georgian electricity grid is defined as the project electricity system.

The DOE hereby confirms that the selected baseline and monitoring methodology ACM0002 “Consolidated baseline methodology for grid-connected electricity generation from renewable sources” version 12.1.0, “Combined Tool to identify the baseline



scenario and demonstrate additionality" version 03.0.0, "Tool for the demonstration and assessment of additionality" version 05.2, "Tool to calculate the emission factor of an electricity system" version 02.2.0 is previously approved by the CDM Executive Board, and is applicable to the project activity, which, complies with all the applicability conditions therein.

The DOE hereby confirms that, as a result of the implementation of the proposed CDM project activity, there are no greenhouse gas emissions occurring within the proposed CDM project activity boundary, which are expected to contribute more than 1% of the overall expected average annual emissions reductions, which are not addressed by the applied methodology.

3.6.2 Project boundary (80)

The DOE validated the project boundary by:

a) During the document review following documentation was assessed in order to distinguish the project boundary:

- Contract agreement dated 25/11/2002 on Enguri HPP Rehabilitation (between Engurhesi Ltd. And Voith Siemens Hydro Kraftwerkstechnik GmbH & Co.KG.
- Letter #28/151-9 dated 15/06/2009 concerning technical information on Hydro Power Plants of "ENERGO-PRO Georgia" JSC
- Protocol CW04-09/2008, Engurhesi Rehabilitation Project, Georgia (unit #4)
- Protocol CW47-49, Engurhesi Rehabilitation Project, Georgia (unit #3)
- Expected Cost of Rehabilitation of the Technology (for Unit #1 and Unit #5) as on Dec 2005
- Protocol CW39, Engurhesi Rehabilitation Project, Georgia (Status of Rehabilitation Works), dated 27/09/2005
- Operational Acceptance Certificate dated 03/03/2008 related to Unit #2
- Operational Acceptance Certificate dated 15/08/2009 related to Unit #4

b) Observations made during the site visit at "Engurhesi" LTD revealed rehabilitated Unit #2 and Unit #4 (please see References for the list of pictures taken, pictures are also available upon request). The visit to the dam revealed that no reservoir expansion was provided.

Based on the above assessment, the DOE hereby confirms that the identified boundary and the selected sources and gases are justified for the project activity.

3.6.3 Baseline identification (87-88)

The steps taken to assess the requirement given in paragraph 81 and 82 of the VVM are described below:

PDD identifies the baseline for the proposed CDM project activity, defined 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. The continuation of current situation was chosen as a baseline scenario.

According to the ACM 0002 ver.12.1.0. "Combined tool to identify the baseline scenario and demonstrate additionality" is applied for identification of the baseline scenario.



Baseline is identified in accordance to this Tool with the deviations described in respective CARs (CAR34) and explained by the PP's answers.

Though ACM 0002 ver.12.1.0. defines that there should be 3 options for choosing the baseline scenario from the project developer's (Engurhesi) perspective there are only two practical options. Either to implement the rehabilitation project or not to implement the rehabilitation project.

As such, routine maintenance work was always being conducted at the project site to make sure that the equipment continues to keep performing (as of 2005, the plant was expected to have a lifetime till 2012, or 17-18 years). However, the units were both de-rated (operating at lower than optimal/maximum possible capacity) and were also operating inefficiently (i.e. for the same water flow through the turbines would generate less power than what would be possible after the rehabilitation works). Undertaking partial rehabilitation work was not a possibility as the generation units are sequential and for the intended objective to be achieved all the sequence of equipment (turbine, generator) need to be rehabilitated along with the auxiliaries.

In order to validate the adequate identification of the baseline scenario accept for the detailed review of the "Combined tool to identify the baseline scenario and demonstrate additionality" the following documentation was checked:

- Letter #28/151-9 dated 15/06/2009 concerning technical information on Hydro Power Plants of "ENERGO-PRO Georgia" JSC;
- Letter #158/211-a dated 23/06/2001 concerning units of the Enguri Hydro Power Plant, Georgia (information on hours of operation and hours of being in reserve mode since initial commissioning in 1978-1980);
- Charts on rehabilitated and non-rehabilitated units operation (Enguri historical operations, historical hydro rehab data);
- Information dated 12/06/2009 on expected lifetime of Units ##1-5, issued by EDF;
- Power Generation by Customers, Revenue billed and Actual Collection for FY 2003, 2004, 2005 (Engurhesi Ltd);
- Investigating Country Risk and its Relationship to Sovereign Ratings in Emerging Europe, dated 5/06/2007, issued by Standard & Poor's;
- Tariff for 2003;
- Tariff for 2006;
- Baseline emission factor for the electricity system of Georgia (Updated version recommended for the CDM projects), issued by Clean Development Mechanism Designated National Authority of the Ministry of Environment Protection and Natural Resources of Georgia, 2008;
- Letter #65-255 dated 17/06/2005 of Director of Engurhesi CAP(BL);
- Data on active power generation by units for 2005 and units in operation, 2001 (units #1-5).

For these reasons, undertaking only partial rehabilitation work or any other alternative (P3) is not a possibility for the project proponent and the two options that are (Option P1



and P2) have already been considered as part of the Baseline Identification process, (in Step 1) on page 13 of the CDM PDD version 4.

Based on the above assessment, the DOE hereby confirms that:

- (a) All the assumptions and data used by the project participants are listed in the PDD, including their references and sources;
- (b) All documentation used is relevant for establishing the baseline scenario and correctly quoted and interpreted in the PDD;
- (c) Assumptions and data used in the identification of the baseline scenario are justified appropriately, supported by evidence and can be deemed reasonable;
- (d) Relevant national and/or sectoral policies and circumstances are considered and listed in the PDD;
- (e) The approved baseline methodology has been correctly applied to identify the most reasonable baseline scenario and the identified baseline scenario reasonably represents what would occur in the absence of the proposed CDM project activity.

3.6.4 Algorithms and/or formulae used to determine emission reductions (92-93)

The steps taken to assess the requirement outlined in paragraph 89 the VVM are described below:

The steps taken and equations applied to calculate project emissions, baseline emissions, leakage and emission reductions comply with the requirements of the selected baseline and monitoring.

In order to validate the values used in the project emissions and baseline emissions the following documentation was checked:

- Letter #28/151-9 dated 15/06/2009 concerning technical information on Hydro Power Plants of “ENERGO-PRO Georgia” JSC;
- Letter #158/211-a dated 23/06/2001 concerning units of the Enguri Hydro Power Plant, Georgia (information on hours of operation and hours of being in reserve mode since initial commissioning in 1978-1980);
- Charts on rehabilitated and non-rehabilitated units operation (Enguri historical operations, historical hydro rehab data);
- Baseline emission factor for the electricity system of Georgia (Updated version recommended for the CDM projects), issued by Clean Development Mechanism Designated National Authority of the Ministry of Environment Protection and Natural Resources of Georgia, 2008;
- Letter #65-255 dated 17/06/2005 of Director of Engurhesi CAP(BL);
- Data on active power generation by units for 2005 and units in operation, 2001 (units #1-5).

Calculation of Baseline Emission Factor for the Electricity System of Georgia was performed by Georgian DNA, which is Ministry of Environment Protection and Natural Resources of Georgia, according to the Tool to calculate the emission factor of an electricity system version 02.2.0. Algorithm of calculation is properly described in



Annex 2 of the PDD version 06 dated 21st of September 2011. In order to validate the emission factor following documentation was checked:

- “Baseline Emission Factor for the Electricity System of Georgia” by Ministry of Environment Protection and Natural Resources of Georgia dated 2008
- Tool to calculate the emission factor of an electricity system version 02.2.0.
- Statistical data by Ministry of Energy and Natural Resources of Georgia which is published on the website <http://www.minenergy.gov.ge/index.php>
- Letter #28/151-9 dated 15/06/2009 concerning technical information on Hydro Power Plants of “ENERGO-PRO Georgia” JSC

Based on the above assessment, the DOE hereby confirms that:

- (a) All assumptions and data used by the project participants are listed in the PDD, including their references and sources;
- (b) All documentation used by project participants as the basis for assumptions and source of data is correctly quoted and interpreted in the PDD;
- (c) All values used in the PDD are considered reasonable in the context of the proposed CDM project activity;
- (d) The baseline methodology has been applied correctly to calculate project emissions, baseline emissions, leakage and emission reductions;
- (e) All estimates of the baseline emissions can be replicated using the data and parameter values provided in the PDD.

The data used for those calculations was cross-checked with the data provided by the plant (plant technical reports, please see References).

3.7 Additionality of a project activity (97)

The steps taken and sources of information used, to cross-check the information contained in the PDD on this matter are described below:

As per the selected methodology ACM0002, the project proponent is required to establish that the GHG reductions due to the project activity are additional to those that would have occurred in the absence of the CDM project. To do so, the project proponent has to use the latest version of the “Tool for the demonstration and assessment of additionality”.

The following documentation was provided to the validation team in order to assess additionality:

- Power Generation by Customers, Revenue billed and Actual Collection for FY 2003, 2004, 2005 (Engurhesi Ltd)
- Investigating Country Risk and its Relationship to Sovereign Ratings in Emerging Europe, dated 5/06/2007, issued by Standard & Poor’s
- Expected Cost of Rehabilitation of the Technology (for Unit #1 and Unit #5) as on Dec 2005
- Implementing Business Environment Reforms: Experience of Georgia, dated 19/06/2007
- Inflation report for 1 Quarter 2006, issued by National Bank of Georgia
- Bulletin of Monetary and Banking Statistics #4 (106), January-December, 2007, issued by the National Bank of Georgia



- Enguri Hydropower Rehabilitation Project (Financed by the European Bank for Reconstruction and Development), 18th Quarterly Report, January-March 2004, issued by Engurhesi Ltd.
- Enguri Hydropower Rehabilitation Project (Financed by the European Bank for Reconstruction and Development), 19th and 20th Quarterly Reports, April-September 2004, issued by Engurhesi Ltd.
- Enguri Hydropower Rehabilitation Project (Financed by the European Bank for Reconstruction and Development), 21st Quarterly Report, October-December 2004, issued by Engurhesi Ltd.
- Final report on Feasibility Study of Rehabilitation. Part II: Environmental Health and Safety Audit, February 1998

The assessment of the documents revealed their authenticity, reliability and traceability.

3.7.1 Prior consideration of the clean development mechanism (104)

The DOE validated the project activity start date provided in the PDD by checking the authenticity of Minutes of Meeting # 19 of the Board of Directors of “Engurhesi” Ltd., which occurred 21/12/ 2005. The project work was already ceased at Enguri rehabilitation project owing to severe financial problems faced by the project activity for over 24 months + due to additional security threats at the project site.

The Board also agreed to on additional costs (€ 461,000 or US \$ 0.55 million) for Rehabilitation work on Unit # 2. CDM consideration was made prior to any work being started on Unit # 2. Hence, any rehabilitation work taken from the rehabilitation of Unit # 2 was possible due to CDM consideration only. This is evident from EBRD extending additional funding for the project activity to the tune of \$ 10 million (New Commitment) in Second Novation Loan, which covered rehabilitation of existing projects (i.e. Unit # 2, and 4). Discussions with EBRD were started at this stage for CDM and it was only due to CDM that Engurhesi could continue with the project. EBRD loan was finally sanctioned in December 2006 (one of the covenant requires that CDM revenue be used on priority to repay the EBRD loan). This document serves the Start Date definition requirement as per EB41 – Para 67.

The evidences for prior consideration of the CDM that were assessed are listed below:

- 18th Quarterly Project Report
- 19th and 20th Quarterly Project Report
- 21st Quarterly Project Report (Extract on Status of Compliance of the Novation Agreements)
- Minutes of Meeting # 4 of the Board of Directors of “Engurhesi” Ltd.
- 22nd Quarterly Project Report
- 23rd Quarterly project Report
- 24th Quarterly Project Report
- Status Meet Protocol – 2005-09-27; Internal meeting within Voith Siemens (VSH)
- Notification of Suspension due to late Payments from the Employer. The document is from VSH) to Engurhesi.
- Status Meet Protocol – 2005-11-18 (I



- Preliminary Notice on Termination of Contract due to non-payment by the Employer
- Email Communication: ENG; Security measures to be implemented; VSHK/PIU-0449
- Loan Drawdown Advice (from EBRD to Engurhesi) – The payments are made directly to VSH (Disbursement Application # 801)
- Loan Drawdown Advice (from EBRD to Engurhesi) – The payments are made directly to VSH (Disbursement Application # 802)
- Loan Drawdown Advice (from EBRD to Engurhesi) – The payments are made directly to VSH
- This is payment of Grant (Disbursement Application # 207)
- Contract Engurhesi Ltd – Voith Siemens (For Cost Comparison)
- Collections 2003 – 2005
- Minutes of Meeting # 19 of the Board of Directors of “Engurhesi” Ltd.
- Engurhesi Rehabilitation Project, Georgia Status-Protocol
- Emergency Loan from a Domestic Bank in Georgia (Procredit Bank)
- Email Communication: ENG; RE: Enguri: follow-up mobilizing of Contractors Staff; VSHK/PIU-0457
- ICF Contract with EBRD to undertake CDM for Enguri rehabilitation project
- Second Novation Loan being sanctioned to Engurhesi

The evidences for continuing and real actions taken to secure CDM status for the project in parallel with its implementation that were assessed are listed below:

- Carbon Mandate Letter (CML) signed between Engurhesi and ICF
- Email of Engurhesi to DNA
- Georgian Letter of Approval
- Authorization letters of governmental bodies to Engurhesi
- Signed Emission Reduction Purchase Agreement
- Executing the legal documents, required by the ERPA
- Selected emails on document collection in support of PDD
- ICF Contract with EBRD to assist validation of the Enguri rehabilitation project
- Validation contract signed

Based on the above assessment, the DOE hereby confirms that the proposed CDM project activity complies with the requirements of the latest version of the Guidance on prior consideration of CDM.

3.7.1.1 Historical information on project timeline

The planning and implementation status of the proposed project activity is presented below:

- Unit#2. The rehabilitation work was started in January 2006 and was expected to be concluded in 13 months, i.e. by February 2007. However, the rehabilitation work was completed in March 2008.



- Unit#4. The rehabilitation works began in January 2008 and was completed in August 2009.
- Unit#1. The rehabilitation works are expected to begin in July 2010 and expected to be completed by March 2012.
- Unit#5. The rehabilitation works are expected to begin after rehabilitation work of Unit # 1 is completed. The rehabilitation work is expected to start in April 2012 and expected to be completed by March 2013.

3.7.2 Identification of alternatives (107)

The DOE considers the listed alternatives to be credible and complete.

The alternatives to the project scenario where defined as:

- P1: The project activity implemented but not as a CDM project;
- P2: The continuation of the current situation, i.e. to use all power generation equipment that was already in use prior to the implementation of the project activity and undertaking business as usual maintenance.

3.7.3 Investment analysis (114)

No investment analysis was provided for this project.

3.7.4 Barrier analysis (118)

Amongst barrier types listed in the Tool (investment, technological, barriers due to prevailing practice, and other barriers), investment barriers have been identified as dominant in preventing the implementation of the proposed project activity. Particularly, the following investment barriers:

- ***Lack of Private Capital***

In order to validate the barrier of lack of private capital the following documents were analyzed:

- The credit rating of Georgia provided, for example, by Standard & Poor's (<http://www.standardandpoors.com/prot/ratings/entity-ratings/en/eu/?entityID=278577§orCode=SOV>
<http://www.standardandpoors.com/prot/ratings/entity-ratings/en/eu/?entityID=279239§orCode=FI>)
- Investigating Country Risk and its Relationship to Sovereign Ratings in Emerging Europe, dated 5/06/2007, issued by Standard & Poor's
- National Bank of Georgia, Bulletin of Monetary and Banking Statistics (January-December, 2006) (<http://www.nbg.gov.ge/uploads/publications/bulletinstatistics/nbg7.6moneratylfiscareview06eng.pdf>)
- Bulletin of Monetary and Banking Statistics #4 (106), January-December, 2007, issued by the National Bank of Georgia
- Expected Cost of Rehabilitation of the Technology (for Unit #1 and Unit #5) as on Dec 2005



- Implementing Business Environment Reforms: Experience of Georgia, dated 19/06/2007
- Inflation report for 1 Quarter 2006, issued by National Bank of Georgia
- Second Novation Loan Agreement (Enguri Hydro Power Plant Rehabilitation Project), dated 29/12/2006 (Execution copy, operation #734).

EBRD was able to lend to Engurhesi only due to the promise that CER revenue will be used to repay its loan (which are independent of the collection ratios), which can be proved by the quotation from the Second Novation Loan Agreement Article III – EXECUTION OF THE PROJECT, Section 3.01. Other Affirmative Project Covenants, chapter (e), which says that Borrower (Engurhesi) shall “undertake and/or procure that all necessary steps are taken to enable the Project to qualify for the Clean development Mechanism and ensure that the funds raised through the CDM are used in priority for meeting the Borrower’s and the Novation Project Company’s obligations regarding the Project;” (please refer to References).

- ***Risks due to level of tariff***

In order to validate the barrier of risk due to level of tariff the following documents were analyzed:

- Tariff for 2003
- Tariff for 2006

- ***Risks due to low collection rates***

In order to validate the barrier of risk due to low collection rates the following documents were analyzed:

- Sum of all total billed and total non collected energy payments from chart on website <http://www.minenergy.gov.ge> in the section Energy Statistics & Forecasts » Electricity » Combined Collections and Commercial Losses
- Power Generation by Customers, Revenue billed and Actual Collection for FY 2003, 2004, 2005 (Engurhesi Ltd)

- ***Exchange Rate Risks***

In order to validate the barrier of exchange rate risks the following documents were analyzed:

- Minutes of Meeting # 4 of the Board of Directors of “Engurhesi” Ltd.
- Loan Drawdown Advice (from EBRD to Engurhesi) – The payments are made directly to VSH (Disbursement Application # 801)
- Loan Drawdown Advice (from EBRD to Engurhesi) – The payments are made directly to VSH (Disbursement Application # 802)
- Loan Drawdown Advice (from EBRD to Engurhesi) – The payments are made directly to VSH
- This is payment of Grant (Disbursement Application # 207)
- Minutes of Meeting # 19 of the Board of Directors of “Engurhesi” Ltd.
- Emergency Loan from a Domestic Bank in Georgia (Procredit Bank)



- Second Novation Loan being sanctioned to Engurhesi

The rehabilitation of units at such a scale as in the proposed project activity requires large capital investment. Consequently, the identified investment barriers preventing to carry out the proposed activity would also apply to the P1 scenario: The project activity not implemented as a CDM project, hindering its implementation. Yet, scenario of P2: The continuation of the current situation would not be affected by investment barriers, as additional capital is not required to continue existing operations.

The DOE hereby confirms that the barrier analysis performed is credible.

3.7.5 Common practice analysis (121)

The geographical scope for assessing the rehabilitation activity at hydro power plants has been restricted to Georgia only, as (A) there is sufficient information regarding operating history of hydro power plants in Georgia and (B) different neighboring countries have very different access to energy resources (e.g. both Azerbaijan and Russia are rich in oil and gas) and that would define the state/ national priority for undertaking hydro rehabilitation activity in neighboring countries differently, and finally (C) achieving access to information regarding rehabilitation of hydro power plants in the neighboring countries would have been extremely difficult and might not have been possible.

In general, rehabilitation of hydro power plants to increase the efficiency and capacity of the hydro plants is not at all practiced in Georgia. Rehabilitation of hydro power plants is done only in case a unit had to be shut down due to any electrical and/or mechanical fault.

Rehabilitation of hydro power plant of such magnitude – leading to an overall increase in the capacity of the project by >200MW and at units with a unit nameplate capacity of 260MW is not a common practice at all.

The current operating age of all the Enguri Hydro Power Plant's Units is far below the operating life of other hydro units in Georgia where rehabilitation work was conducted because operating history of Units of Enguri plant (ranging from 97,266 to 131,221), far below the chosen $DATE_{Baseline\ Retrofit} = 220,150$ hours. Thus, the rehabilitation work at hydro power plant's units, where the units are already operational, is not a common practice. And generally the hydro power plant units in Georgia have went on to operate for at least as long as 220,150 hours before needing any rehabilitation, which is almost two times the current operational lifetime of Enguri units (at the time of CDM decision making).

In order to validate the common practice analysis the following documentation was assessed:

- Generators, cooling system, temperature measurement, Unit #1 before and after modifications, issued by the Ministry of Power Economy and Electrification of the USSR
- Report dated 31/10/1989 on scientific and research work, issued by the Ministry of Power Economy and Electrification of the USSR



- Letter #158/211-a dated 23/06/2001 concerning units of the Enguri Hydro Power Plant, Georgia (information on hours of operation and hours of being in reserve mode since initial commissioning in 1978-1980)
- Charts on rehabilitated and non-rehabilitated units operation (Enguri historical operations, historical hydro rehab data)
- Chart dated 27/05/2011 on hours of operation of each unit since start of operation in 1978-80 until 2005 (Units 1,2,4,5)

The DOE hereby confirms that the proposed CDM project activity is not common practice.

3.8 Monitoring plan (124)

The DOE hereby confirms that the monitoring plan complies with the requirements of the methodology.

The steps taken to assess whether the monitoring arrangements described in the monitoring plan are feasible within the project design are described below.

As stated by the latest version of the monitoring methodology “ACM0002 Consolidated monitoring methodology for zero-emissions grid-connected electricity generation from renewable sources”, the monitoring of the following is required: “Electricity generation from the proposed project activity”. The other data listed in the methodology should not be monitored for this CDM project activity since the ex-ante method was applied for the calculation of the build margin and the operating margin and since this project is not a new hydro electric power project.

This monitoring plan is developed in a project specific manner specifically addressing the unique features of the Enguri HPP and the specifics of electricity metering and meters verification currently in practice in Georgia.

The spatial extent of the monitoring plan will be the physical project site of the CDM project activity that corresponds to the Unit # 2, Unit #4, Unit # 1 and Unit # 5.

Validation site visit has reflected that monitoring of the electricity supplied annually to the grid by Enguri HPP (the only parameter that is supposed to be monitored in accordance to the monitoring plan developed in compliance with the methodology ACM0002 ver.12.1.0.) is performed in the following way:

1. Measurements are taken every eight hours (three times a day after each shift, which is 8 hours long) by a representative of Engurhesi Ltd from an electricity meter fitted to the unit and reported as well to the Commercial Operator of the National Electricity Network. The meters, which have the accuracy class as 0,2S, are continuous recording electricity transfer as the electricity is exported.
2. The data from the energy meter at each of the units are fixed in the information certificate as well as in the logbook by the operator.



3. Any electricity imported in the period is subtracted from the amount of electricity produced by the rehabilitated units and measured by respective meters to give the net electricity exported to the grid.

All the abovementioned was validated on site and with the help of document assessment of the following:

- Enguri Generation Data for 2005
- Data on active power generation by units for 2005 and units in operation, 2001 (units #1-5)
- Yearly report for 2008, "Engurhesi" Ltd
- Information certificate on electricity production dated 16.05.2011, shift I
- Log book on electricity production started 04.04.2011
- Log book on electricity production started 21.10.2010
- Log book on accidents registration for 20.01.2009-25.10.09

Each of the units has their own individual meters. Meters are installed at the Control Panels of each generator of the Enguri HPP. Each of these meters (at the end of Unit) reading is used to get the net power generation by each of these units. Also, each of these meters are also routinely calibrated and sealed (performed by the State Electric System and the Commercial Operator). To ensure that metering equipment cannot be tampered with it is initially certified by the State Standardization Organization and is checked on a regular basis by three parties: State Electric System, Commercial Operator of the National Electricity Network and Engurhesi Ltd. The meters are stamped by all parties and they cannot be opened or manipulated by any single party.

The DOE hereby confirms that the project participants are able to implement the monitoring plan.

3.9 Sustainable development (127)

The host Party's DNA confirmed the contribution of the project to the sustainable development of the host Party. Refer to item 3.1 of this report.

3.10 Local stakeholder consultation (130)

The steps taken to assess the adequacy of the local stakeholder consultation are described below.

The Stakeholder Consultation was held on Monday 12 March 2007, at 14.00 at the Meeting Hall "Salkhino", Metekhi Sheraton Palace Hotel, 20 Telavi street, Tbilisi, 0103, Georgia. The meeting was conducted both in Georgian and English and simultaneous translation was provided. All attendees received a copy of the draft Project Design Document (version of January 2007 in English) and a questionnaire (in Georgian).

In order to assess the adequacy of the local stakeholder consultation the validation team reviewed the following documentation:

- Stakeholder Consultation Enguri Hydro Power Plant Rehabilitation Clean Development Mechanism Project, 12/03/2007



- Summary of the questionnaires, Enguri HPP CDM PSF, March 2007 (translation)
- List of participants of stakeholder consultation for the Enguri Hydro Power Plant Clean Development Mechanism Project (12/03/2007)
- Invitation letter dated 20/02/2007 on inviting to the stakeholder consultation for the Enguri Hydro Power Plant Clean Development Mechanism Project

The DOE hereby confirms that the process of local stakeholder consultation is observed to be adequate.

3.11 Environmental impacts (133)

Letter #05/02.16/595 dated 13/04/2007 on environmental permit, issued by the Department for Licenses and Permits of the Ministry of Environmental Protection and Natural Resources of Georgia was presented as evidence of the fact that CDM project does not need EIA according to the national legislation. The letter states that the Enguri rehabilitation project does not require issuance of environmental permit for the project. The letter has been signed by "Giorgi Tskhakaia", who is the Head of Department at "The Department of Licenses and Permits" at the "Ministry of Environmental Protection and Natural Resources of Georgia".

4 COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

The PDD using methodology ACM0002 "Consolidated baseline methodology for grid-connected electricity generation from renewable sources" was webhosted on the UNFCCC for global stakeholders comments as per CDM requirements. The project was webhosted from 31/05/2011 to 29/06/2011.

Comments were received from 5 persons. The project participant provided response to these comments. Validation team took due account of these comments and the respective responses while making the validation opinion. The details of the comments received, responses by the project participant/s and the explanation of how due account of these is taken by the validation team are attached as Appendix B with this validation report.

5 VALIDATION OPINION

Bureau Veritas Certification has performed a validation of the "Refurbishment of Enguri Hydro Power Plant, Georgia" Project in Georgia. The validation was performed on the basis of UNFCCC criteria and host country criteria and also on the criteria given to provide for consistent project operations, monitoring and reporting.

The validation consisted of the following three phases: i) a desk review of the project design and the baseline and monitoring plan; ii) follow-up interviews with project stakeholders; iii) the resolution of outstanding issues and the issuance of the final validation report and opinion.



Project participant used the latest tool for demonstration of the additionality. In line with this tool, the PDD provides analysis technological and other barriers to determine that the project activity itself is not the baseline scenario.

By increasing the operating capacity of the Enguri Hydro Power Plant (HPP) by a total of 210 MW by undertaking rehabilitation of the four units, the project is likely to result in reductions of GHG emissions partially. An analysis of technological barriers demonstrates that the proposed project activity is not a likely baseline scenario. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity. Given that the project is implemented and maintained as designed, the project is likely to achieve the estimated amount of emission reductions.

The review of the project design documentation (version 6) and the subsequent follow-up interviews have provided Bureau Veritas Certification with sufficient evidence to determine the fulfillment of stated criteria. In our opinion, the project correctly applies and meets the relevant UNFCCC requirements for the CDM and the relevant host country criteria. Bureau Veritas Certification thus requests registration of 'project title' as CDM project activity.

Annual average amount over the crediting period of estimated reductions is 730,478 tonnes of CO₂eq.

6 REFERENCES

Category 1 Documents:

Documents provided by ICF International and "Engurhesi" Ltd that relate directly to the GHG components of the project.

- /1/ PDD "Refurbishment of Enguri Hydro Power Plant, Georgia" version 1 dated 09/05/2011
- /2/ PDD "Refurbishment of Enguri Hydro Power Plant, Georgia" version 2 dated 23/06/2011
- /3/ PDD "Refurbishment of Enguri Hydro Power Plant, Georgia" version 3 dated 30/06/2011
- /4/ PDD "Refurbishment of Enguri Hydro Power Plant, Georgia" version 4 dated 20/07/2011
- /5/ PDD "Refurbishment of Enguri Hydro Power Plant, Georgia" version 5 dated 01/09/2011
- /6/ PDD "Refurbishment of Enguri Hydro Power Plant, Georgia" version 6 dated 21/09/2011
- /7/ ACM0002 "Consolidated baseline methodology for grid-connected electricity generation from renewable sources" version 12.1.0
- /8/ "Combined Tool to identify the baseline scenario and demonstrate additionality"



version 03.0.0

/9/ "Tool for the demonstration and assessment of additionality" version 05.2

/10/ "Tool to calculate the emission factor of an electricity system" version 02.2.0

Category 2 Documents:

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

- /1/ Generators, cooling system, temperature measurement, Unit #1 before and after modifications, issued by the Ministry of Power Economy and Electrification of the USSR
- /2/ Report dated 31/10/1989 on scientific and research work, issued by the Ministry of Power Economy and Electrification of the USSR
- /3/ Contract agreement dated 25/11/2002 on Enguri HPP Rehabilitation (between Engurhesi Ltd. And Voith Siemens Hydro Kraftwerkstechnik GmbH & Co.KG.
- /4/ Letter #28/151-9 dated 15/06/2009 concerning technical information on Hydro Power Plants of "ENERGO-PRO Georgia" JSC
- /5/ Letter #158/211-a dated 23/06/2001 concerning units of the Enguri Hydro Power Plant, Georgia (information on hours of operation and hours of being in reserve mode since initial commissioning in 1978-1980)
- /6/ Charts on rehabilitated and non-rehabilitated units operation (Enguri historical operations, historical hydro rehab data)
- /7/ Protocol CW04-09/2008, Engurhesi Rehabilitation Project, Georgia (unit #4)
- /8/ Power Generation by Customers, Revenue billed and Actual Collection for FY 2003, 2004, 2005 (Engurhesi Ltd)
- /9/ Investigating Country Risk and its Relationship to Sovereign Ratings in Emerging Europe, dated 5/06/2007, issued by Standard & Poor's
- /10/ Tariff for 2003
- /11/ Tariff for 2006
- /12/ Protocol CW47-49, Engurhesi Rehabilitation Project, Georgia (unit #3)
- /13/ Baseline emission factor for the electricity system of Georgia (Updated version recommended for the CDM projects), issued by Clean Development Mechanism Designated National Authority of the Ministry of Environment Protection and Natural Resources of Georgia, 2008
- /14/ Enguri Generation Data for 2005
- /15/ Letter #65-255 dated 17/06/2005 of Director of Engurhesi CAP(BL)
- /16/ Data on active power generation by units for 2005 and units in operation, 2001 (units #1-5)
- /17/ Calibration certificate on Unit #1 (power meter EA0205RTL, serial #1086183)
- /18/ Calibration certificate on Unit #4 (power meter EA0205RTL, serial #1086184)
- /19/ Calibration certificate on Unit #5 (power meter EA0205RTL, serial #1086185)
- /20/ Calibration certificate dated 30/11/2007 on Unit #2 (power meter EA0205RL-4, serial #01079247)
- /21/ Act #0288 dated 30/11/2007 on electricity metering validation and checking of measuring circles and operation norms (generator #2 of Enguri HPP, power meter type EA02RL-4, manufacturing #01079247)
- /22/ Invitation letter dated 20/02/2007 on inviting to the stakeholder consultation for



- the Enguri Hydro Power Plant Clean Development Mechanism Project
- /23/ List of participants of stakeholder consultation for the Enguri Hydro Power Plant Clean Development Mechanism Project (12/03/2007)
 - /24/ Summary of the questionnaires, Enguri HPP CDM PSF, March 2007 (translation)
 - /25/ Summary of the questionnaires, Enguri HPP CDM PSF, March 2007 (translation)
 - /26/ Stakeholder Consultation Enguri Hydro Power Plant Rehabilitation Clean Development Mechanism Project, 12/03/2007
 - /27/ Expected Cost of Rehabilitation of the Technology (for Unit #1 and Unit #5) as on Dec 2005
 - /28/ Implementing Business Environment Reforms: Experience of Georgia, dated 19/06/2007
 - /29/ Inflation report for 1 Quarter 2006, issued by National Bank of Georgia
 - /30/
 - /31/ Appendix 5 to the Contract agreement dated 25/11/2002 on Enguri HPP Rehabilitation, List of Subcontractors
 - /32/
 - /33/ Information dated 12/06/2009 on expected lifetime of Units ##1-5, issued by EDF,
 - /34/ Letter #05/02.16/595 dated 13/04/2007 on environmental permit, issued by the Department for Licenses and Permits of the Ministry of Environmental Protection and Natural Resources of Georgia
 - /35/ Letter of commitment #175/211-a dated 14/07/2011 from Engurhesi Ltd
 - /36/ Bulletin of Monetary and Banking Statistics #4 (106), January-December, 2007, issued by the National Bank of Georgia
 - /37/ Enguri Hydropower Rehabilitation Project (Financed by the European Bank for Reconstruction and Development), 18th Quarterly Report, January-March 2004, issued by Engurhesi Ltd.
 - /38/ Enguri Hydropower Rehabilitation Project (Financed by the European Bank for Reconstruction and Development), 19th and 20th Quarterly Reports, April-September 2004, issued by Engurhesi Ltd.
 - /39/ Enguri Hydropower Rehabilitation Project (Financed by the European Bank for Reconstruction and Development), 21st Quarterly Report, October-December 2004, issued by Engurhesi Ltd.
 - /40/ Minutes of Meeting #4 of the Board of Engurhesi Ltd., dated 17/12/2004
 - /41/ Enguri Hydropower Rehabilitation Project (Financed by the European Bank for Reconstruction and Development), 22nd Quarterly Report, January-March 2005, issued by Engurhesi Ltd.
 - /42/ Enguri Hydropower Rehabilitation Project (Financed by the European Bank for Reconstruction and Development), 23nd Quarterly Report, April-June 2005, issued by Engurhesi Ltd.
 - /43/ Enguri Hydropower Rehabilitation Project (Financed by the European Bank for Reconstruction and Development), 24th Quarterly Report, July-September 2005, issued by Engurhesi Ltd.
 - /44/ Protocol CW39, Engurhesi Rehabilitation Project, Georgia (Status of Rehabilitation Works), dated 27/09/2005



- /45/ Notification dated 01/11/2005 of Suspension due to late Payments from the Employer (Engurhesi)
- /46/ Protocol CW46, Engurhesi Rehabilitation Project, Georgia (Status of Rehabilitation Works), dated 19/11/2005 (Preliminary Notice of Suspension of Start of Unit 2, Status of Rehabilitation Works on Unit 3)
- /47/ Preliminary Notice dated 07/12/2005 on Termination of Contract due to non-payment by the Employer (Engurhesi)
- /48/ Letter dated 19/12/2005 on security measures
- /49/ Loan Drawdown Advice dated 16/12/2005, issued by European Bank for Reconstruction and Development
- /50/ Application for direct payment drawdown dated 15/12/2005
- /51/ Minutes of Meeting #19 of the Supervisory Board of Engurhesi Ltd., dated 21/12/2005
- /52/ Financing through Procredit Bank 22/12/2005, (#8-01/97)
- /53/ Letter dated 10/01/2006 on follow-up mobilizing of Contractors staff
- /54/ Second Novation Loan Agreement (Enguri Hydro Power Plant Rehabilitation Project), dated 29/12/2006 (Execution copy, operation #734)
- /55/ Call-off notice under framework agreement: FC286/ETCF-2005-04-06F, dated 12/09/2006
- /56/ Enguri HPP Rehabilitation Project, Environmental and Workers Health and Safety Report for the period ended 31/12/2006
- /57/ Electrical Diagram (units ##1-3)
- /58/ Final report on Feasibility Study of Rehabilitation. Part II: Environmental Health and Safety Audit, February 1998
- /59/ Chart dated 27/05/2011 on hours of operation of each unit since start of operation in 1978-80 until 2005 (Units 1,2,4,5)
- /60/ Letter #05-255 of Director of Engurhesi CAP(BL) dated 17/06/2005
- /61/ Letter of Approval #08-01-12/4119 dated 28.12.2007 for the project "Refurbishment of Enguri Hydro Power Plant, Georgia"
- /62/ Operational Acceptance Certificate dated 03/03/2008 related to Unit #2
- /63/ Operational Acceptance Certificate dated 15/08/2009 related to Unit #4
- /64/ Single Line Diagram
- /65/ Photo – Unit #2
- /66/ Photo – Unit control board 3UCP-GH 001
- /67/ Photo – Unit #3, which is not included in the project boundary
- /68/ Photo – Unit #4
- /69/ Photo – Unit #1 under the rehabilitation
- /70/ Photo – Unit #4 spherical valve electrical diagram
- /71/ Photo – Unit control board 4-UCP-GH 001
- /72/ Photo – Unit #4 Single Line Diagram
- /73/ Photo – Unit #4 Electrical Flow chart
- /74/ Photo – Unit #4
- /75/ Photo – Relay control board
- /76/ Photo – Unit #5
- /77/ Photo – 4AH-GS007 control board
- /78/ Photo – 4-EXC-GH-001, 4-EXC-GH-002, 4-EXC-GH-003, 4-EXC-GH-004 control board



- /79/ Photo – Junction box for aux. control 4SPG-GH 003
- /80/ Photo – Junction box for aux. control 2SPG-GH 003
- /81/ Station unit construction sectional drawing, form 28
- /82/ Unit #5 nomenclature repair
- /83/ Unit #1 operational regime logbook
- /84/ Unit #2 operational regime logbook
- /85/ Unit #4 operational regime logbook
- /86/ Unit #5 operational regime logbook
- /87/ Yearly report for 2008, “Engurhesi” Ltd
- /88/ Information certificate on electricity production dated 16.05.2011, shift I
- /89/ Log book on electricity production started 04.04.2011
- /90/ Log book on electricity production started 21.10.2010
- /91/ Log book on accidents registration for 20.01.2009-25.10.09



Persons interviewed:

List persons interviewed during the validation or persons that contributed with other information that are not included in the documents listed above.

- /1/ Malkhaz Tskvitishvili – Project Manager, Enguri HPP Rehabilitation
- /2/ Levan Mebonia – Chairman of the Board of Engurhesi Ltd
- /3/ Jeiran Aronia – Manager of the purchase department of Engurhesi Ltd
- /4/ Gia Khubua – Technical director of Engurhesi Ltd
- /5/ Kunal Sharma –Project consultant ICF International

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7 CURRICULA VITAE OF THE DOE'S VALIDATION TEAM MEMBERS

Ivan G. Sokolov, Dr. Sci. (biology, microbiology)

Climate Change Lead Verifier, Bureau Veritas Certification Holding SAS
Local Climate Change Product Manager for Ukraine

Acting CEO Bureau Veritas Ukraine

He has over 25 years of experience in Research Institute in the field of biochemistry, biotechnology, and microbiology. He is a Lead auditor of Bureau Veritas Certification for Environment Management System (IRCA registered), Quality Management System (IRCA registered), Occupational Health and Safety Management System, and Food Safety Management System. He performed over 140 audits since 1999. Also he is Lead Tutor of the IRCA registered ISO 14000 EMS Lead Auditor Training Course, and Lead Tutor of the IRCA registered ISO 9000 QMS Lead Auditor Training Course. He is Lead Tutor of the Clean Development Mechanism /Joint Implementation Lead Verifier Training Course and he was involved in the determination/verification over 60 JI/CDM projects.

Mr. Leonid Yaskin, PhD (thermal engineering)

Bureau Veritas Certification Rus General Director, Climate Change Local Manager, Lead Auditor, IRCA Lead Tutor, Climate change Lead Verifier,

He has over 30 years of experience in heat and power R&D, engineering, and management, environmental science and investment analysis of projects. He worked in Krzhizhanovsky Power Engineering Institute, All-Russian Teploelectroproject Institute, JSC Energoperspektiva. He worked for 8 years on behalf of European Commission as a monitor of Technical Assistance Projects. He is a Lead auditor of Bureau Veritas Certification for Quality Management Systems (IRCA registered), Environmental Management System (IRCA registered), Occupational Health and Safety Management System (IRCA registered). He performed over 250 audits since 2002. Also he is a Lead Tutor of the IRCA registered ISO 14000 EMS Lead Auditor Training Course, and a Lead Tutor of the IRCA registered OHSAS 18001 Lead Auditor Training Course. He is an Assuror of Social Reports. He has undergone intensive training on Clean Development Mechanism /Joint Implementation and was/is involved in the determination of over 50 JI projects.

Kateryna Zinevych, M.Sci. (environmental science)

Verifier



Bureau Veritas Ukraine Health, Safety and Environment Project Manager

Kateryna Zinevych has graduated from National University of Kyiv-Mohyla Academy with the Master Degree in Environmental Science. She has experience at working in a professional position (analytics) involving the exercise of judgment, problem solving and communication with other professional and managerial personnel as well as customers and other interested parties at analytical centre “Dergzovnishinform” and “Bureau Veritas Ukraine” LLC. She has successfully completed IRCA registered Lead Auditor Training Course for Environment Management Systems and Quality Management Systems. She has successfully completed Climate Change Verifier Training Course and she participated as verifier in the determination/verification of 26 JI projects.

Denis Pishchalov

Financial Specialist

Bureau Veritas Ukraine Specialist in economics

Master of foreign trade, he has more than five year of experience in foreign trade and procurement. In particular one year as foreign trade manager in the Engineering Corporation (manufacturer and contractor in the municipal sector) and one year in the NIKO publishing house, one year as sales manager in the ITALCOM srl. In addition Denis has spent four years working as procurement specialist in Ukrainian Energy Service Company and two years as chief product manager in the Altset JSC. At the moment Denis is deputy director for finance and economy in the SUD of UTEM JSC.

Ashok Mammen, PhD (Oils & Lubricants)

Bureau Veritas Certification Internal Technical Reviewer

Over 20 years of experience in chemical and petrochemical field. Dr. Mammen is a lead auditor for environment, safety and quality management systems and a lead verifier and trainer for GHG projects. He has been involved in the validation and verification processes of more than 100 CDM/JI and other GHG projects.

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VALIDATION PROTOCOL

Table 1 Validation requirements based on the Clean Development Mechanism Validation and Verification Manual (Version 01.2) and methodology ACM0002 (Version 12.1.0) – “Consolidated baseline methodology for grid-connected electricity generation from renewable sources”

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
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CHECKLIST QUESTION	Ref.	§	COMMENTS		Draft Concl	Final Concl
1. Approval			COUNTRY A (Georgia)	COUNTRY B (insert the country name)		
1. a. Have all Parties involved approved the project activity?	VVM	44	Georgia has approved the project activity by issuance the Letter of Approval.	No other country is indicated in the PDD version 1	OK	OK
b. Has the DNA of each Party indicated as being involved in the proposed CDM project activity in section A.3 of the PDD provided a written letter of approval? (If yes, provide the reference of the letter of approval, any supporting documentation, and specify if the letter was received from the project participatn or directly from the DNA)	VVM	45	Georgia is indicated as a Host Party and has issued the Letter of Approval for the project "Refurbishment of Enguri Hydro Power Plant, Georgia"#08-01-12/4149 date 28 th of December 2007. (LoA was presented to the validation team by PP)	See above.	OK	OK
c. Does the letter of approval from DNA of each Party involved:	VVM	45			OK	OK
i. confirm that the Party is a Party of the Kyoto Protocol?	VVM	45.a	Yes, Georgia is is a Party of the Kyoto Protocol	-	OK	OK
confirm that participation is voluntary?	VVM	45.b	Yes, participation is voluntary	-	OK	OK
iii. confirm that, in the case of the host Party, the proposed CDM project activity contributes to the sustainable development of the country?	VVM	45.c	Yes, since Georgia is a host Party the proposed CDM project activity contributes to the sustainable development of the	-	OK	OK

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			country		



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iv. Refers to the precise proposed CDM project activity title in the PDD being submitted for registration?	VVM	45.d	Yes, LoA refers to the precise proposed CDM project activity title in the PDD being submitted for registration.	OK	OK
d. Is(are) the letter(s) of approval unconditional with respect to (i) to (iv) above?	VVM	46	Yes, LoA issued by the Minister of Environment Protection and Natural Resources of Georgia.	OK	OK
e. Has(ve) the letter(s) of approval been issued by the respective Party's designated national authority (DNA) and is valid for the CDM project activity under validation?	VVM	47	Yes, the letter of approval has been issued by the respective Party's designated national authority (DNA) and is valid for the CDM project activity under validation	OK	OK
f. Is there doubt with respect to the authenticity of the letter of approval?	VVM	48	No, there is no doubt with respect to the authenticity of the letter of approval	OK	OK
g. If yes, was verified with the DNA that the letter of approval is authentic?	VVM	48	n/a	OK	OK
2. Participation			PP1 (Engurhesi Ltd)	PP2 (insert PP2 name)	
a. Have all project participants been listed in a consistent manner in the project documentation?	VVM	51	Yes, project participant from the host Party is listed in a consistent manner.	OK	OK



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b. Has the participation of the project participants in the project activity been approved by a Party to the Kyoto Protocol?	VVM	51	Yes, the participation of the project participants in the project activity has been approved by a Party to the Kyoto Protocol	OK	OK
c. Are the project participants listed in tabular form in section A.3 of the PDD?	VVM	52	Yes, the project participant is listed in tabular form in section A.3 of the PDD	OK	OK
d. Is the information in section A.3 consistent with the contact details provided in annex 1 of the PDD?	VVM	52	Yes, the information in section A.3 is consistent with the contact details provided in annex 1 of the PDD	OK	OK
e. Has the participation of each of the project participants been approved by at least one Party involved, either in a letter of approval or in a separate letter specifically to approve participation? (Provide reference of the approval document for each of the project participants)	VVM	52	Georgia is indicated as a Host Party and has issued the Letter of Approval for the project "Refurbishment of Enguri Hydro Power Plant, Georgia" #08-01-12/4149 date 28th of December 2007 (LoA was presented to the validation team by PP).	OK	OK
f. Are any entities other than those approved as project participants included in these sections of the PDD?	VVM	52	No, there are no entities other than those approved as project participants included in these sections of the PDD	OK	OK



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
g. Has the approval of participation issued from the relevant DNA?	VVM	53	Yes, the letter of approval has been issued by the relevant designated national authority (DNA) and is valid for the CDM project activity under validation		
h. Is there doubt with respect to (g) above?	VVM	53	No, there is no doubt with respect to above	OK	OK
i. If yes, was verified with the DNA that the approval of participation is valid for the proposed CDM project participant?	VVM	53	n/a	OK	OK
3. Project design document					
a. Is the PDD used as a basis for validation prepared in accordance with the latest template and guidance from the CDM Executive Board available on the UNFCCC CDM website?	VVM	55	No, the PDD used as a basis for validation is not prepared in accordance with the latest template and guidance from the CDM Executive Board available on the UNFCCC CDM website. CAR 01. The latest version of CDM PDD form available at UNFCCC website is 03, while the PDD developer uses version 03.1. Please correct.	CAR 01	OK
b. Is the PDD in accordance with the applicable CDM requirements for completing the PDD?	VVM	56	Yes, the PDD is in accordance with the applicable CDM requirements for completing the PDD.	OK	OK
c. In CDM-PDD section A.1 are the following provided?	EB 41	Ann 12	-	OK	OK
i. Title of project	EB 41	Ann 12	"Refurbishment of Enguri Hydro Power Plant, Georgia"	OK	OK
ii. Current version number and date of document	EB 41	Ann 12	Version 1 of the document Version Date: 9/05/2011 CAR 02. Please correct the date format.	CAR 02	OK



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
d. In CDM-PDD section A.2 are following provided (max. one page)?	EB 41	Ann 12	-		
i. A brief description of the project activity covering purpose which includes the scenario existing prior to the start of project, present scenario and baseline scenario	EB 41	Ann 12	Yes, brief description of the project activity covering purpose which includes the scenario existing prior to the start of project, project scenario and baseline scenario is presented in the PDD version 01 section A.2.	OK	OK
ii. Explanation on how the GHG emission reductions are effected	EB 41	Ann 12	Yes, explanation on how the GHG emission reductions are effected is presented in the PDD version 01 section A.2.	OK	OK
iii. The PP's views on the contribution of project activity to sustainable development	EB 41	Ann 12	Yes, the PP's views on the contribution of project activity to sustainable development is presented in the PDD version 01 section A.2. CL 01. Clarify in a more transparent way how economic effect on the region is achieved. CL 02. Please clarify how new employment for locals is created since the construction works are performed by European employees? CL 03. Please clarify in what more efficient way water resources are going to be used if the water reservoir is not going to be increased.	CL 01, 02, 03	OK
iv. Are there any changes/modifications compared to the webhosted PDD?	EB 41	Ann 12	No, there are no changes/modifications compared to the webhosted PDD since this is the version that was published.	OK	OK
e. In CDM-PDD section A.3 are following provided in the tabular format?	EB 41	Ann 12	-	OK	OK
List of project participants and parties	EB 41	Ann 12	Yes, list of project participants and parties is presented in the PDD version 01 section A.3.	OK	OK
Identification of Host Party			Yes, Georgia is indicated as a host Party	OK	OK
iii. Indication whether the Party wishes to be considered as project participant	EB 41	Ann 12	Georgia does not wish to be considered as project participant.	OK	OK



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
f. In CDM-PDD section A.4.1 are following provided?	EB 41	Ann 12	-		
i. Technical description, location, host party(ies) and address as required	EB 41	Ann 12	Enguri Hydro Power Plant is located in the Gali Region of Abkhazia, near to the north-east coast of the Black Sea.	OK	OK
ii. Detailed physical location with unique identification of the project activity (eg. Longitude/latitude) – not to exceed one page	EB 41	Ann 12	Yes, detailed physical location with unique identification of the project activity is presented in the PDD version 01 section A.4.1.4	OK	OK
iii. Are there any changes/modifications compared to the webhosted PDD?	EB 41	Ann 12	No, there are no changes/modifications compared to the webhosted PDD since this is the version that was published.	OK	OK
g. In CDM-PDD section A.4.2 is the list of categories of project activities provided?	EB 41	Ann 12	This CDM project correspond to a project within the Sectoral Scope Number 1: Energy Industries (renewable -/ non-renewable sources).	OK	OK
h. In CDM-PDD section A.4.3 are following provided?	EB 41	Ann 12	-	OK	OK
i. A description of how environmentally safe and sound technology, and know-how, is transferred to the Host Party(ies)	EB 41	Ann 12	The proposed project activity is a rehabilitation project. By rehabilitation the overall output from each of the units of Enguri HPP has been increased. The project activity does not lead to any increase in the overall reservoir capacity. The project will substitute the power plants on the margin of the electricity system in Georgia. Thus, this is an environmentally safe and sound technology. CAR 03. Please provide information on how know-how technology is transferred to the Host Party (if any).	CAR 03	OK
ii. Explanation of purpose of project activity with scenario existing prior to the start of project, scope or present activities and the baseline	EB 41	Ann 12	Yes, explanation of purpose of project activity with scenario existing prior to the start of project, scope or present activities and the baseline scenario is	CAR 04, 05, 06	OK



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
scenario			presented in the PDD version 01 section A.4.3. CAR 04. Please provide the calculation file for DATE _{BaselineRetrofit} . CAR 05. The document (SD #21) that proves project works restart states that rehabilitation work at unit#2 started in January 2006 while PDD states they started in February of the same year. Please correct. CAR 06. Please provide evidence of the unit#4 rehabilitation works start in January 2008.		
iii. List and arrangement of the main manufacturing/production technologies, systems and equipments involved	EB 41	Ann 12	CAR 07. Please provide list and arrangement of the main manufacturing/production technologies, systems and equipments involved	CAR 07	OK
iv. The emissions sources and GHGs involved	EB 41	Ann 12	CAR 08. Please include the emissions sources and GHGs involved in the PDD section A.4.3.	CAR 08	OK
v. Are there any changes/modifications compared to the webhosted PDD?	EB 41	Ann 12	No, there are no changes/modifications compared to the webhosted PDD since this is the version that was published.	OK	OK
i. In CDM-PDD section A.4.4 is the estimation of emission reductions provided as requested in a tabular format?	EB 41	Ann 12	CAR 09. Please follow the format presented in the Guidelines for completing the Project Design Document (CDM-PDD)	CAR 09	OK
j. In CDM-PDD section A.4.5 is Information regarding Public funding provided?	EB 41	Ann 12	Yes, information regarding Public funding is provided in CDM-PDD section A.4.5. EBRD is providing a loan to Engurhesi Ltd. for the rehabilitation works at the Enguri HPP. EBRD funding does not result in a diversion of official development assistance. In addition the European Commission provides a grant to Engurhesi Ltd. for the rehabilitation works at the Enguri HPP. The European Commission states that this grant does not constitute diversion of official development	OK	OK

VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			assistance funds.		





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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
k. In CDM-PDD section B.1 are following provided?	EB 41	Ann 12	-	-	-
i. The approved methodology and version number	EB 41	Ann 12	Version 11 of ACM0002 Consolidated baseline methodology for grid-connected electricity generation from renewable sources is used. CAR 10. Please update the PDD with the latest version of methodology.	CAR 10	OK
ii. Any methodologies or tools which the above approved methodology draws upon and their version number	EB 41	Ann 12	Version 02.2 of the Combined Tool to identify the baseline scenario and demonstrate additionality Version 05.2 of the Tool for the demonstration and assessment of additionality Version 01.1 of the Tool to calculate the emission factor of an electricity system CAR 11. Please update the PDD with latest version of the "Tool to calculate the emission factor of an electricity system".	CAR 11	OK
I. In CDM-PDD section B.2 are following provided?	EB 41	Ann 12	-	-	-
i. Justification of the choice of methodology that the project activity meets each of the applicability conditions	EB 41	Ann 12	Yes, justification of the choice of methodology that the project activity meets each of the applicability conditions is provided in the PDD section B.2. ACM0002 ver.12.1.0. is applicable because: <ul style="list-style-type: none"> The refurbishment of Enguri hydro power plant is a renewable power generation project activity connected to the Georgian power grid. The project activity belongs to type (c) involve a retrofit of (an) existing plant (s) The refurbishment of Enguri hydro power plant is retrofit of hydro power plant with an accumulation reservoir. 	CAR 12	OK



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			<ul style="list-style-type: none"> The project includes an existing reservoir whose volume will not be increased during or after the project implementation. The refurbishment of Enguri hydro power plant does not involve switching from fossil fuels to renewable energy at the site. The refurbishment of Enguri hydro power plant does not involve biomass fired power plants The refurbishment of Enguri hydro power plant does not involve any increase in existing reservoir <p>CAR 12. Please update the section in accordance with the latest version of the methodology.</p>		



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ii. Documentations with references that had been used. This can be provided in Annex 3 instead	EB 41	Ann 12	Yes, documentations with references that had been used are provided in the PDD section B.2.	OK	OK
m. In CDM-PDD section B.3 are following provided?	EB 41	Ann 12	-	-	-
i. Description of all sources and gases included in the project boundary in the table	EB 41	Ann 12	Yes, description of all sources and gases included in the project boundary in the table is presented in the PDD section B.3. CAR 13. Please clarify the source of emissions in the Table.	CAR 13	OK
ii. A flow diagram of the project boundary physically delineating the project activity	EB 41	Ann 12	Yes, the flow diagram of the project boundary physically delineating the project activity is presented in the PDD section B.3. CAR 14. Please correct spelling in the schematic representation of the area around Enguri HPP	CAR 14	OK
iii. The flow diagram with all equipments, systems and flows of mass and energy etc	EB 41	Ann 12	Yes, the flow diagram with all equipments, systems and flows of mass and energy etc is presented in the PDD section B.3.	OK	OK
n. In CDM-PDD section B.4 are following provided?	EB 41	Ann 12	-	-	-
i. Explanation how the most plausible baseline scenario is identified in accordance with the selected baseline methodology	EB 41	Ann 12	Yes, explanation how the most plausible baseline scenario is identified in accordance with the selected baseline methodology is presented in the PDD section B.4.	OK	OK
ii. Justification of key assumptions and rationales	EB 41	Ann 12	CAR 15. Please provide justification of key assumptions and rationales in the section B.4.	CAR 15	OK
iii. Transparent illustration of all data used to determine the baseline scenario (variables, parameters, data sources, etc.)	EB 41	Ann 12	CAR 16. Please provide transparent illustration of all data used to determine the baseline scenario (variables, parameters, data sources, etc) in the section B.4. CL 04. Please clarify why an annual operation of 5,000 hours has been considered for the expected	CAR 16, CL 04	OK

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			lifetime calculation.		





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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
iv. A transparent and detailed description of the identified baseline scenario, including a description of the technology that would be employed and/or the activities that would take place in the absence of the proposed project activity	EB 41	Ann 12	Yes, transparent and detailed description of the identified baseline scenario, including a description of the technology that would be employed and the activities that would take place in the absence of the proposed project activity is presented in the PDD section B.4.	OK	OK
v. Are there any changes/modifications compared to the webhosted PDD?	EB 41	Ann 12	No, there are no changes/modifications compared to the webhosted PDD since this is the version that was published.	OK	OK
o. In CDM-PDD section B.5 are following provided?	EB 41	Ann 12	-	-	-
i. Explanation of how and why this project activity is additional and therefore not the baseline scenario in accordance with the selected baseline methodology	EB 41	Ann 12	Yes, explanation of how and why this project activity is additional and therefore not the baseline scenario in accordance with the selected baseline methodology is presented in the PDD section B.5.	OK	OK
ii. Justification of key assumptions and rationales	EB 41	Ann 12	CAR 17. Please provide justification of key assumptions and rationales in the section B.5.	CAR 17	OK
iii. Transparent illustration of all data used to determine the baseline scenario (variables, parameters, data sources etc)	EB 41	Ann 12	CAR 18. Please provide transparent illustration of all data used to determine the baseline scenario (variables, parameters, data sources, etc) in the section B.5.	CAR 18	OK
iv. Evidence that the incentive from the CDM was seriously considered in the decision to proceed with the project activity, if the starting date of the project activity is before the date of validation	EB 41	Ann 12	Yes, evidence that the incentive from the CDM was seriously considered in the decision to proceed with the project activity, if the starting date of the project activity is before the date of validation is presented in the PDD section B.5.	OK	OK
p. In CDM-PDD section B.6.1 are following provided?	EB 41	Ann 12	-	-	-
i. Explanation as to how the procedures, in the approved methodology to calculate project emissions, baseline emissions, leakage	EB 41	Ann 12	Yes, explanation as to how the procedures, in the approved methodology to calculate project emissions, baseline emissions, leakage emissions	OK	OK



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emissions and emission reductions are applied to the proposed project activity			and emission reductions are applied to the proposed project activity is presented in the PDD section B.6.1.		
ii. Equations used in calculating emission reductions	EB 41	Ann 12	Yes, the equations used in calculations of emission reductions are properly described. The equations numbers mentioned are from ACM0002 as would apply to the current project activity.	OK	OK
iii. Explanation and justification for all relevant methodological choices, including different scenarios or cases, options and default values	EB 41	Ann 12	Yes, explanation and justification for all relevant methodological choices, including different scenarios or cases, options in the PDD section B.6.1.	OK	OK
q. In CDM-PDD section B.6.2 are following provided?	EB 41	Ann 12	-	-	-
i. A compilation of information on the data and parameters that are not monitored throughout the crediting period but that are determined only once and thus remains fixed throughout the crediting period AND that are available when validation is undertaken	EB 41	Ann 12	Yes, compilation of information on the data and parameters that are not monitored throughout the crediting period but that are determined only once and thus remains fixed throughout the crediting period AND that are available when validation is undertaken is presented in the PDD section B.6.2. CAR 19. Please remove all the parameters which were used to calculate emission factor for grid connected power generation since it was not calculated by PDD developer but provided by the DNA of Georgia.	CAR 19	OK
ii. The actual value period	EB 41	Ann 12	Yes, the actual value period is provided.	OK	OK
iii. Explanation and justification for the choice of the source of data	EB 41	Ann 12	Yes, the explanation and justification for the choice of the source of data	OK	OK
iv. Clear and transparent references or additional documentation in Annex 3	EB 41	Ann 12	CAR 20. Please provide clear and transparent references for the data sources.	CAR 20	OK
v. Where values have been measured, a	EB	Ann	CAR 21. Please provide description of the	CAR 21	OK



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description of the measurement methods and procedures (e.g. which standards have been used), indicated the responsible person/entity having undertaken the measurement, the date of measurement(s) and the measurement results	41	12	measurement methods and procedures (e.g. which standards have been used), indicated the responsible person/entity having undertaken the measurement, the date of measurement(s) and the measurement results		
r. In CDM-PDD section B.6.3 are following provided?	EB 41	Ann 12	-	-	-
i. A transparent <i>ex ante</i> calculation of project emissions, baseline emissions (or, where applicable, direct calculation of emission reductions) and leakage emissions expected during the crediting period, applying all relevant equations provided in the approved methodology	EB 41	Ann 12	CAR 22. Ex ante calculation of project emissions, baseline emissions (or, where applicable, direct calculation of emission reductions) and leakage emissions expected during the crediting period, applying all relevant equations provided in the approved methodology are not transparent, moreover they differ from the calculation patterns in the excel supporting file. In the section B.6.3. it is absolutely not clear how $EG_{facility,y}$ is calculated. While according to ACM 0002 ver 12.1.0 the $BE = (EG_{facility,y} - (EG_{historical} + \sigma_{historical})) * EF_{grid,CM,y}$ in the excel spreadsheet it is calculated as of $EF_{grid,CM,y} * \text{total additional power generation (which is not actually supposed to be monitored) * years into crediting period}$. Please correct all the inconsistencies and provide transparent explanation of all the calculations.	CAR 22	OK
ii. Documentation how each equation is applied, in a manner that enables the reader to reproduce the calculation	EB 41	Ann 12	See CAR 22 above.	-	-
iii. Additional background information and or data in Annex 3, including relevant electronic files (i.e. spreadsheets)	EB 41	Ann 12	Excel spreadsheet was provided to the DOE	OK	OK



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s. In CDM-PDD section B.6.4 are the results of the <i>ex ante</i> estimation of emission reductions for all years of the crediting period, provided in a tabular format?	EB 41	Ann 12	Yes, the results of the <i>ex ante</i> estimation of emission reductions for all years of the crediting period, provided in a tabular format CAR 23. Baseline emissions for the year 2011 differ from emission reductions for the respective period while they should be the same. Please correct.	CAR 23	OK
t. In CDM-PDD section B.7.1 are following provided?	EB 41	Ann 12	-	-	-
i. Specific information on how the data and parameters that need to be monitored would actually be collected during monitoring for the project activity	EB 41	Ann 12	Yes, the section B.7.1. contains information considering the fact how the data and parameters that need to be monitored would actually be collected during monitoring for the project activity	OK	OK
ii. For each parameter the following below information, using the table provided:	EB 41	Ann 12	-	-	-
a. The source(s) of data that will be actually used for the proposed project activity (e.g. which exact national statistics). Where several sources may be used, explain and justify which data sources should be preferred.	EB 41	Ann 12	Yes, the source(s) of data that will be actually used for the proposed project activity (e.g. which exact national statistics). CAR 24. For Electricity supplied annually to the grid by Enguri HPP method c "And finally, at the point of connection between the plant's switchyard and Central Transmission Line there is final power-meter used (and sealed) by the transmission company for the invoicing purposes. Difference between 2 and 3 is "Own Consumption of the Plant" which is not invoiced because it is internally consumed, but is still recorded as generation", which is not correct since this meter provides information considering electricity supplied to the grid by all units, while in this particular CDM project unit# 3 is not included.	CAR 24	OK

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			Please correct and choose appropriate method.		





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b. Where data or parameters are supposed to be measured, specify the measurement methods and procedures, including a specification which accepted industry standards or national or international standards will be applied, which measurement equipment is used, how the measurement is undertaken, which calibration procedures are applied, what is the accuracy of the measurement method, who is the responsible person/entity that should undertake the measurements and what is the measurement interval; (i) A description of the QA/QC procedures (if any) that should be applied; (ii) Where relevant: any further comment. Provide any relevant further background documentation in Annex 4.	EB 41	Ann 12	Yes, data or parameters are supposed to be measured, specify the measurement methods and procedures, including a specification which accepted industry standards or national or international standards will be applied, which measurement equipment is used, how the measurement is undertaken, which calibration procedures are applied, what is the accuracy of the measurement method, who is the responsible person/entity that should undertake the measurements and what is the measurement interval; (i) A description of the QA/QC procedures (if any) that should be applied; (ii) Where relevant: any further comment is provided in the section B.7.1. of the PDD version 1.	OK	OK
u. In CDM-PDD section B.7.2 are following provided?	EB 41	Ann 12	-	-	-
i. A detailed description of the monitoring plan	EB 41	Ann 12	Yes, detailed monitoring plan is provided in the section B.7.2 of the PDD version 01. As stated by the latest version of the monitoring methodology "ACM0002 Consolidated monitoring methodology for zero-emissions grid-connected electricity generation from renewable sources", The monitoring of the following is required: "Electricity generation from the proposed project activity". The other data listed in the methodology should not be monitored for this CDM project activity since the ex ante method was applied for	OK	OK



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			<p>the calculation of the build margin and the operating margin and since this project is not a new hydro electric power project.</p> <p>This monitoring plan is developed in a project specific manner specifically addressing the unique features of the Enguri HPP and the specifics of electricity metering and meters verification currently in practice in Georgia.</p> <p>The spatial extent of the monitoring plan will be the physical project site of the CDM project activity that corresponds to the Unit # 2, Unit #4, Unit # 1 and Unit # 5.</p>		



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ii. The operational and management structure that the project operator will implement in order to monitor emission reductions and any leakage effects generated by the project activity	EB 41	Ann 12	Yes, the operational and management structure that the project operator will implement in order to monitor emission reductions and any leakage effects generated by the project activity is provided in the section B.7.2 of the PDD version 01.	OK	OK
iii. The responsibilities for and institutional arrangements for data collection and archiving	EB 41	Ann 12	Yes, the responsibilities for and institutional arrangements for data collection and archiving are provided in the section B.7.2 of the PDD version 01. The day to day data collection is completed by shift engineer at the Enguri plant. The recording of power generated at each unit is conducted every 8 hours. The information is recorded on both paper and electronically. This information will be stored as part of CDM project activity for a period of at least two years over and above the crediting period of the CDM project. Further, every month at the time of financial settlement of Engurhesi by transmission company – the copies of invoices will be stored (both paper and electronically after scanning) for a period of at least two years over and above the crediting period of the CDM project activity.	OK	OK
iv. Indication that the monitoring plan reflect good monitoring practice appropriate to the type of project activity	EB 41	Ann 12	CAR 25. Please indicate if the monitoring plan reflects current good practices appropriate to the type of project activity.	CAR 25	OK
v. Relevant further background information in Annex 4	EB 41	Ann 12	The monitoring of the CDM project activity has been described in detail in the section B.7 of the PDD.	OK	OK
v. In CDM-PDD section B.8 are following provided?	EB	Ann	-	-	-



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	41	12			



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i. Date of completion of the application of the methodology to the project activity study in DD/MM/YYYY	EB 41	Ann 12	04/18/2010 CAR 26. Please correct the date of completion of the application of the methodology to the baseline study and monitoring methodology	CAR 26	OK
ii. Contact information of the person(s)/entity(ies) responsible for the application of the baseline and monitoring methodology to the project activity	EB 41	Ann 12	Yes, contact information of the person(s)/entity(ies) responsible for the application of the baseline and monitoring methodology to the project activity is provided in the section B.8.	OK	OK
iii. Indication if the person/entity is also a project participant listed in Annex 1	EB 41	Ann 12	ICF International is not a project participant	OK	OK
w. In CDM-PDD section C.1.1 are following provided?	EB 41	Ann 12	-	-	-
i. The starting date of a CDM project activity, which is the earliest of the date(s) on which the implementation or construction or real action of a project activity begins/has begun (EB33, Para 76/CDM Glossary of terms/EB41, Para 67)	EB 41	Ann 12	21/12/2005	OK	OK
ii. A description of how this start date has been determined, and a description of the evidence available to support this start date	EB 41	Ann 12	The date when the Engurhesi Board decided to continue to proceed with the project after works on the project had been suspended due to financing deficit faced by the project activity. The CDM consideration was made in the Board meeting.	OK	OK
iii. If this starting date is earlier than the date of publication of the CDM-PDD for global stakeholder consultation by a DOE, description in Section B.5 contain a of how the benefits of the CDM were seriously considered prior to the starting date (EB41, Para 68).	EB 41	Ann 12	The starting date of the project is earlier then the dae of PDD webhosting, which is why prior consideration is explicitly described in the section B.5.	OK	OK
x. In CDM-PDD section C.1.2 is the expected operational lifetime of the project activity in years	EB 41	Ann 12	CAR 27. Please present expected operational lifetime in years and months.	CAR 27	OK



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and months provided?					
y. In CDM-PDD section C.2 is it stated whether the project activity will use a renewable or a fixed crediting period and is C.2.1 or C.2.2 completed accordingly?	EB 41	Ann 12	Project will used fixed crediting period.	OK	OK
z. In CDM-PDD section C.2.1 is it indicated that each crediting period shall be at most 7 years and may be renewed at most two times, provided that, for each renewal, a designated operational entity determines and informs the Executive Board that the original project baseline is still valid or has been updated taking account of new data where applicable?	EB 41	Ann 12	n/a	n/a	n/a
aa. In CDM-PDD section C.2.1.1 are dates in the following format: (DD/MM/YYYY) provided?	EB 41	Ann 12	n/a	n/a	n/a
bb. In CDM-PDD section C.2.1.2 is the length of the first crediting period in years and months provided?	EB 41	Ann 12	n/a	n/a	n/a
cc. In CDM-PDD section C.2.2 is the fixed crediting period at most ten (10) years provided?	EB 41	Ann 12	Yes, in CDM-PDD section C.2.2 the fixed crediting period at most ten (10) years is provided	OK	OK
dd. In CDM-PDD section C.2.2.1 are the dates provided in the following format: (DD/MM/YYYY)?	EB 41	Ann 12	01/10/2011	OK	OK
ee. In CDM-PDD section C.2.2.2 is the length of the crediting period in years and months Provided?	EB 41	Ann 12	CAR 28. Please provide the length of the crediting period in months.	CAR 28	OK
ff. In CDM-PDD section D.2 are the conclusions and all references to support documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the Host Party, if environmental impacts are considered significant by the project participants or the Host, provided?	EB 41	Ann 12	Yes, the conclusions and all references to support documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the Host Party, if environmental impacts are considered significant by the project participants or the Host, are provided.	OK	OK



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			The Parliament of Georgia gave its approval in 1998 of the Enguri Rehabilitation Project including the Environmental Health and Safety Audit conducted in 1997-1998..Reporting on the Environmental Action Plan was done annually. In 2007, Engurhesi Ltd received a letter from the Ministry of Environmental Protection stating that the environmental impacts of the rehabilitation project yet to be undertaken are not considered significant because of the rehabilitative nature of the project and a full environmental impact assessment is not required.		



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gg. In CDM-PDD section E.1 are the following provided?	EB 41	Ann 12	-	-	-
i. The process by which comments by local stakeholders have been invited and compiled. An invitation for comments by local stakeholders shall be made in an open and transparent manner, in a way that facilitates comments to be received from local stakeholders and allows for a reasonable time for comments to be submitted.	EB 41	Ann 12	CAR 29. Please describe the process by which comments by local stakeholders have been invited and compiled.	CAR 29	OK
ii. The project activity is described in a manner, which allows the local stakeholders to understand the project activity, taking into account confidentiality provisions of the CDM modalities and procedures.	EB 41	Ann 12	There is no information on how the project activity was described to the project stakeholders. CAR 30. Please provide information whether project activity was described in a manner, which allowed the local stakeholders to understand the project activity, taking into account confidentiality provisions of the CDM modalities and procedures.	CAR 30	OK
iii. The local stakeholder process has been completed before submitting the proposed project activity to the DOE for validation.	EB 41	Ann 12	Yes, the local stakeholder process has been completed before submitting the proposed project activity to the DOE for validation.	OK	OK
hh. In CDM-PDD section E.2 are following provided?	EB 41	Ann 12	-	-	-
i. Identification of local stakeholders that have made comments	EB 41	Ann 12	Yes, local stakeholders that have made comments are mentioned in PDD section E.2 with their questions and answers they've received.	OK	OK
ii. A summary of this comments.	EB 41	Ann 12	See above.	OK	OK
ii. In CDM-PDD section E.3 is the explanation of how due account have been taken of comments received from local stakeholders provided?	EB 41	Ann 12	The Environmental Action Plan was sent to those participants that required further information on the environmental aspects of the project. No other comments were received. All the comments given	OK	OK



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			during the Stakeholder Consultation were taken into account in the final version of the Project Design Document.		



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jj. In CDM-PDD Annex 1 are the following provided?	EB 41	Ann 12	-	-	-
i. Contact information of project participants	EB 41	Ann 12	Yes, contact information of project participants is provided in Annex 1	OK	OK
ii. For each organisation listed in section A.3 the following mandatory fields: Organization, Name of contact person, Street, City, Postfix/ZIP, Country, Telephone and Fax or e-mail	EB 41	Ann 12	Yes, all the required fields are filled in.	OK	OK
kk. In CDM-PDD Annex 2 is information from Parties included in Annex I on sources of public funding for the project activity which shall provide an affirmation that such funding does not result in a diversion of official development assistance and is separate from and is not counted towards the financial obligations of those Parties provided?	EB 41	Ann 12	Yes, Annex 2 provides information from Parties included in Annex I on sources of public funding for the project activity which shall provide an affirmation that such funding does not result in a diversion of official development assistance and is separate from and is not counted towards the financial obligations of those Parties provided	OK	OK
ll. In CDM-PDD Annex 3 is the background information used in the application of the baseline methodology provided?	EB 41	Ann 12	Annex 3 contains information considering calculation the grid emission factor of Georgia provided by Georgian DNA	OK	OK
mm. In CDM-PDD Annex 4 is the background information used in the application of the monitoring methodology provided?	EB 41	Ann 12	The monitoring of the CDM project activity has been described in detail in the section B.7 of the PDD.	OK	OK
4. Project description					
a. Does the PDD contain a clear description of the project activity that provides the reader with a clear understanding of the precise nature of the project activity and the technical aspects of its implementation?	VVM	58	Yes, the PDD contains a clear description of the project activity that provides the reader with a clear understanding of the precise nature of the project activity and the technical aspects of its implementation	OK	OK
b. Is the description of the proposed CDM project activity as contained in the PDD:	VVM	59	-	-	-
sufficiently covering all relevant elements?	VVM	59	Yes, the description of the proposed CDM project	CAR 31	OK



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			<p>covers all relevant elements.</p> <p>CAR 31. Please remove from the section A.2 “The project scenario, including a summary of the scope of activities/measures that are being implemented within the proposed project activity” the following “improvements to the dam structure and reduction in leakages from the high pressure pipeline; repair of the water gates at the dam site; and completion of the grouting work at the dam galleries and pressure tunnel” since it is not part of the project.</p>		



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acurate?	VVM	59	Please see CAR 31 above.	-	OK
iii. providing the reader with a clear understanding of the nature of the proposed CDM project activity?	VVM	59	Yes, project description provides the reader with a clear understanding of the nature of the proposed CDM project activity	OK	OK
iv. Are there any changes/modifications compared to the webhosted PDD?	VVM	59	No, there are no changes/modifications compared to the webhosted PDD since this is the version that was published.	OK	OK
c. Is the proposed CDM project activity in existing facilities or or utilizing existing equipments?	VVM	60	The CDM project activity includes the full-scale rehabilitation of four units of Enguri HPP (Unit #1, #2, #4, #5)	OK	OK
d. Is the CDM project activity one of the following types:	VVM	60	-	--	-
i. Large scale?	VVM	60	Yes, the project is large scale	OK	OK
ii. Non-bundled small scale projects with emission reductions exceeding 15,000 tonnes per year?	VVM	60	n/a	n/a	n/a
iii. Bundled small scale projects, each with emission reductions not exceeding 15,000 tonnes?	VVM	60	n/a	n/a	n/a
e. If yes to (c) and (d) above, was a physical site inspection conducted to confirm that the description in the PDD reflects the proposed CDM project activity, unless other means are specified in the methodology?	VVM	60	Yes, site visit was performed on 26 th of May 2011 by the validation team.	OK	OK
f. If yes to (d.iii) above, was the number of physical site visits base on sampling?	VVM	60	n/a	n/a	n/a
g. If yes is the sampling size appropriately justified through statistical analysis?	VVM	60	n/a	n/a	n/a
h. For other individual proposed small scale CDM project activities with emission reductions not exceeding 15,000 tonnes per year, was a	VVM	61	n/a	n/a	n/a



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physical site inspection conducted?					
i. For all other proposed CDM project activities not referred to in paragraphs 59 – 61, was a physical site inspection conducted?	VVM	62	n/a	n/a	n/a
j. If no, was it appropriately justified?	VVM	62	n/a	n/a	n/a
k. Does the proposed CDM project activity involve the alteration of an existing installation or process?	VVM	63	Yes, since the project activity is rehabilitation of four existing units.	OK	OK
l. If yes, does the project description clearly state the differences resulting from the project activity compared to the pre-project situation?	VVM	63	Yes, the project description clearly states the differences resulting from the project activity compared to the pre-project situation since the pre-project situation is a baseline scenario.	OK	OK
5. Baseline and monitoring methodology					
a. General requirement					
a. Do the baseline and monitoring methodologies selected by the project participants comply with the methodologies previously approved by the CDM Executive Board?	VVM	65	Please refer to CAR 10 above	-	OK
b. Is the selected methodology applicable to the project activity?	VVM	66	1. Yes, the selected methodology is applicable to the project activity	OK	OK
c. Had the PP correctly applied the selected methodology?	VVM	66	2. Yes, the PP has correctly applied the selected methodology	OK	OK
d. Had the selected methodology been correctly applied with respect to project boundary?	VVM	67	3. Please see CAR 13	-	OK
e. Had the selected methodology been correctly applied with respect to baseline identification?	VVM	67	4. Yes, the selected methodology has been correctly applied with respect to baseline identification	OK	OK
f. Had the selected methodology been correctly applied with respect to Algorithms and/or formulae used to determine emission reductions?	VVM	67	5. Yes, the selected methodology been correctly applied with respect to Algorithms and/or formulae used to determine emission reductions	OK	OK



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g. Had the selected methodology been correctly applied with respect to additionality?	VVM	67	6. CAR 32. Chosen methodology ACM 0002 ver.12.1.0. suggests using “Tool for the demonstration and assessment of additionality” ver.05.2 while PDD developer partly uses “Combined Tool to identify the baseline scenario and demonstrate additionality” ver.02.2. Please correct.	CAR 32	OK
i. Has the additionality of the project activity been demonstrated and assessed using the latest version of the “Tool for the demonstration and assessment of additionality” agreed by the Board, which is available on the UNFCCC website?	ACM	0002 v12. 1.0	7. See CAR 32 above.	-	OK
h. Had the selected methodology been correctly applied with respect to monitoring methodology?	VVM	67	8. Refer to (7.g), (7.h), (7.i), (7.j) and (7.k) below	-	OK
b. Applicability of the selected methodology to the project activity					
a. Is the selected baseline and monitoring methodology, previously approved by the CDM Executive Board, applicable to the project activity? Is the used version valid?	VVM	68	Please refer to CAR 10 above	-	OK
i. This methodology is applicable to grid-connected renewable power generation project activities that (a) install a new power plant at a site where no renewable power plant was operated prior to the implementation of the project activity (greenfield plants); (b) involve a capacity addition; (c) involve a retrofit of (an) existing plant(s); or (d) involve a replacement of (an) existing plant(s).	ACM	0002 v12. 1.0	The refurbishment of Enguri hydro power plant is a renewable power generation project activity connected to the Georgian power grid. The project activity belongs to type (c) involve a retrofit of (an) existing plant (s)	OK	OK
b. Has the DOE applied specific guidance provided	VVM	69	In order to check the methodology applicability the	OK	OK



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by the CDM Executive Board in respect to the applicable approved methodology?			DOE has applied this specific approved methodology together with "Tool for the demonstration and assessment of additionality" ver.05.2 and "Combined Tool to identify the baseline scenario and demonstrate additionality" ver.02.2.		
c. Is the methodology correctly quoted?	VVM	70	Yes, methodology is correctly quoted	OK	OK
d. Are the applicability conditions of the methodology met?	VVM	71	Yes, the applicability conditions of the methodology are met	OK	OK
i. The project activity is the installation, capacity addition, retrofit or replacement of a power plant/unit of one of the following types: hydro power plant/unit (either with a run-of-river reservoir or an accumulation reservoir), wind power plant/unit, geothermal power plant/unit, solar power plant/unit, wave power plant/unit or tidal power plant/unit	ACM	0002 v12. 1.0	The refurbishment of Enguri hydro power plant is retrofit of hydro power plant with an accumulation reservoir.	OK	OK
ii. In the case of capacity additions, retrofits or replacements (except for wind, solar, wave or tidal power capacity addition projects which use Option 2: on page 10 to calculate the parameter $EG_{PJ,y}$): the existing plant started commercial operation prior to the start of a minimum historical reference period of five years, used for the calculation of baseline emissions and defined in the baseline emission section, and no capacity expansion or retrofit of the plant has been undertaken between the start of this minimum historical reference period and the implementation of the project activity.	ACM	0002 v12. 1.0	The refurbishment of Enguri hydro power plant is at the units that have been in operation since 1978-1980. No capacity expansion or retrofit of the plant has been undertaken between the start of the historical reference period and the implementation of the project activity. Thus, there is availability of 26-28 years of historical performance information for each of the units of Enguri hydro plant.	OK	OK



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iii. 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; or - 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 ; or - 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 .	ACM	0002 v12. 1.0	The project includes an existing reservoir whose volume will not be increased during or after the project implementation. This information is stated in the “Enguri Dam and Hydroelectric Power station, Georgia. Feasibility study for rehabilitation. Part 1. Technical and economic studies”. Thus, the condition no.1 is applicable in the case of Enguri project activity, i.e. The project activity is implemented in an existing reservoir, with no change in the volume of reservoir.	OK	OK
iv. The methodology is not applicable to the following conditions. Please confirm - Project activities that involve switching from fossil fuels to renewable energy sources at the site of the project activity - 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 .	ACM	0002 v12. 1.0	The refurbishment of Enguri hydro power plant does not involve switching from fossil fuels to renewable energy at the site. The refurbishment of Enguri hydro power plant does not involve biomass fired power plants. The refurbishment of Enguri hydro power plant does not involve any increase in existing reservoir.	OK	OK
v. In the case of retrofits, replacements, or capacity additions, this methodology is only applicable if the most plausible baseline scenario, as a result of the identification of baseline scenario, is “the continuation of the current situation, i.e. to use the power	ACM	0002 v12. 1.0	n/a	n/a	n/a



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generation equipment that was already in use prior to the implementation of the project activity and undertaking business as usual maintenance".					
e. Is the project activity expected to result in emissions other than those allowed by the methodology?	VVM	71	The project activity is not expected to result in emissions other than those allowed by the methodology	OK	OK
f. Is the choice of the methodology justified?	VVM	71	Since, the CDM Enguri project meets all the applicability conditions as required by the methodology. The use of ACM0002 is justified by the CDM project activity.	OK	OK
g. Have the project participants shown that the project activity meets each of the applicability conditions or the approved methodology?	VVM	71	Refer to (5.b.d) above	-	-
h. Have the project participants shown that the project activity meets each of the applicability conditions of any tool or other methodology component referred to the methodology?	VVM	71	Please refer to CAR 32 above	-	OK
i. Are each of the applicability conditions of the "Tool to calculate the emission factor for an electricity system" met?	EB 50	Ann 40	Emission factor for the grid was provided by Georgian DNA and was not calculated by project developer.	OK	OK
ii. Are each of the applicability conditions of the "Tool for the demonstration and assessment of additionality" met?	EB 39	Ann 10	Please refer to CAR 32 above	-	OK
iii. Are each of the applicability conditions of the "Combined tool to identify the baseline scenario and demonstrate additionality" met?	EB 28	Ann 14	Yes, the applicability conditions of the "Combined tool to identify the baseline scenario and demonstrate additionality" are met	OK	OK
iv. Are each of the applicability conditions of the "Tool to calculate project or leakage CO ₂ emissions from fossil fuel combustion" met?	EB 41	Ann 11	n/a	OK	OK
i. Is the DOE, based on local and sectoral	VVM	71	Yes, the DOE, based on local and sectoral	OK	OK


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knowledge, aware that comparable information is available from sources other than that used in the PDD?			knowledge, is aware that comparable information is available from sources other than that used in the PDD		
j. If yes, was the PDD cross checked against the other sources to confirm that the project activity meets the applicability conditions of the methodology? (provide the reference to these choices)	VVM	71	PDD was cross checked against official plant information from Engurhesi Ltd.	OK	OK
k. Can a determination regarding the applicability of the selected methodology to the proposed CDM project activity be made?	VVM	72	The determination regarding the applicability of the selected methodology to the proposed CDM project activity is not necessary since methodology is fully and correctly applied.	OK	OK
l. If no, clarification of the methodology was requested, in accordance with the guidance provided by the CDM Executive Board?	VVM	72	n/a	n/a	n/a
m. If answer to (5.b.d) above is "no", revision or deviation from the methodology was requested, in accordance with the guidance provided by the CDM Executive Board?	VVM	73	n/a	n/a	n/a
n. If yes to (5.b.l) and (5.b.m) above, a request for registration was submitted before the CDM Executive Board has approved the proposed deviation or revision?	VVM	74	n/a	n/a	n/a
c. Project boundary					
a. Does the PDD correctly describe the project boundary, including the physical delineation of the proposed CDM project activity included within the project boundary for the purpose of calculating project and baseline emissions for the proposed CDM project activity?	VVM	78	Yes, PDD correctly describes the project boundary, including the physical delineation of the proposed CDM project activity included within the project boundary for the purpose of calculating project and baseline emissions for the proposed CDM project activity.	OK	OK



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i. Does the extent of the project boundary, as described in the PDD, includes the project power plant and all power plants connected physically to the electricity system that the CDM project power plant is connected to?	ACM	0002 v12.1.0	As the Georgian DNA the whole Georgian electricity grid has been considered to calculate the emission factor for Georgia, hence, in the PDD, the Georgian electricity grid is defined as the project electricity system. In addition, the imports of electricity from Russia and Armenia were included in the spatial extent of the project boundary for the purposes of calculation of the operating margin (OM), as requested by the ACM002 methodology for the grid emission factor calculation by DNA.	OK	OK
ii. Are the greenhouse gases and emission sources that are included in or excluded from the project boundary shown in a table format as per applicable methodology?	ACM	0002 v12.1.0	Yes, the greenhouse gases and emission sources that are included in or excluded from the project boundary are shown in a table format as per applicable methodology. Please see CAR 13	OK	OK
b. Is the delineation in the PDD of the project boundary correct and include identification of all locations, processes and equipment including secondary equipment and associated processes such as logistics etc.?	VVM	79	In addition, as per ACM0002, no CO2 emissions from transportation or project construction are to be accounted and therefore no leakage is accounted for in this project activity. In addition, since the reservoir is not modified by the proposed project activity, no sources of methane (from decay of flora/fauna in the reservoir) are accounted for in this project activity.	OK	OK
c. Does the delineation in the PDD of the project boundary meet the requirements of the selected baseline?	VVM	79	Yes, the delineation in the PDD of the project boundary meets the requirements of the selected baseline	OK	OK
d. Have changes been made to the project boundary in comparison to the webhosted PDD. If yes please comment on the reason for the changes.	VVM	79	No, there are no changes/modifications compared to the webhosted PDD since this is the version that was published.	OK	OK
e. Have all sources and GHGs required by the	VVM	79	Please see CAR 13	OK	OK



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methodology been included within the project boundary?					
f. Does the methodology allow project participant to choose whether a source or gas is to be included within the project boundary	VVM	79	Yes, methodology ACM0002 allows project participant to choose whether a source or gas is to be included within the project boundary	OK	OK
g. If yes, have the project participants justified that choice?	VVM	79	CAR 33. Please justify the choice of emission sources within project boundary.	CAR 33	OK
h. If yes, is the justification provided reasonable? (provide reference to the supporting documented evidence provided by the project participants)	VVM	79	Please see CAR 33 above.	-	OK
d. Baseline identification					
a. Does the PDD identify the baseline for the proposed CDM project activity, defined 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?	VVM	81	Yes, PDD identifies the baseline for the proposed CDM project activity, defined 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. The continuation of current situation was chosen as a baseline scenario.	OK	OK
b. Has any procedure contained in the methodology to identify the most reasonable baseline scenario, been correctly applied?	VVM	82	CAR 34. Please justify why option P3 was excluded from the baseline consideration.	CAR 34	OK
i. If the project activity is the install a new grid-connected renewable power plant/unit (greenfield plant), is the baseline scenario identified appropriately in accordance with the ACM0002 ver.12.1.0?	ACM	0002 v12. 1.0	n/a	n/a	n/a
ii. If the project activity is a capacity addition to existing grid-connected renewable power plant/unit, is the baseline scenario identified appropriately in accordance with the ACM0002	ACM	0002 v12. 1.0	n/a	n/a	n/a



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ver. 11? And is the point of time at which the generation facility would likely be replaced or retrofitted (DATE Baseline Retrofit) reasonably defined?					
iii. If the project activity is the retrofit or replacement of existing grid-connected renewable power plant/unit, is the baseline scenario identified following the step-wise procedure in accordance with the ACM0002 ver.12.1.0?	ACM	0002 v12. 1.0	Please refer to CAR 34 above	-	OK
iv. Are the realistic and credible alternative baseline scenarios for power generation appropriately identified following the Step 1 of the “Combined tool to identify the baseline scenario and demonstrate additionality”? (Step 1)	ACM	0002 v12. 1.0	<p>Yes, the realistic and credible alternative baseline scenarios for power generation are appropriately identified following the Step 1 of the “Combined tool to identify the baseline scenario and demonstrate additionality”. Those scenarios are:</p> <p>P1: The project activity not implemented as a CDM project.</p> <p>P2: The continuation of the current situation, i.e. to use all power generation equipment that was already in use prior to the implementation of the project activity and undertaking business as usual maintenance. The additional power generation under the project activity would be generated in existing and new grid connected power plants in the electricity system. The project activity in such a situation would be undertaken without being registered as a CDM project activity – but undertaken at a later point in time. This future date/point-in-time is defined as Baseline Retrofit DATE , which is determined below in a step by</p>	OK	OK

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			step manner.		





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v. Are the realistic and credible alternative baseline scenarios i.e. P1, P2 and P3 appropriately applied Barrier analysis following the Step 2 of the “Combined tool to identify the baseline scenario and demonstrate additionality”? (Step 2)	ACM	0002 v12. 1.0	Yes, generally barrier analysis is applied appropriately except for the fact that alternative P3 was eliminated from the analysis process. For this please refer to the CAR 34 above. But there are still issues that need to be clarified: CAR 35. Please provide the information regarding expected cost of rehabilitation of the units No1, 2, 4, 5 as of the December of 2005. Unfortunately at present the developer has provided in PDD information regarding units No 1, 2, 3 only. CL 05. The developer indicates that the total amount of the loan and grant facilities made available for rehabilitation works in 2001 has been USD 19,4 mln. The developer mentions that the funds were sufficient for rehabilitation of the unit No3 and some part of the unit No2. According to the data provided the total investment expenses for two units were equal to EUR 11,4 mln+USD 3,2mln. Even taking into account EUR revaluation the loan/grant facility should have been sufficient to cover all works related to unit No2 as well. Please clarify.	CAR 35. CL 05	OK
vi. If more than one alternative is remaining after Step 2, is Investment analysis appropriately applied (apply an Investment Comparison as per step 3 of the “Combined tool to identify the baseline scenario and demonstrate additionality” or a Benchmark Analysis as per step 2b of the “Tool for the demonstration and assessment of additionality”)? (Step 3)	ACM	0002 v12. 1.0	Only one alternative is remaining after Step 2 so there is no need in investment analysis appliance.	OK	OK
c. Does the selected methodology require use of	VVM	82	Yes, “Combined tool to identify the baseline	OK	OK


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tools (such as the “Tool for the demonstration and assessment of additionality” and the “Combined tool to identify the baseline scenario and demonstrate additionality”) to establish the baseline scenario?			scenario and demonstrate additionality” is required for use by ACM 0002 ver.12.1.0.		
d. If yes, was the methodology consulted on the application of these tools? (In such cases, the guidance in the methodology shall supersede the tool.)	VVM	82	The methodology clearly requires usage of “Combined tool to identify the baseline scenario and demonstrate additionality”. No confusion was made.	OK	OK
e. Does the methodology require several alternative scenarios to be considered in the identification of the most reasonable baseline scenario?	VVM	83	Yes, the methodology requires several alternative scenarios to be considered in the identification of the most reasonable baseline scenario	OK	OK
f. If yes, are all scenarios that are considered by the project participants and are supplementary to those required by the methodology reasonable in the context of the proposed CDM project activity?	VVM	83	Yes, all scenarios that are considered by the project participants and are supplementary to those are required by the methodology reasonable in the context of the proposed CDM project activity. For more information please refer to CAR 34.	OK	OK
g. Has any reasonable alternative scenario been excluded?	VVM	83	After applying barrier analysis the scenario ‘The project activity not implemented as CDM project’ was reasonably excluded.	OK	OK
h. Is the baseline scenario identified reasonably supported by:	VVM	84	-	-	-
i. Assumptions?	VVM	84	Yes	OK	OK
ii. Calculations?	VVM	84	Yes	OK	OK
iii. Rationales?	VVM	84	Yes	OK	OK
i. Are the documents and sources referred to in the PDD correctly quoted and interpreted?	VVM	84	Yes, all the sources are properly quoted and referenced.	OK	OK
j. Was the information provided in the PDD cross checked with other verifiable and credible sources, such as local expert opinion, if	VVM	84	Information provided in PDD was checked by validation team financial specialist	OK	OK



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available? (identify the sources)					
k. Have all applicable CDM requirements been taken into account in the identification of the baseline scenario for the proposed CDM project activity?	VVM	85	Yes, all applicable CDM requirements have been taken into account in the identification of the baseline scenario for the proposed CDM project activity.	OK	OK
l. Have all relevant policies and circumstances been identified and correctly considered in the PDD, in accordance with the guidance by the CDM Executive Board?	VVM	85	Yes, all relevant policies and circumstances have been identified and correctly considered in the PDD, in accordance with the guidance by the CDM Executive Board.	OK	OK
m. Does the PDD provide a verifiable description of the identified baseline scenario, including a description of the technology that would be employed and/or the activities that would take place in the absence of the proposed CDM project activity?	VVM	86	Yes, the PDD provides a verifiable description of the identified baseline scenario, including a description of the technology that would be employed and/or the activities that would take place in the absence of the proposed CDM project activity.	OK	OK
e. Algorithms and/or formulae used to determine emission reductions					
a. Do the steps taken and equations applied to calculate project emissions, baseline emissions, leakage and emission reductions comply with the requirements of the selected baseline and monitoring?	VVM	89	Yes, please refer to item 3.p.i. above	OK	OK
b. Have the equations and parameters in the PDD been correctly applied with respect those in the select approved methodology?	VVM	90	Yes, please see the item above.	OK	OK
i. Are the Project emissions appropriately calculated?.	ACM	0002 v12. 1.0	Yes, since project emissions are 0.	OK	OK
ii. Are the Baseline emissions appropriately calculated specifically for (a)greenfield plants or	ACM	0002 v12.	Please refer to CAR 22	-	OK


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(b) retrofit and replacements or (c) capacity additions?		1.0			
iii. Are the Leakage appropriately calculated?	ACM	0002 v12. 1.0	n/a	n/a	n/a
iv. Are the Emission reductions appropriately calculated?	ACM	0002 v12. 1.0	Please refer to item 5.e (b.ii) above.	OK	OK
c. Have project participants prepared as part of the CDM-PDD an estimate of likely emission reductions for the proposed crediting period? This estimate should, in principle, employ the same methodology as selected for the calculation of emission reductions. Where the grid emission factor (EFCM,grid,y) is determined ex post during monitoring, project participants may use models or other tools to estimate the emission reductions prior to validation.	ACM	0002 v12. 1.0	Yes, project participants have prepared as part of the CDM-PDD an estimate of likely emission reductions for the proposed crediting period. This estimation is made according to the methodology used. Emission factor was calculated ex-ante by Georgian DNA.	OK	OK
d. Does the methodology provide for selection between different options for equations or parameters?	VVM	90	Yes, the methodology provides for selection between different options for equations or parameters	OK	OK
e. If yes, has adequate justification been provided (based on the choice of the baseline scenario, context of the proposed CDM project activity and other evidence provided)?	VVM	90	Yes, adequate justification has been provided (based on the choice of the baseline scenario, context of the proposed CDM project activity)	OK	OK
f. If yes, have correct equations and parameters been used, in accordance with the methodology selected?	VVM	90	Refer to (5.e.b) above	-	-
g. Will data and parameters be monitored throughout the crediting period of the proposed CDM project activity?	VVM	91	Electricity supplied annually to the grid by Enguri HPP is the parameter that will be monitoring during the crediting period.	OK	OK



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h. If no, and these data and parameters will remain fixed throughout the crediting period, are all data sources and assumptions:	VVM	91	n/a	n/a	n/a
i. Appropriate and correct?	VVM	91	n/a	n/a	n/a
ii. Applicable to the proposed CDM project activity?	VVM	91	n/a	n/a	n/a
iii. Resulting in a conservative estimate of the emission reductions?	VVM	91	n/a	n/a	n/a
i. Will data and parameters be monitored on implementation and hence become available only after validation of the project activity?	VVM	91	No, data and parameters are available and monitored before project implementation.	OK	OK
j. If yes, are the estimates provided in the PDD for these data and parameters reasonable?	VVM	91	n/a	n/a	n/a
6. Additionality of a project activity					
a. Does the PDD describe how a proposed CDM project activity is additional?	VVM	94	Considering additionality project refers to choice of the baseline scenario not does not reflect additionality issue clearly. Please refer to CAR 32	-	OK
b. Does the CDM-PDD state the latest version of the additionality tool being used?	ACM	0002 v12. 1.0	No, please refer to CAR 32	OK	OK
c. Were the following steps of the tool to assess additionality used:	EB 39	Ann 10	Refer to the issue above	OK	OK
i. Identification of alternatives to the project activity?	EB 39	Ann 10	Refer to the issue above	OK	OK
ii. Investment analysis to determine that the proposed project activity is either: 1) not the most economically or financially attractive, or 2) not economically or financially feasible?	EB 39	Ann 10	Refer to the issue above	OK	OK
iii. Barriers analysis?	EB 39	Ann 10	Refer to the issue above	OK	OK



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iv. Common practice analysis?	EB 39	Ann 10	CAR 36. Common practice analysis is described in the PDD version 1 but it is not reflected according to the additionality tool ver.05.2. Please correct.	CAR 36	OK
d. In step 1 (i) have all the sub-steps as below been followed?	EB 39	Ann 10	n/a due to CAR 32	OK	OK
i. Sub-step 1a: Define alternatives to the project activity	EB 39	Ann 10	n/a due to CAR 32	OK	OK
ii. Sub-step 1b: Consistency with mandatory laws and regulations	EB 39	Ann 10	n/a due to CAR 32	OK	OK
e. Have the following alternatives been included while defining alternatives as per sub-step 1a?	EB 39	Ann 10	-	OK	OK
i. (a) The proposed project activity undertaken without being registered as a CDM project activity;	EB 39	Ann 10	n/a due to CAR 32	OK	OK
ii. (b) Other realistic and credible alternative scenario(s) to the proposed CDM project activity scenario that deliver outputs services or services with comparable quality, properties and application areas, taking into account, where relevant, examples of scenarios identified in the underlying methodology;	EB 39	Ann 10	n/a due to CAR 32	OK	OK
iii. (c) If applicable, continuation of the current situation (no project activity or other alternatives undertaken).	EB 39	Ann 10	n/a due to CAR 32	OK	OK
f. Has the project participant included the technologies or practices that provide outputs or services with comparable quality, properties and application areas as the proposed CDM project activity and that have been implemented previously or are currently being introduced in the	EB 39	Ann 10	n/a due to CAR 32	OK	OK



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relevant country/region?					
g. Has the outcome of Step 1a: Identified realistic and credible alternative scenario(s) to the project activity done correctly? Please briefly mention the outcome.	EB 39	Ann 10	n/a due to CAR 32	OK	OK
h. Is the alternative(s) in compliance with all mandatory applicable legal and regulatory requirements, even if these laws and regulations have objectives other than GHG reductions, e.g. to mitigate local air pollution.?	EB 39	Ann 10	n/a due to CAR 32	OK	OK
i. If an alternative does not comply with all mandatory applicable legislation and regulations, has it been shown that, based on an examination of current practice in the country or region in which the law or regulation applies, those applicable legal or regulatory requirements are systematically not enforced and that noncompliance with those requirements is widespread in the country?	EB 39	Ann 10	n/a due to CAR 32	OK	OK
j. Has the outcome of Step 1b: Identified realistic and credible alternative scenario(s) to the project activity that are in compliance with mandatory legislation and regulations taking into account the enforcement in the region or country and EB decisions on national and/or sectoral policies and regulations done correctly? Please state the outcome.	EB 39	Ann 10	n/a due to CAR 32	OK	OK
k. Has PP selected Step 2 (Investment analysis) or Step 3 (Barrier analysis) or both Steps 2 and 3?	EB 39	Ann 10	n/a due to CAR 32	OK	OK
l. In step 2, have all the sub-steps as below been followed?	EB 39	Ann 10	n/a due to CAR 32	OK	OK



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i. Sub-step 2a: Determine appropriate analysis method;	EB 39	Ann 10	n/a due to CAR 32	OK	OK
ii. Sub-step 2b: Option I. Apply simple cost analysis;	EB 39	Ann 10	n/a due to CAR 32	OK	OK
iii. Sub-step 2b: Option II. Apply investment comparison analysis;	EB 39	Ann 10	n/a due to CAR 32	OK	OK
iv. Sub-step 2b: Option III. Apply benchmark analysis;	EB 39	Ann 10	n/a due to CAR 32	OK	OK
v. Sub-step 2c: Calculation and comparison of financial indicators (only applicable to Options II and III);	EB 39	Ann 10	n/a due to CAR 32	OK	OK
vi. Sub-step 2d: Sensitivity analysis (only applicable to Options II and III).	EB 39	Ann 10	n/a due to CAR 32	OK	OK
m. In sub-step 2a has the determination of appropriate method of analysis done as per the guidance as below?	EB 39	Ann 10	n/a due to CAR 32	OK	OK
i. Simple cost analysis if the CDM project activity and the alternatives identified in Step 1 generate no financial or economic benefits other than CDM related income (Option I).	EB 39	Ann 10	n/a due to CAR 32	OK	OK
ii. Otherwise, use the investment comparison analysis (Option II) or the benchmark analysis (Option III). Specify option used with justification.	EB 39	Ann 10	n/a due to CAR 32	OK	OK
n. Has the below guideline followed for sub-step 2b Option I. Apply simple cost analysis? Document the costs associated with the CDM project activity and the alternatives identified in Step1 and demonstrate that there is at least one alternative which is less costly than the project activity.	EB 39	Ann 10	n/a due to CAR 32	OK	OK
o. Has the below guideline followed for sub-step 2b	EB	Ann	n/a due to CAR 32	OK	OK



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Option II. Apply investment comparison analysis? Identify the financial indicator, such as IRR, NPV, cost benefit ratio, or unit cost of service most suitable for the project type and decision-making context. Please specify	39	10			
p. Has the below guideline followed for Sub-step 2b: Option III. Apply benchmark analysis?	EB 39	Ann 10	n/a due to CAR 32	OK	OK
i. Identify the financial/economic indicator, such as IRR, most suitable for the project type and decision context.	EB 39	Ann 10	n/a due to CAR 32	OK	OK
ii. When applying Option II or Option III, the financial/economic analysis shall be based on parameters that are standard in the market, considering the specific characteristics of the project type, but not linked to the subjective profitability expectation or risk profile of a particular project developer. Only in the particular case where the project activity can be implemented by the project participant, the specific financial/economic situation of the company undertaking the project activity can be considered.	EB 39	Ann 10	n/a due to CAR 32	OK	OK
iii. Discount rates and benchmarks shall be derived from: (a) Government bond rates, increased by a suitable risk premium to reflect private investment and/or the project type, as substantiated by an independent (financial) expert or documented by official publicly available financial data; (b) Estimates of the cost of financing and required return on capital (e.g. commercial lending rates and guarantees	EB 39	Ann 10	n/a due to CAR 32	OK	OK



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required for the country and the type of project activity concerned), based on bankers views and private equity investors/funds' required return on comparable projects; (c) A company internal benchmark (weighted average capital cost of the company), only in the particular case referred to above in 2. The project developers shall demonstrate that this benchmark has been consistently used in the past, i.e. that project activities under similar conditions developed by the same company used the same benchmark; (d) Government/official approved benchmark where such benchmarks are used for investment decisions; (e) Any other indicators, if the project participants can demonstrate that the above Options are not applicable and their indicator is appropriately justified. Please specify benchmark and justify.					
q. Has the below guideline followed for Sub-step 2c: Calculation and comparison of financial indicators (only applicable to Options II and III)?	EB 39	Ann 10	n/a due to CAR 32	OK	OK
i. Calculate the suitable financial indicator for the proposed CDM project activity and, in the case of Option II above, for the other alternatives. Include all relevant costs (including, for example, the investment cost, the operations and maintenance costs), and revenues (excluding CER revenues, but possibly including inter alia subsidies/fiscal incentives, ODA, etc, where applicable), and, as appropriate, non-market cost and benefits in	EB 39	Ann 10	n/a due to CAR 32	OK	OK


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the case of public investors if this is standard practice for the selection of public investments in the host country.					
ii. Present the investment analysis in a transparent manner and provide all the relevant assumptions, preferably in the CDM-PDD, or in separate annexes to the CDM-PDD.	EB 39	Ann 10	n/a due to CAR 32	OK	OK
iii. Justify and/or cite assumptions.	EB 39	Ann 10	n/a due to CAR 32	OK	OK
iv. In calculating the financial/economic indicator, the project's risks can be included through the cash flow pattern, subject to project-specific expectations and assumptions.	EB 39	Ann 10	n/a due to CAR 32	OK	OK
v. Assumptions and input data for the investment analysis shall not differ across the project activity and its alternatives, unless differences can be well substantiated.	EB 39	Ann 10	n/a due to CAR 32	OK	OK
vi. Present in the CDM-PDD a clear comparison of the financial indicator for the proposed CDM activity. Please specify details for above.	EB 39	Ann 10	n/a due to CAR 32	OK	OK
r. Has the below guideline followed for Sub-step 2d: Sensitivity analysis (only applicable to Options II and III)? Include a sensitivity analysis that shows whether the conclusion regarding the financial/economic attractiveness is robust to reasonable variations in the critical assumptions.	EB 39	Ann 10	n/a due to CAR 32	OK	OK
s. Has the outcome of Step 2 clearly mentioned with justification?	EB 39	Ann 10	n/a due to CAR 32	OK	OK
t. In step 3: Barrier analysis have all the sub-steps as below been followed?	EB 39	Ann 10	n/a due to CAR 32	OK	OK
i. Sub-step 3a: Identify barriers that would	EB	Ann			


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prevent the implementation of the proposed CDM project activity;	39	10			
ii. Sub-step 3 b: Show that the identified barriers would not prevent the implementation of at least one of the alternatives (except the proposed project activity).	EB 39	Ann 10	n/a due to CAR 32	OK	OK
u. Has the below guideline followed for Sub-step 3a: Identify barriers that would prevent the implementation of the proposed CDM project?	EB 39	Ann 10	n/a due to CAR 32	OK	OK
i. (a) Investment barriers: For alternatives undertaken and operated by private entities: Similar activities have only been implemented with grants or other non-commercial finance terms. No private capital is available from domestic or international capital markets due to real or perceived risks associated with investment in the country where the proposed CDM project activity is to be implemented, as demonstrated by the credit rating of the country or other country investments reports of reputed origin.	EB 39	Ann 10	n/a due to CAR 32	OK	OK
ii. (b) Technological barriers: Skilled and/or properly trained labour to operate and maintain the technology is not available in the relevant country/region, which leads to an unacceptably high risk of equipment disrepair and malfunctioning or other underperformance; Lack of infrastructure for implementation and logistics for maintenance of the technology, Risk of technological failure: the process/technology failure risk in the local	EB 39	Ann 10	n/a due to CAR 32	OK	OK


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circumstances is significantly greater than for other technologies that provide services or outputs comparable to those of the proposed CDM project activity, as demonstrated by relevant scientific literature or technology manufacturer information, The particular technology used in the proposed project activity is not available in the relevant region.					
iii. (c) Barriers due to prevailing practice: The project activity is the "first of its kind".	EB 39	Ann 10	n/a due to CAR 32	OK	OK
iv. (d) Other barriers, preferably specified in the underlying methodology as examples.	EB 39	Ann 10	n/a due to CAR 32	OK	OK
v. Has the outcome from Step 3a clearly mentioned in PDD?	EB 39	Ann 10	n/a due to CAR 32	OK	OK
w. Has the below guideline followed for Sub-step 3 b: Show that the identified barriers would not prevent the implementation of at least one of the alternatives (except the proposed project activity)?	EB 39	Ann 10	n/a due to CAR 32	OK	OK
i. If the identified barriers also affect other alternatives, explain how they are affected less strongly than they affect the proposed CDM project activity. In other words, demonstrate that the identified barriers do not prevent the implementation of at least one of the alternatives. Any alternative that would be prevented by the barriers identified in Sub-step 3a is not a viable alternative, and shall be eliminated from consideration.	EB 39	Ann 10	n/a due to CAR 32	OK	OK
ii. Provide transparent and documented evidence, and offer conservative interpretations of this	EB 39	Ann 10	n/a due to CAR 32	OK	OK



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documented evidence, as to how it demonstrates the existence and significance of the identified barriers and whether alternatives are prevented by these barriers.					
iii. The type of evidence to be provided should include at least one of the following: (a) Relevant legislation, regulatory information or industry norms; (b) Relevant (sectoral) studies or surveys (e.g. market surveys, technology studies, etc) undertaken by universities, research institutions, industry associations, companies, bilateral/multilateral institutions, etc; (c) Relevant statistical data from national or international statistics; (d) Documentation of relevant market data (e.g. market prices, tariffs, rules); (e) Written documentation of independent expert judgments from industry, educational institutions (e.g. universities, technical schools, training centres), industry associations and others. Please specify.	EB 39	Ann 10	n/a due to CAR 32	OK	OK
x. Has the outcome from Step 3 clearly mentioned in PDD?	EB 39	Ann 10	n/a due to CAR 32	OK	OK
y. In step 4: Common practise analysis have all the sub-steps as below followed?	EB 39	Ann 10	Please refer to CAR 36	OK	OK
i. Sub-step 4a: Analyze other activities similar to the proposed project activity;	EB 39	Ann 10	See above	OK	OK
ii. Sub-step 4b: Discuss any similar Options that are occurring.	EB 39	Ann 10	See above	OK	OK
z. Has the below guideline followed for Sub-step 4a: Analyze other activities similar to the proposed project activity? Provide an analysis of any other	EB 39	Ann 10	See above	OK	OK


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activities that are operational and that are similar to the proposed project activity. Other CDM project activities are not to be included in this analysis. Provide documented evidence and, where relevant, quantitative information. On the basis of that analysis, describe whether and to which extent similar activities have already diffused in the relevant region.					
aa. Has the below guideline followed for Sub-step 4b: Discuss any similar Options that are occurring? If similar activities are identified, then it is necessary to demonstrate why the existence of these activities does not contradict the claim that the proposed project activity is financially/economically unattractive or subject to barriers. This can be done by comparing the proposed project activity to the other similar activities, and pointing out and explaining essential distinctions between them that explain why the similar activities enjoyed certain benefits that rendered it financially/economically attractive (e.g., subsidies or other financial flows) and which the proposed project activity cannot use or did not face the barriers to which the proposed project activity is subject. In case similar projects are not accessible, the PDD should include justification about non-accessibility of data/information.	EB 39	Ann 10	See above	OK	OK
bb. Has the outcome from Step 4 clearly mentioned in PDD?	EB 39	Ann 10	See above	OK	OK



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cc. Has it been proved that the porject is additional?	EB 39	Ann 10		OK	OK



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<i>a. Prior consideration of the clean development mechanism</i>					
a. Is the project activity start date prior to the date of publication of the PDD for stakeholder comments?	VVM	98	Yes, project activity start date is prior to the date of publication of the PDD for stakeholder comments via UNFCCC EB website	OK	OK
b. If yes, were the CDM benefits considered necessary in the decision to undertake the project as a proposed CDM project activity?	VVM	98	Yes, CDM benefits were considered necessary in the decision to undertake the project as a proposed CDM project activity, which can be proved by "Minutes of Meeting # 4 of the Board of Directors of "Engurhesi" Ltd.", which occurred 17 th of December 2004.	OK	OK
c. Is the start date of the project activity, reported in the PDD, in accordance with the "Glossary of CDM terms", which states that "The starting date of a CDM project activity is the earliest date at which either the implementation or construction or real action of a project activity begins."?	VVM	99	The starting date of the project is 21 st of December 2005, which is the date of "Minutes of Meeting # 19 of the Board of Directors of "Engurhesi" Ltd", where CDM benefits were being considered to cover financing gap for the rehabilitation work on Unit 2 and Unit 1.	OK	OK
d. Does the project activity require construction, retrofit or other modifications?	VVM	99	The project activity requires the retrofit.	OK	OK
e. If yes, is it ensured that the date of commissioning cannot be considered as the project activity start date?	VVM	99	According to the "Glossary of CDM terms", which states that "The starting date of a CDM project activity is the earliest date at which either the implementation or construction or real action of a project activity begins.", which means that discussion of the CDM benefits on the Board Meeting can be the starting date since it is a real	CL 06	OK



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			action as well. Though, CL 06. Please clarify that the date of commissioning cannot be considered as the project activity start date		



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f. Is it a new project activity (a project activity with a start date on or after 02 August 2008) or an existing project activity (a project activity with a start date before 02 August 2008)?	VVM	100	It is an existing project activity (a project activity with a start date before 02 August 2008)	OK	OK
g. For a new project, for which PDD has not been published for global stakeholder consultation or a new methodology proposed to the CDM Executive Board before the project activity start date, had PPs informed the host Party DNA and the UNFCCC secretariat in writing of the commencement of the project activity and of their intention to seek CDM status? (Provide reference to such confirmation from host Party DNA and UNFCCC secretariat).	VVM	101	n/a	n/a	n/a
h. For an existing project activity, for which the start date is prior to the date of publication of the PDD for global stakeholder consultation, are the following evidences provided:	VVM	102	-	-	-
ii. evidence that must indicate that awareness of the CDM prior to the project activity start date, and that the benefits of the CDM were a decisive factor in the decision to proceed with the project, including, inter alia:	VVM	102	CDM benefits were considered necessary in the decision to undertake the project as a proposed CDM project activity, which can be proved by "Minutes of Meeting # 4 of the Board of Directors of "Engurhesi" Ltd.", which occurred 17 th of December 2004. Supporting Documentation presented to the validation team (mostly Quarterly Project Report, correspondence between plant and contractors, letters from EBRD) shows that benefits of the CDM were a decisive factor in the decision to proceed with the project. Moreover only due to CDM benefits this project has become a reality.	OK	OK


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a. minutes and/or notes related to the consideration of the decision by the Board of Directors, or equivalent, of the project participant, to undertake the project as a proposed CDM project activity?	VVM	102	Please refer to item above.	-	OK
iii. reliable evidence from project participants that must indicate that continuing and real actions were taken to secure CDM status for the project in parallel with its implementation, including, inter alia:	VVM	102	-	-	-
a. contract with consultants for CDM/PDD/methodology services?	VVM	102	Yes, ICF Contract with EBRD to undertake CDM for Enguri rehabilitation project, which was signed 12 th of September 2006.	OK	OK
b. Emission Reduction Purchase Agreements or other documentation related to the sale of the potential CERs (including correspondence with multilateral financial institutions or carbon funds)?	VVM	102	n/a	n/a	n/a
c. evidence of agreements or negotiations with a DOE for validation services?	VVM	102	n/a	n/a	n/a
d. submission of a new methodology to the CDM Executive Board?	VVM	102	n/a	n/a	n/a
e. publication in newspaper?	VVM	102	n/a	n/a	n/a
f. interviews with DNA?	VVM	102	n/a	n/a	n/a
g. earlier correspondence on the project with the DNA or the UNFCCC secretariat?	VVM	102	n/a	n/a	n/a
h. Has the chronology of events including time lines been appropriately captured and explained/detailed in the PDD?	VVM	102	Yes, please refer to PDD version 1 B.5. (a)	OK	OK



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b. Identification of alternatives					
a. Does the approved methodology that is selected by the proposed CDM project activity prescribe the baseline scenario and hence no further analysis is required?	VVM	105	No, approved methodology provides options to choose for the baseline scenario identification.	OK	OK
b. If no, does the PDD identify credible alternatives to the project activity in order to determine the most realistic baseline scenario?	VVM	105	Yes, since PDD developer follows methodology ACM0002, which assumes options to choose for the baseline scenario identification, credible alternatives are identified.	OK	OK
c. Does the list of alternatives given in the PDD ensure that:	VVM	106	-	-	-
i. the list of alternatives includes as one of the options that the project activity is undertaken without being registered as a proposed CDM project activity?	VVM	106	Yes, this is P1	OK	OK
ii. the list contains all plausible alternatives that the DOE, on the basis of its local and sectoral knowledge, considers to be viable means of supplying the outputs or services that are to be supplied by the proposed CDM project activity?	VVM	106	For this please see CAR 34	-	OK
iii. the alternatives comply with all applicable and enforced legislation?	VVM	106	Yes, the alternatives comply with all applicable and enforced legislation	OK	OK
c. Investment analysis					
a. Has investment analysis been used to demonstrate the additionality of the proposed CDM project activity?	VVM	108	No, investment analysis was not used to demonstrate the additionality of the proposed CDM project activity	OK	OK
b. If yes, does the PDD provide evidence that the proposed CDM project activity would not be:	VVM	108	-	-	-
i. the most economically or financially	VVM	108	n/a	n/a	n/a


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attractive alternative?					
ii. economically or financially feasible, without the revenue from the sale of certified emission reductions (CERs)?	VVM	108	n/a	n/a	n/a
c. Was this shown by one of the following approaches?	VVM	109	-	n/a	n/a
i. The proposed CDM project activity would produce no financial or economic benefits other than CDM-related income. Document the costs associated with the proposed CDM project activity and the alternatives identified and demonstrate that there is at least one alternative which is less costly than the proposed CDM project activity.	VVM	109	n/a	n/a	n/a
ii. The proposed CDM project activity is less economically or financially attractive than at least one other credible and realistic alternative.	VVM	109	n/a	n/a	n/a
iii. The financial returns of the proposed CDM project activity would be insufficient to justify the required investment.	VVM	109	n/a	n/a	n/a
d. Is the period of assessment limited to the proposed crediting period of the CDM project activity?	EB 51	Ann 58	n/a	n/a	n/a
e. Does the project IRR and equity IRR calculations reflect the period of expected operation of the underlying project activity (technical lifetime), or - if a shorter period is chosen - include the fair value of the project activity assets at the end of the assessment period?	EB 51	Ann 58	n/a	n/a	n/a
f. Does the IRR calculation include the cost of	EB	Ann	n/a	n/a	n/a



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
major maintenance and/or rehabilitation if these are expected to be incurred during the period of assessment?	51	58			
g. Do the project participants justify the appropriateness of the period of assessment in the context of the underlying project activity, without reference to the proposed CDM crediting period?	EB 51	Ann 58	n/a	n/a	n/a
h. Does the cash flow in the final year include a fair value of the project activity assets at the end of the assessment period?	EB 51	Ann 58	n/a	n/a	n/a
i. Has the fair value been calculated in accordance with local accounting regulations where available, or international best practice?	EB 51	Ann 58	n/a	n/a	n/a
j. Does the fair value calculations include both the book value of the asset and the reasonable expectation of the potential profit or loss on the realization of the assets?	EB 51	Ann 58	n/a	n/a	n/a
k. Was depreciation, and other non-cash items related to the project activity, which have been deducted in estimating gross profits on which tax is calculated, added back to net profits for the purpose of calculating the financial indicator (e.g. IRR, NPV)?	EB 51	Ann 58	n/a	n/a	n/a
l. Has taxation been included as an expense in the IRR/NPV calculation in cases where the benchmark or other comparator is intended for post-tax comparisons?	EB 51	Ann 58	n/a	n/a	n/a
m. Are the input values used in all investment analysis valid and applicable at the time of the investment decision taken by the project	EB 51	Ann 58	n/a	n/a	n/a


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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
participant?					
n. Is the timing of the investment decision consistent and appropriate with the input values?	EB 51	Ann 58	n/a	n/a	n/a
o. Are all the listed input values been consistently applied in all calculations?	EB 51	Ann 58	n/a	n/a	n/a
p. Does the investment analysis reflect the economic decision making context at point of the decision to recommence the project in the case of project activities for which implementation ceases after the commencement and where implementation is recommenced due to consideration of the CDM?	EB 51	Ann 58	n/a	n/a	n/a
q. Have project participants supplied the spreadsheet versions of all investment analysis?	EB 51	Ann 58	n/a	n/a	n/a
r. Are all formulas used in this analysis readable and all relevant cells be viewable and unprotected?	EB 51	Ann 58	n/a	n/a	n/a
s. In cases where the project participant does not wish to make such a spreadsheet available to the public has the PP provided an exact read-only or PDF copy for general publication?	EB 51	Ann 58	n/a	n/a	n/a
t. In case the PP wishes to black-out certain elements of the publicly available version, is it justifiable?	EB 51	Ann 58	n/a	n/a	n/a
u. Was the cost of financing expenditures (i.e. loan repayments and interest) included in the calculation of project IRR?	EB 51	Ann 58	n/a	n/a	n/a
v. In the calculation of equity IRR, has only the portion of investment costs which is financed by equity been considered as the net cash outflow?	EB 51	Ann 58	n/a	n/a	n/a
w. Has the portion of the investment costs which is	EB	Ann	n/a	n/a	n/a



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financed by debt been considered a cash outflow in the calculation of equity IRR? (this is not allowed)	51	58			
x. Was a pre-tax benchmark be applied?	EB 51	Ann 58	n/a	n/a	n/a
y. In cases where a post-tax benchmark is applied, is actual interest payable taken into account in the calculation of income tax?	EB 51	Ann 58	n/a	n/a	n/a
z. In such situations, was interest calculated according to the prevailing commercial interest rates in the region, preferably by assessing the cost of other debt recently acquired by the project developer and by applying a debt-equity ratio used by the project developer for investments taken in the previous three years?	EB 51	Ann 58	n/a	n/a	n/a
aa. In cases where a benchmark approach is used is the applied benchmark appropriate to the type of IRR calculated?	EB 51	Ann 58	n/a	n/a	n/a
bb. Has local commercial lending rates or weighted average costs of capital (WACC) selected as appropriate benchmarks for a project IRR?	EB 51	Ann 58	n/a	n/a	n/a
cc. Has required/expected returns on equity selected as appropriate benchmark for an equity IRR?	EB 51	Ann 58	n/a	n/a	n/a
dd. In case benchmarks supplied by relevant national authorities selected is it applicable to the project activity and the type of IRR calculation presented?	EB 51	Ann 58	n/a	n/a	n/a
ee. In the cases of projects which could be developed by an entity other than the project participant is the benchmark applied based on publicly available data sources which can be	EB 51	Ann 58	n/a	n/a	n/a



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
clearly validated?					
ff. Have internal company benchmarks/expected returns (including those used as the expected return on equity in the calculation of a weighted average cost of capital - WACC) been applied in cases where there is only one possible project developer?	EB 51	Ann 58	n/a	n/a	n/a
gg. In such cases, have these values been used for similar projects with similar risks, developed by the same company or, if the company is brand new, would have been used for similar projects in the same sector in the country/region?	EB 51	Ann 58	n/a	n/a	n/a
hh. Has a minimum clear evidence of the resolution by the company's Board and/or shareholders been provided to the effect as above?	EB 51	Ann 58	n/a	n/a	n/a
ii. Has a thorough assessment of the financial statements of the project developer - including the proposed WACC - to assess the past financial behavior of the entity during at least the last 3 years in relation to similar projects been conducted?	EB 51	Ann 58	n/a	n/a	n/a
jj. Does the risk premiums applied in the determination of required returns on equity reflect the risk profile of the project activity being assessed, established according to national/international accounting principles? (It is not considered reasonable to apply the rate general stock market returns as a risk premium for project activities that face a different risk profile than an investment in such indices.)	EB 51	Ann 58	n/a	n/a	n/a
kk. Has an investment comparison analysis and not	EB	Ann	n/a	n/a	n/a



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
a benchmark analysis used when the proposed baseline scenario leaves the project participant no other choice than to make an investment to supply the same (or substitute) products or services?	51	58			
ll. Have variables, including the initial investment cost, that constitute more than 20% of either total project costs or total project revenues been subjected to reasonable variation (positive and negative) and the results of this variation been presented in the PDD and be reproducible in the associated spreadsheets?	EB 51	Ann 58	n/a	n/a	n/a
mm. Have a corrective action been raised for a variable to be included in the sensitivity analysis which constitute less than 20% and have a material impact on the analysis ?	EB 51	Ann 58	n/a	n/a	n/a
nn. Is the range of variations selected is reasonable in the project context?	EB 51	Ann 58	n/a	n/a	n/a
oo. Dos the variations in the sensitivity analysis at least cover a range of +10% and -10%, unless this is not deemed appropriate in the context of the specific project circumstances?	EB 51	Ann 58	n/a	n/a	n/a
pp. In cases where a scenario will result in the project activity passing the benchmark or becoming the most financially attractive alternative, is an assessment done of the probability of the occurrence of this scenario in comparison to the likelihood of the assumptions in the presented investment analysis, taking into consideration correlations between the variables as well as the specific socio-economic and policy	EB 51	Ann 58	n/a	n/a	n/a



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
context of the project activity?					
qq. Was the plant load factor defined ex-ante in the CDM-PDD according to one of the following options:	EB 48	Ann 11	n/a	n/a	n/a
i. The plant load factor provided to banks and/or equity financiers while applying the project activity for project financing, or to the government while applying the project activity for implementation approval?	EB 48	Ann 11	n/a	n/a	n/a
ii. The plant load factor determined by a third party contracted by the project participants (e.g. an engineering company)?	EB 48	Ann 11	n/a	n/a	n/a
rr. Was a thorough assessment of all parameters and assumptions used in calculating the relevant financial indicator, and determine the accuracy and suitability of these parameters using the available evidence and expertise in relevant accounting practices conducted?	VVM	111	n/a	n/a	n/a
ss. Were the parameters cross-checked against third-party or publicly available sources, such as invoices or price indices?	VVM	111	n/a	n/a	n/a
tt. Were feasibility reports, public announcements and annual financial reports related to the proposed CDM project activity and the project participants reviewed?	VVM	111	n/a	n/a	n/a
uu. Was the correctness of computations carried out and documented by the project participants assessed?	VVM	111	n/a	n/a	n/a
vv. Was the sensitivity analysis by the project participants to determine under what conditions variations in the result would occur, and the	VVM	111	n/a	n/a	n/a



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
likelihood of these conditions assessed?					
ww. Is the type of benchmark applied is suitable for the type of financial indicator presented?	VVM	112	n/a	n/a	n/a
xx. Do any risk premiums applied determining the benchmark reflect the risks associated with the project type or activity?	VVM	112	n/a	n/a	n/a
yy. To determine this, was it assessed whether it is reasonable to assume that no investment would be made at a rate of return lower than the benchmark by:	VVM	112	n/a	n/a	n/a
i. assessing previous investment decisions by the project participants involved?	VVM	112	n/a	n/a	n/a
ii. determining whether the same benchmark has been applied?	VVM	112	n/a	n/a	n/a
iii. determining if there are verifiable circumstances that have led to a change in the benchmark?	VVM	112	n/a	n/a	n/a
zz. Did the project participants rely on values from Feasibility Study Reports (FSR) that are approved by national authorities for proposed CDM project activities?	VVM	113	n/a	n/a	n/a
xx. If yes:	VVM	113	n/a	n/a	n/a
i. has the FSR been the basis of the decision to proceed with the investment in the project, i.e. that the period of time between the finalization of the FSR and the investment decision is sufficiently short for the DOE to confirm that it is unlikely in the context of the underlying project activity that the input values would have materially	VVM	113	n/a	n/a	n/a



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
changed?					
ii. Are the values used in the PDD and associated annexes fully consistent with the FSR?	VVM	113	n/a	n/a	n/a
iii. If not, was the appropriateness of the values validated?	VVM	113	n/a	n/a	n/a
iv. On the basis of its specific local and sectoral expertise, is confirmation provided, by cross-checking or other appropriate manner, that the input values from the FSR are valid and applicable at the time of the investment decision?	VVM	113	n/a	n/a	n/a
d. Barrier analysis					
a. Has barrier analysis been used to demonstrated the additionality of the proposed CDM project activity?	VVM	115	Chosen methodology ACM 0002 ver.12.1.0. suggests using "Tool for the demonstration and assessment of additionality" ver.05.2 while PDD developer partly uses "Combined Tool to identify the baseline scenario and demonstrate additionality" ver.02.2. Basically barrier analysis is applied but not according to Additionality as required by methodology and in a context of baseline setting not in order to prove additionality. Please refer to CAR 32	OK	OK
b. If yes, does the PDD demonstrate that the proposed CDM project activity faces barriers that:	VVM	115	n/a due to CAR 32	OK	OK
i. prevent the implementation of this type of proposed CMD project activity?	VVM	115	n/a due to CAR 32	OK	OK
ii. do not prevent the implementation of at least one of the alternatives?	VVM	115	n/a due to CAR 32	OK	OK
c. Are there any issues that have a clear direct	VVM	116	n/a due to CAR 32	OK	OK


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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
impact on the financial returns of the project activity, other than: risk related barriers, for example risk of technical failure, that could have negative effects on the financial performance; or barriers related to the unavailability of sources of finance for the project activity? {If yes, these issues cannot be considered barriers and shall be assessed by investment analysis. [Refer to (6.c) above]}					
d. Were the barriers determined as real by:	VVM	117	n/a due to CAR 32	OK	OK
i. assessing the available evidence and/or undertaking interviews with relevant individuals (including members of industry associations, government officials or local experts if necessary) to determine whether the barriers listed in the PDD exist?	VVM	117	n/a due to CAR 32	OK	OK
ii. ensuring that existence of barriers is substantiated by independent sources of data such as relevant national legislation, surveys of local conditions and national or international statistics?	VVM	117	n/a due to CAR 32	OK	OK
iii. Is existence of a barrier substantiated only by the opinions of the project participants? (If yes, this barrier cannot be considered as adequately substantiated)	VVM	117	n/a due to CAR 32	OK	OK
e. Were the barriers determined as preventing the implementation of the project activity but not the implementation of at least one of the possible alternatives by applying local and sectoral expertise to judge whether a barrier or set of barriers would prevent the implementation of the	VVM	117	n/a due to CAR 32	OK	OK



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proposed CDM project activity and would not equally prevent implementation of <i>at least one of</i> the possible alternatives, in particular the identified baseline scenario?					
e. Common practice analysis					
a. Is this a proposed large-scale, or first-of-its kind small-scale project activity?	VVM	119	The proposed project is large scale project.	OK	OK
b. If yes, was common practice analysis carried out as a credibility check of the other available evidence used by the project participants to demonstrate additionality?	VVM	119	Yes, common practice analysis was used as a credibility check of the other available evidence to demonstrate additionality	OK	OK
c. Was it assessed whether the geographical scope (e.g. defined region) of the common practice analysis is appropriate for the assessment of common practice related to the project activity's technology or industry type? (For certain technologies the relevant region for assessment will be local and for others it may be transnational/global.	VVM	120	CAR 37. Please provide the assessment whether the geographical scope (e.g. defined region) of the common practice analysis is appropriate for the assessment of common practice related to the project activity's technology or industry type	CAR 37	OK
d. Was a region other than the entire host country chosen?	VVM	120	No, the whole Host country was chosen	OK	OK
e. If yes, was the explanation why this region is more appropriate assessed?	VVM	120	n/a	n/a	n/a
f. Using official sources and local and industry expertise, was it determined to what extent similar and operational projects (e.g., using similar technology or practice), other than CDM project activities, have been undertaken in the defined region?	VVM	120	Yes, it was determined to what extent similar and operational projects (e.g., using similar technology or practice), other than CDM project activities, and have been undertaken in the defined region. Information from other hydropower plants in Georgia was used for assessment.	OK	OK
g. Are similar and operational projects, other than	VVM	120	There are power plants in Georgia, which have	OK	OK



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CDM project activities, already "widely observed and commonly carried out" in the defined region?			rehabilitated their units, but after significantly bigger amount of hours of operation. But at the same time this is the first project which aims to be registered as CDM in Georgia.		
h. If yes, was it assessed whether there are essential distinctions between the proposed CDM project activity and the other similar activities?	VVM	120	n/a	n/a	n/a
7. Monitoring plan					
a. Does the PDD include a monitoring plan?	VVM	122	<p>Yes, PDD includes monitoring plan.</p> <p>As stated by the latest version of the monitoring methodology "ACM0002 Consolidated monitoring methodology for zero-emissions grid-connected electricity generation from renewable sources", The monitoring of the following is required: "Electricity generation from the proposed project activity". The other data listed in the methodology should not be monitored for this CDM project activity since the ex ante method was applied for the calculation of the build margin and the operating margin and since this project is not a new hydro electric power project. This monitoring plan is developed in a project specific manner specifically addressing the unique features of the Enguri HPP and the specifics of electricity metering and meters verification currently in practice in Georgia. The spatial extent of the monitoring plan will be the physical project site of the CDM project activity that corresponds to the Unit # 2, Unit #4, Unit # 1 and Unit # 5. Once implemented, the relevant data monitoring report</p>	OK	OK



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			will be submitted to a designated operational entity contracted to verify the emission reductions achieved during the crediting period. Any revisions requiring improved accuracy and/or completeness of information will be justified and will be submitted to a designated operational entity for validation.		



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b. Is this monitoring plan based on the approved monitoring methodology applied to the proposed CDM project activity?	VVM	122	Yes, please see clause above.	OK	OK
c. Were the list of parameters required by the the selected methodology identified?	VVM	123	Yes, please see clause above.	OK	OK
d. Does the monitoring plan contains all necessary parameters?	VVM	123	Yes, please see clause above.	OK	OK
e. Are the parameters clearly described?	VVM	123	Yes, please see clause above.	OK	OK
f. Does the means of monitoring described in the plan comply with the requirements of the methodology?	VVM	123	Yes, please see clause above.	OK	OK
g. Are all data and parameters monitored as per monitoring methodology?	ACM	0002 v12. 1.0	Yes, please see clause above.	OK	OK
h. Are all data collected as part of monitoring archived electronically and kept at least for 2 years after the end of the last crediting period?	ACM	0002 v12. 1.0	CAR 38. Please provide evidence that data collected as part of monitoring archived electronically and kept at least for 2 years after the end of the last crediting period (Plant order etc)	CAR 38	OK
i. Are 100% of the data monitored, if not indicated otherwise?	ACM	0002 v12. 1.0	100% of relevant data are monitored.	OK	OK
j. Are measurements conducted with calibrated measurement equipment according to relevant industry standards?	ACM	0002 v12. 1.0	Yes, measurements are conducted with calibrated measurement equipment according to relevant industry standards	OK	OK
k. Are the monitoring provisions in the tools referred to in the methodology correctly applied?	ACM	0002 v12. 1.0	Yes, the monitoring provisions in the tools referred to in the methodology are correctly applied	OK	OK
l. Are the monitoring arrangements described in the monitoring plan feasible within the project design?	VVM	123	Yes, the monitoring arrangements described in the monitoring plan are feasible within the project design	OK	OK
m. Are the following means of implementation of the	VVM	123	-	-	-



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
monitoring plan sufficient to ensure that the emission reductions achieved by/resulting from the proposed CDM project activity can be reported ex post and verified:					
i. data management procedures?	VVM	123	Yes	OK	OK
ii. quality assurance procedures?	VVM	123	Yes	OK	OK
iii. quality control procedures?	VVM	123	Yes	OK	OK
8. Sustainable development					
a. Does the CDM project activity assists Parties not included in Annex I to the Convention in achieving sustainable development?	VVM	125	Yes, the CDM project activity assists Parties not included in Annex I to the Convention in achieving sustainable development by sustainable technology transfer, substitution of fossil fuels, employment generation and stakeholders' contribution.	OK	OK
b. Does the letter of approval by the DNA of the host Party confirm the contribution of the proposed CDM project activity to the sustainable development of the host Party?	VVM	126	-	-	-
9. Local stakeholder consultation					
a. Were local stakeholders (public, including individuals, groups or communities affected, of likely to be affected, by the proposed CDM project activity or actions leading to the implementation of such an activity) invited by the PPs to comment on the proposed CDM project activity prior to the publication of the PDD on the UNFCCC website?	VVM	128	A Stakeholder Consultation meeting was organised specifically for the "Refurbishment of Enguri Hydro Power Plant, Georgia" CDM project activity. Invitations to the Stakeholder Consultation were sent by letter, e-mail or communicated telephonically to 47 potential participants identified among stakeholders that are either impacted by this CDM project or have a direct interest in the CDM project. The Stakeholder Consultation was held on Monday 12 March 2007.	OK	OK



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b. Have comments by local stakeholders that can reasonably be considered relevant for the proposed CDM project activity been invited?	VVM	129	Yes, the comments are presented in the PDD version 1 as well as in the supporting documentation.	OK	OK
c. Is the summary of the comments received as provided in the PDD complete?	VVM	129	Yes.	OK	OK
d. Have the project participants taken due account of any comments received and described this process in the PDD?	VVM	129	PPs have answered all the comments received. Their answers are provided in PDD version 1 as well as in the supporting documentation.	OK	OK
10. Environmental impacts					
a. Have the project participants submitted documentation on the analysis of the environmental impacts of the project activity?	VVM	131	Yes, the project participants have submitted documentation on the analysis of the environmental impacts of the project activity	OK	OK
b. Have the project participants undertaken an analysis of environmental impacts?	VVM	132	Yes, the project participants have undertaken an analysis of environmental impacts	OK	OK
c. Does the host Party require an environmental impact assessment?	VVM	132	CL 07. Please clarify whether Georgian legislation require an environmental impact assessment to be performed.	CL 07	OK
d. If yes, have the project participants undertaken an environmental impact assessment?	VVM	132	n/a	n/a	n/a



VALIDATION REPORT

Table 2 Resolution of Corrective Action and Clarification Requests

Draft report clarifications and corrective action requests by validation team	Ref. to check list question in table 1 and 2	Summary of project owner response	Validation team conclusion
CAR 01. The latest version of CDM PDD form available at UNFCCC website is 03, while the PDD developer uses version 03.1. Please correct.	3.a.	The correct version of the CDM PDD form (Version 03) has been used to prepare the current draft of CDM PDD.	Page numbers have been aligned. Issue is closed
CAR 02. Please correct the date format.	3.c.ii	The correct date format has been used. The current version (Version 2) of the CDM PDD is dated June 21, 2011, and as per UNFCCC requirement of presenting date in DD/MM/YYYY format – the date has been presented as 17/06/2011	PDD was checked. Issue is closed
CL 01. Clarify in a more transparent way how economic effect on the region is achieved.	3.d.iii	<p>The project activity led to employment of several local labors as part of the project activity (> 100) through. Additionally three sub-contractors from Georgia were employed for this project activity, each of whose contract values are greater than US\$ 500,000 (please refer CL 02 documents for evidences).</p> <p>In addition to this, increased electricity production from the Enguri Hydro Power Plant would make additional electricity available in the region/country which would both help elevate the quality of life for residents of the country and also stir-up additional economic activity in the region.</p>	Explanation found satisfactory. Issue is closed.



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<p>CL 02. Please clarify how new employment for locals is created since the construction works are performed by European employees?</p>	<p>3.d.iii</p>	<p>Several sub-contractors were appointed as part of the project activity who were from Georgia, majority of these sub-contractors and/ or short-term labors were from Georgia, as it is not possible to get low-value short-term contractors from abroad.</p> <p>In all, there were at least three subcontractors that were from Georgia that had contract value greater than US\$ 500,000. These three sub-contractors were Sakenergoremonti, Energomsheni and Elcom L.t.d. (Please refer page 2 of the attached document). Additionally, two sample contracts for Sakenergoremonti have also been attached.</p> <p>Average local labor engaged in all site works and rehabilitation are in the range of 70-80 workers on regular basis and additionally 30-40 workers on temporary basis per unit. These are mainly electricians, mechanics, welders, and other workers.</p>	<p>Explanation found satisfactory. Issue is closed.</p>
<p>CL 03. Please clarify in what more efficient way water resources are going to be used if the water reservoir is not going to be increased.</p>	<p>3.d.iii</p>	<p>The water resources are going to be used more efficiently as after the rehabilitation the turbines and generators would be able to produce power at higher efficiency. Thus, for the same water flow – the rehabilitated units would be able to generate more power and this is why it is mentioned in the CDM PDD that the CDM project activity leads to “more efficient way of using water resources”.</p>	<p>Explanation found satisfactory. Issue is closed.</p>
<p>CAR 03. Please provide information on how know-hoe technology is transferred to the Host Party (if any).</p>	<p>3.h.i</p>	<p>The technology for rehabilitation of the Enguri Hydro project (in Georgia) was provided by “Voith Siemens Hydro Kraftwerkstechnik GmbH & Co.KG.”, which is based at ‘Alexanderstrasse 11; 89522 Heidenheim / Germany’. This is clearly an indication of technology transfer from West to East.</p>	<p>Presented Contract agreement was analyzed found sufficient. Issue is closed.</p>



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<p>CAR 04. Please provide the calculation file for DATE_{BaselineRetrofit}.</p>	<p>3.h.ii</p>	<p>Calculation of DATE_{BaselineRetrofit} has been done based on the guidelines provided on page 11 of the latest version (Version 12.1.0) of ACM0002. The background data and workings of calculations have been provided in the attached two documents.</p> <p>ICF team:</p> <p>The previous formula used to calculate the number of total units was incorrect because it included the cells with column titles, whereas it should only include cells with “Yes” or “No”. The error was corrected and now the number of Total Units equals the sum of Units Rehabilitated and Units Never Rehabilitated (please see the revised spreadsheet – “CAR 04 - Calculation for Date (Baseline Retrofit)_revised.xls”).</p> <p><u>Regarding 5,000hr of annul operation:</u></p> <p>Please refer the document “CL 04 - EDF on Enguri Units (Average remaining life) + Annual 5000 hours of Operation.pdf”. EDF was a contractor to the project activity and made an estimate on expected plant load based on the historical operating hours at each of the units and expected unit performance post-rehabilitation. Additionally, please refer also to worksheet titled “Historical Annual Operation Hrs” in the spreadsheet “stc-CER calc 2011-06-21.xls”, where it is shown that the historical operations across each of the units have crossed 5,000 hours in at least one of the several years from 1993 to 2005. The average across all the units is 4,455 hours.</p> <p>Given the historical data, and expected operating hours from EDF – an expected annual operation of 5,000 hours have been considered for the ex-ante estimation of expected power generation from the plant after rehabilitation, which is what determines the ex-ante estimation of expected emission reduction from the project. Please note this is only ex-ante estimation and that actual CERs from the project will be accrued based on actual annual operating performance of each of the units, which will be monitored annually through annual CDM monitoring and</p>	<p>KZ: In the excel calculation file for DATE_{BaselineRetrofit} total amount of units is 29 while rehabilitated and non-rehabilitated are 10 and 14 respectively. Please clarify and correct. At the same time it is not clear from the excel calculation file that the annual operation is considered as 5000 hours (since all the figures are just entered to the tables, e.g. expected life time is not calculated just inserted to the table).</p> <p>KZ: explanation and changes provided were found satisfactory. Issue is closed.</p>
		<p>verification protocol. This annual monitoring and verification protocol will be overseen by an UN accredited Designated Operational Entity (DOE).</p>	<p>112</p>



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CAR 05. The document (SD #21) that proves project works restart states that rehabilitation work at unit#2 started in January 2006 while PDD states they started in February of the same year. Please correct.	3.h.ii	The works on site were started in January 2006. The correction has been made in CDM PDD.	PDD was checked. Issue is closed.
CAR 06. Please provide evidence of the unit#4 rehabilitation works start in January 2008.	3.h.ii	Please refer the attached document, where it is indicated (yellow highlighted) that the Rehabilitation works on Unit # 4 started on January 21, 2008 (21/01/2008)	Evidence is accepted. Issue is closed.
CAR 07. Please provide list and arrangement of the main manufacturing/production technologies, systems and equipments involved	3.h.iii.	<p>The first two pages of the contract document have been attached, which lists the overall rehabilitation activities to be undertaken as part of this project. The underlying technology, systems and equipments are only rehabilitated/renovated and not changed. So, the same electricity production technology that existed prior to the rehabilitation continues to be used, only after renovation and hence, offers higher efficient electricity production.</p> <p>Some changes have also been made in the CDM PDD (page 6 and 7)</p>	Arrangement of the main manufacturing/production technologies, systems and equipments involved are clearly listed. PDD was checked. Issue is closed.
CAR 08. Please include the emissions sources and GHGs involved in the PDD section A.4.3.	3.h.iv.	<p>Only CO2 emissions from grid connected power plants in the Georgian Electricity grid are included as emission sources in the baseline. The emissions of these grid-connected power plants is suitably represented by the 'combined margin' of the grid, detailed calculation of which has been completed by the DNA of Georgia and has been reproduced in Annex 3 of the CDM PDD. Only one GHG, i.e. CO2, has been considered in the baseline.</p> <p>Appropriate changes have also been made in the CDM PDD (page 7)</p>	PDD was checked. Issue is closed.



VALIDATION REPORT

CAR 09. Please follow the format presented in the Guidelines for completing the Project Design Document (CDM-PDD)	3.i.	Modifications made on the page 8 of the PDD to strictly comply with the format presented in the Guidelines for completing the Project Design Document (CDM – PDD) ICF team: The table in the section A.4.4 has been revised – please refer to the PDD version 4 of Jul 8	KZ: Please check the last box of the table in the section A.4.3. (box called ‘Annual average over the crediting period of estimated reductions (tonnes of CO ₂ eq)’ and correct. At the same time only year has to be indicated in the year section. KZ: Previously section A.4.4 was ment. Correction accepted. Issue is closed.
CAR 10. Please update the PDD with the latest version of methodology.	3.k.i.	The version number of the methodology has been updated throughout the CDM PDD	Current version 12.1.0 of the Methodology ACM0002 is correctly indicated. Current version of the “Tool for the demonstration and assessment of additionality” is 05.2, please correct. Issue is closed.
CAR 11. Please update the PDD with latest version of the “Tool to calculate the emission factor of an electricity system”.	3.k.ii.	The latest “Tool to calculate the emission factor of an electricity system” is 2.2.0	IS: Current version of the “Tool for the demonstration and assessment of additionality” is 02.2.0, please correct. The version was corrected. Issue is closed.
CAR 12. Please update the section in accordance with the latest version of the methodology.	3.l.i.	The section B.2. of the CDM PDD have been further strengthened by indicating compliance with the definition of ‘existing reservoir’ and ‘retrofit’ activity as included in the latest version of the methodology ACM0002 (version 12.1.0).	Changes that affect applicability of Methodology ACM0002 were taken into account in the PDD. Issue is closed.
CAR 13. Please clarify the source of emissions in the Table.	3.m.i.	The only source of emissions in the baseline is the combustion of fossil fuel in the grid connected power plants in the Georgian grid. These emissions are represented by the combined margin of the Georgian grid.	PDD was checked. Issue is closed.



VALIDATION REPORT

CAR 14. Please correct spelling in the schematic representation of the area around Enguri HPP	3.m.ii	Changes have been made in the latest version of the CDM PDD.	PDD was checked. Issue is closed.
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VALIDATION REPORT

<p>CAR 15. Please provide justification of key assumptions and rationales in the section B.4. (key assumptions that you've made while setting the baseline).</p>	<p>3.n.ii.</p>	<p>Following key assumptions have been made in the CDM PDD:</p> <ol style="list-style-type: none"> 1. Step 1 – Two alternatives have been identified (P1 and P2) and option P3 has been eliminated 2. Calculation of $DATE_{Baseline Retrofit}$ 3. Step 2 – Barrier Analysis (Identification of appropriate barriers, as relevant) 4. Barrier 1 – Investment barrier (Lack of Private Capital) 5. Barrier 2 – Risks due to low level of tariffs 6. Barrier 3 – Risks due to low collection ratios 7. Barrier 4 – Risks due to devaluation of \$ vis-à-vis € <p>Justification of the above assumptions:</p> <ol style="list-style-type: none"> 1. Detailed reasoning has been provided in the CDM PDD at relevant section, additional details/ reasons for eliminating Option P3 has been added in the CDM PDD 2. Detailed rationale and calculations for has been provided in the CDM PDD at appropriate place (under Step 1 on page 14, 15 and 16) 3. Detailed justification for the selection of these barriers has been provided in the CDM PDD in relevant section. These barriers have been selected as these have been affecting the implementation of the project activity and lead to maximum uncertainty w.r.t. the developer's ability to complete the rehabilitation project. These barriers affect the implementation of project activity most strongly 4. Detailed justification on how this barrier affects implementation of the project activity is presented in the CDM PDD. The background information regarding country rating are public information and documentary evidences have been provided as response to next CAR (CAR 16). 	<p>Evidences are accepted. However presented summary can be included into the PDD. Issue is closed.</p>
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VALIDATION REPORT

		<p>5. Detailed justification has already been provided on level of tariffs in the CDM PDD at appropriate section. Relevant evidence has been provided as response to next CAR (CAR 16). The low tariff means lower revenue, which in turn means reduced ability to repay EBRD loan</p> <p>6. Detailed justification has already been provided, which emanates from low collection ratio, in the CDM PDD at appropriate section. Relevant evidence has been provided as response to next CAR (CAR 16). The low collection ratio means lower revenue, which in turn means reduced ability to repay EBRD loan</p> <p>7. Detailed justification has already been provided in the CDM PDD, this is the main reason why the project ran into financial troubles, as the loan was denominated in \$ while the payments were denominated in €. As \$ devalued, the value of financing available became less than sufficient to pay the contractors in €. The chart on page 20 amply illustrates this devaluation affect.</p>	
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VALIDATION REPORT

CAR 16. Please provide transparent illustration of all data used to determine the baseline scenario (variables, parameters, data sources, etc) in the section B.4. (reference to the data you used)	3.n.iii.	Three documentary evidences are provided that illustrates and authenticates the first three barriers listed in the CDM PDD.	Presented documents were reviewed and accepted. Issue is closed.
CL 04. Please clarify why an annual operation of 5,000 hours has been considered for the expected lifetime calculation.	3.n.iii.	<p>Please refer the document mentioned below from EDF. EDF was a contractor to the project activity and made an estimate on expected plant load based on the historical operating hours at each of the units and expected unit performance post-rehabilitation.</p> <p>Additionally also refer worksheet titled “Historical Annual Operation Hrs” in the spreadsheet “stc-CER calc 2011-06-21.xls”, it is evident that the historical operations across each of the units have crossed 5,000 hours in at least one of the several years from 1993 to 2005. The average across all the units is 4,455 hours.</p> <p>Given, the historical data and expected operating hours from EDF – an expected annual operation of 5,000 hours have been considered for the ex-ante estimation of expected power generation from the plant after rehabilitation, which is what determines the ex-ante estimation of expected emission reduction from the project. Please note this is only ex-ante estimation and that actual CERs from the project will be accrued based on actual annual operating performance of each of the units, which will be monitored annually through annual CDM monitoring and verification protocol. This annual monitoring and verification protocol will be overseen by an UN accredited Designated Operational Entity (DOE).</p>	Explanation found satisfactory. Issue is closed.



VALIDATION REPORT

<p>CAR 17. Please provide justification of key assumptions and rationales in the section B.5. (key assumptions that you've made while proving additionality).</p>	<p>3.o.ii</p>	<p>Following key assumptions and rationales have been made in the CDM PDD in section B.5.:</p> <ol style="list-style-type: none"> 1. Seriousness of CDM consideration and chronology of events to demonstrate the project start date and CDM seriousness 2. Additionality of the CDM project activity has already been proven in Section B.4. and has not been repeated in section B.5. 3. Common practice analysis, though not required as part of ACM0002 (ver 12.1.0), has been completed to demonstrate the additionality and as an extra step of 'credibility check'. The common practice analysis has been updated as part the requirements of Additionality Tool. <p>Justification of the above assumptions:</p> <ol style="list-style-type: none"> 1. The above rationale is based on the start date definition as given in EB41 Paragraph 67 & 68. Detailed evidence/document information is provided as response to next CAR (CAR 18). A detailed discussion on this was also conducted with the DOE during site visit. An additional document pertaining to emergency situation on the site on December 11, 2005 (11/12/2005) has now been provided. This document relates to no. 19 in the chronology of events. 2. As this part of the PDD is complementary with an earlier section B.4., as per the latest guidance on completing the PDD, it is not repeated in section B.5. 3. Justification/ rationales for application of common practice analysis has been updated in the CDM PDD in section B.4. Additional justification has also been included as response to CAR 34 below. 	<p>KZ: Please insert the text to PDDs next version.</p> <p>KZ: Correction accepted. Issue is closed.</p>
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VALIDATION REPORT

		<p>ICF team:</p> <p>The text has been incorporated into the PDD – please refer to the PDD version 4 of Jul 8</p>	
<p>CAR 18. Please provide transparent illustration of all data used to determine the baseline scenario (variables, parameters, data sources, etc) in the section B.5. (reference to the data you used)</p>	3.o.iii	<p>All the documents related to the start date have already been shared with the DOE in both hard and soft/electronic copy. An additional document for start date (Document # 19) has now been provided (No. 1 below)</p>	<p>Presented documents were reviewed and accepted. Issue is closed.</p>
<p>CAR 19. Please remove all the parameters which were used to calculate emission factor for grid connected power generation since it was not calculated by PDD developer but provided by the DNA of Georgia.</p>	3.q.i.	<p>The parameters that were indicated in Section B.6.2. of the CDM PDD have been removed. However, the detailed calculation of the grid emission factor has been left untouched in the Annex 3 of the CDM PDD. The original document for grid emission factor calculation (by the DNA of Georgia) has been submitted with this response.</p> <p>ICF team:</p> <p>The required changes have been made in the PDD (page 36). Please refer to the PDD version 4 of Jul 8.</p>	<p>KZ: Parameters CO2 operating margin emission factor of the grid for 2004, 2005 and 2006, ($EF_{OM, simple_adjusted, y}$) and CO2 build margin emission factor of the grid ($EF_{BM, y}$) are still in the PDD ver.3 section B.6.2, please remove them since you do not use them for calculation of the BE directly (they were used to calculate emission factor).</p> <p>KZ: provided changes were found satisfactory. Issue is closed.</p>



VALIDATION REPORT

<p>CAR 20. Please provide clear and transparent references for the data sources. (section B.6.2.)</p>	<p>3.q.iv.</p>	<p>After removing references to data/parameters that have been calculated by the DNA of Georgia to determine the emission factor for Georgia (As per the Validation CAR 19 above), only following parameters remain in the section B.6.2.:</p> <ol style="list-style-type: none"> 1. Emission factor of the grid ($EF_{Grid,CM,y}$) 2. CO2 operating margin emission factor of the grid for 2004, 2005 and 2006, ($EF_{OM, simple_adjusted, y}$) 3. CO2 build margin emission factor of the grid ($EF_{BM, y}$) 4. Historical Electricity Generation by the Enguri Hydro Power Plant's each of the Units ($EG_{historical}$) 5. Remaining lifetime of equipment ($DATE_{Baseline\ Retrofit}$) 6. Capacity of each of the Units in the Baseline (Cap_{BL}) 7. Date when the units became operational ($DATE_{hist}$) <p>Following references have been provided for each of the above data/parameters:</p> <ol style="list-style-type: none"> 1. CAR 19 – Grid Emission Factor of Georgia (Calculated by the DNA of Georgia).pdf 2. CAR 19 – Grid Emission Factor of Georgia (Calculated by the DNA of Georgia).pdf 3. CAR 19 – Grid Emission Factor of Georgia (Calculated by the DNA of Georgia).pdf 4. Additional documents provided. The original document is in Georgian, so an English translation has also been provided 5. Documents provided as part of CAR 04 response 6. Document provided below (CAR 20 - Letter of Director of Engurhesi CAP(BL)June 2005.pdf) 7. The report prepared by the Institute of Energy (Ministry of Energy of Soviet Union) states on page 5 that the units were commissioned from 1978-80 	<p>KZ: Please see CAR 19 above. Though Emission factor of the grid ($EF_{Grid,CM,y}$) was provided in the PDD the references are still not there. Please provide a link where it could be found by the reader (not only to Annex 3 of the PDD but to the published source).</p> <p>KZ: provided changes were found satisfactory. Issue is closed.</p>
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VALIDATION REPORT

		ICF team: The required changes have been made in the PDD (page 36). Please refer to the PDD version 4 of Jul 8.									
CAR 21. Please provide description of the measurement methods and procedures (e.g. which standards have been used), indicated the responsible person/entity having undertaken the measurement, the date of measurement(s) and the measurement results. (section B.6.2.)	3.q.v.	<div>Based on the data/parameter that is monitored above, measurement procedure etc. is needed only for a few of these parameters, each of which are listed below:</div> <table><tr><th>Parameters</th><th>Measurement (Needed/not-needed)</th></tr><tr><td>1. 1. Emission factor of the grid ($EF_{Grid,CM,y}$)</td><td rowspan="3">Measurement procedure not needed, as these parameters are calculated by the DNA of Georgia and provided by them. Detailed calculation of emission factor has been provided in Annex 3 of the PDD</td></tr><tr><td>2. CO2 operating margin emission factor of the grid for 2004, 2005 and 2006, ($EF_{OM, simple\ adjusted, y}$)</td></tr><tr><td>3. CO2 build margin emission factor of the grid ($EF_{BM, y}$)</td></tr><tr><td>4. Historical Electricity Generation by the Enguri Hydro Power Plant's each of the Units ($EG_{historical}$)</td><td>This is measured through regularly calibrated energy meters. The measurement is based on international best practices for measuring power generation from plants.</td></tr></table>	Parameters	Measurement (Needed/not-needed)	1. 1. Emission factor of the grid ($EF_{Grid,CM,y}$)	Measurement procedure not needed, as these parameters are calculated by the DNA of Georgia and provided by them. Detailed calculation of emission factor has been provided in Annex 3 of the PDD	2. CO2 operating margin emission factor of the grid for 2004, 2005 and 2006, ($EF_{OM, simple\ adjusted, y}$)	3. CO2 build margin emission factor of the grid ($EF_{BM, y}$)	4. Historical Electricity Generation by the Enguri Hydro Power Plant's each of the Units ($EG_{historical}$)	This is measured through regularly calibrated energy meters. The measurement is based on international best practices for measuring power generation from plants.	<div>Please include descriptions marked into the PDD. (For CapBL irrelevant text is present in the PDD). Appropriate sections in the latest version of the CDM PDD have been updated in the section B.6.2. Issue is closed.</div>
Parameters	Measurement (Needed/not-needed)										
1. 1. Emission factor of the grid ($EF_{Grid,CM,y}$)	Measurement procedure not needed, as these parameters are calculated by the DNA of Georgia and provided by them. Detailed calculation of emission factor has been provided in Annex 3 of the PDD										
2. CO2 operating margin emission factor of the grid for 2004, 2005 and 2006, ($EF_{OM, simple\ adjusted, y}$)											
3. CO2 build margin emission factor of the grid ($EF_{BM, y}$)											
4. Historical Electricity Generation by the Enguri Hydro Power Plant's each of the Units ($EG_{historical}$)	This is measured through regularly calibrated energy meters. The measurement is based on international best practices for measuring power generation from plants.										



VALIDATION REPORT

		5. Remaining lifetime of equipment (<i>DATE_{Baseline Retrofit}</i>)	This is calculated based on the operation data collected from 24 hydro units operating at 7 hydro power plants in Georgia. The calculation is based on the guidance provided in ACM0002 ver 12.1.0 No measurement needed	
		6. Capacity of each of the Units in the Baseline (Cap_{BL})	The Unit maximum operating capacity was determined by running the unit at maximum load (water flow) till the unit started to become unstable (higher than normal level of vibrations. This was performed in 2005, just prior to starting of the CDM project activity.	
		7. Date when the units became operational (<i>DATE_{hist}</i>)	No measurement needed.	



VALIDATION REPORT

<p>CAR 22. Ex ante calculation of project emissions, baseline emissions (or, where applicable, direct calculation of emission reductions) and leakage emissions expected during the crediting period, applying all relevant equations provided in the approved methodology are not transparent, moreover they differ from the calculation patterns in the excel supporting file. In the section B.6.3. it is absolutely not clear how $EG_{facility,y}$ is calculated. While according to ACM 0002 ver 12.1.0 the $BE = (EG_{facility,y} - (EG_{historical} + \sigma_{historical})) * EF_{grid,CM,y}$ in the excel spreadsheet it is calculated as of $EF_{grid,CM,y} * \text{total additional power generation (which is not actually supposed to be monitored) * years into crediting period}$. Please correct all the inconsistencies and provide transparent explanation of all the calculations.</p>	3.r.i.	<p>In the excel spreadsheet, the calculation of baseline emissions have been done in accordance with the methodological requirement of ACM0002 (Version 12.1.0). As per the attached spreadsheet, in the excel sheet “CERs formatted”</p> <ul style="list-style-type: none"> • The “Total Additional Power Generation” is presented in table from Row no. 68 to 75. • This (Total Additional Power Generation) is <u>difference of $EG_{facility,y}$</u>, which has been presented in table “Project Scenario (Project Generation)” from Row No. 60 to 65 <u>and $(EG_{historical} + \sigma_{historical})$</u>, which has been presented in the table “Baseline Scenario (Baseline Generation)” from Row no. 40 to 45. • Additionally, calculation of <u>$(EG_{historical} + \sigma_{historical})$</u>, has been provided in the Table “Average Historic Output” from Row no. 16 to 22. <p>Thus, the spreadsheet and the PDD (which has included the tables directly from the spreadsheet) calculates the emission reduction in accordance with the Equation no. 6 and Equation no. 8 of the methodology (ACM0002 ver 12.1.0)</p> <p>ICF team: The parameter “Total Additional Power Generation” has been added to the PDD (page 40). Please refer to the PDD version 4 of Jul 8.</p> <p>ICF team: The table has been revised – please see the PDD version 4 of Jul 20 (page 40-41).</p>	<p>KZ: So please include “Total Additional Power Generation” to the list of monitored parameters (section B.6.2.).</p> <p>KZ: on p.41 please add information of the data choice for the total additional power generation as well as justification of the choice of data.</p> <p>KZ: Issue is closed.</p>
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VALIDATION REPORT

<p>CAR 23. Baseline emissions for the year 2011 differ from emission reductions for the respective period while they should be the same. Please correct.</p>	<p>3.s.</p>	<p>The emission reductions for the respective period are correct, and the difference in emission reduction in the some of the years arises due to following reasons:</p> <ol style="list-style-type: none"> 1. In 2011: Emission reductions for three months have been accounted for, considering an expected registration date of October 1, 2011 (01/10/2011) 2. In 2012: Emission reductions from not all the four units to be rehabilitated have been accounted for, i.e. not all the units come online (after rehabilitation) before the starting of this year. Hence, some of the units make partial contribution to emission reduction accrual for this year. 3. In 2013: Emission reductions from not all the four units to be rehabilitated have been accounted for, i.e. not all the units come online (after rehabilitation) before the starting of this year. Hence, some of the units make partial contribution to emission reduction accrual for this year. <p>In 2021: Emission reductions for only nine months have been accounted for, considering the 10 year crediting period expected to come to an end on September 30, 2021 (30/09/2021)</p>	<p>The table was checked. Issue is closed.</p>
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VALIDATION REPORT

<p>CAR 24. For Electricity supplied annually to the grid by Enguri HPP method c “And finally, at the point of connection between the plant’s switchyard and Central Transmission Line there is final power-meter used (and sealed) by the transmission company for the invoicing purposes. Difference between 2 and 3 is “Own Consumption of the Plant” which is not invoiced because it is internally consumed, but is still recorded as generation”, which is not correct since this meter provides information considering electricity supplied to the grid by all units, while in this particular CDM project unit# 3 is not included. Please correct and choose appropriate method.</p>	3.t.ii.a.	<p>Each of the units has their own individual meters.</p> <p>For the CDM project activity, it is not the final meter (As pointed out by the DOE) but the meter at the end of each of the units that will be used to monitor the power generation to account for the associated emission reduction achieved by the unit. Each of these meters (at the end of Unit) reading is used to get the net power generation by each of these units. Also, each of these meters are also routinely calibrated and sealed.</p> <p>Please refer the calibration certificates provided for the monitoring meters of Unit # 2 as part of CAR 25 response below.</p> <p>Additionally, calibration certificates (in Georgian) of Unit # 1, 4, and 5 are also submitted.</p> <ul style="list-style-type: none"> • CAR 24 - Calibration Certificate Unit # 1 • CAR 24 - Calibration Certificate Unit # 4 • CAR 24 - Calibration Certificate Unit # 5 	<p>Issue is closed.</p>
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VALIDATION REPORT

CAR 25. Please indicate if the monitoring plan reflects current good practices appropriate to the type of project activity.	3.u.iv.	<p>The monitoring plan reflects current good practices appropriate to the type of project activity. The meters are checked twice annually by two independent stated bodies to ensure the consistency and integrity of the monitoring meters.</p> <p>Changes made in the latest version of the CDM PDD (page 48-49).</p> <p>Additionally two documents have been attached that indicate clearly the thorough calibration being conducted on the monitoring equipment.</p>	Correction is accepted. Issue is closed.
CAR 26. Please correct the date of completion of the application of the methodology to the baseline study and monitoring methodology	3.v.i.	The application of the methodology (baseline study and monitoring methodology) has been corrected to June 21, 2011 (The current version of the CDM PDD)	Correction is accepted. Issue is closed.
CAR 27. Please present expected operational lifetime in years and months.	3.x.	The expected operational lifetime has been presented in years and months.	Correction is accepted. Issue is closed.
CAR 28. Please provide the length of the crediting period in months.	3.ee.	The length of crediting period has been presented in years and months.	Correction is accepted. Issue is closed.



VALIDATION REPORT

CAR 29. Please describe the process by which comments by local stakeholders have been invited and compiled.	3.gg.i.	First of a long list of stakeholders was compiled representing all the strata of government and non-government organizations that would have a say on this project. On Feb 20, 2007 (20/02/2007) an invitation letter (No. 1 below) was sent to all the identified stakeholders through email or by post. The list of participants that were invited and those that attended the stakeholder consultation meeting is also provided (No. 2 below). Each of the stakeholders that attended the stakeholder consultation meeting were requested to fill a form, in all 13 responses were collected. The original is provided in No. 3 below and additionally English translation has been provided in No. 4 below.	Correction is accepted. Issue is closed.
CAR 30. Please provide information whether project activity was described in a manner, which allowed the local stakeholders to understand the project activity, taking into account confidentiality provisions of the CDM modalities and procedures.	3.gg.ii.	The presentation made to the Stakeholders has been provided with this submission. The presentation was made on the day of the stakeholder consultation and it includes complete background on Kyoto Protocol, about the Enguri rehabilitation project, and its 'Economic', 'Environmental' and 'Social' benefits.	Correction is accepted. Issue is closed.



VALIDATION REPORT

CAR 31. Please remove from the section A.2 “The project scenario, including a summary of the scope of activities/measures that are being implemented within the proposed project activity” the following “improvements to the dam structure and reduction in leakages from the high pressure pipeline; repair of the water gates at the dam site; and completion of the grouting work at the dam galleries and pressure tunnel” since it is not part of the project.	4.b.	Appropriate changes have been made in the latest version of the CDM PDD in Section A.2.	Correction is accepted. Issue is closed.
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VALIDATION REPORT

<p>CAR 32. Chosen methodology ACM 0002 ver.12.1.0. suggests using “Tool for the demonstration and assessment of additionality” ver.05.2 while PDD developer partly uses “Combined Tool to identify the baseline scenario and demonstrate additionality” ver.02.2. Please correct.</p>	5.a.g.	<p>The latest version of the methodology ACM0002 (Version 12.1.0) suggests use of both the tools on page 1/20 of the methodology. Methodology states:</p> <p>“</p> <p>This methodology also refers to the latest approved versions of the following tools:</p> <ul style="list-style-type: none"> • Tool to calculate the emission factor for an electricity system; • Tool for the demonstration and assessment of additionality; • Combined tool to identify the baseline scenario and demonstrate additionality; • Tool to calculate project or leakage CO2 emissions from fossil fuel combustion. <p>“</p> <p>Hence, both the Tools have been mentioned in the CDM PDD and have been used only as appropriate:</p> <p>ICF team:</p> <p>The text in section B.5 of the PDD has been revised. Please refer to the PDD version 4 of Jul 8 (pages 24 and 31).</p> <p>ICF team:</p> <p>The relevant section has been revised – please see the PDD version of Jul 20 (page 30-33).</p>	<p>KZ: On the p.1 of ACM0002 (Version 12.1.0) Methodology only refers to both Tools not suggests using either of them, while p. 5 clearly states “The additionality of the project activity shall be demonstrated and assessed using the latest version of the “Tool for the demonstration and assessment of additionality” agreed by the Board, which is available on the UNFCCC CDM website”. So please correct the section B.5. accordingly.</p> <p>KZ: Still the additionality is not proved with the help of “Tool for the demonstration and assessment of additionality” as requested by methodology but with the help of “Combined tool to identify the baseline scenario and demonstrate additionality”. Please correct and provide additionality analyses in compliance with the “Tool for the demonstration and assessment of additionality” version 05.2.</p> <p>KZ: Issue is closed.</p>
<p>CAR 33. Please justify the choice of emission sources within project boundary.</p>	5.c.g.	<p>The boundary for the project activity is the entire Georgia, and so all the power plants that are connected to the electricity grid. Within the context of this geographic project boundary, the source of GHG emissions has been considered is the fossil-fuel combustion at those power plants that run on fossil fuels. For simplification only CO2 emissions from the fossil fuel combustion at these power plants has been considered to contribute to baseline emissions.</p>	<p>PDD was checked and reply is accepted. Issue is closed.</p>



VALIDATION REPORT

<p>CAR 34. Please justify why option P3 was excluded from the baseline consideration.</p>	<p>5.d.b.</p>	<p>From the project developer's (Engurhesi) perspective there are only two practical options. Either to implement the rehabilitation project or not to implement the rehabilitation project.</p> <p>As such, routine maintenance work was always being conducted at the project site to make sure that the equipment continues to keep performing (as of 2005, the plant was expected to have a lifetime till 2012, or 17-18 years). However, the units were both de-rated (operating at lower than optimal/maximum possible capacity) and were also operating inefficiently (i.e. for the same water flow through the turbines would generate less power than what would be possible after the rehabilitation works).</p> <p>Undertaking partial rehabilitation work was not a possibility as the generation units are sequential and for the intended objective to be achieved all the sequence of equipment (turbine, generator) need to be rehabilitated along with the auxiliaries.</p> <p>For these reasons, undertaking only partial rehabilitation work or any other alternative (P3) is not a possibility for the project proponent and the two options that are (Option P1 and P2) have already been considered as part of the Baseline Identification process, (in Step 1) on page 13 of the CDM PDD.</p>	<p>PDD was checked and reply is accepted. Issue is closed.</p>
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<p>CAR 35. Please provide the information regarding expected cost of rehabilitation of the units No1, 2, 4, 5 as of the December of 2005. Unfortunately at present the developer has provided in PDD information regarding units No 1, 2, 3 only.</p>	<p>5.d.b.v</p>	<p>The rehabilitation works on the first three units (sequentially) were expected to start in December 2002 (after contract signing in November 2002) and were expected be completed by end of 2006. However, by the time of CDM start date (December 2005) rehabilitation works had not been completed even on the first unit (Unit #3) and it was not certain when the works on next units would start. The delay in project execution was invariably going to lead to two things:</p> <ul style="list-style-type: none"> (a) Escalation of cost of completion of the first three units (two of which, Units # 2, 4, were to be undertaken as CDM project) (b) Escalation of cost of completion of the last two units (Unit # 1, and 5) <p>Initially (in Nov 2002) it was expected that the rehabilitation works on Unit # 1 and 5 would be started soon after rehabilitation works on the earlier units have been completed by end of 2006, i.e. by early 2007. However, by the time of CDM start date (December 2005) it was clear that the work on Unit # 1 and 5 won't be started earlier than 2010. This would led to cost escalation owing to inflation, additionally other cost escalations were expected due to increase in scope of rehabilitation activities. Considering these adjustments the expected cost of rehabilitations of Unit # 1 and 5 were US\$ 9,868,011 for each of the units as of December 2005. Or a total of US\$ 19,736,022 only for the two new units (Unit # 1, and Unit # 5)</p> <p>Detailed working of this has been presented in Document No. 1 below. Document no. 2 and 3 give additional background information on inflation in Georgia in the period from 2003 to 2005 and expected inflation beyond that period.</p>	<p>DP: As far as I understand the cost of rehabilitation of the units 2-5 is EUR 3812k + USD 1443k per each unit i.e. the same for all four units (prices as of Nov 2002). Please confirm.</p>
		<p>ICF team: At Nov 2002 prices the Validator's understanding is correct.</p>	<p>DP: Issue is closed.</p>



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<p>CL 05. The developer indicates that the total amount of the loan and grant facilities made available for rehabilitation works in 2001 has been USD 19,4 mln. The developer mentions that the funds were sufficient for rehabilitation of the unit No3 and some part of the unit No2. According to the data provided the total investment expenses for two units were equal to EUR 11,4 mln+USD 3,2mln. Even taking into account EUR revaluation the loan/grant facility should have been sufficient to cover all works related to unit No2 as well. Please clarify.</p>		<p>Three points to be noted as of start date of the CDM project activity (December 2005):</p> <ol style="list-style-type: none"> 1. The cost of rehabilitation for Unit # 2 and Unit # 4 has been indicated based on the expected costs that were originally agreed upon in November 2002 at the time of contract sign plus any increase in scope of work due to new areas of rehabilitation recognized (while conducting the rehabilitation of earlier unit). However, by this time the project was clearly three years delayed and much of the delay was attributed to the financial difficulty being faced by Engurhesi. Hence, the project developer would have expected a cost escalation request from Voith-Hydro, even if only owing to inflation effect. As discussed earlier, even at a rate of inflation of 6%, over the base cost of US\$ 5.79 million – the new expected cost to be borne for rehabilitation of Unit # 2 and Unit # 4 would be US\$ 6.89 million each. Thus, a total of US\$ 13.79 million were expected to be spent as part of the original contract of which funding of only US\$ 5.9 million was available. Thus, even with the available funding it might not have been possible to fund the rehabilitation of the next unit (Unit # 2) alone. 2. Additionally, at the time of decision making for restarting of rehabilitation of units in December 2005, it would not have been possible for the project developer to decide on rehabilitating just one unit (for which partial funding was available) completely on their own. The lending agency (EBRD) had originally lent Engurhesi certain sum of money for rehabilitation of all the three units, as it would have been expected that the revenue from the operations of each of the three units (after rehabilitation) would be used to repay the debt. 3. Finally, the developer had planned to rehabilitate these two units (Unit # 2, and 4) and then follow-on with the rehabilitation of further two units (Unit # 1, and 5). If they had decided to pursue rehabilitation of only one unit (Unit # 2) for which partial funding was available and abandon the rehabilitation of the next unit for which funding was short (Unit # 4). They would have run the risk of not being able to get financing support and/or continued interest from the technology provider (Voith Hydro) to continue pursuing the rehabilitation works (as that would have meant that they are canceling the contract with Voith Hydro). If that were to happen, then the developer would have had the need to go through a lengthy, costly and unpredictable process of first raising the debt and then of tendering to identify a contractor that would complete the rehabilitation works on the site 	<p>DP: Basing on the information provided above the rehabilitation of the Units 2 and 4 have been financed by more than half by the EBRD loan and grant facility issued in 2001 which is considered to be out of the scope of the proposed CDM activity. While it is clear that registration of the project as the CDM activity had definitely positive impact on completion of these two units after premature depletion of the earlier EBRD loan facility it remains unclear whether their commissioning faced insurmountable barriers taking into the account that were completed by already 65% for the moment of the project start as indicated in PDD.</p> <p>The Guidelines for objective demonstration for objective demonstration and assessment of barriers Guideline 4 requires that “Barriers that can be mitigated by additional financial means can be quantified and represented as costs and should not be identified as a barrier for implementation of project while conducting the barrier analysis, but rather should be considered in the framework of investment analysis”.</p>
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<p>CL05</p>	<p>ICF team:</p> <p>In case of the Enguri project, several investment barriers have been demonstrated including a) high interest rates with only short term loan facilities available at the local market (mainly for financing the high-profit trade deals with almost immediate repayment of bank loans), b) low tariff, which was only theoretically established by the tariff authority at a “operational cost-recovery” level, and c) very low collection rates due to non-payment from final consumers plus poor technical condition of distribution network and high rate of theft of electricity.</p> <p>Where (b) and (c) show inability of the project company to use any of own resources to co-finance the rehabilitation works as it was unable to even timely repay salaries, and</p> <p>Where (a) shows inability of the project company to secure loans from the banks due to inability to repay timely such loan principals, even irrespective of very high level of interest rates which is clearly not for the industrial borrowers.</p> <p>Furthermore, regarding the issue of unavailability of other funds than EBRD, public information is available for inter-bank rates applied by commercial banks on foreign and local currency loans in Georgia. The interest rates applied by commercial banks to companies are generally 2-3 percentage points higher than interest rates applied on loans by commercial banks to other banks (i.e. interbank loans). Interest rates on inter-bank loans are presented in the document called “CL05 - Capital of Georgian commercial banks-2007”. It can also be found here: http://www.nbg.gov.ge/index.php?m=352</p> <p>Under point 4.3 and 4.4. interest rates in November 2006 were 14%, translating to 16% for loans to companies.</p> <p>Georgian commercial banks are relatively small in terms of authorised capital and equity capital available (please see document attached called “CL05 - Capital of Georgian banks-2007”, found under point 3.1. here: http://www.nbg.gov.ge/index.php?m=352).</p> <p>The answer to CAR35 provides information on the cost of rehabilitation.</p> <p>The cases a, b, and c above are beyond the frames of any “investment analysis” as there would have been no “investment” in this case.</p> <p>Therefore, (a), (b) and (c) are genuine barriers for implementation of the project.</p>	<p>Please note that factors currently mentioned as the key investment barriers such as high interest rates, low tariffs and collection rates can be measured and serve as the basis for investment analysis. Thereby in order to prove that investment barrier has been banning from the implementation of the project activity either investment analysis may be performed or additional prove regarding unavailability of any funds other than those provided by EBRD in 2006 shall be provided.</p> <p>DP: Issue is closed.</p> <p style="text-align: right;">134</p>
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CL05 -continued	<p>ICF Team:</p> <p>In addition, it is important to understand the root cause of the investment shortfall. The continuous devaluation of US\$/EUR exchange rate between 2002 and 2006 considerably reduced the available finances of Engurhesi, presenting a major barrier to investment. When the US dollars were lent (pledged) by EBRD in 2002, the USD amount was sufficient to cover the supplier contract costs mainly quoted in Euros, using the prevailing exchange rate at that time. However between 2002 and late 2005 (when payments were due to the supplier) the US\$/EUR exchange rate fell precipitously, creating a large shortfall in the amount available (denominated in US\$) to meet contractual commitments to suppliers (in Euro). By its Board Meeting of 21 December 2005, Engurhesi could gauge the overall size of this financing shortfall caused by exchange rate change and was in serious financial difficulty. At this time Engureshi was in default on both its loan with EBRD and its contract with the equipment supplier Voith and facing financial penalties with a dire need to find other sources of capital to allow the payments to be made. CDM finance was identified as a means of improving the overall economic viability of the project, which gave confidence to the Engureshi Board to continue the investment. This led to securing a bridging loan at high interest rate from Procredit Bank in Georgia in December 2005, as a precursor to a further EBRD loan agreement in Dec 2006, which explicitly noted the contribution of CDM finance. However since the supply contract was already signed, Engurhesi was forced to use for Unit 2 the capital originally allocated to other Enguri units. Hence, in December 2005, Engurhesi was aware of the financing pledged for the remaining Units 1, 4 and 5, could already gauge the overall size of the financing shortfall and evaluate the role of CER revenues. The anticipation of revenues stemming from the sale of Certified Emission Reductions was a key factor for Engurhesi in the decision to proceed to payments to the equipment supplier for the works at Unit 2 in December 2005.</p>	
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CAR 36. Common practice analysis is described in the PDD version 1 but it is not reflected according to the additionality tool ver.05.2. Please correct.	6.c.iv	Additional changes have been made in the CDM PDD (on pages 30, 31 and 32) to follow the step-by-step procedure to demonstrate that the project is not a 'common practice in Georgia'.	Common practice analysis is accepted. Issue is closed.
CL 06. Please clarify that the date of commissioning cannot be considered as the project activity start date	6.a.e.	<p>The date of commissioning of the project activity, i.e. completion of the rehabilitation work at any of the unit is actually the date when all the works, expected to be conducted as part of rehabilitation, on the said unit has been completed (and not started). Hence, the start date has not been chosen to coincide with 'the date of commissioning of the project activity'.</p> <p>In fact, as per the definition of start date given in EB41, paragraph 67 – the start date has been chosen as the date when the project proponent had fully committed to undertaking the rehabilitation work (after the project activity had been stopped in early weeks of December 2005. The date when the project proponent had committed to continuing to making expenses for the rehabilitation work is the date when the Board of Directors committed to continue with rehabilitation activity (after the works had stopped). This date is 21/12/2005. This date serves as the CDM start date.</p>	Correction is accepted. Issue is closed.



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CAR 37. Please provide the assessment whether the geographical scope (e.g. defined region) of the common practice analysis is appropriate for the assessment of common practice related to the project activity's technology or industry type	6.e.c.	<p>"The geographical scope for assessing the rehabilitation activity at hydro power plants has been restricted to Georgia only, as (A) there is sufficient information regarding operating history of hydro power plants in Georgia and (B) different neighboring countries have very different access to energy resources (e.g. both Azerbaijan and Russia are rich in oil and gas) and that would define the state/ national priority for undertaking hydro rehabilitation activity in neighboring countries differently, and finally (C) achieving access to information regarding rehabilitation of hydro power plants in the neighboring countries would have been extremely difficult and might not have been possible."</p> <p>These changes have also been made as part of the CDM PDD (on page 30 & 31)</p>	Correction is accepted. Issue is closed.
CAR 38. Please provide evidence that data collected as part of monitoring archived electronically and kept at least for 2 years after the end of the last crediting period (Plant order etc)	7.h.	<p>This is a forward looking activity and will be performed as soon as the CDM project is submitted for registration. In any case, the necessary data (as part of the monitoring and verification) is regularly being monitored on site and is readily available for storing electronically through scanning.</p> <p>ICF team: Please the attached document: <i>CAR38 - Letter of commitment from Engurhesi Ltd.pdf</i>, submitted together with the revised PDD.</p>	<p>KZ: Since, this item will be checked at the time of 1st Verification, this CAR will remain open until 1st Verification.</p> <p>KZ: Please issue an order at the enterprise concerning the data saving.</p> <p>KZ: Issue is closed.</p>
CL 07. Please clarify whether Georgian legislation require an environmental impact assessment to be performed.	10.c.	<p>Since, the letter stating that the Enguri rehabilitation project does not require issuance of environmental permit for the project is attached with this submission. The letter has been signed by "Giorgi Tskhakaia", who is the Head of Department at "The Department of Licenses and Permits" at the "Ministry of Environmental Protection and Natural Resources of Georgia"</p>	Explanation found satisfactory. Issue is closed.



Appendix B: Responses to the comments obtained during PDD webhosting

SN: 1	Comment #1 submitted by: zhong zhou li	<p>It is evident from the PDD that the values are consistent and it is definitely forged and cooked up values to show a non CDM project as a CDM project. What is this? DoE to check the Detailed Project Report and Feasibility Report which is submitted to the other agencies and Banks by Project owner and ensure that the values match with the DPR/FR submitted to DoE also. After careful study of PDD it is found that DPR/FR is in different versions made and submitted with different purposes to different agencies which is totally unacceptable, illegal and unethical. PP/Consultant may show some undertaking letter from bank manager to DoE stating that both DPR's are same. These kinds of letters should not be accepted and entertained by DoE. While collecting the DPR/FR from banks and other agencies, all DPR/FR pages should be counter signed by Banks and other agencies so that the real DPR/FR given to other parties by the PP/Consultant is same as the one submitted to DOE. In this particular project there is clear cut evidence that DPR/FR values are changed/ fabricated mischievously and intentionally. This must be probed fully. DOE must take a written undertaking from the PP/Consultant about the list of parties to whom this DPR/FR is submitted and for what purposes. Then DOE should cross check with all the parties and confirm that the same DPR/FR is submitted to all the parties correctly without any changes. DOE must not accept any reports and undertakings from PP/Consultant. DOE must make independent evaluation and use totally different parties without informing the PP or Consultant to cross check the facts. DOE to write to the party who prepared the DPR/FR which is submitted to the banks and other agencies and the same is verified against the one submitted to the DOE by PP/Consultant. This project is a fabricated and fake CDM project and must be rejected by the DOE right away. DOE should not support this kind of projects otherwise CDM EB should suspend this DOE for at least one year.</p>
ICF Response		<p>There are several questions raised in the web-comment. Hence, response is presented in points below:</p> <p>DOE has been presented the original contract documents, and the financial numbers from</p>



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	<p>the original contract documents have been used to assess the financials of the project activity.</p> <p>As such, no two different DPR/FR have been prepared and those are not even mentioned as such in the CDM PDD. There is no question of two different DPRs.</p> <p>Both the contract document and the financing documents used for developing the CDM PDD have been counter-signed on each of the pages.</p>
Documents Presented:	No Documents needed, only explanation has been provided in this document.
DOE comment:	Validation team confirms that all the evidence presented by PP was found adequate, valid, veracious and trustworthy. Since DPR/FR are not mentioned in the PDD they were not requested by financial specialist due to the fact that other relevant documentation, which satisfied his request, was provided.

SN: 2	<p>Comment Submitted by: xiangbo yao</p> <p># 2</p>	<ul style="list-style-type: none"> It looks like from the PDD the start date of the project is tampered for sure. This must be verified and let the truth come out. The culprits of forgery and malpractices must be brought to book. Why DOE has taken up such a bad project? Is there any pressure on DOE or some cake offered to DOE? They DOE must terminate this project immediately. DOE to check the offer letters originals and get the same verified in writing from the OEM's and submitted parties. Where is the OEM supplier agreement original? DOE to check for the same. Is it prepared later with date and amounts changed to suit the project workings? For sure yes. This is not acceptable. DOE to check all purchase orders originals with the receiver of purchase orders i.e. the supplier of equipment. This PO confirmation to the DOE must be in writing from a board level person of the equipment supplier to avoid any malpractices and forgery. Then DOE to check for the invoices dates, payment amounts and date of payments made with all original documents and reconfirm with the parties involved and the banks for the accuracy of amounts, dates and parties involved. Same analysis and due diligence work to be repeated for "Notice to Proceed" as written in the case of Purchase order as above. DOE to check all "Notice to Proceed" originals with the receiver of "Notice to Proceed" i.e. the supplier of equipment or Engineering Procurement & Construction Contractor. This "Notice
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		<p>to proceed” and EPC contract confirmation to the DOE must be in writing from a board level person of the equipment supplier and EPC contractor to avoid any malpractices and forgery. Then DOE to check for the invoices dates, payment amounts and date of payments made with all original documents and reconfirm with the parties involved and the banks for the accuracy of amounts, dates and parties involved.</p> <ul style="list-style-type: none"> ▪ DOE to check OEM supplier agreements, EPC contractor agreements, “Notice to proceed” letters, and Invoices raised. I’m sure DOE will catch the malpractices happened in this project. All the parties involved in this matter must be brought to justice. DOE must not support this kind of forgeries and malpractices. DOE cannot afford to close their eyes to this kind of malpractices.
ICF Response		<p>There are several questions raised in the web-comment. Hence, response is presented in points below:</p> <p>The start date of the CDM PDD is extremely well documented and each event in the chronology of events is suitably referenced and authenticated with a background data</p> <p>The original letters and contracts from the OEMs have been presented to the DOE, which has been countersigned on each page of the contract document. None of the dates or the project costs has been changed. The project’s additionality is primarily due to devaluation of currency \$/€ and so the original funding ran out to cover the overall cost of rehabilitation (This is a public information and available freely).</p> <p>The contract documents with the OEM supplier has been made available to the DOE for their review, which they have reviewed in detail</p>
Documents Presented:		No Documents needed, only explanation has been provided in this document.
DOE comment:		Validation team confirms that all the evidence presented by PP was found adequate, valid, veracious and trustworthy. All the CARs and CLs considering start date of the project and additionality were closed. No further action is needed.
SN: 3	Comment # 3	It is evident from the PDD that the values are consistent and it is definitely forged and cooked up values to show a non CDM project as a CDM project. What is this? DoE to check the Detailed Project Report and Feasibility Report which is submitted to the other agencies



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	Submitted by: sud	and Banks by Project owner and ensure that the values match with the DPR/FR submitted to DoE also. After careful study of PDD it is found that DPR/FR is in different versions made and submitted with different purposes to different agencies which is totally unacceptable, illegal and unethical. PP/Consultant may show some undertaking letter from bank manager to DoE stating that both DPR's are same. These kinds of letters should not be accepted and entertained by DoE. While collecting the DPR/FR from banks and other agencies, all DPR/FR pages should be counter signed by Banks and other agencies so that the real DPR/FR given to other parties by the PP/Consultant is same as the one submitted to DOE. In this particular project there is clear cut evidence that DPR/FR values are changed/fabricated mischievously and intentionally. This must be probed fully. DOE must take a written undertaking from the PP/Consultant about the list of parties to whom this DPR/FR is submitted and for what purposes. Then DOE should cross check with all the parties and confirm that the same DPR/FR is submitted to all the parties correctly without any changes. DOE must not accept any reports and undertakings from PP/Consultant. DOE must make independent evaluation and use totally different parties without informing the PP or Consultant to cross check the facts. DOE to write to the party who prepared the DPR/FR which is submitted to the banks and other agencies and the same is verified against the one submitted to the DOE by PP/Consultant. This project is a fabricated and fake CDM project and must be rejected by the DOE right away. DOE should not support this kind of projects otherwise CDM EB should suspend this DOE for at least one year.
ICF Response		There is no Detailed Project Report, which is relevant to the PDD. There is the Feasibility Study (FS), which has been developed in two parts: Part 1 referring to project technical and economic feasibility; and Part 2 referring to project's environmental, health and safety audit. This FS is referred to in the PDD and is available in one version only. DOE has been presented with the original project documents (including Feasibility Study Part 1 and Part 2), and the financial numbers from the original contract documents have been used to assess the financials of the project activity.
Documents Presented:		No Documents needed, only explanation has been provided in this document.



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DOE comment:	Validation team confirms that all the evidence presented by PP was found adequate, valid, veracious and trustworthy. Since DPR/FR are not mentioned in the PDD they were not requested by financial specialist due to the fact that other relevant documentation, which satisfied his request, was provided.
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SN: 4	Comment Submitted lawrance	#4 by:	Layout of power transmission lines from the generation to the consumer with the metering system is not shown. It should include the distance of transmission lines. DOE has to check the meters are installed to monitor electricity generated, net electricity used in Bhutan, net electricity exported to India. Pls. clarify.
ICF Response			This project aims to refurbish existing units at the Enguri hydro power plant in Georgia. Transmission lines, net electricity used in Bhutan, and net electricity exported to India are not part of the project scope. Hence, this comment appears to refer to a different project entirely (based in Bhutan rather than in Georgia). For the Enguri project in Georgia (the subject of this PDD), the monitoring parameters, including meters, have been described in the PDD as required by the ACM0002. The DOE undertook the site visit in May, as part of the validation process. Furthermore, the implementation of the monitoring plan, including installation of meters as presented in the PDD, will be checked by a DOE at verification of emission reductions achieved by the project.
Documents Presented:			No Documents needed, only explanation has been provided in this document.
DOE comment:			Comment is not relevant for this particular CDM project. No further action is needed.

SN: 5	Comment Submitted lawrance	# 5 by:	The status of the construction & commission of the project is not stated in the PDD.
ICF Response			The status of the project planning and implementation has been included in the webhosted version of the PDD. Please refer to page 7.
Documents Presented:			No Documents needed, only explanation has been provided in this document.



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DOE comment:	Comment is not relevant for this particular CDM project. No further action is needed.
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SN: 6	Comment Submitted by:	# 6	What is the basis of calculation for transmission loss, auxiliary consumption and transformer losses? What is the length of transmission line?
ICF Response			<p>The proposed project activity assumes the refurbishment of the existing units at the Enguri hydro power plant. The applicable methodology to this type of activity is the ACM0002. This methodology does not require accounting for transmission loss or transformer losses. There is no transmission line assumed in the proposed project, thus no length of transmission line has been provided in the PDD.</p> <p>Regarding the auxiliary consumption: as explained on page 47 of the webhosted PDD; there are power meters installed at each unit and at the connection point between the plant's switchyard and Central Transmission Line. The difference between these two allows calculating "own consumption of the plant".</p>
Documents Presented:			No Documents needed, only explanation has been provided in this document.
DOE comment:			<p>Since transmission and transformer loss are accounted by the methodology used in the Enguri CDM project they are not accounted by the project as well. Relevant explanation of auxiliary consumption is provided in the webhosted PDD:</p> <p>http://cdm.unfccc.int/Projects/Validation/DB/ZS5QQLHW8O9G3OZPYHAYJLKGO8VAXC/view.html</p>

SN: 7	Comment Submitted by:	# 7	The project is claimed to be run of river hydro project. So the calculation of reservoir is wrong. The criterion 3 is applicable only to pumped storage or accumulation hydro projects. What does reservoir refer to as per PP?
ICF Response			The project is not claimed to be a run of river hydro project. As written in the webhosted PDD, the refurbishment of Enguri hydro power plant is the retrofit of hydro power plant with an accumulation reservoir. The project involves replacement and upgrade of hydroelectric turbine generators and



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		ancillary equipment. It is implemented at an existing reservoir, with no change in the volume of reservoir. As such, there is no calculation of reservoir required or presented in the PDD. It is unclear to what criterion 3, the comment refers to. The ACM0002 do not list any criteria, except the applicability conditions. Section B.2. of the webhosted PDD demonstrates how the proposed project activity meets the applicability conditions. The project proponent understands “reservoir” as defined in the ACM0002: “A reservoir is a water body created in valleys to store water generally made by the construction of a dam.”
Documents Presented:		No Documents needed, only explanation has been provided in this document.
DOE comment:		Comment is not relevant for this particular GHG project. No further action is needed.

SN: 8	Comment Submitted by:	# 8	The justification of opting out alternative 3 and alternative 4 is not justified adequately. It should be based on latest published data and figures. Refer B.4. Pls. clarify.
ICF Response			The PDD mentions three alternative scenarios (please refer to page 12 of the webhosted PDD). Yet, only two of these alternatives have been deemed feasible. The additional explanation of eliminating option 3 has been introduced in newer version of the PDD that has been developed in response to DOE’s queries. There is no alternative 4 mentioned in the PDD.
Documents Presented:			No Documents needed, only explanation has been provided in this document.
DOE comment:			Comment is not relevant for this particular CDM project. No further action is needed.

SN: 9	Comment Submitted by:	# 9	The bilateral agreements, PPA with India are the documents, DOE to check thoroughly
ICF Response			It is unclear to which bilateral agreements the comment refers. Nevertheless, any contract required by the DOE has been duly provided by the project company and consultant, and checked thoroughly by the DOE, as required by CDM rules.



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	There is no PPA with India included in the project documentation, as the project does not involve any power purchase with India. Hence, this comment appears to refer to a different project entirely (based in India rather than in Georgia).
Documents Presented:	No Documents needed, only explanation has been provided in this document.
DOE comment:	Comment is not relevant for this particular CDM project. No further action is needed.

SN: 10	Comment # 10 Submitted by: lawrance	Date of investment decision should be at the time of DPR preparation. So, the basis of the cost escalation factors at a later date for CDM consideration is not valid. Pls. clarify. Refer B5. Step 3a. (Investment barrier).
ICF Response		The PDD does not include any reference to DPR, as no such document has been created with regards to the proposed project activity. The sequence of events that led to CDM consideration and the investment decision has been presented (and documented) in detail in the PDD. Section B.5. of the webhosted PDD does not include Step 3a (Investment Barrier). Investment Barriers are discussed in Section B.4., and arguments are based on data from period prior and shortly after the CDM consideration (e.g. currency devaluation trend from 2001 to 2006). The cost escalation prior to CDM consideration is a valid argument, as it demonstrates that the project encountered serious financial problems and would not have been constructed without the promise of the CDM finance.
Documents Presented:		No Documents needed, only explanation has been provided in this document.
DOE comment:		Comment is not relevant for this particular CDM project. No further action is needed.

SN: 11	Comment # 11 Submitted by: lawrance	How the CDM benefit will alleviate the technical barriers. As per additionality tool, if the barriers are not alleviated by CDM, then the project is not additional.
ICF Response		The "Tool for the demonstration and assessment of additionality" requires the project proponents to identify barriers that would prevent the implementation of the proposed CDM project activity (sub-step 3a). It further states that realistic and credible barriers may be of different types, such as



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	investment, technological, barriers due to prevailing practice, and other barriers. However, it does not require that each type of a barrier needs to be applicable to a project activity. As such, in the Enguri project, investment barriers have been identified dominant in preventing its implementation. Therefore, no technical barriers have been mentioned in the PDD, and consequently there has been no need to demonstrate that CDM would alleviate them.
Documents Presented:	No Documents needed, only explanation has been provided in this document.
DOE comment:	The “Tool for the demonstration and assessment of additionality” ver.05.2, which is used in the latest version of PDD, does not oblige PP to use all kinds of barriers that is why investment barrier was chosen by PP as the one to elaborate. No further action is needed.

SN: 12	Comment Submitted by:	# 12	Emission factor for state is not calculated. It should be made available to DOE to clearly validate this value. Emission factor for India is not as per “Tool for emission factor for the system”.
ICF Response			Detailed calculations of grid Emission Factor has been presented in Annex 2 of the PDD. These calculations have been performed by the DNA of Georgia, and they meet the requirements of the “Tool to calculate an emission factor for an electricity system”. The DNA’s publication can be found at: http://www.moe.gov.ge/files/Klimatis%20Cvlileba/Grid_Emission_Factor_Georgia.pdf Again, this comment appears to refer to a different project entirely (based in India rather than in Georgia), as no emission factor for India is mentioned in the Enguri PDD.
Documents Presented:			No Documents needed, only explanation has been provided in this document.
DOE comment:			Comment is not relevant for this particular CDM project. No further action is needed.

SN: 13	Comment Submitted by:	# 13	Electricity generated by the project, auxiliary consumption, transmission losses, transformer losses, net electricity exported to India, net electricity exported to the grid. These parameters to be monitored continuously and to be cross checked with sale receipts.
ICF Response			The proposed project activity assumes the refurbishment of the existing units at the Enguri hydro



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		<p>power plant. The applicable methodology to this type of activity is the ACM0002. This methodology does not require monitoring transmission losses or transformer losses. Also, net electricity exported to India is not part of the project scope. Again, this comment appears to refer to a different project entirely (based in India rather than in Georgia).</p> <p>As required by the ACM0002, the project company undertakes to monitor electricity supplied annually to the grid by the project. Considering that there are meters installed at each unit, as well as at the connection point between the plant's switchyard and Central Transmission Line, the electricity generated by the project, including auxiliary (plant's own) consumption, will be captured (as assumed in the monitoring plant presented in the PDD).</p> <p>The monitoring of this parameter will be checked thoroughly at verification stage.</p>
Documents Presented:		No Documents needed, only explanation has been provided in this document.
DOE comment:		Comment is not relevant for this particular CDM project. No further action is needed.
SN: 14	Comment # 14 Submitted by: lawrance	<p>The Meth mentions that if investment analysis option is used, apply the following:</p> <p>a. Apply an investment comparison analysis, as per Step 3 of the .Combined tool to identify the baseline scenario and demonstrate additionality., if more than one alternative is remaining after Step 2 and if the remaining alternatives include scenarios P1 and P3;</p> <p>b. Apply a benchmark analysis, as per Step 2b of the .Tool for the demonstration and assessment of additionality. If more than one alternative is remaining after Step 2 and if the remaining alternatives include scenarios P1 and P2.</p> <p>But PP failed to apply like this. Pls. clarify.</p>
ICF Response		<p>ACM0002 provides several options of analysis method to choose from, when a project proponent opts for investment analysis to demonstrate the additionality.</p> <p>However, at the same time, the Tool allows a project proponent to select between Investment analysis and Barrier analysis, or to use both. In case of the proposed project activity, the project proponent has chosen to use Barrier analysis only. Thus, there has been no need to apply either an investment comparison analysis or benchmark analysis.</p>
Documents Presented:		No Documents needed, only explanation has been provided in this document.



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DOE comment:	Used methodology ACM0002 ver.12.1.0. directly states that the latest version of “Tool for the demonstration and assessment of additionality” is supposed to be used. At the same time methodology itself does not contain detailed stepped instruction of the way to prove additionality, which is why the submitted comment can be found irrelevant. No further action is needed.
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SN: 15	Comment Submitted lawrance	# 15 by:	PLF should be based on EB48 Annex 11 guideline which says The plant load factor provided to banks and/or equity financiers while applying the project activity for project financing, or to the government while applying the project activity for implementation approval; (b) The plant load factor determined by a third party contracted by the project participants (e.g. an engineering company); But PDD doesn't demonstrate how PLF has been arrived at.
ICF Response			Plant load factor (PLF) of 57.08% is based upon 5,000h of estimated annual operation from the available 8,760h (24hx365days). This estimate was provided by the technical consultant of the project company. This calculation has been included in the Emission Reduction spreadsheet provided to the DOE and the documentary proof presented to the DOE. The actual energy yield will depend on the operation of the reservoir and hydrology of the catchment, with electricity output measured by the meters and subject to verification.
Documents Presented:			No Documents needed, only explanation has been provided in this document.
DOE comment:			Validation team confirms that all the evidence presented by PP was found adequate, valid, veracious and trustworthy. All the algorithms as well as the calculations were found adequate and the ones that consist with methodology.

SN: 16	Comment Submitted lawrance	# 16 by:	Whether PLF includes machine shutdown, machine availability. Whether grid availability is accounted for in the calculation of gross generation. To my surprise, critical parameter like PLF is missing from the PDD. How DOE has allowed this.
ICF Response			The PLF is mentioned in the PDD and assigned valued of 57.08% is given (please refer to page 43). The PLF is based upon 5,000h of estimated annual operation from the available 8,760h (24hx365days). Hence, there is a large portion of non-operation hours per year in which maintenance could be undertaken.

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	The PLF is not mentioned in the ACM0002 as a parameter to calculate or monitor. The PLF is a ratio derived from operational hours in the year.
Documents Presented:	No Documents needed, only explanation has been provided in this document.
DOE comment:	Validation team confirms that all the evidence presented by PP was found adequate, valid, veracious and trustworthy. All the algorithms as well as the calculations were found adequate and the ones that consist with methodology.

SN: 17	Comment # 17 Submitted by: lawrance	Common practice analysis should be based on EB 39 Annex 10 (Additionality tool). Each step of common practice analysis should be fulfilled as per tool.
ICF Response	The same issue has been raised by the DOE in the Validation Protocol. As a result, the latest version of the PDD includes a detailed description of the common practice analysis, including all the steps as required by the Tool, i.e.: Sub-step 4a: Analyze other activities similar to the proposed project activity; Sub-step 4b: Discuss any similar options that are occurring.	
Documents Presented:	No Documents needed, only explanation has been provided in this document.	
DOE comment:	The same CAR was raised by validation team and was successfully resolved by PP (this may be found in the protocol).	

SN: 18	Comment # 18 Submitted by: lawrance	Emission reduction calculation should be based on EB 50 Annex 14 "Tool for emission factor for the electricity system.
ICF Response	In the PDD, ex-ante emission reduction calculation has been based on the ACM0002, and with use of relevant Tools, including "Tool to calculate emission factor for an electricity system". In fact, there is a newer version of the Tool available (EB61 Annex 12), and it has been applied in the latest version of the PDD. This has been checked by the DOE.	
Documents Presented:	No Documents needed, only explanation has been provided in this document.	



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DOE comment:	Validation team confirms that ex-ante emission reduction calculation has been based on the ACM0002, and with use of relevant Tools.
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SN: 19	Comment # 19 Submitted by: lawrance	Whether only one set of main meter, check meter set is enough for three projects. The monitoring parameters need to be checked by DOE.
ICF Response		The proposed project activity relates to only one project: refurbishment of units at the Enguri Hydro Power Plant. The meters already installed are sufficient to monitor parameters required by the methodology and relevant tools. This has been checked by the DOE.
Documents Presented:		No Documents needed, only explanation has been provided in this document.
DOE comment:		All the monitoring equipment and relevant documentation was checked on site and found adequate. Comment is not relevant for this particular CDM project. No further action is needed.

SN: 20	Comment # 20 Submitted by: lawrance	The main meter and check meter technical parameters like accuracy level, make, etc. needs to be mentioned in the PDD.
ICF Response		Quality assurance of the metering devices is ensured by the mandatory annual calibration process performed by the State Electric System and the Commercial Operator of the National Electricity Network. This ensures the accuracy of the metering devices. The methodology does not require providing technical parameters of meters installed at the project site. As such, these haven't been included in the PDD.
Documents Presented:		No Documents needed, only explanation has been provided in this document.
DOE comment:		All the monitoring equipment and relevant documentation was checked on site and found adequate. The same issue was raised during ITR and was closed.

SN:	Comment #	▪ It looks like from the PDD the start date of the project is tampered for sure. This must be
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21	21Submitted by: xiangbo yao	<p>verified and let the truth come out. The culprits of forgery and malpractices must be brought to book. Why DOE has taken up such a bad project? Is there any pressure on DOE or some cake offered to DOE? They DOE must terminate this project immediately. DOE to check the offer letters originals and get the same verified in writing from the OEM's and submitted parties. Where is the OEM supplier agreement original? DOE to check for the same. Is it prepared later with date and amounts changed to suit the project workings? For sure yes. This is not acceptable.</p> <ul style="list-style-type: none">▪ DOE to check all purchase orders originals with the receiver of purchase orders i.e. the supplier of equipment. This PO confirmation to the DOE must be in writing from a board level person of the equipment supplier to avoid any malpractices and forgery. Then DOE to check for the invoices dates, payment amounts and date of payments made with all original documents and reconfirm with the parties involved and the banks for the accuracy of amounts, dates and parties involved. Same analysis and due diligence work to be repeated for "Notice to Proceed" as written in the case of Purchase order as above. DOE to check all "Notice to Proceed" originals with the receiver of "Notice to Proceed" i.e. the supplier of equipment or Engineering Procurement & Construction Contractor. This "Notice to proceed" and EPC contract confirmation to the DOE must be in writing from a board level person of the equipment supplier and EPC contractor to avoid any malpractices and forgery. Then DOE to check for the invoices dates, payment amounts and date of payments made with all original documents and reconfirm with the parties involved and the banks for the accuracy of amounts, dates and parties involved.▪ DOE to check OEM supplier agreements, EPC contractor agreements, "Notice to proceed" letters, and Invoices raised. I'm sure DOE will catch the malpractices happened in this project. All the parties involved in this matter must be brought to justice. DOE must not support this kind of forgeries and malpractices. DOE cannot afford to close their eyes to this kind of malpractices.
ICF Response		These comments are almost identical with the comments by sud. As such, responses provided by ICF to sud's comments #34-36 are applicable to comments raised by xiangbo yao.



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Documents Presented:	No Documents needed, only explanation has been provided in this document.
DOE comment:	Validation team confirms that all the evidence presented by PP was found adequate, valid, veracious and trustworthy.

SN: 22	Comment # 22 Submitted by: sud	 DOE to write to the party who prepared the DPR/FR which is submitted to the banks and other agencies and the same is verified against the one submitted to the DOE by PP/Consultant.
ICF Response		There is no Detailed Project Report, which is relevant to the PDD. There is the Feasibility Study, which has been developed in two parts: Part 1 referring to project technical and economic feasibility; and Part 2 referring to project's environmental, health and safety audit. This FS is referred to in the PDD and is available in one version only. DOE has been presented with the original project documents (including Feasibility Study Part 1 and Part 2).
Documents Presented:		No Documents needed, only explanation has been provided in this document.
DOE comment:		Validation team confirms that all the evidence presented by PP was found adequate, valid, veracious and trustworthy.

SN: 23	Comment # 23 Submitted by: sud	 DOE must not entertain this project any more if found the DPR/FR is tampered with at any point in time. PP cannot give different DPR's and FR's. They must submit only the one given to Banks and other agencies while obtaining loans and decision making time.
ICF Response		This comment is of similar nature as the comment above (ref. number 20). As such, the response given by ICF to the comment #20 is applicable to the sud's comment #21.
Documents Presented:		No Documents needed, only explanation has been provided in this document.
DOE comment:		Validation team confirms that all the evidence presented by PP was found adequate, valid, veracious and trustworthy.

SN:	Comment # 24	 DOE to ensure that the PDD values are consistent and ensure that the CDM
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24	Submitted sud	by:	project is a genuine project
ICF Response			Arguments used in the PDD have been substantiated with reliable evidence. The full package of documentation has been submitted to the DOE for their thorough review. If there was any inconsistency in values found in the webhosted PDD; this has been picked up by the DOE and addressed by the project proponents accordingly.
Documents Presented:			No Documents needed, only explanation has been provided in this document.
DOE comment:			Validation team confirms that all the evidence presented by PP was found adequate, valid, veracious and trustworthy. All relevant CARs and CLs were raised during validation process and successfully closed by PP. Please refer to the protocol Appendix A.

SN: 25	Comment Submitted sud	# 25 by:	 DoE to check the Detailed Project Report and Feasibility Report which is submitted to the other agencies and Banks by Project owner and ensure that the values match with the DPR/FR submitted to DoE also.
ICF Response			As mentioned in responses to two previous comments (#22, #23), no two versions of the documents have been developed. In fact, no Detailed Project Report has been prepared with regards to the proposed project activity. The DOE has been presented with original project documentation. The values presented in the PDD are consistent with that documentation, as checked by the DOE.
Documents Presented:			No Documents needed, only explanation has been provided in this document.
DOE comment:			Validation team confirms that all the evidence presented by PP was found adequate, valid, veracious and trustworthy.

SN: 26	Comment Submitted sud	# 26 by:	 Careful study must be done so that the DPR/FR is not in different versions made and submitted with different purposes to different agencies, which is totally unacceptable, illegal and unethical.
ICF Response			This comment is of similar nature as the comment above (ref. number 23). As such, the



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	response given by ICF to the comment #23 is applicable to the sud's comment #24.
Documents Presented:	No Documents needed, only explanation has been provided in this document.
DOE comment:	Validation team confirms that all the evidence presented by PP was found adequate, valid, veracious and trustworthy.

SN: 27	Comment # 27 Submitted by: sud	 Project owner should show some undertaking letter from bank manager to DoE stating that both DPR's are same. These kinds of letters should not be accepted and entertained by DoE at face value, but must be checked independently. While collecting the DPR/FR from banks and other agencies, all DPR/FR pages should be counter signed by Banks and other agencies so that the real DPR/FR given to other parties by the PP/Consultant is same as the one submitted to DOE.
ICF Response		No two or more different versions of Detailed Project Report and Feasibility Report have been prepared. In fact, the PDD do not mention the DPR at all, and no such document has been developed with regards to the proposed project. Only original documentation was presented to the DOE, as well as to other parties when necessary. The documentation authenticity has been checked by the DOE, as part of their validation work.
Documents Presented:		No Documents needed, only explanation has been provided in this document.
DOE comment:		Validation team confirms that all the evidence presented by PP was found adequate, valid, veracious and trustworthy.

SN: 28	Comment # 28 Submitted by: sud	 DPR/FR values must be probed fully. DOE must take a written undertaking from the PP/Consultant about the list of parties to whom this DPR/FR is submitted and for what purposes. Then DOE should cross check with all the parties and confirm that the same DPR/FR is submitted to all the parties correctly without any changes. DOE must not accept any reports and undertakings from PP/Consultant. DOE must make independent evaluation and use totally different parties without informing the PP or Consultant to cross check the
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	facts.
ICF Response	This comment is of similar nature as the comment above (ref. number 25). As such, the response given by ICF to the comment #25 is applicable to the sud's comment #26.
Documents Presented:	No Documents needed, only explanation has been provided in this document.
DOE comment:	Validation team confirms that all the evidence presented by PP was found adequate, valid, veracious and trustworthy.

SN: 29	Comment # 29 Submitted by: sud	<p>&#61558; Has the PP considered the CDM revenues while envisaging the project? Without CDM the project was not viable, is it right? This project is having a debt component? Then how bankers or lenders gave the loan? Have the bankers or lenders considered the CDM revenues while agreeing to give loan to this project? If not this project should be rejected right away by DOE by terminating the contract forthwith. If yes, where is the proof? What is the date of the evidence document from bank? Is this document printed nowadays or earlier. DOE to independently check the same. If the document is available from Bank it must be checked from all angles so that it is genuine and not forged and date changed by putting back dated. This is normally done, DOE to be aware of this please. Please check the communication the PP had during that time with banks, emails and postal receipts and the weights and dates mentioned on the receipts. Do not believe in courier bills and receipts since these can be cooked up easily. Insist on government owned postal service receipts only. If the project is fully equity project then on what basis the PP has invested full equity in to the project while considering the CDM revenue? DOE to check the same in detail and bring out the facts. Is there any past record of this PP to invest or not to invest at returns what he is talking about in this project? Proper evidences must be reviewed and digged out by the DOE and take decision on the project based on established facts. Do not ask documents from PP, DOE to collect the same from different sources to do independent evaluation.</p>
ICF Response		As presented in the PDD, there has been a genuine consideration of CDM by the project company. The chronology of events leading to the CDM consideration has been presented in the PDD, and relevant documentary evidence submitted to the DOE. It has been clearly



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		<p>demonstrated that project implementation activity was possible due to the promise of the CDM benefits.</p> <p>As written in the PDD (and proved to the DOE), despite the constant breach of covenants, EBRD (loan provider) was able to lend to Engurhesi only due to the promise that CER revenue will be used to repay its loan.</p> <p>The DOE has been performing validation services, including checks of documentation submitted by the project company and consultant, according to the CDM rules.</p>
Documents Presented:		No Documents needed, only explanation has been provided in this document.
DOE comment:		<p>▪ Validation team confirmed the adequacy of evidence Second Novation Loan Agreement (Enguri Hydro Power Plant Rehabilitation Project), dated 29/12/2006 (Execution copy, operation #734)(which is available upon request) states:</p> <p>(e) undertake and/or procure that all necessary steps are taken to enable the Project to qualify for the Clean Development Mechanism and ensure that the funds raised through the CDM are used in priority for meeting the Borrower's and the Novation Project Company's obligations regarding the Project:</p> <p>which confirms the statement: that "EBRD was able to lend to Engurhesi only due to the promise that CER revenue will be used to repay its loan (which are independent of the collection ratios)"</p>
SN: 30	Comment # 30 Submitted by: sud	<p>&#61558; How is the baseline defined in this project? Is Base line hypothetically defined with no proper evidences and proper justification? In such case, DOE cannot take the base line as suggested by the PDD. Please check that there are real emission reductions beyond the real and factual base line. It may so happen that this project qualifies for no CER's. DOE cannot assume values and things as giving by this PP. Whatever values are considered throughout the project in all documents including the real DPR (not the one prepared for CDM, the one given to the banks and others), they must be validated, verified and double checked. Do not ask PP for DPR. Ask the parties who have been given DPR by the PP. Get directly from the bank and others by each page of the DPR and Feasibility report signed. Such document can</p>



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		be considered as a real DPR or FR. UNFCCC CDM process cannot be degraded by fabricating and misinterpreting the project base line and additionality.
ICF Response		As showed in the PDD, the baseline has been identified by following all the steps required by the ACM0002 and the "Combined tool to identify the baseline scenario and demonstrate additionality". This has been checked by the DOE. The DOE has also checked the arguments used in determining the baseline scenario, against the documentary evidence. The DOE has checked the emission reduction calculations. The DOE has applied the CDM rules in checking statements and values used in the PDD.
Documents Presented:		No Documents needed, only explanation has been provided in this document.
DOE comment:		All relevant CARs and CLs were raised by validation team and successfully closed by PP.

SN: 31	Comment # 31 Submitted by: sud	 From DOE side which auditor has done marketing and business development for acquiring this business of validating this project? With whom he or she was co-ordinating at PP or CER buyer? The same person who has done the marketing and business development to acquire the business do validation or participate in any manner what so ever in the validation process? One cannot do like that. It is against the accreditation rules and norms followed since ages. DOE should send auditors from different offices or countries to do this validation audit. DOE must take care of impartiality and accreditation rules. Due to the targets set by the DOE managements auditors are doing marketing and meeting clients and giving promises that the project will be taken care. Is it acceptable and fair? This must be stopped. No auditor should do marketing. Only non-auditing staff should do marketing. DOE to ensure the same please.
ICF Response		This comment is addressed to the DOE directly. However, from the project proponents' perspective, the DOE has been chosen in the process open to several DOEs. The proposals submitted were evaluated against a number of criteria, and the offer matching best the requirements has been selected to perform the validation services of the project.
Documents Presented:		No Documents needed, only explanation has been provided in this document.



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DOE comment:	DOE is well aware of impartiality and accreditation rules and puts high priority to meet the impartiality criteria and accreditation rules, which is why all the personnel, who have been involved in the validation process was assessed for conflict of interest. It was found that no one from the listed validation team has ever been involved with the Engurihesi LTD in a relationship of any kind. Moreover DOE has its own procedure for defining conflict of interest and it is a must for all employees to follow one. As may be seen in Validation Report auditors from different countries too part in the validation process, none of them was from the Host Country.
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SN: 32	Comment # 32 Submitted by: sud	 If applicable only: Is these machines, equipment was a part of any bundle of CDM activity envisaged and developed earlier. DOE to check the same through independent sources also. Once some bundles are non-additional and getting negative validation from a DOE, PP is rolling out the same project as an individual project which is not a CDM project at all. DOE to verify the same from independent sources and also take undertaking in the form of an affidavit from the PP's that any misrepresentation or false statement with respect this would attract strict legal action from UNFCCC and DOE. Furthermore the registered project must be de-registered in case of any future findings contradicting the submissions made by the project owner.
ICF Response		This project has never been part of a bundle. It is a stand-alone project activity.
Documents Presented:		No Documents needed, only explanation has been provided in this document.
DOE comment:		Comment is not relevant for this particular CDM project. No further action is needed.

SN: 33	Comment # 33 Submitted by: sud	 DOE to be more careful so that this is a genuine CDM project. What is the exact project cost? The project cost is covering what? Each value considered must be validated with proof. The machinery is second hand purchased or fresh and new from an OEM? In either case DOE to check all the quotations, proposals, purchase orders, invoices, way bills, transport bills, proof of payments like bank statements. DOE to check with banks by way of written confirmation the amount transacted, to whom the money is paid, when the money is
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		paid, is the party paid is the correct party as shown in the purchase orders. It may so happen that the values, party names, dates are fabricated and misrepresented in this project. DOE should terminate their contract for this project immediately. This is the only way out to protect the value of CDM process. If the PP is purchasing second hand or second quality equipment and inflating the purchase order values and invoices, this must be probed thoroughly and real values to taken for additionality calculation. Then I'm sure the additionality is not there at all in such a situation.
ICF Response		The costs associated with the project have been described in Section B.4. of the PDD. The DOE has been presented with necessary evidence to substantiate the financials of the project, including the agreement with the main contractor which provides prices schedules. All payments for refurbishment works have been made directly from the loan lender (EBRD) to Voith-Siemens. Details, such as payment description, invoice numbers, payment dates, and values, are stored by the contractor and EBRD. These have been available for DOE's review. All equipment purchased and installed (and to be installed) is new and sourced from the world's leading manufacturers, such as German Voith-Siemens Company.
Documents Presented:		No Documents needed, only explanation has been provided in this document.
DOE comment:		All relevant CARs and CLs were raised by validation team and successfully closed by PP.
SN: 34	Comment # 34 Submitted by: sud	 Is the project equipment purchased second hand equipment or sourced from cheap foreign sources? If yes, the issue must be probed by DOE since invoices will invariably be inflated and forged. Total project costs mentioned by PP will not be the same as originals. Hence no additionality. These facts must be probed in full by DOE by checking all documents and money transactions along with bank statements and certified accounts by a legally acceptable financial analyst.
ICF Response		This comment is of similar nature as the previous one (#31). Thus, the response to the comment #31 is applicable to the comment #32.
Documents Presented:		No Documents needed, only explanation has been provided in this document.



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DOE comment:	All relevant CARs and CLs were raised by validation team and successfully closed by PP. Validation team confirms that all the evidence presented by PP was found adequate, valid, veracious and trustworthy.
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SN: 35	Comment # 35 Submitted by: sud	The Proposed project activity with a start date before 2 August 2008 for which the start date is prior to the date of publication of the PDD for global stakeholder consultation are required to demonstrate that the CDM was seriously considered in the decision to implement the project activity. If your project does not comes under this category please ignore the relevant comments as given below:
ICF Response		The start date of the proposed project activity is before August 2, 2008, and thus, response to each comment raised has been provided.
Documents Presented:		No Documents needed, only explanation has been provided in this document.
DOE comment:		Validation team confirms that all the evidence presented by PP was found adequate, valid, veracious and trustworthy. It has been clearly proved by PP that CDM was seriously considered in the decision to implement the project activity. Please refer to answer to comment #29.

SN: 36	Comment # 36 Submitted by: sud	1) It looks like from the PDD the start date of the project is tampered. This must be verified and let the truth come out. The culprits of forgery and malpractices must be brought to book if it happened. If found the dates are tampered, the DOE must terminate this project immediately. DOE to check the offer letters originals and get the same verified in writing from the OEM's and submitted parties. Where is the OEM supplier agreement original? DOE to check for the same. Is it prepared later with date and amounts changed to suit the project workings? If yes, this is not acceptable. DOE to check all purchase orders originals with the receiver of purchase orders i.e. the supplier of equipment. This PO confirmation to the DOE must be in writing from a board level person of the equipment supplier to avoid any malpractices and forgery. Then DOE to check for the invoices dates, payment amounts and date of payments made with all original documents and reconfirm with the parties involved
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		and the banks for the accuracy of amounts, dates and parties involved.
ICF Response		<p>The start date of the CDM PDD is well documented. As such, each event leading to the CDM decision-making has been duly referenced and substantiated with an appropriate document. Please refer to the table with the chronology of events in Section B.5 of the PDD, under the point “(a) Seriousness of CDM consideration and chronology of events”. The DOE has been provided with a full set of documentation for their review; and any question raised by the DOE has been addressed by the project company and project consultant.</p> <p>Similarly to the evidence on start date, the original letters and contracts from the OEMs have been presented to the DOE. None of the dates or the project costs has been changed “to suit project workings”, as implied in the comment. The project’s additionality is primarily due to devaluation of currency \$/€ and so the original funding ran out to cover the overall cost of rehabilitation.</p> <p>The project company and consultant have provided the DOE with any documentation that was requested, to substantiate any arguments presented in the PDD.</p> <p>Furthermore, considering that the DOE has closed satisfactorily any questions related to the start date and financials in the Validation Protocol, the project company and the consultant assume that the presented justification and evidence behind the start date has been checked and confirmed authentic.</p>
Documents Presented:		No Documents needed, only explanation has been provided in this document.
DOE comment:		Validation team confirms that all the evidence presented by PP was found adequate, valid, veracious and trustworthy. All the CARs and CLs considering start date of the project, additionality and prior consideration were closed. No further action is needed.
SN: 37	Comment # 37 Submitted by: sud	2) Same analysis and due diligence work to be repeated for “Notice to Proceed” as written in the case of Purchase order as above. DOE to check all “Notice to Proceed” originals with the receiver of “Notice to Proceed” i.e. the supplier of equipment or Engineering Procurement & Construction Contractor. This “Notice to proceed” and EPC contract confirmation to the DOE must be in writing from a board level person of the equipment supplier and EPC contractor to avoid any malpractices and forgery. Then DOE to check for the invoices dates, payment



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		amounts and date of payments made with all original documents and reconfirm with the parties involved and the banks for the accuracy of amounts, dates and parties involved. DOE to check OEM supplier agreements, EPC contractor agreements, "Notice to proceed" letters, and Invoices raised. I'm sure DOE will unearth the real story of what happened in this project. All the parties involved in this matter must be brought to justice if found guilty. DOE cannot afford to simply keep validating these kind of old projects just like that.
ICF Response		The PDD does not mention any "Notice to Proceed". Nevertheless, as written in response above, the project company and consultant have provided the DOE with required evidence to statements made in the PDD. The evidence presented to the DOE has been original, authenticated by initials and signatures of appropriate parties. Again, the DOE has firm standards of checking projects thoroughly. Since all the questions in the Validation Protocol have been closed, the project company and consultant assume that the DOE has found any amounts and dates used in the PDD valid and accurate.
Documents Presented:		No Documents needed, only explanation has been provided in this document.
DOE comment:		Comment is not relevant for this particular CDM project. No further action is needed.

SN: 38	Comment # 38 Submitted by: sud	3) Is PP showing ERPA as a part of real and continuous action? If yes, How come the PP is showing an ERPA and telling that there is real and continuous action? In what way PP can prove that the ERPA what is mentioned is genuine? This ERPA is dated what? Are there any emails exchanged during those ERPA signing days between PP and CER Buyer? Let PP show the real evidence that this particular ERPA was really signed on that date by showing the exchange of emails during those days. Any government owned postal receipt copies to prove the transmission of documents? Any way EPRA has no meaning even if they prove that ERPA was signed those days. ERPA is not a concluding evidence to show real and continuous action. Why the party has not signed any validation agreement with a DOE? Do they have a signed CDM validation agreement with any DOE? If yes, have they paid money to DOE so that we can conclusively prove that PP has considered CDM and serious real and continuous action was there. If the PP has not paid to the DOE the advance amount towards
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		<p>CDM validation, then we can conclusively say that no real and continuous action in this project at all. In such case, this project does not merit any further validation, DOE must tell the PP to withdraw the project from CDM. Alternatively DOE should issue a negative validation report and protect their reputation and future. When did PP apply for host country approval? Why delay? DOE to probe fully. Is it a case where PP has never considered CDM revenue to establish the project? Is it case, where one consultant must have given this fraud idea of applying for CDM revenues when the PP has almost forgot the project activity itself since it is a done project without envisaging any CDM revenues? DOE must be careful in taking up this kind of projects. What due diligence and checks the DOE has done prior to accepting this job?</p>
ICF Response		<p>Several questions have been asked in this comment, and thus the response is presented in bullet points below:</p> <ul style="list-style-type: none"> <input type="checkbox"/> The Emission Reduction Purchase Agreement (ERPA) has not been mentioned or referenced in the PDD. Therefore, the questions related to using ERPA as “part of real and continuous action” are deemed irrelevant to the proposed project. Nevertheless, the ERPA was signed much later than the contract on validation and employing the consultant to assist the project company in the process. <input type="checkbox"/> The validation agreement with the DOE has been signed and is being executed. The DOE has the copy of signed contract in their records. <input type="checkbox"/> There is no such CDM rule that requires demonstrating “real and continuous action” by proving the advance payment has been made to the DOE. The payment for validation services is governed by validation contract terms, which are confidential to the public, but can be audited by an authorised party, if such need arises. <input type="checkbox"/> The application for the host country Letter of Approval (LoA) was made November 5, 2007. The time lapse between the start date and the LoA issuance date is due to the documentary requirements of the Georgia DNA. To apply for the LoA requires inter alia the PDD. Thus, time was needed to put all contracts in place, and start developing a document. <input type="checkbox"/> The DOE has been presented with evidence supporting the serious CDM consideration of the project company. Each document has been verified by the DOE as required by CDM



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	rules. Considering that the DOE has closed satisfactorily any questions related to the start date in the Validation Protocol, the project company and the consultant assume that the presented justification and evidence behind the start date has been confirmed authentic.
Documents Presented:	No Documents needed, only explanation has been provided in this document.
DOE comment:	Comment is not relevant for this particular CDM project. No further action is needed.
DOE comment:	Comment is not relevant for this particular CDM project. No further action is needed.