



Voluntary Carbon Standard 2007.1
Validation Report

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Validation Report:

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Validation Report for "Feke II 69.58 MW Hydroelectric Power Plant "	Burcu Mutman 
Client:	Project Title:
Global Tan Enerji A.S	"Feke II 69.58 MW Hydroelectric Power Plant
Summary:	
Bureau Veritas Certification has made the validation of "Feke II 69.58 MW Hydroelectric Power Plant". The project activity involves the installation of a 69.58 MW hydro electric power plant (HEPP) located at the south of Turkey, in the Mediterranean Region, on the Goksu Creek, a main branch of Seyhan River, within the province of Adana, about 9 km to Feke I district. 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 122,205 tonnes of CO₂e (tCO₂e). Renewable crediting period is chosen for the project activity. The crediting period of the project activity is 10 years, which may be renewed at most two times. 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 10 and meets the relevant VCS 2007.1 requirements and local legislation.	
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TABLE OF CONTENTS:

1	<i>INTRODUCTION</i>	4
1.1	Objective	4
1.2	Scope and Criteria	4
1.3	VCS Project Description	4
1.4	Level of assurance	5
2	<i>METHODOLOGY</i>	5
2.1	Review of Document	5
2.2	Follow-up Interviews	5
2.3	Resolution of any material discrepancy	5
3	<i>VALIDATION FINDINGS</i>	6
3.1	Project Design	6
3.2	Baseline	7
3.3	Monitoring Plan	11
3.4	Calculation of GHG Emissions	14
3.5	Environmental Impact	16
3.6	Comments by stakeholders	16
4	<i>VALIDATION CONCLUSION</i>	17
5	<i>REFERENCES</i>	18
5.1.	Documents	18
5.2.	Persons Interviewed	19
	<i>ANNEX I – Validators’ Competence</i>	20
	<i>ANNEX II - Validation Protocol</i>	21

Abbreviations List:

HEPP	: Hydro Electric Power Plant
CL	: Clarification
CAR	: Corrective Action Request
MP	: Monitoring Plan
VCS	: Voluntary Carbon Standard
VCU	: Voluntary Carbon Unit
VER	: Voluntary Emissions Reductions / Verified Emissions Reductions
PD	: Project Description
EMRA	: Electricity Market Regulatory Authority (EPDK)
EPDK	: Elektrik Piyasasi Duzenleme Kurulu (EMRA)
TEIAS	: Turkiye Elektrik Iletim A.S. (Turkish Electricity Transmission Company)
DSI	: Devlet Su Isleri (State Hydraulic Works)
PP	: Project Proponent
CDM	: Clean Development Mechanism
HES	: Hidro Elektrik Santrali (Hydro Electric Power Plant)

1 INTRODUCTION

This report summarizes the findings of the validation of the “Feke II 69.58 MW Hydroelectric Power Plant” 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 69.58 MW runoff-river hydro electric power plant (HEPP) located at the south of Turkey, in the Mediterranean Region, on the Goksu Creek, a main branch of Seyhan River, within the province of Adana, about 9 km southwest of Feke I district. Feke I and Feke II projects were first developed by General Directorate of DSI (State Hydraulic Works) as a single project, to generate energy by utilizing the water potential of Goksu Branch in Seyhan Basin. However it was seen during the feasibility studies that the project would cause whole of Feke district to be covered with water, therefore the project was divided into Feke I and Feke II projects which are developed as individual projects. Akkur Enerji Uretim Sanayi ve Ticaret A.S. has been awarded the project after bidding by the Turkish Energy Market Regulatory Authority (EMRA) and won the rights of the license for a period of 49 years.

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 223.410 GWh /year of electricity to supply the national grid using a renewable resource. Electricity generated by the power plant will be delivered to the grid by a 7 km long 154 kV, 795 MCM overhead transmission line. 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 expected average annual emission reduction is 122,205 tonnes of CO₂e (tCO₂e). Renewable crediting period is chosen for the project activity. The crediting period of the project activity is 10 years which may be renewed.

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 Global Tan Enerji A.S and additional background documents related to the project design and baseline, i.e. Country 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, Global Tan Enerji A.S revised the PD several times, PD version 03.1 being the last version which was submitted to the validation team on 16.06.2010. All corrective action requests and clarification requests were closed in 07.07.2010.

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

2.2 Follow-up Interviews

Between December 2009 and May 2010 Bureau Veritas Certification performed interviews with Global Tan Enerji A.S 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 07.07.2010 all documented CL and CAR in the validation protocol.

2.3 Resolution of any material discrepancy

During the validation totally 53 clarification requests and 27 corrective actions have been raised which have all been closed during the validation process.

3 VALIDATION FINDINGS

3.1 Project Design

Bureau Veritas Certification recognizes that Global Tan Enerji A.S which is the project proponent is helping the country in fulfilling its goals of promoting sustainable development with this project. The project is in line with country specific requirements.

The conclusions of the validation team are as follows:

- The technology used:

The characteristics of the proposed project; as given below have been validated during the site visit through the approved feasibility reports and the purchase agreements of which the references are given in annex 5.1. of this report.

LOCATION:	GÖKSU RIVER/FEKE DISTRICT/ADANA PROVINCE
DESIGN DISCHARGE:	127.50 M3/SEC
LENGTH OF TUNNEL:	317 M
AVERAGE NATURAL FLOW	51.17 M3/SEC
GROSS HEAD:	63 M
RIVERBED HEIGHT	485 M
CREST HEIGHT	545 M
TOTAL INSTALLED CAPACITY:	69.58 MW
RESERVOIR VOLUME	1610.5 HM3
MAX. RESERVOIR SURFACE AREA	2.477 KM2
NUMBER OF UNITS:	2 EACH
TURBINE TYPE:	FRANCIS TYPE – VERTICAL AXIS
TURBINE MANUFACTURER:	ECIDI
GENERATOR TYPE:	3 PHASE SYNCHRONOUS WITH 0.98 EFFICIENCY
LENGTH OF ENERGY TRANSMISSION LINE:	7 KM
ENERGY TRANSMISSION LINE CAPACITY:	154 KV
NUMBER OF PENSTOCKS:	1
LENGTH OF PENSTOCK:	171 M
AVERAGE ANNUAL POWER GENERATION:	223.410 GWH
GRID CONNECTION	THE GRID CONNECTION SHALL BE PROVIDED BY MEANS OF A 7 KM LONG 795 MCM ENERGY TRANSMISSION LINE TO FEKE I TRANSFORMER SUBSTATION,

Characteristics of Feke-II HEPP

The electricity delivery to the grid by the project is estimated to be 223.410 GWh per annum. The quantity of electricity required for operation of the plant is at a negligible level.

The technology used in the plant is a state-of-the-art technology with extensive automatization. The equipment to be provided is brand new according to the electromechanical equipment agreement. There is no new technology which is expected to replace the plant's technology in the short run. The project does not need extensive initial training and maintenance efforts in order to work as presumed during the project planning period. Necessary trainings to the plant staff will be delivered by the supplier in line with the agreement between the project owner and the supplier. The agreement between the supplier and Akkur Enerji Uretim Sanayi ve Ticaret A.S has been reviewed by the validation team. The related training records shall be verified during the first verification of the project activity.

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

Expected starting date of the project activity is 01.07.2011 when the plant commences electricity generation. The carbon crediting period and therefore the monitoring starts when the plant commences electricity generation. The crediting life is a maximum of ten years which may be renewed at most two times.

The expected life time of the project starting from May 2007 is 49 years according to duration of the license obtained from EMRA. The indicated project duration corresponds to 45 years starting from the expected starting date of the project activity as given in the PD. However, the equipments may be renewed (as recommended) during the lifetime of the project activity according to the conditions of the equipments.

- Ownership

The generation license belongs to Akkur Enerji Uretim Sanayi ve Ticaret A.S. A copy of the generation license is given in Annex 6 of the PD.

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 69.58 MW HEPP and it uses renewable sources to produce electricity. Since the installed capacity of the planned HEPP is larger 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 "Feke II 69.58 MW Hydroelectric Power Plant" project is established by using the UNFCCC official methodology ACM0002, version 10, namely "Consolidated baseline methodology for grid-connected electricity generation from renewable sources".

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.

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 10**, is justified as the proposed project activity meets relevant applicability criteria:

Applicability condition in the ACM0002/Version 10	Compliance of the condition
This methodology is applicable when the project activity is the installation, capacity addition, retrofit or replacement of a power plant/unit of one of the following types: hydro power plant/unit (either with a run-of-river reservoir or an accumulation reservoir), wind power plant/unit, geothermal power plant/unit, solar power plant/unit, wave power plant/unit or tidal power plant/unit.	The project activity is a Greenfield grid connected hydropower project with a accumulation reservoir.
In the case of capacity additions, retrofits or replacements: the existing plant started commercial operation prior to the start of a minimum historical reference period of five years, used for the calculation of baseline emissions and defined in the baseline emission section, and no capacity expansion or retrofit of the plant has been undertaken between the start of this minimum historical reference period and the implementation of the project activity.	This condition is not applicable to the project activity as it involves the installation of a new hydroelectric power plant.
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	The project activity results in new reservoirs and the power density of the power plant, as per definitions given in the Project Emissions section, is greater than 4 W/m ² The power density (PD) for this reservoir is calculated as follows: PD = 69580000 W/2477000 m ² PD = 29.08 W/m ²

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.	PD > 4 W/m² PD > 10 W/m², therefore, according to the methodology, there will be no emissions from the reservoir.
This methodology is not applicable to project activities that involve switching from fossil fuels to renewable energy sources at the site of the project activity, since in this case the base line may be the continued use of fossil fuels at the site.	This condition is not applicable to the project activity as it does not involve switching from fossil fuel to renewable energy at the site of the project activity.
This methodology is not applicable to biomass fired power plants.	This condition is not applicable to the project activity as it does not involve the installation of a biomass fired power plant.
In the case of retrofits, replacements, or capacity additions, this methodology is only applicable if the most plausible baseline scenario, as a result of the identification of baseline scenario, is "the continuation of the current situation, i.e. to use the power generation equipment that was already in use prior to the implementation of the project activity and undertaking business as usual maintenance".	This condition is not applicable to the project activity as it does not involve a capacity addition, retrofit or replacement of existing grid-connected renewable power plant/unit(s).

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:

"Electricity delivered to the grid by the project 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 emission factor for an electricity system"

The defined baseline scenario is in line with the methodology as the project activity is the installation of a new grid-connected renewable power plant.

As the project activity is not a retrofit or replacement of existing grid-connected renewable power plant, the step-wise procedure to identify the baseline given in ACM 0002 version 10 is not used for this project activity.

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 1: Proposed project not undertaken as a VER project activity

Alternative 2: Continuation of the current situation-supply of equal amount of electricity by the grid connected power plants.

Alternative 3: Construction of a thermal power plant with the same installed capacity or the same annual power output.

All three alternatives have been defined as realistic in the PD. Analyzing the alternatives that are defined as realistic, it is seen that all scenarios are consistent with the baseline definition of ACM0002 / Version 10. All of the alternatives are in compliance with legal requirements as they are practices currently present in the 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 and the other options are eliminated because, the proposed Project generates financial and economic benefits through the sales of electricity other than Voluntary Emissions Reduction (VCS-VER) related income. Therefore the simple cost analysis (Option I) cannot be taken. Investment comparison analysis (Option II) is only applicable to projects where alternatives should be similar investment projects. Since the baseline of the project is generation of electricity by the grid and there exist no publicly available data for comparison with alternative investment types, no alternative investment is considered for comparison. This method is also assessed to be appropriate by the validation team.

Under sub-step 2b, Equity IRR is selected as a financial indicator. As a benchmark, Turkish Eurobond rate increased by a suitable risk premium is used. The Turkish Eurobond rate has been selected as 6.83 for the date May 2007 with a maturity date of 2030. The Eurobond rate at the time of investment decision which is the date of the generation license (May 2007) is taken. The maturity date of the Eurobond rate is also convenient for the investment analysis period which is selected as 20 years. The country risk premium is taken from the study of Prof. Aswath Damodara as 9.41%. As a result; the benchmark value has been selected as 16.24 %. 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 final approved version of the IRR calculation sheet is dated 30 May 2010

Majority of the data used in the IRR calculations are taken from the feasibility report of the Akkur Enerji.

The electricity sales price is taken as 5.5 € Cents/kWh which is the minimum purchase guarantee offered by the State as an incentive to renewable energy investments. Hence this sales price is accepted by the validation team.

The depreciation periods of machinery, equipment and other fixed assets are taken as per the local rules and regulations.

The IRR of the project activity is around 7.38 % without the VER revenues and around 8.81 with VER revenues at USD 7 /tCO₂ for 20 years both of which are under the benchmark expectation of 16.24%.

The above analysis shows that the project is not financially attractive without VER revenues for the investor.

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

- Total investment
- Electricity selling price
- Annual operational costs

for a decrease of 5%, 10% and 20% and for an increase of 5% , 10% and 20 % .

The results of the sensitivity analysis are presented below;

	% Fluctuation						
	-20	-10	-5	0	5	10	20
Investment Cost	11.28	9.17	8.24	7.38	6.58	5.83	4.47
Operating Cost	7.80	7.59	7.48	7.38	7.27	7.16	6.95
Electricity Income	3.69	5.60	6.50	7.38	8.23	9.05	10.64

The above sensitivity analysis shows that the project is still not financially attractive due to the changes in total investment electricity selling price and annual operational cost.

The common practice analysis:

According to the "Tool for the demonstration and assessment of additionality" version 05.2, the common practice analysis shall be applied unless the proposed project activity has demonstrated to be first of its kind. Under the common practice analysis section of the PD, HEPP projects in the country is compared with the thermal power plants. Also an analysis of the HEPPs in Turkey is given.

It has been stated that share of HEPPs in total installed capacity of Turkey is about 32.8% whereas share of HEPPs in total generation is only 18.7%. Also, the distribution of hydro power capacity by utilities has been demonstrated and it has been concluded generation capacity of the hydroelectric power plants owned by generation companies is 1,503 GWh by end of 2007 which corresponds to 0.78% of the total generation capacity(191,558.1 GWh) of Turkey at that time.

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 consolidated monitoring methodology for grid connected generation from renewable sources named as "Approved Monitoring Methodology ACM0002 / Version 10 is applied. All the applicability conditions of the monitoring methodology are the same as the applicability conditions of the baseline methodology which 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, this parameter will be the basis for the emission reduction calculations.

According to the methodology ACM0002 version 10, the parameters used to calculate the Power Density of HEPPs also need to be monitored. These parameters are also included in the monitoring plan.

The below table shows the parameters that are included in the monitoring plan together with their monitoring process.

Data /Parameter	Description	Source of Data	Data Unit	Monitoring Frequency	QA/QC Procedures to be Applied
$EG_{\text{facility},y}$	Quantity of net electricity generation supplied by the project to the grid in year y	Project activity site/electricity meters	MWh/y	Continuous measurement and at least monthly recording	Cross check measurement results with records for sold electricity. There will be two sets of meters one main meter and one check meter. If there is a measuring difference between these meters, then one of the parties may request calibration.
Cap_{PJ}	Installed capacity of the HEPP after implementation	Project site	MW	Yearly	Data will be determined based on recognized standards
A_{PJ}	Area of the regulation pond measured in the surface of the water after the implementation of the project activity when the reservoir is full	Project site	m ²	Yearly	Measured from topographical surveys, maps, satellite pictures, etc.

The monitoring will be performed in-house by the project proponent:

1. Plant Manager: Responsibility for running the HEPP plant and compliance with VER monitoring plan
2. Electrical Engineer: Responsible for day electrical operations and recording and monitoring of relevant data and periodic reporting
3. Accounting Manager: Responsible for keeping data about power sales, invoicing and purchasing.
4. Global Tan Energy: Responsible for emission reduction calculations, preparing monitoring report and periodical verification process.

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

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 117 GWh per annum. The annual baseline emissions amount is 122,205 tCO₂e. Over the period of ten years, the total amount of baseline emissions will reach 1,222,050 tCO₂e. For all calculations, the rounded value of the combined emission factor, 0.547 is applied.

Years	Annual estimation of emission reductions in tones of CO₂ e
<i>2011 (01.07.2011 – 31.12.2011)</i>	61,102
<i>2012</i>	122,205
<i>2013</i>	122,205
<i>2014</i>	122,205
<i>2015</i>	122,205
<i>2016</i>	122,205
<i>2017</i>	122,205
<i>2018</i>	122,205
<i>2019</i>	122,205
<i>2020</i>	122,205
<i>2021</i>	61,103
Total emission reductions (Tones of CO₂ e)	1,222,050
Total number of crediting years	10
Annual average over the crediting period of estimated reductions (tones of CO₂e)	122,205

- *The appropriateness of the source, sink and reservoir:*

According to ACM0002/Version 10 if the power density (PD) of the hydro power plant is above 10 W/m², Project Emissions is 0. The following calculation of the PD and the assumptions for the Project Emissions and Leakage made afterwards, is found acceptable and suitable for the project activity by the validation team.

The power density of the project activity is calculated as follows:

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

Where:

- PD: Power density of the project activity, in W/m^2
- Cap_{PJ}: Installed capacity of the hydro power plant after the implementation of the project activity (W)
- Cap_{BL}: Installed capacity of the hydro power plant before the implementation of the project activity (W). For new hydro power plants, this value is zero
- A_{PJ}: Area of the reservoir measured in the surface of the water, after the implementation of the project activity, when the reservoir is full (m^2)
- A_{BL}: Area of the reservoir measured in the surface of the water, before the implementation of the project activity, when the reservoir is full (m^2). For new reservoirs, this value is zero

For the proposed project HEPP,

- CapPJ = 69,580,000 W
- CapBL = 0.0 W
- APJ = 2,477,000 (m^2)
- ABL = 0.0 (m^2)

Therefore PD is calculated as ;

$$\text{PD} = \frac{69580000 - 0}{2477000 - 0}$$

$$\text{PD} = 28.09 \text{ W/m}^2$$

- *The correctness and transparency of formulas and factors used,*

The formulas and factors used in the calculation of GHG emissions are found to be transparent and correct by the validation team. The emission factors of fuels which 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 assumptions made for estimating GHG emission reductions*

The only assumption is the one about project emissions which 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*

There are no uncertainties in the calculations.

3.5 Environmental Impact

According to the laws and regulations the project owners have prepared a detailed environmental impact assessment report and submitted this report to the Ministry of Environment and Forestry. EIA assessment for Feke II HEPP project has been performed by PRD Planlama, Araştırma, and Geliştirme ve Danışmanlık Co. as defined by the regulations. This report has been evaluated by relevant local government agencies and Ministry of Environment and Forestry (MoEF). After evaluation of the project and comments of local agencies, Ministry of Environment and Forestry has concluded that project does not have significant environmental effects. The EIA not required certificate is given in Annex 5 of the PD.

3.6 Comments by stakeholders

According to Article 9. of the Environmental Impact Assessment Regulation, a stakeholders meeting was held on 09.10.2007, at Karacaoglan Culture Center (Marriage Saloon) of Feke District, a location which was determined together with the Governor. The meeting hours and its location was announced on 04.10.2007 in the national (Aksam) newspaper and the local (Adana 5 January) newspaper.

During the meeting, information on the importance of the project, reasons for selection of the project location, employment, seismic activities and action required for environmental issues has been explained to the participants and stakeholders views, considerations and questions were answered. Since no request for a change in the project was asked, no changes in the project were made.

The project owners organized a second stakeholder consultation meeting according to EIA regulations of the country on 13th of November 2008 in Kisacikli. The stakeholders were informed via announcements in newspapers copies of which are presented in the PD. The attendance list has been seen during the site tour by the DOE.

The participants comprised representatives from the community, relevant municipalities, public institutions and inhabitants of the surrounding villages. All the aspects of the project including the socio-economic and environmental aspects were presented to the participants by a project developer representative and were discussed by the stakeholders. Clarifications were requested and the overall response to the project was encouraging and positive. All the hearings were held in Turkish.

During the interviews realised by the validation team in December 2009, positive feedback from stakeholders were received. The satakeholder interviewed has been presented in annex 5.2 of this report.

4 VALIDATION CONCLUSION

Bureau Veritas Certification has made the validation of "Feke I 29.4 MW Hydroelectric Power Plant" The validation was performed on the basis of VCS criteria and 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; (October 2009)
- ii) Review of the baseline methodology by the specialist and the validator (December 2010-June 2010)
- iii) Review of the investment analysis by the specialist and the validator (December 2009-June 2010)
- iv) Follow-up interviews and on site visit; (December 2009)
- v) Resolution of outstanding issues and the issuance of the final validation report and opinion (November 2009 – July 2010)

Project proponents namely GTE used the latest tool for demonstration of the additionality.

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 barrier demonstrate 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 (Version 01 dated 20 October 2009 until Version 03.1 dated 15 June 2010), 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 03.1 dated 15 June 2010 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 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 Global Tan Energy that relates directly to the GHG components of the project and other reference documents are given below:

1. PDD for "Feke II 29.4 MW Hydroelectric Power Plant"
Version 01 dated 20 October 2009
Version 02 dated 11 May 2010
Version 03 dated 30 May 2010
Version 03.1 dated 15 June 2010
2. Baseline Calculation Excel Sheet
Version 01 dated 20 October 2009
Version 02 dated 09 March 2010
Version 03 dated 10 June 2010
3. Investment Analysis – IRR Calculation Excel Sheet
Version 01 dated 02 October 2009
Version 02 dated 12 April 2010
Version 03 dated 18 May 2010
(IRR Analysis for PD)
Version 04 dated 30 May 2010
(IRR Analysis for PD)
4. Revised system connection agreement by TEAIS on May 2010.
5. Energy Generation License dated May 2007
6. "Installed Capacity Revision Request Report" by Hidro Dizayn in July 2007.
7. The related pages of the electromechanical equipment purchase agreement with "East China Investigation and Design Institute"
8. The related pages of electric works contract with "Siemens Sanayi ve Ticaret A.S."
9. The insurance records of the regional employees.
10. "Expropriation and engineering" contract with "ADA" "on August 2007
11. The related pages of "Relocation" agreement with Akrapro on August 2007.
12. The related pages of "Engineering Services" agreement with Hidro Dizayn on March 2007
13. The related pages of "Construction" Agreement with Nata Construction on December 2007
14. The related pages of "Geological Survey Services" agreement with Zemar on November 2007
15. Environmental Impact Assessment Report -2008
16. Approved consolidated baseline and monitoring methodology ACM 0002 version 10.
17. UNFCCC's Methodological Tool: "Tool for the demonstration and assessment of additionality", version 05.2

18. UNFCCC's Methodological Tool: "Tool to calculate the emission factor for an electricity system", version 02
19. VCS PD Template – 19 November 2007
20. VCS Validation Report Template – 19 November 2007
21. 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.

M. Kemal Demirkol- Global Tan Energy
Ahmet Sel –Mayor of Feke
Ali Ulusoy – Muhtar
Hasan Gezer- Akkur İnşaat
Ramazan Düzmen- Egemen İnşaat

ANNEX I – Validators' Competence

Lead Verifier : Ashok Mammen - PhD (Oils & Lubricants)

Bureau Veritas Certification - Internal Technical Reviewer

Over 20 years of experience in chemical and petrochemical field. Dr. Mammen is a lead auditor for environment, safety and quality management systems. He is also a lead verifier and tutor for GHG projects and has been involved in the validation and verification processes of more than 60 CDM/JI/VCS and other GHG projects.

Verifier : Bade Cebeci– Environmental Engineer

Bureau Veritas Certification SAS– Verifier

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

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

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

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

Investment Analysis Specialists:

Mr. Murat Gençer – Master of Economics

RiskTürk Software Development and Consultancy – Head of Financial Analysis Team

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

Mr. Haluk Cengiz – Business Administration

Bureau Veritas Certification – Financial Controller

Haluk Cengiz is a financial controller of Bureau Veritas Turkey since 1999. He has been graduated from Marmara University, Business Administration.

Internal Technical Reviewer : Ms. Burcu Mutman – Environmental Engineer

Bureau Veritas Certification – Senior Technical Specialist

Burcu Mutman is an auditor for environment, safety and quality management systems.

She is also lead verifier for GHG projects. Bureau Veritas Certification Holding SAS – Internal Technical Reviewer

ANNEX II - Validation Protocol**TABLE 1 GENERAL REQUIREMENTS CHECKLIST**

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
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CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
• VCS Program specific issues					
Have the project(s) created another form of environmental credit (for example renewable energy certificates)?	VCS	3.1	The project is not eligible for GS crediting as it is a large scale HEPP. It has been stated in section F.2. of the VCS PD that the project owner confirms that the project activity does not create any other form of environmental credits.	OK	OK
If yes, have the project participant/proponent s provided a letter from the program operator that the credit has not been used and has been cancelled from the relevant programthe?	VCS	3.1	N/A	OK	OK
Are the VCS PD, monitoring reports, and other documents required under the VCS Program in English?	VCS	3.2	PD version 1 and the monitoring plan sheet have been presented in English. Please present the following documents in english 1. (EIA exemption letter, production license) in the PD) 2. financial model sheet and CM calculationsheet	CAR 1	OK
• Project level requirements					
General requirements					
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	The project proponent has applied CDM approved Methodology ACM0002 version 10 and tools that are referred in ACM0002.	OK	OK
Is the Project Start Date before 1 January 2002? (If yes, a CAR shall be raised as the Project Start Date for non-AFOLU projects for the VCS 2007.1 shall not be before 1 January 2002)	VCS	5.2.1	The project start date has been estimated to be 01.01.10 as stated in C.1.1 of the PD version 1. During the site visit it has been validated that the project was still in the construction phase. The project start date is after January 2002.	OK	OK

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
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	The project as not been validated according to VCS version 1, hence the question is not applicable.	OK	OK
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	The checklist question is N/A as the Project Crediting Period starts on 01.01.2010 as indicated in section C.1.2 of the PD version 1.	OK	OK
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	The project does not 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. Turkey is not involved in any emission trading program other than the voluntary market and does not have any limits until 2012. In addition there is no binding legal limits established in Turkey related to HEPPs.	OK	OK
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 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]	VCS	5.2.2	N/A	OK	OK

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
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	5.2.1	The project proponents have not claimed GHG credits from one project under more than one GHG Program. The project is not eligible for GS crediting as it is a large scale HEPP. The project is not eligible for any of the compliance markets because of the position of the country.	OK	OK
Was this project rejected by other GHG Programs?	VCS	5.2.2	The project was not rejected by any other GHG program. Please refer to the above question.	OK	OK
If yes, have project proponents:	VCS	5.2.2			
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	N/A	OK	OK
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	N/A	OK	OK
Is this a renewal of the Project Crediting Period?	VCS	5.2.3	N/A	OK	OK
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	N/A	OK	OK
Standards and factors					
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			

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
1. be publicly available from a reputable and recognised source (e.g. IPCC, published Government data etc)?	VCS	5.5	The standards and factors used to derive GHG emission data as well as any supporting data are taken from the IPCC and TEIAS which are both publicly available.	OK	OK
2. be reviewed as part of its publication by a recognised competent organization?			TEIAS and IPCC are both reputable sources, and their publication processes are deemed reliable.	OK	OK
• Project grouping					
b. Is this a grouped project?	VCS	5.6	The project is not a grouped project as validated through the site visit.	N/A	OK
c. If yes , was this grouped project described in one VCS PD?	VCS	5.6	This is not a grouped project. The checklist question is N/A.	N/A	OK
d. Does this PD include a description of the central GHG information system and controls associated with the project and its monitoring?	VCS	5.6	This is not a grouped project. The checklist question is N/A.	N/A	OK
e. What is the sampling carried out by the VCS verifier?	VCS	5.6	This is not a grouped project. The checklist question is N/A.	N/A	OK
f. Have the sampling of a grouped project taken account of any sub groups and associated activities within each sub group?	VCS	5.6	This is not a grouped project. The checklist question is N/A.	N/A	OK
g. 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	This is not a grouped project. The checklist question is N/A.	N/A	OK
• Content of the VCS PD					
d. Is the PDD used as a basis for validation prepared in accordance with the latest template and guidance from the VCS?	VCS	5.7	The VCS PD template given in the web address v-c-s-org.tr has not been used. The PDD format given in the UNFCCC website has been used.	CL1	OK

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
			Please clarify the assumptions and the reasons.		
e. Is there a project title?	PD temp	1.1.	The project title is "FEKE II Hydroelectric Power Plant" as stated under section A.2.of the PD. The date of the document is 20.11.2009. Version of the document is version 01.	OK	OK
f. Type/Category of the project	PD temp	1.2			
a. 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	The Project fits in: Sectoral Scope Number: 1 Sectoral Scope: Energy Industries – Renewable Energy	OK	OK
b. Is it specified if the project is a Grouped project?	PD temp	1.2	It has been stated that FEKE1 and FEKE 2 projects were first developed by General Directorate of State of Hydraulic Works as a single project ; however the project was divided into FEKE I and FEKE II projects later. The statement has been approved during the interviews with the State of Hydraulic Works and through the feasibility report. Please clarify if the projects are grouped projects.	CAR 2	OK
g. Is the amount of emission reductions over the crediting period estimated, including project size? (Micro project: Less than 5,000 tonnes CO ₂ equivalent emissions reductions per year; Mega Project: More than 1,000,000 tonnes CO ₂ equivalent emissions reductions per year)	PD temp	1.3	Please state the project size in the PD (Micro project: Less than 5,000 tonnes CO ₂ equivalent emissions reductions per year; Mega Project: More than 1,000,000 tonnes CO ₂ equivalent emissions reductions per year)	CL2	OK

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
h. Is a brief description of the project provided?	PD temp	1.4	A brief description of the project has been provided in section A.2. of the PD version 01. a. The installed capacity of the project is 69.58 MW as validated from the generation license dated 14.2.2008. b. The project will increase the share of HEPPs in electricity generation mix of Turkey since the installed capacity is 6.9.68 MW which will result in considerable a high generation value. c. The project will contribute to economic development in the region during construction period since the project will employ over 300 people as validated from the pay rolls and the subcontractor agreements. d. It has been defined that The electricity generated will be delivered to the grid by a 10km long 154KV 795 MCM overhead transmission lines. Please clarify the connection point to the grid and the length of the transmission line according to the connection agreement with TEIAS.	CL3	OK
i.			e. The project does not include the irrigation of lands; however the 07.08.2008 dated water usage agreement also includes water supply for irrigation and potable water. Also; this scenario has been included in the energy generation optimization calculations as validated from the July 2007 installed power revision report. It is concluded that the project will increase the agricultural income of local community and support Adana region. f. The expected annual generation has been defined as 223 GWH whereas it has been defined as 223,410 GWH in the license.	CL3	OK

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
			Please clarify. g. The project consists of concrete dam with a crest length of 256 mt and a height of 60 meters from the river bed; 317 meters long derivation tunnel, upstream and downstream cofferdams, spillway, 171 metres long penstock, a powerhouse of 44 by 32 metres dimensions and 2 vertical axis Francis turbines with a gross head of 63 metres. The characteristics of the projects have been checked according to the July 2007 installed power revision report. Please clarify if there is any change on the characteristics. h. It has been stated that the proposed will meet increasing electricity demand in Turkey and guarantee the energy security. Please justify with the references.		

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
j. 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 location has been given as Adana Province, Feke District in A.4.1.3 & A.4.14 of the PD version 01 as validated through the site visit. It has been stated that <i>"The project site lies between 35°51' - 35 ° 52"</i> Please give the reference. During the site visit it has been validated that the project lies on Goksu creek basin and the closest settlement is Feke village.	OK	OK
k. Duration of the project activity/crediting period	PD temp	1.6			
a. Is the project start date, i.e., the date on which a financial commitment was made to the project and the project reached financial closure, provided?	PD temp	1.6	Under Section C.1.2. of the VCS PD version 01, it is stated that the project construction has started on 01.04.2006 and the plant is expected to start operation by 01.01.2010. Please provide a proof to clarify the start date of the construction and a workplan also to clarify the expected start date of the operation.	CL4	OK
b. Is the crediting period start date, i.e., the date the first monitoring period commenced, provided? (VCS project crediting period: A maximum of ten years which may be renewed at most two times)	PD temp	1.6	Under section C.2.1.1 of the PD version 01; it has been stated the crediting period is expected to start in 01/07/2011. However according to the work schedule submitted to the DOE the project will be commissioned on 1.1.2011. Please clarify. Under section C.2.1.2. of the PD version 01, it has been stated that the project will use a renewable crediting period and the length of the first crediting period will be 10 years.	CL5	OK

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
l. Are the conditions prior to project initiation provided?	PD temp	1.7	Please include the conditions prior to the project initiation in the PD.	CL 6	OK
m. Is a description of how the project will achieve GHG emission reductions and/or removal enhancements provided?	PD temp	1.8	The project will achieve GHG emission reduction in the grid by generating electricity from renewable resources as stated in PD version 1.	OK	OK
n. Are project technologies, products, services and the expected level of activity described?	PD temp	1.9	In section A.4.3 of the PD the technologies and the services have been presented. Please clearly describe the characteristics of the project and the technologies to be used in the PD	CL 7	OK
o. 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 relevant local laws and related to the project and the alternatives to the proposed project has been listed under substep1 b in section B.5 of the PD version 1. The relevant local regulations related to the project has not been listed in the PD.	CAR3	OK
			Energy generation license, EIA report has been referred for the compliance to the regulations in section B.5. of the PD which were also crosschecked by the validation team. However please clarify the requirement for EIA for the transmission line.	CL8	OK

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
p. Are risks that may substantially affect the project's GHG emission reductions or removal enhancements identified?	PD temp	1.11	<i>Please clearly state in the PD; if there are any risks that may substantially affect the project's GHG emission reductions</i>	OK	OK
q. 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	Confirmation that the project was not implemented to create GHG emissions primarily for the purpose of its subsequent removal or destruction has been demonstrated in the VCS PD section F.1. of the PD version 01.	OK	OK
r. Has the project created another form of environmental credit (for example renewable energy certificates)?	PD temp	1.13	It has been stated in section F.2. of the VCS PD that the project owner confirms that the project activity does not create any other form of environmental credits.	OK	OK
s. 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	Since the project has not created another form of environmental credit as stated above this checklist question is N/A.	OK	OK
t. Was the project rejected under other GHG programs (if applicable)	PD temp	1.14	In F.3. of the PD VERSION 01 , it has been stated that the the project was not rejected under other GHG programs	OK	OK
u. If yes, does the project:	PD temp	1.14			
i. Clearly state 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)	PD temp	1.14	N/A	OK	OK
ii. provide the VCS verifier and Registry with the actual rejection document(s) including explanation?	PD temp	1.14	N/A	OK	OK

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
v. Are project proponents roles and responsibilities, including contact information of the project proponent, other project participant/proponent s provided?	PD temp	1.15	In section B.8 of the PD rev 01; it has been stated that the baseline has been calculated by Kemal Demirkol-GTE. The contact information has been included in the section. In section B.8 of the PD rev01; it has been stated that the monitoring methodology has been developed by Kemal Demirkol and Ferit Aran.The contact information has been included in the section. In section A.3 of the PD rev01; Akkur Elektrik Uretim A.S. and Global Tan Energy Ltd. Has been defined as project proponents. Turkey has been defined as the host party in section A.3 of the PD and it is indicated that the host party is not a project participant. Contact information on proponents in the project activity has been included in annex 1 of the PD version01	OK	OK
w. 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	Please supply economic, sectoral, social, environmental, geographic, site-specific information in the PD	CAR04	OK
x. Is there any commercially sensitive information that has been excluded from the public version of the VCS PD that will be displayed on the VCS Project Database?	PD temp	1.17	Please clarify in the PD if there is any commercial sensitive information that has been excluded from thee public version of the PD that will be displayed on the VCS Project Data Base.	CL9	OK
y. If yes, was it listed?	PD temp	1.17	Please clarify in the PD if there is any commercial sensitive information that has been excluded from thee public version of the PD that will be displayed on the VCS Project Data Base.	Pls see CL9	OK
z. Are title and reference of the VCS methodology applied to the project activity and explanation	PD temp	2.1	Under section B.1. of the VCS PD, the title and the reference of the methodology are given as	OK	OK

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
of methodology choices provided?			follows: <i>"The United Nations approved consolidated baseline methodology applicable to this project is ACM0002 Consolidated methodology for grid-connected electricity generation from renewable sources , Version 10.</i> <i>ACM0002 refers to the following tools:</i> <i>Tool for the demonstration and assessment of additionality", Version 05.2, 2and</i> <i>Tool to calculate the emission factor for an electricity system, Version 01.13."</i>		
aa. 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	The project uses a Clean Development Mechanism approved methodology without any deviations or revisions to the existing methodology.	OK	OK
bb. Are the choice of the methodology and its applicability to the project activity justified?	PD temp	2.2	For the justification of the choice of the methodology and its applicability to the project, It is stated in section B.2. of the PD ver 01 that <i>FEKE II 69.68 MW HEPP is a grid connected renewable electricity generation project. The statement is also validated by the DOE from the generation license.</i>	OK	OK
			For the justification of the choice of the methodology and its applicability to the project, it is stated in section B.2. of the PD rev01 that; the project does not involve switching from fossil fuel use to renewable energy at the site of the project activit. The satement has also been validated by the DOE through the site visit.	OK	OK
			For the justification of the choice of the methodology and its applicability to the project, it is stated in section B.2. of the PD rev01 that; the geographic and system boundaries for the	CL10	OK

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
			relevant electricity grid can be clearly identified and information on the characteristics of the grid is available. Please clarify the sources for identification and the charecterics of the grid in the PD.		
			For the justification of the choice of the methodology and its applicability to the project, it is stated in section B.2. of the PD rev01 that; <i>Project Power density is higher than 4 W/m²</i> Please clarify which applicability criteria is applied to the project (new reservoir, existing reservoir with no change volume or existing reservoir with a change in the volume). Please justify the applicability criteria selected.	CAR05	OK
			For the justification of the choice of the methodology and its applicability to the project, it is stated in section B.2. of the PD rev01 that; <i>Project Power density is higher than 4 W/m²</i> Please clearly present how the power density has been calculated by also giving references for the data used in calculation.	CL11	OK

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
cc. Are GHG sources, sinks and reservoirs identified for the baseline scenario and for the project?	PD temp	2.3	GHG sinks and reservoirs have been defined in ACM 002 version 10. Pls see Table 2 for details	OK	OK
dd. Is it described how the baseline scenario is identified and the identified baseline scenario?	PD temp	2.4	Under section B .4 of the VCS PD version 01, it is stated that the baseline scenario is identified according to the methodology ACM0002 which is as follows: <i>"Electricity delivered to the grid by the project 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".</i> It is also approved by the validation team that the selected baseline scenario is in line with the methodology.	OK	OK
ee. Has the project proponent selected the most reasonable baseline scenario for the project?	PD temp	2.4	Yes. The project proponent has selected the most reasonable baseline scenario for the project activity.	OK	OK
ff. Does it reflect what most likely would have occurred in the absence of the project?	PD temp	2.4	It has been stated in section B.4. of PD version 01 that "In the absence of the proposed project activity, same amount of electricity is required to be supplied via either the current power plants or by an increased number of thermal power plants, thus increasing GHG emissions." <i>Please justify the statement above and supply a reference for the above justification.</i>	CL 12	OK
gg. Is it described how the emissions of GHG by source in baseline scenario are reduced below those that would have occurred in the absence	PD temp	2.5	Under section B.5 of the PD version 01, it is described how the GHG emissions by source are reduced below those that would have occurred in	OK	OK

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
of the project activity (assessment and demonstration of additionality)?			the absence of the project activity using the latest version (version 05.2) of the UNFCCC Methodological Tool "Tool for the demonstration and assessment of additionality" as suggested by the methodology ACM0002.		
hh. 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	The project proponents have used the UNFCCC Approved consolidated baseline and monitoring methodology ACM0002 "Consolidated baseline methodology for grid-connected electricity generation from renewable sources" and the additionality tool referred in this methodology. Therefore the checklist question is N/A.	OK	OK
ii. 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	In section B.4 of the PD version 01; the title and the reference of the VCS methodology applied to the project has been given as the following; <i>"This project follows the methodology described in the ACM0002 "Consolidated baseline methodology for grid-connected electricity generation from renewable sources". Selected methodology has been applied together with the "tool to calculate the emission factor for an electricity system, version 01.1" and "tool for assessment and demonstration of additionality, version 5.2".</i>	OK	OK
jj. Is monitoring, including estimation, modelling, measurement or calculation approaches described including:	PD temp	3.2			
a. Purpose of monitoring?	PD temp	3.2	The monitoring procedures should include purpose of monitoring according to clause 5.11 of VCS 2007:1. Please include the purpose of monitoring in the monitoring procedures or the related section of the PD.	CAR06	OK
b. Types of data and information to be	PD	3.2	Types of data and information to be reported	OK	OK

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
reported, including units of measurement?	temp		including the units of measurement has been given in section B.7. of the VCS PD version 01 . The tabular format used is checked form the tool applied which is " Tool to calculate the emission factor of an electricity system" in this project.		
c.Origin of the data?	PD temp	3.2	Origin of data for net electricity generated and delivered to the grid by Guuluabg HEPP is given in section B.7. of the PD version 01 as Metering devices used in power plants and the monthly records signed by TEİAŞ &plant manager. The definition is line with the legislation in Turkey.	OK	OK
			Origin of data for quantity of fuel combusted in diesel power generator is given in section B.7. of the PD version 01 as; on site measurements from equipment working hours.	OK	OK
			In section B.7. of the PD version 01 the parameters EGy and FCi,j,y have been presented for monitoring in the tabular format. However, the parameters which are included in ACM 002 version 10 namely EG Facility, Cappj, PE ffY, Apj are not included in the tabular format. The tabular format shall include data unit, description, source of data to be used, measurement procedures, monitoring frequency, QA/QC procedures. Please include the relevant parameters in the monitoring as required by the methodology.	CAR07	OK

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
d. Monitoring, including estimation, modelling, measurement or calculation approaches?	PD temp	3.2	Monitoring, including estimation, modelling, measurement or calculation approaches have been presented in the PD version 01.	OK	OK
e. Monitoring times and periods, considering the needs of intended users?	PD temp	3.2	In section B.7. of the PD version 01 the parameters EGy and FCI,j,y have been presented for monitoring in the tabular format. However, the parameters which are included in ACM 002 version 10 namely EG Facility, Cappj, Apj are not included in the tabular format. The tabular format shall include data unit, description, source of data to be used, measurement procedures, monitoring frequency, QA/QC procedures. Please include the relevant parameters in the monitoring as required by the methodology.	CAR07	OK
			Monitoring frequency has been presented as "continuously" for the FCI,y parameter in section B.7.1. of the PD version 01. Please clarify the recording period also.	CL13	OK

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
f. Monitoring roles and responsibilities ?	PD temp	3.2	Monitoring roles and responsibilities have been defined in section B.7.2 of the PD version 01. Monitoring roles have been defined for plant manager, electrical engineer, accounting manager, and Global Tan Energy. The information given in the PD has been validated during the site visit.	OK	OK
g. Managing data quality?	PD temp	3.2	Calibration procedures have been defined as the following in section B.7 of the PD version 01 <i>"Calibration of the metering devices will be made by TEIAS and sealed before the commissioning of the power plant. The meters will be calibrated by TEIAS when there is an inconsistency between two devices."</i> Since the procedure is in line with the TEIAS (Turkish State of Electrical Works) regulations, it has been accepted by the DOE.	OK	OK
h. Managing data quality?	PD temp	3.2	Calibration procedures have been defined as the following in section B.7 of the PD version 01 <i>"Calibration of the metering devices will be made by TEIAS and sealed before the commissioning of the power plant. The meters will be calibrated by TEIAS when there is an inconsistency between two devices."</i> Since the procedure is in line with the TEIAS (Turkish State of Electrical Works) regulations, it has been accepted by the DOE.	OK	OK
			According to ACM 002 version 10, All data	CAR08	OK

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
			collected as part of monitoring should be archived electronically and be kept at least for 2 years after the end of the last crediting period. Please include the archiving methodology in the PD.		
kk. 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	In section B.7. of the PD version 01 the parameters EGy and FCI,j,y have been presented for monitoring in the tabular format. However, the parameters which are included in ACM 002 version 10 namely EG Facility, Cappj, PE ffY, Cappj, Apj are not included in the tabular format. The tabular format shall include data unit, description, source of data to be used, measurement procedures, monitoring frequency, QA/QC procedures. Please include the relevant parameters in the monitoring as required by the methodology.	CAR07	OK
			The parameter, namely EGy, is not required to be monitored according to ACM 002 version 10. However the named parameter has been included in the monitoring parameters in section B.7. of the PD version 01. Please clarify the reason for including the named parameter.	CL14	OK
			EGy, EGy, total EF CO2, FCI,y, GE, NCV ara Data and parameters selected for estimating GHG emissions and removals. The selected parameters have been presented using the tabular format in section B.6.2. of the PD version 01. The parameters selected have been checked from the ACM002 version 10.	OK	OK

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
i. Data unit?	PD temp	3.3	In section B.6.2 of the PD version 01; the data units used are given as the following: EGy: MWh ; $EF_{CO_2}:TCO_2/TJ$; $FCi,y:tons$ or 100 m3 gasses; $\eta: \%$; $NCV:TJ/kt$. According to "Tool to calculate the emission factor of an electricity system the data units for NCV and EF_{CO_2} are GJ/kt and TCO_2/GJ . The definition of the data units in TJ are accepted since both of the parameters are defined in the TJ unit. However please clarify the reason for selecting the parameter for the NCV as TJ/ kt where the other parameters are based on the tonnes unit.	CL15	OK
			In section B.7 of the PD version 01; the data unit for FCi,y is mass or volume unit per year. The data unit selected is in line with the methodology	OK	OK

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
ii. Description?	PD temp	3.3	Under section B.7. of the PD, the description for EGy has been defined as the net electricity generated and delivered to the grid by Feke power plant in year 2007. The description of the the parameter does not match with the indicator according to ACM002 version 10. Please clarify	CL16	OK
iii. Source of data to be used?	PD temp	3.3	- In section B.7. of the PD version 01 the parameters EGy and FCI_{j,y} have been presented for monitoring in the tabular format. However, the parameters which are included in ACM 002 version 10 ; namely EG Facility, Cappj, PEffY, Cappj, Apj are not included in the tabular format. The tabular format shall include data unit, description, source of data to be used, measurement procedures, monitoring frequency, QA/QC procedures. Please include the relevant parameters in the monitoring as required by the methodology. - The source of data for the parameter EGy has been defined as the feasibility report in section B.6.2. of the PD version 01 in the tabular format; please clarify.	CAR07	OK
			IPCC default values at lower limit of 95% confidence interval has been used as the source of data for EF _{CO2 i,y} factors in section B.6.2. of the PD version 01 in the tabular format	CL17	OK
				OK	OK

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
iv. Value of data applied for the purpose of calculating expected emissions reductions?	PD temp	3.3	Pls see Table 3 of this protocol	OK	OK
v. Description of measurement methods and procedures to be applied?	PD temp	3.3	Pls see Table 3 of this protocol	OK	OK
vi. QA/QC procedures to be applied?	PD temp PD temp	3.3	Pls see Table 3 of this protocol	OK	OK
vii. Any comment?	PD temp	3.3	Pls see Table 3 of this protocol	OK	OK
ll. Is the monitoring plan described?	PD temp	3.4	The monitoring plan has been defined in section B.7.2 of the PD version 01.	OK	OK
mm. Are methodological choices explained?	PD temp	4.1	For the F _{CI,y} parameter it has been stated that the gauges and reading devices on diesel generators will be used for monitoring of F _{CI,y} parameter in section B.6.2. of the PD version 01. Please clarify the procedure. Please clarify how the amount of fuel stocked in the tank of the generator will be defined if data will be checked from the invoices provided by the plant operator.	CL18	OK
nn. Are GHG emissions and/or removals for the baseline scenario quantified?	PD temp	4.2	The GHG emissions have been quantified for the baseline scenario according to ACM002 version 10.	OK	OK
oo. Are GHG emissions and/or removals for the project quantified?	PD temp	4.3	In section B.6.3 of the PD version 01, it has been stated that the only emission source for the project is the diesel generator which is used as an auxiliary power. The calculation methodology has been transparently presented in the PD.	OK	OK

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
pp. Are GHG emission reductions and removal enhancements for the GHG project quantified?	PD temp	4.4	The emission reductions for the GHG project has been quantified in section B.6.4. of the PD version 01.	OK	OK
qq. 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 14064-2	5.2.k	Approval of EIA assessment report has been reviewed by the Validation Team. Please include a summary of the environmental impacts and the precautions	OK	OK
rr. Were relevant outcomes from stakeholder consultations and mechanisms for on-going communication provided?	PD temp		Stakeholder consultation meeting is mandatory for this project. Please include the result of the stakeholder consultation related with the EIA also. The second stakeholder consultation has been realized on 13.11.2008.	CL19	OK
ss. 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		Please clarify the chronological plan for the date of initiating project activities, date of terminating the project, frequency of monitoring and reporting in the PD	CL20	OK
tt. Was evidence of proof of title provided through one of the following:	PD temp	8.1	The revised generation license was sent to the validation team as a proof of title. Please also state who will have the ownership of the emission reductions.	CL 21	OK
i. a legislative right?	PD temp	8.1	N/A	OK	OK
ii. a right under local common law?	PD temp	8.1	N/A	OK	OK
iii. ownership of the plant, equipment and/or process generating the reductions/removals?	PD temp	8.1	N/A	OK	OK
iv. a contractual arrangement with the owner of the plant, equipment or process that grants all reductions/removals to the proponent?	PD temp	8.1	N/A	OK	OK

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
uu. 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	N/A	OK	OK
vv. 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
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
• Additionality					
i. 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	The project proponents have used the UNFCCC Approved consolidated baseline and monitoring methodology ACM0002 “Consolidated baseline methodology for grid-connected electricity generation from renewable sources” and the additionality tool referred in this methodology. According to Frequently Asked Questions sections	OK	OK

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
			on the VCS website, the VCS additionality guidance is not a substitute for the additionality requirements set out in the methodology being used. Therefore the checklist question is N/A. The additionality of the project activity is assessed using "Table 3: Checklist based on Methodological tool for assessment of additionality (version 05.2 - EB 39 report Annex 10)" of this protocol.		
ii. If the project proponent used Test 1:	VCS	5.8			
1. Step 1 – Regulatory Surplus - Is the project be mandated by any enforced law, statute or other regulatory framework? (If yes a CAR shall be issued and the project shall be deemed non additional).	VCS	5.8	Please refer to question a above. The checklist question is N/A. The additionality of the project activity is assessed using Table 3 of this protocol.	OK	OK
2. Step 2 – Implementation Barriers – Does the project face one (or more) distinct barrier(s) compared with barriers faced by alternative projects?	VCS	5.8	Please refer to question a above. The checklist question is N/A. The additionality of the project activity is assessed using Table 3 of this protocol.	OK	OK
1. 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	Please refer to question a above. The checklist question is N/A. The additionality of the project activity is assessed using Table 3 of this protocol.	OK	OK
2. Technological Barriers – Does the project face technology-related barriers to its implementation?	VCS	5.8	Please refer to question a above. The checklist question is N/A. The additionality of the project activity is assessed using Table 3 of this protocol.	OK	OK
3. Institutional barriers – Does the project face financial, organizational, cultural or social barriers that the VCU revenue stream can help overcome?	VCS	5.8	Please refer to question a above. The checklist question is N/A. The additionality of the project activity is assessed using Table 3 of this protocol.	OK	OK
3. Step 3 – Common Practice	VCS	5.8	Please refer to question a above. The checklist	OK	OK

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
			question is N/A. The additionality of the project activity is assessed using Table 3 of this protocol.		
a. Is project type common practice in sector/region, compared with projects that have received no carbon finance?	VCS	5.8	Please refer to question a above. The checklist question is N/A. The additionality of the project activity is assessed using Table 3 of this protocol	OK	OK
b. if it is common practice, have the project proponents identified barriers faced compared with existing projects?	VCS	5.8	Please refer to question a above. The checklist question is N/A. The additionality of the project activity is assessed using Table 3 of this protocol	OK	OK
c. 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	Please refer to question a above. The checklist question is N/A. The additionality of the project activity is assessed using Table 3 of this protocol.	OK	OK
i. Was data on all baseline candidates within the geographic area collected?	GHG PROT OCO L	7.4.2 AND 7.6	Please refer to question a above. The checklist question is N/A. The additionality of the project activity is assessed using Table 3 of this protocol.	OK	OK
ii. 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	GHG PROT OCO L	7.4.2 AND 7.6	Please refer to question a above. The checklist question is N/A. The additionality of the project activity is assessed using Table 3 of this protocol.	OK	OK

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
could be weighted by the proportion of the total output for the market that is attributed to each technology or practice.)					
iii. If the project proponent used Test 2:	VCS	5.8			
i. Step 1 – Regulatory Surplus - Is the project be mandated by any enforced law, statute or other regulatory framework? (If yes a CAR shall be issued and the project shall be deemed non additional).	VCS	5.8	Please refer to question a above. The checklist question is N/A. The additionality of the project activity is assessed using Table 3 of this protocol.	OK	OK
ii. Step 2: Performance Standard	VCS	5.8	Please refer to question a above. The checklist question is N/A. The additionality of the project activity is assessed using Table 3 of this protocol.	OK	OK
1. Are the emissions generated per unit output by the project below the level that has been approved by the VCS Program for the product, service, sector or industry, as the level defined to ensure that the project is not business-as-usual?	VCS	5.8	Please refer to question a above. The checklist question is N/A. The additionality of the project activity is assessed using Table 3 of this protocol.	OK	OK
2. 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	Please refer to question a above. The checklist question is N/A. The additionality of the project activity is assessed using Table 3 of this protocol.	OK	OK
iv. If the project proponent used Test 3:	VCS	5.8	Please refer to question a above. The checklist question is N/A. The additionality of the project activity is assessed using Table 3 of this protocol.	OK	OK
i. Step 1: Regulatory Surplus - Is the project be mandated by any enforced law, statute or other regulatory framework? (If	VCS	5.8	Please refer to question a above. The checklist question is N/A. The additionality of the project activity is assessed using Table 3 of this protocol.	OK	OK

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
yes a CAR shall be issued 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	Please refer to question a above. The checklist question is N/A. The additionality of the project activity is assessed using Table 3 of this protocol.	OK	OK
• Identifying GHG sources, sinks and reservoirs relevant to the project					
i. Refer to Clause 6, under Methodologies.	VCS	5.9	Refer to Clause 6, under Methodologies.	-	-
• Determining the baseline scenario					
i. 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 project proponent has used ACM0002 Methodology. According to ACM0002 for greenfield renewable power plants the only applicable baseline scenario is as follows: <i>"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"</i> Under section 2.4 of the VCS PD version 01, the project proponent has stated that the above mentioned baseline scenario for the project.	OK	OK
ii. Does the baseline scenario set out the geographic scope as applicable to the project?	VCS	5.10	The baseline scenario is determined according to the methodology ACM0002 therefore the checklist question is N/A. The appropriateness of the baseline scenario and the calculations are assessed using "Table 2: Baseline and Monitoring Methodologies: ACM0002 Version 10" of this protocol.	OK	OK
iii. Has the project proponent selected or established criteria and procedures for	ISO 1406	5.4	The baseline scenario is determined according to the methodology ACM0002 therefore the	OK	OK

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
identifying and assessing potential baseline scenarios considering the following:	4-2		checklist question is N/A. The appropriateness of the baseline scenario and the calculations are assessed using "Table 2: Baseline and Monitoring Methodologies: ACM0002 Version 10" of this protocol.		
a. The project description, including identified GHG sources, sinks and reservoirs;	ISO 1406 4.2	5.4	The baseline scenario is determined according to the methodology ACM0002 therefore the checklist question is N/A. The appropriateness of the baseline scenario and the calculations are assessed using "Table 2: Baseline and Monitoring Methodologies: ACM0002 Version 10" of this protocol.	OK	OK
b. 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	The baseline scenario is determined according to the methodology ACM0002 therefore the checklist question is N/A. The appropriateness of the baseline scenario and the calculations are assessed using "Table 2: Baseline and Monitoring Methodologies: ACM0002 Version 10" of this protocol.	OK	OK
c. Data availability, reliability and limitations;	ISO 1406 4-2	5.4	The baseline scenario is determined according to the methodology ACM0002 therefore the checklist question is N/A. The appropriateness of the baseline scenario and the calculations are assessed using "Table 2: Baseline and Monitoring Methodologies: ACM0002 Version 10" of this protocol.	OK	OK
d. 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	The baseline scenario is determined according to the methodology ACM0002 therefore the checklist question is N/A. The appropriateness of the baseline scenario and the calculations are assessed using "Table 2: Baseline and Monitoring Methodologies: ACM0002 Version 10" of this protocol.	OK	OK
iv. 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	ISO 1406 4.2	5.4	The baseline scenario is determined according to the methodology ACM0002 therefore the checklist question is N/A. The appropriateness of the baseline scenario and	OK	OK

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
explained, as appropriate, any significant differences between the project and the baseline scenario ?			the calculations are assessed using "Table 2: Baseline and Monitoring Methodologies: ACM0002 Version 10" of this protocol.		
v. 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	The baseline scenario is determined according to the methodology ACM0002 therefore the checklist question is N/A. The appropriateness of the baseline scenario and the calculations are assessed using "Table 2: Baseline and Monitoring Methodologies: ACM0002 Version 10" of this protocol.	OK	OK
vi. In developing the baseline scenario, has the project proponent selected the assumptions, values and procedures that help ensure that GHG emissions reductions or removal enhancements are not over-estimated?	ISO 1406 4.2	5.4	The baseline scenario is determined according to the methodology ACM0002 therefore the checklist question is N/A. The appropriateness of the baseline scenario and the calculations are assessed using "Table 2: Baseline and Monitoring Methodologies: ACM0002 Version 10" of this protocol.	OK	OK
vii. 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	The baseline scenario is determined according to the methodology ACM0002 therefore the checklist question is N/A. The appropriateness of the baseline scenario and the calculations are assessed using "Table 2: Baseline and Monitoring Methodologies: ACM0002 Version 10" of this protocol.	OK	OK
viii. Has the project participant/proponent demonstrated that the project has met all relevant regulations, legislation and project approvals (e.g. environmental permits)?	VCS	5.10	The baseline scenario is determined according to the methodology ACM0002 therefore the checklist question is N/A. The appropriateness of the baseline scenario and the calculations are assessed using "Table 2: Baseline and Monitoring Methodologies: ACM0002 Version 10" of this protocol.	OK	OK
• 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	VCS	5.11	The project proponent has established criteria and procedures for obtaining, recording, compiling and analysing data and information important for quantifying and reporting GHG	OK	OK

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
and reporting GHG emissions and/or removals relevant for the project and baseline scenario (i.e. GHG information system)?			emission reductions relevant for the project and baseline scenario in line with the ACM 002 version. For detailed information system please see Table 2: Baseline and Monitoring Methodologies: ACM0002 Version 10"		
b. Do the monitoring procedures include?	VCS	5.11	Please refer to question ff-i of this checklist.	OK	OK
i. purpose of monitoring?	VCS	5.11	Please refer to question ff-i of this checklist.	OK	OK
ii. types of data and information to be reported, including units of measurement?	VCS	5.11	Please refer to question ff-i of this checklist.	OK	OK
iii. origin of the data?	VCS	5.11	Please refer to question ff-i of this checklist.	OK	OK
iv. monitoring methodologies, including estimation, modelling, measurement or calculation approaches?	VCS	5.11	Please refer to question ff-i of this checklist.	OK	OK
v. monitoring times and periods, considering the needs of intended users?	VCS	5.11	Please refer to question ff-i of this checklist.	OK	OK
vi. monitoring roles and responsibilities?	VCS	5.11	Please refer to question ff-i of this checklist.	OK	OK
vii. GHG information management systems, including the location and retention of stored data?	VCS	5.11	Please refer to question ff-i of this checklist	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	In section B.7.2 of the PD, it has been stated that the calibration of the metering devices will be made by TEIAS and sealed before the commissioning of the plant. The explanation has been accepted since it is in compliance with the legal requirements.	OK	OK
d. Does the project proponent apply GHG monitoring criteria and procedures on a regular basis during project implementation?	VCS	5.11	The project is at validation stage therefore the checklist question is N/A.	OK	OK
• Monitoring reports for the GHG project					
a. Do monitoring reports include all the monitoring data, calculations, estimations, conversion factors and others standard factors	VCS	5.12	The project is at validation stage therefore the checklist question is N/A.	OK	OK

CHECKLIST QUESTION	Ref.	item	COMMENTS	Draft Concl	Final Concl
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)					
• Records relating to the project					
1. Has the project proponent kept all documents and records in a secure and retrievable manner for at least two years after the end of the project crediting period.?	VCS	5.13	The project is at validation stage therefore the checklist question is N/A.	OK	OK
• Information to validator and verifier					
i. 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	The revised generation license was sent to the validation team as a proof of title, and please also present the generation license taken from EMRA as an attachment to the VCS PD. Please also state who will have the ownership of the emission reductions.	CL 21	OK
ii. 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	N/A	OK	OK

TABLE 2 BASELINE AND MONITORING METHODOLOGIES: ACM 0002 VERSION 10

CHECKLIST QUESTION	Ref.	MoV	COMMENTS	Draft Concl	Final Concl
1. Baseline Methodology					
1. 1. Applicability					
1.1.1. Does the project activity generate electricity from a renewable source?	PD ver01 B.1.	DR	Yes the project activity generates electricity from a renewable source.	OK	OK
1.1.2. Is the power connected to the grid?	PD ver01 B.1.	DR	The power is connected to grid as validated through the feasibility report.	OK	OK
1.1.3 If answer to question above is 'No', whether it displaces the electricity generated in grid ?	PD ver01	DR	N/A		
1.1.4 Is the baseline methodology used in conjunction with the approved monitoring methodology ACM0002	PD ver01 B.1.	DR	The project activity is not a capacity addition to an existing plant therefore the checklist question is N/A.	OK	OK
1.1.5 Does the project activity relate to electricity capacity additions from renewable sources?	PD ver01	DR	The project is a installation a new hydropower plant with a dam. Hence the checklist question is N/A.	OK	OK
1.1.6 Does proposed project activity falls in either of the categories – Green filed Power Project, Power capacity expansion, Energy efficiency Improvement / Fuel Switch	PD ver01	DR	The project falls under the category of Green Field project as it involves the construction of a new hydro electric power plant which has been validated during the site visit.	OK	OK
1.1.7 Can the geographic and system boundaries for the relevant electricity grid be clearly identified?	PD ver01	DR	For the justification of the choice of the methodology and its applicability to the project, it is stated in section B.2. of the PD rev01 that; the geographic and system boundaries for the relevant electricity grid can be clearly identified and information on the characteristics of the grid is available. Please clarify the sources for identification and the charecterics of the grid in the PD.	CL 22	OK

CHECKLIST QUESTION	Ref.	MoV	COMMENTS	Draft Concl	Final Concl
1.1.8 Is the information on the characteristics of the grid available?	PD ver01	DR	Pls see CL10	CL10	OK
1.1.9 Will the Project activity consume in-house biomass or will it be purchased from outside?	PD ver01	DR	Project will not consume biomass in any stage, as it is a hydropower plant.	OK	OK
1.1. 10 Will implementation of Project result in increase in processing capacity of raw input?	PD ver01	DR	Implementation of the Project will not result in increase in processing capacity of raw input.	OK	OK
1.1.12 Will biomass to be used by Project activity be stored for more than one year?	PD ver01	DR	N/A	--	--
1.1.13 Will biomass require significant energies (like Processing) other than transportation?	PD ver01	DR	N/A	--	--
1.1.14 Is material and energy balance (heat and steam requirements for the processes) information available and assessed Old plants Proposed plants	PD ver01	DR	N/A	--	--
1. 2. Project boundary					
1.2.1. Did the project participant/proponent account for the CO ₂ emission from electricity generation in fossil fuel fired power that is displaced due to project activity?	PD ver01	DR	There is no electricity generation fossil fuel fired power that s displaced due to project activity. Hence this the checklist question is N/A	OK	OK

CHECKLIST QUESTION	Ref.	MoV	COMMENTS	Draft Concl	Final Concl
1.2.2 Did the project participant/proponent account for the CO ₂ emission from Heat generation in fossil fuel based power that is displaced due to project activity?	PD ver01	DR	N/A	OK	OK
1.2.2. Does the spatial extent of the project boundary include the power plant at project site, means of transportation of biomass and all power plants connected physically to the electricity system that the CDM project power plant is connected to?	PD ver01	DR	The project is a HEPP project hence the question not applicable	OK	OK
1.2.3 Is 'Biomass dumped or left to decay or burned in uncontrolled manner without utilizing for energy purposes most likely scenario?	PD ver01	DR	The project is a HEPP project hence the question not applicable	OK	OK
1.2.4 If answer to Question 1.2.3 is Yes, then are CH ₄ emissions in the project boundary are included?	PD ver01	DR	The project is a HEPP project hence the question not applicable	OK	OK
1.2.5 If answer to Question 1.2.3 is Yes, then are CH ₄ emissions calculated in a conservative manner using emission factors for uncontrolled burning of biomass?	PD ver01	DR	The project is a HEPP project hence the question not applicable	OK	OK
1.2.6 Whether choice of inclusion/exclusion CH ₄ emissions in project and baseline are documented in PDD?	PD ver01 B.3.	DR	Under section B.3 of the PD version 01, the GHG sources are identified for the project in the tabular format. 1. CO₂ emissions have been excluded in the tabular format and the justification has been given as "minor emission source" in ACM 002 version 10. However, CO₂ emissions have been identified as a major emission source in the tabular format and the methodology is referred for justification in Table 2 of the PD version 01. On the other hand; CO₂ emissions from the back-up unit have been included in the emission	CL 23	OK

CHECKLIST QUESTION	Ref.	MoV	COMMENTS	Draft Concl	Final Concl
			reduction calculations in section B.6.4 of the PD version 01 which is assessed a conservative approach. Please reassess the justification for including the CO2 emissions in the project boundary considering that it is not required by the methodology. 2. Methane emission has been included in the emission sourced and the explanation is given as "major emission source" in table 1 of ACM002 version 10. However, methane emissions have been excluded in the project boundary in table 2 of PD version 1 with an explanation that the project is zero-emission electricity generation. On the other hand; power density has been calculated in section B.6.3 of the PD version 01 as 28.09 W/m2 and concluded that the project emission for methane is zero according to ACM 002 version 10. Please consider the clarification in this protocol for the power density calculation (CL 53) and recalculate if necessary. In accordance; please reassess the justification for excluding the methane emissions in the project boundary considering that it is required by the methodology.		
			3. It has been stated in section B.6.3 of the PD that; emissions from reservoir was not included in emission reductions calculations since the reservoir is mainly built before start of power plant component. Please clarify the applicability of the statement to the proposed project since the components of the project includes the dam according to the feasibility report approved by	CL24	OK

CHECKLIST QUESTION	Ref.	MoV	COMMENTS	Draft Concl	Final Concl
			State of Hydraulics. 4. In the same section of the PD version 1; it has been stated that the project activity does not result in GHG gasses since the project is the installation of a hydropower plant. However, the HEPP projects with a power density larger than 4W/m2 emits methane emissions according to ACM002 version 10. In addition, the diesel generator which will be used as an auxiliary power has been identified a CO2 emission source in section B.6.3 of the PD version 01. Please clarify the contradiction.		
			Power density has been calculated in section B.6.2 of the PD version 1. The formula used for the calculation of the power density is inline with ACM002 version 10. Cap _{pj} has been assumed as 29,400 W as validated from the production license . A _{pj} has been assumed as 410,000 m ² . Please supply the reference for the reservoir area.	CL25	OK
1.2.7. Is the regional project electricity system identified by the spatial extent of the power plants that can be dispatched without significant transmission constraints?	PD ver01 B.6.3.	DR	In section B.6.3 of the PDD version01, the identification of the relevant electrical power system has been defined as the following: "According to the " Tool to calculate the emission factor for an electricity system", Version 01, a project electricity system has to be defined by the spatial extent of power plants that are physically dispatched without significant transmission constraints. Therefore, in this project activity the project electricity system includes the project site	OK	OK

CHECKLIST QUESTION	Ref.	MoV	COMMENTS	Draft Concl	Final Concl
			<i>and all power plants attached to the Interconnected Turkish National Grid which has an installed capacity of 40,835.7 MW"</i> The definition of the electricity system has been accepted by the DOE since the explanation is in line with the tool.		
<i>1.2.8 Whether N₂O has been excluded as GHG source within the project boundary?</i>	PD ver01	DR	According to ACM0002 Version 10 for Hydro power projects N ₂ O is a minor emission source and is negligible as an emission source. However in the Table 2 of the PD the justification for excluding the N ₂ O has been given as the zero-emission electricity generation. Please clarify the justification in reference with the ACM002 table 1.	CL26	OK
<i>1.2.9. Are the assumptions made in determining the project electricity system defined and justified?</i>	PD ver01	DR	In section B.6.3 of the PDD the identification of the relevant electrical power system has been defined and the justification for selection of the electrical power system has been defined in section B.2. OF PD version 01 as the following: <i>"Since there exists no delineation of project electricity system or connected electricity systems by DNA, following criteria has been used to determine the existence of significant transmission constraints:</i> <i>1. In case of electricity systems with spot markets for electricity: there are differences in electricity prices (without transmission and distribution costs) of more than 5 percent between the systems during 60 percent or more of the hours of the year.</i> <i>2. The transmission line is operated at 90% or more of its rated capacity during 90% percent or more of the hours of the year.</i>	OK	OK

CHECKLIST QUESTION	Ref.	MoV	COMMENTS	Draft Concl	Final Concl
			<i>Since the project output is fed to the Turkish electricity grid which does not involve any distinct electricity systems that applies different price, first criteria defined above is not applicable. Also, since the transmission line between the proposed project and nearest substation is built within the scope of the project and there exist no information on grid capacity utilization, second criteria is also inapplicable. Based on assessment above, it is difficult to conclude with a significant transmission constraint or grid boundary. Since there is no dispatch grid system in Turkey, the project boundary is considered as the National Electricity Grid of Turkey according to applied tool. The geographical and physical boundaries of the Turkish grid and location of the power plants are well identified as given diagram below."</i> The above justification has been checked form the internet site of governmental bodies namely, Turkish Electricity Transmission Company and Electricity Generation CO. Inc; and it has been concluded that project boundary is considered as the National Electricity Grid of Turkey according to applied tool.		
<i>1.2.10. Does the application of this methodology result in a clear grid boundary?</i>	PD ver01	DR	Yes the application of this methodology result in a clear grid boundary. The boundary of the grid is the Turkish national grid.	OK	OK
<i>1.2.11. Does the application of this methodology result in a given country specific variations in grid management policies?</i>	PD ver01	DR	The application of this methodology does not result in a given country specific variations in grid management policies.	OK	OK
<i>1.2.12. If answer to question is yes then whether</i>	PD	DR	N/A	OK	OK

CHECKLIST QUESTION	Ref.	MoV	COMMENTS	Draft Concl	Final Concl
<i>DNA of the host country provides the delineation of grid boundaries.</i>	ver01				
<i>1.2.13. If answer to question is no whether DNA guidance is available for defining the boundary.</i>	PD ver01	DR	There is no DNA in Turkey, therefore the checklist question is N/A.	OK	OK
<i>1.2.14. If answer to question is no whether the layered dispatch system (e.g. state/provincial/regional/national) the regional grid is used</i>	PD ver01	DR	There is no layered dispatch system in Turkey, therefore the checklist question is N/A.	OK	OK
<i>1.2.15. If the regional grid is not used whether the national or state grid is used.</i>	PD ver01 DR	DR	The Turkish national grid is used.	OK	OK
1.3. Identification of alternative baseline scenarios					
1.3.1. Are Realistic and credible alternatives separately determined for power, biomass and Heat?	PD ver01	DR	The baseline scenario is defined as as " <i>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) described in the "Tool to Calculate the emission factor for an electricity system"</i> as given in ACM0002 version 10 as the project activity is the installation of a new grid-connected renewable power plant/unit.	OK	OK
1.3.2. Are the various options for alternatives explained in PDD?	PD ver01	DR	Since the project is not a retrofit project alternatives are not required in ACM002 version 10. Since the checklist question is N/A	OK	OK
1.3.3. Is the explanation of these options transparent	PD	DR	Since the project is not a retrofit project	OK	OK

CHECKLIST QUESTION	Ref.	MoV	COMMENTS	Draft Concl	Final Concl
and complete	ver01		alternatives are not required in ACM002 version 10. Since the checklist question is N/A		
1.3.4 Did the project participant/proponent provide evidence and supporting documents to exclude baseline options that do not comply with legal and regulatory requirements; or depend on key resources such as fuels, materials or technology that are not available at the project site?	PD ver01	DR	Since the project is not a retrofit project alternatives are not required in ACM002 version 10. Since the checklist question is N/A	OK	OK
1.3.5 Are the calculations for baseline are as per latest version of ACM 0002 as required by this methodology?	PD ver01	DR	The calculation have been realized as per version 10 of ACM 0002.	OK	OK
1.3.6 Are transmission & Distribution losses neglected as required by the methodology?	PD ver01	DR	The transmission& distribution losses are neglected as required by the methodology.	OK	OK
1.3.7 Is quantity of electricity required for operation of plant subtracted?	PD ver01	DR	Yes the electricity supplied to the grid has been taken into consideration as net electricity. However this step will be concluded through verification .	OK	OK
1.3.8 Where EG-historical is the average of historical electricity delivered by the existing facility to the Grid, whether spanning all data from the most recent available year (or month, week or other time period) to the time at which the facility was constructed, retrofit, or modified in a manner that significantly affected output (i.e., by 5% or more), expressed in MWh per year. A minimum of 5 years (120 months) (excluding abnormal years) of historical generation data is required in the case of hydro facilities.	PD ver01	DR	The project is a Greenfield power plant, therefore the checklist question is N/A.	OK	OK
1.3.9. Whether a minimum of three years data is referred and used in case the project is non-hydro?	PD ver01	DR	The project is a Greenfield power plant, therefore the checklist question is N/A.	OK	OK
1.3.10. Is it required to estimate the point in time	PD	DR	The project is an installation of a new power plant;	OK	OK

CHECKLIST QUESTION	Ref.	MoV	COMMENTS	Draft Concl	Final Concl
when the existing equipment would need to be replaced in the absence of project activity?	ver01		hence the question N/A		
1.3.11 If the answer to question is Yes Whether project participant/proponent s have taken any of the two approaches, indicated in the ACM0002 into account?	PD ver01	DR	The project is a Greenfield power plant, therefore the checklist question is N/A.	OK	OK
1.3.12 Whether the typical average technical lifetime of the type equipment is determined and documented taking into account common practices in the sector and country e.g. based on industry surveys, statistics, and technical literature?	PD ver01	DR	The project is not a retrofit or replacement of an existing renewable energy power plant; hence the checklist question is not applicable.	OK	OK
1.3.13. Whether the common practices of the responsible company regarding the replacement schedules is evaluated and documented, e.g. based on historical replacement records for such equipment?	PD ver01	DR	The project is not a retrofit or replacement of an existing renewable energy power plant; hence the checklist question is not applicable.	OK	OK
1.3.14. Whether the baseline emission factor is calculated as a combined margin consisting of the combination of operating margin (OM) and build margin factors according to three steps indicated in the methodology ACM0002?	PD ver01 B.6.3.	DR	The baseline emission factor is calculated as a combined margin consisting of the combination of operating margin and build margin as indicated in step 6 of the section B.6.3 of the PD rev01.	OK	OK
	PD ver01	DR	The three steps indicated in the methodology ACM0002 has been applied during the calculations.	OK	OK
1.3.15 Whether the weighted average applied by project participant/proponent is fixed for a crediting period.	PD ver01	DR	The weighted average has been considered for 2005-2006-2007 by the PP as stated under step 2 of section B.6.3 of the PD version 1. However at the date of the submission of the PD, the values for 2008 has been published. Please change the vintage of data selected so that the vintage will cover the latest 3 years' data that	CAR09	OK

CHECKLIST QUESTION	Ref.	MoV	COMMENTS	Draft Concl	Final Concl
			are available at time of submission of the PD. 1. Please recalculate the OM 2. Please recalculate BM 3. Please recalculate the CM		
1.3.16. Whether operating margin emission factors calculations are based on one of the four methods described in the methodology ACM 0002?	PD ver01	DR	OM emission factor calculations are based on the "Option C of the Simple OM (Method (a))" method described in ACM0002's referred methodological Tool to Calculate the Emission Factor for an Electricity System.	OK	OK
	PD ver01	DR	Simple OM method is used for the calculation of the emission factor of the operating margin as described in step 2 of the section B.6.1 of the PD REV01.	OK	OK
	PD ver01	DR	The justification for not selecting the method is given as lack of data for fuel consumption of each power plant in section B.6.1 of the PD REV01. The statement is also verified from the TEIAS site by the DOE.	OK	OK
	PD ver01	DR	The justification for not selecting the option B and C are given as due to insufficient data in step 2 of the PD rev01.	OK	OK
	PD ver01	DR	It has been stated that Option C of the Simple OM method has been selected in step 3 of the section B.6.3 of the PD rev01. The selection has been justified by stating that fuel consumption and average efficiency data for each power plant/ unit are not available. The statement has also been accepted by the DOE since it has been validated from the TEIAS web site.	OK	OK
	PD ver01	DR	In Section B.6.1. of the PD rev 01 share of low	CAR10	OK

CHECKLIST QUESTION	Ref.	MoV	COMMENTS	Draft Concl	Final Concl
			cost-must run resources have been presented for years 2003-2007. The data for year 2008 is available at the time of the submission of the PD. Please recalculate the values in table 6 which shows the breakdown by source of electricity generation for the most recent years and reevaluate if low cost must run resources constitute less than %50 of total grid generation for the five most recent years.		
1.3.17 Is the most likely baseline scenario `electricity production from other sources feeding into the grid?	PD ver01	DR	Yes the most likely baseline scenario is the electricity production from other sources feeding into the grid.	OK	OK
1.3.18 If the project activity modifies or retrofits an existing electricity generation facility, is the guidance by EB08 taken into account?	PD ver01	DR	No, the project does not modify or retrofit an existing electricity generation facility.	OK	OK
1.4. Additionality					
1.4.1. Was the additionality of the project activity demonstrated and assessed using the latest version of the "Tool for demonstration and assessment of additionality"?	PD ver01	DR	The methodological tool for the demonstration and assessment of the additionality has been defined as "Tool for the demonstration and assessment of additionality", Version 5.2. in section B.1 of the PD rev0.1.	OK	OK
1.5 Project Emissions					
1.5.1. Are the relevant project emissions indicators have been considered?	PD ver01	DR	It has been stated that the project emission has been defined as "0" in section B.6.2 of the PD version 01. The power density has been calculated to justify the assumption.	OK	OK
			It has been stated that in section B.6.3 of the PD version 01 that the only emission source in the plant is the diesel generator which is used as	OK	OK

CHECKLIST QUESTION	Ref.	MoV	COMMENTS	Draft Concl	Final Concl
			auxiliary source. The assumption is also accepted by the DOE since it is a conservative approach.		
1.5.2 Are the project emissions arising out of transportation of biomass and/or on site use of fossil fuel and/or CO ₂ emissions due to on site electricity consumption and/or Methane emissions from combustion of biomass residues	PD ver01	DR	In section B.6.3 of the PD version 01; calculation of CO ₂ emissions due to the diesel generator which is used as a auxiliary power has been transparently presented.	OK	OK
1.5.3 Is the approach for project emissions conservative and transparent ?	PD ver01	DR	N/A	OK	OK
1.5.4 In case of Methane emissions due to combustion of biomass, are the relevant IPCC values are taken in to account with appropriate uncertainty ?	PD ver01	DR	N/A	OK	OK
1.6. Baseline Emissions					
	B.6.3.	DR	Yes, the baseline emissions are determined according to the formula: $BE_y = EG_y \times EF_y$. The findings on the compliance of the calculations have been given below:	OK	OK
	PD ver01	DR	1.6.1. Are the baseline emissions determined according to the formula $BE_y = EG_y \times EF_y$?	CAR 11	OK
	PD ver01	DR	1. Heating values for each type of fuel has been presented in the "NCV and EF calculation" sheet of the "CM_calculation_2007_24012010.xls" workbook. The summary of heating values presented for year 2006 and 2007 have been checked from the official web site of Turkish Electricity Transmission Company" (www.teias.gov.tr) for 2006 and 2007. Please	CAR12	OK

CHECKLIST QUESTION	Ref.	MoV	COMMENTS	Draft Concl	Final Concl
			present heating values of fuels values applicable for the most recent vintage data available at the time of submission of the PD. 2. Data source for heating values of the fuels have not been presented in the excel sheet that will enable the reproducing the calculation.		
	PD ver01	DR	1. NCV parameter has been included in the tabular format under section B.6.2. (DATA AND PARAMETERS AVAILABLE AT VALIDATION) of the PD version 1. The data source given is for the years 2005-2006 and 2007. Please refer to the data source applicable for the most recent vintage data available at the time of submission of the PD. 2. The NCV parameters have been presented in; a. Table 7& Table 8 & Table 13 & Table 14 of the PD version 1 and, b. "NCV and EF calculation" & "OM calculation" & "BM calculation" sheets of CM_calculation_2007_24012010.xls. Please apply NCV values applicable for the most recent data vintage available at the time of submission of the PD.	CAR13	OK
	PD ver01	DR	The reference for table 13 of the PD version 1 is given as the 2007 Turkey National GHG Inventory. However the values presented are not from the National Inventory. Please consider that the "Tool to calculate the emission factor for an electricity system" requires the use national values. Please clarify the source of NCV . Please clearly present	CL27	OK

CHECKLIST QUESTION	Ref.	MoV	COMMENTS	Draft Concl	Final Concl
			how the NCV values are computed.		
	PD ver01	DR	1. $EF_{CO_2,i,y}$ for all the fuel sources used except coal is from the IPCC default values at the lower limit of uncertainty at a 95% confidence interval as provided in Table 1.4. Chapter 1 of Vol.2 of the 2006 IPCC Guidelines. However $EF_{CO_2,i,y}$ for coal has been computed by the multiplication of $25.8 \times 44/12$ (carbon content of bituminous coal multiplied by the conversion factor) in the "BM calculation" sheet of CM_calculation_2007_24012010.xls. The computed value is the default value for the bituminous coal. Please use the IPCC default values at the lower limit of uncertainty at a 95% confidence interval for the same fuel source. Please present/correct the value in the following documents; -Table 10&Table 11&Table 13&Table 16 of the PD version 1, -Under section B.6.2 of the PD version 1, - "NCV and EF calculation" & "OM calculation" & "BM calculation" sheets of CM_calculation_2007_24012010.xls. 2. In section b.6.3. -pg.24 of the PD version 1 ; it has been stated that heating values of fuels consumed and formulas given in Revised 1996 IPCC Guidelines have been used for lignite and coal. However; it has been stated that IPCC default values at the lower limit of uncertainty at a 95% confidence interval as provided in Table 1.4. Chapter 1 of Vol.2 of the 2006 IPCC Guidelines have been used for $EF_{CO_2,i,y}$ parameter the in the tabular format under	CAR14	OK

CHECKLIST QUESTION	Ref.	MoV	COMMENTS	Draft Concl	Final Concl
			section B.6.2 of the PD version 01. Please clarify the contradiction		
			1. The data "Net Electricity" has been presented in section B.6.2. of the PD version 01. The data vintage selected is for the years 2005-2007. Please present the references applicable to the most recent data at time of submission of the PD. 2. Net electricity data has been used to compute OM value in "OM calculation" sheet of CM_calculation_2007_24012010.xls. Please select the data vintage applicable to the most recent vintage available and recalculate the O&M value. 3. Net electricity generation values have been presented in table 9 of the PD version 1. Please select the data vintage applicable to the most recent vintage available and re-present the table. 4. Net electricity supply to the grid has been presented in table 15 of the PD version 1. Please select the data vintage applicable to the most recent vintage available and represent the table. 5. The reference for the for table 15 in PD version 1 indicates only the amount of exported electricity. Please supply the reference for the total energy generation and the thermal electricity generation license. 6. The reference given in the source of data for EGy given in section B.6.2 of the PD version 1 has been includes gross and net electricity production. However, this table is used for computing of gross/net electricity production ratio. This value is multiplied by the gross electricity production by thermal sources to compute the net electricity generation as validated from the	CAR 15	OK

CHECKLIST QUESTION	Ref.	MoV	COMMENTS	Draft Concl	Final Concl
			_calculation_2007_24012010.xls. However the reference for the amount of thermal electricity production has not been given the tabular format		
	PD ver01	DR	In Table 13 of the PD version 01, values used for the calculation of the OM have been presented. The reference for the table is given as the National Inventory of Turkey-2007. In 2007 inventory; IPCC mid values have been used. However, the EF values given in the table stand for the min IPCC min values. According to the "Tool to calculate the emission factor of an electricity system" it is convenient to use IPCC min values. So, please clarify the reference for the EF factors.	CAR16	OK
			1. In the version 01 of the PD, it has been stated that the list of most recent capacity additions to the grid and their average and firm generation capacities are available at the TEİAŞ web page 2. In the BM calculations worksheet, it is seen that the capacity addition data for the years 2006 and 2007 are taken from the TEİAŞ website which are given as a reference in the PD. However the data that is used in the calculations does not give detailed plant based information on the capacity additions. Please revise your calculations and the references given in the PD using the detailed lists that are given in the annexes of capacity projection reports that are also available on the TEİAŞ website.	CAR17	OK
	PD ver01	DR	1. For the generation efficiency of coal, the value of present thermal power plants has been used from Türkiye Çevre Atlası prepared by Ministry of Environment and Forestry as indicated in section B.6.2. of the PD rev 01; Table 10&Table	CAR 18	OK

CHECKLIST QUESTION	Ref.	MoV	COMMENTS	Draft Concl	Final Concl
			11&Table 15 of thePD rev01 and the "EF calculation.xls". However, the document has been published in 2004 and refers to data from power plants of all vintages in operation. On the other hand, the BM comprises most recently built power plants which are expected to be of higher efficiency. Hence using the default efficiency factor in the TOOL (for new power plants built after 2000), which is slightly higher, would be more appropriate. 2.		
1.6.2. Were the Emissions Factor for displaced electricity calculated as in ACM0002?	PD ver01	DR	As Simple OM method is used calculating the Emissions Factor for displaced electricity is not required. (Only required in Dispatch data analysis OM)	OK	OK
1.6.3 Were the baseline emissions for heat correctly represent the existing situation of heat generation?	PD ver01	DR	N/A	OK	OK
1.6.4 Whether 'life time aspects' are taken into account if required so by applicable scenario?	PD ver01	DR	No. There is no applicable scenario which requires taking "life time aspects" into account. Therefore the checklist question is N/A.	OK	OK
1.6.5 Does project account for baseline emissions due to natural decay or uncontrolled burning of anthropogenic sources of biomass residues ?	PD ver01	DR	N/A	OK	OK
1.6.6 Does project account for quantity of biomass residues used as a result of the project activity ?	PD ver01	DR	N/A	OK	OK
1.7. Leakage					
1.7.1. Are the leakage considered?	PD	DR	No leakage has been considered with justification	OK	OK

CHECKLIST QUESTION	Ref.	MoV	COMMENTS	Draft Concl	Final Concl
	ver01		that no equipment has been transferred from or to another activity in section B.6.3. of the PD version 01.		
1.7.2. Have any credits been claimed for the project on account of reducing the emissions due to power plant construction, fuel handling and land inundation below the level of the baseline scenario?	PD ver01	DR	No. No credits have been claimed for the project on account of reducing the emissions due to power plant construction, fuel handling and land inundation below the level of the baseline scenario.	OK	OK
1.7.3 Has it been demonstrated that biomass availability from the region is abundant enough & that the use of the biomass residues does not result in increased fossil fuel consumption elsewhere ?	PD ver01	DR	N/A	OK	OK
1.7.4 Is this demonstration done through one of the options L1 to L3 as recommended by the methodology?	PD ver01	DR	N/A	OK	OK
1.7.5 When either L2 or L3 is chosen as a option, the radius for procurement of biomass is at least 20 km and not more than 200 km in any case?	PD ver01	DR	N/A	OK	OK
1.7.6 Where Project cannot demonstrate the procurement of biomass in above stated limits, is leakage penalty applied?	PD ver01	DR	N/A	OK	OK
1.8. Emission Reduction					
1.8.1. Did the emissions reductions were determined according to the formula $ER_y = ER_{\text{heaty}} + ER_{\text{electricity y}} + BE_{\text{biomassy}} - PE_y - L_y$	PD ver01	DR	ER_y is calculated as follows: $ER_y = BE_y - PE_y - LE_y$	OK	OK
1.8.2 Are the emission reduction calculations for displacement of power done as appropriate to chosen scenario ?	PD ver01	DR	Yes the emission reduction calculations for displacement of power done as appropriate to chosen scenario.	OK	OK

CHECKLIST QUESTION	Ref.	MoV	COMMENTS	Draft Concl	Final Concl
			The heading B.6.3. is duplicated in PD version 01.	CL 28	OK
1.8.3. Were all values chosen in a conservative manner and was the choice justified?	PD ver01 PD ver01	DR DR	Generally the values chosen were selected in a conservative manner.	OK	OK
			In the BM calculations the employed emission factor for fuel oil is the same as the IPCC lower level for residual fuel oil. However according to NIR 2009-2007 there is no residual fuel oil usage on that year. Please clarify.	CL 29	OK
1.8.4. Whether an estimate of likely project emission reductions for the proposed crediting period is prepared as part of the PDD?	PD ver01	DR	An estimate of likely project emission reductions for the proposed crediting period is prepared and shown in Table 12 in section B.6.4. of the PD. 1. Please clarify the emission reduction values according to the CARs&CL raised in this table.	CL 30	OK
1.8.5. Whether the estimate in principle employs the same methodology ACM0006?	PD ver01	DR	Project is not biomass residue, therefore checklist question is N/A	OK	OK
1.8.6. Whether the emission factor is determined ex-post during monitoring?	PD ver01	DR	EF is determined as ex-ante as stated under section B.6.3. Step 2	OK	OK
1.8.7. If yes whether project participant/proponent s have used models or other tools to estimate the emission reductions prior to validation?	PD ver01	DR	N/A	OK	OK
2. Monitoring Methodology					

CHECKLIST QUESTION	Ref.	MoV	COMMENTS	Draft Concl	Final Concl
2.1. Applicability					
2.1.1. Does the project activity generate electricity from a renewable source?	PD ver01	DR	The project generates electricity from a renewable source.	OK	OK
2.1.2. Is the power connected to the grid?	PD ver01	DR	The power is connected to grid as validated through the feasibility report.	OK	OK
2.1.3. Does the project activity relate to electricity capacity additions from renewable sources?	PD ver01	DR	The project activity does not relate capacity additions from renewable sources.	OK	OK
2.1.4. Is fuel switch done in the process?	PD ver01	DR	Since the project is the installation a new HEPP, the question is not applicable to the project.	OK	OK
2.1.5. Can the geographic and system boundaries for the relevant electricity grid be clearly identified?	PD ver01	DR	The geographic and system boundaries for the relevant electricity grid may be clearly identified	OK	OK
2.1.6. Is the information on the characteristics of the grid available?	PD ver01	DR	The information on the characteristics of the grid is available.	OK	OK
2.2. Monitoring Methodology					
2.2.1. Does the monitoring plan require monitoring of increased electricity generation from the proposed project activity?	PD ver01	DR	The monitoring plan requires monitoring of increased electricity generation from proposed project activity	OK	OK

CHECKLIST QUESTION	Ref.	MoV	COMMENTS	Draft Concl	Final Concl
2.2.2 Does monitoring takes in to account the lower value between (a) the net quantity of electricity generated in the new power unit that is installed as part of the project activity and (b) the difference between the total net electricity generation from firing the same type(s) of biomass at the project site (EG total,y) and the historical generation of the existing power unit(s), (EG historic, 3yr) based on the three most recent years.	PD ver01	DR	N/A	OK	OK
2.2.3. Does the methodology requires monitoring of Data needed to recalculate the operating margin emission factor, if needed, based on the choice of the method to determine the operating margin (OM), consistent with ACM0002?	PD ver01	DR	The ex-ante option has been selected as indicated in section B.6. of the PD rev01.	OK	OK
2.2.4. Does the monitoring plan require monitoring of Data needed to recalculate build margin emission factor, if needed, consistent with ACM0002?	PD ver01	DR	The ex-ante option has been selected as indicated in section B.6. of the PD rev01.	OK	OK
2.2.5. Does the monitoring plan require monitoring of data needed to calculate fugitive carbon dioxide and methane emissions and carbon dioxide emissions from combustion of fossil fuels required to operate the geothermal power plant ?	PD ver01	DR	The project is a hydro powerplant project. So, the question is not applicable to the project.	--	--
2.3. Quality Control (QC) and Quality Assurance (QA) Procedures					
2.3.1. Did all measurements use calibrated measurement equipment that is regularly checked for its functioning?	PD ver01	DR	The measurements use calibrated equipments.	OK	OK
2.3.2 Are frequency of monitoring the parameters defined hourly/daily ?	PD ver01	DR	The frequency of parameters have been defined	OK	OK

TABLE 3 CHECKLIST BASED ON METHODOLOGICAL TOOL FOR ASSESSMENT OF ADDITIONALITY (VERSION 05.2 - EB 39 REPORT ANNEX 10)

CHECKLIST QUESTION	Ref.	MoV	COMMENTS	Draft Concl	Final Concl
1. Additionality of a project activity					
1. Does the VCS-PD state the latest version of the additionality tool being used?	PD ver 01	DR	However the steps followed in section B.5 of the PD rev 01 is in line with the steps of the tool "Tool for the demonstration and assessment of additionality".	OK	OK
2. Has the tool used the following steps to assess additionality 1. Identification of alternatives to the project activity 2. Investment analysis to determine that the proposed project activity is either: 1) not the most economically or financially attractive, or 2) not economically or financially feasible 3. Barriers analysis; and 4. Common practice analysis.	PD ver 01	DR	In the PD all of the relevant steps are used. The PPs have chosen to use both the investment analysis and the barrier analysis. The PPS have realised investment analysis to determine that the proposed project activity is not economically or financially feasible. (It has been written in the PD as not the most economically attractive)	OK	OK
3. In Step 1 have all the sub-steps as below followed 1. Sub-step 1a: Define alternatives to the project activity 2. Sub-step 1b: Consistency with mandatory laws and regulations	PD ver 01		Both of the sub-steps of step 1 are used	OK	OK

CHECKLIST QUESTION	Ref.	MoV	COMMENTS	Draft Concl	Final Concl
4. Have the following alternatives been included while defining alternatives as per sub-step 1a 1. (a) The proposed project activity undertaken without being registered as a CDM project activity 2. (b) Other realistic and credible alternative scenario(s) to the proposed CDM project activity scenario that deliver outputs services or services with comparable quality, properties and application areas, taking into account, where relevant, examples of scenarios identified in the underlying methodology 3. (c) If applicable, continuation of the current situation (no project activity or other alternatives undertaken).	PD ver 01	DR DR DR	Three alternatives have been defined by the PP in sub-step 1 a of section B.5 of the PD rev 01. The defined alternatives and the discussion about credibility of the secenarios are given below: Proposed project not undertaken as a VER project activity Continuation of the current situation-supply of equal amount of electricity in the grid. Construction of a thermal powerplant with the same installed capacity or the same annual power output	OK	OK
			The first scenario defined by the PP in sub-step 1 of section B.5 of the PD rev 01 is : The proposed project not undertaken as a ver project. As an altenative it is found realistic and credible by the DOE also; since it has been defined in the Additionality tool ver 5.02.	OK	OK
			The second alternative has been defined as current situation-supply of equal amount of electricity in the grid. The justification has been defined as that the second alternative is the baseline scenario. The justification is also accepted by the DOE.	OK	OK
			Last alternative has been defined as a construction of a thermal power plant with the same installed capacity or the same annual power output in section B.5. of the rev01. Please supply references of for thermal power plant or justify that the investor has sufficient technical background in thermal power plant operations.	CL31	OK
5. Has the project participant/proponent included the technologies or practices that provide outputs or services with comparable quality, properties and application areas as the proposed CDM project activity and that have been implemented	PD ver 01	DR	Last alternative has been defined as a construction of a thermal power plant with the same installed capacity or the same annual power output in section B.5. of the rev01. Please supply references of for thermal power plant or justify that the investor has sufficient	CL32	OK

CHECKLIST QUESTION	Ref.	MoV	COMMENTS	Draft Concl	Final Concl
previously or are currently being introduced in the relevant country/region.			technical background in thermal power plant operations.		
6. Has the outcome of Step 1a: Identified realistic and credible alternative scenario(s) to the project activity done correctly? Please briefly mention the outcome.	PD ver 01	DR	Please clearly state the realistic scenarios in the outcome of step 1a.	CL33	OK
7. 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.	PD ver 01	DR	It has been stated in section 2.5 - sub step 1 b of the PD version 01 that all the alternative scenarios defined in the VCS PD are in line with all the mandatory applicable legal and regulatory requirements.	OK	OK
8. 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.	PD ver 01	DR	N/A	OK	OK
9. Has the outcome of Step 1b: Identified realistic and credible alternative scenario(s) to the project activity that are in compliance with mandatory legislation and regulations taking into account the enforcement in the region or country and EB decisions on national and/or sectoral policies and regulations done correctly? Please state the outcome.	PD ver 01	DR	In step 1.b. of the PD version 01 , the out come of step 1.b. has been defined as the following; <i>"Mandatory legislation and regulations for each alternative are taken into account in sub step 1.b. . Based on the above analysis, the proposed project activity is not the only alternative amongst the project participants that is in compliance with the mandatory regulations. Therefore, the proposed VER project activity is considered as additional".</i>	OK	OK
10. Has PP selected Step 2 (Investment analysis) or Step 3 (Barrier analysis) or both Steps 2 and 3.)	PD ver 01	DR	The PP selected both step 1 and step2.	OK	OK

CHECKLIST QUESTION	Ref.	MoV	COMMENTS	Draft Concl	Final Concl
11. In step 2 have all the sub-steps as below followed? - Sub-step 2a: Determine appropriate analysis method - Sub-step 2b: Option I. Apply simple cost analysis - Sub-step 2b: Option II. Apply investment comparison analysis - Sub-step 2b: Option III. Apply benchmark analysis - Sub-step 2c: Calculation and comparison of financial indicators (only applicable to Options II and III): - Sub-step 2d: Sensitivity analysis (only applicable to Options II and III):	PD ver 01	DR	In step 2 the following sub-steps have been followed as the below: - Determine appropriate analysis method. - Option III. Apply benchmark analysis - Calculation and comparison of financial indicators - Sensitivity analysis	OK	OK
12. In sub-step 2a has the determination of appropriate method of analysis done as per the guidance as below - 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). - Otherwise, use the investment comparison analysis (Option II) or the benchmark analysis (Option III). Specify option used with justification	PD ver 01	DR	In substep 2a simple cost analysis has been elected and the justification has been documented as below; <i>"Since the project activity generates economic benefits from sales of electricity, the simple cost analysis is not applicable."</i> The justification is found appropriate by the DOE by benchmarking with the similar projects.	OK	OK

CHECKLIST QUESTION	Ref.	MoV	COMMENTS	Draft Concl	Final Concl
	PD ver 01	DR	In substep II a of section B.5 of the PD version 01; it has been stated that 'benchmark analysis' has been selected. The justification is given as below: "<i>Since the baseline scenario of the project is generation of electricity by the grid, no alternative investment is considered at issue.</i>" Please clearly state the reason for not selecting investment comparison analysis considering the clause 14 of the guidance of EB39.	OK	OK
13. Has the below guideline followed for sub-step 2b Option I. Apply simple cost analysis 1. 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.	PD ver 01	DR	N/A	OK	OK
14. Has the below guideline followed for sub-step 2b Option II. Apply investment comparison analysis 1. 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	PD ver 01	DR	N/A	OK	OK

CHECKLIST QUESTION	Ref.	MoV	COMMENTS	Draft Concl	Final Concl
15. Has the below guideline followed for Sub-step 2b: Option III. Apply benchmark analysis - Identify the financial/economic indicator, such as IRR, most suitable for the project type and decision context. - When applying Option II or Option III, the financial/economic analysis shall be based on parameters that are standard in the market, considering the specific characteristics of the project type, but not linked to the subjective profitability expectation or risk profile of a particular project developer. Only in the particular case where the project activity can be implemented by the project participant, the specific financial/economic situation of the company undertaking the project activity can be considered. Discount rates and benchmarks shall be derived from: (a) Government bond rates, increased by a suitable risk premium to reflect N/A private investment and/or the project type, as substantiated by an independent (financial) expert or documented by official publicly available financial data; (b) Estimates of the cost of financing and required return on capital (e.g. commercial lending rates and guarantees required for the country and the type of project activity concerned), based on bankers views and private equity investors/funds' required return on comparable projects;	PD ver 01		The discussions have been summarized below using the same numeric order with question list (left hand column) for traceability. 1. The financial indicator has been identified as IRR as the financial / economic indicator as stated in substep 2 b of section B.5 . IRR has also been found a suitable indicator for the project by the DOE in comparison with the similar projects.	OK	OK

CHECKLIST QUESTION	Ref.	MoV	COMMENTS	Draft Concl	Final Concl
o (c) A company internal benchmark (weighted average capital cost of the company), only in the particular case referred to above in 2. The project developers shall demonstrate that this benchmark has been consistently used in the past, i.e. that project activities under similar conditions developed by the same company used the same benchmark; (d) Government/official approved benchmark where such benchmarks are used for investment decisions; (e) Any other indicators, if the project participants can demonstrate that the above Options are not applicable and their indicator is appropriately justified. Please specify benchmark and justify.		DR	2. Discounts rates have been selected as given below: a) Government bond rates, increased by a suitable risk premium as indicated substep 2b of section B.5 of the PD rev 01 have been used for equity IRR. b) In the PD v.01; B.5 selection of appropriate benchmark for project IRR is not defined and justified.	OK CAR 19	OK OK
16. Has the below guideline followed for Sub-step 2c: Calculation and comparison of financial indicators (only applicable to Options II and III): 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	PD ver 01	DR	The discussions have been summarized below using the same numeric order with question list (left hand column) for traceability 1.3 The IRR value which has been considered as as the suitable financial indicator has been calculated by the main financial parameters given in Table 4 of the PD version01. 1.4 The installed capacity of Power plant is 69.58 MW as indicated in the generation license issued by EMRA.	OK	OK

CHECKLIST QUESTION	Ref.	MoV	COMMENTS	Draft Concl	Final Concl
			1. The grid connected output is presented as 223 GWh in the table 4 of the PDrev01. Please clarify the annual generation output in comparison with the license. 2. Production has been assumed as 111,50 GWh in L6 of the cash flow sheet of the FekeII Financial Model02112009.xls. Please clarify. 3. Please clarify the note in cell D29 of " cashflow sheet" of the "Feke II Financial Model02112009.xls". (Average generation for analysis period has been assumed as 110GWh) 4. Production has been assumed as 223 GWh in Table 4 of the PD ver1 and D29 of Please clarify " cash flow sheet" of the "Feke II Financial Model02112009.xls"	CL36	OK
			1. Loan amount has been indicated as 35561 million euros in table 4 of the PDD version 01. Please justify the loan amount. Interest on loan has been assumed 9% in cell B28 of the " cash flow sheet" of the "Feke II Financial Model02112009.xls"Please justify. 2. Loan payback has been defined in L25-Q25 FekeIIFinancialModel02112009. Please justify the loan payback conditions from the loan agreement. Please supply detailed payback conditions. 3. Loan interest has not been considered in the the " cash flow sheet" of the "Feke II Financial Model02112009.xls"Please justify.	CL37	OK

CHECKLIST QUESTION	Ref.	MoV	COMMENTS	Draft Concl	Final Concl
			4. In section B.5 of the PD version 1 (pg.13) ; it has been stated that the the interest payments have not been included in the cash flow. The justification has been given by stating the requirement of the additionality tool version 5.02. Please clarify the justification since the payment on interest has been required to be included in the cashflow in the equity IRR calculations in version 05.2 of the Additionality tool. 5. In the sheet named "yıllara dağılım" of the "Feke II Financial Model02112009.xls"; the cost of investment has been defined between the years 2006-2011. However, in the " butce ozetlinki" sheet of the Feke II Financial Model02112009.xls it has been stated that the contruction ends on 31.12.2010(Also in the work schedule given by the investor during the site visit also indicated the same date.) Please clarify the differences between the dates.		

CHECKLIST QUESTION	Ref.	MoV	COMMENTS	Draft Concl	Final Concl
			1. Please justify the total investment value indicated in cashflow of FekeII Financial Model-02.11.2009. (cell B67-B99 in butceozetlinkli sheet and the license fee in H94) 2. Please clearly include the justification of the assumption for the contingency item identified in cell "D8" of the cash flow of "FekeII Financial Model-02.11.2009 xls" . 3. VAT amount has been defined in B11 of cashflow and I92 of the "butceozetlinkli"sheet of the FekeII Financial Model-02.11.2009. Please clarify the reason for including the turbine amount in VAT calculation. 4. The expropriation amount has been indicated in the connection agreement (bağlantı anlaşması) is different form the value given in the "butceozetlinkli" sheet of the FekeII Financial Model-02.11.2009. Please clarify the difference. 5. Please clarify if the expropriation will be carried out for only transmission lines. Please clarify if all the amount fro the expropriation has been included in the calculation.	CL38	OK
			Electricity tariff has been assumed as 5.5 Euro cent in table 4 of the PD version 01. The tariff has been justified from the EMRA regulation.	OK	OK
			Income tax rate has been assumed as 20% in table 4 of the PS version01. The assumption has been validated from the regulation.	OK	OK
			Please justify the assumption for the expected VERs price which is given in Table 4 of the PD version 1.	OK	OK
			1. Number of employee has been defined as 20 in	CL39	OK

CHECKLIST QUESTION	Ref.	MoV	COMMENTS	Draft Concl	Final Concl
			the PD version 01. During the site tour it has been defined that FEKE1 and FEKE2 projects will be operated from one single point. Please clarify the number of employee. 2. For the maintenance cost %0.5 of the investment cost has been assumed in B2 of the op. ex. Details. Please justify. 3. The maintenance cost formulae in B33 includes the license fee. Please clarify the assumption and change if necessary. 4. Please justify the insurance cost given in D7 of the cash flow. 5. The grid fee formulae given in cell D4 of the cashflow sheet of the FekeII Financial Model-02.11.2009 includes a value of 88.45. Please clarify what the value stands for. 6. Please clarify the transmission loss factor given in D18 of the of " cash flow sheet" of the "FekeII Financial Model02112009.xls"		

CHECKLIST QUESTION	Ref.	MoV	COMMENTS	Draft Concl	Final Concl
			7. In the formulae of the grid fee in D4 of the cash flow please clarify the value 8845 . 8. The transmission line cost given in "bağlantıanlaşması" is different from the value given in H82 of "butceozetlinkli" sheet of the "FekeII Financial Model-02.11.2009". Please clarify. 9. It has been stated that the construction and design amount for 380/154/OG will be deducted from the grid fee in the agreement with the "Energy Regulatory Board". Please clarify if the amount has been deducted in the financial analysis. 10. %50 discount on the grid fee for the five years after the commissioning plant has been indicated in 24.12.2008 dated 1894 numbered decision of the "Energy Regulatory Board". However the discount has not been reflected to the calculations. Please clarify. 11. In G28-K28 of the cash flow sheet of the "FekeII Financial Model-02.11.2009" the portion of investment that is paid by equity is computed as 53,069; however the amount for the equity given in B20 is 55,621. Please clarify.	CL40	OK
	PD ver 01		1. The exchange ratio has been presented in K67 AND L 67 in the "butce_ozet_linkli" and B23, d 24, S48 and T48 of the "average_currency_rates" sheet of the "FekeII Financial Model-02.11.2009". Please clarify. 2. Euro /YTL exchange change rate has been considered as "2" in F32 of the cashflow sheet of "FekeII Financial Model-02.11.2009". Please justify.	CL41	OK

CHECKLIST QUESTION	Ref.	MoV	COMMENTS	Draft Concl	Final Concl
	PD ver 01	DR	1. The dates of the contracts indicated in the "sozlesme tarihileri" sheet of the "FekeII Financial Model-02.11.2009" are not the same with the actual dates on the contracts. 2. The sheet CF-FEKE has also a cashflow other than the "cashflow sheet" of "FekeII Financial Model-02.11.2009". The IRR indicated in the CF-FEKE sheet is different than the IRR value calculated in the cashflow sheet.	CL42	OK
	PD ver 01	DR	1. Depreciation has been defined in L7 of the cashflow of "Feke II Financial Model-02.11.2009". Please clarify if the license fee is considered in computing the depreciation value. 2. Depreciation has been defined in D 29 "Feke II Financial Model-02.11.2009". Please clarify the depreciation amount in considering the VUK list.	CL43	OK
	PD ver 01	DR	Residual value has been calculated in d15 of the PD and has been added back to AF28 of FEKE II financial model-02.11.2009. However the value has been added back to the 21 st year of the calculation . Please clarify and change if needed.	CL44	OK
	PD ver 01	DR	1. Date of investment date has been given as 17.05.2007 in the PD version 01 however the investment analysis started from 2006 in in the FEKE II financial model-02.11.2009. Please clarify the contradiction. 2. Please clarify the period of assessment for the benchmark in the PD (for construction and the operation phase) 3. Please justify the reason for including the	CL45	OK

CHECKLIST QUESTION	Ref.	MoV	COMMENTS	Draft Concl	Final Concl
			expenses in 2006 which is before the investment decision date (The Additionality tool version 5.2. requires to exclude the expenses before the investment decision date in clause-6 PG 13 of the additionality tool .		
	PD ver 02	DR	There are interest expenses recorded in 2008, 2009 and 2010 in the financial analysis. This would lead to a financial loss in these years and these losses must effect the next years corporate taxes. Please make the correction.	CL 22	OK
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.	PD ver 01	DR	Please present the Investment analysis with carbon credit in a transparent manner in the Calculation sheet. Please present the calculation for the project IRR	CL 46	OK
3. Justify and/or cite assumptions.	PD ver 01	DR	Please clarify the CF-FEKE 2 SHEET high includes different values form the other sheets. The values in CF FEKE 2 can be reproduced.	CL47	OK
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	PD ver 01	DR	a. There is no risk indicated in the feasibility report subject to project-specific expectations and assumptions.	CL48	OK
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.	PD ver 01	DR	b. In V8 of the cashflow sheet of the for the formulae has "+120! Value. Please clarify the reason for change in operating cost in 11 th year of the assessment.	CL49	OK

CHECKLIST QUESTION	Ref.	MoV	COMMENTS	Draft Concl	Final Concl
6. Present in the CDM-PDD a clear comparison of the financial indicator for the proposed CDM activity Please specify details for above	PD ver 01	DR	Please present the Investment analysis with carbon credit in a transparent manner in the Calculation sheet. Please present the calculation for the project IRR	CL46	OK
17. 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.	PD ver 01	DR DR	A sensitivity analysis have been carried in sub-step 2.d. of the section B.5. of the PD version 1. Please clearly state how the parameters selected for the sensitivity analysis. Please recalculate the sensitivity analysis according to the CLs and CARs raised in table 3 of this protocol and present in the PD and the financial model Please calculate the Equity IRR also for 6.5 Euro cent also.	CL50	OK
18. Has the outcome of Step 2 clearly mentioned with justification?	PD ver 01	DR	The outcome of Step 2 has been defined in substep 2-b of the PD version 01 as the following: <i>"The investment and sensitivity analysis shows that the VER revenues will improve the financial indicators of the project and make the investment more reasonable for investors. Considering that figures above are based on highest guaranteed price rather than average price, optimistic estimations for yearly generation and that those figures do not reflect the risk for investment, role of carbon income is a significant number to enable the project to proceed and favorable investment and funding decision taken. Based on the above information, it is seen that project is not the most attractive option. Therefore project is considered as additional to the baseline scenario."</i>	CL51	OK

CHECKLIST QUESTION	Ref.	MoV	COMMENTS	Draft Concl	Final Concl
			Please clearly state the outcome of step 2 according to the Additionality tool version 5.2 step 2 .		
19. In step 3: Barrier analysis have all the sub-steps as below followed? 1. Sub-step 3a: Identify barriers that would prevent the implementation of the proposed CDM project activity 2. Sub-step 3 b: Show that the identified barriers would not prevent the implementation of at least one of the alternatives (except the proposed project activity):	PD ver 01 B.5	DR	Barrier analysis have all the substeps as below in step 3 of the the PD version 01: 1. Sub-step 3a: Identify barriers that would prevent the implementation of the proposed CDM project activity 2. Sub-step 3 b: Show that the identified barriers would not prevent the implementation of at least one of the alternatives (except the proposed project activity):	OK	OK
20. Has the below guideline followed for Sub-step 3a: Identify barriers that would prevent the implementation of the proposed VCS project 1. (a) Investment barriers: For alternatives undertaken and operated by private entities: Similar activities have only been implemented with grants or other non-commercial finance terms. No private capital is available from domestic or international capital markets due to real or perceived risks associated with investment in the country where the proposed CDM project activity is to be implemented, as demonstrated by the credit rating of the country or other country investments reports of reputed origin. 2. (b) Technological barriers: Skilled and/or properly trained labour to operate and maintain the technology is not available in the relevant country/region, which leads to an unacceptably high risk of equipment disrepair and malfunctioning or other underperformance; Lack of infrastructure for	PD ver 01	DR	In step 3 of the section B.5. of the PD version 01; only investment barriers , technological barriers and other barriers have been defined. <i>Investment barriers can be stated in the following case. Similar activities have only been implemented with grants or other non-commercial finance terms. No private capital is available from domestic or international capital markets due to real or perceived risks associated with investment in the country where the proposed CDM project activity is to be implemented, as demonstrated by the credit rating of the country or other country investments reports of reputed origin."</i> <i>Please clarify and reassess the investment barriers considering that the investment barriers should include barriers other than included in the investment analysis.</i>	CAR20	OK
			Technological barriers stated in the PD version 01 does not include the barriers that should prohibit the	CAR21	OK

CHECKLIST QUESTION	Ref.	MoV	COMMENTS	Draft Concl	Final Concl
implementation and logistics for maintenance of the technology, Risk of technological failure: the process/technology failure risk in the local circumstances is significantly greater than for other technologies that provide services or outputs comparable to those of the proposed CDM project activity, as demonstrated by relevant scientific literature or technology manufacturer information, The particular technology used in the proposed project activity is not available in the relevant region. 3. (c) Barriers due to prevailing practice: The project activity is the "first of its kind". 4. (d) Other barriers, preferably specified in the underlying methodology as examples.			project from occurring. In additions the sated barriers are not specific to the proposed project. In section B.5 of the PD ; the uncertainty in the flow regime has been stated as a barrier for the proposed project. There is no risk in relation with the flow regime specific to the proposed project in the approved design capacity projection report. The stated barrier is not a barrier to the proposed project. Please amend.	CAR22	OK
21. Has the outcome from Step 3a clearly mentioned in PDD?	PD ver 01	DR	The outcome from Step 3 a has not been clearly mentioned in the PD version 01.	CAR23	OK
22. Has the below guideline followed for Sub-step 3 b: Show that the identified barriers would not prevent the implementation of at least one of the alternatives (except the proposed project activity): 1. If the identified barriers also affect other alternatives, explain how they are affected less strongly than they affect the proposed CDM project activity. In other words, demonstrate that the identified barriers do not prevent the implementation of at least one of the alternatives. Any alternative that would be prevented by the barriers identified in Sub-step 3a is not a viable alternative, and shall be eliminated	PD ver 01	DR	In section B5 of the PD version 1 , it has been stated that the proposed barriers can not implemented to the alternatives. However o documented references were available.	CAR 24	OK

CHECKLIST QUESTION	Ref.	MoV	COMMENTS	Draft Concl	Final Concl
from consideration. 2. provide transparent and documented evidence, and offer conservative interpretations of this documented evidence, as to how it demonstrates the existence and significance of the identified barriers and whether alternatives are prevented by these barriers. 3. The type of evidence to be provided should include at least one of the following: (a) Relevant legislation, regulatory information or industry norms; (b) Relevant (sectoral) studies or surveys (e.g. market surveys, technology studies, etc) undertaken by universities, research institutions, industry associations, companies, bilateral/multilateral institutions, etc; (c) Relevant statistical data from national or international statistics; (d) Documentation of relevant market data (e.g. market prices, tariffs, rules); (e) Written documentation of independent expert judgments from industry, educational institutions (e.g. universities, technical schools, training centres), industry associations and others. Please specify.					
23. Has the outcome from Step 3 clearly mentioned in PDD?	PD ver 01	DR	The out come of the step3 has not been defined in the PD.	CAR 25	OK
24. In step 4: Common practise analysis have all the sub-steps as below followed?	PD ver	DR	Both of the steps have been used in sub step 4-b of the section B.5 of the PD version 01.	OK	OK

CHECKLIST QUESTION	Ref.	MoV	COMMENTS	Draft Concl	Final Concl
1. Sub-step 4a: Analyze other activities similar to the proposed project activity 2. Sub-step 4b: Discuss any similar Options that are occurring	01				
25. Has the below guideline followed for Sub-step 4a: Analyze other activities similar to the proposed project activity 1. 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.	PD rev0 1 B.5	DR	In substep 4 a in section B.5 of the project, it has been stated that share of HEPPS in total installed capacity of Turkey is about 32.8 % where as share of HEPPS in total generation is only 18.7 %. Additionally, it has been stated that the installed capacity of thermal power plants has shown a rapid growth where as that of hydroelectric power plants decrease from %40 to 32.8 % historically. The statement has been justified by the statistics of TEIAS which show the annual development of Turkey's installed capacity and annual development of Turkey's gross electricity generation by primary sources. It has been agreed that the electricity generation by hydropowerplants is not diffused to country wise in comparison with thermal powerplants considering the potential of Turkey's hydroelectric potential. From the paragraph given above it can be concluded that there are similar projects in Turkey. Please clarify the capacity, the geographic region and the status of the projects. Please supply an analysis of hydroelectrically power plants that are operational and that are in the same country/region and or rely on a similar technology, are of similar scale, and take place in a comparable environment according to the sub step 4.a of the additionality tool version 5.02. Please consider that 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.	CL 34	OK

CHECKLIST QUESTION	Ref.	MoV	COMMENTS	Draft Concl	Final Concl
26. Has the below guideline followed for Sub-step 4b: Discuss any similar Options that are occurring: If similar activities are identified, then it is necessary to demonstrate why the existence of these activities does not contradict the claim that the proposed project activity is financially/economically unattractive or subject to barriers. This can be done by comparing the proposed project activity to the other similar activities, and pointing out and explaining essential distinctions between them that explain why the similar activities enjoyed certain benefits that rendered it financially/economically attractive (e.g., subsidies or other financial flows) and which the proposed project activity cannot use or did not face the barriers to which the proposed project activity is subject. In case similar projects are not accessible, the PDD should include justification about non-accessibility of data/information.	PD ver 01	DR	Please demonstrate why the existence of these activities (if any according to the sub step 4.a for Clarification has been requested) does not contradict the claim that the proposed project activity is financially/economically unattractive or subject to barriers.	CAR26	OK
27. Has the outcome from Step 4 clearly mentioned in PDD?	PD ver 01	DR	The outcome of step4 has not been presented in the PDversion 01.	CAR 27	OK
28. Has it been proved that the project is additional?	PD ver 3.1.	DR	It has been proved that the project is additional.	OK	OK

TABLE 4 LEGAL REQUIREMENTS

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
1. Legal requirements					
1.1. Is the project activity environmentally licensed by the competent authority?	PD versi on 01	DR	Yes project activity is environmentally licensed by the competent authority	OK	OK
1.2. Are the conditions of the environmental license being met?	PD versi on 01	DR	The conditions of the environmental license have been met.	OK	OK
1.3 Are the conditions of the Designated National Authority being met?	PD versi on 01	DR	N/A	OK	OK

TABLE 5 RESOLUTION OF CORRECTIVE ACTION AND CLARIFICATION REQUESTS

<u>Draft report clarifications and corrective action requests by validation team</u>	<u>Ref. to checklist question in table 1/2/3/4/5</u>	<u>Summary of project owner response</u>	<u>Validation team conclusion</u>
<u>CAR 1</u> PD version 1 and the monitoring plan sheet have been presented in English. Please present the following documents in english • (EIA exemption letter, production license) in the PD) • financial model sheet and CM calculationsheet	Table 1	EIA Approval Letter, Production Licence in PDD and Financial Model has been presented in English. CM calculation in English has been sent within the scope of Feke I.	In the PD version 02, the translation of the documents are attached. The financial model and CM calculation sheet are also revised. <u>The corrective action request is closed.</u>
<u>CL1</u> The VCS PD template given in the web address v-c-s-org.tr has not been used. The PDD format given in the UNFCC website has been used. Please clarify the assumptions and the reasons.	Table 1	CDM PDD can be used according to the VCS rules if the additional VCS requirements are covered in PDD. Therefore Project Developer has chosen to use CDM PDD template.	The explanation is found satisfactory according to the VCS website-FAQ part. <u>The clarification request is closed.</u>
<u>CAR 2</u> It has been stated that FEKE1 and FEKE 2 projects were first developed by General Directorate of State of Hydraulic Works as a single project ; however the project was dived into FEKE I and FEKE II projects later. The statement has been approved during the interviews with the State of Hydraulic Works and through the feasibility report. Please clarify if the projects are grouped projects.	Table 1	It has been clarified in Section A.4.2. of PDD that Feke II project is an independent Hydroelectric project with its own dam and its own powerhouse.	<u>In PD version 02, it has been defined that the Feke II project is an independent Hydroelectric project with its own dam and its own powerhouse. The statement has been validated from the generation license.</u> <u>The corrective action request is closed.</u>

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<u>CL2</u> Please state the project size in the PD (Micro project: Less than 5,000 tonnes CO ₂ equivalent emissions reductions per year; Mega Project: More than 1,000,000 tonnes CO ₂ equivalent emissions reductions per year)	Table 1	It has been clarified in the Section A.4.2 of PDD that since the project delivers more than 5,000 tons CO ₂ e and less than 1,000,000 tons of CO ₂ e per year, it is neither a micro project nor a mega project.	In the PD version 02, It has been clarified in the Section A.4.2 of PDD that since the project delivers more than 5,000 tons CO ₂ e and less than 1,000,000 tons of CO ₂ e per year, it is neither a micro project nor a mega project. <u>The corrective action request is closed.</u>
<u>CL3</u> A brief description of the project has been provided in section A.2. of the PD version 01. 1. The installed capacity of the project is 69.58 MW as validated from the generation license dated 14.2.2008. 2. The project will increase the share of HEPPs in electricity generation mix of Turkey since the installed capacity is 6.9.68 MW which will result in considerable a high generation value. 3. The project will contribute to economic development in the region during construction period since the project will employ over 300 people as validated from the pay rolls and the subcontractor agreements. 4. It has been defined that The electricity generated will be delivered to the grid by a 10km long 154KV 795 MCM overhead transmission lines. Please clarify the connection point to the grid	Table 1	4. Grid Connection Agreement	1. It has been validated from the PD version 02 that the project consists 10km long 154KV 795 MCM overhead transmission lines from the grid connection agreement. The connection point to the grid has been presented in section A.4.3. of the PD and has been validated from the "Grid Connection Agreement" by the DOE. 2. Annual Generation has been validated from the energy Generation License dated 14.02.2008. 3. The references for the increasing electricity demand has been checked by the DOE. <u>The clarification request is closed.</u>

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and the length of the transmission line according to the connection agreement with TEIAS. 5. The project does not include the irrigation of lands; however the 07.08.2008 dated water usage agreement also includes water supply for irrigation and potable water. Also; this scenario has been included in the energy generation optimization calculations as validated from the July 2007 installed power revision report. It is concluded that the project will increase the agricultural income of local community and support Adana region. 6. The expected annual generation has been defined as 223 GWH whereas it has been defined as 223,410 GWH in the license. Please clarify. 7. The project consists of concrete dam with a crest length of 256 mt and a height of 60 meters form the river bed; 317 meters long derivation tunnel, upstream and downstream cofferdams, spillway, 171 metres long penstock, a powerhouse of 44 by 32 metres dimensions and 2 vertical axis Francis turbines with a gross head of 63 metres. The characteristics of the projects have been checked according to the July 2007 installed power revision report. 8. It has been stated that the proposed		6. Annual Generation in PDD has been changed from 223 GWh to 223.410 GWh. 7. Changes in the characteristics shall be submitted to DOE when they occur.	

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will meet increasing electricity demand in Turkey and guarantee the energy security. Please justify with the references.		8. References for the increasing electricity demand and the required capacity for energy security has been included in A2 of PDD.	
<u>CL4</u> " Under Section C.1.2. of the VCS PD version 01, it is stated that the project construction has started on 01.04.2006 and the plant is expected to start operation by 01.01.2010. Please provide a proof to clarify the start date of the construction and a workplan also to clarify the expected start date of the operation.	Table 1	1. The project start date has been updated as 17.05.2007, the issuance of generation licence. The commissioning date is given as 01/07/2011, as was planned to be at the investment decision date. Timeline is included in Section A.2. Detailed workplan is provided to DOE as a separate document.	1. Please clarify the change in the project start date. The project start date is the start date of the emission reductions according to VCS 2007:1. Please clarify the project start date accordingly. 2. Commissioning date has been accepted by the DOE. 3. Please submit timeline_to the DOE. <u>CL has not been closed.</u> <u>Review2:</u> Timeline has been included into the PD version2. <u>Hence the CL has been closed.</u>
<u>CL5</u> Under section C.2.1.1 of the PD version 01; it has been stated the crediting period is expected to start in 01/07/2011. However according to the work schedule submitted to the DOE the project will be commissioned on 1.1.2011. Please clarify. Under section C.2.1.2. of the PD version 01, it	Table 1	1. The project start date has been updated as 17.05.2007, the issuance of generation licence. 2. The commissioning date is given as 01/07/2011, as was planned to be at	1. Please clarify the change in the project start date. The project start date is the start date of the emission reductions according to VCS 2007:1. Please clarify the project start date accordingly. 2. Commissioning date has been

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has been stated that the project will use a renewable crediting period and the length of the first crediting period will be 10 years.		the investment decision date.	accepted by the DOE. <u>CL has not been closed.</u> <u>Review 2 :</u> The project start date has been defined as 01.07.2011. The date has been validated from the license. <u>The clarification request is closed.</u>
<u>CL 6</u> Please include the conditions prior to the project initiation in the PD.	Table 1	Conditions prior to implementation of the project is included in PDD	In version 2 of the PD the conditions of prior to the project implementation has been provided. It has been validated during the site visit that The project boundaries involves both public, private and forest lands. Main elements of the project are located on public land. <u>CL has been closed.</u>
<u>CL 7</u> In section A.4.3 of the PD the technologies and the services have been presented. Please clearly describe the characteristics of the project and the technologies to be used in the PD	Table 1	The characteristics of the project have been included as a table in PDD, A.4.3.	The characteristics of the prject have been given in section A.4.3. of the PDD version02. The charatericts given have been validated from the energy generation license, EIA report, grid connection agreement. <u>CL has been closed.</u>

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<u>CAR3</u> The relevant local laws and related to the project and the alternatives to the proposed project has been listed under substep1 b in section B.5 of the PD version 1. The relevant local regulations related to the project has not been listed in the PD.	Table 1	Identified relevant laws have been given in PDD already. There exist no publicly available source which defines relevant regulations with selected project type and alternatives which can be more than a few hundreds and outside the scope of the project.	The explanation is found satisfactory. <u>The corrective action request is closed.</u>
<u>CL8</u> Energy generation license, EIA report has been referred for the compliance to the regulations in section B.5. of the PD which were also crosschecked by the validation team. However please clarify the requirement for EIA for the transmission line.	Table 1	The requirement for EIA for transmission lines is for voltage levels of 154 kV or higher and a length of 15 km or longer. Therefore EIA would not be required for the transmission line.	The explanation is found satisfactory. <u>The clarification request is closed</u>
<u>CAR04</u> Please supply economic, sectoral, social, environmental, geographic, site-specific information in the PD	Table 1	Detailed information about the region have been included in PDD.	It has been stated in section A.2. of the PD that average population increase has been 7.7% from the Feka District according to study of State Planning Organization ¹ . Main economic activity in the region is agriculture and main agricultural products are fruits and nuts. The information given has been validated from the internet site of Turkish State Planning Organization, and during the site

¹ Socioeconomical Development Index of Districts', State Planning Organization, 2004 (page 135)

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			tour via interviews with the local stakeholders. <u>CL request has been closed.</u>
<u>CL9</u> Please clarify in the PD if there is any commercial sensitive information that has been excluded from the public version of the PD that will be displayed on the VCS Project Data Base.	Table 1	There exists no commercially sensitive information that has been excluded from public version of the PDD. PP Response 15/062010 The statement is given in section F.6	According to section 1.17 of the VCS PD template it should be stated in the PD whether there is any commercially sensitive information or not. As the VCS PD template is not used, this statement should also be given in the PD as per the rules of VCS. <u>The clarification request is still open.</u> <u>Review2: The clarification is closed</u>
<u>CL10</u> For the justification of the choice of the methodology and its applicability to the project, it is stated in section B.2. of the PD rev01 that; the geographic and system boundaries for the relevant electricity grid can be clearly identified and information on the characteristics of the grid is available. Please clarify the sources for identification and the characteristics of the grid in the PD.	Table 1	Grid characteristics, sourced by the Dispatch Department of the Grid Authority TEIAS have already been given in PDD.	In version 2 of the PDD it has been stated that The Geographical and physical boundaries of the Turkish grid and location of the power plants are clear. Turkish electricity grid has been presented in version 2 of the PDD. <u>The CL has been closed.</u>
<u>CAR05</u> For the justification of the choice of the methodology and its applicability to the project, it is stated in section B.2. of the PD rev01 that; <i>Project Power density is higher</i>	Table 1	The criterion is a new reservoir with a power density higher than 10 W/m ² , as given in section B.3 of PDD.	In version 2 of the PDD it has been stated that Project Power density is higher than 4 W/m ² . (28.09 W/m ²)

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than 4 W/m² Please clarify which applicability criteria are applied to the project (new reservoir, existing reservoir with no change volume or existing reservoir with a change in the volume). Please justify the applicability criteria selected.		PP Response 15/062010 It has been stated that a new reservoir is formed. Power density has been calculated ignoring existing flooded area for simplicity and conservativeness.	The calculation of the power density has been presented in B.6.3. of the PD version 02. Please clarify which applicability criteria are applied to the project in section B.2. of the PD .(new reservoir, existing reservoir with no change volume or existing reservoir with a change in the volume). <u>CL is still open.</u> <u>Review2:</u> <u>The clarification has been accepted by the DOE CAR has been closed.</u>
<u>CL11</u> For the justification of the choice of the methodology and its applicability to the project, it is stated in section B.2. of the PD rev01 that; <i>Project Power density is higher than 4 W/m²</i> Please clearly present how the power density has been calculated by also giving references for the data used in calculation.	Table 1	Details of Power Density calculation is given in section B.6.3. Reference for reservoir surface area is taken from EIA and has been included as Annex to PDD.	The calculation of the power density has been presented in B.6.3. of the PD version 02. The calculation has been checked and the parameters have been validated from EIA report and the energy generation license. <u>CL request is closed.</u>
<u>CL 12</u> It has been stated in section B.4. of PD version 01 that "In the absence of the proposed project activity, same amount of electricity is required to be supplied via either the current	Table 1	Reference for licenses issued by EPDK has been added as evidence which shows that license issued for thermal	<u>CL request has been closed.</u>

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power plants or by an increased number of thermal power plants, thus increasing GHG emissions.” <i>Please justify the statement above and supply a reference for the above justification.</i>		power plants have a total capacity of at least two times as much as current power plants. http://www.epdk.gov.tr/lisans/elektrik/lisansdatabase/verilentesistipi.asp	
<u>CAR06</u> The monitoring procedures should include purpose of monitoring according to clause 5.11 of VCS 2007:1. Please include the purpose of monitoring in the monitoring procedures or the related section of the PD.	Table 1	Clarification about the purpose of monitoring has been included in section B.7.2 of PDD.	The purpose of the monitoring has been included in the PDD version 02 as to guarantee the proposed project's real, measurable and long-term GHG emission reductions.. The clarification has been accepted by the DOE. <u>CL request has has been closed.</u>
<u>CAR07</u> In section B.7. of the PD version 01 the parameters EGy and FCi,j,y have been presented for monitoring in the tabular format. However, the parameters which are included in ACM 002 version 10 namely EG Facility, Cappj, PE ffY, Apj are not included in the tabular format. The tabular format shall include data unit, description, source of data to be used, measurement procedures, monitoring frequency, QA/QC procedures. Please include the relevant parameters in the monitoring as required by the methodology.	Table 1	CAPpj and Apj have been added to monitoring parameters. PEffy has been excluded as it is not required by version 10 of ACM0002 anymore for HEPPs.	It has been agreed that PEffy is not required by the methodology hence exclusion of PEffy is accepted by the DOE. CAPpj and Apj have been added to monitoring parameters in section B.7 of the PD version 2 . <u>CAR has been closed.</u>
<u>CL13</u>	Table 1		It has been agreed that PEffy is

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Monitoring frequency has been presented as "continuously" for the FCI,y parameter in section B.7.1. of the PD version 01. Please clarify the recording period also.		FCI,y has been removed as it is not required by the methodology and amount is not expected to be significant	not required by the methodology hence exclusion of PEffy is accepted by the DOE. <u>CL request has has been closed.</u>
<u>CAR08</u> According to ACM 002 version 10, All data collected as part of monitoring should be archived electronically and be kept at least for 2 years after the end of the last crediting period. Please include the archiving methodology in the PD.	Table 1	It has been included in section B.7 that data will be kept for at least two years.	In section B.7 of the PDD it has been stated that all data collected as part of monitoring will be archived electronically and be kept at least for 2 years after the end of the last crediting period. <u>CAR has been closed.</u>
<u>CL14</u> The parameter, namely EGy, is not required to be monitored according to ACM 002 version 10. However the named parameter has been included in the monitoring parameters in section B.7. of the PD version 01. Please clarify the reason for including the named parameter.	Table 1	EGy has been removed from monitoring parameters in the revised PDD.	CL has been accepted by the DOE <u>CL request has been closed.</u>
<u>CL15</u> In section B.6.2 of the PD version 01; the data units used are given as the following: EGy: MWh ; EF _{CO2} :TCO ₂ /TJ; FCI,y:tons or 100 m3 gasses; η:%; NCV:TJ/kt. According to "Tool to calculate the emission factor of an electricity system the data units for NCV and EF _{CO2} are GJ/kt and TCO ₂ /GJ. The definition of the data units in TJ are accepted since both of the parameters are	Table 1	Since NCV of some fuels (like lignite) are very low, they would not represent exact values due to rounding if expressed in terms of TJ/ton. Therefore, they have been given in TJ/kt.	The explanation is found acceptable. <u>The clarification request is closed.</u>

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defined in the TJ unit. However please clarify the reason for selecting the parameter for the NCV as TJ/ kt where the other parameters are based on the tonnes unit.			
<u>CL16</u> Under section B.7. of the PD, the description for EGy has been defined as the net electricity generated and delivered to the grid by Feke power plant in year 2007. The description of the the parameter does not match with the indicator according to ACM002 version 10. Please clarify	Table 1	EGy has been removed from monitoring parameters in the revised PDD.	In section B.7. of the PDD version 02; EG facility has been defined as "Net Electricity generated and delivered to grid by Feke II power plant in year y". The clarification is in line with the "tool to calculate the emission factor of an electricity system" version2. <u>Hence the CL request has been closed.</u>
<u>CL17</u> The source of data for the parameter EGy has been defined as the feasibility report in section B.6.2. of the PD version 01 in the tabular format; please clarify.	Table 1	Parameter EGy is changed to EG facility,y in section B.6.2. of PDD. PP Response 15/062010 EGy has been removed in revised version.	Parameter EGy is changed to EG facility,y in section B.6.2. of PDD. however EG facility is also indicated in both B.6.2. and B.7. Please clarify. <u>CL has not been closed.</u> <u>Review2:</u> <u>Clarification has been closed</u>
<u>CL18</u> For the FCi,y parameter it has been stated that the gauges and reading devices on diesel generators will be used for monitoring of FC,iy parameter in section B.6.2. of the PD version 01. Please clarify the procedure. Please clarify how the amount of fuel stocked in the tank of the generator will be defined if data will be	Table 1	Parameter FCi,y has been removed in revised PDD .	<u>Clarification request has been closed.</u>

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checked form the invoices provided by the plant operator.			
<u>CL19</u> Stakeholder consultation meeting is mandatory for this project. Please include the result of the stakeholder consultation related with the EIA also. The second stakeholder consultation has been realized on 13.11.2008.	Table 1	Results of the stakeholders consultation related with the EIA has been included in Section E.1 of PDD.	Summary of stakeholder consultation in relation with the EIA has been given in the PDD version. It has been concluded that Since no request for a change in the project was asked, no changes in the project were made. The results of the stakeholder consultation in the context of the EIA has been validated form EIA report by the DOE. <u>Clarification request has been closed.</u>
<u>CL20</u> Please clarify the chronological plan for the date of initiating project activities, date of terminating the project, frequency of monitoring and reporting in the PD	Table 1	Timeline for the project activities have been included in PDD.	<u>CL has been closed.</u>

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<u>CL 21</u> The revised generation license was sent to the validation team as a proof of title. Please also state who will have the ownership of the emission reductions.	Table 1	It has been included in PDD that project owner will have the ownership of emission reductions.	The explanation is found acceptable. <u>The clarification request is closed.</u>
<u>CL22</u> There are interest expenses recorded in 2008, 2009 and 2010 in the financial analysis. This would lead to a financial loss in these years and these losses must effect the next years corporate taxes. Please make the correction.	Table 2	PP Response 30/05/2010 The submitted model represents a general overview of the investment at time of decision. There were no loan agreement at time of investment decision therefore interest payment has not been included. The interest payments are not included as an extra item for conservativeness. Besides, the contingency item in the investment cost covers this type of payments also. PP Response: %50 loan has been assumed in the analysis. The interest expenses are recorded.	<u>Review 1:</u> There are interest expenses in the excel file. Please reasses. <u>The clarification request is not closed.</u> <u>Review2:</u> As it is seen from the IRR analysis, interest expenses recorded in 2008, 2009, 2010 and 2011 are booked in 2012 for simplicity. This way of booking the interest expenses wouldn't change the IRR results so the CL has been closed. <u>The clarification request is closed.</u>
<u>CL 23</u> Under section B.3 of the PD version 01, the GHG sources are identified for the project in the tabular format. 1. CO ₂ emissions have been excluded in the tabular format and the justification has been given as "minor emission	Table 2	Project emissions have been reassessed and reservoir emissions have been excluded from the table due to high power density of the project. Also, emission from diesel generator has been excluded as it is not required by methodology anymore.	In version 02 of the PD it has been stated that CH ₄ emissions have been excluded excluded from the table due to high power density of the project. It has been accepted by the DOE that emission from diesel generator has been excluded as it

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source" in ACM 002 version 10. However, CO₂ emissions have been identified as a major emission source in the tabular format and the methodology is referred for justification in Table 2 of the PD version 01. On the other hand; CO₂ emissions from the back-up unit have been included in the emission reduction calculations in section B.6.4 of the PD version 01 which is assessed a conservative approach. Please reassess the justification for including the CO₂ emissions in the project boundary considering that it is not required by the methodology. 2. Methane emission has been included in the emission sourced and the explanation is given as "major emission source" in table 1 of ACM002 version 10. However, methane emissions have been excluded in the project boundary in table 2 of PD version 1 with an explanation that the project is zero-emission electricity generation. On the other hand; power density has been calculated in section B.6.3 of the PD version 01 as 28.09 W/m² and concluded that the		PP Response 15/06/2010 The statement has been revised in version 3.1	is not required by methodology anymore. However, it is justified in the PDD stating that the project is zero emission generating project. please clarify the justification of exclusion of CO₂ emissions to be in line with ACM002 version 10. <u>CL request is still open.</u> <u>Review2:</u> <u>Clarification has been closed.</u>

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project emission for methane is zero according to ACM 002 version 10. Please consider the clarification in this protocol for the power density calculation (CL 53) and recalculate if necessary. In accordance; please reassess the justification for excluding the methane emissions in the project boundary considering that it is required by the methodology.			
<u>CL24</u> 1. It has been stated in section B.6.3 of the PD that; emissions from reservoir was not included in emission reductions calculations since the reservoir is mainly built before start of power plant component. Please clarify the applicability of the statement to the proposed project since the components of the project includes the dam according to the feasibility report approved by State of Hydraulics. 2. In the same section of the PD version 1; it has been stated that the project activity does not result in GHG gasses since the project is the installation of a hydropower plant. However, the HEPP projects with a power density larger than 4W/m^2 emits methane emissions	Table 2	These statements were excluded in the revised version of PDD since the project includes the dam according to the feasibility study and the criterion for exclusion of project emissions is the high power density of the project area.	The clarification in the PD version 02 has been found sufficient by the DOE. <u>Clarification request has been closed.</u>

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according to ACM002 version 10. In addition, the diesel generator which will be used as an auxiliary power has been identified a CO ₂ emission source in section B.6.3 of the PD version 01. Please clarify the contradiction.			
<u>CL25</u> Power density has been calculated in section B.6.2 of the PD version 1. The formula used for the calculation of the power density is inline with ACM002 version 10. Cap _{pj} has been assumed as 69,580,000 W as validated form the production license . A _{pj} has been assumed as 2,477,000 (m ²). Please supply the reference for the reservoir area.	Table 2	Reference for the reservoir area, taken from the EIA report, has been included as annex to the revised PDD.	The clarification has been found sufficient. <u>The CL request has been closed.</u>
<u>CL26</u> According to ACM0002 Version 10 for Hydro power projects N ₂ O is a minor emission source and is negligible as an emission source. However in the Table 2 of the PD the justification for excluding the N ₂ O has been given as the zero-emission electricity generation. Please clarify the justification in reference with the ACM002 table 1.	Table 2	It has been indicated in the table that N ₂ O has been excluded for simplification. PP Response 15/06/2010 The confusion is due the versions. In version 3 and 3.1 the statement is revised.	In PD version 02 it has not been indicated that N ₂ O has been excluded for simplification. Please reassess. <u>CL request is still open.</u> <u>Review2:</u> <u>Clarification has been closed.</u>

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<u>CAR09</u> The weighted average has been considered for 2005-2006-2007 by the PP as stated under step 2 of section B.6.3 of the PD version 1. However at the date of the submission of the PD, the values for 2008 has been published. Please change the vintage of data selected so that the vintage will cover the latest 3 years' data that are available at time of submission of the PD. Please recalculate the OM Please recalculate BM Please recalculate the CM	Table 2	PDD has been updated according to the most recent data (2006-2008 period). 	In PD version 02, the data vintages of the year 2008 has been included in the calculations. <u>The corrective action request has been closed.</u>
<u>CAR10</u> In Section B.6.1. of the PD rev 01 share of low cost-must run resources have been presented for years 2003-2007. The data for year 2008 is available at the time of the submission of the PD. Please recalculate the values in table 6 which shows the breakdown by source of electricity generation for the most recent years and reevaluate if low cost must run resources constitute less than %50 of total grid generation for the five most recent years.	Table 2	Share of low cost must run sources have been updated together with baseline calculations. PP Response 15/06/2010 The statement has been revised in previous version (3.0) already.	<u>Review 1:</u> According to the "Tool to calculate emission factor for an electricity system" Simple OM method can only be used if the LCMR resources constitute less than 50% of the total generation based on long term averages for hydroelectricity production. Under section B.6.1 of the PD version 02, the share of LCMR resources are calculated as a 5 year average. Please calculate this share based on long term averages. <u>The corrective action request is still open.</u>

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			<u>Review 2:</u> <u>Clarification has been closed.</u>
<u>CAR 11</u> 1. Fuel consumption values have been presented in PD version 1. The vintage includes 2005-2008. Please re-present the table considering the most recent data at the time of the submission date of PD. 2. The references for the fuel consumption data has been referenced in the PD . Please redefine the references considering the most recent data at the time of the submission date of PD. 3. In PD version 1; amounts of fuels used for electricity generation have been presented. Please represent the table considering the most recent data at the time of the submission date of PD. 4. Fuel consumption values have been presented in the spreadsheet submitted to the DOE. According to "Tool to calculate the emission factor of an electricity system version 01.1" - page 18; the data should be presented in a manner that enables reproducing of the calculation of the build margin and operating margin grid emission factor. In line with the requirement, please present the fuel consumption values applicable for the most recent data vintage available at the time of submission of the	Table 2	Baseline calculation and relevant data have been updated.	1. 2008 data vintages are included in the fuel consumption data. 2. The Fuel consumption reference has been updated in the PD version 02. 3. The fuel consumption values have been revised in the PD version 02. 4. The FC values for the year 2008 is presented clearly in the PD version 02. 5. FC data in the excel calculation sheet has also been revised. <u>The corrective action request is closed.</u>

<u>Draft report clarifications and corrective action requests by validation team</u>	<u>Ref. to checklist question in table 1/2/3/4/5</u>	<u>Summary of project owner response</u>	<u>Validation team conclusion</u>
PD. Fuel consumption values for 2005-2007 have been used in the "NCV and EF calculation" of the CM_calculation_2007_24012010.xls workbook for computing NCV values. Fuel consumption values for 2005 and 2006 have been checked from the web site of Turkish Electricity Transmission Company" (www.teias.gov.tr) for 2006 and 2007. Please use the fuel consumption values applicable for the most recent data vintage available at the time of submission of the PD applicable for the data vintage selected.			
<u>CAR12</u> Heating values for each type of fuel has been presented in the "NCV and EF calculation" sheet of the "CM_calculation_2007_24012010.xls" workbook. The summary of heating values presented for year 2006 and 2007 have been checked from the official web site of Turkish Electricity Transmission Company" (www.teias.gov.tr) for 2006 and 2007. Please present heating values of fuels values applicable for the most recent vintage data available at the time of submission of the PD. Data source for heating values of the fuels have not been presented in the excel sheet that will enable the reproducing the calculation.	Table 2	Baseline calculations have been updated using most recent data including Heating values.	The heating values of fuel types for the year 2008 have been included in the revised calculations. Since the data sources for the fuel consumption have been given in the PDD version 1.1; the CL has been closed. <u>The corrective action request is closed.</u>

<u>Draft report clarifications and corrective action requests by validation team</u>	<u>Ref. to checklist question in table 1/2/3/4/5</u>	<u>Summary of project owner response</u>	<u>Validation team conclusion</u>
<u>CAR13</u> 2. NCV parameter has been included in the tabular format under section B.6.2. (DATA AND PARAMETERS AVAILABLE AT VALIDATION) of the PD version 1. The data source given is for the years 2005-2006 and 2007. Please refer to the data source applicable for the most recent vintage data available at the time of submission of the PD. 3. The NCV parameters have been presented in; ⌀ Table 7& Table 8 & Table 13 & Table 14 of the PD version 1 and, ⌀ "NCV and EF calculation" & "OM calculation" & "BM calculation" sheets of CM_calculation_2007_24012010.xls. Please apply NCV values applicable for the most recent data vintage available at the time of submission of the PD.	Table 2	Baseline calculations have been updated using most recent data including Heating values.	1. The reference source of NCV for the year 2008 has been included in the PD version 02. 2. The NCV and FC values have been revised to include the data vintages for the year 2008 in the tables in PD version 02 and also in the excel calculation sheet. <u>The corrective action request is closed.</u>
<u>CL27</u> The reference for table 13 of the PD version 1 is given as the 2007 Turkey National GHG Inventory. However the values presented are not from the National Inventory. Please consider that the "Tool to calculate the emission factor for an electricity system" requires the use national values. Please clarify	Table 2	Baseline calculations have been updated using most recent data including Heating values. PP Response 15/06/2010 The explanation is already available in section B.6.2 under definition of	NCV is calculated by dividing heating values of fuels by amount of fuel consumed in that year so that the formula in effect turns to a weighted average result. The calculation is shown in CM_calculation_GTE_2006_2008_v2_FeKe. Please clearly present how

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the source of NCV . Please clearly present how the NCV values are computed.		parameter.	the NCV values are computed in the PD. <u>CL request is still open.</u> <u>Review 2:</u> <u>Clarification is closed.</u>
<u>CAR14</u> $EF_{CO_2,i,y}$ for all the fuel sources used except coal is from the IPCC default values at the lower limit of uncertainty at a 95% confidence interval as provided in Table 1.4. Chapter 1 of Vol.2 of the 2006 IPCC Guidelines. However $EF_{CO_2,i,y}$ for coal has been computed by the multiplication of 25.8x44/12 (carbon content of bituminous coal multiplied by the conversion factor) in the "BM calculation" sheet of CM_calculation_2007_24012010.xls. The computed value is the default value for the bituminous coal. Please use the IPCC default values at the lower limit of uncertainty at a 95% confidence interval for the same fuel source. Please present/correct the value in the following documents; -Table 10&Table 11&Table 13&Table 16 of the PD version 1, -Under section B.6.2 of the PD version 1, -"NCV and EF calculation" & "OM calculation" & "BM calculation" sheets of	Table 2	1) EF data used corresponds to anthracite's lower limit value. 2) Wording about NCV of coal and lignite has been corrected in revised PDD. PP Response 15/06/2010 The calculation had already been revised in previous version and value of subbituminous coal has been used.	1) Anthracite is not the most commonly used coal type in thermal power generation. Please clarify and justify the selection. 2) Wording about NCV of coal and lignite has been corrected in revised PDD. <u>CL request is still open.</u> <u>Review 2:</u> <u>Clarification has been closed.</u>

<u>Draft report clarifications and corrective action requests by validation team</u>	<u>Ref. to checklist question in table 1/2/3/4/5</u>	<u>Summary of project owner response</u>	<u>Validation team conclusion</u>
CM_calculation_2007_24012010.xls. In section b.6.3. -pg.24 of the PD version 1 ; it has been stated that heating values of fuels consumed and formulas given in Revised 1996 IPCC Guidelines have been used for lignite and coal. However; it has been stated that IPCC default values at the lower limit of uncertainty at a 95% confidence interval as provided in Table 1.4. Chapter 1 of Vol.2 of the 2006 IPCC Guidelines have been used for $EF_{CO_2,i,y}$ parameter the in the tabular format under section B.6.2 of the PD version 01. Please clarify the contradiction			
<u>CAR 15</u> 3. The data "Net Electricity" has been presented in section B.6.2. of the PD version 01. The data vintage selected is for the years 2005-2007. Please present the references applicable to the most recent data at time of submission of the PD. 4. Net electricity data has been used to compute OM value in "OM calculation" sheet of CM_calculation_2007_24012010.xls. Please select the data vintage applicable to the most recent vintage available and recalculate the O&M value. 5. Net electricity generation values have been presented in table 9 of the PD version 1. Please select the data vintage applicable to the most recent vintage available and re-	Table 2	Baseline calculation has been updated using 2006-2008 data.	<u>Review 1:</u> 1. In PD version 02, under section B.6.2, the reference sources for the revised data is presented, however there are EG facility is also indicated in both B.6.2. and B.7. Please clarify. 2. Net electricity generation data has been revised in the baseline calculation excel sheet. 3. Net electricity generation data has been revised in the table in PD version 02. 4. The table in the annex has been taken out in PD version

<u>Draft report clarifications and corrective action requests by validation team</u>	<u>Ref. to checklist question in table 1/2/3/4/5</u>	<u>Summary of project owner response</u>	<u>Validation team conclusion</u>
present the table. 6. Net electricity supply to the grid has been presented in table 15 of the PD version 1. Please select the data vintage applicable to the most recent vintage available and represent the table. 7. The reference for the for table 15 in PD version 1 indicates only the amount of exported electricity. Please supply the reference for the total energy generation and the thermal electricity generation license. 8. The reference given in the source of data for EGy given in section B.6.2 of the PD version 1 has been includes gross and net electricity production. However, this table is used for computing of gross/net electricity production ratio. This value is multiplied by the gross electricity production by thermal sources to compute the net electricity generation as validated from the _calculation_2007_24012010.xls. However the reference for the amount of thermal electricity production has not been given the tabular format		The reference for the total energy generation and thermal electricity generation has been included. http://www.teias.gov.tr/istatistik2008/32(75-08).xls PP Response 15/06/2010 Requested correction had been made in previous version..	02. 5. The table in the annex has been taken out in PD version 02. 6. The reference for the amount of thermal electricity production given in the tabular format in the PD version 02. <u>Corrective action request is not closed.</u> <u>Review 2:</u> <u>Clarification has been closed.</u>
<u>CAR16</u> In Table 13 of the PD version 01, values used for the calculation of the OM have been presented. The reference for the table is given as the National Inventory of Turkey-2007. In 2007 inventory; IPCC mid values have been used. However, the EF values given in the		Baseline calculation has been updated using 2006-2008 data.	The reference source for the emission factors of fuels have been revised in the PD version 02. <u>The corrective action request is closed.</u>

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table stand for the min IPCC min values. According to the "Tool to calculate the emission factor of an electricity system" it is convenient to use IPCC min values. So, please clarify the reference for the EF factors.			
<u>CAR17</u> In the version 01 of the PD, it has been stated that the list of most recent capacity additions to the grid and their average and firm generation capacities are available at the TEİAŞ web page. In the BM calculations worksheet, it is seen that the capacity addition data for the years 2006 and 2007 are taken from the TEİAŞ website which are given as a reference in the PD. However the data that is used in the calculations does not give detailed plant based information on the capacity additions. Please revise your calculations and the references given in the PD using the detailed lists that are given in the annexes of capacity projection reports that are also available on the TEİAŞ website.	Table 2	Baseline calculation has been updated using 2006-2008 data. Capacity projection documents of TEİAŞ are used for details of recent power plants. Links have been given in BM calculation spreadsheet.	Baseline calculation has been updated using 2006-2008 data. Capacity projection documents of TEİAŞ are used for details of recent power plants. Links have been given in BM calculation spreadsheet. <u>The corrective action request has been closed.</u>
<u>CAR 18</u> For the generation efficiency of coal, the value of present thermal power plants has been used from Türkiye Çevre Atlası prepared by Ministry of Environment and Forestry as indicated in section B.6.2. of the PD rev 01; Table 10&Table 11&Table 15 of thePD rev01 and the "EF calculation.xls". However, the document	Table 2	The source used is in line with the tool and real situation. Most of the coal power plants are old power plants having lower efficiencies than recently built ones.	<u>CAR has been closed.</u>

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has been published in 2004 and refers to data from power plants of all vintages in operation. On the other hand, the BM comprises most recently built power plants which are expected to be of higher efficiency. Hence using the default efficiency factor in the TOOL (for new power plants built after 2000), which is slightly higher, would be more appropriate.		Whereas most of the recently built power plants are natural gas power plants and efficiency assumed for these plants are in line with the tool. Also, since the efficiencies of these plants decrease by time, reference used is considered appropriate and fair. The data in annex I of the tool does not show the real situation as they only consider efficiency during electricity generation. Considering fuel consumption during start-up, shutdown and standby periods and internal consumption of the plants, actual efficiencies are much lower. Nevertheless, for simplification and accelerating the process, the values in the tool have been used.	
<u>CL 28</u> The heading B.6.3. is duplicated in PD version 01.	Table 2	Heading was corrected in revised PDD.	<u>Clarification request has been closed.</u>
<u>CL 29</u> In the BM calculations the employed emission factor for fuel oil is the same as the IPCC lower level for residual fuel oil. However according to NIR 2009-2007 there is no residual fuel oil usage on that year. Please clarify.	Table 2	TEIAS data have been used for EF calculations which show existence of fuel oil.	The explanation is found acceptable. <u>The clarification request is closed.</u>

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<u>CL 30</u> An estimate of likely project emission reductions for the proposed crediting period is prepared and shown in Table 12 in section B.6.4. of the PD. Please clarify the emission reduction values according to the CARs&CL raised in this table.	Table 2	Emission reduction values have been updated according to revised calculation.	The clarification will be closed when all the CARs and CLs regarding the baseline calculations are closed. <u>The clarification request is still open.</u> <u>Review 2:</u> <u>CL has been closed.</u>
<u>CL31</u> Last alternative has been defined as a construction of a thermal power plant with the same installed capacity or the same annual power output in section B.5. of the rev01. Please supply references of for thermal power plant or justify that the investor has sufficient technical background in thermal power plant operations.	Table 3	The references for thermal power plant licences have been included in the revised PDD which shows that the investors have sufficient background in thermal power plant investments. http://www.epdk.gov.tr/lisans/elektrik/lisansdatabase/verilentesistipi.asp	The references have been checked. The explanation is found acceptable. <u>The clarification request is closed.</u>
<u>CL32</u> Last alternative has been definedf as a construction of a thermal power plant with the same installed capacity or the same annual power output in section B.5. of the rev01. Please supply references of for thermal power plant or justify that the investor has sufficient technical background in thermal power plant operations.	Table 3	The references for thermal power plant licences have been included in the revised PDD which shows that the investors have sufficient background in thermal power plant investments. http://www.epdk.gov.tr/lisans/elektrik/lisansdatabase/verilentesistipi.asp	<u>The clarification request is closed.</u>
<u>CL33</u> Please clearly state the realistic scenarios in the outcome of step 1a.	Table 3	Given scenarios are realistic and determined according to the tool	According to the "Tool for the demonstration and assessment of

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		applied. PP Response 15/0562010 Names of alternatives have been given in outcome of 1.a	additionality" the outcome of sub-step 1a shall be "Identified realistic and credible alternative scenario(s) to the project activity" Please define clearly which alternatives are identified to be realistic and credible by giving the names of the alternatives. <u>The clarification request is still open.</u> <u>Review 2:</u> <u>The clarification request is closed.</u>
<u>CL 34</u> In substep 4 a in section B.5 of the project, it has been stated that share of HEPPS in total installed capacity of Turkey is about 32.8 % where as share of HEPPS in total generation is only 18.7 %. Additionally, it has been stated that the installed capacity of thermal power plants has shown a rapid growth where as that of hydroelectric power plants decrease from %40 to 32.8 % historically. The statement has been justified by the statistics of TEIAS which show the annual development of Turkey's installed capacity and annual development of Turkey's gross electricity generation by primary sources. It has been agreed that the electricity generation by hydropowerplants is not diffused to country wise in comparison with thermal powerplants	Table 3	Common practice analysis has been revised and information about other projects planned or implemented on the same basin has been reviewed. PP Response 30/05/2010 Analysis is based on operational plants as it seems more reasonable. Since there is no info on ongoing plants or when or how they 'll be finished(or even they'll be finished) they haven't been included in analysis. DOE should be more specific on plants	In annex 8 of the PDD version 2 detailed analysis have been presented. However the analysis does not include the plants that have been put into operation in 2007 (appendix B of the referenced document). In addition some projects have been defined as autoproducers however the referenced documents refer the plants as generation companies. Please clarify <u>Clarification request is still open.</u> <u>Review2 :</u>

<u>Draft report clarifications and corrective action requests by validation team</u>	<u>Ref. to checklist question in table 1/2/3/4/5</u>	<u>Summary of project owner response</u>	<u>Validation team conclusion</u>
considering the potential of turkeys' hydroelectric potential. From the paragraph given above it can be concluded that there are similar projects in Turkey. Please clarify the capacity, the geographic region and the status of the projects. Please supply an analysis of hydroelectrically power plants that are operational and that are in the same country/region and or rely on a similar technology, are of similar scale, and take place in a comparable environment according to the sub step 4.a of the additionality tool version 5.02. Please consider that 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.		seemed as generation companies.	<u>CL has been closed.</u>
<u>CL35</u> Government bond rates used as a benchmark has been presented in table 3 of the PD rev01. The selected benchmarks have maturity date as 2006-2010. Please select a bond with the maturity date same as the last year of the IRR period. Government bond rates used as a benchmark	Table 3	Since government bond rates in local rate does not have maturity dates in line with analysis period, Eurobond rates valid at time of start date in USD has been used for comparison in revised version.	The corrections and clarification has been found appropriate but in PDD there is a paragraph as follows: "Considering the Government bond rates (6.83%) and estimated country risk premiums which are around 9.41% for Turkey, it can be concluded that expected return on investment for these types of

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has been presented in table 3 of the PD rev01. Please clearly state the year that government bond rates have been accessed. Please present the government bond rates based on the investment decision date In substep II b of the section B.5 of the PD version 01, it has been stated that <i>"Acceptable IRR values for energy investments in Turkey are, given the present global financial crisis and economic uncertainty, are expected at yields in excess of 15% per annum."</i> Please clearly state how the assumed value (%15) is computed in the PD. Please clearly state in the PD the value assumed for the bond rate and the risk premium		References for risk premium and bond rates have been included in PDD. PP Response 15/06/2010 The expression has been revised in v3 of PDD.	projects should be above 16.24% for reasonable investors. This IRR, when compared with Eurobond rates and or with Turkish bond yields in the market, it is seen that the project is not financially attractive for investors. " Conceptually the expression is wrong. In fact, IRR result (5,87%) should be compared to benchmark IRR of 16,24% and conclude that the project is financially not attractive. <u>The clarification request is still open.</u> <u>Review 2:</u> <u>CL has been closed.</u>
<u>CAR 19</u> b) In the PD v.01; B.5 selection of appropriate benchmark for project IRR is not defined and justified.	Table 3	Benchmark is justified in 2.b of PDD.	Project IRR has been removed <u>CAR has been closed.</u>
<u>CL36</u> 1. The grid connected output is presented as 223 GWh in the table 4 of the PDrev01. Please clarify the annual generation output in comparison with the license. 2. Production has been assumed as	Table 3	1. The output is clarified as being 223.410 GWh as given in the license. 2. Production in 2011 is 6 months, according to the commissioning	1. The ourput is validated from the generation license. 2. The clarification that the Production in 2011 is 6 months, according to the commissioning of the power plant in the second half of

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111,50 GWh in L6 of the cash flow sheet of the FekeII Financial Model02112009.xls. Please clarify. 3. Please clarify the note in cell D29 of "cashflow sheet" of the "Feke II Financial Model02112009.xls". (Average generation for analysis period has been assumed as 110GWh) 4. Production has been assumed as 223 GWh in Table 4 of the PD ver1 and D29 of Please clarify "cash flow sheet" of the "Feke II Financial Model02112009.xls"		of the power plant in the second half of 2011 3. The note was changed to the licence value of 223.410 GWh. 4. Production value has been changed to the license value of 223.410 in PDD and financial model.	2011 is accepted by the DOE. 3. The change in the note was accepted by the DOE. The calculations have not been affected by the change in the note. 4. The production values in Table 4 of the PD and in cash flow sheet has been accepted by the DOE. <u>The clarification request has been closed.</u>
<u>CL37</u> 1. Loan amount has been indicated as 35561 million euros in table 4 of the PDD version 01. Please justify the loan amount. Interest on loan has been assumed 9% in cell B28 of the "cash flow sheet" of the "Feke II Financial Model02112009.xls"Please justify. 2. Loan payback has been defined in L25-Q25 FekeIIFinancialModel02112009. Please justify the loan payback conditions from the loan agreement. Please supply detailed payback conditions. 3. Loan interest has not been considered	Table 3	1. Financial model has been revised assuming 50% of the investment was made through equity based on information provided by the company.	1. Loan amount is justified. Although loan rate hasn't been justified yet, it is accepted that 7 % is not significantly differ from the market rates. So, the loan rate is acceptable. 2. Since there was no loan agreement at the time of investment loan repayment presented in "Loan Payment" sheet can be accepted. However, please clarify why outstanding amount is multiplied by LIBOR/2 instead

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in the the " cash flow sheet" of the "Feke II Financial Model02112009.xls"Please justify. 4. In section B.5 of the PD version 1 (pg.13) ; it has been stated that the the interest payments have not been included in the cash flow. The justification has been given by stating the requirement of the additionality tool version 5.02. Please clarify the justification since the payment on interest has been required to be included in the cashflow in the equity IRR calculations in version 05.2 of the Additionality tool. 5. In the sheet named "yıllara dağılım" of the "Feke II Financial Model02112009.xls"; the cost of investment has been defined between the years 2006-2011. However, in the " butce ozetlinki" sheet of the Feke II Financial Model02112009.xls it has been stated that the contruction ends on 31.12.2010(Also in the work schedule given by the investor during the site visit also indicated the same date.) Please clarify the differences between the dates.		6. The investment plan considered at the time of the investment decision considered the investment to be completed in 2011. "Butce ozet linki" ("summary budget" sheet) was corrected accordingly. PP Response 30/05/2010 3. It has been assumed that on loan is withdrawn by mid year and interest is expected to be paid for 6 months, assumption has been given in excel sheet.	of LIBOR in the years between 2009 and 2016? Please correct it. 3. Loan interest has been taken into consideration in the analysis file named as "Feke_II_Financial_Model-10.05.2010.xls" 4. Interest Expenses are calculated based on a loan amount of 39.170. However, total instalments are 38.778 which is 50% of total project cost. Please, apply interest expenses based on a loan amount of 38.778. 5. Summary bugged will be validated after the above CLs have been closed. <u>Clarification request still open.</u> <u>Review 2:</u> Explanation is clear so the CL has been closed. The loan amount is corrected as 38.778. <u>So, the CL has been closed.</u>

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<u>CL38</u> 1. Please justify the total investment value indicated in cashflow of FekeII Financial Model-02.11.2009. (cell B67-B99 in butceozetlinkli sheet and the license fee in H94) 2. Please clearly include the justification of the assumption for the contingency item identified in cell "D8" of the cash flow of "FekeII Financial Model-02.11.2009 xls" . 3. VAT amount has been defined in B11 of cashflow and I92 of the "butceozetlinkli" sheet of the FekeII Financial Model-02.11.2009. Please clarify the reason for including the turbine amount in VAT calculation. 4. The expropriation amount has been indicated in the connection agreement (bağlantı anlaşması) is different form the value given in the "butceozetlinkli" sheet of the FekeII Financial Model-02.11.2009. Please clarify the difference. 5. Please clarify if the expropriation will be carried out for only transmission lines. Please clarify if all the amount from the expropriation has been included in the calculation.	Table 3	1. Total investment value of 91.181,983 euro is the estimation at the date of the investment decision and would be justified considering 1.3 million euros per MW of installation capacity including a dam of 2.477 square kilometres. 2. Contingency has been excluded in the revised financial model. 3. Turbine amount is not included in VAT calculation. 4. The given expropriation amount is for the power plant and it is different from the expropriation of the transmission lines given in the connection agreement. PP Response 30/05/2010 Realized cost of the project is about 91M€ whereas the expectation at the beginning was about 77.5M€. In	1. Please justify the basis for the assumption of investment value clearly. 2. Contingency amount is excluded and the assumption is accepted by the DOE since it is conservative. 3. Turbine amount is not included in VAT calculation. However, Although the total VAT in the investment is 8.843, deducted VAT is 9.654. Please make the deduction with the correct amount. 4. The clarification is accepted however please justify assumption for the expropriation the sheet transparently. 5. Please clarify if the expropriation will be carried out for only transmission lines. Please clarify if all the amount from the expropriation has been included in the calculation. 6. In both PDD and IRR analysis documents the investment value is stated as 77.556k €. In the IRR analysis file 3.929k€ is subtracted from the total above costs which is in range between B4 and B12 in sheet "Cash

<u>Draft report clarifications and corrective action requests by validation team</u>	<u>Ref. to checklist question in table 1/2/3/4/5</u>	<u>Summary of project owner response</u>	<u>Validation team conclusion</u>
		revised financial analysis, justification of the cost and assumptions have been explained in excel sheet as comments. EM, Powerhouse and construction costs have been extracted from Feasibility report. Other costs (design&consultancy, transmission line etc) have been calculated based on expert judgement and previous project experience (i.e design consultancy has been assumed as 5% like in Akocak Hepp).	Flow". Please clarify where this comes from? <u>Clarification request is still open.</u> <u>Review 2:</u> VAT amount is corrected. The clarifications are acceptable so the <u>CL has been closed.</u>
<u>CL39</u> 1. Number of employee has been defined as 20 in the PD version 01. During the site tour it has been defined that FEKE1 and FEKE2 projects will be operated from one single point. Please clarify the number of employee. 2. For the maintenance cost %0.5 of the investment cost has been assumed in B2 of the op. ex. Details. Please justify. 3. The maintenance cost formulae in B33 includes the license fee. Please clarify the assumption and change if necessary. 4. Please justify the insurance cost given in D7 of the cash flow. 5. The grid fee formulae given in cell D4 of	Table 3	1. Number of employees has been reduced to 14 in the revised financial model. 2. Maintenance cost is assumed as 0.5 to 1% of the investment cost for similar projects as an expert judgement. 3. License fee has been excluded in the revised financial model. 4. Insurance cost of 0,2 to 0,3 % would be considered justified for operation. 5. As can be seen from the reference	1. The number of employees has been justified from the similar projects and accepted by the DOE. 2. It is stated the 0.5% assumption of annual maintenance expenses is valid for the first 10 years. What is the assumption for the next 10 years? It wouldn't have big impact on the results so please state that it is valid for the whole years. 3. The assumption for excluding the license fee from the maintenance fee is conservative so it is accepted by the DOE. 4. Insurance cost is taken

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the cashflow sheet of the FekeII Financial Model-02.11.2009 includes a value of 88.45. Please clarify what the value stands for. 6. Please clarify the transmission loss factor given in D18 of the of " cash flow sheet" of the "FekeII Financial Model02112009.xls"		link for the grid fee, 88.45 is the grid usage fee. 6. Transmission losses were considered as 3 %. It is deducted from the generation output. PP Response 30/05/2010 Number of staff has been reduced to 8 since part of the staff will be paid by Feke-I Hepp projects of investor. It has been stated that assumption is valid for all analysis period. Reference for grid fee has been included in excel sheet.	0.31% of total investment cost (77.556k€) 88.45 can be used for the 4th Region so the clarification is clear. 5. The reference from the grid fee can not be accessible please resupply the link 6. Transmission losses are reflected to the production. <u>Clarification request is still open.</u> <u>Review 2:</u> <u>Clarification has been closed</u>
<u>CL40</u> 1. In the formulae of the grid fee in D4 of the cash flow please clarify the value 8845 . 2. The transmission line cost given in "bağlantıanlasmısı" is different from the value given in H82 of "butceozetlinkli" sheet of the "FekeII Financial Model-02.11.2009". Please clarify. 3. It has been stated that the construction and design amount for 380/154/OG will	Table 3	1. Explanation is given above. 2. Transmission line cost was calculated at the investment stage as given in summary budget.. 3. The amount has been deducted from the system usage fee + system	1. The reference from the grid fee can not be accessible please resupply the link 2. Please clearly present the calculation for the transmission losses with giving the references valid for the investment decision date. 3. The deduction of system usage fee + system operation fee in the revised financial model has been

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be deducted from the grid fee in the agreement with the "Energy Regulatory Board". Please clarify if the amount has been deducted in the financial analysis. 4. %50 discount on the grid fee for the five years after the commissioning plant has been indicated in 24.12.2008 dated 1894 numbered decision of the "Energy Regulatory Board". However the discount has not been reflected to the calculations. Please clarify. 5. In G28-K28 of the cash flow sheet of the "FekeII Financial Model-02.11.2009" the portion of investment that is paid by equity is computed as 53,069; however the amount for the equity given in B20 is 55,621. Please clarify.		operation fee in the revised financial model. 4. The grid fee is zero due to deduction for the construction of 380/154/OG. 5. Financial model has been revised assuming considering 50% investment. PP Response 30/05/2010 Reference for grid fee has been given in financial model Reference for transmission loss has been given as hyperlink. Transmission loss has 2,7% in 2006 (latest data at time of investment decision) which has been assumed as 3% in model to be on the safe side.	found sufficient. 4. The amount has been deducted from the system usage fee + system operation fee. However please clarify the assumption for not using the discounted rate for five years for the deduction 5. The assumption has been justified during the interview with the financial specialists from Akkur A.Ş. <u>The clarification is still open.</u> <u>Review 2:</u> <u>CL has been closed.</u>
<u>CL41</u> The exchange ratio has been presented in K67 AND L 67 in the "butce_ozet_linkli" and B23, d 24, S48	Table 3	All exchange ratios are from "Average Currency Rates" sheet, average rates	<u>The corrections are acceptable. The CL has been closed.</u>

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and T48 of the "average_currency_rates" sheet of the "FekeII Financial Model-02.11.2009". Please clarify. Euro /YTL exchange change rate has been considered as "2" in F32 of the cashflow sheet of "FekeII Financial Model-02.11.2009". Please justify.		for May 2007. F32 in "operation exp details" now refers to "the average currency rates" sheet.	
<u>CL42</u> - The dates of the contracts indicated in the "sozlesme tarihleri" sheet of the "FekeII Financial Model-02.11.2009" are not the same with the actual dates on the contracts. - The sheet CF-FEKE has also a cashflow other than the "cashflow sheet" of "FekeII Financial Model-02.11.2009". The IRR indicated in the CF-FEKE sheet is different than the IRR value calculated in the cashflow sheet.	Table 3	The given dates were foreseen at the time of investment model and could not match the actual dates realized. CF-FEKE sheet was given to represent company's own estimation for Feke-I cash flow. Financial model has been revised and simplified to prevent confusion. PP Response 30/05/2010 Assumptions and justifications of the investment figures have been given as comments in the excel sheet.	<u>Review 1:</u> The clarifications are acceptable. However please clarify the basis used for the assumption for the investment amount. <u>The clarification is still open.</u> <u>Review 2:</u> The assumptions and justifications have been justified from the feasibility report. <u>The clarification is closed.</u>
<u>CL43</u> - Depreciation has been defined in L7 of the cashflow of "Feke II Financial Model-02.11.2009". Please clarify if the license fee is considered in computing the depreciation value. - Depreciation has been defined in D 29	Table 3	Financial model has been revised assuming all investment was made through equity since no agreement had been signed at time of investment decision.	- There is a loan repayment in the financial model. That means loan is taken to finance the project. - Licence fee is not included in the financial model.

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"Feke II Financial Model-02.11.2009". Please clarify the depreciation amount in considering the VUK list.		2. License fee is not included in depreciation value in the revised model. PP Response 30/05/2010 Model has been revised to include 50% loan. License fee is excluded from the model used for investment analysis (and depreciation value).	3. Depreciation has been defined in L7 of the cashflow of "Feke II Financial Model-02.11.2009". Please clarify if the license fee is considered in computing the depreciation value. <u>The CL hasn't been closed yet.</u> <u>Review2:</u> Although the feasibility report approved by the State of Hydraulics does not include any assumption on the loan, on which the financial analysis is based; the investor intends to apply for a general loan. The proposals have been validated during the interviews. <u>Since the assumption is conservative; the clarification is closed.</u>
<u>CL44</u> Residual value has been calculated in d15 of the PD and has been added back to AF28 of FEKE II financial model-02.11.2009. However the value has been added back to the 21 st year of the calculation . Please clarify and change if needed.	Table 3	According to the applied tool, residual value of the assets should be added to the last year as an income therefore no change was made.	In the revised calculation model the residual value has been added to 20 th year of the analysis. <u>The CL has been closed.</u>

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<u>CL45</u> ○ Date of investment date has been given as 17.05.2007 in the PD version 01 however the investment analysis started from 2006 in the FEKE II financial model-02.11.2009. Please clarify the contradiction. ○ Please clarify the period of assessment for the benchmark in the PD (for construction and the operation phase) ○ Please justify the reason for including the expenses in 2006 which is before the investment decision date (The Additionality tool version 5.2. requires to exclude the expenses before the investment decision date in caluse-6 PG 13 of the additionality tool .	Table 3	Expenses in 2006 have been excluded in the revised financial model. Eurobond rates available at time of investment decision have been given together with reference for risk premium.	<u>The CL has been closed.</u>
<u>CL 46</u> Please present the Investment analysis with carbon credit in a transparent manner in the Calculation sheet. Please present the calculation fpr the project IRR	Table 3	Calculation for investment analysis with carbon credits has been included as a separate sheet in the financial analysis. Calculation for project IRR is given in the revised financial model. PP Response 30/05/2010 Project IRR calculation has been removed from PDD	Calculation for investment analysis with carbon credits has been included as a separate sheet in the financial analysis. Please present the project IRR transparently. <u>Clarification request is still open.</u> <u>Review 2:</u> <u>CL has been closed.</u>

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<u>CL47</u> Please clarify the CF-FEKE 2 SHEET which includes different values from the other sheets. The values in CF FEKE 2 can be reproduced.	Table 3	CF sheet was given to represent company's own estimation for Feke-I cash flow. Financial model has been revised and simplified to prevent confusion.	Clarification is accepted. <u>Clarification has been closed.</u>
<u>CL48</u> There is no risk indicated in the feasibility report subject to project-specific expectations and assumptions.	Table 3	The risks were introduced in Sections A.4.4 and B.5. step 2.c.	Clarification is accepted. <u>Clarification has been closed.</u>
<u>CL49</u> In V8 of the cashflow sheet of the for the formulae has "+120! Value. Please clarify the reason for change in operating cost in 11th year of the assessment.	Table 3	It was assumed that the annual maintenance cost of the plant would increase in ten years due to wear and tear of the plant equipment. It has been excluded in revised model due to simplicity.	The clarification has been accepted. <u>The clarification request has been closed.</u>
<u>CL50</u> A sensitivity analysis has been carried in sub-step 2.d. of the section B.5. of the PD version 1. Please clearly state how the parameters selected for the sensitivity analysis. Please recalculate the sensitivity analysis according to the CLs and CARs raised in table 3 of this protocol and present in the PD and the financial model Please calculate the Equity IRR also for 6.5	Table 3	Parameters have been selected as per the tool and three main parameters have been included as indicated in the sensitivity analysis section. Sensitivity analysis has been updated according to the revised model. IRR for 6,5 euro cents have been included in the model	The sensitivity analysis will be concluded after the CARs and CLs have been closed regarding the investment analysis calculations. Please calculate the Equity IRR also for 6.5 Euro cent also. <u>CL is still open</u>

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Euro cent also.		PP Response 30/05/2010 Benchmark tariff has been identified as 8,5€ cents and a separate sheet showing IRR for benchmark tariff has been included in financial model.	<u>Review 2:</u> The sensitivity analysis will be concluded after the CARs and CLs have been closed regarding the investment analysis calculations. <u>Review 3:</u> Sensitivity analysis has been checked and it has been concluded that the project is not the most feasible alternative for all the scenarios. <u>CL has been closed.</u>
<u>CL51</u> The outcome of Step 2 has been defined in substep 2-b of the PD version 01 as the following: <i>"The investment and sensitivity analysis shows that the VER revenues will improve the financial indicators of the project and make the investment more reasonable for investors. Considering that figures above are based on highest guaranteed price rather than average price, optimistic estimations for yearly generation and that those figures do not reflect</i>	Table 3	The outcome has already been stated clearly and in line with the tool used therefore no change was made.. PP Response 30/05/2010 Further clarification has been added to PDD about result of benchmark analysis.	Please clearly state the IRR calculated and the benchmark and the result in the outcome. <u>CL request is still open.</u> <u>Review 2:</u> <u>CL request has been closed.</u>

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<i>the risk for investment, role of carbon income is a significant number to enable the project to proceed and favorable investment and funding decision taken. Based on the above information, it is seen that project is not the most attractive option. Therefore project is considered as additional to the baseline scenario."</i> Please clearly state the outcome of step 2 according to the Addtionality tool version 5.2 step 2 .			
<u>CAR20</u> In step 3 of the section B.5. of the PD version 01; only investment barriers , technological barriers and other barriers have been defined. <i>Investment barriers can be stated in the following case. Similar activities have only been implemented with grants or other non-commercial finance terms. No private capital is available from domestic or international capital markets due to real or perceived risks associated with investment in the country where the proposed CDM project activity is to be implemented, as demonstrated by the credit rating of the country or other country investments reports of reputed origin."</i> Please clarify and reassess the investment barriers considering that the investment barriers should include barriers other than included in the investment analysis.	Table 3	As the additionality is demonstrated in step 2, barrier analysis section has been removed from PDD v2.	<u>The corrective action request is closed.</u>

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<u>CAR21</u> Technological barriers stated in the PD version 01 does not include the barriers that should prohibit the project from occurring. In additions the sated barriers are not specific to the proposed project.	Table 3	As the additionality is demonstrated in step 2, barrier analysis section has been removed from PDD v2.	<u>The corrective action request is closed.</u>
<u>CAR22</u> In section B.5 of the PD ; the uncertainty in the flow regime has been stated as a barrier for the proposed project. There is no risk in relation with the flow regime specific to the proposed project in the approved design capacity projection report. The stated barrier is not a barrier to the proposed project. Please amend.	Table 3	As the additionality is demonstrated in step 2, barrier analysis section has been removed from PDD v2.	<u>The corrective action request is closed.</u>
<u>CAR23</u> The outcome from Step 3 a has not been clearly mentioned in the PD version 01.	Table 3	As the additionality is demonstrated in step 2, barrier analysis section has been removed from PDD v2.	<u>The corrective action request is closed.</u>
<u>CAR 24</u> In section B5 of the PD version 1 , it has been stated that the proposed barriers can not implemented to the alternatives. However o documented references were available.	Table 3	As the additionality is demonstrated in step 2, barrier analysis section has been removed from PDD v2.	<u>The corrective action request is closed.</u>
<u>CAR 25</u>	Table 3		<u>The corrective action request</u>

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The out come of the step3 has not been defined in the PD.		As the additionality is demonstrated in step 2, barrier analysis section has been removed from PDD v2.	<u>is closed.</u>
<u>CAR26</u> Please demonstrate why the existence of these activities (if any according to the sub step 4.a for Clarification has been requested) does not contradict the claim that the proposed project activity is financially/economically unattractive or subject to barriers.	Table 3	Common practice analysis has been revised. PP Response 30/05/2010 Analysis is based on operational plants as it seems more reasonable. Since there is no info on ongoing plants or when or how they 'll be finished(or even they'll be finished) they haven't been included in analysis. DOE should be more specific on plants seemed as generation companies.	In annex 8 of the PDD version 2 detailed analysis have been presented. However the analysis does not include the plants that have been put into operation in 2007 (appendix B of the referenced document). In addition some projects have been defined as autoproducers however the referenced documents refer the plants as generation companies. <u>Corrective active action request is still open</u> <u>Review 2:</u> <u>CL has been closed.</u>
<u>CAR 27</u> The outcome of step4 has not been presented in the PDversion 01.	Table 3	Further clarification has been added to Step.4.	The outcome of step 4 is clearly presented in the PD version 02. <u>The corrective action request is closed.</u>
<u>CL 52</u> 1. The excel sheet OM calculation COLUMNS J and K labels(Total Fuel Consumption years should be 2006-2008. At present it is 2005-2007 and it should be corrected. 2. In the PDD Annex 3, the EF for Coal is	Table 3	The PDD has been revised.	1. The labels are corrected 2. Annex 3 of the PD has been revised according to IPCC min values. 3. The mismatch has been

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shown as 94,6 which is the default value in IPCC 2006 Guidelines. Yet in the excel sheet this is taken as 89,5 which is the min value in the guidelines. And used correctly. The Annex 3 should be revised. 3. There is a mismatch between the PDD and the Excel sheets as explained above. Otherwise the quality of evidence is satisfactory.			corrected. <u>Clarification request has been closed.</u>
<u>CL 53</u> Generation efficiencies in the PDD are different than the values used in the excel sheet. For example generation efficiency for natural gas plants is 60% in the PDD Table 82. Yet the same efficiency is 46% in the BM calculations excel sheet. The BM emission factor in the PDD and the calculation sheet are also differing from each other. The excel sheet should be updated.	Table 3	The excel sheet has been revised.	The efficient factor has been revised. The results in the PDD was correct however the changes were not reflected to the excel sheet. The excel sheet has also been corrected. <u>Clarification request has been closed.</u>