VERIFICATION REPORT
ÜTOPYA ELEKTRIK URETIM SANAYI TICARET A.S.

VERIFICATION OF THE GRID-CONNECTED ELECTRICITY GENERATION FROM RENEWABLE SOURCES: DÜZOVA 15 MW WIND POWER PROJECT, TURKEY

BUREAU VERITAS CERTIFICATION
REPORT NO. TURKEY/CER.1481.10.C45/2010

REVISION NO. 02

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VERIFICATION REPORT

Date of first issue: 12/01/2011	Organizational unit: Bureau Veritas Certification Holding SAS
Client: Utopya Elektrik Uretim San. Ve Tic. A.S.	Client ref.: Mr. Cagdas Duran

Summary:
Bureau Veritas Certification has made the 1st periodic verification of the "Grid-Connected Electricity Generation From Renewable Sources: Düzova 15 MW Wind Power Project, Turkey", Gold Standard Registration Reference Number GS672, project of Utopya Elektrik Uretim San. Ve Tic. A.S. located in İzmir Province, TURKEY, and applying the methodology ACM0002 version 11, on the basis of UNFCCC criteria for the CDM, Gold Standard Version 2.0 Criteria as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 12 of the Kyoto Protocol, the CDM rules and modalities and the subsequent decisions by the CDM Executive Board, as well as the host country criteria.

The verification scope is defined as a periodic independent review and ex post determination by the Designated Operational Entity of the monitored reductions in GHG emissions during defined verification period, and consisted of the following three phases: i) desk review of the project design and the baseline and monitoring plan; ii) follow-up interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final verification report and opinion. The overall verification, from Contract Review to Verification Report & Opinion, was conducted using Bureau Veritas Certification internal procedures.

The first output of the verification process is a list of Clarification, Corrective Actions Requests, Forward Actions Requests (CR, CAR and FAR), presented in Appendix A.

In summary, Bureau Veritas Certification confirms that the project is implemented as planned and described in validated and registered project design documents. Installed equipment being essential for generating emission reduction runs reliably and is calibrated appropriately. The monitoring system is in place and the project is ready to generate GHG emission reductions. The GHG emission reduction is calculated without material misstatements, and the VER issued totalize 28,535 tons of CO_2eq for the monitoring period (11/08/2009 – 31/08/2010)

Our opinion relates to the project's GHG emissions and resulting GHG emission reductions reported and related to the valid and registered project baseline and monitoring, and its associated documents.

Report No.: TURKEY/CER.1481.10.C45/2010	Subject Group: VER	
Project title: Grid-Connected Electricity Generation From Renewable Sources: Düzova 15 MW Wind Power Project, Turkey		
Work carried out by: Ms. Bade Cebeci, Team Leader Mrs. Burcu Mutman, Team Member		
Work approved by: Mr. Ashok Mammen		
Date of this revision: 11/03/2011	Rev. No.: 03	Number of pages: 26

Indexing terms

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Abbreviations

UNFCCC	United Nations Framework Convention for Climate Change
CDM	Clean Development Mechanism
GS	Gold Standard
GS-VER-PDD	Project Design Document
VVM	CDM Validation and Verification Manual
CER	Certified Emission Reductions
VER	Voluntary Emission Reductions
CAR	Corrective Action Request
CL	Clarification Request
FAR	Forward Action Request
DOE	Designated Operational Entity
GHG	Green House Gas(es)
CO_2	Carbon Dioxide
CO_{2eq}	Carbon Dioxide Equivalent
PMUM	Market Financial Conciliation Center (Piyasa Mali Uzlastirma Merkezi)
TEIAS	Turkish Electricity Transmission Company (Turkiye Elektrik Iletim A.S.)
EPDK	Energy Market Regulatory Authority - EMRA (Enerji Piyasasi Denetleme Kurulu)

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1 INTRODUCTION

Utopya Elektrik Uretim San. Ve Tic. A.S. has commissioned Bureau Veritas Certification to verify the emissions reductions of its GS-VER project Grid-Connected Electricity Generation from Renewable Sources: Düzova 15 MW Wind Power Project, Turkey (hereafter called "the project") at İzmir province in TURKEY.

This report summarizes the findings of the verification of the project, performed on the basis of UNFCCC criteria and & Gold Standard Version 2.0 Criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

1.1 Objective

Verification is the periodic independent review and ex post determination by the DOE of the monitored reductions in GHG emissions during defined verification period.

The objective of verification can be divided in Initial Verification and Periodic Verification.

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

1.2 Scope

The verification scope is defined as an independent and objective review of the project design document, the project's baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against Gold Standard Version 2.0 Criteria, Kyoto Protocol requirements, UNFCCC rules and associated interpretations.

The verification 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 monitoring towards reductions in the GHG emissions.

1.3 GHG Project Description

The project is a 15 MW wind power plant in İzmir Province in Turkey. The purpose of the project is to generate electricity and to feed it into the public grid. Turkish grid consists mainly of fossil fuel fired power plants; the project activity reduces the GHG emissions by replacing fossil fuel power generation. The project consists of 6 wind turbines with each output of 2, 5 MW. The project includes GE 2.5xl model wind turbines with 100 m. rotor diameter and 85 m. hub height.

1.4 Verification Team

The verification team consists of the following personnel:

Ms. Bade Cebeci
Bureau Veritas Certification Team Leader, Climate Change Lead Verifier

Mrs. Burcu Mutman
Bureau Veritas Certification Climate Change Verifier

Dr. Ashok Mammen
Bureau Veritas Certification, Internal Technical Reviewer

2 METHODOLOGY

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

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

- It organizes, details and clarifies the requirements a GS-VER project is expected to meet;
- It ensures a transparent verification process where the verifier will document how a particular requirement has been verified and the result of the verification.

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

2.1 Review of Documents

The Monitoring Report (MR) submitted by the by FutureCamp who is the carbon consultants for Utopya Elektrik Uretim San. Ve Tic. A.S. and baseline, i.e. country Law, Project Design Document (CDM-SSC-PDD), Approved methodology, Kyoto Protocol, Clarifications on Verification Requirements to be Checked by a Designated Operational Entity were reviewed.

The verification findings presented in this report relate to the project as described in the CDM-SSC-PDD version 6 dated 16/09/2010.

2.2 Follow-up Interviews

From November 2010 to January 2011, Bureau Veritas Certification performed interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of FutureCamp and Utopya Elektrik were interviewed (see References).

The Plant Managers, Mr. Ahmet Şimşir and Volkan Başkaya, were interviewed during the site visit dd. 3rd of December 2010. To see how the monitoring procedures were implemented, the whole process was explained to the verification team during the site visit.

Also during the site visit, the employees were interviewed about the management of the operation and the sustainable development indicators.

During the site visit dd. 3rd of December 2010, the villagers and village head were interviewed about sustainable development indicators and affects of the capacity addition of the project. The villagers confirmed that they have no negative impact about the project activity and capacity addition did not affect villagers. Aşağıkırıklar Village is the only village that project activity lays on. The nearest house owner is Ergun Dal and written approval has been provided that noise does not disturb. Also the noise measurement has been provided and it is confirmed that noise level is 39,5db in the nearest house which is below than the 50 db limit. Also with the construction of the new turbines the nearest house does not change.

The carbon consultant, Fariz Tasdan, was interviewed about the monitoring report and related parameters. Whole process related emission reduction calculation and sustainability monitoring plan was explained.

The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

Interviewed organization	Interview topics
Ütopya Elektrik Uretim Sanayi ve Ticaret A.S.	➢ Implementation of the project ➢ Review of the data flow for generating, aggregating and reporting the monitoring parameters ➢ Confirmation of the correct implementation of procedures of operations and data collection ➢ Information on the monitoring equipment ➢ Production Evidances ➢ Sustainable Development Indicators ➢ Capacity Addition
LOCAL Stakeholders	➢ Noise pollution caused by the wind turbines ➢ Project's impact on local economy ➢ Waste Management ➢ Capacity Addition
FutureCamp	➢ Monitoring Report ➢ Emission reduction calculations ➢ Production Evidances ➢ Sustainable Development Indicators ➢ Capacity Addition

2.3 Resolution of Clarification, Corrective and Forward Action Requests

The objective of this phase of the verification is to raise the requests for corrective actions and clarification and any other outstanding issues that needed to be clarified for Bureau Veritas Certification positive conclusion on the GHG emission reduction calculation.

Findings established during the initial verification can either be seen as a non-fulfilment of criteria ensuring the proper implementation of a project or where a risk to deliver high quality emission reductions is identified.

Corrective Action Requests (CAR) is issued, where:

(a) Non-conformities with the monitoring plan or methodology are found in monitoring and reporting, or if the evidence provided to prove conformity is insufficient;

(b) Mistakes have been made in applying assumptions, data or calculations of emission reductions which will impair the estimate of emission reductions;

(c) Issues identified in a FAR during validation or previous verifications to be verified during verification have not been resolved by the project participants.

Forward Action Requests (FAR) are issued, for actions if the monitoring and reporting require attention and/or adjustment for the next verification period.

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

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

2.4 Internal Quality Control

The verification report underwent a technical review before requesting issuance of VERs for the project activity. The technical review was performed by a qualified technical reviewer.

3 VERIFICATION CONCLUSIONS

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

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

The Clarification, Corrective and Forward Action Requests are stated, where applicable, in the following sections and are further documented in the Verification Protocol in Appendix A. The verification of the Project resulted in 1 Corrective Action Requests, 7 Clarification Requests, and 1 Forward Action Requests.

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

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

3.1 Project implementation in accordance with the registered project design document (198)

The project was implemented in accordance with the registered project design document, which was verified during the first periodic verification.

The actual operation of the proposed project activity is generation of electricity from Wind Power and feeding it to the public grid. 6 wind turbines are in operation since 11/08/2009.

The technical properties of the turbines are in accordance with description in the registered PDD. It was verified during the site visit that the project includes 6 GE wind turbines with an output of 2500 kWh. Generated electricity is supplied to the grid as stated in the registered PDD.

Information provided in the MR is in accordance with that stated in the registered PDD. Further analysis of monitored parameters as reported in the MR compared to those estimated in the PDD is developed in section 3.4 of this report.

3.2 Compliance of the monitoring plan with the monitoring methodology (203)

The monitoring plan is in accordance with the approved methodology ACM0002 version 11 applied by the proposed GS VER project activity.

3.3 Compliance of monitoring with the monitoring plan (206)

Monitoring has been carried out in accordance with the monitoring plan contained in the registered CDM-SSC-PDD.

The parameters required by the monitoring plan and the way the Verification Team has verified the values in the monitoring reports are described below:

(a) EG_y – Annual net electricity amount fed to the grid by the project activity: According to the monitoring plan, the net electricity generation data has been taken from official monthly TEIAS Protocols and cross checked from the PMUM web site.

The generation data is stored by PMUM on the web site. The Project owner has an ID and password to access this data on the web site. After the Project owner log in to web site, they can access electricity generation and consumption reports of the project. They can export these reports in electronic format and print hardcopies.

TEIAS personnel monthly perform on-site measurements for both the primary and secondary (back-up) measurement devices on the first days of the month. In the beginning of each month, an authorized TEIAS employee comes to the project activity site and reads the generation data from the meters. Based on this reading, monthly meter reading protocol is prepared by TEIAS on site and then signed by both parties each month.

The measurement devices give the total gross electricity generated and the total electricity consumed by the wind farm. The difference of these two data is the net electricity generated. Furthermore, TEIAS cuts a certain percentage of the generation to account for transmission losses however transmission line lost does not calculated in the project activity as required by the selected baseline methodology. The net electricity generation, which is to be monitored and to be used for baseline emissions, is the net electricity generation, which does not include the transmission losses.

To see how the monitoring procedures were implemented, the whole process was explained to the verification team during the site visit.

As the EG_y represents net electricity supplied to the grid, electricity imported from the grid is subtracted from the electricity exported by the Project to obtain the next value of EG_y.

During on site assessment, verification team was able to verify that the metering system consists of two electric energy meters that are in place and functions well. There was no brake down recorded during the monitoring period. The calibration of the electricity meters are the responsibility of TEIAS and the project owner has no control over this calibration process. It was verified during the site visit that the meters were sealed by TEIAS personnel. The necessary maintenance and calibration are the responsibility of TEIAS.

According to the "regulation on the testing of measurement devices" which was published on the official gazette dated 24/07/1994 the testing of the electricity meters are done every 10 years unless there is a major discrepancy between the main and auxiliary meters. The calibration records of ACTERIS meters dated 05/09/2009 when the meters were installed by TEIAS were submitted to the verification team.

According to the registered GS Passport, regarding the sustainability monitoring, the following parameters are monitored:

Air Quality:

Under air quality parameter reduction of NOx, CO and NMVOC has been calculated. The calculation based on the defined parameters in the registered PDD and the electricity generation.

Water Quality and Quantity:

Waste water collected in a septic tank however since it is not full the transfer to the waste water is not performed. The official letter from municipality and the project manager has been submitted in line with the monitoring plan.

Soil Condition:

Soil conditions are not negatively affected. Pictures during implementation have been provided and official letter from village head has been submitted. It is confirm that solid wastes are collected properly and send to the city dump.

Other Pollutants:

It is confirmed that noise, dust and rubbishes are monitored in line with the monitoring methodology.

Quality of Employment:

Training certificated of the employees has been submitted and it is confirmed that employment is monitored in line with the monitoring plan.

Quantitative employment and Income Generation:

SGK records of the employees have been seen. The monitoring has been done in line with the monitoring plan. Also regarding to GS request the residence certificates of Levent Ayman, Ahmet Gulbezen and Mehmet Kurunaz who are living in Asagikiriklar Village has been seen.

Balance of Payment and Investments:

Balance of Payments and investments has been calculated regarding to the production volume of the project. The monitoring is in line with the monitoring plan.

The Forward Action Request was raised by the validation team during the validation:

FAR3-
It has to be checked during periodic verification if an extension of the current small scale project activity into a large scale project is considered or even under way.

Verification DOE Response: FAR1 has been created since capacity addition did not effect the monitoring period. However meeting with stakeholders has been done to confirm if sustainable development parameters has to be changed or not. And it is concluded that the capacity addition does not change the village that project lays on and the nearest house does not change. During site visit, DOE meet with local stakeholders and it is confirmed that no negative impact has been occured.

FAR5-
The application of standard values and assumptions alone is considered as not suitable for the estimation of the achievable capacity factor. It is therefore requested to review the current wind energy yield predictions and determine a more realistic net energy production for the Düzova 15 MW wind power project, related to the first months of the real technical operation and the site-specific availabilities and losses.

Verification DOE Response: Capacity factor has been calculated for one year and it is calculated as %33.

The Forward Action Request were raised by the verification team during the first verification stage:

Please consider following FARs on the second verification period.
FAR1-
The capacity addition does not affect the first monitoring period which is defined as 11/08/2009 to 31/08/2010. The added capacity started to produce electricity on 01/09/2010 which is confirmed through the provisional acceptance from the Ministry of Energy and Natural Resources.

This capacity addition has been informed to GS by PP however no guideline is provided on this. The capacity addition shall be assess in the second monitoring period which is going to be affected since the generated electricity will be measured with the same measurement equipment.

The confirmation from Abhishek Goyal who is the deputy technical director of the Gold Standard Foundation has been send to verification DOE via mail dd. 01.02.2011. Regarding to the mail capacity addition will be considered during next verification.

Assessment of data and calculation of greenhouse gas emission reductions

A complete set of data for the specified monitoring period is available.

The critical parameters used for the determination of the Emission Reductions are the official TEIAS data from monthly readings and the PMUM web site dedicated for measuring the electricity exchanged with the grid and the emission factor, which was determined ex-ante in the registered CDM-SSC-PDD of the Project.

The data pertaining to the monitoring parameters are maintained in the archived records. All the data are consistent with the values input in the Monitoring Report. According to the registered CDM-SSC-PDD, the emission reductions of the project are calculated as follows:

$BEy = (EG_y - EG_{baseline}) \times EF_{grid,CM,y}$

Where:

BE_y : Baseline emissions in year y (tCO_2/yr)

EG_y : Electricity supplied by the project activity to the grid (MWh)

$EG_{baseline}$: Baseline electricity supplied to the grid in the case of modified or retrofit facilities (MWh)

$EF_{grid,CM,y}$: Combined Margin CO_2 emission factor (tCO_2/MWh) for grid connected power generation in year y, calculated ex-ante in the registered GS-VER-PDD as 0.6018 tCO_2/MWh

Y : Refers to a given year

For a wind project both leakage and project emissions are assumed to be negligible, hence the emission reductions are equal to the baseline emissions.

The project has a generator in the project activity site for emergency cases. During the site visit, it was verified that the generator is used for very limited amount of time. The fossil fuel used in the diesel generator is not included in the monitoring plan, which is in line with the applied methodology.

The projects' internal consumption is usually taken from the grid when there is no generation in the project activity; this value is deducted from the electricity generation figures to get the net electricity figure.

Starting date of the first crediting period 11/08/2009 has been confirmed through the official document from EPDK to take project into operation.

The calculation of net electricity delivered to the grid in this reporting period are as shown in the Table below.

Months	Electricity supplied to the grid (MWh) (1)	Electricity consumption from the grid (MWh) (2)	Net electricity supplied to the grid[MWh] (3) =(1)-(2)	Baseline emission (acc. formulae 3): (ER = GEN * EF) [t CO2e]
Aug-09	4.104,14	37,40	4.066,74	2.447,36
Sep-09	3.612,94	12,58	3.600,36	2.166,70
Oct-09	3.303,00	18,05	3.284,95	1.976,88
Nov-09	2.531,95	19,49	2.512,46	1.512,00
Dec-09	3.525,72	16,03	3.509,69	2.112,13
SUM'09	**17.077,75**	**103,55**	**16.974,20**	**10.215,07**
Jan-10	5.463,16	9,86	5.453,30	3.281,80
Feb-10	3.187,72	15,08	3.172,64	1.909,29
Mar-10	4.162,72	13,76	4.148,96	2.496,84
Apr-10	4.087,58	18,19	4.069,39	2.448,96
May-10	1.984,58	25,21	1.959,37	1.179,15

Jun-10	2.049,81	23,69	2.026,12	1.219,32
Jul-10	3.404,93	8,43	3.396,50	2.044,01
Aug-10	6.234,83	18,84	6.215,99	3.740,78
SUM'10	**30.575,33**	**133,06**	**30.442,27**	**18.320,16**
Total	**47.653,08**	**236,61**	**47.416,47**	**28.535,23**

Monthly Reading protocols were cross checked with the PMUM Records,

Appropriate methods and formulae for calculating baseline emissions, project emissions and leakage have been followed.

The assumptions, emission factors and default values that were applied in the calculations have been justified.

The below table shows a summary of the emission reductions generated during the monitoring period and specifically during the years 2009 and 2010:

Emission reductions generated during the monitoring period (from 11/08/2009 to 31/08/2010-both days are included)	28,535 tCO_2e
Emission reductions generated in the year 2009 (from 11/08/2009 to 31/12/2009-both days are included)	10,215 tCO_2e
Emission reductions generated in the year 2010 (from 01/01/2010 to 31/08/2010-both days are included)	18,320 tCO_2e

All CLs/CARs have been closed on 07/01/2011. All changes has been done in the monitoring report are listed in the verification protocol.

4 VERIFICATION OPINION

Bureau Veritas Certification has performed the 1st periodic verification of the "Grid-Connected Electricity Generation from Renewable Sources: Düzova 15 MW Wind Power Project, Turkey", which applies the methodology ACM0002 version 11. The verification was performed based on the requirements set by the CDM and relevant guidance provided by CMP and the CDM Executive Board and Gold Standard.

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

The management of Ütopya Elektrik Üretim Sanayi ve Ticaret A.Ş. is responsible for the preparation of the GHG emissions data and the reported GHG emissions reductions of the project on the basis set out within the project Monitoring and Verification Plan indicated in the final CDM-SSC-PDD version 6. The development and maintenance of records and reporting procedures in accordance with that plan, including the

calculation and determination of GHG emission reductions from the project, is the responsibility of the management of the project.

Bureau Veritas Certification verified the Project Monitoring Report version 01.1 dated 14/12/2010 for the reporting period as indicated below. Bureau Veritas Certification confirms that the project is implemented and described in validated and registered project design documents. Installed equipment being essential for generating emission reduction runs reliably and is calibrated appropriately. The monitoring system is in place and the project is ready to generate GHG emission reductions

Bureau Veritas Certification can confirm that the GHG emission reduction is calculated without material misstatements. Our opinion relates to the project's GHG emissions and resulting GHG emissions reductions reported and related to the valid and registered project baseline and monitoring, and its associated documents. Based on the information we have seen and evaluated, we confirm the following statement:

Data Vintage	**Emission Reductions (tCO_2 eq)**
11/08/2009 – 31/12/2009	10,215
01/01/2010 – 31/08/2010	18,320
TOTAL	**28,535**

Reporting period: From 11/08/2009 to 31/08/2010
Baseline emissions : 28,535 t CO_2 equivalents.
Project emissions : 0 t CO_2 equivalents.
Emission Reductions : 28,535 t CO_2 equivalents

5 REFERENCES

Category 1 Documents:
Documents provided by Utopya Elektrik Üretim Sanayi ve Ticaret A.S. that relate directly to the GHG components of the project.

/1/ Registered CDM-SSC-PDD version 6 dated 16 September 2010
/2/ Registered GS Passport
/3/ Validation Report No: 21212149 dd. 05.10.2010
/4/ Monitoring Report Version 1.0 dated 20.10.2010
/5/ Monitoring Report Version 1.1 dated 14.12.2010

Category 2 Documents:
Background documents related to the design and/or methodologies employed in the design or other reference documents.

/1/ ACM0002 version 11
/2/ CDM Validation and Verification Manual v01.2
/3/ All Electricity Production Monthly Protocols signed by TEIAS and Project Owner between August 2009 to August 2010
/4/ All PMUM Records between August 2009 to August 2010
/5/ Training Records
/6/ Social Insurance Institution Records
/7/ Signed Documents from Head Villager and the local stakeholder for SD Matrix
/8/ The official documents prepared by EPDK for taking the Project into operation

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

/1/ Mr. Cagdas Duran – Fina Enerji
/2/ Mr. Gökhan Köroğlu - Fina Enerji
/3/ Mr. Ahmet Şimşir – Utopya Elektrik
/4/ Mr. Volkan Başkaya – Utopya Elektrik
/5/ Mr. Fariz Taşdan - FutureCamp
/6/ Mr. Halil Erol – Village Head
/7/ Mr. Ramazan Gökce - Villager
/8/ Mr. Mehmet Gülbezen - Villager
/9/ Mr. Rüştü Doğdu - Villager
/10/ Mr. Ahmet Can - Villager

6. CURRICULA VITAE OF THE DOE'S VERIFICATION TEAM MEMBERS

Ms. Bade Cebeci
Bureau Veritas Certification Team Leader, Climate Change Lead Verifier

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

Mrs. Burcu Mutman
Bureau Veritas Certification Climate Change Verifier

Burcu Mutman is an auditor for environment, safety and quality management systems. Has participated various online trainings, seminars and personal trainings on Gold Standard also participated in the Gold Standard Academy in 2009 and 2010.

Dr. Ashok Mammen – PhD Oils and 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 100 CDM/JI/VCS and other GHG projects.

ANNEX A: VERIFICATION PROTOCOL

Table 1 Verification requirements based on the Clean Development Mechanism Validation and Verification Manual (Version 01.2)

	CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
1 Project implementation in accordance with the registered project design document						
a	Are all physical features of the proposed CDM project activity proposed in the registered PDD in place?	VVM	196	Yes, all physical features of the proposed CDM project activity that are proposed in the registered PDD are in place. It has been verified through site visit.	OK	OK
b	Have the project participants operated the proposed CDM project activity as per the registered PDD?	VVM	196	Yes, the operation of the project is in line with the registered PDD.	OK	OK
c	Was an on-site visit conducted?	VVM	196	Yes, on site visit for the verification has been conducted on 3rd of December 2010.	OK	OK
d	If not, justify the rationale of the decision.	VVM	196	n.a.	OK	OK
e	Does the implementation or operation of CDM project activity conform with the description contained in the registered PDD?	VVM	197	Yes, the implementation and operation of the project confirm with the project description in the registered PDD. However there is a 15 MW capacity addition to the project activity. In the monitoring report it is stated that registration is not completed yet however project is listed as registered in the GS registry. Please correct and also indicate the GS number in the MR.	OK CL6	OK
f	If not, which are the potential impacts due to these changes, according to the relevant guidelines established by the Executive Board	VVM	197	The capacity addition does not affect the first monitoring period which is defined as 11/08/2009 to 31/08/2010. This capacity addition has been	FAR1	OK

	CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
	(EB48-§73)?			informed to GS by PP however no guideline is provided on this. The capacity addition shall be assess in the second monitoring period which is going to be affected since the generated electricity will be measured with the same measurement equipment. The village of the second phase is also same with the first phase. The nearest house (Ergun Dal) is not changed because of the second phase. During site visit, second phase is also discussed with the local people and it is confirmed that stakeholders has no negative comments because of the construction. Please provide objective evidence to verify the dates for the second phase which is stated in the monitoring report.	CL5 OK	
g	Was a notification or a request for approval of changes from the project activity as described in the registered PDD submited prior to the conclusion of the verification/certification for the corresponding?	VVM	197	Please provide objective evidence that GS has been informed for this design change.	CL1	OK
2 Compliance of the monitoring plan with the monitoring methodology						
a	Is the validated monitoring plan in accordance with the approved methodology applied by the proposed CDM project activity?	VVM	200	Yes, the monitoring plan is inline with the selected ACM0002 Version 11 methodology.	OK	OK
b	If no, was a request for revision of the monitoring plan was done? (The DOE may request for revision of the monitoring plan covering the	VVM	201	n.a.	OK	OK

	CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
	monitoring period under verification, for approval by the CDM Executive Board)					
c	Are there any monitoring aspects of the project activity that are not specified in the methodology, particularly in the case of small-scale methodologies (e.g. additional monitoring parameters, monitoring frequency and calibration frequency)?	VVM	202	No, there is no other monitoring aspects that are not specified in the methodology.	OK	OK
3 Compliance of monitoring with the monitoring plan						
a	Have the monitoring plan and the applied methodology been properly implemented and followed by the project participants?	VVM	205	Yes, the monitoring plan and the applied methodology been properly implemented and followed.	OK	OK
b	Have all parameters stated in the monitoring plan, the applied methodology and relevant CDM Executive Board decisions been sufficiently monitored and updated as applicable, including:	VVM	205			
i	Project emission parameters?	VVM	205	Project emissions defined as 0 in the registered PDD which is in line with the methodolgy. No parameter has been monitored.	OK	OK
ii	Baseline emission parameters?	VVM	205	The generated electricity parameter has been defined in the registered PDD to monitore the baseline emissions. The monitoring has been done in line with the monitoring plan. Please update the table in the monitoring report and include both generated electricity and the consumptions to calculate the net electricity generation.	CL2	OK
iii	Leakage parameters?	VVM	205	No leakage has been identified for the project activity.	OK	OK

	CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
	iv Management and operational system: the responsibilities and authorities for monitoring and reporting are in accordance with the responsibilities and authorities stated in the monitoring plan?	VVM	205	Yes, the operational and management system is in line with the monitoring plan.	OK	OK
c	Is the accuracy of equipment used for monitoring in accordance with the relevant guidance provided by the CDM Executive Board and are equipment controlled and calibrated in accordance with the monitoring plan?	VVM	205	The measuring equipments are under TEIAS reponsibility. No break down is reported for the monitoring period. That's why there is no calibration record by TEIAS.	OK	OK
	i Are monitoring results consistently recorded as per approved frequency?	VVM	205	Since TEIAS did not record any difference between two meters, no control has been done by TEIAS.	OK	OK
	ii Have quality assurance and quality control procedures been applied in accordance with the monitoring plan monitoring plan?	VVM	205	Yes, QA/QC has been implemented as it is defined in the montoring plan.	OK	OK
4 Assessment of data and calculation of greenhouse gas emission reductions						
a	Is a complete set of data for the specified monitoring period is available? (If no, i.e., only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, the DOE shall opt to either make the most conservative assumption theoretically possible in finalizing the verification report, or raise a request for deviation prior to submitting request for issuance, if appropriate).	VVM	208	Yes, a set for all months in the monitoring period has been provided to DOE. (Monthly readings which is signed by both TEIAS and the Project Owner and PMUM records)	OK	OK
b	Has information provided in the monitoring report been cross-checked with other sources such as plant log books, inventories, purchase records, laboratory	VVM	208	Yes, monthly readings have been cross checked with PMUM records. And it is found that emission reductions calculated with in line with the	OK	OK

	CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
	analysis?			monitoring plan and the correct data collected during the monitoring period.		
c	Have calculations of baseline emissions, proposed CDM project activity emissions and leakage, as appropriate, been carried out in accordance with the formulae and methods described in the monitoring plan and the applied methodology document?	VVM	208	Please provide the excel sheet that has been used for the emission reduction calculations. Please correct the emission reduction values given in section B.3.2.4 tables.	CL3 CL7	OK
d	Have any assumptions used in emission calculations been justified?	VVM	208	Please provide the excel sheet for the calculation of reduction of air pollution.	CL4	OK
e	Have appropriate emission factors, IPCC default values and other reference values been correctly applied?	VVM	208	Yes, registered emission factor (0, 6018 tco2/mwh) has been used to calculated emission reduction. Also for the air pollution calculation (NOx: 1.102 tons/GWh, CO: 0.146 tons/GWh and NMVOC: 0.037 tons/GWh) registered values has been used. In section D of the Monitoring report FAR 5 has been answered. However the electricity generation data used for capacity factor calculation is not in line with the generation data that used for the emission reduction which was correct value.	OK CAR1	OK

Table 2 Resolution of Corrective Action / Forward Action / Clarification Requests.

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
FAR1- The capacity addition does not affect the first monitoring period which is defined as 11/08/2009 to 31/08/2010. This capacity addition has been informed to GS by PP however no guideline is provided on this. The capacity addition shall be assess in the second monitoring period which is going to be affected since the generated electricity will be measured with the same measurement equipment.	Table1 – 1.f		
CL1- Please provide objective evidence that GS has been informed for this design change.	Table1 – 1.g	One of initial approach to Gold Standard was done in 22th February 2010 to get feedback on the procedure of extension issue. Screenshot of the e-mail is provided as Annex 1.	The mail between GS and PP has provided about the design change. Since design change does not effect this verification period, it will be checked during next verification. (Please refer to FAR1) The clarification request is closed.
CL2- The generated electricity parameter has been defined in the registered PDD to monitore the baseline emissions. The monitoring has been done in line with the monitoring plan. Please	Table1 - 3.b.ii	The table revised accordingly.	The table has been updated in the Monitoring Report. The clarification request is closed.

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
update the table in the monitoring report and include both generated electricity and the consumptions to calculate the net electricity generation.			
CL3 Please provide the excel sheet that has been used for the emission reduction calculations.	Table1 – 4.c	Please find excel sheet of emission reduction as annex 2.	The excel sheet for the emission reduction calculation has been provided. The calculations are in line with the methodology and correct. The clarification request is closed.
CL4 Please provide the excel sheet for the calculation of reduction of air pollution.	Table1 – 4.d	Please find excel sheet of calculation of air pollution as annex 3.	The excel sheet for calculation reduction of air pollution has been provided. The calculation found acceptable and in line with the monitoring plan. The clarification request is closed.
CAR1 In section D of the Monitoring report FAR 5 has been answered. However the electricity generation data used for capacity factor calculation is not in line with the generation data that used for the emission reduction which was correct value.	Table1 – 4.e	12 months data of electricity production is used and capacity factor is revised accordingly. Respond 1: Capacity factor is calculated based on 12 month data, however monitoring period covers 13 months that is why annex 3 and avoidance of NOx, CO, NMVOC emission calculation	September 2009 to the end of august 2010 results 43548, 94 and it is correctly stated in the MR. However in annex 3 the value is given as 47416 and the calculation has been done with this value. Please clarify. Review3: The clarification found acceptable. The corrective action request is closed.

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
		based on electricity production of whole period.	
CL5 Please provide objective evidence to verify the dates for the second phase which is stated in the monitoring report.	Table1 – 1.f	Second phase of the project started in September 2010 and objective evidence is confirmation of Ministry of Energy and Natural Resources which is provided as annex 4.	Provisional acceptance has been provided and it is dated as 01.09.2010 for the second phase of the project. It is clearly shows that the second phase does not affect this monitoring period which ends on 31st of August 2010. The clarification request is closed.
CL6 In the monitoring report it is stated that registration is not completed yet however project is listed as registered in the GS registry. Please correct and also indicate the GS number in the MR.	Table1 – 1.e	At the date of writing monitoring report the date of registration was not clear yet, that is why it is left blank. The date and number of GS registration is revised in Monitoring report.	Registry information is corrected. The clarification request is closed.
CL7 Please correct the emission reduction values given in section B.3.2.4 tables.	Table1 – 4.c	The values are revised accordingly	The correction has been done in the second revision of the monitoring report. The clarification request is closed.