



Voluntary Carbon Standard 2007
Validation Report

19 November 2007

Validation Report:

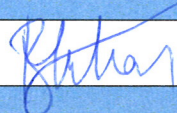
Name of Verification company:	Date of the issue:
Bureau Veritas Certification Holding SAS	24.08.2011 / Version 02
Report Title:	Approved by:
Validation Report for "Saraçbendi HPP Run-of-River Hydro Project"	Burcu Mutman 
Client:	Project Title:
Çamlıca Elektrik Üretim A.S.	"Saraçbendi HPP Run-of-River Hydro Project"
Summary:	
Bureau Veritas Certification has made the validation of "Saraçbendi HPP Run-of-River Hydro Project". The project activity involves the installation of a 23.67 MWe hydroelectric power plant (HEPP) located on the Kızılırmak River in the province of Sivas, Turkey. The project comes under Type-I Renewable Energy Project as per Appendix B of the procedures for CDM project activities. The expected annual emission reduction is 55,170 tonnes of CO₂e (tCO₂e). The crediting period of the project activity is 10 years, renewable twice for a total of 30 years. The validation scope is defined as an independent and objective review of the VCS project description, the project's baseline study, monitoring plan and other relevant documents, and consisted of the following five phases: i) desk review of the project design and the baseline and monitoring plan; ii) Review of the baseline methodology by the specialist and the validator; iii) Review of the investment analysis by the specialist and the validator iv) follow-up interviews and on site visit; v) 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 Annex II in the Validation Protocol. Taking into account this output, the project proponent revised its VCS project description. In summary, it is Bureau Veritas Certification's opinion that the project correctly applies the baseline and monitoring methodology ACM0002, version 12 and meets the relevant VCS 2007.1 requirements and local legislation.	
Work carried out by:	Number of pages:
Bade Cebeci-Internal Technical Review Burcu Mutman - Team Leader Seda Yücel - Team Member Yıldız Arıkan - Baseline Specialist Murat Gencer - Financial Specialist	131

TABLE OF CONTENTS:

1	INTRODUCTION	3
1.1	Objective	3
1.2	Scope and Criteria.....	3
1.3	VCS Project Description	3
1.4	Level of assurance	3
2	METHODOLOGY.....	3
2.1	Review of Document	4
2.2	Follow-up Interviews.....	4
2.3	Resolution of any material discrepancy	4
3	VALIDATION FINDINGS.....	4
3.1	Project Design	4
3.2	Baseline.....	6
3.3	Monitoring Plan.....	11
3.4	Calculation of GHG Emissions.....	12
3.5	Environmental Impact	15
3.6	Comments by stakeholders.....	15
4	VALIDATION CONCLUSION.....	15
5	REFERENCES.....	17
5.1.	Documents.....	17
5.2.	Persons Interviewed.....	18
	ANNEX I – Validators’ Competence	19
	ANNEX II - Validation Protocol.....	20

1 Introduction

This report summarizes the findings of the validation of the “Saraçbendi HPP Run-of-River Hydro Project” project, performed on the basis of VCS 2007.1 criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

1.1 Objective

The validation serves as project design verification and is a requirement of all voluntary emission reduction 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 VCS criteria which 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 VCS projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of Voluntary Carbon Units (VCUs).

1.2 Scope and Criteria

The validation scope is defined as an independent and objective review of the VCS project description, the project's baseline study and monitoring plan, the project's investment analysis and other relevant documents. The information in these documents is reviewed against the methodologies and tools that are given under the Clean Development Mechanism of Kyoto Protocol, VCS 2007.1 rules and associated interpretations. The validation is not meant to provide any consulting towards the client. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the project design.

1.3 VCS project Description

The project activity involves the installation of a 23.67 MWe hydroelectric power plant (HEPP) located on the Kızılırmak River in the province of Sivas, Turkey. The project comes under Type-I Renewable Energy Project as per Appendix B of the procedures for CDM project activities. The main purpose of the project is to generate approximately 100,470 MWh/year of electricity to supply the national grid using a renewable resource and tapping the significant hydropower potential in the region. The project activity reduces greenhouse gas (GHG) emissions that would have otherwise occurred in the absence of the project activity by avoiding electricity generation from fossil fuel sources. The average annual emission reductions of the proposed Project are estimated to be 55,170 tonnes of CO₂e (tCO₂e). The crediting period of the project activity is 10 years, renewable twice for a total of 30 years.

The objective of Saracbendi HPP is the creation of carbon friendly energy generation capacity via realization of a hydro-project.

1.4 Level of assurance

The Level of assurance of the validation report is defined as high.

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. The protocol shows, in a transparent manner, criteria (requirements), means of

verification and the results from validating the identified criteria. The validation protocol serves the following purposes:

- It organizes, details and clarifies the requirements of a VCS 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.

2.1 Review of Document

The Project Description (PD) submitted by Çamlica Elektrik Uretim A.S. and additional background documents related to the project design and baseline, i.e. relevant law, VCS Project Description Template, Approved Methodology and tools under the CDM of Kyoto Protocol, Clarifications (CL) and Corrective Action Requests (CAR) on validation requirements were reviewed.

To address Bureau Veritas Certification corrective action requests and clarification requests, Çamlica Elektrik revised the PD several times, VCS PD version 08 dated 29.07.2011 being the last version, which was submitted to the validation team on 20.06.2011. After further clarifications, all corrective action requests and clarification requests were closed on 05.07.2011. The validation of the Project resulted in 18 Corrective Action Requests and 45 Clarification Requests.

All documents were reviewed under the requirements of the CDM Methodologies as these methodologies are approved under the VCS.

2.2 Follow-up Interviews

In August 2010 Bureau Veritas Certification performed interviews with Çamlica Elektrik and local stakeholders regarding the Grid emission factor, Investment Analysis, project specific questions and Clarification and Corrective Actions Requests documented in the validation protocol. A list of the persons interviewed is given under section 5.2 of this report. After the discussions, the validation team closed on 05.07.2011 all documented CL and CAR in the validation protocol.

2.3 Resolution of any material discrepancy

During the validation there were no material discrepancies that were identified.

3 Validation Findings

3.1 Project Design

Bureau Veritas Certification recognizes that Çamlica Elektrik, which is the project participant, is helping the country in fulfilling its goals of promoting sustainable development with this project. The project is in line with country specific requirements. In addition, the project highly supports the sustainable economic development in the region.

It was validated during the site visit that the project description given in the VCS PD version 08 is accurate.

Saraçbendi HPP is not a debundled component of a larger project activity as defined in the VCS PD version 08. The project activity is neither in existing facilities nor in utilizing existing equipment. During the site visit, it was confirmed that project activity is a greenfield project.

The conclusions of the validation team are as follows:

- The technology used:

Saraçbendi HPP project entails the construction and operation of a 23,67 MWe hydroelectric power plant (HEPP) on Kızılırmak River in the province of Sivas, Turkey. The location of the project activity was validated during the site visit.

In the powerhouse, four vertical Axis Kaplan type vertical turbines (each with the capacity of 6.152 MW) and 4 generators (each with the capacity of 5.918 MW) were installed; the total installed capacity is 23.67 MWe.

The implementation of the project consists of construction of the following main items:

- Weir, 8 m high; 84 m wide; 1.165 m elevation at crest
- Headpond
- Conveyance channel of 25,561 m length
- 2 penstocks is 28.75 m with 3.2 m diameter
- Power house with Axis Kaplan type vertical turbines
- Transmission line connected to the Şarkışla distribution center via 34.5 kV, 477 MCM section, 30 km transmission line

The net electricity delivery to the grid by the project is estimated to be 100,470 MWh per annum.

Saraçbendi HPP project site is located at Kızılırmak River.

The equipments that are used in the project are all first-hand. There is no new technology, which is expected to replace the plant's technology in the short run. As a result, validation team approves that the technology used in the project activity is state of the art and all the equipment used in the project are new.

- Project duration, crediting time and project start date

Saraçbendi HPP consists of 4 unit turbines. Each unit has an output capacity of 6.152 MW. The project activity is implemented on 06/05/2011 as was validated through the "Provisional Acceptance Certificate" approved by The Ministry of Energy and Natural Resources.

The project started with the initial commercial operation of the turbines after testing phase on 06/05/2011. The carbon crediting period and therefore the monitoring starts when the plant commences electricity generation. The crediting life is a maximum of ten years that may be renewed at most two times.

- Ownership

The Saraçbendi HPP is operated and owned by Çamlıca Elektrik Üretim A.S. and the generation license belongs to Çamlıca Elektrik Üretim A.S. A copy of the generation license is provided to DOE.

The VCS project proponent is Çamlıca Elektrik Üretim A.S. Company is involved in the engineering tasks of the project and also responsible party for the management of the VER project.

The project did not participate in any other GHG emission reduction program. The validation team approves that there is no double counting involved in this project activity during this validation.

- Eligibility of the project activity under VCS

The project comes under Type I – Renewable Energy Project as per Appendix B of the procedures for CDM project activities. The project is a 23.67 MWe HEPP and it uses renewable sources to produce electricity. Since the installed capacity

of the planned HEPP is greater than 15 MW; it is a large scale renewable energy project activity according to the Decision 17/ CP.7 Article 6. As per the justifications given above, the project activity is eligible under VCS. The project is not a grouped project.

3.2 Baseline

- Approval of the baseline methodology:

The baseline for “Saraçbendi HPP Run-of-River Hydro Project” project is established by using the UNFCCC official methodology ACM0002, version 12, namely “Grid connected renewable electricity generation”.

For the calculation of the grid emission factor, UNFCCC Methodological Tool “Tool to Calculate Emission Factor of an Electricity System” version 02 is used.

For the assessment and demonstration of additionality, UNFCCC Methodological Tool “Tool for the Demonstration and Assessment of Additionality”, Version 05.2 is used.

Both of the tools are referred in the applied methodology.

The PD was first submitted on 14/07/2010. Both the tools and the methodology are the latest available versions at the time of PD submission to the DOE, and are found appropriate by the validation team. Clean Development Mechanism Methodologies are approved under the VCS program.

- Correct application and justification of baseline methodology:

The choice of methodology ACM0002, version 12, is justified as the proposed project activity meets relevant applicability criteria:

- Saraçbendi Run-of-River Hydro Project is a Greenfield renewable energy power plant
- The project results in construction of a new reservoir with a power density greater than 4 W/m²
- The project activity is not capacity additions, retrofits or replacements
- Project activities do not involve switching from fossil fuels to renewable energy sources at the site of the project activity.
- Project activity is not a biomass fired power plant.

The baseline scenario was applied correctly and the justification for the choice of the baseline methodology is found appropriate by the validation team.

- Appropriate setting of baseline scenario

The baseline scenario is defined as follows:

“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 defined baseline scenario is in line with the methodology.

The above setting of the baseline scenario is found appropriate by the validation team.

- Assessment and demonstration of additionality:

The assessment and demonstration of additionality of the project is done by using UNFCCC Methodological Tool “Tool for the Demonstration and Assessment of Additionality”, Version 05.2. In applying this tool under Step 1a,

the following four alternatives are identified as the alternative scenarios that are likely to happen in the absence of the project activity:

- Alternative (a) : The proposed project activity undertaken without being registered as a VER project activity
- Alternative (b) : Other energy project(s) that could also deliver electricity with comparable quality, properties
- Alternative (c) : Continuation of the current situation, i.e. Saraçbendi hydro project is not built

From the above mentioned alternatives (a) and (c) are assessed to be realistic and credible alternatives. Alternative (b) is eliminated since there are no evidences that built capacity will increase on behalf of renewable energy.

Analyzing the alternatives that are defined as realistic, it is seen that all scenarios are consistent with the baseline definition of ACM0002, version 12. All of the alternatives comply with legal requirements, as they are practices currently present in the host country.

The project proponent used Step 2 'Investment Analysis' for the demonstration of the additionality of the project activity.

Under Step 2-Investment Analysis there are four sub-steps.

Under sub-step 2a, Benchmark Analysis (Option III) is chosen. This chosen is also assessed to be appropriate by the validation team. The simple cost analysis (Option I) cannot be taken since the proposed project generates financial and economic benefits through the sales of electricity other than Voluntary Emissions Reduction (VCS-VER) related income. (Option II) is only applicable to projects where alternatives should be similar investment projects.

Under sub-step 2b, Equity IRR is selected as a financial indicator for the demonstration of the additionality of the project as permitted in the tool. The selected benchmark is assessed to be applicable to the type of IRR calculated as per the guidelines given in 'The tool for the demonstration and assessment of additionality'.

The CAPM value is calculated for benchmark. CAPM formulation used is as below:

$$E(R_i) = R_f + \beta_i (E(R_m) - R_f)$$

Where;

$E(R_i)$ is the expected return on the capital asset

R_f is the risk-free rate of interest such as interest arising from government bonds

β_i (the beta coefficient) is the sensitivity of the asset returns to market returns, or

$$\beta_i = (\text{COV}(R_i, R_m)) / (\text{VAR}(R_m))$$

$E(R_m)$ is the expected return of the market

$E(R_m) - R_f$ is sometimes known as the market premium or risk premium (the difference between the expected market rate of return and the risk-free rate of return).

Starting date of construction activities (17.04.2008) is set to be project-starting date since, with these activities the project investor committed to the overall investment.

EUROBOND rate (% 7.52) dated to 17.04.2011 are used in CAPM calculation. Value is validated with governmental bank web site: ziraat.gov.tr.

The Beta coefficient of securities is assumed to be 1 as there is no publicly available source for Beta value of power generation and trading companies. This assumption is approved by financial experts.

“Market risk premium” of Turkey is provided from the independent study of Aswath Damodaran – Stern School of Business (New York University) was used. The determined market risk premium for Turkey is 9.29%.

All in all, the relevant discount rate is calculated as:

$$7.529\% + 9.29\% * 1 = 17.11 \%$$

The above discount rate is the benchmark for Saracbendi.

Hence, the benchmark is assessed to be appropriate by the validation team and the financial expert.

Under sub-step 2c, the Equity IRR is calculated. Project proponents have also submitted an excel sheet showing the details of the calculations. Some revisions have been made to these calculations until the latest version, which was submitted to the validation team together with the final VCS PD.

The investment decision date of civil works agreement with Ozdemir Insaat dated 17 April 2008. The reference documents for the IRR input were submitted to the validation team. “Loan Proposal of ABN-AMRO dated 24.12.2007” and “Proposal of VATECH Hydro dated 31 March 2008” were provided to the validation team. The inputs were validated through the provided documents.

Production license is for 49 years, IRR is calculated for 41 years. In line with EB50 Annex 15, operational lifetime of the equipment is calculated as 39 years. This is on the conservative side as it reflects the reality and the calculations are not limited to the crediting period.

The documents used to validate all the assumptions in IRR calculation are given below.

Parameters	Validated Value	Means of validation
Annual electricity generation	100,470 MWh	Generation License dated April 2005 and Electromechanical proposal dated February 2008
Installed Power	23,7 MW	
Electricity sales price	0.055 €/kWh	The minimum purchase guarantee of the State
Parity of USD/TL	1,5937 \$/TL	The average value is at the time of investment decision date. This value was validated through the Turkey Central Bank website.
Parity of Euro/USD	1,3230 €/€	
Parity of Euro/TL	2,1085 €/TL	
Depreciation periods		
Civil Works	40 years	Local rules and regulations
Electromechanical and Hydromechanical Equipments	15 years	
Transmission Lines	10 years	
Costs		
Civil Works	28.000.000 \$	Agreement with Özdemir İnşaat dated 17.04.2008*
Electromechanical Equipments	9.626.740 \$	Proposal of VATECH Hydro dated 31 March 2008
Operation and Maintenance Cost	799.698 \$/kW	The “Operation and Maintenance Cost” that is assumed as 50 \$/kW is based on a report prepared by a university professor. The report is special to the hydro projects and found acceptable by the validation team.
System Usage and Management Fee	91.626 €	The system usage fee is calculated as per the EMRA regulation and was validated through the EMRA website.
Loan		
Equity Share	25.0%	Loan Proposal of ABN-AMRO dated 24.12.2006
Loan Interest	6.28%	
Loan Term	9 years	
Grace Period	2 years	

IRR is 7.18.

Under Sub-step 2d, sensitivity analysis is applied to the following items:

- Electricity Price
- Investment Costs
- Energy Yield
- Operating Cost

for a decrease of 10% and for an increase of 10%.

According to this sensitivity analysis;

The IRR of the project activity rises up to 8.48% when electricity price raises 10%. The IRR value decreases with the decrease of the electricity price down to 5.88%.

The IRR of the project activity rises up to 8.39% when the investment costs decrease 10%. The IRR value decreases with the rise of the investment costs down to 6.19%.

When energy yield raises 10%, the IRR of the project activity rises up to 8.48%. The IRR value decreases with the decrease of the energy yield down to 5.88%.

The IRR of the project activity rises up to 8.33% when the construction costs decrease. The IRR value decreases with the rise of the operating costs down to 6.20%.

The above sensitivity analysis reveals the fact that no alternative scenario without VER revenues can make the project pass the benchmark IRR expectation that is 15.70%. Therefore, the project is not financially attractive.

- The common practice analysis:

Under the common practice analysis section of the PD, annual development of Turkey's installed capacity and all hydro projects in operation belonging to independent power plants are provided.

First, an analysis of annual development of Turkey's installed capacity is provided. The growing ratio of thermal power plants is compared to the growing ratio of hydro power plants between the 1990-2008 years. The analysis shows that over the time ratio of hydro-generated electricity in the overall electricity generation has decreased historically from 40.2% by 1990 to 16.8% by the end of 2008. The statement was validated through the TEIAS statistics.

A breakdown of Installed Capacity of Turkey by the end of 2008 is provided. Majority of electricity producers in Turkey are either state-owned companies or operating with different business models (including long-term purchase guarantees from state-owned companies. Only 1.93% of the installed capacity is potentially similar to Sarabendi HPP. The number is found by dividing hydro capacity under the topic of Generation companies by total capacity.

These similar hydro projects in operation belonging to independent power plants by the end of the 2008 are analyzed. There are 4 HPPs in operation in Sivas and Kayseri provinces by the end of 2008. All of these HPPs are very small.

When all projects in Turkey are analysed, after the VER projects are excluded, most of the remaining projects have small capacities. However it is impossible to show the differences and similarities between projects with installed capacities in the range of 20-25 MW like Sarabendi HPP. The technical and financial data of

the projects are not accessible and known. In addition to that with 25,561 m. long channel length Sarabendi HPP is not a similar project.

There is no similar project with proposed project. The validation team has concluded that the proposed project activity is not common practice in the region due to the reasons that are explained above.

3.3 Monitoring Plan

- Approval of the monitoring methodology:

The Monitoring Plan used for determining the emission reduction by the Project is based on the approved methodology ACM0002 version 12. All the applicability conditions of the monitoring methodology are the same as the applicability conditions of the baseline methodology that are given under section 3.2 of this validation report. The data will be archived electronically and be kept at least for 2 years after the end of the last crediting period. All measurements will be conducted with calibrated measurement equipment according to relevant industry standards.

- Correct application and justification of the selected monitoring methodology:

The justification of the choice is explained in section 3.2 of this validation report. The monitoring methodology is applied correctly and appropriately.

- Information about monitoring plan is as follows:

The monitoring plan includes the monitoring of several parameters, the main parameter in the monitoring plan is the quantity of the net electricity that is delivered to the grid, and this parameter will be the basis for the emission reduction calculations.

The main data that should be monitored is the amount of electricity ($EG_{\text{facility},y}$) that is annually fed into the grid by the plant. The project owner, Çamlıca Elektrik, has already signed an agreement with distribution company that includes measuring the amount of electricity that goes to the system accurately by the help of electricity meters which are installed by TEIAS. Two electricity meters (one main and one reserve) are placed at the substation. The meters were sealed by the distribution company and the project owner has no control over, or access to the measurement devices and cannot perform any type of maintenance or calibration. The meters give the total gross electricity generated and the total electricity consumed by the hydro power plant. The difference of these two data is the net electricity generated.

At the end of one monitoring period, which is planned to generally last one year, the data from the monthly meter reading records will be added up to the yearly net electricity generation and multiplied with the combined margin emission factor with the help of an excel spreadsheet that also contains the combined margin calculation. Thus, the complete baseline approach is always transparent and traceable. Data monitored will be kept in electronic form and hard copy until the end of second year after the end of crediting period.

Based on the sales agreement, there is no need for an additional process or equipment to monitor the data. Meters are read by TEIAS staff monthly, a protocol is prepared and signed by both on site by technicians and TEIAS staff. The generation data is stored by PMUM on the web site. The Project owner has an ID and password to access this data on the web site. For monitoring, the monthly settlement notification of PMUM shall be used as source of data.

Technicians in Saracbendi HPP daily reads meters and keeps record for electricity generation amount and reports to management. The net electricity supplied to the grid is crosschecked with these internal records and also PMUM data obtained from TEIAS web page (<http://pmum.teias.gov.tr>) using the ID and password of the project owner.

In case of a major failure at both metering at the same time, electricity generation by the plant since the last measurement will be able to be monitored by another metering device at the inlet of the main substation operated by TEIAS where the electricity is fed to the grid. Third meter is not a property of the company but TEIAS. The fact that two meters are installed keeps the uncertainty level of the only parameter for baseline calculation low.

Besides, Ministry of Trade and Industry (Ministry) is responsible for control and calibration of the meters. Accuracy of the meters is defined under the Article 11 of the Communiqué for meters in electricity market as 0.5. According to “Regulation of Metering and Testing of Metering Systems” periodic calibration of the meters will be done every 10 years.

A FAR is raised for the observation on site how the possible deviations between two meters is monitored by Camlica elektrik and in which cases action is taken.

If it is suspected that meters are not working appropriately tests of the meters will be done in presence of both parties. If, after controls, it is seen that the meter is not working appropriately, the measurements of reserve meters are taken into account beginning from the last measurement value when both meters are reading the same.

Also as the Combined Margin emission factor is calculated ex-ante, the parameters used in the calculation of the emission factor is also included in the monitoring plan, but the frequency of monitoring for these parameters are once for each crediting period as per the definitions in the “Tool to calculate the emission factor for an electricity system”.

Overall the monitoring methodology is found appropriate and suitable for this particular project activity.

Monitoring of installed capacity and reservoir area are also planned. Installed capacity will be monitored from Turbine/Generator Supply Agreement.

Reservoir area will be monitored with one of the ways of topographical surveys / maps, satellite pictures.

3.4 Calculation of GHG Emissions

Anthropogenic emission reduction is a function of the expected net amount of electricity produced, for the given project, which amounts to 100,470 MWh per annum. The annual emission reduction is 55,170 tCO₂e. Over the period of ten years, the total amount of emission reduction will reach 551,700 tCO₂e. For all calculations, the rounded value of the combined emission factor, 0.5491 tCO₂/MWh is applied.

The project started with the initial commercial operation of the turbines after testing phase on 06/05/2011. The carbon crediting period and therefore the monitoring starts when the plant commences electricity generation.

Year	Electricity Output MWh	Baseline emission reductions in tones of CO ₂ e	Project emissions in tones of CO ₂ e	Annual estimation of emissions reductions in tones of CO ₂ e
2011	66980	36,780	0	36,780
2012	100470	55,170	0	55,170
2013	100470	55,170	0	55,170
2014	100470	55,170	0	55,170
2015	100470	55,170	0	55,170
2016	100470	55,170	0	55,170
2017	100470	55,170	0	55,170
2018	100470	55,170	0	55,170
2019	100470	55,170	0	55,170
2020	100470	55,170	0	55,170
2021	33490	18,390	0	18,390
TOTAL				552790

- The appropriateness of the source, sink and reservoir:
The project is a new run-of-river project that results in a new reservoir (validated with site visit) but as power density is more than 10 W/m² project emission (PE_y) is zero. Power density is calculated as 23,8 W/m² (reservoir size: 992,982 m², installed capacity: 23.67 MW).

CO₂ is included for baseline emissions.

Leakage emissions are considered as zero according to the ACM0002/Version 12.

The assumptions for the Project Emissions and Leakage made afterwards is found acceptable and suitable for the project activity by the validation team.

- The correctness and transparency of formulas and factors used.
Baseline emissions include only CO₂ emissions from electricity generation in fossil fuel fired power plants that are displaced due to the project activity:

$$BE_y = (EG_y - EG_{\text{baseline}}) \times EF_{\text{grid,CM,y}} \quad (6)$$

Where:

- BE_y = Baseline emissions in year y (tCO₂/yr).
 EG_y = Electricity supplied by the project activity to the grid (MWh).
 EG_{baseline} = Baseline electricity supplied to the grid in the case of modified or retrofit facilities(MWh). For new power plants this value is taken as zero.
 EF_{grid,CM,y} = Combined margin CO₂ emission factor for grid connected power generation in year y calculated using the latest version of the "Tool to calculate the emission factor for an electricity system".

The project activity is the installation of a new grid-connected renewable power plant, thus EG_{baseline} = 0 (ACM0002 page 9, equation 8).

It follows that:

$$BE_v = EG_v * EF_{grid,CM} = 100,470 \text{ MWh/year} * 0.5491 \text{ tCO}_2/\text{MWh} = 55.170 \text{ tCO}_2/\text{year}$$

For the calculation of CM:

In Step 1: Only the national transmission system is defined in Turkey and only TEİAŞ is in the charge of all transmission system related activities. The emission factor for imports from neighboring countries is considered 0 (zero) tCO₂/MWh for determining the OM.

In Step 2 “**Option I:** Only grid power plants are included in the calculation”. There are no off-grid plants in Turkey.

Step 3: As approved by experts, the only low cost resources in Turkey, which are considered as must-run, are Hydro, Renewables and Waste, Geothermal and Wind. As average share of low cost resources for the last five years is far below 50% (23.43%), the Simple OM method is applicable to calculate the operating margin emission factor (EF_{grid,OM,y}) and ex ante option is selected, with the most recent data for the baseline calculation stemming from the years 2006 to 2008.

For Step 4: “data on the total net electricity generation of all power plants serving the system and the fuel types and total fuel consumption of the project electricity system” (option B) is chosen, as there is no power plant specific data available, renewable power generation are considered as low-cost power sources and amount of electricity supplied to the grid by these sources is known.

For the calculation of the OM the consumption amount and heating values of the fuels for each sources used for the years 2006, 2007 and 2008, is taken from the TEİAŞ annual statistics (latest available data on date of PD submission to DOE).

3-year Generation Weighted Average EF_{grid,OMsimple,y} (ktCO₂/GWh): 0.6534

For Step 5 and 6: The set of power capacity additions in the electricity system that comprise 20% of the system generation (in MWh) and that have been built most recently (Option b) is used to identify the sample group, as this option comprises the larger annual generation in Turkey.

EF_{grid,BM,y} (tCO₂/MWh: 0.4448

For Step 7: The combined margin emission factor is calculated as per tool:

$$EF_{grid,CM,y} = 0.6534 \text{ tCO}_2/\text{MWh} * 0.5 + 0.4448 \text{ tCO}_2/\text{MWh} * 0.5 = 0.5491 \text{ tCO}_2/\text{MWh}$$

The experts have checked in details all the assumptions, equations and parameters. The formulas and factors used in the calculation of GHG emissions are found to be transparent and correct by the experts and the validation team. The emission factors of fuels that are used in the calculations are taken from the IPCC default values at the lower limit of uncertainty at a 95% confidence interval as provided in table 1.4 of Chapter 1 of Vol.2 (Energy) of the 2006 IPCC Guidelines on National GHG Inventories, as suggested by the methodology.

The efficiency factors of power plants are taken from Annex 1 of the “Tool to calculate the emission factor for an electricity system”. Efficiency of coal is taken as 41.5% under the assumption that the plants use “fluidized technology”. The efficiency

for lignite is taken as 39% for subcritical coal. The efficiency factors used are on the conservative side.

- The assumptions made for estimating GHG emission reductions

The only assumption is the one about leakage emissions that is assumed to be zero as per the methodology. Other unknown parameters like the emission factors of fuels are taken from the IPCC values as mentioned above.

- Uncertainties

All data presented in the baseline calculations are provided from official sources. Therefore, uncertainties of data sets were not estimated. There are no uncertainties in the calculations

3.5 Environmental Impact

The domestic laws and regulations in Turkey do not require an Environmental Impact Analysis for the project activity. The project has “EIA not required certificate” dated 10/01/2008 that was given by the Ministry of Environment and Forestry. The “EIA not required certificate” was submitted to the validation team.

It has been verified depending on the processes that the project complies with the legal requirements.

3.6 Comments by stakeholders

During the site visit, the head of the village, Mr. Cemal Çakmak and some villagers were interviewed and no complaints were received. There is ongoing communication between the local community and of Saracbendi village and the plant management. It was validated via interviews during the site visit that the project activity supports the sustainable development. At the construction stage of the project activity, 12 local people were employed among the maximum 450 employees and 10 local people are employed at the operation stage. It was verified during the site visit through the interviews with local people and village head that the project has a positive impact to the region’s sustainable development.

4 Validation Conclusion

Bureau Veritas Certification has made the validation of “Saraçbendi Run-of-River Hydro Project, in Sivas, Turkey”.

The validation was performed on the basis of VCS criteria and host country criteria and also on the criteria given to provide for consistent project operations, monitoring and reporting.

The validation consisted of the following three phases:

- i) Desk review of the project design and the baseline and monitoring plan; (July 2010)
- ii) Review of the baseline methodology by the specialist and the validator (July 2010-July 2011)
- iii) Review of the investment analysis by the specialist and the validator (July 2010-July 2011)
- iv) Follow-up interviews and on site visit; (August 2010)
- v) Resolution of outstanding issues and the issuance of the final validation report and opinion (July 2011)

Project participant/s used the latest tool for demonstration of the additionality. In line with this tool, the PD provides analysis of prevailing barriers to determine that the project activity itself is not the baseline scenario.

By generating electricity using renewable energy, the project is likely to result in reductions of GHG emissions partially displacing the electricity that would have been generated using fossil fuels. 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 Description, the site visit and the subsequent follow-up interviews (please see the list of the persons interviewed under section 5.2 of this report) have provided Bureau Veritas Certification with sufficient evidence to determine the fulfillment of stated criteria. The Project Description was subsequently revised as Version 05 dated 20 June 2011 to resolve the issues that have risen during the interviews and subsequent interactions.

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

5 References

5.1. Documents

Documents provided by Çamlıca Elektrik that relates directly to the GHG components of the project and other reference documents are given below:

1. PD for “Saraçbendi HPP Run-of-River Hydro Project”
Version 01 dated 14 July 2010
Version 02 dated 15 December 2010
Version 03 dated 04 February 2011
Version 04 dated 25 March 2011
Version 05 dated 24 May 2011
Version 06 dated 20 June 2011
Version 07 dated 21 July 2011
Version 08 dated 29 July 2011
2. Baseline Calculation Excel Sheet
Version 01 dated 14 July 2010
CM-Calculation_AKFEN_2010-07-09)
3. Investment Analysis – IRR Calculation Excel Sheet
Version 00 dated 14 July 2010
Version 01 dated 15 December 2010
Version 02 dated 04 February 2011
Version 03 dated 25 March 2011
Version 04 dated 24 May 2011
Version 05 dated 20 June 2011
4. Saraçbendi Project Report dated June 2008
5. Loan Proposal from bank dated 24/12/2007
6. E-mail for early VER consideration dated 25/08/2007
7. Agreement with Akfen Insaat Co. dated 01/03/2008 (related pages)
8. Contract with Hangzhou Yatai dated 28/05/2008 (related pages)
9. Agreement with Ozdemir Insaat for construction dated 17/04/2011 (related pages)
10. Provisional Acceptance Protocol dated 06/05/2011
11. “EIA not required” 10/01/2008
12. Grid connection agreement with TEIAS dated 14/07/2011
13. License is dated 08/04/2005, revised license (base for IRR) is dated 21/02/2008
14. Approved consolidated baseline and monitoring methodology ACM0002, version 12
15. UNFCCC’s Methodological Tool: “Tool for the demonstration and assessment of additionality”, version 05.2
16. UNFCCC’s Methodological Tool: “Tool to calculate the emission factor for an electricity system”, version 02
17. VCS PD Template – 19 November 2007
18. VCS Validation Report Template – 19 November 2007
19. Voluntary Carbon Standard 2007.1

5.2. Persons Interviewed

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

1. Mr. Ramazan Aslan, Carbon Consultant, FutureCamp Türkiye
2. Mr. Serdar Beykont, Plant Manager, Camlica Elektrik
3. Mr. Serdar Ünver, Local Employee
4. Mr. Türker Öztürk, Local Employee
5. Mr. İlhami Sırmalı, Local Employee
6. Mr. Cemal Çakmak, Head of the Saraç Village

ANNEX I – Validators' Competence

Lead Verifier: Ms. Bade Cebeci - Environmental Engineer

Bureau Veritas Certification Lead Verifier

Bade Cebeci has over 10 years experience in environmental sciences and auditing. She is a lead auditor for environment, safety and quality management systems. She is also lead verifier for GHG Emission Reduction Projects.

Verifier: Ms. Seda Yücel – M.Sc.Energy Science and Technology, Chemical Engineer

Bureau Veritas Certification – Climate Change Verifier

Seda Yucel has over 2 years of experience in management systems and 4 years of experience in energy management in industry. She is a verifier for GHG Emission Reduction Projects. Has participated various trainings on Gold Standard.

Baseline Specialist: Mrs. Yildiz Arikan - Assoc. Professor Dr

Sabancı University, Faculty of Management, Orhanlı, Tuzla, 34956, Istanbul, Turkey

Yıldız Arıkan 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, Yıldız Arıkan is working also on GHG project since 2005.

Investment Analysis Specialists: Mr. Murat Gencer – Master of Economics

RiskTürk Software Development and Consultancy – Head of Financial Analysis Team

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 modelling, risk management and MS Excel applications.

Internal Technical Reviewer: Mrs. 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.

ANNEX II - Validation Protocol

VALIDATION PROTOCOL

TABLE 1 VALIDATION REQUIREMENTS BASED ON THE VOLUNTARY CARBON STANDARD 2007.1

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
1. VCS Program specific issues					
a. Have the project(s) created another form of environmental credit (for example renewable energy certificates)?	VCS	3.1	It is stated in Section 1.13 of the VCS PD v1 that there is no other form of environmental credit generated by the Saracbendi Project.	OK	OK
b. If yes, have the project participants provided a letter from the program operator that the credit has not been used and has been cancelled from the relevant program?	VCS	3.1	As it is stated in Section 1.13 of the VCS PD v1 that there is no other form of environmental credit, question is N/A.	OK	OK
c. Are the VCS PD, monitoring reports, and other documents required under the VCS Program in English?	VCS	3.2	The VCS PD, IRR calculation sheet, CM calculation sheet and project report are in English. “EIA Exemption Document” and “Production Licence” are in Turkish. Please provide English versions of these documents.	CL-1	OK
2. Project level requirements					
a. General requirements					
a. Have the project proponent applied an approved VCS Program methodology or a methodology from an approved GHG Program based on the list of current VCS Program approved GHG Programs and methodologies as set out on www.v-c-s.org ?	VCS	5.2	ACM0002 “Consolidated methodology for grid-connected electricity generation from renewable sources”, Version 11 is applicable and used for this project. CDM methodology elements are approved under the VCS Program.	OK	OK
b. Is the Project Start Date before 1 January 2002? (If yes, a CAR shall be raised as the Project Start	VCS	5.2.1	Please discuss why the project start date is not the electromechanical contract date.	CAR-1	OK

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
Date for non-AFOLU projects for the VCS 2007.1 shall not be before 1 January 2002)					
c. Will this validation be completed within two years of the Project Start Date? If not, was this validation contracted before 19 November 2008? (If yes validation shall be completed by 19 November 2009 and proof of contracting prior to 19 November 2008 shall be provided)	VCS	5.2.1	Project start date (commissioning) is July 2012 and validation will have been completed then.	OK	OK
d. Is the earliest Project Crediting Period Start Date under the VCS 2007.1 28 March 2006 for non-AFOLU projects and 1 January 2002 for AFOLU projects ?	VCS	5.2.1	Project Crediting Period Start Date is given as 01/07/2012, the start date of the commercial operation of the plant and last until 30/06/2022. This is a non-AFOLU project and Crediting Period Start Date is not earlier than 28/03/2006.	OK	OK
e. Does the project reduce GHG emissions from activities that are included in an emissions trading program; or take place in a jurisdiction or sector in which binding limits are established on GHG emissions?	VCS	5.2.2	No, in section 8.2 of VCS PD v1, it is stated that "The project activity is neither included in an emissions trading program nor does it take place in a jurisdiction or sector in which binding limits are established on GHG emissions".	OK	OK
f. If yes, have the project proponents provided evidence that the reductions or removals generated by the project have or will not be used in the emissions trading program or for the purpose of demonstrating compliance with the binding limits that are in place in that jurisdiction or sector? [Such evidence could include: a letter from the program operator or designated national authority that emissions allowances (or other GHG credits used in the program) equivalent to the reductions or removals generated by the	VCS	5.2.2	As the answer to the above question is NO, this question is N/A.	OK	OK

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
project have been cancelled from the program; or national cap as applicable or; purchase and cancellation of GHG allowances equivalent to the GHG emissions reductions or removals generated by the project related to the program or national cap]					
g. Have project proponents claimed GHG credits from one project under more than one GHG Program? (If yes, a CAR shall be raised, as Project proponents shall not claim GHG credits from one project under more than one GHG Program)	VCS	5.2.2	It is stated in Section 1.14 of the VCS PD v1 that "Sarabendi HPP has not applied for crediting of any other GHG program nor has it been rejected from any other GHG program".	OK	OK
h. Was this project rejected by other GHG Programs?	VCS	5.2.2	It is stated in Section 1.14 of the VCS PD v1 that "Sarabendi HPP has not applied for crediting of any other GHG program nor has it been rejected from any other GHG program".	OK	OK
i. If yes, have project proponents:	VCS	5.2.2	As the answer to the above question is NO, this question is N/A.	OK	OK
i. clearly stated in its VCS PD all GHG Programs for which the project has applied for credits and why the project was rejected? (Such information shall not be deemed commercially sensitive information	VCS	5.2.2	As the answer to the above question is NO, this question is N/A.	OK	OK
ii. provided the VCS Program validator and verifier, VCS Program project database and VCS Program Registry with the actual rejection document(s) including any additional explanations?	VCS	5.2.2	As the answer to the above question is NO, this question is N/A.	OK	OK
j. Is this a renewal of the Project Crediting Period?	VCS	5.2.3	No, this is not renewal but first validation of the project.	OK	OK

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
k. If yes have a VCS Program approved validator determined that the original project baseline scenario(s) and additionality is still valid or has been updated taking account of new data and changed VCS Program requirements where applicable?	VCS	5.2.3	As this is not renewal but first validation of the project, this question is N/A.	OK	OK
b. Standards and factors					
d. Do standards and factors used to derive GHG emission data as well as any supporting data for additionality and baseline scenario(s) meet the following requirements:	VCS	5.5		OK	OK
i. be publicly available from a reputable and recognised source (e.g. IPCC, published Government data etc)?	VCS	5.5	All data are publicly available and are from trustworthy sources (governmental).	OK	OK
ii. be reviewed as part of its publication by a recognised competent organization?			All data are publicly available and are from trustworthy sources (governmental).	OK	OK
c. Project grouping					
a. Is this a grouped project?	VCS	5.6	No, this is not a grouped project (as indicated in Section 1.2 of the VCS PD v1).	OK	OK
b. If yes , was this grouped project described in one VCS PD?	VCS	5.6	As this is not a grouped project, this question is N/A.	OK	OK
c. Does this PD include a description of the central GHG information system and controls associated with the project and its monitoring?	VCS	5.6	As this is not a grouped project, this question is N/A.	OK	OK
d. What is the sampling carried out by the VCS verifier?	VCS	5.6	As this is not a grouped project, this question is N/A.	OK	OK
e. Have the sampling of a grouped project taken account of any sub groups and associated activities within each sub group?	VCS	5.6	As this is not a grouped project, this question is N/A.	OK	OK

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
f. Do this project, which intends to apply for the VCS Program VCUs as part of a grouped project also comply with the VCS Program requirements for grouped projects, detailed in the most recent version of the Program Guidelines 2007.1 on www.v-c-s.org ?	VCS	5.6	As this is not a grouped project, this question is N/A.	OK	OK
d. Content of the VCS PD					
a. Is the PDD used as a basis for validation prepared in accordance with the latest template and guidance from the VCS?	VCS	5.7	Yes, the PDD is in accordance with the latest template and guidance from the VCS.	OK	OK
b. Is there a project title?	PD temp	1.1.	Title of the project is "Saraçbendi HPP run-of-river hydro project".	OK	OK
c. Type/Category of the project	PD temp	1.2		OK	OK
i. Is it defined whether the project category is part of a GHG program that has been approved by the VCS Board?	PD temp	1.2	It is stated in Section 1.2 that project category is "Scope 1: "Energy Industry-Renewable/Non-renewable Sources". Also in Section 1.16 is explained that a CDM methodology is used and as CDM is a VCS approved GHG program, the project is also eligible under the VCS.	OK	OK
ii. Is it specified if the project is a Grouped project?	PD temp	1.2	It is specified that the project is not a grouped project.	OK	OK
d. Is the amount of emission reductions over the crediting period estimated, including project size? (Micro project: Less than 5,000 tonnes CO2 equivalent emissions reductions per year; Mega Project: More than 1,000,000 tonnes CO2 equivalent emissions reductions per year)	PD temp	1.3	-In the VCS PD v1 Section 1.4., it is indicated that "with an installed capacity of 23.7 MW, an expected annual electricity production to be sold of up to 80.895 GWh and an estimated baseline grid emission factor of 0.5502 tCO2e/MWh is expected and annual average of estimated emission reductions are 44,508 tCO2e and the estimated	CAR-2	OK

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
			amount of emission reductions over the crediting period is 445,084 tCO₂e”. -In the generation license figures for installed capacity is 10 MW, annual production is 43,740,000 kWh -In the VCS PD v1 Section 1.9, capacity is 23,7 MW, annual production is 80,8 GWh, which are different from the above figures. Please clarify.		
e. Is a brief description of the project provided?	PD temp	1.4	The brief description of the project is given as “Saraçbendi HPP is a 23.7 MW low head run-of-river power plant using a new weir structure to deviate river water of the Kızılırmak River into an intake structure with three settlement basins. From there it enters an open trapezoidal canal of 25.5 km length which runs along the left bank of the river. At the end a head pond is located with an intake to two steel penstocks of 3.90 m diameter and 156 m length each which lead to the powerhouse with the turbines. From there the water is released to the Kızılırmak River by an open canal. Saraçbendi HPP is expected to start electricity production on 1st July 2012. Produced electricity is being fed into the national grid. The project generates a substantial emission reduction by bringing carbon neutral electricity production to the	OK	OK

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
			Turkish grid. The overall emission reductions shall amount to 44,508 tCO ₂ e per year on average".		
f. Is the project location, including geographic and physical information allowing the unique identification and delineation of the specific extent of the project, and including GPS project boundaries, provided?	PD temp	1.5	The project is located downstream of Yamula River on Kızılırmak River; it lies within the boundaries of Gemerek municipality, Sivas province, in Central Anatolian Region of Turkey. The project area is 19 km northeast of Gemerek city (Sivas province), 22 km southwest of Sarkısla city (Sivas province) and 37 km north of Akkısla village (Kayseri province). The geographical coordinates of the Weir and the Power plant (provided by the PP) are: <u>Weir</u> Longitude 39° 19' 28.184" N Latitude 36° 9' 40.638" E <u>Power Plant</u> Longitude 39° 8' 30.730" N Latitude 36° 6' 43.128" E Durig site visit, coordinates of the regulator have been measured as 39° 19' 43" N and 36° 20' 50" E.	OK	OK
g. Duration of the project activity/crediting period	PD temp	1.6		OK	OK
i. Is the project start date, i.e., the date on which the project began reducing or removing GHG emissions*, provided?	PD temp	1.6	In the VCS PD v1, start date is indicated as "the initial commercial operation of the turbines:1 July 2012".	OK	OK
ii. Is the crediting period start date, i.e., the date the first monitoring period commenced,	PD temp	1.6	According to PD template, Crediting period start date is the date the first monitoring period is	CL-2	OK

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
provided? (VCS project crediting period: A maximum of ten years which may be renewed at most two times)			commenced”. In the VCS PD v1, it is stated that a renewable crediting period over 10 years shall apply and the first crediting period shall begin on start date of the commercial operation of the plant and last until 30 June 2022. Please indicate if the crediting period is to be renewed and how many times (mostly two times).		
h. Are the conditions prior to project initiation provided?	PD temp	1.7	In section 1.7. of the VCS PD v1, it is indicated that this is a Greenfield project. Please give more details regarding the conditions prior to project initiation.	CL-3	OK
i. Is a description of how the project will achieve GHG emission reductions and/or removal enhancements provided?	PD temp	1.8	In section 1.8 of the VCS PD v1, it is mentioned that “The emission reductions will be achieved by substituting electricity produced from the conventional electricity mix of the Turkish grid which depends to a large degree on fossil fuels.”	OK	OK
j. Are project technologies, products, services and the expected level of activity described?	PD temp	1.9	In section 1.9. of the VCS PD v1, it is indicated that “The 23.7 Saraçbendi run-of-river HPP produces electricity for transmission into the national grid, using the kinetic energy of the water in Kızılırmak River. For this purpose an 8 m high (from river bed) weir is constructed. From there the water is sent via a new 26 km long conveyance canal on the left bank of Kızılırmak River to a head pond. Two penstocks channel the water to four turbines powering four electricity generators. The Turbine type will be Francis, vertical type. Generated	CAR-3	OK

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
			electricity will be fed into national grid via a connection to Sarkısla District Transformer Center with 34.5 kV, 477 MCM section, 30 km transmission line. The total annual electricity production of the project activity is expected to be 80,895 GWh. Detailed technical characteristics of Saraçbendi HPP are given in the VCS PD. Figures are different in the VCS PD than the licence. Please refer to Table 1 D.d. and clarify.		
k. Does the VCS PD include identification of relevant local laws and regulations related to the project and demonstration of compliance with them?	PD temp	1.10	The PD Template indicates that “the VCS PD shall include identification of relevant local laws and regulations related to the project and demonstration of compliance with them”. In VCS PD v1, relevant laws and regulations have been identified (Electricity Market Law, Law on Utilization of Renewable Energy Resources for the Purpose of Generating Electricity Energy, Environment Law) and it is stated that “compliance is demonstrated by the authorizations and operation permits obtained.” Production license and EIA exemption are provided to DOE. Please provide water usage agreement and any other documents showing compliance with regulations (i.e. regarding waste management) Energy efficiency law is not included. Please clarify.	CL-4	OK
l. Are risks that may substantially affect the	PD	1.11	The only risk that may substantially affect the	OK	OK

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
project's GHG emission reductions or removal enhancements identified?	temp		project's GHG emission reductions or removal enhancements is identified as "Precipitation related low-water levels might lead to diminished electricity production and thus lower emission reductions".		
m. Is confirmation that the project was not implemented to create GHG emissions primarily for the purpose of its subsequent removal or destruction demonstrated?	PD temp	1.12	It is mentioned in Section 1.12 of the VCS PFD v1 that the objective of Saraçbendi HPP is the creation of carbon friendly energy generation capacity via realization of a hydro-project, the main purpose is not to create GHG emissions primarily for the purpose of its subsequent removal or destruction demonstrated.	OK	OK
n. Has the project created another form of environmental credit (for example renewable energy certificates)?	PD temp	1.13	No, the project has not created another form of environmental credit. The only other possibility that the project gets environmental credits is Gold Standard (host country is not eligible for JI/CDM projects and there is no local environmental crediting system within the country). A search through the GS project registry website retrieved no results.	OK	OK
o. If yes, has the proponent provided a letter from the program operator that the credit has not been used and has been cancelled from the relevant program?	PD temp	1.13	As the answer to the above question is NO, this question is N/A.	OK	OK
p. Was the project rejected under other GHG programs (if applicable)	PD temp	1.14	No, it is stated in Section 1.14 of the VCS PD v1 that "Saracbendi HPP has not applied for crediting of any other GHG program nor has it been rejected from any other GHG program".	OK	OK
q. If yes, does the project:	PD temp	1.14	As the answer to the above question is NO, this question is N/A.	OK	OK
i. clearly state in its VCS PD all GHG programs	PD	1.14	As the answer to the above question is NO, this	OK	OK

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
for which the project has applied for credits and why the project was rejected? (Such information shall not be deemed commercially sensitive information)	temp		question is N/A.		
ii. provide the VCS verifier and Registry with the actual rejection document(s) including explanation?	PD temp	1.14	As the answer to the above question is NO, this question is N/A.	OK	OK
r. Are project proponents roles and responsibilities, including contact information of the project proponent, other project participants provided?	PD temp	1.15	The HPP is operated and owned by Çamlıca Elektrik Üretim A.S. The VCS project proponent is Akfenhes Yatırımları ve Enerji Üretim A.S. Akfen is involved in the engineering tasks of the project and also responsible party for the management of the VER project. Contact details of the responsible and company are provided. FutureCamp Türkiye is the other party involved as PD consultant.	OK	OK
s. Is any information relevant for the eligibility of the project and quantification of emission reductions or removal enhancements, including legislative, technical, economic, sectoral, social, environmental, geographic, site-specific and temporal information provided?	PD temp	1.16	Information provided in this section is related to the project eligibility. It is stated that although the project cannot be staged under the JI/CDM – as Turkey is not eligible for staging such projects –, still an approved CDM methodology shall be applied. Pertaining thus to a VCS approved GHG program, the project at hand shall be eligible also under the VCS.	OK	OK
t. Is there any commercially sensitive information	PD	1.17	Documentary proof for Financial Analysis is	OK	OK

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
that has been excluded from the public version of the VCS PD that will be displayed on the VCS Project Database?	temp		commercially sensitive information and has been excluded from the public version of the VCS PD		
u. If yes, was it listed?	PD temp	1.17	Please indicate if the document will be displayed on the VCS Project Database.	CL-5	OK
v. Are title and reference of the VCS methodology applied to the project activity and explanation of methodology choices provided?	PD temp	2.1	The UN approved consolidated baseline methodology ACM0002 "Consolidated methodology for grid-connected electricity generation from renewable sources", Version 11 is applicable to this project. ACM0002 refers to the following tools: "Tool for the demonstration and assessment of additionality", V 05.2 "Tool to calculate the emission factor for an electricity system,V 02".	OK	OK
w. Does the project use one of the VCS program approved project methodologies and provide information relevant to methodology deviations or methodology revisions?	PD temp	2.1	Yes, CDM is a VCS approved methodology as indicated in Section 1.16 of the VCS PD v1 as: "although the project cannot be staged under the JI/CDM – as Turkey is not eligible for staging such projects –, still an approved CDM methodology shall be applied. Pertaining thus to a VCS approved GHG program, the project at hand shall be eligible also under the VCS."	OK	OK
x. Are the choice of the methodology and its applicability to the project activity justified?	PD temp	2.2	1) This methodology is applicable to grid-connected renewable power generation project activities that (a) install a new power plant at a site where no renewable power plant was operated prior to the implementation of the project activity (greenfield	CAR-4	OK

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
			plants); (b) involve a capacity addition; (c) involve a retrofit of (an) existing plant(s); or (d) involve a replacement of (an) existing plant(s): <u>Project is a Greenfield project.</u> 2) The methodology is applicable under the following conditions: a) The project activity is the installation, capacity addition, retrofit or replacement of a power plant/unit of one of the following types: hydro power plant/unit (either with a run-of-river reservoir or an accumulation reservoir), wind power plant/unit, geothermal power plant/unit, solar power plant/unit, wave power plant/unit or tidal power plant/unit <u>This is a hydropower project.</u> b) In case of hydro power plants, one of the following conditions must apply: -The project activity is implemented in an existing reservoir, with no change in the volume of reservoir; or -The project activity is implemented in an existing reservoir, where the volume of reservoir is increased and the power density of the project activity, as per definitions given in the Project Emissions section, is greater than 4 W/m²; or -The project activity results in new reservoirs and		

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
			the power density of the power plant, as per definitions given in the Project Emissions section, is greater than 4 W/m². <u>It is indicated in the VCS PD v1 that the project results in construction of a new reservoir with a power density greater than 4 W/m². Please justify.</u> 3) The methodology is not applicable to the following conditions. a) Project activities that involve switching from fossil fuels to renewable energy sources at the site of the project activity <u>The project does not involve switching from fossil fuels to renewable energy at the site of the project activity.</u> b) Biomass fired power plants; <u>Project is not a biomass fired power plant.</u> c) Hydro power plants that result in new reservoirs or in the increase in existing reservoirs where the power density of the power plant is less than 4 W/m². <u>It is indicated in the VCS PD v1 that the project</u>		

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
			<u>results in construction of a new reservoir with a power density greater than 4 W/m². Please justify.</u> Applicability of the methodology will be decided after the CL in this question is clarified.		
y. Are GHG sources, sinks and reservoirs identified for the baseline scenario and for the project?	PD temp	2.3	According to ACM0002, CO₂ emissions for the baseline and CH₄ emissions from the reservoir of the project activity are the emissions to be included. Also, if the power density is greater than 4 w/m², Project emissions are zero. In the VCS PD v1, only CO₂ emissions for the baseline are included. Please refer to Table 1 D.x. and provide calculations regarding power density.	CAR-5	OK
z. Is it described how the baseline scenario is identified and the description of the identified baseline scenario?	PD temp	2.4	According to ACM0002, baseline for “project activities that are installations of new grid connected renewable power plants” is “electricity delivered to the grid by the project activity which would have otherwise been generated by the operation of grid connected power plants and by the addition of new generation sources”. Please revise the baseline statement in accordance with the methodology.	CAR-6	OK
aa. Has the project proponent selected the most reasonable baseline scenario for the project?	PD temp	2.4	Yes, the baseline is defined in the methodology.	OK	OK
bb. Does it reflect what most likely would have occurred in the absence of the project?	PD temp	2.4	It is indicated after the baseline justification explanations that “if Saraçbendi HPP would not have been built, power from a new grid-connected thermal plant would have been the most likely scenario”.	OK	OK

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
cc. Is it described how the emissions of GHG by source in baseline scenario are reduced below those that would have occurred in the absence of the project activity (assessment and demonstration of additionality)?	PD temp	2.5	How the emissions of GHG by source in baseline scenario are reduced below those that would have occurred in the absence of the project activity (additionality) is explained in accordance with the "Tool for the demonstration and assessment of additionality v:5.2". This is in line with the methodology.	OK	OK
dd. Has the project proponent demonstrated, in the VCS PD, in addition to describing how the project meets the VCS methodology, that the project is additional based on one of the tests, the project test, the performance test, and technology test?	PD temp	2.5	Additionality is only proven by the "Tool for the demonstration and assessment of additionality v:5.2". which is in line with the methodology. No other tests like the project test, the performance test, and technology test have been done.	OK	OK
ee. Are title and reference of the VCS methodology (which includes the monitoring requirements) applied to the project activity and explanation of methodology choices provided?	PD temp	3.1	Yes, title and reference of the VCS methodology is provided. The latest version of CDM EB approved large scale "Consolidated methodology for grid-connected electricity generation from renewable sources, ACM0002, Version 11" is applied.	OK	OK
ff. Is monitoring, including estimation, modelling, measurement or calculation approaches described including:	PD temp	3.2		OK	OK
i. Purpose of monitoring?	PD temp	3.2	Please include a statement regarding the purpose of monitoring.	CL-6	OK
ii. Types of data and information to be reported, including units of measurement?	PD temp	3.2	According to the methodology: EG facility,y Cap pj Apj are the parameters to be monitored.	CL-7	OK

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
			The units, sources, measurement methods, QA/QC procedures are included in tabular format for all parameters but Cap pj. Please include monitoring methods and qa/qc procedures to be applied for parameter Cappj.		
iii. Origin of the data?	PD temp	3.2	Source of data is described as project site for each parameter.	OK	OK
iv. Monitoring, including estimation, modelling, measurement or calculation approaches?	PD temp	3.2	EGfacility,y is monitored with electricity meters (Continuous measurement and at least monthly recording) APJ is monitored from topographical surveys / maps Please indicate how CapPJ paramater will be monitored.	CL-8	OK
v. Monitoring times and periods, considering the needs of intended users?	PD temp	3.2	EGfacility,y is monitored continuously. APJ and CapPJ are monitored annually.	OK	OK
vi. Monitoring roles and responsibilities?	PD temp	3.2	Please clearly describe monitoring roles and responsibilities.	CL-9	OK
vii. Managing data quality?	PD temp	3.2	Please describe how data quality will be managed for parameters to be monitored.	CL-10	OK
gg. Are data and parameters monitored/selecting relevant GHG sources, sinks and reservoirs for monitoring or estimating GHG emissions and removals described in the tabular form including:	PD temp	3.3		OK	OK
i. Data unit?	PD temp	3.3	Tabular format for parameters to be monitored includes "data unit" information.	OK	OK
ii. Description?	PD	3.3	Tabular format for parameters to be monitored	OK	OK

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
	temp		includes "description" information.		
iii. Source of data to be used?	PD temp	3.3	Tabular format for parameters to be monitored includes "Source of data to be used" information.	OK	OK
iv. Value of data applied for the purpose of calculating expected emissions reductions?	PD temp	3.3	Tabular format for parameters to be monitored includes "Value of data applied for the purpose of calculating expected emissions reductions" information.	OK	OK
v. Description of measurement methods and procedures to be applied?	PD temp	3.3	Tabular format for parameters to be monitored includes "Description of measurement methods and procedures to be applied" information. Please fill in relevant information for Cappj parameter.	CL-11	OK
vi. QA/QC procedures to be applied?	PD temp	3.3	Tabular format for parameters to be monitored includes "QA/QC procedures to be applied" information. Please fill in relevant information for Cappj and Apj parameters.	OK	OK
vii. Any comment?	PD temp	3.3	Tabular format for parameters to be monitored includes "Any comment" information for some parameters.	OK	OK
hh. Is the monitoring plan described?	PD temp	3.4	Yes, the monitoring plan is described in Section 3.4 of the VCS PD.	OK	OK
ii. Are methodological choices explained?	PD temp	4.1	Expalantion is given as "CDM approved methodology ACM0002 was chosen as methodological basis as this methodology defines well-established procedures and has already been successfully applied to many CDM and JI projects".	OK	OK
jj. Are GHG emissions and/or removals for the	PD	4.2	Yes, baseline emissions have been quantified.	OK	OK

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
baseline scenario quantified?	temp		Calculations are approved by experts.		
kk. Are GHG emissions and/or removals for the project quantified?	PD temp	4.3	Project emissions are zero.	OK	OK
ll. Are GHG emission reductions and removal enhancements for the GHG project quantified?	PD temp	4.4	Yes, emission reductions have been quantified. Calculations are approved by experts.	OK	OK
mm. Was a summary of environmental impact assessment, when such an assessment is required by applicable legislation or regulation, provided? ISO14064-2, 5.2.k	ISO 1406 4-2	5.2.k	EIA not required document is provided to DOE.	OK	OK
nn. Were relevant outcomes from stakeholder consultations and mechanisms for on-going communication provided?	PD temp	6	It is indicated in the VCS PD that “a stakeholder consultation report shall be available at validation”. <u>Please provide stakeholder consultation report to DOE.</u> During the site visit, it has been communicated with the stakeholders that they have been promised by the project owner that: -fences will be build around the channel in dangerous places -villagers will be able to pump water for their fields from the structures -an emergency plan will be made (if somebody falls into the channel) -bridges will be built for easy transportation -pools will be built for animals with the water of ground drainage water <u>Please provide current situation or plans about these issues.</u>	CL-12	OK

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
			71 employees have attended to OHSAS training and 76 employees have attended to Handling training. Signed attendance records have been provided to DOE. 4 employees have obtained first aid certificate (presented to DOE). According to local regulations, % 10 of the employees should obtain the certificate. As around 350 people work in the field per month, <u>please provide a plan about how to increase number of employees with first aid training.</u> 12 employees are from the closest village, Şarkışla. Bills of some local purchases have been presented to DOE: sand, construction equipment, food. -Validation team has been told that around 8-10 employees (technicians) will be from nearby villages. <u>Please provide objective evidence for this.</u>		
oo. Were chronological plan for the date of initiating project activities, date of terminating the project, frequency of monitoring and reporting and the project period, including relevant project activities in each step of the GHG project cycle provided?	PD temp	7	Issuance of the License, Requests for Proposals from Consultants for VER Development, mechanical contract, Initial Agreement with a VER Consultant, Financial Closure with Bank, Contract with electrical subcontractor, Start of First Construction Activities, Signature with FutureCamp Türkiye for VER	CAR-7	OK

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
			Development and Start of operation dates are provided. Please discuss why the start date is not the mechanical contract date.		
pp. Was evidence of proof of title provided through one of the following:	PD temp	8.1		OK	OK
i. a right of use arising or granted under statute, regulation or decree by a competent authority?	PD temp	8.1	Production licence is provided as a proof of title.	OK	OK
ii. a right of use arising under law?	PD temp	8.1	Production licence is provided as a proof of title. Licence was first obtained for Camlica Elektrik Uretim A.S.bu then changed to Gungor Elektrik Uretim A.S..	OK	OK
iii. a right of use arising by virtue of a property or contractual right in the plant, equipment or process that generates GHG emission reductions and/or removals (where the right includes the right of use of such reductions or removals and the project proponent has not been divested of such right of use)?	PD temp	8.1	Production licence is provided as a proof of title.	OK	OK
iv. a right of use arising by virtue of a property or contractual right in the land, vegetation or conservational or management process that generates GHG emission reductions and/or removals (where such right includes the right of use of such reductions or removals and the project proponent has not been divested of such right of use)?	PD temp	8.1	Production licence is provided as a proof of title.	OK	OK

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
v. an enforceable and irrevocable agreement with the holder of the property or contractual right in the plant, equipment or process that generates GHG emission reductions and/or removals which vests the right of use in the project proponent?			Production licence is provided as a proof of title.	OK	OK
vi. an enforceable and irrevocable agreement with the holder of the property or contractual right in the land, vegetation or conservational or management process that generates GHG emission reductions or removals which vests the right of use in the project proponent?			Production licence is provided as a proof of title.	OK	OK
qq. Does the project reduce GHG emissions from activities that participate in an emissions trading program, or take place in a jurisdiction or sector in which binding limits are established on GHG emissions?	PD temp	8.2	No, project is not involved in activities that participate in an emissions trading program, or take place in a jurisdiction or sector in which binding limits are established on GHG emissions.	OK	OK
rr. If yes, have project proponents provided evidence that the reductions or removals generated by the project have or will not be used in the Program or jurisdiction for the purpose of demonstrating compliance, such as:	PD temp	8.2	N/A	OK	OK
i. a letter from the Program operator or designated national authority that emissions allowances (or other GHG credits used in the Program) equivalent to the reductions/removals generated by the project have been cancelled from the Program; or national cap as applicable?	PD temp	8.2	N/A	OK	OK

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
ii. purchase and cancellation of GHG allowances equivalent to the reductions/removals generated by the project related to the Program or national cap?	PD temp	8.2	N/A	OK	OK
e. Additionality					
a. Has the project proponent demonstrated that the project is additional using one of the following tests: Test 1 - The project test; Test 2 – Performance test; Test 3 – Technology test?	VCS	5.8	No, additionality is only demonstrated by the methodology ACM0002 “Consolidated baseline methodology for grid-connected electricity generation from renewable sources” Version 11 and the additionality tool referred in this methodology.	OK	OK
b. If the project proponent used Test 1:	VCS	5.8	As the referred tests have not been used question is N/A.	OK	OK
i. Step 1 – Regulatory Surplus - Is the project mandated by any systematically enforced law, statute or other regulatory framework? Laws, statutes, regulatory frameworks or policies implemented since 11 November 2001 that give comparative advantage to less emissions-intensive technologies or activities relative to more emissions-intensive technologies or activities need not be taken into account. Laws, statutes, regulatory frameworks or policies implemented since 11 December 1997 that give comparative advantage to more emissions-intensive technologies or activities relative to less emissions-intensive technologies or activities shall not be taken	VCS	5.8	As the referred tests have not been used question is N/A.	OK	OK

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
into account. (If yes a CAR shall be issued and the project shall be deemed non additional).					
ii. Step 2 – Implementation Barriers – Does the project face one (or more) distinct barrier(s) compared with barriers faced by alternative projects?	VCS	5.8	As the referred tests have not been used question is N/A.	OK	OK
i. Investment Barrier – Does the project face capital or investment return constraints that can be overcome by the additional revenues associated with the generation of VCUs?	VCS	5.8	As the referred tests have not been used question is N/A.	OK	OK
ii. Technological Barriers – Does the project face technology-related barriers to its implementation?	VCS	5.8	As the referred tests have not been used question is N/A.	OK	OK
iii. Institutional barriers – Does the project face financial, organizational, cultural or social barriers that the VCU revenue stream can help overcome?	VCS	5.8	As the referred tests have not been used question is N/A.	OK	OK
iii. Step 3 – Common Practice	VCS	5.8	As the referred tests have not been used question is N/A.	OK	OK
i. Is project type common practice in sector/region, compared with projects that have received no carbon finance?	VCS	5.8	As the referred tests have not been used question is N/A.	OK	OK
ii. if it is common practice, have the project proponents identified barriers faced compared with	VCS	5.8	As the referred tests have not been used question is N/A.	OK	OK

CHECKLIST QUESTION		Ref.	item	COMMENTS	Draft Concl	Final Concl
existing projects?						
iii.	Is the demonstration that the project is not common practice based on guidance in the GHG Protocol for Project Accounting, Chapter 7?	VCS	5.8	As the referred tests have not been used question is N/A.	OK	OK
	1. Was data on all baseline candidates within the geographic area collected?	GH G PRO TOC OL	7.4.2 AND 7.6	As the referred tests have not been used question is N/A.	OK	OK
	2. Was a relative percentage for each different technology or practice calculated? (Common practice refers to the predominant technologies or practices in a given market, as determined by the degree to which those technologies or practices have penetrated the market (defined by a specified geographic area). This percentage could be based on the number of plants or sites using each technology or practice, or could be weighted by the proportion of the total	GH G PRO TOC OL	7.4.2 AND 7.6	As the referred tests have not been used question is N/A.	OK	OK

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
output for the market that is attributed to each technology or practice.)					
c. If the project proponent used Test 2:	VCS	5.8	As the referred tests have not been used question is N/A.	OK	OK
i. Step 1 – Regulatory Surplus - Is the project mandated by any systematically enforced law, statute or other regulatory framework? Laws, statutes, regulatory frameworks or policies implemented since 11 November 2001 that give comparative advantage to less emissions-intensive technologies or activities relative to more emissions-intensive technologies or activities need not be taken into account. Laws, statutes, regulatory frameworks or policies implemented since 11 December 1997 that give comparative advantage to more emissions-intensive technologies or activities relative to less emissions-intensive technologies or activities shall not be taken into account. (If yes a CAR shall be issued and the project shall be deemed non additional).	VCS	5.8	As the referred tests have not been used question is N/A.	OK	OK
ii. Step 2: Performance Standard	VCS	5.8	As the referred tests have not been used question is N/A.	OK	OK
i. Are the emissions generated per unit output by the project below the level that has been approved by the VCS Program for the	VCS	5.8	As the referred tests have not been used question is N/A.	OK	OK

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
product, service, sector or industry, as the level defined to ensure that the project is not business-as-usual?					
ii. Are performance standard based additionality tests approved through the double approval process and by the VCS Board? (The list of approved performance standards is on www.v-c-s.org)	VCS	5.8	As the referred tests have not been used question is N/A.	OK	OK
d. If the project proponent used Test 3:	VCS	5.8	As the referred tests have not been used question is N/A.	OK	OK
i. Step 1 – Regulatory Surplus - Is the project mandated by any systematically enforced law, statute or other regulatory framework? Laws, statutes, regulatory frameworks or policies implemented since 11 November 2001 that give comparative advantage to less emissions-intensive technologies or activities relative to more emissions-intensive technologies or activities need not be taken into account. Laws, statutes, regulatory frameworks or policies implemented since 11 December 1997 that give comparative advantage to more emissions-intensive technologies or activities relative to less emissions-intensive technologies or activities shall not be taken into account. (If yes a CAR shall be issued	VCS	5.8	As the referred tests have not been used question is N/A.	OK	OK

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
and the project shall be deemed non additional).					
ii. Step 2: Technology Additionality – Are the project and its location contained in the list of project types and applicable areas approved as being additional by the VCS Program? (The approved list is available on www.v-c-s.org)	VCS	5.8	As the referred tests have not been used question is N/A.	OK	OK
f. Identifying GHG sources, sinks and reservoirs relevant to the project					
a. Refer to Clause 6, under Methodologies.	VCS	5.9	Refer to Clause 6, under Methodologies.	-	-
g. Determining the baseline scenario					
a. Has the project proponent selected the most conservative baseline scenario for the project, based on the requirements in the applicable VCS methodology?	VCS	5.10	The methodology directly states the baseline scenario 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”. The PP has no selection to make.	OK	OK
b. Does the baseline scenario set out the geographic scope as applicable to the project?	VCS	5.10	Please clearly indicate the project boundary.	CL-13	OK
c. Has the project proponent selected or established criteria and procedures for identifying and assessing potential baseline scenarios considering the following:	ISO 1406 4-2	5.4	As baseline is clearly identified in the selected methodology, ACM0002, this question is N/A.	OK	OK
i. The project description, including identified GHG sources, sinks and reservoirs;	ISO 1406	5.4	As baseline is clearly identified in the selected methodology, ACM0002, this question is N/A.	OK	OK

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
	4.2				
ii. Existing and alternative project types, activities and technologies providing equivalent type and level of activity of products or services to the project;	ISO 1406 4-2	5.4	As baseline is clearly identified in the selected methodology, ACM0002, this question is N/A.	OK	OK
iii. Data availability, reliability and limitations;	ISO 1406 4-2	5.4	As baseline is clearly identified in the selected methodology, ACM0002, this question is N/A.	OK	OK
iv. Other relevant information concerning present or future conditions, such as legislative, technical, economic, sociocultural, environmental, geographic, site-specific and temporal assumptions or projections.	ISO 1406 4-2	5.4	As baseline is clearly identified in the selected methodology, ACM0002, this question is N/A.	OK	OK
d. Has the project proponent demonstrated equivalence in type and level of activity of products or services provided between the project and the baseline scenario and has explained, as appropriate, any significant differences between the project and the baseline scenario ?	ISO 1406 4.2	5.4	Significant differences between the project and the baseline scenario have been explained in Section 2.4. of the VCS-PD.	OK	OK
e. Has the project proponent selected or established, explained and applied criteria and procedures for identifying and justifying the baseline scenario?	ISO 1406 4.2	5.4	For identification of the baseline scenario please refer to Table 1-2.g.a. Justification of the baseline scenario is carried out in Section 2.4 of the VCS PD v1.	OK	OK
f. In developing the baseline scenario, has the project proponent selected the assumptions, values and procedures that help ensure that GHG emissions reductions or removal	ISO 1406 4.2	5.4	As baseline is clearly identified in the selected methodology, ACM0002, this question is N/A.	OK	OK

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
enhancements are not over-estimated?					
g. Has the project proponent selected or established, justified and applied criteria and procedures for demonstrating that the project results in GHG emissions reductions or removal enhancements that are additional to what would occur in the baseline scenario?	ISO 1406 4.2	5.4	Additionality calculations are given in section 2.5.	OK	OK
h. Has the project participant demonstrated that the project has met all relevant regulations, legislation and project approvals (e.g. environmental permits)?	VCS	5.10	Related laws have been stated in Section 1.10 of the VCS PD v1. Please refer to Table 1-2.d.k. Please provide water usage agreement and any other documents showing compliance with regulations (i.e. regarding waste management) Energy efficiency law is not included. Please clarify.	CL-14	OK
h. Monitoring the GHG project					
a. Has the project proponent shall established and maintained criteria and procedures for obtaining, recording, compiling and analysing data and information important for quantifying and reporting GHG emissions and/or removals relevant for the project and baseline scenario (i.e. GHG information system)?	VCS	5.11	Yes, criteria and procedures for obtaining, recording, compiling and analysing data and information important for quantifying and reporting GHG emissions and/or removals relevant for the project and baseline scenario have been identified in the monitoring plan.	OK	OK
b. Do the monitoring procedures include?	VCS	5.11	Please refer to Table 1-2.d.ff	OK	OK
i. purpose of monitoring?	VCS	5.11	Please refer to Table 1-2.d.ff	OK	OK
ii. types of data and information to be reported, including units of measurement?	VCS	5.11	Please refer to Table 1-2.d.ff	OK	OK

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
iii. origin of the data?	VCS	5.11	Please refer to Table 1-2.d.ff	OK	OK
iv. monitoring methodologies, including estimation, modelling, measurement or calculation approaches?	VCS	5.11	Please refer to Table 1-2.d.ff	OK	OK
v. monitoring times and periods, considering the needs of intended users?	VCS	5.11	Please refer to Table 1-2.d.ff	OK	OK
vi. monitoring roles and responsibilities?	VCS	5.11	Please refer to Table 1-2.d.ff	OK	OK
vii. GHG information management systems, including the location and retention of stored data?	VCS	5.11	It is indicated in Section 3.4 of the VCS PD v1 that "All data monitored under the monitoring plan will be kept in electronic form and hard copy for 2 years after the end of the crediting period".	OK	OK
c. Where measurement and monitoring equipment is used, does the project proponent ensure the equipment is calibrated according to current good practice?	VCS	5.11	Please provide information regarding calibration of electricity meters.	CL-15	OK
d. Does the project proponent apply GHG monitoring criteria and procedures on a regular basis during project implementation?	VCS	5.11	This question will be answered during verification.	OK	OK
i. Monitoring reports for the GHG project					
a. Do monitoring reports include all the monitoring data, calculations, estimations, conversion factors and others standard factors as defined in the monitoring clause of the applied VCS Program methodology and set out in the VCS PD? (A list of VCS approved methodologies is available on www.v-c-s.org)	VCS	5.12	As the validation process is not completed yet, there is no monitoring plan prepared. Question is N/A.	OK	OK
j. Records relating to the project					
a. Has the project proponent kept all documents and records in a secure and retrievable manner	VCS	5.13	As the validation process is not completed yet, the crediting period has not started. Question is N/A.	OK	OK

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
for at least two years after the end of the project crediting period.?					
k. Information to validator and verifier					
a. Has the project proponent made available to the validator the VCS PD, proof of title and any requested supporting information and data needed to evidence statements and data in the VCS PD and proof of title?	VCS	5.14	License is provided as proof of title but other documents like mechanical contract and bank loan are requested for proof of dates. All required documents have been provided.	OK	OK
b. Has the project proponent made the VCS PD and validation report available to the verifiers as well as a monitoring report applicable to the period of monitoring and any requested supporting information and data needed to evidence statements and data in the monitoring report?	VCS	5.14	This question is N/A as the project is at validation stage yet.	OK	OK

* Definition of Project Start Date differ between VCS PD template and VCS 2007.1. This protocol applies the VCS 2007.1 definition.

TABLE 2 METHODOLOGY

CHECKLIST QUESTION	Ref.	§	comments		Draft Concl	Final Concl
1. Approval			COUNTRY A (Country A)	COUNTRY B (Country B)		
1.1. Has the DNA of each Party indicated as being involved in the proposed CDM project activity in section A.3 of the PDD provided a written letter of approval? State the country.	VVM	45	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	VVM	45	N/A		OK	OK

CHECKLIST QUESTION	Ref.	§	comments		Draft Concl	Final Concl
- The participation is voluntary - 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						
1.3. Is(are) the letter(s) of approval unconditional with respect to (1.2) above?	VVM	46	N/A		OK	OK
1.4. 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?	VVM	47	N/A		OK	OK
2. Participation						
2.1. Have all project participants been listed in a consistent manner in the project documentation?	VVM	51	N/A		OK	OK
2.2. Is the information in tabular form of section A.3 consistent with the contact details provided in Annex 1 of the PDD?	VVM	52	N/A		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		OK	OK
2.4. Are any entities other than those approved as project participants included in these sections of the PDD?	VVM	52	N/A		OK	OK
2.5. Has the approval of participation issued from the relevant DNA?	VVM	53	N/A		OK	OK

CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
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 VCS-PD used for validation is in effect as of 19 November 2007 and is the latest version available in VCS website.	OK	OK
3.2. Is the PDD in accordance with the applicable CDM requirements for completing the PDD?	VVM	56	Yes, PDD is in accordance with the applicable VCS requirements for completing the PDD. According to the comparison of the PDD with the PDD format, all titles have been included in the PDD.	OK	OK
3.3. In CDM-PDD section A.1 -Title of project -Current version number and date of document	EB 41	Ann 12	Project title, date and version are stated in the VCS PD version 1. Title of the project is indicated as "Saraçbendi HPP run-of-river hydro project". Date of the PDD is 14 July 2010 and version of the document is 1.	OK	OK
3.4. In CDM-PDD section A.2, are following provided?	EB 41	Ann 12		OK	OK
3.4.1. A brief description of the project activity covering purpose which includes the scenario existing prior to the start of project, project scenario and baseline scenario	EB 41 - VVM	Ann 12 - 58 59 60	Description of the project is given as "Saraçbendi HPP is a 23.7 MW low head run-of-river power plant using a new weir structure to deviate river water of the Kızılırmak River into an intake structure with three settlement basins. From there it enters an open trapezoidal canal of 25.5 km length which runs along the left bank of the river. At the end a head pond is located with an intake to two steel	CL-16	OK

CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
			penstocks of 3.90 m diameter and 156 m length each which lead to the powerhouse with the turbines. From there the water is released to the Kızılırmak River by an open canal. Saraçbendi HPP is expected to start electricity production on 1st July 2012. Produced electricity is being fed into the national grid. The project generates a substantial emission reduction by bringing carbon neutral electricity production to the Turkish grid. The overall emission reductions shall amount to 44,508 tCO₂e per year on average.” Baseline scenario identified as electricity delivered to the grid by the project would have otherwise been generated by the operation of grid connected fossil fuel power plants. The project involves the constructions of a greenfield plant. Please indicate in more details the conditions prior to project scenario (i.e. land properties and usage).		
3.4.2. Does the proposed CDM project activity involve the alteration of an existing installation or process?	VVM	63	As indicated in Section 1.7, the project involves the constructions of a greenfield plant, it is not an alteration of an existing installation or process.	OK	OK
3.4.3. Explanation on how the GHG emission reductions effected.	EB 41	Ann 12	As indicated in Section 1.8, the emission reductions will be achieved by substituting	OK	OK

CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
			electricity produced from the conventional electricity mix of the Turkish grid that depends to a large degree on fossil fuels.		
3.4.4. The PP's views on the contribution of project activity to sustainable development	EB 41	Ann 12	The PP's views on the contribution of project activity to sustainable development are: ☐ Reducing Turkey's expanding energy deficit ☐ Diversification of Turkish electricity generation mix and reduction of import dependency ☐ Creation of local employment and income during construction and operation of HPP (directly as well as indirectly via contracts with local providers for supply of construction material) ☐ Foster infrastructural investments with connected development benefits to the local rural community in the remote project area ☐ Making rural electricity supply more reliable, better available and cost efficient thanks to decreasing distances between generation and consumption points. Local employment records have been obtained during the site visit.	CL-17	OK

CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
			Please justify that the project makes rural electricity supply more reliable.		
3.5. In CDM-PDD section A.3, are following provided in the tabular format? d) List of project participants and parties e) Identification of Host Party f) Indication whether the Party wishes to be considered as project participant	EB 41 VVM	Ann 12 51,52	In section 1.15 of the VCS PD v1, the following information is provided: The HPP is operated and owned by Çamlıca Elektrik Üretim A.S. The VCS project proponent is Akfenhes Yatırımları ve Enerji Üretim A.S. Akfen is involved in the engineering tasks of the project and also responsible party for the management of the VER project. Contact details of the responsible and company are provided. FutureCamp Türkiye is the other party involved as PD consultant.	OK	OK
3.6. In CDM-PDD section A.4.1, are following provided?	EB 41	Ann 12		OK	OK
3.6.1. Physical description, location, host party(ies) and address as required	EB 41	Ann 12	Project contact data is provided in Section 1.15 of the VCS PD v1.	OK	OK
3.6.2. Detailed physical location with unique identification of the project activity (e.g. Longitude/latitude)	EB 41	Ann 12	Coordinates of the project are given in Section 1.5 of the VCS PD v1. Detailed physical location is identified with maps.	OK	OK
3.7. In CDM-PDD section A.4.2, is the list of categories of project activities provided?	EB 41	Ann 12	The respective sectoral scope is scope 1: "Energy Industry-Renewable/Non-	OK	OK

CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
			renewable Sources"		
3.8. In CDM-PDD section A.4.3, are following provided?	EB 41	Ann 12		OK	OK
3.8.1. A description of how environmentally safe and sound technology, and know-how, is transferred to the Host Party(ies)	EB 41	Ann 12	The specific environmental benefits are given as: ☐ Reduction of GHG emissions as attributable to conventional energy production in BAU scenario; ☐ Creation of local employment during construction and operation of HPP; ☐ Reduction of other pollutants from power generation in Turkey as compared to BAU. EIA not required document is presented to DOE. Project technology is an updated, current technology.	OK	OK
3.8.2. Further explanation of purpose of project activity with scenario existing prior to the start of project, scope or present activities and the baseline scenario	EB 41	Ann 12	Purpose of project activity is explained in Section 1.4. of the VCS PD.	OK	OK
3.8.3. List and arrangement of the main manufacturing/production technologies, systems and equipments involved	EB 41	Ann 12	The 23.7 Saraçbendi run-of-river HPP produces electricity for transmission into the national grid, using the kinetic energy of the water in Kızılırmak River. For this purpose an 8 m high (from river bed) weir is constructed. From there the water is sent via a new 26 km long conveyance	OK	OK

CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
			canal on the left bank of Kızılırmak River to a head pond. Two penstock channel the water to four turbines powering four electricity generators. The Turbine type will be Francis, vertical type. Generated electricity will be fed into national grid via a connection to Sarkısla District Transformer Center with 34.5 kV, 477 MCM section, 30 km transmission line. The total annual electricity production of the project activity is expected to be 80,895 GWh.		
3.8.4. The emissions sources and GHGs involved	EB 41	Ann 12	The emissions sources and GHGs involved are given as CO2 emissions for the baseline and no project emissions. This is in line with the methodology.	OK	OK
3.9. In CDM-PDD section A.4.4, is the estimation of emission reductions provided as requested in a tabular format?	EB 41	Ann 12	Estimations of annual emission reductions, the total amount of emission reductions over the crediting period and annual average of emission reductions are stated in section 1.3. of the VCS PD version 1. Calculations are correct	OK	OK
3.10. In CDM-PDD section A.4.5, is information regarding public funding provided?	EB 41	Ann 12	Please indicate in the VCS PD that project does not obtain public funding.	CAR-8	OK
3.11. In CDM-PDD section (Baseline identification)	EB 41	Ann 12			
3.11.1. The approved methodology and version number	EB 41	Ann 12	The approved CDM methodology applied is "ACM0002: Consolidated methodology	OK	OK

CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
	VVM	69	for grid-connected electricity generation from renewable sources, Version 11".		
3.11.2. Are the following applicability conditions of the methodology ACM0002 met?	VVM	70		OK	OK
3.11.2.1. This methodology is applicable to grid-connected renewable power generation project activities that (a) install a new power plant at a site where no renewable power plant was operated prior to the implementation of the project activity (greenfield plants); (b) involve a capacity addition; (c) involve a retrofit of (an) existing plant(s); or (d) involve a replacement of (an) existing plant(s).	ACM	0002	The project is a grid-connected renewable power generation project activity that is the installation of a new hydropower plant at a site where no renewable power plant was operated prior to the implementation of the project activity (greenfield plant). The selected methodology is convenient.	OK	OK
3.11.2.2. The project activity is the installation, capacity addition, retrofit or replacement of a power plant/unit of one of the following types: hydro power plant/unit (either with a run-of-river reservoir or an accumulation reservoir), wind power plant/unit, geothermal power plant/unit, solar power plant/unit, wave power plant/unit or tidal power plant/unit	ACM	0002	The project is the installation of a hydro power plant/unit as validated in the site visit.	OK	OK
3.11.2.3. In the case of capacity additions, retrofits or replacements (except for wind, solar, wave or tidal power capacity addition projects which use Option 2: on page 10 to calculate the parameter EGPJ,y): the existing plant started commercial operation prior to the start of a minimum historical reference period of five years, used for the calculation of baseline emissions and defined in the baseline emission section, and no capacity expansion or retrofit of the plant has been undertaken between the start of this minimum historical reference period and the			This is not a capacity addition, retrofit or replacement project so question is N/A.	OK	OK

CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
implementation of the project activity.					
3.11.2.4. In case of hydro power plants, one of the following conditions must apply: - The project activity is implemented in an existing reservoir, with no change in the volume of reservoir; or - The project activity is implemented in an existing reservoir, where the volume of reservoir is increased and the power density of the project activity, as per definitions given in the Project Emissions section, is greater than 4 W/m²; or - The project activity results in new reservoirs and the power density of the power plant, as per definitions given in the Project Emissions section, is greater than 4 W/m².	ACM	0001	In section 2.2 of the VCS-PD it is stated that the project results in construction of a new reservoir with a power density greater than 4 W/m². This information is intended to be shown in section 4.3 as “Regarding project emissions of hydro power plants ACM0002 refers to the power density of the water reservoir. As in the case of Saraçbendi HPP this density is above the 10 W/m² threshold (xxx W/m²; reservoir size: xxxx m², installed capacity: xxx MW), emissions from the reservoir are zero (ACM0002, page 7).” Please correct the calculation.	CAR-9	OK
3.11.2.5. The methodology is not applicable to the following conditions. Please confirm • Project activities that involve switching from fossil fuels to renewable energy sources at the site of the project activity • Biomass fired power plants; • Hydro power plants that result in new reservoirs or in the increase in existing reservoirs where the power density of the power plant is less than 4 W/m².	ACM	0002	Project does not involve switching from fossil fuels to renewable energy sources at the site of the project activity (validated in site visit) Project is not a biomass fired power plant (validated in site visit) Project does not result in new reservoirs where the power density of the power plant is less than 4 W/m²	OK	OK
3.12. Does the PDD correctly describe the project boundary, including the physical delineation of the proposed CDM	VVM	77 78	Project boundary is indicated as “The spatial extent of the project boundary	OK	OK

CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
project activity included within the project boundary for the purpose of calculating project and baseline emissions for the proposed CDM project activity?			includes the project power plant and all power plants connected physically to the electricity system that the CDM project power plant is connected to."		
3.13. In CDM-PDD section B.3, are following provided? (a) Description of all sources and gases included in the project boundary in the table (b) A flow diagram of the project boundary physically delineating the project activity with all equipments, systems and flows of mass and energy etc	VVM EB 41	79 Ann 12	Sources and gases included in the project boundary are given as CO2 for baseline and no emissions for project activity. This is in line with the methodology. Technical overview drawings and coordinates are given in the VCS-PD. Coordinates are given as 39° 19' 28.184" N and 36° 9' 40.638" E for the weir and 39° 8' 30.730" N and 36° 6' 43.128" E for the power plant. Coordinates of the regulator have been measured as 39° 19' 43" N and 36° 20' 50" E.	OK	OK
3.14. Is an explanation how the most plausible baseline scenario is identified in accordance with the selected baseline methodology is provided in CDM-PDD section B.4?	EB 41	Ann 12	It is explained that the baseline scenario is identified as defined in ACM0002 via calculation of the combined margin calculation. Justification is carried out in Section 2.4.	OK	OK
3.14.1. If the project activity is the install a new grid-connected renewable power plant/unit (greenfield plant), is the baseline scenario identified appropriately in accordance	ACM	0002	The PP has selected the most reasonable baseline scenario for the project since the baseline scenario is the scenario that is	OK	OK

CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
with the ACM0002 Ver.10?			defined in the selected methodology.		
3.14.2. If the project activity is a capacity addition to existing grid-connected renewable power plant/unit, is the baseline scenario identified appropriately in accordance with the ACM0002 Ver.10 and the point of time at which the generation facility would likely be replaced or retrofitted (DATE Baseline Retrofit) defined reasonably?	ACM	0002	The project activity is not a capacity addition. Question is N/A.	OK	OK
3.14.3. If the project activity is the retrofit or replacement of existing grid-connected renewable power plant/unit, is the baseline scenario identified following step-wise procedure in accordance with the ACM0002 Ver.10?	ACM	0002	The project activity is not a retrofit or replacement. Question is N/A.	OK	OK
3.14.3.1. Are the realistic and credible alternative baseline scenarios for power generation appropriately identified following the Step 1 of the "Combined tool to identify the baseline scenario and demonstrate additionality"? (Step 1)	ACM	0002	The project activity is not a retrofit or replacement. Question is N/A.	OK	OK
3.14.3.2. Are the realistic and credible alternative baseline scenarios i.e. P1, P2 and P3 appropriately applied Barrier analysis following the Step 2 of the "Combined tool to identify the baseline scenario and demonstrate additionality"? (Step 2)	ACM	0002	The project activity is not a retrofit or replacement. Question is N/A.	OK	OK
3.14.3.3. If more than one alternative is remaining after Step 2, is Investment analysis appropriately applied (apply an Investment Comparison as per step 3 of the "Combined tool to identify the baseline scenario and demonstrate additionality" or a Benchmark Analysis as per step 2b of the "Tool for the demonstration and assessment of additionality")? (Step 3)	ACM	0002	The project activity is not a retrofit or replacement. Question is N/A.	OK	OK
3.15. Does the PDD identify the baseline for the proposed	VVM	80	Baseline is stated as: The project activity	OK	OK

CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
CDM project activity, defined as the scenario that reasonably represents the anthropogenic emissions by sources of GHGs that would occur in the absence of the proposed CDM project activity?			is the installation of a new grid-connected renewable power plant/unit, the baseline scenario is that, electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources, as reflected in the combined margin (CM) calculations described in the 'Tool to calculate the emission factor for an electricity system'.		
3.16. Has any procedure contained in the methodology to identify the most reasonable baseline scenario, been correctly applied?	VVM	81	According to ACM0002, baseline for "project activities that are installations of new grid connected renewable power plants" is "electricity delivered to the grid by the project activity which would have otherwise been generated by the operation of grid connected power plants and by the addition of new generation sources".	OK	OK
3.17. 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	Yes, the methodology and related tools are used to establish the baseline scenario: "Tool for the demonstration and assessment of additionality", Version 05.2 "Tool to calculate the emission factor for an electricity system", Version 02	OK	OK
3.18. Does the methodology require several alternative scenarios to be considered in the identification of the	VVM	82	No, according to ACM0002, baseline for "project activities that are installations of	OK	OK

CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
most reasonable baseline scenario?			new grid connected renewable power plants" is "electricity delivered to the grid by the project activity which would have otherwise been generated by the operation of grid connected power plants and by the addition of new generation sources".		
3.19. 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? (identify the sources)	VVM	83	Baseline references have been checked and contain no problems. IRR references have been requested from the PP. Other references have been checked by the DOE.	OK	OK
3.20. Have all applicable CDM requirements been taken into account in the identification of the baseline scenario for the proposed CDM project activity?	VVM	84	There are no requirements to be taken into account in the identification of the baseline scenario for the proposed project activity. Please refer to Table 1-2.d.z.	OK	OK
3.21. 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	Policies and circumstances have been identified and correctly considered in the PDD.	OK	OK
3.22. 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	Baseline scenario is continuation of current situation and is identified as electricity delivered to the grid by the project activity which would have otherwise been generated by the operation of grid connected power plants. The grid is mainly fed by fossil fuels and the GHG source of baseline is combustion	OK	OK

CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
			of fossil fuel. The justification is given in Section 2.4 of VCS PD.		
3.23. In CDM-PDD section B.5, are following provided?	EB 41	Ann 12		OK	OK
3.23.1.Explanation and Justification of how and why this project activity is additional and therefore not the baseline scenario in accordance with the selected baseline methodology	EB 41	Ann 12	Additionality is demonstrated through investment analysis.	OK	OK
3.23.2. Has the latest version of the “Tool for the demonstration and assessment of additionality” been used?	ACM	0002	Yes, the latest version of the “Tool for the demonstration and assessment of additionality” has been used.	OK	OK
3.23.3. Evidence that the incentive from the CDM was seriously considered in the decision to proceed with the project activity, if the starting date of the project activity is before the date of validation	EB 41	Ann 12	Please provide objective evidences for dates indicated in Table A1-1 Implementation Schedule.	CAR-10	OK
3.24. In CDM-PDD section B.6.1, are following provided? (Algorithms and/or formulae used to determine emission reductions)	EB 41	Ann 12			
3.24.1. Explanation how the procedures, in the approved methodology to calculate project emissions, baseline emissions, leakage emissions and emission reductions are applied to the proposed project activity	EB 41	Ann 12	ACM0002 refers to “Tool to calculate the emission factor for an electricity system” to calculate project emissions, baseline emissions, leakage emissions and emission reductions. “Tool to calculate the emission factor for an electricity system” version 02 is used in accordance with the selected methodology.	OK	OK
3.24.2. Do the steps taken and equations applied to calculate project emissions, baseline emissions, leakage and emission reductions comply with the requirements of	VVM	88	The steps taken and equations applied to calculate project emissions, baseline emissions, leakage and emission	OK	OK

CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
the selected baseline and monitoring methodology?			reductions is in accordance with “Tool to calculate the emission factor for an electricity system”.		
3.24.2.1. Are the Project emissions appropriately calculated?	ACM	0002	Project emissions are zero as power density is greater than 4 W/m2.	OK	OK
3.24.2.2. Are the Baseline emissions appropriately calculated specifically for (a)greenfield plants or (b) retrofit and replacements or (c) capacity additions?	ACM	0002	Baseline emissions appropriately calculated specifically for greenfield plants.	OK	OK
3.24.2.3. Are the Leakage appropriately calculated?	ACM	0002	Please clarify if the project has leakage emissions.	CAR-18	OK
3.24.2.4. Are the Emission reductions appropriately calculated?	ACM	0002	Under section, 1.3 of the VCS PD version 1 it is stated that the expected annual generation is 80,895 GWh but according to the generation license annual generation is 100,470,000 kWh. Please clarify the annual generation of the project activity and revise the emission reduction calculation.	CAR-11	OK
3.24.3. Have the equations and parameters in the PDD been correctly applied with respect those in the select approved methodology?	VVM	89	The steps and equations applied are in accordance with the tool and ACM0002.	OK	OK
3.24.4. Does the methodology provide for selection between different options for equations or parameters?	VVM	89	“Tool to calculate the emission factor for an electricity system” version 02 provides different options in Steps 1, 2, 3, 4 and 5.	OK	OK
3.24.5. If yes, has adequate justification been provided and correct equations and parameters been used in accordance with the methodology selected?	VVM	89	Baseline information is given in the Annex 2 of the VCS PD version 1. The steps of the “Tool to calculate the emission factor for an electricity system” version 02 are applied. Please see below discussions for details and some discrepancies.	CL-18	OK

CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
			• Step 1: The relevant electric power system is identified in accordance with the tool. • Step 2: This step is optional and there are two options in the step 2. Option 1 is chosen, only grid power plants are included in the calculation of operating margin and build margin emission factor. • Step 3: There are four methods for calculation of the operating margin emission factor. Since the average share of electricity generation by low-cost/must-run plants for five most recent years is found to be less than 50%, option (a) is chosen. The simple OM emission factor can be calculated using either of the two data vintages: Ex-ante option and ex-post option. The ex-ante option is selected to carry out the baseline methodology for the Project. • Step 4: There are two options (Option A and Option B) in the Step 4 of "Tool to calculate the emission factor for an electricity system" version 02. Option B is applied. • Step 5: In this step, a generation-weighted average emission factor is calculated based on a sample of		

CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
			power plants, which have been taken into operation recently. The sample group of power plants/units m used to calculate the build margin consists of two options (Option a and Option b). For conducting the calculations, Option b is selected, because this option results in a larger electricity generation. In terms of vintage data, there are two options available: Option 1 (ex-ante) and Option 2 (ex-post). The ex-ante option is selected. There are two options (Option A and Option B) in the Step 4 of "Tool to calculate the emission factor for an electricity system" version 02. However, three options (Option A, Option B and Option C) are given in the VCS PD version 1. Please clarify.		
3.24.6. If yes, have correct equations and parameters been used, in accordance with the methodology selected?	VVM	89	Correct equations and parameters have been used in accordance with the selected methodology.	OK	OK
3.24.7. Appropriate and correct?	VVM	90	OM calculation excel sheet and explanation in the VCS PD version 1 are clear and correct. Efficiency figures and emission factors in the BM Calculation excel sheet are acceptable. Efficiency of coal is taken as	OK	OK

CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
			41.5% under the assumption that the plants use “fluidized technology”. The efficiency for lignite has been calculated as the weighted average of the considered plants’ efficiencies and it resulted in 38.63. This is very close to the efficiency figure for subcritical coal in the “Tool to calculate the emission factor for an electricity system-Version 02”, which 39% for units is built after 2000.		
3.24.8. Applicable to the proposed CDM project activity?	VVM	90	The project is an installation a new hydropower plant where no renewable power plant was operated prior to the implementation of the project activity (□reenfield plant). Algorithms and/or formulae used to determine emission reductions are in accordance with the ACM0002 that is applicable methodology to the □reenfield plant.	OK	OK
3.24.9. Resulting in a conservative estimate of the emission reductions?	VVM	90	The approach for emission reductions is conservative.	OK	OK
3.24.10. A compilation of information on the data and parameters that are not monitored throughout the crediting period but that are determined only once and thus remains fixed throughout the crediting period and that are available when validation is undertaken	EB 41	Ann 12	The standards and factors used to derive GHG emission data as well as any supporting data are taken from the IPCC and TEIAS that are both publicly available.	OK	OK
3.24.11. Explanation and justification for the choice of the source of data	EB 41	Ann 12	Explanation of emission factor selection for each energy sources and references are given in section 3.3 of the VCS PD version 1. No plant specific and national	OK	OK

CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
			emission factor data is available in Turkey. So, IPCC default data is used. TEIAS (Turkish Electricity Transmission Company) is the national electricity transmission company, which makes available the official data of all power plants in Turkey.		
3.24.12. Clear and transparent references or additional documentation in Annex 3	EB 41	Ann 12	Clear and transparent references are given in Annex 2 of the VCS PD version 1.	OK	OK
3.24.13. Where values have been measured, a description of the measurement methods and procedures (e.g. which standards have been used), indicated the responsible person/entity having undertaken the measurement, the date of measurement(s) and the measurement results	EB 41	Ann 12	No measured values have been used. So, the checklist question is N/A.	OK	OK
3.25. In CDM-PDD section B.6.3, are following provided?	EB 41	Ann 12		OK	OK
3.25.1. A transparent ex ante calculation of project emissions, baseline emissions (or, where applicable, direct calculation of emission reductions) and leakage emissions expected during the crediting period, applying all relevant equations provided in the approved methodology	EB 41	Ann 12	The standards and factors used to derive GHG emission data as well as any supporting data are taken from the IPCC and TEIAS that are both publicly available. The ex-ante calculation of project emissions, baseline emissions and leakage emissions met the demands of the methodology.	OK	OK
3.25.2. Documentation how each equation is applied, in a manner that enables the reader to reproduce the calculation	EB 41	Ann 12	Each equation is explained in the VCS PD version 1 and the calculation can be reproduced.	OK	OK
3.25.3. Additional background information and or data in Annex 3, including relevant electronic files (i.e. spreadsheets)	EB 41	Ann 12	The information of baseline emission	OK	OK

CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
			calculation is provided in Annex 2 of the VCS PD version 1. Excel sheet of the combined margin calculation is submitted to the validation team.		
3.26. In CDM-PDD section B.6.4 are, the results of the ex ante estimation of emission reductions for all years of the crediting period, provided in a tabular format?	EB 41	Ann 12	The results of the emission reductions for all years of the crediting period are provided in section 1.3. of the VCS PD version 1.	OK	OK
3.27. In CDM-PDD section B.7.1, are following provided?	EB 41	Ann 12		OK	OK
3.27.1. Specific information on how the data and parameters that need to be monitored would actually be collected during monitoring for the project activity	EB 41	Ann 12	Data and parameters that need to be monitored are: - Quantity of electricity generation supplied by the project plant/unit to the grid in year y, Egfacility,y - Installed capacity of the hydro power plant after the implementation of the project activity, CapPJ Area of the reservoir measured in the surface of the water, after implementation of the project activity, when reservoir full, APJ Besides these, parameters used for the calculation of combined margin are included in the monitored parameters table.	OK	OK

CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
			Required information (data unit, sources, measurement methods, QA/AC procedures) for all parameters is provided in tabulated format.		
3.27.2. For each parameter the following below information, using the table provided:	EB 41	Ann 12		OK	OK
3.27.2.1. The source(s) of data that will be actually used for the proposed project activity (e.g. which exact national statistics). Where several sources may be used, explain and justify which data sources should be preferred.	EB 41	Ann 12	For parameters Egfacity,y, CapPJ and CapPJ project activity site is the source of data. TEIAS, EPDK and IPCC are sources for parameters used for calculation of combined margin. These governmental sources are trustworthy.	OK	OK
3.27.2.2. Where data or parameters are supposed to be measured, specify the measurement methods and procedures, how the measurement is undertaken: (i) A description of the QA/QC procedures (if any) that should be applied; (ii) Where relevant: any further comment.	EB 41	Ann 12	Measured parameters are: Egfacity,y: will be measured by electricity meters (Continuous measurement and at least monthly recording) measurement results will be cross checked with records for sold electricity CapPJ: Please clarify how this parameter will be monitored. CapPJ p: will be measured from topographical surveys / maps annually	CL-19	OK

CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
3.28. In CDM-PDD section B.7.2, is a detailed description of the monitoring plan provided?	EB 41	Ann 12		OK	OK
3.29. Are all data monitored as per monitoring methodology?	ACM	0002	Parameters necessary to be monitored are Ecfacility,y, CapPJ and CapPJ and these are included in the monitoring plan.	OK	OK
3.30. Are all data collected as part of monitoring archived electronically and kept at least for 2 years after the end of the last crediting period?	ACM	0002	It is indicated in Section 3.2. in the VCS PD that all data collected as part of monitoring archived electronically and kept at least for 2 years after the end of the last crediting period.	OK	OK
3.31. In CDM-PDD section B.8, are following provided?	EB 41	Ann 12		OK	OK
3.31.1. Date of completion of the application of the methodology to the project activity study in DD/MM/YYYY	EB 41	Ann 12	Please indicate in the VCS-PD the date of completion of the application of the methodology to the project activity study in DD/MM/YYYY.	CL-20	OK
3.31.2. Contact information of the person(s)/entity(ies) responsible for the application of the baseline and monitoring methodology to the project activity	EB 41	Ann 12	Please include contact information of Futurecamp, the responsible for the application of the baseline and monitoring methodology to the project activity	CL-21	OK
3.31.3. Indication if the person/entity is also a project participant listed in Annex 1	EB 41	Ann 12	Please indicate if the person/entity is also a project participant listed in Annex 1	CL-22	OK
3.32. In CDM-PDD section C.1.1, are following provided?	EB 41	Ann 12			
3.32.1. Is the project's starting date clearly defined and evidenced?	EB 41	Ann 12	Start date for this VCS project is the date of commissioning, that is planned as July 2012.	OK	OK
3.33. In CDM-PDD section D., are the conclusions and all references to support documentation of an environmental impact assessment undertaken in	EB 41	Ann 12	EIA not necessary document (dated 10.01.2008) has been presented to DOE.	OK	OK

CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
accordance with the procedures as required by the Host Party, if environmental impacts are considered significant by the project participants or the Host, provided?					
3.34. In CDM-PDD section E.1, are the following provided?	EB 41	Ann 12		OK	OK
3.34.1. The process by which comments by local stakeholders have been invited and compiled. An invitation for comments by local stakeholders shall be made in an open and transparent manner, in a way that facilitates comments to be received from local stakeholders and allows for a reasonable time for comments to be submitted.	EB 41	Ann 12	It is indicated in section 6 of the VCS PD that "A stakeholder consultation report shall be available at validation". Please provide the said LSC report to DOE. This question will be answered when the LSC Report is presented to DOE.	CL-23	OK
3.34.2. The project activity is described in a manner, which allows the local stakeholders to understand the project activity, taking into account confidentiality provisions of the CDM modalities and procedures.	EB 41	Ann 12	As this is a VCS project, the LSC meeting was not organized in line with CDM rules, non technical summary was not available to DOE.	OK	OK
3.34.3. The local stakeholder process has been, completed before submitting the proposed project activity to the DOE for validation.	EB 41	Ann 12	LSC is not mandatory for VCS projects.	OK	OK
3.35. In CDM-PDD section E.2, are following provided?	EB 41	Ann 12		OK	OK
3.35.1. Identification of local stakeholders that have made comments	EB 41	Ann 12	As this is a VCS project, the LSC meeting was not organized in line with CDM rules, participant list was not available to DOE.	OK	OK
3.35.2. A summary of these comments.	EB 41	Ann 12	As this is a VCS project, the LSC meeting was not organized in line with CDM rules, original summary of the comments was not available to DOE. PP claims that comments were positive.	OK	OK
3.36. In CDM-PDD section E.3 is the explanation of how due	EB 41	Ann	As there have not been raised any	OK	OK

CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
account have been taken of comments received from local stakeholders provided?		12	significant concerns related to the potential impacts of the project, no changes to the project design were necessary.		
3.37. In CDM-PDD Annex 1, are the following provided?	EB 41	Ann 12		OK	OK
3.37.1. Contact information of project participants	EB 41	Ann 12	Contact data is provided for Akfenhes Yatırımları ve Enerji Üretim AS.	OK	OK
3.37.2. For each organization listed in section A.3 the following mandatory fields: Organization, Name of contact person, Street, City, Postfix/ZIP, Country, Telephone and Fax or e-mail	EB 41	Ann 12	All the required contact information is provided for Akfenhes Yatırımları ve Enerji Üretim AS.	OK	OK
3.38. In CDM-PDD Annex 2, is information from Parties included in Annex I on sources of public funding for the project activity which shall provide an affirmation that such funding does not result in a diversion of official development assistance and is separate from and is not counted towards the financial obligations of those Parties provided?	EB 41	Ann 12	It is indicated in the VCS PD that project does not obtain public funding.	OK	OK
3.39. In CDM-PDD Annex 3, is the background information used in the application of the baseline methodology provided?	EB 41	Ann 12	Baseline calculations are provided in Annex 2. Calculations are approved by experts.	OK	OK
3.40. In CDM-PDD Annex 4, is the background information used in the application of the monitoring methodology provided?	EB 41	Ann 12	No information related to monitoring is provided in Annexes.	OK	OK
4. Additionality of a project activity					
4.1. General checklist for additionality					

CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
4.1.1. Does the CDM-PDD state the latest version of the additionality tool being used?	VVM	94	Yes, the latest version of additionality tool is 5.2 and it is used in the project.	OK	OK
4.1.2. Were the steps taken of the “Tool for the Demonstration and Assessment of Additionality” to assess additionality used:	EB 39	Ann 10	Yes, the steps of the additionality tool version 5.2. are applied: Step 1: Identification of technically feasible baseline scenario alternatives to the project activity Step 2: Investment analysis Step 4: Common Practice Analysis	OK	OK
4.1.3. Have the following alternatives been included while defining alternatives as per sub-step 1a?	EB 39	Ann 10		OK	OK
4.1.3.1. The proposed project activity undertaken without being registered as a CDM project activity;	EB 39	Ann 10	Yes, the alternative of “The proposed project activity undertaken without being registered as a CDM project activity” is considered.	OK	OK
4.1.3.2. Other realistic and credible alternative scenario(s) to the proposed CDM project activity scenario that deliver outputs services or services with comparable quality, properties and application areas, taking into account, where relevant, examples of scenarios identified in the underlying methodology;	EB 39	Ann 10	Yes, the alternative of “Other realistic and credible alternative scenario(s) to the proposed CDM project activity scenario that deliver outputs services or services with comparable quality” is considered but not found to be realistic.	OK	OK
4.1.3.3. If applicable, continuation of the current situation (no project activity or other alternatives undertaken).	EB 39	Ann 10	Continuation of the current situation (no project activity or other alternatives undertaken) is considered as an alternative.	OK	OK
4.1.4. Has the outcome of Step 1a: Identified realistic and credible alternative scenario(s) to the project activity done correctly?	EB 39	Ann 10	Realistic and credible alternative scenario(s) to the project activity have been determined correctly.	OK	OK

CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
4.1.5. Is the alternative(s) in compliance with all mandatory applicable legal and regulatory requirements, even if these laws and regulations have objectives other than GHG reductions, e.g. to mitigate local air pollution, and outcome of Step 1.b is thus concluded?	EB 39	Ann 10	It is indicated in the VCS-PD that both remaining alternatives are in compliance with all mandatory applicable legal and regulatory requirements – not building a hydro power plant as well as building one.	OK	OK
4.1.6. If an alternative does not comply with all mandatory applicable legislation and regulations, has it been shown that, based on an examination of current practice in the country or region in which the law or regulation applies, those applicable legal or regulatory requirements are systematically not enforced and that noncompliance with those requirements is widespread in the country?	EB 39	Ann 10	Alternatives are in compliance with all mandatory applicable legal and regulatory requirements. Question is N/A.	OK	OK
4.1.7. Has PP selected Step 2 (Investment analysis) or Step 3 (Barrier analysis) or both Steps 2 and 3?	EB 39	Ann 10	PP has selected to do Investment Analysis.	OK	OK
4.1.8. In step 2, have all the sub-steps as below been followed?	EB 39	Ann 10		OK	OK
4.1.9. In sub-step 2a has the determination of appropriate method of analysis done as per the guidance as below?	EB 39	Ann 10		OK	OK
4.1.9.1. Simple cost analysis if the CDM project activity and the alternatives identified in Step 1 generate no financial or economic benefits other than CDM related income (Option I).	EB 39	Ann 10	Not used	OK	OK
4.1.9.2. Otherwise, use the investment comparison analysis (Option II) or the benchmark analysis (Option III). Specify option used with justification.	EB 39	Ann 10	Benchmark analysis is used	OK	OK

CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
4.1.10. Has the below guideline followed for sub-step 2b Option I. Apply simple cost analysis? Document the costs associated with the CDM project activity and the alternatives identified in Step1 and demonstrate that there is at least one alternative which is less costly than the project activity.	EB 39	Ann 10	Not used	OK	OK
4.1.11. Has the below guideline followed for sub-step 2b Option II. Apply investment comparison analysis? Identify the financial indicator, such as IRR, NPV, cost benefit ratio, or unit cost of service most suitable for the project type and decision-making context. Please specify	EB 39	Ann 10	Not used	OK	OK
4.1.12. Has the most suitable benchmark for the project been determined in Sub-step 2b?	EB 39	Ann 10	The world bank document as of May '09 is given as a reference for the benchmark IRR rate. Since the project size (23.67MW) is very high compared to the referenced project size (6MW) in world bank document, given benchmark rate can not be accepted. Besides, the date of this document is not before the investment decision date (april 2008-start of construction). As the document is not acceptable, please calculate CAPM to obtain the benchmark rate.	CAR-16	OK
4.1.12.1. Which source shall the discount rates and benchmarks derived from? Please specify benchmark and justify.	EB 39	Ann 10	World bank document is given as a reference for the benchmark rate. Please refer above.	OK	OK

CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
4.1.13. Has the below guideline followed for Sub-step 2c: Calculation and comparison of financial indicators (only applicable to Options II and III)?	EB 39	Ann 10		OK	OK
4.1.13.1. Calculate the suitable financial indicator for the proposed CDM project activity and, in the case of Option II above, for the other alternatives. Include all relevant costs (including, for example, the investment cost, the operations and maintenance costs), and revenues (excluding CER revenues, but possibly including inter alia subsidies/fiscal incentives, ODA, etc, where applicable), and, as appropriate, non-market cost and benefits in the case of public investors if this is standard practice for the selection of public investments in the host country.	EB 39	Ann 10	All necessary costs are taken into consideration in the analysis.	OK	OK
4.1.13.2. Present the investment analysis in a transparent manner and provide all the relevant assumptions, preferably in the CDM-PDD, or in separate annexes to the CDM-PDD.	EB 39	Ann 10	The analysis is done in a transparent manner.	OK	OK
4.1.13.3. Justify and/or cite assumptions.	EB 39	Ann 10	Assumptions are verified.	OK	OK
4.1.13.4. In calculating the financial/economic indicator, the project's risks can be included through the cash flow pattern, subject to project-specific expectations and assumptions.	EB 39	Ann 10	Sensitivity analysis is prepared in order to see the possible project risks.	OK	OK
4.1.13.5. Assumptions and input data for the investment analysis shall not differ across the project activity and its alternatives, unless differences can be well substantiated.	EB 39	Ann 10	The cost items in the project don't differ too much from the alternative projects.	OK	OK

CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
4.1.13.6. Present in the CDM-PDD a clear comparison of the financial indicator for the proposed CDM activity. Please specify details for above.	EB 39	Ann 10	The calculated IRR is compared by a benchmark set by the CAPM in which country risk premium is added to the risk free rate.	OK	OK
4.1.13.7. Is the period of assessment limited to the proposed crediting period of the CDM project activity?	EB 41	Ann 45	The analysis period is 42+2 (construction) which is higher than the VER crediting period. It is also smaller than the electricity generation licence period which is acceptable.	OK	OK
4.1.13.8. 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 41	Ann 45	There is no need to calculate the fair value because all assets are depreciated fully within the analysis period.	OK	OK
4.1.13.9. Does the IRR calculation include the cost of major maintenance and/or rehabilitation if these are expected to be incurred during the period of assessment?	EB 41	Ann 45	0,5% of investment cost is used to reflect the maintenance costs.	OK	OK
4.1.13.10. 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 41	Ann 45	41 years of analysis period is acceptable.	OK	OK
4.1.13.11. 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 41	Ann 45	There is no need to calculate the fair value because all assets are depreciated fully within the analysis period.	OK	OK

CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
4.1.14. Has the below guideline followed for Sub-step 2d: Sensitivity analysis (only applicable to Options II and III)? Include a sensitivity analysis that shows whether the conclusion regarding the financial/economic attractiveness is robust to reasonable variations in the critical assumptions.	EB 39	Ann 10	There must be some improvement and corrections to be done.	CAR-17	OK
			Please correct the Debt Interest Payment calculations.	OK	OK
			Please apply depreciation for the contingency item since it is significant considering the total investment cost.	OK	OK
			Please include the ELECTROMECHANICAL AND ELECTRICAL EQUIPMENTS item to the Construction Cost scenarios in the sensitivity analysis.	OK	OK
			It is found that ELECTROMECHANICAL AND ELECTRICAL EQUIPMENTS are depreciated by 10 years. However it is given as 15 years in the Input sheets. Please clarify if there is something wrong here.	OK	OK
			Please indicate if there are some additional costs in the loan agreement such as commission etc.	OK	OK

CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
			Could you please verify if there is insurance cost depends on the original asset value or on the book / market value of the asset throughout the asset life?	OK	OK
			In PDD it is found that Operating Cost doesn't exist in the sensitivity table. In IRR analysis Construction Cost scenarios affected the operation and civil works together. Please replace the construction costs by operation costs and construct the correct relations.	OK	OK
			Also, it is found that in investment cost scenarios cash flow items are changed only. The project cost item hasn't been affected so do the depreciation figures. Please link the scenario to the Project Cost sheet so that both cash flows and asset base to be depreciated can be simulated.	OK	OK
4.1.15. Has the outcome of Step 2 clearly mentioned with justification?	EB 39	Ann 10	Please clearly state the outcomes or each substep and provide an overall outcome for step 2.	CL-34	OK
4.1.16. Have the barrier analysis been conducted?	EB 39	Ann 10	No, barrier analysis has not been conducted. Question is N/A.	OK	OK

CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
4.1.17. In step 4: Common practice analysis has all the sub-steps as below followed?	EB 39	Ann 10		OK	OK
4.1.17.1. Has the below guideline followed for Sub-step 4a: Analyze other activities similar to the proposed project activity? Provide an analysis of any other activities that are operational and that are similar to the proposed project activity. Other CDM project activities are not to be included in this analysis. Provide documented evidence and, where relevant, quantitative information. On the basis of that analysis, describe whether and to which extent similar activities have already diffused in the relevant region.	EB 39	Ann 10	Other activities similar to the proposed project activity have been analyzed. Please provide a list of similar activities and discuss in details the differences with the project activity and why the project activity is not common practice.	CAR-12	OK
4.1.17.2. Has the below guideline followed for Sub-step 4b: Discuss any similar Options that are occurring?	EB 39	Ann 10	It is indicated in the VCS-PD that "Discussion from the business model perspective show that only 1.9% of the existing electricity installation capacity is potentially similar to the project. Still if we consider the special features of the project, it is hard to identify most similar projects". Please clarify why it is hard to identify most similar projects.	CL-24	OK
4.1.18. Has the outcome from Step 4 clearly mentioned in PDD?	EB 39	Ann 10	Please clearly state the outcome for step 4.	CL-35	OK
4.2. Prior consideration of the clean development mechanism					
4.2.1. Is the project activity start date prior to the date of publication of the PDD for stakeholder comments?	VVM	96	Please provide LSC Report. It is declared in the Implementation Schedule that equipment contract has been signed on 28.05.2008. Please provide the contract as objective evidence	CAR-13	OK

CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
			for this date and discuss why this date is not the start date.		
4.2.2. If yes, were the CDM benefits considered necessary in the decision to undertake the project as a proposed CDM project activity?	VVM	96	CDM awareness is proven by the confirmation by DOE, the date of first proposal from VER consultants.	OK	OK
4.2.3. Is the start date of the project activity, reported in the PDD, in accordance with the "Glossary of CDM terms", which states that "The starting date of a CDM project activity is the earliest date at which either the implementation or construction or real action of a project activity begins"?	VVM	97	As this is a VCS project, start date is defined as the date when the project begins to reduce GHG emissions.	OK	OK
4.2.4. Does the project activity require construction, retrofit or other modifications?	VVM	97	Yes, the project activity requires construction.	OK	OK
4.2.5. Is it ensured that the date of commissioning cannot be considered as the project activity start date?	VVM	97	As this is a VCS project, start date is defined as the date when the project begins to reduce GHG emissions.	OK	OK
4.2.6. Is it a new project activity (project activities with starting date on or after 02 August 2008) or an existing project activity (project activities with a start date before 02 August 2008)?	VVM	98	It is a new project activity (project activities with starting date on or after 02 August 2008) with a planned start date of July 2010.	OK	OK
4.2.7. For a new project, for which PDD has not been published for global stakeholder consultation or a new methodology proposed to the Executive Board before the project activity start date, had the PP informed the Host Party DNA and/or the UNFCCC secretariat in writing of the commencement of the project activity and of their intention to seek CDM status?	VVM	99	As this is a VCS project, question N/A.	OK	OK
4.2.8. 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	VVM	100	N/A	OK	OK

CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
provided:					
4.2.8.1. 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	100	N/A	OK	OK
4.2.8.2. 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	100	N/A	OK	OK
4.3. Identification of alternatives					
4.3.1. 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	103	Yes, the methodology that is selected by the proposed project activity describes the baseline scenario and no further analysis is required.	OK	OK
4.3.2. If no, does the PDD identify credible alternatives to the project activity in order to determine the most realistic baseline scenario?	VVM	103	Question is N/A.	OK	OK
4.3.3. 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	104	Alternatives to the project activity are given as: (a) The proposed project activity undertaken without being registered as a VEM project activity; (b) Other renewable energy scenario(s) that could also deliver electricity with comparable quality, properties; (c) Continuation of the current situation, i.e. Saraçbendi hydro project is not built.	OK	OK

CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
			Alternative (b) is not found to be realistic. Both remaining alternatives are in compliance with all mandatory applicable legal and regulatory requirements – not building a hydro power plant as well as building one and relevant laws are identified in section 1.10 as: (1) Electricity Market Law (2) Law on Utilization of Renewable Energy Resources for the Purpose of Generating Electricity Energy (3) Environment Law		
4.4. Investment analysis					
4.4.1. 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:	VVM	106		OK	OK
4.4.1.1. The most economically or financially attractive alternative?	VVM	106	The project is not the most economically or financially attractive alternative.	OK	OK
4.4.1.2. Economically or financially feasible, without the revenue from the sale of certified emission reductions (CERs)?	VVM	106	The project is not economically or financially feasible, without the revenue from the sale of certified emission reductions (CERs)	OK	OK
4.4.2. Was this shown by one of the following approaches?	VVM	107		OK	OK
4.4.2.1. Demonstrate that the proposed CDM project activity would produce no financial or economic benefits other than CDM-related income.	VVM	107	N/A	OK	OK

CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
4.4.2.2. The proposed CDM project activity is less economically or financially attractive than at least one other credible and realistic alternative.	VVM	107	N/A	OK	OK
4.4.2.3. The financial returns of the proposed CDM project activity would be insufficient to justify the required investment.	VVM	107	Since the equity IRR calculated is less than the benchmark investment rate, the financial return of investment is insufficient to justify the required rate of investment.	OK	OK
4.4.3. 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	109	All parameters, assumptions and calculations are reliable and they are in line with the accounting principles.	OK	OK
4.4.4. 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	109	All scenarios in the sensitivity analysis can happen by one by or together. The scenarios covered in the sensitivity analysis are all probable.	OK	OK
4.4.5. 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: a. Assessing previous investment decisions by the project participants involved, and b. Determining whether the same benchmark has been applied, or c. Determining if there are verifiable circumstances that have led to a change in the benchmark	VVM	110	These assessments are not done. However, there is no need to do these further studies because the difference between benchmark and calculated IRR is significant.	OK	OK
4.4.6. Did the project participants rely on values from Feasibility Study Reports (FSR) that are approved by national authorities for proposed project activities?	VVM	111	FSR is not used for IRR inputs. Proposals from subcontractors are used as IRR inputs and these documents are provided to DOE.	OK	OK

CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
4.4.7. If yes: (EB38 para.54)	VVM	111			
4.4.7.1. 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	111	Please provide electromechanical contract and bank loan agreement as objective evidence for some of the IRR inputs (some of the cells B6-B32 in inputs sheet of IRR_SARACBENDI_HPP_2010-07-14). For those which can not be validated through these documents (project and operation costs), please provide references.	CAR-14	OK
4.4.7.2. 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	111	The values used in the PDD and associated annexes are fully consistent with the FSR.	OK	OK
4.4.7.3. 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	111	The input values from the FSR are valid and applicable at the time of the investment decision. The values are cross-checked and confirmed by looking at the sectoral and local experiences.	OK	OK
4.5. Barrier analysis					
4.5.1. Has barrier analysis been used to demonstrate the additionality of the proposed CDM project activity?	VVM	113	Barrier analysis has not been carried out. Question is N/A.	OK	OK
4.5.2. If yes, does the PDD demonstrate that the proposed CDM project activity faces barriers that: a. Prevent the implementation of this type of proposed CDM project activity? b. Do not prevent the implementation of at least one of the alternatives?	VVM	113	Barrier analysis has not been carried out. Question is N/A.	OK	OK
4.6. Common practice analysis					

CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
4.6.1. Is this a large-scale or first-of-its kind small-scale project activity?	VVM	118	With 23,7 MW installed capacity this is a large scale project.	OK	OK
4.6.2. Was common practice analysis carried out as a credibility check of the other available evidence used by the project participants to demonstrate additionality?	VVM	118	Yes, common practice analysis was carried out as a credibility check of the other available evidence used by the project participants to demonstrate additionality.	OK	OK
4.6.3. Was it assessed whether the geographical scope (e.g. defined region) of the common practice analysis is appropriate for the assessment of common practice related to the project activity's technology or industry type? (For certain technologies the relevant region for assessment will be local and for others it may be trans-national /global.)	VVM	119	The geographical scope (e.g. defined region) of the common practice analysis is Turkish national grid.	OK	OK
4.6.4. Was a region other than the entire host country chosen?	VVM	119	No, the entire country is chosen.	OK	OK
4.6.5. If yes, was the explanation why this region is more appropriate assessed?	VVM	119	Question is N/A.	OK	OK
4.6.6. Using official sources and local and industry expertise, was it determined to what extent similar and operational projects (e.g., using similar technology or practice), other than CDM project activities, and have been undertaken in the defined region?	VVM	119	Please discuss in details the similar technologies.	CL-25	OK
4.6.7. Are similar and operational projects, other than CDM project activities, already "widely observed and commonly carried out" in the defined region?	VVM	119	Please indicate if the similar and operational projects are "widely observed and commonly carried out" in the defined region.	CL-26	OK
4.6.8. If yes, was it assessed whether there are essential distinctions between the proposed CDM project activity and the other similar activities?	VVM	120	Please discuss the similarities and differences between project activity and similar activities.	CL-27	OK

CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
5. Monitoring plan					
5.1. Is this monitoring plan based on the approved monitoring methodology applied to the proposed CDM project activity?	VVM	120	Yes, the monitoring plan is based on the approved monitoring methodology applied.	OK	OK
5.2. Does the monitoring plan contain all necessary parameters?	VVM	121	Yes, necessary parameters have been included in the plan.	OK	OK
5.3. Are the monitoring arrangements described in the monitoring plan feasible within the project design?	VVM	121	Please provide more details on the monitoring of the parameters.	CL-28	OK
5.4. 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	121	Emission reductions can be reported ex post and verified.	OK	OK
6. Sustainable development					
6.1. Does the CDM project activity assists Parties not included in Annex I to the Convention in achieving sustainable development?	VVM	123	Turkey is not a Party, question is not applicable.	OK	OK
6.2. 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	124	Turkey Has no DNA, question is not applicable.	OK	OK
7. Local stakeholder consultation					
7.1. 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	126	Local stakeholders were invited by the PPs to comment on the proposed VCS project activity.	OK	OK

CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
7.2. Have comments by local stakeholders that can reasonably be considered relevant for the proposed CDM project activity been invited?	VVM	127	Comments have been invited.	OK	OK
7.3. Is the summary of the comments received as provided in the PDD complete?	VVM	127	As this is a VCS project, the LSC meeting was not organized in line with CDM rules, original summary of the comments was not available to DOE. PP claims that comments were positive.	OK	OK
7.4. Have the project participants taken due account of any comments received and described this process in the PDD?	VVM	127	As there have not been raised any significant concerns related to the potential impacts of the project, no changes to the project design were necessary.	OK	OK
8. Environmental impacts					
8.1. Have the project participants submitted documentation on the analysis of the environmental impacts of the project activity?	VVM	129	EIA not necessary document (dated 10.01.2008) has been presented to DOE.	OK	OK
8.2. Have the project participants undertaken an analysis of environmental impacts?	VVM	130	EIA not necessary document (dated 10.01.2008) has been presented to DOE.	OK	OK
8.3. Does the host Party require an environmental impact assessment?	VVM	130	EIA not necessary document (dated 10.01.2008) has been presented to DOE.	OK	OK
8.4. If yes, have the environmental impact assessment approved by local government?	VVM	130	EIA not necessary document (dated 10.01.2008) has been presented to DOE.	OK	OK

TABLE 3 LEGAL REQUIREMENTS

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
1. Legal requirements					

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
1.1. Is the project activity environmentally licensed by the competent authority?	2	DR	EIA not required decision had been given by the Ministry of Environment and Forestry. EIA not required certificate is submitted to the validation team.	OK	OK
1.2. Are the conditions of the environmental license being met?	2	DR	"EIA not required certificate" has been submitted to the validation team as a proof of compliance with Environment Law.	OK	OK
1.3 Are the conditions of the Designated National Authority being met?	2	DR	There is no DNA in Turkey. Hence, the checklist question is N/A.	OK	OK

TABLE 4 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
CAR-1 Please discuss why the project start date is not the electromechanical contract date.	Table 1 2.b	Response1: Construction contract date is April 2008. VCS PD is revised accordingly. Electromechanical contract date is May 2008, which is a later date from the construction contract date. Thus, project start date is the date contract signed.	Review 1: Document showing the date of "the site being handed in to the construction subcontractor-April 2008" is provided to DOE. This date is accepted as construction start date. Commissioning date (the date when the project begins to reduce GHG

			emissions) was planned as 7/2010. Project Start Date is not before 1 January 2002. <u>The clarification request is closed.</u>
CAR-2 -In the VCS PD v1 Section 1.3., it is indicated that “with an installed capacity of 23.7 MW, an expected annual electricity production to be sold of up to 80.895 GWh and an estimated baseline grid emission factor of 0.5502 tCO₂e/MWh is expected and annual average of estimated emission reductions are 44,508 tCO₂e and the estimated amount of emission reductions over the crediting period is 445,084 tCO₂e”. -In the generation license figures for installed capacity is 10 MW, annual production is 43,740,000 kWh -In the VCS PD v1 Section 1.9, capacity is 23,7 MW, annual production is 80,8 GWh, which are different from the above figures. Please clarify.	Table 1 2.d.d	Response1: Installed capacity of the project is calculated as 24,7 MW based on the electromechanical contract, and annual electricity production of the project is 83,1 MWh as calculated in Doğru Mühendislik Feasibility report, which was submitted to the DOE. Related sections of VCS PD v1 are revised accordingly. Response to Review 1: The third revision that mentioned in license is that previous capacity 10 Mwe is increased to 25.49 Mwe. Electromechanical contract is provided to DOE. Response 2: Annual emission reductions and Table 1	Review 1: Please clarify why there is such a revision in the licence (from 25,49 Mwe to 10 Mwe). Please provide electromechanical contract so that installed capacity can be validated. <u>The clarification request is still open.</u> Review 2: Electromechanical contract is for 24,6 MW. License is for 25,49 Mwe. Annual electricity production is 100.47 GWh and the estimated baseline grid emission factor is 0.5502 tCO₂e/MWh. Annual emission reductions is 55.275 tCO₂/year.

		is revised accordingly.	In table 1 please revise emission reductions for 2011 and 2021 accordingly with the start date.
			<u>The clarification request is still open.</u> Review 3: Annual electricity production is 100.47 GWh (validated from the licence) and the estimated baseline grid emission factor is 0.5502 tCO ₂ e/MWh (checked by experts). Annual emission reductions is 55.275 tCO ₂ /year. Table 1 is correct. <u>The clarification request is closed.</u>
CAR-3 In section 1.9. of the VCS PD v1, it is indicated that "The 23.7 Saraçbendi run-of-river HPP produces electricity for transmission into the national grid, using the kinetic energy of the water in Kızılırmak River. For this purpose an 8 m high (from river bed) weir is constructed. From there the water is sent via a new 26 km long conveyance canal on the left bank of Kızılırmak River to a head pond. Two penstock channel the water to four turbines powering four electricity generators. The Turbine type will be Francis, vertical type. Generated electricity will be fed into national grid via a connection to Sarkısla District Transformer Center with 34.5 kV, 477 MCM section, 30 km transmission line. The total annual electricity production of the project activity is	Table 1 2.d.j	Response1: Figures and information in Table 1-3 are put in line with the feasibility report. Response to Review 2: Turbine types are corrected accordingly mechanical contract. Installed capacity is defined as 23.67 MW in the equipment contract. It is calculated by multiplying by rated power (5.918 MW at pg. 11) by unit number (4). Response: Rated power is also calculated by	Review 1: This CAR will be evaluated when CAR-2 is clarified. <u>The clarification request is still open.</u> Review 2: According to signed mechanical contract, turbines are vertical Francis. In page 7 of the PD, Kaplan turbines are mentioned. Please clarify. Please also clarify why the installed

expected to be 80,895 GWh. Detailed technical characteristics of Saraçbendi HPP are given in the VCS PD. Figures are different in the VCS PD than the licence. Please refer to Table 1 D.d. and clarify.		multiplying rated power factor by the power of the generator. So the installed capacity should be 23.67 MW.	capacity is defined as 23.67 as the capacity in the mechanical contract is 24,6. <u>The clarification request is still open.</u> Review 3: Francis turbines are used and the PD is revised accordingly. Installed capacity is defined as 23.67 MW in the equipment contract. It is calculated by multiplying by rated power of the generator (5.918 MW at pg. 11) by unit number (4). As the generator has a power factor of 0.86, please clarify if the electrical output of the generator is less than 23.67. <u>The clarification request is still open.</u> Review 4: Installed capacity is 23.67 MW. <u>The clarification request is closed.</u>
--	--	--	---

CAR-4 1) This methodology is applicable to grid-connected renewable power generation project activities that (a) install a new power plant at a site where no renewable power plant was operated prior to the implementation of the project activity (□greenfield plants); (b) involve a capacity addition; (c) involve a retrofit of (an) existing plant(s); or (d) involve a replacement of (an) existing plant(s): <u>Project is a Greenfield project.</u> 2) The methodology is applicable under the following conditions: a) The project activity is the installation, capacity addition, retrofit or replacement of a power plant/unit of one of the following types: hydro power plant/unit (either with a run-of-river reservoir or an accumulation reservoir), wind power plant/unit, geothermal power plant/unit, solar power plant/unit, wave power plant/unit or tidal power plant/unit <u>This is a hydropower project.</u> b) In case of hydro power plants, one of the following conditions must apply: -The project activity is implemented in an existing reservoir, with no change in the volume of reservoir; or	Table 1 2.d.x	Response1: <u>The project results in construction of a new reservoir with a power density greater than 4 W/m2.</u> Installed capacity is divided by reservoir size and the result gives the power density of the project which is 956 W/m2. Response to Review 1: Power density calculations are clearly performed under the section 4.3 of VCS PD. Reference for reservoir area is provided to the DOE.	Review 1: Data to calculate power density is now included in the PDD but please provide a reference for reservoir area. Please also include power density equation and calculation. Methodology is applicable to Saracendi project. <u>The clarification request is still open.</u> Review 2: According to technical drawings provided, reservoir area is 992,082 m2. Power density calculations are correct. <u>The clarification request is closed.</u>
---	--------------------------	--	--

-The project activity is implemented in an existing reservoir, where the volume of reservoir is increased and the power density of the project activity, as per definitions given in the Project Emissions section, is greater than 4 W/m²; or -The project activity results in new reservoirs and the power density of the power plant, as per definitions given in the Project Emissions section, is greater than 4 W/m². <u>It is indicated in the VCS PD v1 that the project results in construction of a new reservoir with a power density greater than 4 W/m². Please justify.</u> 3) The methodology is not applicable to the following conditions. g) Project activities that involve switching from fossil fuels to renewable energy sources at the site of the project activity <u>The project does not involve switching from fossil fuels to renewable energy at the site of the project activity.</u> h) Biomass fired power plants; <u>Project is not a biomass fired power plant.</u> i) Hydro power plants that result in new			
--	--	--	--

reservoirs or in the increase in existing reservoirs where the power density of the power plant is less than 4 W/m². <u>It is indicated in the VCS PD v1 that the project results in construction of a new reservoir with a power density greater than 4 W/m². Please justify.</u> Applicability of the methodology will be decided after the CL in this question is clarified.			
CAR-5 According to ACM0002, CO₂ emissions for the baseline and CH₄ emissions from the reservoir of the project activity are the emissions to be included. Also, if the power density is greater than 4 w/m², Project emissions are zero. In the VCS PD v1, only CO₂ emissions for the baseline are included. Please refer to Table 1 D.x. and provide calculations regarding power density.	Table 1 2.d.y	Response1: Power density is greater than 4 W/m² which means CH₄ and CO₂ emissions from the reservoir are zero. Response to Review 1: Power density calculations are clearly performed under the section 4.3 of VCS PD. Please refer to CAR5	Review 1: Please clearly demonstrate in the PD how the power density is calculated and provide references. <u>The clarification request is still open.</u> Review 2: Power density calculations are provided and correct. <u>The clarification request is closed.</u>
CAR-6 According to ACM0002, baseline for “project activities that are installations of new grid connected renewable power plants” is “electricity delivered to the grid by the project activity which would have otherwise been generated by the	Table 1 2.d.z	Response1: Baseline statement is revised. Response to Review 1:	Review 1: DOE could not find the revised baseline statement. Please state where the revised baseline statement is.

operation of grid connected power plants and by the addition of new generation sources". Please revise the baseline statement in accordance with the methodology.		Baseline statement is revised under the section 2.4 of VCS PD.	<u>The clarification request is still open.</u> Review 2: Baseline is stated as: The project activity is the installation of a new grid-connected renewable power plant/unit, the baseline scenario is that, electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources, as reflected in the combined margin (CM) calculations described in the 'Tool to calculate the emission factor for an electricity system'. <u>The clarification request is closed.</u>
CAR-7 Issuance of the License, Requests for Proposals from Consultants for VER Development, mechanical contract, Initial Agreement with a VER Consultant, Financial Closure with Bank, Contract with electrical subcontractor, Start of First Construction Activities, Signature with FutureCamp Türkiye for VER Development and Start of operation dates	Table 1 2.d.oo	Response1: Construction contract signed date is set to be project starting date since, with this contract the project investor committed to the overall investment. Construction contract date is April 2008. VCS PD is revised accordingly.	Review 1: All objective evidences for the dates in the timeline are provided. Document showing the date of "the site being handed in to the construction subcontractor-April 2008" is provided to DOE. This date is accepted as construction start

are provided. Please discuss why the start date is not the mechanical contract date.		Objective evidences for all dates given in the PDD are provided to the DOE.	date. <u>The clarification request is closed.</u>
CAR-8 Please indicate in the VCS PD that project does not obtain public funding.	Table 2 3.10	Response1: Statement is added to the VCS PD.	Review 1: Statement is added to the VCS PD. <u>The clarification request is closed.</u>
CAR-9 In section 2.2 of the VCS-PD it is stated that the project results in construction of a new reservoir with a power density greater than 4 W/m ² . This information is intended to be shown in section 4.3 as “Regarding project emissions of hydro power plants ACM0002 refers to the power density of the water reservoir. As in the case of Saraçbendi HPP this density is above the 10 W/m ² threshold (xxx W/m ² ; reservoir size: xxxx m ² , installed capacity: xxx MW), emissions from the reservoir are zero (ACM0002, page 7).” Please correct the calculation.	Table 2 3.11.2.4	Response1: Calculation is corrected in the related section.	Review 1: The empty fields are filled in power density data. <u>The clarification request is closed.</u>
CAR-10 Please provide objective evidences for dates indicated in Table A1-1 Implementation Schedule.	Table 2 3.23.3	Response1: Evidences are provided	Review 1: All objective evidences for the dates in the timeline are provided. <u>The clarification request is closed.</u>
CAR-11 Under section, 1.3 of the VCS PD version 1 it is	Table 2	Response1:	Review 1:

stated that the expected annual generation is 80,895 GWh but according to the generation license annual generation is 100,470,000 kWh. Please clarify the annual generation of the project activity and revise the emission reduction calculation.	3.24.2.4	Expected annual generation is corrected to 83.100 MWh and the emission reduction calculations are revised.	This CAR will be evaluated when the CARs about the license are closed. Review 2: Emission reductions are appropriately calculated. <u>The clarification request is closed.</u>
CAR-12 Other activities similar to the proposed project activity have been analyzed. Please provide a list of similar activities and discuss in details the differences with the project activity and why the project activity is not common practice.	Table 2 4.1.17.1	Response1: Similar activities are listed. Response to Review 1: Reference is revised for the figure 7.	Review 1: The list of similar projects is provided. Reference for figure 7 is not reproducible to DOE. Please clarify. Review 2: Reference for figure 7 is reproducible.OK
		Response to Review 1: The statement is justified after it. It is stated before the table 10.	Please provide a reference for statement "only 1.93% of the installed capacity is potentially similar to Saraçbendi HPPs". Review 2: Statement is explained.OK
		Response to Review 1: Related section is revised accordingly in	Please check the sentence "Hence all those power plants NOT belonging to these companies

		the VCS PD.	cannot be considered similar to the proposed project activity". Does the PP mean "the power plants BELONGING to these companies cannot be considered similar to the proposed project activity". Review 2: OK
		Response to Review 1: Statement is deleted.	Please provide a reference for statement "In case of Saraçbendi HPP these special project specific factors (notably the long conveyance canal) lead to significantly increased investment costs – thus defining project characteristics which are hard to be found in many other hydro power projects". Review 2: Statement is deleted.OK
		Response to Review 1: It is discussed in sub-step 4b in the section 2.5 of VCS PD. Response 2: Analyses of the similar projects are done in the section 2.5 of the VCS PD.	Regarding the statement "still if we consider the special features of the project, it is hard to identify most similar projects. At the same time it is easy to conclude that the Saraçbendi HPP kind of project is not common practice in Turkey", please discuss the similar project in more details. Is it impossible to

		Response 3: Common practice analysis is explained under the section 2.5 of the VCS PD. Response 4: Common practice analysis is revised under the section 2.5 of the VCS PD	obtain information about them? Please compare them with Saracabendi by means of capacity and geography. Please also compare if these projects use VER revenues or not. Review 2: Among the similar projects please sort and discuss the projects by means of geographic location, installed capacity and (referring to carbon crediting project registres) carbon revenue status. Narrow down similar projects and discuss in more details. Review 3: List of similar projects is provided for whole country but discussion is carried out only for Sivas. Please determine clearly the scope of common practice analysis and discuss if it is conservative to choose only Sivas for the scope of common practice analysis. Review 4: In order to be conservative, please consider all the projects in the list provided. Please discuss if those
--	--	--	---

			projects get VER revenues, compare them by scale etc. Review 5: Similar projects have been discussed. <u>The clarification request is closed.</u>
CAR-13 Please provide LSC Report. It is declared in the Implementation Schedule that equipment contract has been signed on 28.05.2008. Please provide the contract as objective evidence for this date and discuss why this date is not the start date.	Table 2 4.2.1	Response1: LSC report is added under the section of 6 in the VCS PD. Construction contract signed date is set to be project starting date since, with this contract the project investor committed to the overall investment	Review 1: All objective evidences for the dates in the timeline are provided. <u>The clarification request is closed.</u>
CAR-14 Please provide electromechanical contract and bank loan agreement as objective evidence for some of the IRR inputs (some of the cells B6-B32 in inputs sheet of IRR_SARACBENDI_HPP_2010-07-14). For those which can not be validated through these documents (project and operation costs), please provide references.	Table 2 4.4.7.1	Response1: Documents are provided to DOE. Response to Review 1: Updated IRR sheet is provided to the DOE. All references related to figures are given in the IRR excel sheet reference column next to the related inputs.	Review 1: Documents are provided to DOE and CAR-15 is raised for the mechanical contract. Please make a neat list of IRR inputs clearly indicating --input name --input value --name of reference document --page/column number of related value <u>The clarification request is still open.</u>

		Response to Review 2: OK	Review 2: The IRR inputs not mentioned below are validated with documents that are dated before the investment decision date (April 2008-start of construction)
		Response to Review 2: Date is corrected accordingly.	The "Loan Proposal of ABN-AMRO dated 24.12.2006" is shown as document for IRR input. The date of this document is 2007. Please revise. Review 3: OK
		Response to Review 2: As it can be seen in the Generation License previous owner of the project is Güngör Elektrik which is mentioned in the Loan proposal in the borrowers section.	The "Loan Proposal of ABN-AMRO dated 24.12.2006" is not for Camlica Elektrik (Saracbendi HEPP). Please clarify. Review 3: Name of company is changed before loan proposal date. OK
		Response to Review 2: Table is revised accordingly.	In timeline on page 40, start of construction (April 2008) is before mechanical contract (May 2008). Please revise the table in correct order. Review 3:

			Table is corrected. OK
		Response to Review 2: Reference is revised accordingly Response: In the IRR excel sheet installed power is corrected and taken from Generation License of the Saraçbendi HPP.	25,6 MW value is from "VA TECH BH_Saraçbendi_Proposal February 2008". Not the "Electromechanical Contract" as indicated in D22 cell of saracbendi IRR. Please revise the document name. Review 4: Installed power is taken from the licence. OK
		Response to Review 2: Document is provided to the DOE.	Start date of construction was validated with Hakedis document. With this document the DOE can not validate the civil works cost (28.000.000 Euro). Please provide Agreement with Özdemir İnşaat dated 17.04.2008. Review 3: Civil works cost (28.000.000 Euro) is validated from contract. OK
			<u>The clarification request is closed.</u>
CAR-15 Mechanical contract is provided to DOE. The contract only shows the specifications of one turbine. It does not show the number of units. Please provide the related pages, too.		Response1: Related documents are provided to the DOE.	Review 1: Mechanical contract is for 4 turbines. <u>The clarification request is closed.</u>

CAR-16 The world bank document as of May '09 is given as a reference for the benchmark IRR rate. Since the project size (23.67MW) is very high compared to the referenced project size (6MW) in world bank document, given benchmark rate can not be accepted. Besides, the date of this document is not before the investment decision date (april 2008-start of construction). As the document is not acceptable, please calculate CAPM to obtain the benchmark rate.	Table 1 4.1.12.	Response 1: CAPM calculation is performed in the sub-step 2b of section 2.5	Review 1: CAPM calculation is correct. <u>The clarification request is closed.</u>
CAR-17	Table 1 4.1.14.		
Please correct the Debt Interest Payment calculations.		Response 1: Debt interest payment calculations are corrected	Review 1: Interest payment calculations are corrected.
Please apply depreciation for the contingency item since it is significant considering the total investment cost.		Response 1: Depreciation is applied for the contingency. Response: It is corrected.	Review 1: The asset of CIVIL WORKS is double counted in the depreciation calculations. Please remove it from the formula Review 2: The action taken is correct.
Please include the ELECTROMECHANICAL AND ELECTRICAL EQUIPMENTS item to the		Response 1 : ELECTROMECHANICAL AND	Review 1: Contingency item could have been

Construction Cost scenarios in the sensitivity analysis.		ELECTRICAL EQUIPMENTS item is included to the construction cost in the sensitivity analysis. Response: Contingency item has already considered in the sensitivity analysis since contingency is 15% of the civil works and electromechanical cost . when electromechanical cost and cşvşl works is multiplied or divided by something contingency is also effected so it is also effected by sensitivity analysis.	included in the sensitivity as well. Please include it Review 2: The clarification is correct.
It is found that ELECTROMECHANICAL AND ELECTRICAL EQUIPMENTS are depreciated by 10 years. However it is given as 15 years in the Input sheets. Please clarify if there is something wrong here.		Response 1 : It is depreciated for 15 years.	Review 1: OK
Please indicate if there are some additional costs in the loan agreement such as commission etc.			Review 1: It is seen that Arrangement Fee is added to the finance costs.
Could you please verify if there is insurance cost depends on the original asset value or on the book / market value of the asset throughout the asset life?		Response 1 : As it can be seen in the operating cost calculation a total value is used. In that calculation insurance and all that costs. So there is no need to calculate them again.	Review 1: The clarification is acceptable
In PDD it is found that Operating Cost doesn't		Response 1 :	Review 1:

exist in the sensitivity table. In IRR analysis Construction Cost scenarios affected the operation and civil works together. Please replace the construction costs by operation costs and construct the correct relations.		It is corrected. Response 2: It is corrected.	There is no need to multiply the Total Operating Cost by the sensitivity parameter since it is already multiplied in the Maintenance and Personnel Expenses and System Usage and Management Fee items. Please remove the sensitivity parameter multiplication in the total cost part. Review 1: The correction is made.
Also, it is found that in investment cost scenarios cash flow items are changed only. The project cost item hasn't been affected so do the depreciation figures. Please link the scenario to the Project Cost sheet so that both cash flows and asset base to be depreciated can be simulated.		Response 1 : It is corrected.	Review 1: OK
			<u>The clarification request is closed.</u>
CAR-18 Please clarify if the project has leakage emissions.	Table 2 3.24.2.3	Response : It is clarified under the section 4.3 of the VCS PD.	Review 1: There are no leakage emissions. <u>The clarification request is closed.</u>

CL-1 The VCS PD, IRR calculation sheet, CM calculation sheet and project report are in English. “EIA Exemption Document” and “Production Licence” are in Turkish. Please provide English versions of these documents.	Table 1 1.c	Response1: The original Turkish version of the License and the “EIA not required certificate” contains the signature and is thus the appropriate documentation	Review 1: “EIA Exemption Document” and “Production Licence” are only presented in Turkish. <u>The clarification request is closed.</u>
CL-2 According to PD template, Crediting period start date is the date the first monitoring period is commenced”. In the VCS PD v1, it is stated that a renewable crediting period over 10 years shall apply and the first crediting period shall begin on start date of the commercial operation of the plant and last until 30 June 2022. Please indicate if the crediting period is to be renewed and how many times (mostly two times).	Table 1 2.d.g.ii	Response1: Crediting period will be renewed two times. The statement is added to the VCS PD.	Review 1: The statement that “Crediting period will be renewed two times” is added to the VCS PD. <u>The clarification request is closed.</u>
CL-3 In section 1.7. of the VCS PD v1, it is indicated that this is a Greenfield project. Please give more details regarding the conditions prior to project initiation.	Table 1 2.d.h	Response1: Section 1.7 is revised. Response to Review 1: Details about land is mentioned in the section 1.7 of VCS PD. Response 2: Documents will be provided to the DOE in	Review 1: Please provide more details about what the land was used for before the project (forest, field etc) <u>The clarification request is still open.</u> Review 2: Project land was mainly fields for agriculture. Please provide (with objective evidences) information

		the next round. Response 3: Related document is provided to the DOE.	about the current situation of the expropriation process. <u>The clarification request is still open</u> Review 3: Please summarize latest situation about the expropriation process. <u>The clarification request is still open</u> Review 4: According to an official letter from project owner, expropriation process is still going on. As this issue follows the legal procedures, no more questioning is made. <u>The clarification request is closed.</u>
CL-4 The PD Template indicates that “the VCS PD shall include identification of relevant local laws and regulations related to the project and demonstration of compliance with them”. In VCS PD v1, relevant laws and regulations have been identified (Electricity Market Law, Law on Utilization of Renewable Energy Resources for the Purpose of Generating Electricity Energy, Environment Law) and it is stated that “compliance is demonstrated by the authorizations and operation permits obtained.”	Table 1 2.d.k	Response1: Water usage agreement is provided. Electricity Market Law, Law on Utilization of Renewable Energy Resources for the Purpose of Generating Electricity Energy, Environment Law are included to VCS PD section 1.10. Energy efficiency law is added. Response:	Review 1: Water usage agreement and one wastewater and one MSW disposal document is provided to DOE. Energy efficiency law is added. As it is declared to DOE during conversations with Futurecamp that that Saracbendi project area includes many stakeholders in the expropriation process, please also

Production license and EIA exemption are provided to DOE. Please provide water usage agreement and any other documents showing compliance with regulations (i.e. regarding waste management) Energy efficiency law is not included. Please clarify.		Identification of these law and regulations and demonstration the compliance of the project activity with these laws and regulations are given in the Section 1.10 of VCS PD Response 2: Please refer to CL-3. Response 3: Please refer to CL-3.	demonstrate with objective evidences that all expropriation process is finished without problems. <u>The clarification request is still open.</u> Review 2: Project land was mainly fields for agriculture. Please provide (with objective evidences) information about the current situation of the expropriation process. <u>The clarification request is still open</u> Review 3: Please summarize latest situation about the expropriation process. <u>The clarification request is still open</u> Review 4: According to an official letter from project owner, expropriation process is still going on. As this issue follows the legal procedures, no more questioning is made. <u>The clarification request is closed.</u>
CL-5 Please indicate if the document will be displayed	Table 1	Response1:	Review 1:

on the VCS Project Database.	2.d.u	The included VCS guidance from the blank PD template has been erased. Please refer to section 1.17.	The financial analysis document which is commercially sensitive is provided to DOE. <u>The clarification request is closed.</u>
CL-6 Please include a statement regarding the purpose of monitoring.	Table 1 2.d.ff.i	Response1: VCS PD is updated.	Review 1: Purpose of monitoring is determined as “measurement and analysis of greenhouse gas emissions of the project within the project boundary in order to determine the amount of emission reductions that are attributable to the project”. <u>The clarification request is closed.</u>
CL-7 According to the methodology: EG facility,y Cap pj Apj are the parameters to be monitored. The units, sources, measurement methods, QA/QC procedures are included in tabular format for all parameters but Cap pj. Please include monitoring methods and qa/qc procedures to be applied for parameter Cappj.	Table 1 2.d.ff.ii	Response1: Monitoring methods and qa/qc procedures to be applied for parameter Cappj is added. Source of data and qa/qc procedures to be applied for parameter Apj is given.	Review 1: All the required parameters are added in the monitoring plan. <u>The clarification request is closed.</u>
CL-8	Table 1	Response1:	Review 1:

EG facility, y is monitored with electricity meters (Continuous measurement and at least monthly recording) APJ is monitored from topographical surveys / maps Please indicate how CapPJ parameter will be monitored.	2.d.ff.iv	CapPJ parameter is indicated.	"Cross-checking of instrument specifications of the installed turbines/generators (MW) and the indication in the PD" is the monitoring method of Cap pj. <u>The clarification request is closed.</u>
CL-9 Please clearly describe monitoring roles and responsibilities.	Table 1 2.d.ff.vi	Response1: An explanation is added in section 3.4 for monitoring, roles and responsibilities.	Review 1: Monitoring roles and responsibilities are stated. <u>The clarification request is closed.</u>
CL-10 Please describe how data quality will be managed for parameters to be monitored.	Table 1 2.d.ff.vii	Response1: Managing data qualities are stated in section 3.4. of the VCS PD. Response to Review 1: The table in the section 3.3 for the parameter CapPJ is revised accordingly. Response 2: Related table in the Section 3.3 is revised accordingly. Response 3: Section 3 of the PDD is revised and the	Review 1: Please provide more details on calibration of electricity meters. <u>The clarification request is still open.</u> Review 2: Please provide more details on calibration of electricity meters. <u>The clarification request is still open.</u> Review 3: Please provide more details on

		calibration of electricity meters is explained in detailed.	calibration of electricity meters. Please define the legal requirements and the role of the project owner about calibration. <u>The clarification request is still open</u> Review 4: Detailed information about calibration is provided. <u>The clarification request is closed.</u>
CL-11 Tabular format for parameters to be monitored includes "Description of measurement methods and procedures to be applied" information. Please fill in relevant information for Cappj parameter.	Table 1 2.d.gg.v	Response1: Cappj parameter is filled.	Review 1: Description of measurement methods are described for each parameter. <u>The clarification request is closed.</u>
CL-12 It is indicated in the VCS PD that "a stakeholder consultation report shall be available at validation". Please provide stakeholder consultation report to DOE.	Table 1 2.d.nn	Response1:	Review 1: LSC report is provided to DOE. Comments on LSC are handled in a different CAR.OK
12 employees are from the closest village, Şarkışla. Bills of some local purchases have been presented to DOE: sand, construction equipment, food.			OK
During the site visit, it has been communicated with the stakeholders that they have been		Building fences, pools and bridges are	Review 1:

promised by the project owner that: -fences will be build around the channel in dangerous places -villagers will be able to pump water for their fields from the structures -an emergency plan will be made (if somebody falls into the channel) -bridges will be built for easy transportation -pools will be built for animals with the water of ground drainage water Please provide current situation or plans about these issues.		still in progress. When it is finished Doe will be informed. Response to Review 1: DOE will be informed when the services are finished. It is considered that these measures are detail of project implementation and VCS validaiton process only asks for compliance with the environmental laws and regulations this is already demonstrated wtih necessary approval and permissions submitted to DOE. Response 2: Occupational Health and Safety Regulation is deleted from the VCS PD.	The mentioned services have not been finished yet._Please let DOE know when they are finished. <u>The clarification request is still open.</u> Review 2: Please demonstrate compliance with Occupational Health and Safety Regulation. <u>The clarification request is still open.</u> Review 3: Employees have safety trainings and records have been provided to DOE. <u>The clarification request is closed.</u>
71 employees have attended to OHSAS training and 76 employees have attended to Handling training. Signed attendance records have been provided to DOE. 4 employees have obtained first aid certificate (presented to DOE). According to local regulations, % 10 of the employees should obtain the certificate. As around 350 people work in the field per month, please provide a plan about how to increase number of employees with first aid training.		Six more employees have obtained first aid certificate. Certificates are provided to Doe. Response to Review 1: Necessary health and safety tranings and attented list of these trainings are already provided to DOE. In Turkey there is no local regulations and all health and safety regulations are valid for whole country.	Review 1: Only one new first aid certificate is provided to DOE. Please provide the others too. Review 2: According to health and safety regulations, % 10 of the employees should obtain first aid certificate. Please explain if the company has a plan to increase number of employees that will have first aid

		Response 2: It is considered that these measures are detail of project implementation and VCS validaiton process only asks for compliance with the environmental laws and regulations this is already demonstrated wtih necessary approval and permissions submitted to DOE. In addition to that first aid certificates are also provided to the DOE with the request of the DOE. In addition to that 71 employees have attented to OHSAS training.	training. <u>The clarification request is still open.</u> Review 3: Employees have safety trainings and records have been provided to DOE. <u>The clarification request is closed.</u>
-Validation team has been told that around 8-10 employees (technicians) will be from nearby villages. Please provide objective evidence for this.		Response to Review 1: These evidences were provided to validation team during site visit also validation had some interviews with the workers from local. Response 2: We asked for the documents. So obtaining the documents one more time will take some time. Documents will be provided to the DOE in the next round. Response 3: Documents are provided to the DOE.	Review 1: Validation team has been told that around 8-10 employees (technicians) will be from nearby villages. Please provide objective evidence for this. Review 2: As the DOE auditor has changed and documents are no longer available, please provide objective evidences that local people are employed. Review 3: Documents will be available to DOE.

			Review 3: Social security records and residence records have been provided to DOE.
			<u>The clarification request is closed.</u>
CL-13 Please clearly indicate the project boundary.	Table 1 2.g.b	Response1: Project boundary is clearly indicated. Response to Review 1: Project boundary is indicated under the section 2.3 of VCS PD.	Review 1: Please state where in the VCS PD the project boundary is clearly stated. To avoid duplication of questions, please state the page or section number while indicating any revisions in the protocol. d <u>The clarification request is still open.</u> Review 2: Project boundary is indicated as "The spatial extent of the project boundary includes the project power plant and all power plants connected physically to the electricity system that the CDM project power plant is connected to." <u>The clarification request is closed.</u>
CL-14	Table 1	Response1:	Review 1:

Related laws have been stated in Section 1.10 of the VCS PD v1. Please refer to Table 1-2.d.k. Please provide water usage agreement and any other documents showing compliance with regulations (i.e. regarding waste management) Energy efficiency law is not included. Please clarify.	2.g.h	Water usage agreement and regarding waste management is provided. Energy efficiency law is included to VCS PD section 1.10.	Water usage agreement and one wastewater and one MSW disposal document is provided to DOE. Energy efficiency law is added. <u>The clarification request is closed.</u>
CL-15 Please provide information regarding calibration of electricity meters.	Table 1 2.h.c	Response1: It is stated in the VCS PD section 3.2 Response to Review 1: Please refer CL10. Response 2: Please refer to CL-10. Response 3: Please refer to CL-10	Review 1: Please describe in details the calibration procedures. <u>The clarification request is still open.</u> Review 2: Please provide more details on calibration of electricity meters. <u>The clarification request is still open.</u> Review 3: Please provide more details on calibration of electricity meters. Please define the legal requirements and the role of the project owner about calibration. <u>The clarification request is still open</u>

			Review 4: Detailed information about calibration is provided. <u>The clarification request is closed.</u>
CL-16 Description of the project is given as “Saraçbendi HPP is a 23.7 MW low head run-of-river power plant using a new weir structure to deviate river water of the Kızılırmak River into an intake structure with three settlement basins. From there it enters an open trapezoidal canal of 25.5 km length which runs along the left bank of the river. At the end a head pond is located with an intake to two steel penstocks of 3.90 m diameter and 156 m length each which lead to the powerhouse with the turbines. From there the water is released to the Kızılırmak River by an open canal. Saraçbendi HPP is expected to start electricity production on 1st July 2012. Produced electricity is being fed into the national grid. The project generates a substantial emission reduction by bringing carbon neutral electricity production to the Turkish grid. The overall emission reductions shall amount to 44,508 tCO₂e per year on average.” Baseline scenario identified as electricity delivered to the grid by the project would have otherwise been generated by the operation of grid connected fossil fuel power plants.	Table 2 3.4.1	Response1: Section 1.7 in the VCS PD is revised. Response to Review 1: Please refer to CL03.	Review 1: Please provide more details about what the land was used for before the project (forest, field etc) <u>The clarification request is still open.</u> Review 2: Project description is provided. Please refer to CL-4. <u>The clarification request is closed.</u>

The project involves the constructions of a greenfield plant. Please indicate in more details the conditions prior to project scenario (i.e. land properties and usage).			
CL-17 The PP's views on the contribution of project activity to sustainable development are: ☐ Reducing Turkey's expanding energy deficit ☐ Diversification of Turkish electricity generation mix and reduction of import dependency ☐ Creation of local employment and income during construction and operation of HPP (directly as well as indirectly via contracts with local providers for supply of construction material) ☐ Foster infrastructural investments with connected development benefits to the local rural community in the remote project area ☐ Making rural electricity supply more reliable, better available and cost efficient thanks to decreasing distances between generation and consumption points. Local employment records have been obtained during the site visit. Please justify that the project makes rural	Table 2 3.4.4	Response1: Documents are provided to DOE Response to Review 1: The statement is deleted.	Review 1: If the PP claims that "the project makes rural electricity supply more reliable" this should be justified with references. Please justify. <u>The clarification request is still open.</u> Review 2: The statement is deleted. <u>The clarification request is closed.</u>

electricity supply more reliable.			
CL-18 Baseline information is given in the Annex 2 of the VCS PD version 1. The steps of the “Tool to calculate the emission factor for an electricity system” version 02 are applied. Please see below discussions for details and some discrepancies. • Step 1: The relevant electric power system is identified in accordance with the tool. • Step 2: This step is optional and there are two options in the step 2. Option 1 is chosen, only grid power plants are included in the calculation of operating margin and build margin emission factor. • Step 3: There are four methods for calculation of the operating margin emission factor. Since the average share of electricity generation by low-cost/must-run plants for five most recent years is found to be less than 50%, option (a) is chosen. The simple OM emission factor can be calculated using either of the two data vintages: Ex-ante option and ex-post option. The ex-ante option is selected to carry out the baseline methodology for the Project. • Step 4: There are two options (Option A and Option B) in the Step 4 of “Tool to calculate the emission factor for an electricity system” version 02. Option B is applied. • Step 5: In this step, a generation-weighted average emission factor is calculated based	Table 2 3.24.5	Response1: In Step-4, the options are revised to be Option A and Option B to be in line with the emission factor tool v2.	Review 1: The steps of the “Tool to calculate the emission factor for an electricity system” version 02 are correctly applied <u>The clarification request is closed.</u>

on a sample of power plants, which have been taken into operation recently. The sample group of power plants/units m used to calculate the build margin consists of two options (Option a and Option b). For conducting the calculations, Option b is selected, because this option results in a larger electricity generation. In terms of vintage data, there are two options available: Option 1 (ex-ante) and Option 2 (ex-post). The ex-ante option is selected. There are two options (Option A and Option B) in the Step 4 of “Tool to calculate the emission factor for an electricity system” version 02. However, three options (Option A, Option B and Option C) are given in the VCS PD version 1. Please clarify.			
CL-19 Measured parameters are: EGfacility,y: will be measured by electricity meters (Continuous measurement and at least monthly recording) measurement results will be cross checked with records for sold electricity CapPJ:Please clarify how this parameter will be monitored. CapPJ p: will be measured from topographical surveys / maps annually	Table 2 3.27.2.2	Response1: Way of monitoring Cap,pj is clarified.	Review 1: “Cross-checking of instrument specifications of the installed turbines/generators (MW) and the indication in the PD” is the monitoring method of Cap pj. <u>The clarification request is closed.</u>

CL-20 Please indicate in the VCS-PD the date of completion of the application of the methodology to the project activity study in DD/MM/YYYY.	Table 2 3.31.1	Response1: Date format is revised.	Review 1: Application date of the methodology and the tools is 14 July 2010. <u>The clarification request is closed.</u>
CL-21 Please include contact information of Futurecamp, the responsible for the application of the baseline and monitoring methodology to the project activity	Table 2 3.31.2	Response1: Contact information is added.	Review 1: Contact information is added. <u>The clarification request is closed.</u>
CL-22 Please indicate if the person/entity is also a project participant listed in Annex 1	Table 2 3.31.3	Response1: The entity is not a participant of the project and VCS PD is revised accordingly.	Review 1: FutureCamp Türkiye is not a participant of the project. <u>The clarification request is closed.</u>
CL-23 It is indicated in section 6 of the VCS PD that "A stakeholder consultation report shall be available at validation". Please provide the said LSC report to DOE. This question will be answered when the LSC Report is presented to DOE.	Table 2 3.34.1	Response1: LSC report is added under the section 6 in the VCS PD.	Review 1: LSC report is added under the section 6 in the VCS PD. An invitation for comments by local stakeholders was made in an open and transparent manner, in a way that facilitates comments to be received from local stakeholders and allows for a reasonable time for comments to be submitted. <u>The clarification request is closed.</u>
CL-24 It is indicated in the VCS-PD that "Discussion	Table 2 4.1.17.2	Response1: Hence all those power plants not	Review 1: Response is not related with the

from the business model perspective show that only 1.9% of the existing electricity installation capacity is potentially similar to the project. Still if we consider the special features of the project, it is hard to identify most similar projects". Please clarify why it is hard to identify most similar projects.		belonging to these companies cannot be considered similar to the proposed project activity.	question. Please refer to CAR-12 as the common practice analysis is evaluated with CAR-12. <u>The clarification request is closed.</u>
CL-25 Please discuss in details the similar technologies.	Table 2 4.6.6	Response1: Table 10 given in the PDD shows all power plants in operation by the end of 2008, means these figures are including plants commissioned also in previous years. EMRA website includes issued licenses. This is not equivalent to the actual number of plants in operation which shall be based on common practice analysis.	Review 1: Please refer to CAR-12 as the common practice analysis is evaluated with CAR-12. <u>The clarification request is closed.</u>
CL-26 Please indicate if the similar and operational projects are "widely observed and commonly carried out" in the defined region.	Table 2 4.6.7	Response1: There is no similar project in the defined region. Response to Review 1: Please refer to CAR12	Review 1: Please refer to CAR-12 as the common practice analysis is evaluated with CAR-12. Please provide a reference for the statement "There is no similar project in the defined region". <u>The clarification request is still open.</u> Review 2:

			Common practice analysis clarifications are requested in CAR-12. <u>The clarification request is closed.</u>
CL-27 Please discuss the similarities and differences between project activity and similar activities.	Table 2 4.6.8	Response1: Table 10 given in the PDD shows all power plants in operation by the end of 2008, means these figures are including plants commissioned also in previous years. EMRA website includes issued licenses. This is not equivalent to the actual number of plants in operation which shall be based on common practice analysis.	Review 1: Please refer to CAR-12 as the common practice analysis is evaluated with CAR-12. <u>The clarification request is closed.</u>
CL-28 Please provide more details on the monitoring of the parameters.	Table 2 5.3	Response1: Monitoring of the parameters are detailed.	Review 1: Monitoring arrangements are feasible but details on calibration are missing. This issue will be handled in CL-10. <u>The clarification request is closed.</u>
CL-29 It is indicted in the timeline that start of operation is planned in July 2010. As this date already passed please provide information about the current situation.		Start date of the operation is revised as 01.04.2011.	Review 1: Start of operation is estimated to be in April, 2011. <u>The clarification request is closed.</u>
CL-30 Is the LSC meeting done in Sarac village or Belen		LSC meeting dene in Saraç village and it is corrected in the section 6 of VCS PD.	Review 1: Village name is corrected.

village? Please clarify as on page 35 both names exist.			<u>The clarification request is closed.</u>
CL-31 According to technical drawings provided, reservoir area is 992,082 m2. Please clarify why on page 26, data is different.		Response : It is corrected.	Review 1: Reservoir area is corrected. <u>The clarification request is closed.</u>
CL-32 Please define technical lifetime and operational lifetime of the project as per CDM tools (for example EB50 annex 15)		Response : Definitions of the technical lifetime and operational lifetime are explained under section 2.5 of the VCS PD.	Review 1: Technical and operational lifetime are defined correctly. Crediting period is in line with the lifetime. <u>The clarification request is closed.</u>
CL-33 Please move the VAT line from P/L table to cash flow table		Response: It is removed from P/L table to cash flow table.	Review 1: Correction is made. <u>The clarification request is closed.</u>
CL-34 Please clearly state the outcomes or each substep and provide an overall outcome for step 2.		Response: Overall outcome for step 2 is added to the VCS PD.	Review 1: Outcome is clearly stated in the PDD. <u>The clarification request is closed.</u>
CL-35 Please clearly state the outcome for step 4.		Response: Overall outcome for step 4 is added to the VCS PD.	Review 1: Outcome is clearly stated in the PDD. <u>The clarification request is closed.</u>
CL36 In CAPM calculation Eurobonds should be taken at time of investment decision which is the construction start date for Sarabendi (17-04-2008). Please revise the calculation and PD and provide a clear reference for Eurobonds		Benchmark calculation for investment analysis is revised. New benchmark is set by using default values in Appendix of Guidelines on assessment of investment analysis" Version 05 (see: See: http://cdm.unfccc.int/Reference/Guidclarif/	Review 1: Please clarify why the benchmark is changed from CAPM calculation to a reference to a guideline. <u>The clarification request is still open.</u>

(including document page number)		reg/reg_guid03.pdf). Please refer to section 2.5 of PD for revision. Response: Benchmark analysis is written as former version of the VCS PD. Eurobond date is revised accordingly.	Review 1: CAPM calculation is used with correct Eurobond rates. <u>The clarification request is closed.</u>
CL37 Please provide a reference in the PD for following statement “The β_i for the Electricity Index is calculated as 0.922 by Bloomberg which is one of the prominent data suppliers in financial markets.”		Benchmark calculation for investment analysis is revised. New benchmark is set by using default values in Appendix of Guidelines on assessment of investment analysis” Version 05 (see: See: http://cdm.unfccc.int/Reference/Guidclarif/reg/reg_guid03.pdf). Please refer to section 2.5 of PD for revision. Response: B calculation is now in line with the methodology.	Review 1: Beta value is assumed to be zero and assumption is approved by financial experts. <u>The clarification request is still open.</u>
CL38 Please update ACM0002 v11 to v12 as v12 is the latest available version at time of validation report.		Version number of ACM0002 is revised to be V12.1.0 in PD.	Review 1: ACM0002 v12 is indicated in the PD now. <u>The clarification request is closed.</u>
CL39 In the monitoring section following expression exists: “The measurement is done hourly while readings are conducted on a monthly basis.” As the “on site plant technicians readings and TEIAS personnel readings” are not clear for the reader, please clarify in the PD the monitoring roles. Who does the reading, who does the		Explanations are added under monitoring section.	Review 1: Explanations are added: -Meters are read by TEIAS staff monthly, a protocol is prepared and signed by both on site by technicians and TEIAS staff. -Yearly electricity generation will be

measurement and where the records are kept. Please also state the monitoring frequencies and records storage periods.			calculated by summing up monthly meter reading records. Data monitored will be kept in electronic form and hard copy until the end of second year after the end of crediting period. <u>The clarification request is closed.</u>
CL40 In section 2.2. please include ALL applicability conditions stated in ACM0002 and discuss each of them even if they are related to the project or not.		Applicability conditions of ACM0002 is stated and discussed under Section 2.2 of PD.	Review 1: Applicability conditions of ACM0002 is stated and discussed under Section 2.2 of PD. <u>The clarification request is closed.</u>
CL41 It is stated that "The project is expected to start with the initial commercial operation of the turbines on 1st July 2012". As this date is already in the past, please clarify if the production began and provide provisional acceptance if available.		Production start date has been changed and provisional acceptance document is provided to DOE together with this protocol.	Review 1: Provisional acceptance dated 6/5/2011 is provided to DOE. This is the date when the plant begins to generate electricity. <u>The clarification request is closed.</u>
CL42 If project starts in 2012, please revise the sentence "the first crediting period shall begin on start date of the commercial operation of the plant and last until 1 st May 2021."		The date mentioned in given sentence is corrected.	Review 1: Correction is made. <u>The clarification request is closed.</u>
CL43 In Section 3.3. regarding the explanations in "Description of measurement methods and procedures to be applied" for $\eta_{m,y}$, efficiency		Expressions are revised to include efficiency of each plant. Response: In the CM calculation sheet for the power	Review 1: Data for each plant is used separately. Please also update the CM calculation data sheet and

value: the tool needs to get efficiency plants for each plant (an average is not identified). Please clarify		plants separate data has already been used older version of the excel sheet is correct. So there is no change on the CM calculation data sheet and on the PDD.	update the PD if the EF changes. <u>The clarification request is still open.</u> Review 1: Explanation is accepted. <u>The clarification request is closed.</u>
CL44 “Starting date of construction activities is set to be project-starting date since, with these activities the project investor committed to the overall investment” In this sentence “project-starting date” is actually “investment decision date”. Please revise the expression in the PD.		Expression is revised accordingly.	Review 1: Correction is made. <u>The clarification request is closed.</u>
CL45 Date of VCS PD: 20 June 2011 should be version 6 according to DOE records. Please revise the date and provide the VCS PD without the changes requested in this version of the protocol. Then please make the correction on PD version 7.(provide 2 PDD)		Response: It is corrected. PDD's are provided to the DOE.	Review 1: Versions are correct now. <u>The clarification request is closed.</u>
FAR1 Please observe on site how the possible deviations between two meters is monitored by Camlica elektrik and in which cases action is taken.			

