



VALIDATION REPORT GLOBAL TAN ENERGY LIMITED

VALIDATION OF THE CATALOLUK HEPP

REPORT No. TURKEY-
VAL/CER.1028.10.C45/2010/2011

REVISION No. 02

BUREAU VERITAS CERTIFICATION

Great Guildford House, 30 Great Guildford Street
SE1 0ES - London – United Kingdom

Report No: TURKEY-val/CER.1028.10.c45/2010/2011 rev. 02

VALIDATION REPORT

Date of first issue: 21/03/2011	Organizational unit: Bureau Veritas Certification Holding SAS
Client: Global Tan Energy Limited	Client ref.: M. Kemal Demirkol

Summary:

Bureau Veritas Certification has made the validation of the Cataloluk HEPP project of Global Tan Energy Limited located in Kahramanmaraş on the basis of UNFCCC criteria for the CDM, Gold Standard Version 2.1 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 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 AMS.I.D. Version 16 and meets the relevant Gold Standard Version 2.1 requirements for VER and the relevant host country criteria.

Report No.: Turkey- val/cer.1028.10.c45/2010/2011	Subject Group: GS Ver.2.1
Project title: Cataloluk HEPP	
Work carried out by: Burcu Mutman – Lead Verifier Yıldız Arıkan – Baseline Specialist Murat Gencer – Financial Specialist	
Internal Technical Review carried out by: Bade Cebeci – Internal Technical Reviewer	
Date of this revision: 08.07.2011	Rev. No.: 02
Number of pages: 79	

Indexing terms

Work approved by:

Flavio Gomes – Global Product Manager

☒ No distribution without permission from the Client or responsible organizational unit

☐ Limited distribution

☐ Unrestricted distribution



Table of Contents	Page
1 INTRODUCTION	4
1.1 Objective	4
1.2 Scope	4
1.3 Validation team	4
2 METHODOLOGY	5
2.1 Review of Documents	5
2.2 Follow-up Interviews	6
2.3 Resolution of Clarification and Corrective Action Requests	6
2.4 Internal Technical Review	7
3 VALIDATION CONCLUSIONS	7
3.1 Approval (49-50)	8
3.2 Participation (54)	8
3.3 Project design document (57)	8
3.4 Changes in the Project Activity	8
3.5 Project description (64)	8
3.6 Baseline and monitoring methodology	9
3.6.1 General requirement (76-77)	9
3.6.2 Project boundary (80)	9
3.6.3 Baseline identification (87-88)	10
3.6.4 Algorithms and/or formulae used to determine emission reductions (92-93)	10
3.7 Additionality of a project activity (97)	11
3.7.1 Prior consideration of the clean development mechanism (104)	12
3.7.1.1 Historical information on project timeline	12
3.7.2 Identification of alternatives (107)	12
3.7.3 Investment analysis (114)	12
3.7.4 Barrier analysis (118)	14
3.7.5 Common practice analysis (121)	14
3.8 Monitoring plan (124)	14
3.9 Sustainable development (127)	Error! Bookmark not defined.
3.10 Local stakeholder consultation (130)	15
3.11 Environmental impacts (133)	16
4 COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS	16
5 VALIDATION OPINION	16



6 REFERENCES.....17

7 CURRICULA VITAE OF THE DOE’S VALIDATION TEAM
MEMBERS19

APPENDIX A: COMPANY CDM PROJECT VALIDATION PROTOCOL.....20



1 INTRODUCTION

Global Tan Energy Limited has commissioned Bureau Veritas Certification to validate its GS-VER project Cataloluk HEPP (hereafter called “the project”) at Kahramanmaraş.

This report summarizes the findings of the validation of the project, performed on the basis of UNFCCC – CDM Methodology criteria and GS Version 2.1 requirement, 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 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 GS-VER projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of verified emission reductions (VERs).

UNFCCC criteria refer to Article 12 of the Kyoto Protocol, the CDM rules and modalities and the subsequent decisions by the CDM Executive Board, and Gold Standard Version 2.1 requirements as well as the 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, GS Version 2.1 requirements 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	Burcu Mutman	☐ Yes ☒ No	☒ DR ☒ SV ☒ RI
Verifier	n.a.	☐ Yes ☐ No	☐ DR ☐ SV ☐ RI
Baseline	Yildiz Arikan	☒ Yes ☐ No	☒ DR ☐ SV ☐ RI



Specialist			
Financial Specialist	Murat Gencer	☐ Yes ☒ No	☒ DR ☐ SV ☐ RI
Internal Technical Reviewer (ITR)	Bade Cebeci	☐ Yes ☒ No	☐ DR ☐ SV ☒ RI
Specialist supporting ITR	Mustafa Işık	☒ 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 GS-VER 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 Global Tan Energy Limited and additional background documents related to the project design and baseline, i.e. country Law, Guidelines for Completing the Project Design Document (GS-VER-PDD), Approved methodology, Kyoto Protocol, Gold Standard Version 2.1 requirements, Clarifications on Validation Requirements to be Checked by a Designated Operational Entity were reviewed.

To address Bureau Veritas Certification corrective action and clarification requests, Global Tan Energy Limited revised the PDD and resubmitted it on 08.07.2011

The validation findings presented in this report relate to the project as described in the PDD version 06.



2.2 Follow-up Interviews

27/08/2010 Bureau Veritas Certification performed interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of Global Tan Energy Limited were interviewed (see References). The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

Interviewed organization	Interview topics
Global Tan Energy Limited	➤ Emission Factor calculation ➤ Investment Analysis Calculations ➤ SD Matrix ➤ Passport ➤ Local Stakeholder Consultation Meeting ➤ Hydro Power Plant Requirements regarding to Annex-C
LOCAL Stakeholder	➤ Sustainable Development in the region ➤ Environmental Impacts of the Project Activity
Beytek Elektrik Üretim A.S.	➤ Technical Details of the Project ➤ Fish Pass Construction ➤ Sustainable Development in the Region ➤ Purchasing of the project activity from Guvenen A.S.

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 GS - VER 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 GS - VER 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 a 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 GS - VER 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 Gold Standard Registry 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



15 Corrective Action Requests (CARs) , 23 Clarification Requests (CLs) and 1 Forward Action Requests (FARs).

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)

Since Turkey ratified Kyoto Protocol on 05/02/2009 Turkey does not have any emission reduction target and also the approval from DNA is not a requirement for the country.

3.2 Participation (54)

Since Turkey ratified Kyoto Protocol on 05/02/2009, there is no emission reduction target for the country. Also the approval of the participation is not needed.

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 and the GS – VER requirements.

3.4 Changes in the Project Activity

The project activity has a retroactive project cycle under GS requirements. Under retroactive registration stakeholder feedback round can be done by a physical meeting on site or with webhosting. The project participant choose to do an on site meeting and it has been done on 3rd of August 2010 in Cataloluk District.

The final PDD version 06 has following changes as compared to PDD ver 01 that was provided to DOE.

1. Sustainable Development Matrix indicator scoring has been updated to be clear. The needed clarifications and corrections have been done for each parameter of the matrix.
2. Emission Factor Calculation has been corrected to be in line with the methodology requirement and to be consistent both in the excel sheet and the PDD.
3. Sensitivity Analysis of the project has been added by the project participant to be in line with the methodology.

3.5 Project description (64)

The process undertaken to validate the accuracy and completeness of the project description started with the document review and site visit. The project is a run-off river project activity in Kahramanmaraş with 9,54 MWe total capacity.



The project activity involves 2 franchise type turbines each 4,77 MWe in the powerhouse. Also with the project 1447.6 m convey channel and 1252.4 m tunnel, forbay and penstock will be constructed

The project description has been confirmed during site visit and through the feasibility of the project activity.

The DOE hereby confirms that the project description in PDD (Section A.2) is accurate and complete in all respects and that there are no changes to the project activity/design or boundary as compared to the first PDD provided to DOE.

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.

Applicability condition (a): Cataloluk HEPP is grid connected renewable electricity generation project information is confirmed through the generation license of the project and with the site visit.

Applicability condition (b): During site visit, it was confirmed that the project does not involve switching from fossil fuel use to renewable energy at the site of the project activity.

Applicability condition (c): The geographic and system boundaries for the relevant electricity grid can be clearly identified and information on the characteristics of the grid is available from TEIAS. All used information has been checked through the official web page.

Applicability condition (d): The proposed project is a run-off-river type HEPP and power density is 37.18 W/m². The calculation was confirmed and data's were verified through the generation license and technical drawing of the project activity.

The DOE hereby confirms that the selected baseline and monitoring methodology AMS.I.D. Version 16, Appendix B of the AMS.I.D. and "Tool to calculate the emission factor for an electricity system" (Version 2) 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 no greenhouse gas emissions occurring within the proposed GS-VER 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) Site visit, Feasibility Report and forest permission has been seen to confirm the project boundary.

b) The project is individual small scale project activity.

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:

Regarding to the selected methodology AMS.I.D Version 16 baseline scenario identified as “If the project activity is the installation of a new grid-connected renewable power plant/unit, the baseline scenario is the electricity delivered to the grid by the project activity that otherwise would have been generated by the operation of grid-connected power plants and by the addition of new generation sources”. Since the project activity is an installation of a new grid connected power plant the baseline scenario defined as the electricity delivered to the grid by the project activity that otherwise would have been generated by the operation of grid-connected power plants and by the addition of new generation sources.” The baseline scenario found acceptable by the validation team since it is confirmed that project activity is a installation of a new generation. This has been confirmed by the feasibility and the generation licence.

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 emission reduction calculation has been done with the following equation,

$$BE = EG \times EF$$

Electricity generation data has been used as 31.99 GWh has been validated through the generation licence. Emission factor of Turkey is not defined by the government so the calculation has been done through the “tool to calculate emission factor for an



electricity system” and presented through the emission factor calculation excel file. The values used for the calculation are taken from the publicly available sources (TEIAS) and annex of the tool for the Operating and Build Margin. The years considered for OM are 2006 and 2008 and the OM emission factor has calculated as 0.654 tCO₂/MWh. The BM emission factor has calculated as 0.439 tCO₂/MWh between 2004 and 2008. The project participant has applied weight average of the OM and BM as specified in the tool to arrive at the emission factor for the combined margin. Accordingly, the combined margin emission factor has calculated as 0.547 tCO₂/MWh that was confirmed by the validation team with reviewing all the baseline calculation sheet equations and confirming the used parameters for the calculations.

Project emissions has been calculated through the following equation,

$$PD = \frac{Cap_{PJ} - Cap_{BL}}{A_{PJ} - A_{BL}}$$

1 capacity is 9,540,000 W regarding to the generation licence and the area of the reservoir has been calculated through the map and it is defined as 256,555.96 m². Since the power density is 37, 18 W/m² the project emissions accepted as 0 regarding to the selected approved methodology AMS.I.D Version 16.

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.

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:

Selected methodology AMS.I.D Version 16 refers to “Attachment A to Appendix B” to demonstrate additionality. Regarding to the tool additionality can be demonstrated by investment barrier, technological barrier, barrier due to prevailing practice or other barriers. PP selected investment barrier and it is provided through investment analysis. The investment Analysis and Common Practice Analysis have been applied for the project activity. The input values were confirmed through the feasibility of the project activity and other sectoral data's were confirmed by the financial specialist through the sectoral knowledge. Common Practice is not a requirement however PP demonstrated common practice analysis and data's were checked from TEIAS Statistics.



3.7.1 Prior consideration of the clean development mechanism (104)

The DOE validated the project activity start date provided in the PDD by the purchase agreement of the project activity on 10/07/2009. When the project activity purchased by Beytek Elektrik, %60 of the project construction was completed by the prior project owner but regarding to the guidance recommence date has been accepted as the project start date.

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

- a) The pre-protocol for sales and negotiations between Beytek and Güvenen Elektrik dd. 04.05.2009
- b) The agreement between Beytek and GTE is dd. 18 June 2009 (Prior Consideration)
- c) The purchase agreement between Beytek and Guvenen Elektrik dd. 10.07.2009 (Project Start Date)

After pre-protocol between Beytek and Guvenen Elektrik, Beytek reached all project documents and investment details. After the financial studies Beytek decided that the project activity can be implemented with carbon revenues and the agreement between GTE and Beytek has been signed. This protocol comes into force after the final agreement between Güvenen Elektrik and Beytek dd. 10.07.2009.

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 project construction has been started in 09/03/2006 by former project owner Guvenen Elektrik. However the project owner has some financial difficulties and the project activity sold to Beytek Elektrik when the %60 of the project was completed on 10/07/2009.

3.7.2 Identification of alternatives (107)

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

3.7.3 Investment analysis (114)

The assessment and demonstration of additionality of the project has been done by using Appendix A to Attachment B. To demonstrate financial barrier, PP has been done investment analysis in line with the investment Analysis guidance under UNFCCC. In applying this tool under sub-step 2a, Benchmark Analysis (Option III) has been chosen and the other options has been eliminated because, the proposed Project generates financial and economic benefits through the sales of electricity other than GS - VER related income.

Under sub-step 2b, Equity IRR has been selected as a financial indicator. The selected benchmark has been assessed to be applicable to the type of IRR calculated as per the guidelines given in the tool.

The country risk premium has been taken from the study of Prof. Aswath Damodara. The Eurobond rate and risk premium value at the time of investment decision which is the purchase agreement for the project activity between Guvenen and Beytek has been seen by the validation team. The benchmark value has been calculated with sum up the country risk premium and the Eurobond Rates since beta coefficient is 1. The calculation results as %16, 14.

The input values of the investment analysis have been validated through the feasibility report dd. August 2008 (Installed and output capacity of the project activity) and the share agreement (Project costs).

The capacity factor of the project activity can be calculated as follows,

Grid connected output / installed capacity = Annual working hour of the project activity.

Plant Load Factor = Annual working of the project activity/ 8760 (total hours per year)

With this calculation capacity factor of the project activity calculated as %38. However in DSI feasibilities this value is already considered in grid connected output. So this value is not considered in the IRR calculations which make the result conservative. If it was added to the IRR then the income of the project activity will be decreased so the IRR will be decreased also. The validation team found this appropriate.

Since the project has been purchased when %60 of it was finalized the construction value has been taken from the purchase agreement. Also the contract was conditional on the fact the project will be completed and delivered to new owner as operational. So, the values used in the IRR calculation are reflects at the point of taking decision to restart implementation with carbon revenues. Electricity sales price has been taken as 5,5 euro/cent since it is the guarantee price by the government.

The summary of the IRR inputs listed below,

Parameter	Value	Unit	Reference
Installed Capacity	9.54	MW	Project Feasibility dd. August 2008
Grid Connected Output	31.99	GWh	Project Feasibility dd. August 2008
Capital Investment	17,871	Million Euro	Purchase Agreement dd. 10.07.2009
Corporate Tax Rate	20	%	Tax Regulation
Loan	12,600	Million Euro	%29 Equity/debt Ratio
Electricity Tariff	5.5	Euro/cent	Guarantee Price
Operational Cost	373,000	Euro per year	Financial Model dd.



			June 2009
--	--	--	-----------

The IRR has been calculated as % 6,89 which is lower than the calculated benchmark and this clearly shows that project needs carbon revenues.

Under sensitivity analysis %10 fluctuations has been done for investment and operational costs and %40 fluctuations for electricity tariff and annual production. Since the %60 of the investment already finalised %10 is also a high fluctuation and found conservative by the validation team. Electricity Tariff fluctuation has been done +-%40 which makes the sales price as 7, 7 euro/cent to be conservative. None of the cases pass the benchmark value in the sensitivity analysis.

The DOE, based on the assessment result by the financial expert engaged, hereby confirms that the underlying assumptions are appropriate and the financial calculations are correct.

3.7.4 Barrier analysis (118)

The Barrier analysis is not provided in the PDD.

3.7.5 Common practice analysis (121)

All Turkey has been selected as the geographical scope for the common practice analysis. This approach has been found acceptable and conservative since it shows the government policy and tendency of the hydro power plants in the country.

The share of the similar HEPP's has been defined in the PDD and it is confirmed through TEIAS official web page.

3 project has been defined as similar however the capacities are different from the project activity and that's why the projects are excluded and also it is stated that information (Investment model, incentives, ODA or public funding, investment finance cost or IRR) about these plants is not publicly available. Therefore a reliable comparison of these plants would not result in a reliable outcome.

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.

Regarding to the selected methodology AMS.I.D the only parameter to monitor is the electricity generation. However PP also defined A_{pj} and Cap_{pj} as the parameters to monitor. For the electricity generation TEIAS protocols will be used as the basis of the monitoring and the cross check will be done with PMUM records.

The calibration of the measurement equipments are under control of TEIAS. At the end of each month during measurement of production values the difference between main and backup meters will be controlled. If any brake down occurs, it will be taken into



control by TEIAS. The meters shall be in compliance with EPDK regulations which define the accuracy class of the meters as 0.2 or 0.5 depending on the capacity of the circuit. (<http://www.epdk.gov.tr/web/elektrik-piyasasi-dairesi/44>)

Also since this is a Gold Standard project activity following parameters will be monitored in line with the latest project passport as follows,

- Air Quality, The amount of SO₂ and NO_x emission reductions will be monitored during the crediting period. The reference data will be used from the GHG Inventory of Turkey.
- Water Quality and Quantity: Minimum %10 of the water shall be released to the river bed. Also beside the monitoring parameter verification DOE shall verify if the volume of the released water is enough for the project site. (FAR1)
- Soil Condition: Only during first verification it will be monitored if the excavation wastes has been handled according to the legislation.
- Other Pollutants: Waste oil disposal will be monitored during monitoring period to confirm if it is handled in line with the legislation through the disposal or storage records.
- Quality of Employment: This will be verified during the crediting period through the training certificated of the employees.
- Quantative Employment and income generation: Quantative Employment and income generation will be monitored during the crediting period through the social security records.
- Balance of Payments: The saving from the natural gas import will be monitored to proof the balance of payments. The gas price will be taken from the Esgaz website.
- Biodiversity: Fish pass was under construction during the site visit. Only during the first verification it will be confirmed if the fish pass has been completed.

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

3.9 Local stakeholder consultation (130)

Since the project activity is retroactive project the local stakeholder not performed for the project activity. Regarding to the GS requirements local stakeholder consultation is not mandatory for the retroactive projects. However for the stakeholder feedback round PP choose to do a physical meeting on site. All comments raised have been presented in the passport. During site visit it is confirmed by the locals that 3 wells drilled for the irrigation, new pipeline system provided clean drinking and irrigation water, new road has been constructed, planting has been done and for the safety fence has been constructed to avoid landslides. Validation team confirm that stakeholder consultation feedbacks have been taken into account by the project owner.. Also it is confirmed that project activity has no negative impact on the local stakeholders.



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

3.10 Environmental impacts (133)

Regarding to the regulations in Turkey Environmental Impact Assessment for renewable energy projects with an installed capacity less than 25 MW is not a requirement. But the projects still need to provide preliminary EIA, which ensures that some further and detailed EIA is not necessary because the project does not contain any risk for environmental and social sustainability. Ministry of Environment and Forestry has been decided that EIA is not required for the project activity regarding to the information provided in Pre-EIA. EIA not required certificate has been provided to the validation team dated 30/12/2009 which is also presented in Annex 5 of the PDD.

Regarding to the GS all hydro projects shall discuss Annex-C Table C-2 and for the project activity it has been added to passport. Project will provide minimum water for the natural river life is defined by DSI. FAR1 has been created to confirm if the minimum water has been released from the project activity. There is no disconnection with the lateral rivers and groundwater will not be disturbed, since the project does not contain a dam for water storage. The project includes a small reservoir to regulate water. Since the installed capacity of the project is very low, the changes in reservoir levels will not impair lateral ecosystems. The fish passage was under construction during site visit. Also project will support local development in the region with employment and no resettlement occurred for the project activity.

4 COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

The project activity has been described to the stakeholders for the feedback round. Comments were received during stakeholder feedback round from the villagers. 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 participants has been listed in the passport and the PDD. During site visit validation team met with the villagers and it is confirmed that there is no negative impact by the project activity.

5 VALIDATION OPINION

Bureau Veritas Certification has performed a validation of the Cataloluk HEPP Project in Turkey. The validation was performed on the basis of UNFCCC – CDM Methodology criteria, Gold Standard Version 2 requirements 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/s used the latest tool for demonstration of the additionality. In line with this tool, the PDD provides analysis of investment, to determine that the project activity itself is not the baseline scenario.

By run-off river hydro power plant, the project is likely to result in 17,467 tCO₂ reductions annually. An analysis of the investment 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 – CDM Methodology requirements for the GS - VER and the relevant host country criteria. Bureau Veritas Certification thus requests registration of 'Cataloluk HEPP' as GS - VER project activity.

6 REFERENCES

Category 1 Documents:

Documents provided by Global Tan Energy that relate directly to the GHG components of the project.

- /1/ Cataloluk HEPP PDD Version 01 dd.11.06.2010
Cataloluk HEPP PDD Version 02 dd.30.11.2010
Cataloluk HEPP PDD Version 03 dd.04.02.2011
Cataloluk HEPP PDD Version 04 dd.14.04.2011
Cataloluk HEPP PDD Version 05 dd.08.06.2011
Cataloluk HEPP PDD Version 06 dd.08.07.2011
- /2/ Baseline Calculation Excel - CONFIDENTIAL_CM_calculation_GTE_2008_ver excluded
Cataloluk EF Calculation Excel
- /3/ Investment Analysis Excel - Cataloluk Financial Model_04_06_2010
Cataloluk Financial Model_14_04_2011
Cataloluk Financial Model_14_04_2011 Rev.2
Cataloluk Financial Model_08_07_2011
- /4/ Cataloluk Passport - 23Aug2010 Cataloluk passport GSv21
23Aug2010 Cataloluk GSv2.1_Passport_30112010_clean copy
Cataloluk GSv2.1_Passport_04022011_track change



Category 2 Documents:

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

- /1/ Bank Letter dd. 14.05.2010
- /2/ Generation Licence
- /3/ Project Purchase Agreement 10.07.2009
- /4/ System Agreement
- /5/ Provisional Acceptance April 2010
- /6/ Forest Usage Agreement 31.12.2008
- /7/ Fish Passage Agreement 06.12.2010
- /8/ Water Usage Agreement 18.12.2009
- /9/ Cataloluk Feasibility August 2008
- /10/ Pre-protocol dd. May 2009

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/ M.Kemal Demirkol – Global Tan Energy
- /2/ Zeren Erik – Global Tan Energy
- /3/ Aydın Büyükmurat – Project Consultant
- /4/ Ahmet Bodur – Project Consultant
- /5/ Ali Gök – Head of Döngel Village
- /6/ Yusuf Akbaş – Project Opeation Manager
- /7/ Mahmut Gök - Local
- /8/ Ali Balaban - Local
- /9/ Cuma Karasu – Local Employee
- /10/ Bayram Şişman – Local Employee

1. o0o -



7 CURRICULA VITAE OF THE DOE'S VALIDATION TEAM MEMBERS

Ms. Bade Cebeci - Environmental Engineer

Bureau Veritas Certification SAS – Internal Technical Reviewer

Bade Cebeci has over 10 years' experience in environmental sciences and auditing. She is an auditor in EMS&QMS&OHS. She is a verifier for GHG Emission Reduction Projects.

Mr. Mustafa Isık

Bureau Veritas Certification Sector Specialist

Mustafa Isık is an auditor for environment, safety and quality management systems. He has over 5 years experience in Health Safety and Environmental management system coordination in the wind farm construction projects.

Ms. Burcu Mutman

Bureau Veritas Certification – Lead Verifier

Burcu Mutman is an auditor for environment, safety and quality management systems. She is also lead verifier for GHG projects.

Mrs. Yildiz Arikan - Assoc. Professor Dr

Emission Factor Calculation Specialist

Baseline Specialist - Sabancı University, Faculty of Management, Orhanlı, Tuzla, 34956, Istanbul, Turkey

Yildiz Arikan is an Electrical engineer and is working at Sabancı University. She has supported thesis related with energy . Also she has been conducting research studies on energy including "CO2 Emission Research" Studies. Academically, Yıldiz Arikan is working also on GHG project since 2005.

Mr. Murat Gencer – Master of Economics

Investment Analysis Specialists - RiskTürk Software Development and Consultancy

Murat Gencer, consultant and a trainer, has over 11 years of experience in FMCG, software development and banking sectors. He is specialized in project finance, financial modeling, risk management and MS Excel applications.

2. o0o -

Appendix A: Company GS PROJECT Validation Protocol

Table 1 Validation requirements based on the Validation and Verification Manual Version 01.2 (EB51 Annex 03)

CHECKLIST QUESTION	Ref.	§	Comments		Draft Concl	Final Concl
1. Approval			COUNTRY A	COUNTRY B		
1.1. Has the DNA of each Party indicate as being involved in the proposed CDM project activity in section A.3 of the PDD provided a written letter of approval?	VVM	45	Since Turkey ratify Kyoto Protocol in February 2009, Turkey does not involve KP for period 2008-2012. Project is developed for voluntary market. The question is n.a.	Since Turkey ratify Kyoto Protocol in February 2009, Turkey does not involve KP for period 2008-2012. Project is developed for voluntary market. The question is n.a.	OK	OK
1.2. Does the letter of approval from DNA of each Party confirm that : - The Party is a Party of the Kyoto Protocol - The participation is voluntary	VVM	45	n.a.	n.a.	OK	OK



CHECKLIST QUESTION	Ref.	§	Comments		Draft Concl	Final Concl
- In the case of the host Party, the proposed CDM project activity contributes to the sustainable development of the country - Refers to the precise proposed CDM project activity title in the PDD being submitted for registration						
a. <u>Is(are) the letter(s) of approval unconditional with respect to (1.2) above?</u>	VVM	46	n.a.	n.a.	OK	OK
b. <u>Has(ve) the letter(s) of approval been issued by the respective Party's designated national authority (DNA)? If there is doubt with respect to (1.2) above, was verified with the DNA that the letter of approval is valid for the proposed CDM project activity under validation?</u>	VVM	47	n.a.	n.a.	OK	OK
2. Participation						
2.1. Have all project participants been listed in a consistent manner in the project documentation?	VVM	51	Beytek Elektrik Üretim A.Ş. listed as project participant in section A.3 of the PDD.	Global Tan energy Ltd. Listed as project participant in section A.3 of the PDD.	OK	OK
2.2. Does the DOE have a contractual relationship with the	VVM	51	n.a.	The contract has been signed with	OK	OK



CHECKLIST QUESTION	Ref.	§	Comments		Draft Concl	Final Concl
project participants?				GTE.		
c. <u>Is the information in tabular form of section A.3 consistent with the contact details provided in Annex 1 of the PDD?</u>	VVM	52	Yes, the contact information provided in Annex - 1 for the project participants listed in section A.3 of the PDD.	Yes, the contact information provided in Annex - 1 for the project participants listed in section A.3 of the PDD.	OK	OK
2.3. 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?	VVM	52	n.a.	n.a.	OK	OK
2.4. Are any entities other than those approved as project participants included in these sections of the PDD?	VVM	52	No, only project participants information's are available both in section A.3 and Annex-1.		OK	OK
2.5. Has the approval of participation issued from the relevant DNA?	VVM	53	n.a.	n.a.	OK	OK
3. Project design document						
3.1. 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	Yes, the latest version of SSC PPD version 03 dd.22 December 2006 has been used as the template.		OK	OK



CHECKLIST QUESTION	Ref.	§	Comments	Draft Concl	Final Concl
3.2. Is the PDD in accordance with the applicable CDM requirements for completing the PDD?	VVM EB34	56 Anne x9	The description in section A.2 is more than 1 page. Please correct. In PDD section A.2 it is stated that project will generate electricity from a renewable source. Please also include the existing prior to the start of project. Please also explain how emission reductions effected. The technological information has been provided in section A.4.2 of the PDD. Please also include how environmentally safe technology is applied. The capacity of the project is under 15 MW and it is confirmed with the generation licence. Please also provide information in section B.2 of the PDD that project will remain under limits of small scale during every year of the crediting period. No, transparent illustration of all data used to determine the baseline emissions are not provided in section B.4. National policies and circumstances relevant to the baseline of the project activity is not provided in section B.5. Please add.	CAR1	OK



CHECKLIST QUESTION	Ref.	§	Comments	Draft Concl	Final Concl
			The basic assumptions and the OM calculation method has been provided in section B.6.1 however it is not defined how the procedures in the methodology to calculate project emissions, baseline emissions, leakage emissions and emission reductions are applied. Please clearly provide the equations that will be used for the calculations in section B.6.1 of the PDD. The completion date of the baseline has been identified as 15/06/2009. Please clarify. Yes, expected operational lifetime defined as 46 years in line with the generation license. Please give the lifetime in years and months. Please give the choice of the crediting period in section C.2 it is not indicated in section C.2.2. fixed crediting period at most 10 years. The length of the fixed crediting period defined as 7 years. Please provide it in years and months. Postfix/ZIP is not provided for GTE in Annex-1.		



CHECKLIST QUESTION	Ref.	§	Comments	Draft Concl	Final Concl
4. Project description					
4.1. 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 provide clear description to the reader about the nature of the project.	OK	OK
4.2. Is the description of the proposed CDM project activity as contained in the PDD?	VVM	59			
4.2.1. sufficiently covering all relevant elements?	VVM	59	Yes, all elements covered in the PDD.	OK	OK
4.2.2. accurate?	VVM	59	Yes, the description of the PDD is accurate..	OK	OK
4.2.3. providing the reader with a clear understanding of the nature of the proposed CDM project activity?	VVM	59	Yes, PDD provides clear understanding of the nature of the project activity.	OK	OK
4.3. Is the proposed CDM project activity in existing facilities or utilizing existing equipments?	VVM	60	No, the project is not in existing facilities.	OK	OK
4.4. Is the CDM project activity one of the following types: Large scale? Non-bundled small scale projects with emission	VVM	60	The project is individual small scale project (emission reduction 17,499 tCo2).	OK	OK



CHECKLIST QUESTION	Ref.	§	Comments	Draft Concl	Final Concl
reductions exceeding 15,000 tonnes per year Bundled small scale projects, each with emission reductions not exceeding 15,000 tonnes					
4.5. Does the DOE conducted physical site visit to assess the Project? If the DOE does not undertake a physical site inspection, this should be appropriately justified.	VVM	62	The physical site visit conducted by BV on 27 th of August 2010.	OK	OK
4.6. Does the proposed CDM project activity involve the alteration of an existing installation or process? If yes, does the project description clearly state the differences resulting from the project activity compared to the pre-project situation?	VVM	63	No, the project is not alteration of an existing installation.	OK	OK
5. Baseline and monitoring methodology					
5.1. Do the baseline and monitoring methodologies selected by the project participants comply with the methodologies previously approved by the CDM Executive Board?	VVM	65	AMS.I.D. Version15 has been used for the baseline and the monitoring methodology however version 16 is available since 28 May 2010 which is prior to the submission of the validation documents. Please correct	CAR2	OK
5.2. Are the applicability conditions of the methodology met?	VVM	70	The applicability conditions justified in section B.2 of the PDD. The project is electricity production from a renewable	CL1	OK



CHECKLIST QUESTION	Ref.	§	Comments	Draft Concl	Final Concl
			source (hydro power plant). The geographic and system boundaries of the national grid is available Please provide the technical feasibility of the project to verify the power density of the project.		
5.3. If a determination regarding the applicability of the selected methodology to the proposed CDM project activity can not be made, was clarification of the methodology requested, in accordance with the guidance provided by the CDM Executive Board?	VVM	71	n.a.	OK	OK
5.4. If the proposed CDM project activity does not comply with the applicability conditions of the methodology, was revision or deviation from the methodology requested, in accordance with the guidance provided by the CDM Executive Board?	VVM	72	n.a.	OK	OK
5.5. 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	77 78	Yes, PDD correctly describe the project boundary. The delineation of the national grid for the baseline emissions provided in figure 2. Please provide the delineation of the project activity.	CL2	OK
5.6. Does the PDD identify the baseline for the proposed CDMNo., project activity, defined as the scenario that reasonably represents the anthropogenic emissions by	VVM	80	The baseline scenario identified in section B.4 of the PDD.	OK	OK



CHECKLIST QUESTION	Ref.	§	Comments	Draft Concl	Final Concl
sources of GHGs that would occur in the absence of the proposed CDM project activity?					
5.7. Has any procedure contained in the methodology to identify the most reasonable baseline scenario, been correctly applied?	VVM	81	The baseline of the project activity shall be the electricity delivered to the grid by the project activity that otherwise would have been generated by the operation of grid-connected power plants and by the addition of new generation sources. In the PDD it is stated that baseline scenario identified as The kWh produced by the renewable generating unit multiplied by an emission coefficient (measured in kg CO₂e/kWh) which is defined as calculation method in the methodology. Please correct.	CAR3	OK
5.8. Does the selected methodology require use of 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?	VVM	81	The methodology requires the use of Appendix A to Attachment B to demonstrate the additionality.	OK	OK
5.9. Does the methodology require several alternative scenarios to be considered in the identification of the most reasonable baseline scenario?	VVM	82	No, the baseline scenario defined by the methodology as “the electricity delivered to the grid by the project activity that otherwise would have been generated by	OK	OK



CHECKLIST QUESTION	Ref.	§	Comments	Draft Concl	Final Concl
			the operation of grid-connected power plants and by the addition of new generation sources”.		
5.10. Are the documents and sources referred to in the PDD correctly quoted and interpreted? And are they cross checked with other verifiable and credible sources, such as local expert opinion, if available?	VVM	83	The baseline scenario defined by the selected methodology AMS.I.D.	OK	OK
5.11. Have all applicable CDM requirements been taken into account in the identification of the baseline scenario for the proposed CDM project activity?	VVM	84	The baseline scenario defined by the selected methodology AMS.I.D.	OK	OK
5.12. 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	84	The baseline scenario defined by the selected methodology AMS.I.D.	OK	OK
5.13. 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	85	The baseline scenario defined by the selected methodology AMS.I.D.	OK	OK
6. Emission reductions					
6.1. Do the steps taken and equations applied to calculate the	VVM	88			



CHECKLIST QUESTION	Ref.	§	Comments	Draft Concl	Final Concl
following parameters comply with the requirement of the selected baseline and monitoring methodology?					
6.1.1. Project emission?	VVM	88	Since power density calculated as 68,1 W/m ² the project emissions considered as since it is more than 10 W/m ² . Please refer to CL1.	OK	OK
6.1.2. Baseline emissions?	VVM	88	Baseline emissions calculated regarding to the equations defined in the selected methodology.	OK	OK
6.1.3. Leakage?	VVM	88	Electricity generating equipment is not transferred from another activity. Leakage is not considered as per the methodology.	OK	OK
6.1.4. Emission reductions?	VVM	88	Emission reductions calculated as per the methodology.	OK	OK
6.2. Have the equations and parameters in the PDD been correctly applied with respect those in the select approved methodology?	VVM	89	There is a unit error in the Excel sheet 'OM Calculations': the unit of the emission factor is given as ktCO ₂ /MWh although it is tCO ₂ /MWh. However, both the PDD and rest of calculations are based on the correct units so that results are not affected. Correcting the unit in Excel alone	CAR4	OK



CHECKLIST QUESTION	Ref.	§	Comments	Draft Concl	Final Concl
			will therefore be sufficient. There is a problem with the generation units put in operation in year 2005: in the worksheet 'capacity addition 2005', the commissionary date of most of these plants is indicated as 2001. How can plants commissioned in year 2001 be considered as a capacity addition for year 2005? The BM emission factor in the PDD and Excel are quite different: 0.441 t CO₂/GWh in the PDD and 0.491 t CO₂/MWh in the Excel. When the unit error in the PDD is corrected as t CO₂/MWh, there is still a significant discrepancy of about 11%. In the Excel sheet 'BM Calculation' there is a full mismatch of emission factors and fuel types. For example the emission factor computed for fuel oil is actually that for lignite. The emission factor computed for natural gas is actually that of naphta		



CHECKLIST QUESTION	Ref.	§	Comments	Draft Concl	Final Concl
			etc. All values are inconsistent. The calculations are OK however there are several inconsistencies in the documentation There is a formatting problem with the OM formula on p.22 of the PDD. The OM formula on p.22 is for EF_{grid,OM,y} although this annual emission factor has actually not been explicitly computed and is not given in the PDD. It is implicit in the generation-weighted average and therefore the spreadsheet calculations are correct. This issue should be mentioned/underlined in the PDD in order to avoid any misunderstanding (or else the implicit computations could be made explicit). In the PDD, page 24 line 4 in the paragraph above the table suing instead of using – general spell check recommended for whole document		



CHECKLIST QUESTION	Ref.	§	Comments	Draft Concl	Final Concl
			In the PDD, tables are not numbered consecutively: e.g. there is a jump from Table 10 (p.22) to Table 41 (p.22), Table 52 (p.24), Table 63 (p.25),		
6.3. Does the methodology provide for selection between different options for equations or parameters?	VVM	89	The basic assumptions and OM calculation methodology (simple OM) has been provided in section B.6.1 of the PDD.	OK	OK
6.4. If yes, has adequate justification been provided and correct equations and parameters been used in accordance with the methodology selected?	VVM	89	The basic assumptions and OM calculation methodology (simple OM) has been provided in section B.6.1 of the PDD.	OK	OK
6.5. If data and parameters will not be monitored throughout the crediting period of the proposed CDM project activity but have already been determined and will remain fixed throughout the crediting period, - All data sources and assumptions are appropriate - Calculations are correct - Be applicable to the proposed CDM project activity - Will result in a conservative estimate of the emission	VVM	90	Yes, the data/parameter tables that are available during validation provided in section B.6.2 of the PDD. The applied values defined in the data/parameter tables. Please refer to CAR4.	CAR4	OK



CHECKLIST QUESTION	Ref.	§	Comments	Draft Concl	Final Concl
reductions.					
7. Additionality of a project activity					
7.1. General checklist for additionality					
7.1.1. Does the CDM-PDD state the latest version of the additionality tool being used?	VVM	95	The Attachment A to Appendix B of the Simplified Modalities and Procedures for Small-scale CDM project activities has been used to demonstrate additionality.	OK	OK
7.1.2. Has the PP demonstrated additionality by explaining Investment barrier, Access-to-finance barrier, Technological barrier, Barrier due to prevailing practice or other barriers?	EB 35	Ann 34	Investment barrier was used to demonstrated additionality of the project. Under Investment Barrier, IRR calculation has been provided.	OK	OK
7.1.3. If Investment barrier has been explained, is it demonstraed that financilly more viable alternative to the project activity would have led to higher emissions? Please explain.	EB 35	Ann 34	No, the project acitivity that would have led to higher emissions is not provided in the PDD.	CAR5	OK
7.1.4. If Access-to-finance has been explained, is it demonstraed that the project activity could not access appropriate capital without consideration of the CDM revenues? Please explain.	EB 35	Ann 34	n.a.	OK	OK



CHECKLIST QUESTION	Ref.	§	Comments	Draft Concl	Final Concl
7.1.5. If Technological barrier has been explained, is it demonstraed that a less technologically advanced alternative to the project activity involves lower risks due to the performance uncertainty or low market share of the new technology adopted for the project activity and so would have led to higher emissions? Please explain.	EB 35	Ann 34	n.a.	OK	OK
7.1.6. If prevailing practise barrier has been explained, is it demonstrated that the prevailing practice or existing regulatory or policy requirements would have led to implementation of a technology with higher emissions? Please explain.	EB 35	Ann 34	n.a.	OK	OK
7.1.7. If other barrier has been explained, is it demonstrated that Other barriers such as institutional barriers or limited information, managerial resources, organizational capacity, or capacity to absorb new technologies would prevent the project activity any way?	EB 35	Ann 34	n.a.	OK	OK
7.1.8. Have the project participants identified the most relevant barrier?	EB 35	Ann 34	The investment barrier identified.	OK	OK
7.1.9. Have the project participants provided transparent and documented third party evidence such as national/international statistics, national/provincial	EB 35	Ann 34	The investment barrier demonstrated with the IRR calculation.	OK	OK



CHECKLIST QUESTION	Ref.	§	Comments	Draft Concl	Final Concl
policy and legislation, studies/surveys by independent agencies etc. to demonstrate the most relevant barrier? Please explain.					
7.1.10. Is the period of assessment limited to the proposed crediting period of the CDM project activity?	EB 51	Ann 58	The assessment period is defined as 20 years which is under all project period.	OK	OK
7.1.11. 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	Equity IRR has been calculated for 20 years which reflect the operational life time of the project activity.	OK	OK
7.1.12. 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	Yes, the assessment period is in line with the additionality tool, investment analysis guideline.	OK	OK
7.1.13. 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	Yes, fair value included to the cash flow.	OK	OK
7.1.14. Is pre-tax benchmark or post tax benchmark applied in the investment analysis?	EB 51	Ann 58	post-tax benchmark applied.	OK	OK



CHECKLIST QUESTION	Ref.	§	Comments	Draft Concl	Final Concl
7.1.15. If a post tax benchmark is applied, is the actual interest payable taken into account in the calculation of income tax?	EB 51	Ann 58	Yes, post tax is applied to the project activity.	OK	OK
7.1.16. If yes, is the interest calculated according to the prevailing commercial interest rate 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	Equity debt ratio has been applied.	OK	OK
7.2. Prior consideration of the clean development mechanism					
7.2.1. Is the project activity start date prior to the date of publication of the PDD for stakeholder comments?	VVM	97	The start date of the project activity is before the validation. Please provide objective evidence that incentive from the CDM was seriously considered in decision to proceed the project activity.	CAR6	OK
7.2.2. If yes, were the CDM benefits considered necessary in the decision to undertake the project as a proposed CDM project activity?	VVM	97	Please refer to CAR 6. There is no explanation in the milestones of the project activity that CDM revenues were considered. Also start date of the project is not indicated in the milestones.	OK	OK
7.2.3. Is the start date of the project activity, reported in the	VVM	98	Yes, the start date of the project activity	OK	OK



CHECKLIST QUESTION	Ref.	§	Comments	Draft Concl	Final Concl
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"?			defined as the transfer of the project to the new project owner.		
7.2.4. Does the project activity require construction, retrofit or other modifications?	VVM	98	The project requires construction.	OK	OK
7.2.5. Is it ensured that the date of commissioning cannot be considered as the project activity start date?	VVM	98	Yes, commissioning is not considered as project activity start date.	OK	OK
7.2.6. 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	99	The project is a new project activity.	OK	OK
7.2.7. 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, has it been ensured that PPs had 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, by means of confirmation from the UNFCCC secretariat?	VVM	100	n.a.	OK	OK



CHECKLIST QUESTION	Ref.	§	Comments	Draft Concl	Final Concl
7.2.8. 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	101	n.a.	OK	OK
7.2.8.1. 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,	VVM	101	Please refer to CAR 6.	OK	OK
7.2.8.2. 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	VVM	101	Please provide evidence that must indicate that continuing and real actions were taken to secure CDM status for the project in parallel with its implementation	CAR7	OK
7.3. Identification of alternatives					
7.3.1. 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	104	Yes, the methodology defines the baseline scenario, no further analysis is required.	OK	OK
7.3.2. If no, does the PDD identify credible alternatives to the project activity in order to determine the most realistic baseline scenario?	VVM	104	n.a.	OK	OK



CHECKLIST QUESTION	Ref.	§	Comments	Draft Concl	Final Concl
7.3.3. Does the list of alternatives given in the PDD ensure that: - One of the options that the project activity is undertaken without being registered as a proposed CDM project activity - The list contains all plausible alternatives - The alternatives comply with all applicable and enforced legislation	VVM	105	n.a.	OK	OK
7.4. Investment analysis					
7.4.1. If investment analysis has been used to demonstrate the additionality of the proposed CDM project activity, does the PDD provide evidence that the proposed CDM project activity would not be: The most economically or financially attractive alternative? Economically or financially feasible, without the revenue from the sale of certified emission reductions (CERs)?	VVM	107	Yes, investment analysis has been carried out. It is stated that the IRR of the project activity is under the benchmark. So the project is not the most financially attractive.	OK	OK



CHECKLIST QUESTION	Ref.	§	Comments	Draft Concl	Final Concl
7.4.2. Was this shown by one of the following approaches?	VVM	108			
7.4.2.1. The proposed CDM project activity would produce no financial or economic benefits other than CDM-related income.	VVM	108	n.a.	OK	OK
7.4.2.2. The proposed CDM project activity is less economically or financially attractive than at least one other credible and realistic alternative.	VVM	108	Yes, the project activity is not the most financially attractive project. The benchmark(%16,14) is higher than the project IRR.(%7,14)	OK	OK
7.4.2.3. The financial returns of the proposed CDM project activity would be insufficient to justify the required investment.	VVM	108	n.a.	OK	OK
7.4.3. 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	110	Please provide the objective evidence to proof the input values that used in the financial analysis.	CAR8	OK
7.4.4. Were the parameters crosschecked against third-party or publicly available sources?	VVM	110	The parameters has been confirmed by the financial expert.	OK	OK
7.4.5. Were feasibility reports, public announcements and annual financial reports related to the proposed CDM	VVM	110	Please refer to CAR8	OK	OK



CHECKLIST QUESTION	Ref.	§	Comments	Draft Concl	Final Concl
project activity and the project participants reviewed?					
7.4.6. Was the correctness of computations carried out and documented by the project participants assessed?	VVM	110	Yes, correctness of computations carried out and documented by the project participants assessed	OK	OK
7.4.7. Was the sensitivity analysis by the project participants to determine under what conditions variations in the result would occur and the likelihood of these conditions assessed?	VVM	110	The sensitivity analysis is missing in the PDD.	CAR9	OK
7.4.8. 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: Assessing previous investment decisions by the project participants involved, and Determining whether the same benchmark has been applied, or Determining if there are verifiable circumstances that have led to a change in the benchmark	VVM	111	Please refer to CAR9	OK	OK
7.4.9. Did the project participants rely on values from Feasibility Study Reports (FSR) that are approved by national authorities for proposed CDM project	VVM	112	Please refer to CAR8	OK	OK



CHECKLIST QUESTION	Ref.	§	Comments	Draft Concl	Final Concl
activities?					
7.4.10. If yes: (EB38 para.54)	VVM	112			
7.4.10.1. 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 changed?	VVM	112	Please refer to CAR8	OK	OK
7.4.10.2. Are the values used in the PDD and associated annexes fully consistent with the FSR? If not, was the appropriateness of the values validated?	VVM	112	Please refer to CAR8	OK	OK
7.4.10.3. 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	112	Please refer to CAR8	OK	OK
7.5. Barrier analysis					
7.5.1. Has barrier analysis been used to demonstrate the additionality of the proposed CDM project activity?	VVM	114	Yes, barrier analysis has been used to demonstrate the additionality however investment analysis has been carried out	OK	OK



CHECKLIST QUESTION	Ref.	§	Comments	Draft Concl	Final Concl
			under investment barrier.		
7.5.2. If yes, does the PDD demonstrate that the proposed CDM project activity faces barriers that: Prevent the implementation of this type of proposed CDM project activity? Do not prevent the implementation of at least one of the alternatives?	VVM	114	In the PDD it is demonstrated that project activity is not the most financially attractive project.	OK	OK
7.5.3. Do the barriers below occur in the project? Risk related barriers, for example risk of technical failure, that could have negative effects on financial performance; or Barriers related to the unavailability of sources of finance for the project activity	VVM	115	No, risk barriers or unavailability of sources of finance is not defined as the barriers.	OK	OK
7.5.4. Is a two-step process applied to assessing the barrier analysis performed? Determine whether the barriers are real. Determine whether the barriers prevent the implementation of the project activity but not the implementation of at least one of the possible alternatives.	VVM	116	In the PDD it is demonstrated that project activity is not the most financially attractive project.	OK	OK



CHECKLIST QUESTION	Ref.	§	Comments	Draft Concl	Final Concl
8. Monitoring plan					
8.1. Is this monitoring plan based on the approved monitoring methodology applied to the proposed CDM project activity?	VVM	121	Yes, the monitoring plan is based on the selected methodology AMS.I.D.	OK	OK
8.2. Does the monitoring plan contain all necessary parameters?	VVM	122	Yes, the needed monitoring parameters defined in the monitoring plan. (Electricity Generation, Cap and full lake area)	OK	OK
8.3. Are the monitoring arrangements described in the monitoring plan feasible within the project design?	VVM	122	The generated electricity and reservoir are will be measured. Generation measurement equipments are under control of TEIAS regarding to the applicable law and it is stated. The responsible of the measurement, Qa/QC procedures has been provided. Please update the measurement method for electricity generation inline with the new electricity sales procedure by government. Please also provide needed information for the measurement of the full lake area. The responsibilities for data collection and archiving provided in section B.7.2 of the PDD. Please also explain the data archiving.	CL3	OK



CHECKLIST QUESTION	Ref.	§	Comments	Draft Concl	Final Concl
8.4. Are the means of implementation of the 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?	VVM	122	This is the validation of the project. It will be verified during verification.	OK	OK
9. Sustainable development					
9.1. Does the CDM project activity assists Parties not included in Annex I to the Convention in achieving sustainable development?	VVM	124	n.a.	OK	OK
9.2. 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	125	n.a.	OK	OK
10. 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	127	Please provide the local stakeholder information's in section E.	CAR10	OK



CHECKLIST QUESTION	Ref.	§	Comments	Draft Concl	Final Concl
a. Have comments by local stakeholders that can reasonably be considered relevant for the proposed CDM project activity been invited?	VVM	128	Please refer to CAR10	OK	OK
b. Is the summary of the comments received as provided in the PDD complete?	VVM	129	Please refer to CAR10.	OK	OK
b. Have the project participants taken due account of any comments received and described this process in the PDD?	VVM	129	Please refer to CAR10.	OK	OK
11. Environmental impacts					
11.1. Have the project participants submitted documentation on the analysis of the environmental impacts of the project activity?	VVM	130	Please provide the pre-eia report of the project activity.	CL4	OK
11.2. Have the project participants undertaken an analysis of environmental impacts?	VVM	131	The environmental impact assessment is not required certificate is attached in Annex-5 of the PDD.	OK	OK
11.3. Does the host Party require an environmental impact assessment?	VVM	131	The pre-eia has been done which is required by the country and EIA is not required certificate issued by the government.	OK	OK



CHECKLIST QUESTION	Ref.	§	Comments	Draft Concl	Final Concl
11.4. If yes, have the environmental impact assessment approved by local government?	VVM	131	The pre-eia has been done which is required by the country and EIA is not required certificate issued by the government.	OK	OK

Table 2 Specific Validation Activities for small scale project activities

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
1 Project design of small-scale clean development mechanism project activities					
1.1 Does the proposed small-scale project activity meet the requirements of the simplified modalities and procedures for small-scale CDM project activities?	VVM	134	Yes, the project activity meet the requirements of the simplified modalities and procedures for small-scale CDM project activities	OK	OK
1.2 Does the project activity qualify within the thresholds of the three possible types of small scale project activities? Type (i) project activities: renewable energy project activities with a maximum output capacity equivalent to up to 15 megawatts; Type (ii) project activities: energy efficiency improvement project activities which reduce energy consumption, on the supply and/or demand side, by up to the equivalent of 60 gigawatt hours per year; Type (iii) project activities: other project activities that both reduce anthropogenic emissions by sources and directly emit less than 60 kilotonnes of carbon dioxide equivalent annually.]	VVM	135	The project is 9,84 MW hydroelectric power plant.	OK	OK



CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
1.3 Does the project activity conform to one of the approved small-scale categories?	VVM	135	The project is 9,84 MW hydroelectric power plant.	OK	OK
1.4 Does the project activity apply the relevant tool and methodology?	VVM	135	Yes, the project activity applies the AMS.I.D for the project activity.	OK	OK
1.5 Are the small-scale methodologies applied in conjunction with the general guidance to the methodologies, which provides guidance on equipment capacity, equipment performance, sampling and other monitoring-related issues?	VVM	135	Small scale methodology applied with general guidance of the methodologies.	OK	OK
1.6 Is the project activity a debundled component of a large-scale project, i.e., is there a registered small-scale CDM project activity or an application to register another CDM project activity: (a) with the same project participants; (b) in the same project category and technology/measure; and (c) registered within the previous 2 years; and (d) whose project boundary is within 1 km of the proposed boundary of the proposed small-scale activity at the closest point?	VVM	135	No, the project is not a debundled component of a large-scale project.	OK	OK
1.7 Is an assessment of the environmental impacts of the proposed CDM project activity required by the host Party?	VVM	135	The pre-eia has been done which is required by the country and EIA is not required certificate issued by the government.	OK	OK
1.8 Is the project additional?	VVM	136	Yes, the project is additional	OK	OK

BUREAU VERITAS CERTIFICATION

VALIDATION REPORT: CATALOLUK GS VALIDATION REPORT

REPORT NO:



Table 2 – Validation requirements based on the Gold Standard Passport Requirements (version 2.1)

CHECKLIST QUESTION	GS Ref.	COMMENTS	Draft Concl	Final Concl
--------------------	------------	----------	----------------	----------------



CHECKLIST QUESTION	GS Ref.	COMMENTS	Draft Concl	Final Concl
A. Project Title				
a. Is the Project title given in the Passport the same as in the PDD?	T-1.6	Yes, the project title in the Passport, in the registry and in the PDD is same. It is defined as Cataloluk HEPP.	OK	OK
B. Project Description				
a. Is the Project description given in the Passport consistent with the one given in the PDD?	T-1.6	Yes, the project description in the passport and in the PDD section A2 is consistent.	OK	OK
b. Has the estimated start date of construction been given under the Project description?		Please give the start date of the construction and delivery date of the ownership in Section B. Project Description.	CL5	OK
C. Proof of project eligibility				
1. C.1. Scale of Project				
a. Has the scale of the Project activity been defined as per Gold Standard Toolkit Section 1.2.1?	T-1.2.1	Yes, the scale of the project been defined as per the GS Toolkit.	OK	OK
b. Does the project proponent have a written statement (e.g. in the PDD) against de-bundling of the project? (De-bundling of small and large-scale projects to create micro-scale projects is not allowed.	T-3.5.1	Yes, in the PDD section A.4.5 it is defined that project is not debundled.	OK	OK
2. C.2. Host Country				
a. Does the host country have cap on its GHG emissions?	T-1.2.2	No, since Turkey ratified Kyoto Protocol in February 2009, the country has no cap for this period.	OK	OK
b. If the answer to the above question is yes, then has the Project proponent provided an official approval from the relevant local authorities stating that an equivalent amount of allowances will be retired to back-up the GS VERs issued?	T-1.2.2	n.a.	OK	OK
c. If the host country does not have a cap on its GHG emissions, has it been stated in the Passport?	T-1.2.2	The country does not have cap on its GHG emissions. Please indicate this in the passport.	CL6	OK



CHECKLIST QUESTION	GS Ref.	COMMENTS	Draft Concl	Final Concl
3. C.3. Project Type				
a. Is the Project a Renewable Energy Supply Project or an End-use Energy Efficiency Improvement Project? (If not, the validation has to be aborted)	T-1.2.3	Yes, the project is a renewable energy supply project.	OK	OK
b. Has the Project type and eligibility of the Project activity been defined as per Annex C of Gold Standard Toolkit?	T-1.2.3	Project type has been identified as renewable energy project which is eligible to the Gold Standard.	OK	OK
c. Has a previous announcement of the project going ahead without the revenues from carbon credits been made?	T-1.2.3	The project is not previously announced. The project initially implemented by Guvenen Elektrik A.S however before the complication of the construction it is sold to Beytek A.S.	OK	OK
d. If the answer to the above question is yes, has the project subsequently been cancelled or the design has been significantly revised?	T-1.2.3	n.a.	OK	OK
e. If the answer to question (c) is no, have the Project Proponents provided a pre-announcement statement under section C.3 in the Gold Standard Passport, attesting that no such previous announcement has been made?	T-1.2.3	Yes, pre – announcement statement has been made.	OK	OK
4. C.4. Greenhouse Gas				
a. Does the project reduce emissions of one or more of the following an GHG? Carbon dioxide, methane, nitrous oxide?	T-1.2.4	The project will reduce carbon dioxide emissions.	OK	OK
5. C.5. Project registration type				
a. Does the project apply the correct project cycle (regular vs. pre-feasibility assessment)?	T-3.5.1	Yes, the project applies the retroactive project cycle.	OK	OK
b. Is the Project activity a regular registration?	T-	No, the project is retroactive project cycle.	OK	OK

BUREAU VERITAS CERTIFICATION

VALIDATION REPORT: CATALOLUK GS VALIDATION REPORT

REPORT NO:



**BUREAU
VERITAS**

CHECKLIST QUESTION	GS Ref.	COMMENTS	Draft Concl	Final Concl
	1.2.5			



CHECKLIST QUESTION	GS Ref.	COMMENTS	Draft Concl	Final Concl
c. Is the Project activity a retroactive registration?	T-1.2.5	Yes, the project is retroactive registration.	OK	OK
d. If the answer to the above question is yes, has the Project proponents applied to the Gold Standard for the pre-feasibility assessment?	T-1.2.5	The project is approved for fast-track. BV Turkey and GTE is eligible for fast-track.	OK	OK
e. If the answer to the above question is yes, then has the Project proponent provided the Gold Standard pre-feasibility assessment feedback to the DOE?	T-1.2.5	n.a. The project is approved for fast-track. BV Turkey and GTE is eligible for fast-track.	OK	OK
f. Does the Project activity need preliminary evaluation? (Large hydro or palm-oil related project)	T-1.2.5	No, the project is small hydro.	OK	OK
g. If the answer to the above question is yes, has the Project proponents applied to the Gold Standard for the pre-feasibility assessment?	T-1.2.5	n.a.	OK	OK
h. If the answer to the above question is yes, then has the Project proponent provided the Gold Standard pre-feasibility assessment feedback to the DOE?	T-1.2.5	n.a.	OK	OK
i. Has the Project activity been rejected by UNFCCC?	T-1.2.5	No, the project is not applicable for UNFCCC. IT is developed in Turkey.	OK	OK
j. If the answer to the above question is yes, has the Project proponents applied to the Gold Standard for the pre-feasibility assessment?	T-1.2.5	n.a.	OK	OK
k. If the answer to the above question is yes, then has the Project proponent provided the Gold Standard pre-feasibility assessment feedback to the DOE?	T-1.2.5	n.a.	OK	OK
l. Are there any double counting occurring with other certification schemes?	T-3.5.1	No, there is no double counting for the project activity.	OK	OK
D. Unique project identification				
6. D.1. GPS-coordinates of Project location				



CHECKLIST QUESTION	GS Ref.	COMMENTS	Draft Concl	Final Concl
a. Has the Project proponent stated the exact GPS coordinates of Project location for point source activities and the boundaries for projects spread over a broader area?	T-1.6	Yes, the project participant included GPS coordinates of the Weir and powerhouse.	OK	OK
b. For Programme of Activity projects have the Project Proponent explained the reasoning behind the definition of the project location and coordinates carefully?	T-1.6	n.a.	OK	OK
7. D.2. Map				
a. Have the coordinates been illustrated with a map? (Optional)	T-1.6	The project location indicated on a map but the coordinates are not illustrated.	OK	OK
E. Outcome stakeholder consultation process				
8. E.1. Assessment of stakeholder comments				
a. Has the Project proponent inserted the "Table ii-Assessment of Stakeholder Comments" in section B5 of the Stakeholder Consultation Report?	Annex R, E.1	Local Stakeholder Report is not available in the registry and it is not submitted to the DOE. Please insert the "Table ii-Assessment of Stakeholder Comments"	CAR11	OK
b. Has the Project proponent inserted a summary of alterations based on stakeholders comments?	Annex R, E.1	Yes, summary of stakeholders comments has been provided in section E.1 of the PDD.	OK	OK
c. Has an invitation tracking table been filled out?	T-3.5.1	Invitation tracking table is not inserted in the passport.	CAR12	OK
d. Are copies of invitations published/sent out available?	T-3.5.1	Yes, in Annex-2 of the passport the invitation published is attached.	OK	OK
e. Has a non-technical summary in local language been included in the Local Stakeholder Consultation report, as well as an English summary?	T-3.5.1	Local Stakeholder Consultation report is not submitted. Please refer to CAR11.	CAR11	OK
f. Is a participant list presented?	T-3.5.1	Participant list provided in Annex of the passport.	OK	OK



CHECKLIST QUESTION	GS Ref.	COMMENTS	Draft Concl	Final Concl
g. Are stakeholder evaluation forms available?	T-3.5.1	Stakeholder evaluation forms attached to Annex-4.	OK	OK
h. Are minutes of the meeting(s) available?	T-3.5.1	Yes, the minute of the meeting is available.	OK	OK
i. Has due account been made on comments received?	T-3.5.1	Yes, in section E.1 of the PDD the comments and the promises of the project owner have been listed. It will be verified during first verification through the monitoring parameters.	OK	OK
j. If stakeholders required a revisit to the sustainable development assessment, has this been done?	T-3.5.1	No, it is not decided as needed..	OK	OK
k. Is the consolidated sustainable development matrix presented based on own 'preliminary' scoring and the matrix from the outcome of the blind stakeholder exercise.	T-3.5.1	Please present the consolidated sustainable development matrix presented based on own 'preliminary' scoring and the matrix from the outcome of the blind stakeholder exercise.	CL7	OK
l. Were comments accepted and received by email or other means actually considered?	T-3.5.1	Local stakeholder consultation comments received directly. Please also indicate if any comments received by email or other ways.	CL8	OK
9. E.2. Stakeholder Feedback Round (Can be performed in parallel to the validation process)				
a. Has the Project proponent organized a stakeholder feedback round to give feedback to the stakeholders on how their comments have been taken into account?	T-2.11	Yes, in the passport it is stated that stakeholder feedback round has been organized on 3rd of August 2010.	OK	OK
b. Did the stakeholder feedback round include a physical meeting? (optional)	T-2.11	Yes, the feedback round organized with a physical meeting.	OK	OK
c. Have all the stakeholders invited for participation in the Local Stakeholder Consultation been included in the Stakeholder Feedback Round?	T-2.11	Please provide information about local stakeholder consultation. Please refer to CAR11	OK	OK



CHECKLIST QUESTION	GS Ref.	COMMENTS	Draft Concl	Final Concl
d. Have all of the following documents been made available to the public for a period of at least two months prior to completion of the validation: a. The Latest version of the complete PDD (including the EIA, if applicable); b. A non-technical summary of the project (in appropriate local language(s)); and English summary. c. The (revised) Passport d. if applicable, supporting documentation such as an environmental impact assessment (EIA) (if available, in appropriate local language(s)); in the case of an EIA, at least a one-page English summary is required e. Additional, non-translated information must be made available as well and shall be translated to the local language upon any justified request of a stakeholder.	T-3.5.1	Please clarify if the needed documents webhosted.	CL9	OK
e. Did the Project proponent also prepare hard copies to be publicly displayed at local places like the post Office, municipality, etc?	T-2.11	It is stated that informative notes were send via post and emails to the identified stakeholders.	OK	OK
f. If the Project is a retroactive Project, did the stakeholder feedback round include a site visit by the stakeholders participating in the process?	T-2.11	Yes, the stakeholder feedback round include a site visit.	OK	OK
g. If the Project is a retroactive Project, did the Project proponent follow the guidance provided by the Gold Standard in the pre-feasibility assessment?	T-2.11	No, the project is follow fast-track option. Mou has been seen.	OK	OK
h. Does the stakeholder feedback round report given in the Passport include the following information: a. How the feedback round was organized (A	T-3.5.1	Yes, the organization of the feedback round, how the stakeholders invited, the outcome of feedback round and the responded to the comments has been provided.	OK	OK



CHECKLIST QUESTION	GS Ref.	COMMENTS	Draft Concl	Final Concl
description of the procedure followed to invite comments, including addressing all the details of the oral hearing such as place, date, participants, language, local or national Gold Standard NGO supporters, etc.), b. What the outcomes of the feedback round are (All written or oral comments received.) c. How did the Project proponents followed up on the feedbacks. (The argumentation on whether or not comments are taken into account and the respective changes to the project design.)				
F. Outcome Sustainability assessment				
10. F.1. 'Do no harm' Assessment				
a. Has the Project proponents considered the critical issues for their Project type that are listed in Annex C of Gold Standard?	T-2.4.1	AnnexC Table C-2 is not presented in the passport.	CAR13	OK
b. Have the Project participants discussed all of the safeguarding principles with the stakeholders?	T-2.4.1	It is not indicated if the safeguarding principles are discussed with the stakeholders.	CL10	OK
c. Have the Project participants introduced mitigation measures for the safeguarding principles with a medium to high risk?	T-2.4.1	There is no medium or high risk defined in the safeguarding principles. It is stated that workers will be trained to provide workers with a safe and healthy work environment and is not complicit in exposing workers to unsafe or unhealthy work environments. The training records will be monitored during first verification. IT is also defined in the monitoring plan. Please provide the feasibility report for number 10 of the safeguarding principles. Please refer to CL4	OK CL4	OK



CHECKLIST QUESTION	GS Ref.	COMMENTS	Draft Concl	Final Concl
d. Does the 'Do No Harm' Assessment base on accurate information and have the reference sources been included?	T-3.5.1	Yes, do not harm assessment base on accurate information.	OK	OK
11. F.2. Sustainable Development matrix				
a. Has the Sustainable Development Matrix table been inserted in the Passport?	Annex R, F.2	Yes, sustainable development matrix table inserted in the passport section F.2.	OK	OK
b. Has the project been scored on the following indicators?: a. Environmental b. Social c. Technological d. Economic	T-2.4.2	Yes, the project has been scored on the environmental, social, technological and economic indicators.	OK	OK
c. Have the corresponding parameters to represent the status of each of the indicators been selected?	T-2.4.2	Yes, proper parameters selected to represent the status of each of the indicators.	OK	OK
d. Is the baseline situation and the situation aimed for the project described for each parameter?	T-2.4.2	Please define the baseline situation and the situation aimed for the project for each parameter.	CL11	OK
e. Are the indicators connected to the localized MDG's (Milenium Development Goals) when possible?	T-2.4.2	Yes, indicators connected to the MDG when possible.	OK	OK
f. Was the reason for choice of the parameters described?	T-2.4.2	Please explain the choice of the parameters for each indicator.	CL12	OK
g. Have all of the indicators been scored 'negative', 'positive' or 'neutral' in comparison with the baseline situation?	T-2.4.2	Yes, all indicators scored +,- or 0.	OK	OK
h. If there are any 'negative' indicators, are there any mitigation measures for these indicators?	T-2.4.2	No negative indicators has been identified.	OK	OK
i. Has the matrix been filled by the stakeholders during the Local Stakeholder Consultation?	T-2.4.2,	It is not stated if the matrix has been filled with the stakeholders during local stakeholder consultation. Please refer to CAR11.	CL13	OK



CHECKLIST QUESTION	GS Ref.	COMMENTS	Draft Concl	Final Concl
j. Were there any negative scores during the stakeholder consultation?	T-2.4.2	Please refer to CAR 11 and CL12	CAR 11 – CL12	OK
k. If the answer to the above question is yes, has the sustainability assessment been revisited?	T-2.4.2	Please refer to CAR 11 and CL12	CAR 11 – CL12	OK
l. Does the project contribute positively to least at two of the three categories and neutral to the third category?	T-2.4.2,	Please define if the 2 of the categories indicated as positive and third is neutral.	CL14	OK
m. Is the matrix based on existing sources of information? (can include data from existing reports, results from stakeholder consultations, and experiences with similar projects in similar situations, etc. Where data are unavailable or are of poor quality, or severely outdated, independent opinions and expert judgments can also be used.)	T-3.5.1	Please provide the reference to the each parameter defined in the sustainable development matrix.	CAR14	OK
n. Are the data or expert opinions presented in a sufficient degree of detail and transparency?	T-3.5.1	Please refer to CAR14	CAR14	OK
o. Are the data uncertainties clearly stated, if possible with associated margins of error?	T-3.5.1	No, no uncertainty is stated.	OK	OK
p. Is the scoring reproducible and verifiable?	T-3.5.1	Please refer to CAR14.	CAR14	OK
q. Does the project demonstrate clear benefits in terms of sustainable development?	T-2.4.2	Yes, the project will create job opportunities, will provide emission reduction and support region.	OK	OK
G. Sustainability Monitoring Plan				
a. Are the mitigation actions included in the monitoring plan?	T-2.4.3	Yes, mitigation actions defined in the monitoring plan.	OK	OK
b. Are all the non-neutral indicators included in the monitoring plan?	T-2.4.3	Balance of payment, quantitative employment and income generation and air quality indicated as positive. Air quality has been defined in the monitoring plan.	CAR15	OK

BUREAU VERITAS CERTIFICATION

VALIDATION REPORT: CATALOLUK GS VALIDATION REPORT

REPORT NO: _____



**BUREAU
VERITAS**

CHECKLIST QUESTION	GS Ref.	COMMENTS	Draft Concl	Final Concl
		Please correct the parameter of quality of employment with quantative employment and income generation. Please also add balance of payment to the monitoring plan.		



CHECKLIST QUESTION	GS Ref.	COMMENTS	Draft Concl	Final Concl
c. Is the current status (or expected status under the baseline) of the parameters, the future status and the way they will be monitored described in the monitoring plan?	T-2.4.3	Yes, current status, future status and the way of the monitoring defined in the monitoring plan.	OK	OK
d. Have the project proponents identified parameters that can be used to properly monitor each non-neutral Sustainable Development Indicator according Annex I of the Toolkit?	T-2.4.3	Some neutral indicators also identified in the monitoring plan. The other pollutants and soil condition will be monitored however the way of monitoring is not clear. The signed transportation sheets can be used as an evidence. Please also clarify the recording method for the minimum flow rate.	CL15	OK
e. Are chosen parameters relevant to the indicators?	T-3.5.1	Yes, the parameters are relevant to the indicators.	OK	OK
f. Are these parameters planned to be monitored over the crediting period and on a recurrent basis?	T-2.4.3	For the quality of employment it is defined that the monitoring will be done once in the monitoring period. However it should be done yearly since it is also indicated in the stakeholder consultation.	CL16	OK
g. Are all mitigation measures put in place to prevent violation or the risk of violating a safeguarding principle of the 'Do No Harm' Assessment or to 'neutralize' a Sustainable Development Indicator included in the monitoring plan?	T-2.4.3	Yes, all needed parameters defined in the monitoring plan.	OK	OK
h. Is the sustainability monitoring plan clear about who will monitor with what frequency?	T-3.5.1	Yes, project developer is the responsible for all parameters and the frequencies identified in the tables.	OK	OK
i. Is the monitoring plan feasible?	T-3.5.1	It will be concluded after needed correction has been done.	OK	OK
12. ANNEX 1 ODA declaration				
a. Does the project receive ODA under the condition that	T-	ODA is not used for the project activity.	OK	OK

BUREAU VERITAS CERTIFICATION

VALIDATION REPORT: CATALOLUK GS VALIDATION REPORT

REPORT NO:



**BUREAU
VERITAS**

CHECKLIST QUESTION	GS Ref.	COMMENTS	Draft Concl	Final Concl
the credits coming out of the project are transferred to the donor country?	3.5.1			
b. Is a scanned copy of the Official Development Assistance Declaration statement signed by the project owner given in Annex 1?	Annex D	Yes, scanned copy of the ODA has been provided in Annex-1 of the PDD.	OK	OK

**Table 3 Resolution of Corrective Action and Clarification Requests**

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1 and 2	Summary of project owner response	Validation team conclusion
CAR1 * The description in section A.2 is more than 1 page. Please correct. * In PDD section A.2 it is stated that project will generate electricity from a renewable source. Please also include the existing prior to the start of project. * Please also explain in section A.2 of the PDD how emission reductions effected. * The technological information has been provided in section A.4.2 of the PDD. Please also include how environmentally safe technology is applied. * The capacity of the project is under 15 MW and it is confirmed with the generation license. Please also provide information in section B.2 of the PDD that project will remain under limits of small scale during every year of the crediting period. * No, transparent illustration of all data used to determine the baseline emissions are not provided in section B.4. * National policies and circumstances relevant to the baseline of the project activity are not provided in section B.5. Please add.	Table1-3.2	*The PDD guide v05 is used. The limitation one page is valid for view of participant on SD. *Conditions prior to start of the project is given. *A comparison of main energy resources have been added to demonstrate environmental cost of hepps. *Information was added to section B.2 *Like what? References are available already and confirmed by BV for earlier projects. *Information about national circumstances has been added.	* The clarification is accepted. * The prior condition of the project area has been given in section A.2 of the PDD. Correction is accepted. * Emission reductions have been explained. * The cost comparison does not show how the environmentally safe technology is used. (fish pass, monitoring of min. water, some technological details, etc.) *The issue is not about the calculation. It is about the PDD template. The transparent illustration of key elements shall be stated in section B.4 for the baseline calculation. National circumstances are provided. The correction is accepted.



Continue to CAR1 * The basic assumptions and the OM calculation method has been provided in section B.6.1 however it is not defined how the procedures in the methodology to calculate project emissions, baseline emissions, leakage emissions and emission reductions are applied. * Please clearly provide the equations that will be used for the calculations in section B.6.1 of the PDD. * The completion date of the baseline has been identified as 15/06/2009. Please clarify. * Yes, expected operational lifetime defined as 46 years in line with the generation license. Please give the lifetime in years and months. * Please give the choice of the crediting period in section C.2 * It is not indicated in section C.2.2. fixed crediting period at most 10 years. * The length of the fixed crediting period defined as 7 years. Please provide it in years and months. * Postfix/ZIP is not provided for GTE in Annex-1.		*Statement about application of meth and tools have been added. *Equations are added to B.6.1 *Baseline date has been updated. *Lifetime is updated and given in years and months. *Choice is given in section c.2 *The renewable crediting period is applied. *Postfix added.	Used equations have been stated in section B.6.1 of the PDD. The methods used for the OM calculation has been stated in section B.6.3 of the PDD. The completing date for the baseline has been corrected as 11/06/2010. The operational lifetime defined as years and months. Renewable crediting period has been selected for the project activity. The crediting period has been corrected as 7 years which will be renewed twice. Post/zip has been added in Annex-1 Table. The corrective action request is closed.
CAR2 AMS.I.D. Version15 has been used for the baseline and the monitoring methodology however version 16 is available since 28 May 2010 which is prior to the submission of the validation documents. Please correct		Version 16 is valid from 11 June 2010. Since the date is same as submission of PDD, the version was updated for clarification.	Version of the selected methodology AMS.I.D has been corrected as 16. <u>The corrective action request is closed.</u>



CL1 The applicability conditions justified in section B.2 of the PDD. The project is electricity production from a renewable source (hydro power plant). The geographic and system boundaries of the national grid is available Please provide the technical feasibility of the project to verify the power density of the project.		Feasibility report is provided to DOE. PP Response 04/02/2011 A map of the reservoir has been drawn and area has been calculated using CAD software and submitted to DOE. The area calculated includes the existing river bed which is a conservative approach.	The information provided in pg.6 of the EIA is the expropriation area in the regulator area. Please provide the information about the lake area. Rev.3 The map has been provided the clarification request is closed.
CL2 Yes, PDD correctly describe the project boundary. The delination of the national grid for the baseline emissions provided in figure 2. Please provide the delination of the project activity.		Layout of project activity is added.	Layout of the proposed project activity has been added in section A.4.1. of the PDD. <u>The clarification request is closed.</u>
CAR3 The baseline of the project activity shall be the electricity delivered to the grid by the project activity that otherwise would have been generated by the operation of grid-connected power plants and by the addition of new generation sources. In the PDD it is stated that baseline scenario identified as The kWh produced by the renewable generating unit multiplied by an emission coefficient (measured in kg CO ₂ e/kWh) which is defined as calculation method in the methodology. Please correct.		Definition of baseline was updated.	The needed correction has been done. <u>The corrective action request is closed.</u>



CAR4 * There is a unit error in the Excel sheet 'OM Calculations': the unit of the emission factor is given as ktCO₂/MWh although it is tCO₂/MWh. However, both the PDD and rest of calculations are based on the correct units so that results are not affected. Correcting the unit in Excel alone will therefore be sufficient. * There is a problem with the generation units put in operation in year 2005: in the worksheet 'capacity addition 2005', the commissionary date of most of these plants is indicated as 2001. How can plants commissioned in year 2001 be considered as a capacity addition for year 2005? * The BM emission factor in the PDD and Excel are quite different: 0.441 t CO₂/GWh in the PDD and 0.491 t CO₂/MWh in the Excel. When the unit error in the PDD is corrected as t CO₂/MWh, there is still a significant discrepancy of about 11%.		*The unit was corrected *The reference is from TEIAS web page as given in PDD. The issue can be due to difference in definition of "commissioning". *The BM figures in PDD and excels are updated. *The formula has been corrected in excel sheet. PP Response 04/02/2011 Revised calculations are inserted below.  CONFIDENTIAL_cataluluk_CM_calculation_	Revised calculation is not provided.
--	--	---	---



Continues to CAR4 * In the Excel sheet 'BM Calculation' there is a full mismatch of emission factors and fuel types. For example the emission factor computed for fuel oil is actually that for lignite. The emission factor computed for natural gas is actually that of naphta etc. All values are inconsistent. * The calculations are OK however there are several inconsistencies in the documentation * There is a formatting problem with the OM formula on p.22 of the PDD. * The OM formula on p.22 is for EFgrid,OM,y although this annual emission factor has actually not been explicitly computed and is not given in the PDD. It is implicit in the generation-weighted average and therefore the spreadsheet calculations are correct. This issue should be mentioned/underlined in the PDD in order to avoid any misunderstanding (or else the implicit computations could be made explicit). * In the PDD, page 24 line 4 in the paragraph above the table suing instead of using – general spell check recommended for whole document * In the PDD, tables are not numbered consecutively: e.g. there is a jump from Table 10 (p.22) to Table 41 (p.22), Table 52 (p.24), Table 63 (p.25),		*formatting can be due to versions of software used. Data used for OM calculation has been given in Annex 3. Further clarification has been added for NCV values. *The spelling has been corrected. *Table numbering has been updated.	The information provided in the PDD is accepted. Please also provide the excel sheet. The table number has been updated. Spelling has been corrected. Rev.3 The revised excel sheet found appropriate. <u>The corrective action request is closed.</u>
CAR5 No, the project activity that would have led to higher emissions is not provided in the PDD.		This is already defined as baseline.	Baseline alternative would have the higher emissions than the project activity. <u>The corrective action request is closed.</u>



CAR6 The start date of the project activity is before the validation. Please provide objective evidence that incentive from the CDM was seriously considered in decision to proceed the project activity. Please also indicate the start date of the project in the milestones of the project.		Agreement btw GTE and Beytek has been provided as evidence. PP Response 04/02/2011 The signature page has been rescanned and sent.	The date is not readable in the provided evidence. Rev.3 The needed document has been provided. Prior consideration has been validated through the agreement between GTE and Beytek dd. June 2009. After this contract Beytek has been signed purchase agreement with the Güvenen Elektrik. It is clearly demonstrated that after May 2009(date of the pre-protocol to share the financial documents) Beytek decided to move forward with carbon revenues and signed the contract with GTE. <u>The corrective action request is closed.</u>
--	--	---	--



CAR7 Please provide evidence that must indicate that continuing and real actions were taken to secure CDM status for the project in parallel with its implementation		The agreement between GTE and Beytek is dated before the delivery agreement of the project is signed. PP Response 04/02/2011 The signature page has been rescanned and sent.	The date is not readable in the provided evidence. Rev.3 Since the project activity is retroactive LSC was not needed. However Stakeholder Feedback round has been done on August 2010. <u>The corrective action request is closed</u>
CAR8 Please provide the objective evidence to proof the input values that used in the financial analysis.		The delivery agreement is provided as the proof. PP Response 04/02/2011 The project has a unique position. The delivery agreement provided serves as a proof for total project cost. Date of delivery agreement is date of investment decision. There figure in agreement shows the total cost of investment for new owners, it does not include any breakdown.	Please provide the revised IRR excel sheet with all input values. Rev.3 Regarding to the Investment Analysis guidance the value at the time of investment decision shall be taken into account. So the purchase agreement provided to DOE which includes the breakdowns of the total value. <u>The corrective action request is closed.</u>



CAR9 The sensitivity analysis is missing in the PDD.		Sensitivity analysis is added in v2.	Sensitivity analysis has been added. <u>The corrective action request is closed.</u>
CL3 The generated electricity and reservoir are will be measured. Generation measurement equipments are under control of TEIAS regarding to the applicable law and it is stated. The responsible of the measurement, Qa/QC procedures has been provided. Please update the measurement method for electricity generation inline with the new electricity sales procedure by government. Please also provide needed information for the measurement of the full lake area. The responsibilities for data collection and archiving provided in section B.7.2 of the PDD. Please also explain the data archiving.		The monitoring section was updated. It has been stated that data will be kept for at least two years. The area at maximum height is defined already. Since it is not possible to exceed maximum level(lake area) and the reservoir will not be full always, the value used is conservative. Further clarification has been added to PDD about monitoring.	The needed corrections have been done in the monitoring section. <u>The clarification request is closed.</u>
CAR10 Please provide the local stakeholder information's in section E.		The list of invitees is given in section E. The list of participants and confirmation is available in Annex of Passport.	The list of invitees is not given in section E. Participants have been listed in annex of the passport. <u>The corrective action request is closed.</u>



CL4 Please provide the pre-eia report of the project activity.		Pre-EIA is submitted to DOE PP Response 04/02/2011 Forest permits and water usage agreements and sent.	EIA has been provided. Regarding to the EIA there is not endemic species in the project area. Please provide forest permit and the water usage agreement. <u>Rev.3</u> Forest permit dd. 28.04.2010 and water usage agreement for 9,54 MWe dd. 18.12.2009 has been seen. <u>The clarification request is closed.</u>
CL8 Local stakeholder consultation comments received directly. Please also indicate if any comments received by email or other ways.		No comment has been received other than those during meeting. A statement has been added to passport.	It is stated that no comment has been received for the project activity after the stakeholder meeting. <u>The clarification request has been closed.</u>
CL9 Please clarify if the needed documents webhosted.		The documents have been uploaded to GTE website in addition to GS website.	The web hosted documents uploaded to the GS Registry. <u>The clarification request is closed.</u>



CAR13 AnnexC Table C-2 is not presented in the passport.		Table C-2 is added. PP Response 04/02/2011 The water level preferred to be kept at constant level for more efficient operation of the plant and to prevent blurring. The water depth will be observed by operators in the weir and monitored by operators in the powerhouse using the rulers in the weir and graphs prepared to adjust gate opening for setting minimum flow corresponding to each water level in the weir. Keeping water depth at a certain level is also important for effective functioning of the plant. The plant will be operated in coordination with the upstream plants to control the water level.	Table C-2 has been added to the passport. %10 is the minimum requirement for the hydro projects which has to be released from the weir. In the passport it is stated that flow measurements will be done continuously by project developer. Please also clarify how minimum water dept will be controlled. <u>Review3</u> Since %10 defined by the regulation, project owner will monitore this volumeDuring first verification it shall be verified by the verification DOE. FAR1
--	--	--	---



CL10 It is not indicated if the safeguarding principles are discussed with the stakeholders.		In section E.2, it has been given that SD exercise has been conducted.	In section E.2 of the passport it is mentioned that PP has been discussed safeguarding principles with the stakeholders. Also during site visit it is confirmed through the local stakeholders that information has been given by the PP. <u>The clarification request is closed.</u>
CL11 Please define the baseline situation and the situation aimed for the project for each parameter.		Baseline has been defined for each indicator.	The baseline has been identified for each SD parameter. <u>The clarification request is closed.</u>
CL12 Please explain the choice of the parameters for each indicator.		It has been stated in passport that table I-2 has been used to identify parameters selected. PP Response 04/02/2011 The documents have been defined where possible.	The parameters have been clearly explained for each indicator. Please also define the documents that will be the output of the monitoring parameters. (min. water, soil condition, etc. (the documents that will be provided during verification) Review3 The record for min. water flow has been defined as the document to provide DOE during verification. <u>The clarification request is closed.</u>



CL13 It is not stated if the matrix has been filled with the stakeholders during local stakeholder consultation. Please refer to CAR11.		See section E.2 of passport.	IT is stated that SD has been discussed with the local stakeholders and it is also confirmed during site visit. <u>The clarification request is closed.</u>
CL14 Please define if the 2 of the categories indicated as positive and third is neutral.		PP Response 04/02/2011 Scoring for quality of employment has been changed to positive. Justification for livelihood of the poor has been revised upon discussions with GS. Scoring has been kept neutral	Quality of Employment and livelihood of the poor has been indicated as zero. However the positive impacts have been defined. Rev.3 The scoring has been corrected. <u>The clarification request is closed.</u>
CAR14 Please provide the reference to the each parameter defined in the sustainable development matrix.		References have been added where available.	The references have been added. <u>The corrective action request is closed.</u>



CAR15 Balance of payment, quantative employment and income generation and air quality indicated as positive. Air quality has been defined in the monitoring plan. Please correct the parameter of quality of employment with quantative employment and income generation. Please also add balance of payment to the monitoring plan.		PP Response 04/02/2011 Scoring for quality of employment has been changed to positive. Monitoring Parameter for quality of employment has been updated. Parameter for balance of payment has been added.	No response has been indicated. Rev.3 The needed corrections have been done. <u>The corrective action request is closed.</u>
CL15 Some neutral indicators also identified in the monitoring plan. The other pollutants and soil condition will be monitored however the way of monitoring is not clear. The signed transportation sheets can be used as an evidence. Please also clarify the recording method for the minimum flow rate.		PP Response 04/02/2011 Indicators which include mitigation measure should also be monitored therefore some neutral indicators also exist. Further clarification for soil condition and minimum flow rate has been added.	No response has been indicated. Rev.3 Soil condition monitoring can not done through the picture. Please provide an appropriate method. Other pollutants – Waste oil from the equipments. Project manager letter and the transportation record. Rev.4 The monitoring parameters have been corrected. <u>The clarification request is closed.</u>



CL16 For the quality of employment it is defined that the monitoring will be done once in the monitoring period. However it should be done yearly since it is also indicated in the stakeholder consultation.		PP Response 04/02/2011 The monitoring period has been revised.	No response has been indicated. Rev.3 The correction has been done. <u>The clarification request is closed.</u>
CL 17 – PDD Page 15 Grid connected output given as 38,99 GWh and the reference is IEA Turkey country report. Please clarify.		The footnote has been updated and figure has been corrected.	<u>The clarification request is closed.</u>
CL20- There is no discussion on the Prior consideration of VER as per guideline EB49 Annex 22		The buyer and seller has made a protocol on May 04 as stated in first page of transfer agreement submitted to DOE. The final version of agreement has been developed in June and signed by both parties in June. The milestones have been added to PDD also.	The clarification found acceptable. <u>The clarification request is closed.</u>
CL18 “According to the investment analysis made for Cataloluk HEPP, Equity IRR for the project has been calculated as 7.14% in the absence of carbon revenue. When carbon revenue is included to the project income, project IRR increases to 8.45% and the project becomes more viable.” Which IRR has been used for the project activity to demonstrate additionality? Please stick with one type of IRR.		The equity IRR is used. Word “project” has been removed to prevent confusion and IRR has been updated.	<u>The clarification request is closed.</u>



CL19- Sensitivity analysis has been carried out for three main parameters identified; ☐ Investment Cost ☐ Operating Cost ☐ Electricity Sales revenue The parameters used for IRR in table 4 does not include Operation cost and Electricity sales revenue. Electivity sales revenue depends on generation (plant load factor) and electricity tariff. Hence it is required to have sensitivity done on both these factors separately.		Operational Costs have been included in table 4 Electricity Sales revenue is multiplication of tariff and generation both of which are available in table 4. The reference for operational cost has been added The parameter in cash flow is electricity income which depends on two factors. Regardless of the parameter, (whether the change is in generation or tariff) the impact will be exactly same. Therefore showing them separately is not meaningful. However, to close the issue, another line has been added to financial model and pdd to show parameters separately. Formulas are available for each parameter used.(Cells B15, D29, D28 and D9). Red cells in the excel sheet are dynamic cells for values of fluctuation. Each parameter is in the sensitivity analysis is multiplied with input value for fluctuation as per the model so that dependent figures(including IRR) are updated automatically . Further explanation has been added to PDD.	Needed correction has been done. <u>The clarification request is closed.</u>
CL21- There is no mention about the accuracy class of the metering devices to be used.		Accuracy class has been added referring to relevant regulation. The accuracy of the metering equipments is under control of TEIAS.	<u>The clarification request is closed.</u>



CL22- "The expected operational lifetime of the project is about 44 years 0 months as per the license issued." Please use EB50 Annex 15 to define operational life time of the project		Operational lifetime of the turbines has been identified as 150,000 hours which corresponds to more than 17 years if plant is operated at full time. Since the plant will not operated full time, actual lifetime of the turbines will be more than 20 years.	The clarification found acceptable. <u>The clarification request is closed.</u>
CL23 Installed capacity is stated as 8.54 MW in the IRR excel sheet. Please clarify Please clarify the reason for the change in operational expenditures after 10th year.		Installed capacity corrected. The increase was due to expected maintenance renovation cost of the plant. It was removed in revised calculations for simplicity.	The corrections have been done. The clarification request is closed.