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VERITAS

# VERIFICATION REPORT ALİZE ENERJİ ELEKTRİK ÜRETİM A.Ş.

## VERIFICATION OF THE KELTEPE WIND FARM PROJECT

REPORT No. TURKEY-  
VER/CER.445.11.C45/2011-2012 REVISION No. 01

BUREAU VERITAS CERTIFICATION

62/71 Boulevard du Château  
92571 Neuilly Sur Seine Cdx - France



## VERIFICATION REPORT

Date of first issue: <b>26/07/2012</b>	Organizational unit: <b>Bureau Veritas Certification Holding SAS</b>
Client: <b>Alize Enerji Elektrik Üretim A.S.</b>	Client ref.: <b>Mrs. Çağla Balcı Eriş</b>
<p>Summary:</p> <p>Bureau Veritas Certification has made the 3rd periodic verification of the Keltepe Wind Farm Project, Gold Standard Project ID Number 437, project of Alize Enerji Elektrik Üretim A.S. located in Balıkesir-Susurluk Region, Turkey, and applying the methodology ACM002 version 07, on the basis of UNFCCC criteria for the CDM and GS Requirements, 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 &amp; 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 (CL, CAR and FAR), presented in Appendix A.</p> <p>In summary, Bureau Veritas Certification confirms that the project is implemented as planned and described in validated and registered project design documents version 06 dd. 04/08/2009. Installed equipment being essential for generating emission reduction runs reliably and is calibrated appropriately. The monitoring system is in place and the project is already generating GHG emission reductions. The GHG emission reduction is calculated without material misstatements, and the emission reductions verified totalize 45,404 tons of CO<sub>2</sub>eq for the monitoring period.</p> <p>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.</p> <p>Reporting period : 01/05/2011 to 30/04/2012  Baseline emissions : 45,404 t CO<sub>2</sub> equivalents.  Project emissions : 0 t CO<sub>2</sub> equivalents.  Leakage emissions : 0 t CO<sub>2</sub> equivalents.  Emission Reductions : 33,551 t CO<sub>2</sub> equivalents (01/05/2011-31/12/2011)  Emission Reductions : 11,853 t CO<sub>2</sub> equivalents (01/01/2012-30/04/2012)  Emission Reductions : 45,404 t CO<sub>2</sub> equivalents (01/05/2011-30/04/2012)</p>	

Report No.: <b>TURKEY- ver/CER.445.11.C45/2011- 2012</b>	Subject Group: <b>GS-VER</b>	
Project title: <b>Keltepe Wind Farm Project</b>		
Work carried out by: <b>Mehmet Kumru - Lead Verifier Hikmet Tan - Verifier</b>		
Internal Technical Review carried out by: <b>Ashok Mammen</b>		
Date of this revision: <b>26/07/2012</b>	Rev. No.: <b>03</b>	Number of pages: <b>37</b>

**Indexing terms**

Work approved by:  
**Flavio GOMES - Global Product Manager**

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## 1. INTRODUCTION

Alize Enerji Elektrik Üretim A.Ş. has commissioned Bureau Veritas Certification to verify the emissions reductions of its Gold Standard project Keltepe Wind Farm Project (hereafter called “the project”) at Balıkesir – Susurluk Region, Turkey.

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

### 1.1 Objective

In carrying out its verification work, the DOE shall ensure that the project activity complies with the requirements of paragraph 62 of the CDM modalities and procedures.

Based on the applicable requirements of paragraph 62 of the CDM modalities and procedures, this assessment shall:

- (a) Ensure that the project activity has been implemented and operated as per the registered PDD and that all physical features (technology, project equipment, and monitoring and metering equipment) of the project are in place;
- (b) Ensure that the monitoring report and other supporting documents provided are complete in accordance with latest applicable version of the completeness checklist for requests for issuance of CERs and verifiable and in accordance with applicable CDM Methodology and GS requirements;
- (c) Ensure that actual monitoring systems and procedures comply with the monitoring systems and procedures described in the monitoring plan and the approved methodology;
- (d) Evaluate the data recorded and stored as per the monitoring methodology.

### 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 Kyoto Protocol requirements, UNFCCC CDM Methodology rules, GS Requirements and associated interpretations.

The verification is not meant to provide any consulting towards the Alize Enerji Elektrik Üretim A.S. 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 Keltepe Wind Farm Project activity (also referred as Keltepe Project) comprises the operation of a 20.7 MW onshore wind farm in the Balıkesir Province in Turkey. The generated electricity is delivered to the national grid. The project consists of 23 units of E44 turbines with an installed capacity of 900 kW each. The generated electricity is delivered to the grid at 34.5 kV Gobel transformer stations. The project helps reduce GHG emissions generated from the national grid, which is significantly based on fossil fuel electricity generation.

### 1.4 Verification Team

The verification team consists of the following personnel:

FUNCTION	NAME	CODE HOLDER*	TASK PERFORMED
Lead Verifier	Mehmet Kumru	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> DR <input checked="" type="checkbox"/> SV <input checked="" type="checkbox"/> RI
Verifier	Hikmet TAN	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> DR <input checked="" type="checkbox"/> SV <input checked="" type="checkbox"/> RI
Technical Specialist	N.A	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> DR <input type="checkbox"/> SV <input type="checkbox"/> RI
Internal Technical Reviewer (ITR)	Ashok Mammen	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> DR <input type="checkbox"/> SV <input checked="" type="checkbox"/> RI
Specialist supporting ITR	N.A.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> DR <input type="checkbox"/> SV <input type="checkbox"/> RI

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

## 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 55<sup>th</sup> 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 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 verification of the project documentation provided by the project participant is based upon both quantitative and qualitative information on emission reductions. Quantitative information comprises the reported numbers in the monitoring report submitted to the DOE. Qualitative information comprises information on internal management controls, calculation procedures, procedures for transfer of data, frequency of emissions reports, and review and internal audit of calculations.

In addition to the monitoring documentation provided by the project participants, the DOE reviews:

- (a) The registered PDD, including the monitoring plan and the corresponding validation report;
- (b) Previous verification reports, if any;
- (c) Previous monitoring reports, if any;
- (d) The revised monitoring plan, if any, and its impact on the current verification;
- (e) The applied monitoring methodology;
- (d) Relevant decisions, clarifications and guidance from the CMP and the GS-VER Executive Board;
- (e) Any other information and references relevant to the project activity's resulting emission reductions (e.g. IPCC reports, data on electricity generation in the national grid or laboratory analysis and national regulations).

## 2.2 Follow-up Interviews

On 04/05/2012 Bureau Veritas Certification performed interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of ALIZE and OAK Danismanlik (Consultant firm, referred to as OAK hereafter) were interviewed (see Section 5: References). The main topics of the interviews are summarized in Table 1.

**Table 1 Interview topics**

Interviewed organization	Interview topics
ALIZE	<ul style="list-style-type: none"> <li>➤ Management and Operational Structure</li> <li>➤ Sustainable Development Indicators</li> <li>➤ Sales of Electricity and Monitoring Practices</li> <li>➤ Project Implementation</li> </ul>
Local Stakeholders	<ul style="list-style-type: none"> <li>➤ Sustainable Development Indicators and local impacts of the project</li> <li>➤ Employment from the village</li> </ul>
OAK	<ul style="list-style-type: none"> <li>➤ Emission Reduction Calculations</li> <li>➤ Monitoring Report</li> </ul>

### 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 GS-VER requirements have been met.



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

## **2.4 Internal Technical Review**

The verification report underwent a Internal Technical Review (ITR) before requesting issuance of CERs for the project activity.

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

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

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

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

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

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

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

## **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 02 Corrective Action Requests, 05 Clarification Requests, and 00 Forward Action Requests.

The CARs, CLs and FARs 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 Remaining issues from previous validation/verification**

All CARs and CLs raised were successfully closed during the validation stage of the project activity, and no remaining issues were left.

### **3.2 Project implementation in accordance with the registered project design document (198)**

The starting date of operation is 10/07/2009. Project consists of a single site and no phased implementation

The actual operation of the proposed project activity is generating electricity from the wind power and fed into the grid. Total emission reduction for the 3rd verification period is 45,404 tCO<sub>2</sub>.

The following information (data and variables) provided in the monitoring report is different from the stated in the registered PDD and has caused an increase in estimates of the emission reductions in the current monitoring period or is highly likely to increase the estimates of emission reductions in the future monitoring periods.

No emergencies were reported during the monitoring period. As described in the GS-VER-PDD, calibration and maintenance responsibility for the electricity meters that are the primary source of monitoring for the fundamental parameter to be monitored belong to TEIAS. No erroneous measurements have been reported; therefore no calibration or maintenance was required for the monitoring equipment.

Information provided in the MR is in accordance with that stated in the registered PDD (version 06 dd.04/08/2009). 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.



### 3.3 Compliance of the monitoring plan with the monitoring methodology (203)

The monitoring plan is in accordance with the approved methodology applied by the proposed GS-VER project activity

### 3.4 Compliance of monitoring with the monitoring plan (206)

Monitoring has been carried out in accordance with the monitoring plan contained in the registered GS-VER-PDD. No revisions to the registered monitoring plan or no deviations have been requested.

The parameters required by the monitoring plan and the way the Verification Team has verified the information flow (from data generation, aggregation, to recording, calculation and reporting for these parameters including the values in the monitoring reports are described below:

(a) Electricity supplied by the project activity to the grid (EGy):  
Models, specifications and serial numbers of the main and backup meters identified as the monitoring equipment for the parameter have been verified and found to be as indicated in the verified GS-VER-MR, dd. 11/05/2012, rev.02 during the site visit:

	Electricity Meter (Primary)	Electricity Meter (Secondary)
Manufacturer	Schlumberger	Schlumberger
Model	SL7000	SL7000
Serial number	53031748	53031749
Accuracy	0.5s	0.5s

Electricity generation has been verified through the monthly protocols which are signed both TEIAS and Project Owner. Protocols are signing at the last day of the month and these values are cross checked with the PMUM records which are the basis of the electricity sales invoices. Both monthly protocols and PMUM records has been provided for each month which are under the monitoring period.

Based on the records, OAK has prepared a spreadsheet\* to report the generation values and performed the emission reduction calculations. Net generation values were reached by subtracting the consumption of the plant from the gross amount of electricity supplied to the grid. Reported amount of total electricity generated in the monitoring period is indicated as 70,504.393 MWh for this monitoring period, which is from 01/05/2011 to 30/04/2012 (inclusive).

\* Dares Datça 3rd Monitoring Period ER Calculation v2



(b) Diesel consumption of the auxiliary power unit (FC\_Diesel): Diesel generator is using in emergency cases. Amount of diesel consumed during the monitoring period has been verified during the site visit through the diesel purchase invoices, which was crosschecked with the operation log of the generator and. Consumed amount of diesel is 390.63 liters. Using ex-ante validated values for the diesel and the formula from the applied methodology the corresponding Project Emissions were calculated as 1.06 tCO<sub>2</sub>-eq, which is below 1% of the baseline emissions (45,404.83 tCO<sub>2</sub>-eq) and hence were neglected.

(c) Job Quality:

Regarding to the monitoring plan under Gold Standard number of staff trained by Enercon and Demirer Holding for the technical and security issues shall be monitored. During 3rd crediting period it is seen by the verification team that trainings like occupational safety and technical training have been done by Enercon . The training records have been provided by the PP.

(d) Employment Quantity:

Number of employment created by the project has been defined under monitoring plan as a monitoring parameter. This parameter was verified through the SGK (Social Security Institution) records dd May 2012 as well as realized payrolls. Project provides employment opportunities to 7 people.

(e) Water Quality:

The disposal of the wastewater included to the monitoring plan. Due to its large size the wastewater tank has a high capacity and it was not necessary to empty the tank within the 3rd crediting period. It has checked during the site visit.

### **3.5 Assessment of data and calculation of greenhouse gas emission reductions (209)**

A complete set of data for the specified monitoring period for all of the monitored parameters was available for verification.

The following actions were taken to ensure that the most conservative assumption theoretically possible has been made:

(a) Official sources were used for verification and crosschecking of generation values, as declared in the registered GS-VER-PDD monitoring methodology;



(b) All parameters used for the calculation of emission reductions (such as EFCO<sub>2</sub>) were taken from the ex-ante validated values in the registered GS-VER-PDD;

(c) All the data are consistent with the values input in the Monitoring Report;

(d) Formulae used are in line with the applied methodology;

Emission reductions were determined as:

$$ER_y = BE_y - PE_y - LE_y$$

Where:

ER<sub>y</sub> : Emission reductions in year y (tCO<sub>2</sub>)

BE<sub>y</sub> : Baseline emissions in year y (tCO<sub>2</sub>)

PE<sub>y</sub> : Project emissions in year y (tCO<sub>2</sub>)

LE<sub>y</sub> : Leakage emissions in year y (tCO<sub>2</sub>)

Y : Refers to a given year

#### **Baseline Emissions:**

$$BE = EF_{grid,CM} \times EG$$

Where:

BE = Baseline emissions in tones CO<sub>2</sub>-eq

EF<sub>grid,CM</sub> = Combined Margin CO<sub>2</sub> emission factor in tCO<sub>2</sub>-eq/MWh (0.644 tCO<sub>2</sub>-eq/MWh value was validated ex-ante in the registered GS-VER-PDD)

EG = Electricity supplied to the grid in MWh

The calculation of net electricity delivered to the grid in 3rd monitoring period are as shown in Table below.



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Month	(A) Electricity supplied to the grid [MWh]	(B) Electricity consumption from the grid [MkWh]	(C) = (A) - (B) EG (ID 8) Net electricity supplied to the grid [MWh]	Baseline emissions BE = EG * EG [t CO <sub>2</sub> -eq]
May 2011	4,792.239	2.620	4,789.619	<b>3,084.51</b>
June 2011	3,940.648	3.553	3,937.095	<b>2,535.49</b>
July 2011	4,715.778	2.243	4,713.535	<b>3,035.52</b>
August 2011	9,126.300	0.668	9,125.632	<b>5,876.91</b>
September 2011	6,929.926	0.846	6,929.080	<b>4,462.33</b>
October 2011	7,884.498	3.516	7,880.982	<b>5,075.35</b>
November 2011	7,826.675	2.461	7,824.214	<b>5,038.79</b>
December 2011	6,905.190	6.911	6,898.279	<b>4,442.49</b>
January 2012	4,093.288	26.534	4,066.754	<b>2,618.99</b>
February 2012	2,418.025	27.629	2,390.396	<b>1,539.42</b>
March 2012	3,769.584	6.209	3,763.375	<b>2,423.61</b>
April 2012	8,186.962	1.530	8,185.432	<b>5,271.42</b>
<b>Sum (01/05/2011 - 31/12/2011)</b>	<b>52,121.254</b>	<b>22.818</b>	<b>52,098.436</b>	<b>33,551.39</b>
<b>Sum (01/01/2012 - 30/04/2012)</b>	<b>18,467.859</b>	<b>61.902</b>	<b>18,405.957</b>	<b>11,853.44</b>
<b>Sum (01/05/2011 - 30/04/2012)</b>	<b>70,589.113</b>	<b>84.720</b>	<b>70,504.393</b>	<b>45,404.83</b>

$$BE_{2011} = 33,551.39 \text{ tCO}_2\text{-eq}$$

$$BE_{2012} = 11,853.44 \text{ tCO}_2\text{-eq}$$

$$BE_{3rdMP} = 45,404.83 \text{ tCO}_2\text{-eq}$$

**Project Emissions:**

$$PE = FC_{\text{Diesel}} \times NCV_{\text{Diesel}} \times EF_{\text{CO}_2\text{Diesel}}$$

Where:

$$PE = \text{Project emissions due to auxiliary power unit in tCO}_2\text{-eq}$$



FCDiesel = Consumption of diesel in auxiliary power unit in L

NCVDiesel = Net Calorific Value of Diesel in GJ/L

EFCO2Diesel = CO2 emission factor of diesel tCO<sub>2</sub>-eq/GJ

Using the ex-ante validated values in the registered GS-VER-PDD for diesel, and the monitored amount of diesel consumed (verified through the diesel purchase invoices crosschecked with the generator operation log) the project emissions are:

$$PE_{3rdMP} = 390.63 \times 0.0366 \times 0.074 = 1.06 \text{ tCO}_2\text{-eq}$$

The monitored amount of emission reductions for the project has been determined as 45,404.83 tCO<sub>2</sub>-eq and  $0.72 < (45,404.83 \times 0.01)$ ; therefore:

$$PE_{3rdMP} = 0 \text{ tCO}_2\text{-eq}$$

#### **Leakage emissions:**

In line with the requirements of the applied approved methodology ACM002 v.07, leakage is neglected:

$$L_{3rdMP} = 0 \text{ tCO}_2\text{-eq};$$

Hence the emission reductions for the 3rd Monitoring Period [01/05/2011 to 30/04/2012 (inclusive)] is:

$$ER_{3rdMP} = BE_{3rdMP} - PE_{3rdMP} - L_{3rdMP} = 45,404.83 - 0 - 0 = 45,404.83 \text{ tCO}_2\text{-eq}$$

The reported data was cross-checked through relevant sources, as described in the monitoring plan of GS-VER-PDD of the project, by the DOE.

Appropriate methods and formulae for calculating baseline emissions, project emissions and leakage have been followed. Additionally, the estimated annual emission reductions (46,501 tCO<sub>2</sub>-eq) in the GS-VER-PDD are deemed appropriate and the difference to the verified value (45,404 tCO<sub>2</sub>-eq) is deemed reasonable.

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

#### **4. VERIFICATION OPINION**

Bureau Veritas Certification has performed the 3rd periodic, verification of the Keltepe Wind Farm Project Project in Turkey, which applies the methodology ACM002 version 07. The verification was performed based




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on the requirements set by the GS and relevant guidance provided by CMP and the CDM Executive Board.

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 Alize Enerji Elektrik Uretim A.S. 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 Plan indicated in the registered PDD. 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 02, dd. 11/05/2012 for the reporting period as indicated below. Bureau Veritas Certification confirms that the project is implemented as 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 generating 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 evidence and information that are considered necessary to guarantee that GHG emission reductions are appropriately calculated, Bureau Veritas Certification confirms the following statement:

Reporting period: From 01/05/2012 to 30/04/2012 (inclusive)

Baseline emissions	: 45,404	t CO <sub>2</sub> equivalents.
Project emissions	: 0	t CO <sub>2</sub> equivalents.
Leakage emissions	: 0	t CO <sub>2</sub> equivalents
Emission Reductions	: 33,551	t CO <sub>2</sub> equivalents (2011)
Emission Reductions	: 11,853	t CO <sub>2</sub> equivalents (2012)
Emission Reductions	: 45,404	t CO <sub>2</sub> equivalents (01/05/2011-30/04/2012)

01/08/2012

28/07/2012

Name

Name



Internal Technical Reviewer  
Ashok Mammen

Lead Verifier  
Mehmet Kumru

## 5. REFERENCES

### Category 1 Documents:

Documents provided by Type the name of the company that relate directly to the GHG components of the project.

- /1/ Keltepe Validation Report dd.14.11.2008
- /2/ Keltepe Final PDD Version 06 04.08.2009
- /3/ Keltepe 1st Verification Report dd.30.09.2010
- /4/ Keltepe 2<sup>nd</sup> Monitoring Report Version 1
- /5/ Keltepe 2<sup>nd</sup> Monitoring Report Version 2  
Keltepe 2<sup>nd</sup> Monitoring Report Version 3
- /6/ Keltepe Emission Reduction Calculation Version 1  
Keltepe Emission Reduction Calculation Version 2
- /7/ Keltepe 3<sup>rd</sup> Monitoring Plan Version 1  
Keltepe 3<sup>rd</sup> Monitoring Plan Version 2
- /8/ Keltepe Organization Chart
- /9/ Keltepe Training System Document
- /10/ Keltepe Training Programmes
- /11/ Keltepe Training System
- /12/ SGK Records
- /13/ Payrolls
- /14/ Training Certificates
- /15/ Metering Reading Protocols for each month between 01/05/2011 – 30/04/2012
- /16/ PMUM Records for each month between 01/05/2011 – 30/04/2012
- /17/ Record of place of residence
- /18/ Organization Chart
- /19/ Meters Technical Brochure
- /20/ Bill for diesel oil

### Category 2 Documents:

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

- /1/ UNFCCC CDM ACM0002, v.07;
- /2/ CDM Validation Verification Manual v.01.2;
- /3/ Gold Standard v.01, VER Project Developer's Manual;
- /4/ Gold Standard v.01, Validation Verification Manual;
- /5/ GS-VER-MR Format
- /6/ UNFCCC CDM ACM0002, v.07;
- /7/ CDM Validation Verification Manual v.01.2;
- /8/ Gold Standard v.01, VER Project Developer's Manual;
- /9/ Gold Standard v.01, Validation Verification Manual;



/10/ GS-VER-MR Format

**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/ Mrs. Cagla Balcı Eris – Demirer Enerji
- /2/ Mr. Edip Erdoğan - Enercon
- /3/ Mr. Omer Akyurek – OAK Danışmanlık
- /4/ Yıldırım Beyazıt – Local Employee – Head of Kiraz Village
- /5/ Halil Demirel – Local

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

**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.

**Mr. Mehmet Kumru – Environmental Engineer**

Bureau Veritas Certification – Lead Verifier

Mehmet Kumru is a lead auditor for Greenhouse Gas Assertion for Organizational Level standard. He is also a verifier for GHG emission reduction projects. He is worked renewable energy projects and he has over 5 years' experience in environmental and energy sectors.

**Mrs. Hikmet Tan – Chemist**

Bureau Veritas Certification – Verifier

Hikmet Tan is a lead auditor for environment, safety and quality management systems. She is also a verifier for GHG Emission Reduction Projects. She has 11 years' experience in different production facilities.



## VERIFICATION REPORT

## APPENDIX A: COMPANY CDM PROJECT VERIFICATION PROTOCOL

**VERIFICATION PROTOCOL** (revision 06)**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
<b>1 Compliance of the monitoring report with the guidelines for completing the monitoring report form</b>					
<b>a Brief description of the project activity</b>					
a. Is the description of the project activity to be presented in this section a brief summary of the detailed description given in the section .B.1 Implementation status of the project activity?	EB 54	Ann 34	Yes, all physical features of the proposed Gold Standard project activity are in place as it is registered in the PDD.	OK	OK
b. Does this description include:	EB 54	Ann 34	<i>Please see below.</i>		
i. Purpose of the project activity and the measures taken to reduce greenhouse gas emissions?	EB 54	Ann 34	The purpose of the project activity and the measure taken to reduce greenhouse gas emission has been defined below in section A1. "The project helps reduce GHG emissions generated from the national grid, which is significantly based on fossil fuel electricity generation."	OK	OK
ii. Brief description of the installed technology and equipments;	EB 54	Ann 34	A brief description of the installed technology and equipment has been included in section A.4 of this monitoring report.	OK	OK
iii. Relevant dates for the project activity (e.g. construction, commissioning, continued operation periods, etc.)?	EB 54	Ann 34	Yes. Relevant dates of the project activity have been given in Table1.	OK	OK



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
iv. Total emission reductions achieved in this monitoring period?	EB 54	Ann 34	The amount of total emission reductions in this monitoring period has been given in section A.1. Please provide April PMUM and TEIAS reading protocols.	CAR01	OK
<b>b Project participants</b>					
a. Are the project participants listed?	EB 54	Ann 34	The project participants have listed in section A.2.	OK	OK
<b>c Location of project activity</b>					
a. Is complete information of the location of the project activity: town, city, country and GPS coordinates provided?	EB 54	Ann 34	The complete information of the location of the project activity has been given in section A.3. Please add country information.	CL01	OK
<b>d Technical description of the project</b>					
a. Are a description of the technology applied in the project activity and detailed technical process, including diagrams provided?	EB 54	Ann 34	A description of the technology applied in the project activity and detailed technical process, including diagrams have been provided in section A.4.	OK	OK
<b>e Title, reference and version of the baseline and monitoring methodology applied to the project activity</b>					
a. Are the complete reference of the methodology applied and tools whenever is applicable included?	EB 54	Ann 34	The complete reference of the methodology applied and tools whenever is applicable have been included in section A.5.	OK	OK
<b>f Registration date of the project activity</b>					
a. Is the registration date of the project activity provided?	EB 54	Ann 34	The registration date of the project activity has been provided in section A.6. The date is 18.09.2009. It has been checked from Gold Standard Register.	OK	OK
<b>g Crediting period of the project activity and related information (start date and choice</b>					



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
<b><i>of crediting period)</i></b>					
a Does the description also include changes to the start date of the crediting period post-registration that have been accepted by the Board, when applicable?	EB 54	Ann 34	The first crediting period has been defined in Section A.7 as "from 10/07/2008 to 09/07/2015". Commissioning date given Table 1 in this monitoring report is 10/07/2009. Please clarify this difference.	CL02	OK
<b><i>h Name of responsible person(s)/entity(ies)</i></b>					
a Is the contact information of the person(s)/entity(ies) responsible for completing the monitoring report form (CDM-MR) provided?	EB 54	Ann 34	The contact information of the person who responsible for completing the monitoring report form has been provided in section A.8 of this monitoring report. Mr. Ömer Akyürek is responsible person.	OK	OK
<b><i>i Implementation status of the project activity</i></b>					
a Does this section include a description of the implementation and operational status of the project as of this monitoring period in accordance with the latest version of the CDM Validation and Verification Manual (CDM-VVM)?	EB 54	Ann 34	Yes. Description of the implementation and operational status of the project have been given under Section B1.	OK	OK
b Does the description include inter alia:	EB 54	Ann 34	<i>Please see below.</i>		
i The starting date of operation of the project activity? For project activities that consist of more than one site, the report shall clearly describe the status of implementation and starting date of operation for each site. For CDM project activities with phased implementation, the report shall indicate the progress of the proposed CDM project activity achieved in each phase.	EB 54	Ann 34	The description has been included the starting date of operation of the project activity in section B1. "The commissioning date of the project activity was 10/07/2009. The project activity consists of only one site with no phased implementation."	OK	OK



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
ii The information regarding the actual operation of the project activity during this monitoring period, including information on special events, for example overhaul times, downtimes of equipment, exchange of equipment, etc?	EB 54	Ann 34	There were no special events, emergency reported or any changes regarding the employment structure for the project during the 3rd monitoring period. The information has been given under section B1. Also the information has been checked during site visit.	OK	OK
iii A brief description of: (i) events or situations that occurred during the monitoring period, which may impact the applicability of the methodology, and (ii) how the issues resulting from these events or situations are being addressed?	EB 54	Ann 34	There were no special events, emergency reported or any changes regarding the employment structure for the project during the 3rd monitoring period. The information has been given under section B1.	OK	OK
<b>j Revision of the monitoring plan</b>					
a Is it indicated if the monitoring plan has been revised?.	EB 54	Ann 34	The information has been provided in section B.2. "No revisions to the registered monitoring plan are required."	OK	OK
b Is the date of approval, if revised, included?	EB 54	Ann 34	The information has been provided in section B.4. "No notification or request of approval of changes has been made."	OK	OK
<b>k Request for deviation applied to this monitoring period</b>					
a Is any deviation applied to this monitoring period indicated?	EB 54	Ann 34	The information has been provided in section B.3. "There are no requests for deviation applied to this monitoring period."	OK	OK
b Is the reference number, if any deviation applied, included?	EB 54	Ann 34	There is no deviation in this monitoring period and this question is not applicable.	OK	OK
<b>l Notification or request of approval of changes</b>					
a Is any notification or request of approval of	EB	Ann	The information has been provided in section B.4	OK	OK



## VERIFICATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
changes from the project activity as described in the registered CDM-PDD indicated?	54	34	"No notification or request of approval of changes has been made."		
b Is the date of approval, if applicable, included?	EB 54	Ann 34	There is no approval change and this question is not applicable	OK	OK
<b>m Description of the monitoring system</b>					
a Is a description of the monitoring system provided?	EB 54	Ann 34	Description of the monitoring system has been described in section C.	OK	OK
b Does this section include data collection procedures (information flow including data generation, aggregation, recording, calculation and reporting), organizational structure, roles and responsibilities of personnel, and emergency procedures for the monitoring system?	EB 54	Ann 34	This section includes data collection procedures (information flow including data generation, aggregation, recording, and calculation and reporting), organizational structure, roles and responsibilities of personnel, and emergency procedures for the monitoring system. Regular checks are performed by the responsible engineer. Ms. Çağla Balcı Eriş is responsible for control and storage of monthly data.	OK	OK
c Does this include line diagrams showing all relevant monitoring points?	EB 54	Ann 34	Line diagram has been given in section A4.	OK	OK
<b>n Data and parameters</b>					
a Does this section include parameters used to calculate baseline, project, and leakage emissions as well as other relevant parameters required by the approved methodology and the monitoring plan; and specific information on how data and parameters have been monitored during the monitoring period?	EB 54	Ann 34	Data and parameters have been given in section D. They include parameters used to calculate baseline, project, and leakage emissions as well as other relevant parameters required by the approved methodology and the monitoring plan; and specific information on how data and parameters have been monitored during the monitoring period.	OK	OK
b Are data that is determined only once for the crediting period but are used after registration of the project activity included here under section	EB 54	Ann 34	The data that is determined only once for the crediting period but are used after registration of the project activity have been included under	OK	OK



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
D.1.?			section D.1. They are “EF, NCV Diesel and EFco2, diesel”.		
c For each parameter the following information, using the tables provided, is provided:			<i>Please see below.</i>		
i Value of monitored parameter in the period for the purpose of calculating emission reductions? To report multiple values, a table may be used and included in this monitoring report or include references to spreadsheet. For default value (such as an IPCC value), where it is ex-post confirmed, the most recent value shall be applied.	EB 54	Ann 34	Value of monitored parameter in the period for the purpose of calculating emission reductions have been provided under section D2. There are two parameters; EGy and FC diesel.	OK	OK
ii Description of the equipment used to monitor each parameter, including details on accuracy class, and calibration information (frequency, date of calibration and validity), if applicable as per monitoring plan?	EB 54	Ann 34	Description of the equipment used to monitor each parameter has been provided under section D2, Please add accuracy class, frequency and validity information for calibration.	CL03	OK
iii Measuring and recording method: how the parameters are measured/calculated, specifying the measurement and recording frequency?	EB 54	Ann 34	Measuring and recording method has been defined under section D.2. “Source of data is electricity meter readings; Reading/recording frequency is continuous measurement and monthly reading.	OK	OK
iv Source of data: logbooks, daily records, surveys, etc?	EB 54	Ann 34	Source of data is defined as electricity meter readings.	OK	OK
v Where relevant, the calculation method of the parameter?	EB 54	Ann 34	NA _ only reading have been done	OK	OK
vi The QA/QC procedures applied (if applicable per monitoring plan)?	EB 54	Ann 34	Yes The QA/QC has been defined.	OK	OK
vii Include information about appropriate emission factors, IPCC default values and any other reference values that have been used in the	EB 54	Ann 34	Diesel emission factor is derived from IPCC 2006 Table 2.2 Volume 2.	OK	OK


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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
calculation of emission reductions?					
<b>o Baseline emissions calculation</b>					
a Does this section include all formulae used and description to calculate the baseline emissions applying actual values?	EB 54	Ann 34	Yes, the used formula has been given in section E1.	OK	OK
b Was a table used and included in this monitoring report or include references to spreadsheet?	EB 54	Ann 34	A table used and included in this monitoring report under section E1. Please include April 2012 values for “electricity supplied from grid”, “electricity consumption from the grid”, “net electricity supplied from to the grid” and “baseline emissions”.  April 2012 values for “electricity supplied from grid”, “electricity consumption from the grid”, “net electricity supplied from to the grid” and “baseline emissions” have been added into the table3 under section E.1 of the MR ver02.	CAR01	OK
<b>p Project emissions calculation</b>					
a Does this section include all formulae used and description to calculate the project emissions applying actual values?	EB 54	Ann 34	All formula used to calculate the project emissions have been provided under section E2 of this monitoring report. “Project emissions are negligible; however the auxiliary emissions are monitored and reported.”	OK	OK
b Was a table used and included in this monitoring report or include references to spreadsheet?	EB 54	Ann 34	A table used and included in this monitoring report under section E2. PE= 1.06 tCO <sub>2</sub> -eq.	OK	OK
<b>q Leakage calculation</b>					
a Does this section include all formulae used and description to calculate the leakage applying actual values?	EB 54	Ann 34	NA (No leakage is to be accounted by the Project. This is in line with the registered PDD and applicable methodology ACM0002 version 7. Therefore; L= 0 tCO <sub>2</sub> -eq)	OK	OK



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
b Was a table used and included in this monitoring report or include references to spreadsheet?	EB 54	Ann 34	NA	OK	OK
<b>r Emission reductions calculation/table</b>					
a Does this section include the formulae used to calculate the emission reductions and the total of the emission reductions achieved during the monitoring period?	EB 54	Ann 34	Yes, Section E has included the formulae used to calculate the emission reductions and the total of the emission reductions achieved during the monitoring period.	OK	OK
i Total baseline emissions:	EB 54	Ann 34	Total baseline emissions (BE): 40,133 tCO <sub>2</sub> -eq $BE = EF * EG$ Please recalculate this baseline emissions considering April 2012 TEIAS readings and PMUM records.  The total baseline emission has been recalculated and given as below under section E.1 of the MR rev02. $BE = EF * EG$ $EF = 0.644 \text{ tCO}_2\text{-eq/MWh}$ Total baseline emissions (BE): <b>45,404</b> tCO <sub>2</sub> -eq	CAR01	OK
ii Total project emissions:	EB 54	Ann 34	$PE = FC_{diesel} * NVC_{diesel} * EF_{CO2 \text{ diesel}}$ PE is calculated as 1.06 tCO <sub>2</sub> -eq "As $PE \ll 1\% BE$ , the project emissions are negligible and considered to be 0." $PE = 0 \text{ tCO}_2\text{-eq}$	OK	OK
iii Total leakage:	EB 54	Ann 34	According to ACM0002 version 7, no leakage is accounted by the project and considered to be 0. Total leakage (L): 0 tCO <sub>2</sub> -eq	OK	OK
iv Total emission reductions:	EB	Ann	Total emission reductions for 3rd Monitoring Period	CAR01	OK



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
	54	34	(01/05/2011 – 30/04/2012) ER <input type="checkbox"/> BE <input type="checkbox"/> PE-L Please recalculate this baseline emissions considering April 2012 TEIAS readings and PMUM records. The total baseline emission reduction has been given as below under section E.4 of the MR rev02. Total baseline emissions (BE): 45,404tCO2-eq Total project emissions (PE): 0 tCO2-eq Total leakage (L): 0 tCO2-eq. Total baseline emission reduction (ER): 45,404tCO2-eq		



## VERIFICATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
<b>s Comparison of actual emission reductions with estimates in the CDM-PDD</b>					
a Does this section include a comparison of actual values of the emission reductions achieved during the monitoring period with the estimations in the registered CDM-PDD?	EB 54	Ann 34	A comparison of actual emission reductions in this monitoring period with the estimates in the CDM-PDD has been included in this monitoring report under section E5. The ex-ante estimated yearly volume in PDD is different from the value in this monitoring report. Please correct this value. The value in PDD is 46,501 tCO <sub>2</sub> -eq, the value in the monitoring report is 63,417 tCO <sub>2</sub> -eq.	CAR02	OK
<b>t Remarks on difference from estimated value in the PD</b>					
a Is an explanation of the cause of any increase in the actual emission reductions achieved during the current monitoring period (e.g. higher water availability, higher load plant factor, etc), including all information (i.e. data and/or parameters) that is different from that stated in the registered CDM-PDD provided?	EB 54	Ann 34	There is not any increase in the actual emission reductions achieved during the current monitoring period. This information is given under section E.6. as below; “The ex-post achievements are slightly lower but consistent with performance monitored during the previous years of operation.” The value in PDD is 46,501 tCO <sub>2</sub> -eq, the value in the monitoring report is 63,417 tCO <sub>2</sub> -eq. Please correct this value.  The correction has been done. Values applied in ex-ante calculation of the registered CDM-PDD has been defined as 46,501 under section E.5 and E.6 in the MR rev02.	CAR02	OK
<b>2 Project implementation in accordance with the registered project design document</b>					



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
a Are all physical features of the proposed CDM project activity proposed in the registered PDD in place?	VVM	196	Physical features checked in site visit. All physical features of the proposed activity proposed in the registered PDD in place.	OK	OK
b Have the project participants operated the proposed CDM project activity as per the registered PDD?	VVM	196	All physical features of the GS VER project activity, proposed in the registered PDD were in place. The project consists of 23 units of E44 turbines with an installed capacity of 900 kW each.	OK	OK
c Was an on-site visit conducted?	VVM	196	Yes, on 04/05/2012.	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	Implementation or operation of CDM project activity checked in site visit. It is conform to the description in the registered PDD.	OK	OK
f If not, which are the potential impacts due to these changes, according to the relevant guidelines established by the Executive Board (EB48-§73)?	VVM	197	N/A		OK
g Was any change identified close to the boundary of the project activity but outside it?	VVM	197	There was not any change identified close to the boundary of the project activity. Verified.	OK	OK
h If yes, which are the potential impacts due to these changes?	VVM	197	N/A		OK
i Was a notification or a request for approval of changes from the project activity as described in the registered PDD submitted prior to the conclusion of the verification/certification for the corresponding?	VVM	197	Any notification or a request was not described. The information has been provided in section B.2, B.3 and B.4.	OK	OK
<b>3 Compliance of the monitoring plan with the monitoring methodology</b>					



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
a Is the validated monitoring plan in accordance with the approved methodology applied by the proposed CDM project activity?	VVM	200	Yes, the validated monitoring plan is in accordance with the approved methodology. In accordance with the approved methodology ACM0002 Ver.07, EG <sub>y</sub> and FC <sub>diesel</sub> are to be monitored as defined in the project PDD Ver.06.	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 monitoring period under verification, for approval by the CDM Executive Board)	VVM	201	N/A	OK	OK
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 monitoring aspects of the project activity that are not specified in the methodology.	OK	OK
<b>4 Compliance of monitoring with the monitoring plan</b>					
a Have the monitoring plan and the applied methodology been properly implemented and followed by the project participants?	VVM	205	Yes, the monitoring plan applied and applied methodology have been implemented properly. Electricity supplied by the project, diesel consumption of the auxiliary generator, employment quantity, employment job quality and water quality are inlined with registered PDD. Electricity generation and diesel consumption have been given in this monitoring report. PMUM and TEIAS records, invoice of purchased diesel, training documents, local employees social security records, employee payrolles were provided to DOE	OK	OK



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			during site visit.		


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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
b Have the previous monitoring reports been reviewed?	VVM	205	Yes. The previous monitoring reports been rewied.	OK	OK
c Where applicable, has the impact of revision in the monitoirng plan on the current verification been reviewed ?	VVM	205	N/A	OK	OK
d Does the registered/approved monitoring plan have any description of an illustration to calculate net electricity supplied to the grid by the project activity ?	VVM	205	Net electicity values are given in table-3. Please provide April PMUM records and TEIAS reading.  PMUM and TEİAŞ reading protocols for April 2012 have been provided.	CAR01	OK
e If yes to (d) above, has the verification team verified /confirmed the validity of such illustration with supporting documents ?	VVM	205	TEİAŞ meter reading documents checked during site visit. Please correct the reading of electricity supplied to the grid for December 2011.	CL04	OK
f 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>Please see below:</i>		
i Project emission parameters?	VVM	205	Project emissions are negligible regarding to the registered PDD and approved methodology. During site visit diesel consumption value has been checked and it is found that 390,63 liter diesel has been used. The value is under %1 of total emission reductions.	OK	OK
ii Baseline emission parameters?	VVM	205	Baseline emission has been calculated through the electricity generation value and the approved emission factor. Please provide the generation values for April 2012.	CAR01	OK



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			PMUM and TEİAŞ reading protocols for April 2012 have been provided.		


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CHECKLIST QUESTION		Ref.	§	COMMENTS	Draft Concl	Final Concl
iii	Leakage parameters?	VVM	205	N/A	OK	OK
iv	Validation of entire procedure of apportioning, if applicable	VVM	205	N/A	OK	OK
v	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 responsibilities and authorities for monitoring and reporting are in accordance with the responsibilities and authorities stated in the monitoring plan.	OK	OK
g	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	This check list question will be answered after CL03 is closed.  The measuring equipments are under TEIAS responsibility. Dates of the initial calibration are 12/08/2009. The calibrations are valid for 10 years.	CL03	OK
i	Are monitoring results consistently recorded as per approved frequency?	VVM	205	Yes. Recording frequency is continuous measurement and monthly reading. Records were checked during site visit.	OK	OK
ii	Have quality assurance and quality control procedures been applied in accordance with the monitoring plan monitoring plan?	VVM	205	QA/QC procedures have been applied in accordance with monitoring plan. Project participant and TEIAS perform readings, and TEIAS readings are performed via OSOS system remotely.	OK	OK
iii	Has the verification team confirmed whether the applicability and correct implementation of any procedure that replaces direct calibration of meters, and any procedure that leads to calculation of parameters used in the ER determination ?	VVM	205	There are no any procedure that replace direct calibration of meters and that leads to calculation of parameters used in the ER determination.	OK	OK
<b>5 Assessment of data and calculation of</b>						



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
<b><i>greenhouse gas emission reductions</i></b>					
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, the complete set from 01/05/2011 and 01/03/2012 has been provided. Please also provide the records for April 2012.  PMUM and TEİAŞ reading protocols for April 2012 have been provided.	CAR01	OK
b Has information provided in the monitoring report been cross-checked with other sources such as plant log books, inventories, purchase records, laboratory analysis?	VVM	208	TEİAŞ reading were crossed checked with PMUM records. Invoice of purchased diesel, training documents, local employees social security records, employee payrolles were provided to DOE during site visit.	OK	OK
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	Yes, The calculations have been carried out in accordance with provisions of the monitoring plan and applied methodology.	OK	OK
d Have any assumptions used in emission calculations been justified?	VVM	208	The emission and emission reduction calculations are based on the data measured using calibrated meters of adequate accuracy. Apart from the ex-ante emissions factor, no other assumption is used in these calculations, which is in line with the monitoring methodology. The emission factor has been taken from the approved PDD and it is defined as 0,644. No assumptions have been used.	OK	OK



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
e Have appropriate emission factors, IPCC default values and other reference values been correctly applied?	VVM	208	Yes, correct emission factors have been used. The emission factor for electricity has been taken from the approved PDD and it is defined as 0,644 tCO <sub>2</sub> -eq/MWh. The emission factor for diesel has been taken from the approved PDD and it is defined as 0,074 tCO <sub>2</sub> -eq/GJ. Diesel emission factor is derived from IPCC 2006 Table 2.2 Volume 2.	OK	OK



## VERIFICATION REPORT

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

<b>Draft report clarifications and corrective action requests by verification team</b>	<b>Reference to checklist question in Periodic Verification Checklist</b>	<b>Summary of project owner response</b>	<b>Verification team conclusion</b>
<p>CAR01 The amount of total emission reductions in this monitoring period has been given in section A.1. Please provide April PMUM and TEIAS reading protocols.</p>	Table 1;1.b.iv	The Monitoring Report has been updated in accordance with April data. TEIAS reading protocols have been submitted to the DOE.	<p>Review 1 PMUM and TEIAS reading protocols for April 2012 have been provided. The total emission reduction achieved during the third monitoring period has been given as <b>45,404</b> tCO<sub>2</sub>-eq under section A1 in the MR ver02.</p> <p>The corrective action request is closed.</p>
<p>CAR02 A comparison of actual emission reductions in this monitoring period with the estimates in the CDM-PDD has been included in this monitoring report under section E5. The ex-ante estimated yearly volume in PDD is different from the value in this monitoring report. Please correct this value. The value in PDD is 46,501 tCO<sub>2</sub>-eq, the value in the monitoring report is 63,417 tCO<sub>2</sub>-eq.</p>	Table 1;s.a	The value has been corrected to 46,501 under section E.5 of the monitoring report.	<p>Review 1: The correction has been done. Values applied in ex-ante calculation of the registered CDM-PDD has been defined as 46,501 under section E.5 and E.6 in the MR rev02. The corrective action request is closed.</p>
<p>CL01 The complete information of the location of the project activity has been given in section A.3.</p>	Table 1;1.c.a	Turkey has been added to section A.3.	<p>Review 1: Turkey has been added to section A.3 Location of the project activity.</p>



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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
Please add country information.			The clarification request is closed.
<b>CL02</b> The first crediting period has been defined in Section A.7 as “from 10/07/2008 to 09/07/2015”. Commissioning date given Table 1 in this monitoring report is 10/07/2009. Please clarify this difference.	Table 1;1.g.a	The first crediting period is in between 10/07/2009 to 09/07/2016. The date under section A.7 has been corrected and the MR has been revised accordingly.	Review 1: The first crediting period has been given under section A.7 as “The first crediting period is from 10/07/2009 to 09/07/2016.” The clarification request is closed.
<b>CL03</b> Description of the equipment used to monitor each parameter has been provided under section D2, Please add accuracy class, frequency and validity information for calibration.	Table 1;1.n.ii	The Monitoring Report has been revised accordingly.	Review 1: The technical Brochure of ACE SL7000 electricity meter has been provided. The accuracy information of these meters has been given as “0,5s”. The meters used are compliant with IEC standards. Calibration period has been defined as 10 years. The clarification request is closed.
<b>CL04</b> TEIAŞ meter reading documents checked during site visit. Please correct the reading of electricity supplied to the grid for December 2011.	Table 1; 4.e	December data has been corrected accordingly.	Review 1: December meter reading has been corrected as 6.905.190 according to TEIAŞ reading protocol. The clarification request is closed.
<b>CL05</b> Four training given are out of this crediting period. Please remove them from this		Four trainings provided outside the monitoring period have been excluded from the Monitoring	Review 1: Yes. The trainings given out of this crediting period have been removed



VERIFICATION REPORT

<b>Draft report clarifications and corrective action requests by verification team</b>	<b>Reference to checklist question in Periodic Verification Checklist</b>	<b>Summary of project owner response</b>	<b>Verification team conclusion</b>
monitoring report.		Report.	from the MR ver02. The clarification is closed.