GOLD STANDARD VERIFICATION/CERTIFICATION REPORT

Final

"Çataltepe 16 MW Wind Farm Project, Turkey"
in
Turkey

Monitoring period: 19/04/2011 to 31/07/2012

Report N°2012-TQ-07-MD

Revision N°1.1

GOLD STANDARD VERIFICATION/CERTIFICATION REPORT

Project Title:	Country:	Estimated VERs (tCO2e):
Çataltepe 16 MW Wind Farm Project, Turkey	Turkey	39,618 annual average
GS Registration Reference N°:	**Monitoring period:**	**Certified VERs (tCO2e):**
574	19/04/2011 to 31/07/2012	35,869
Client:	**Client contact:**	
Alize Enerji Elektrik Uretim A.S.	Salih UYSAL	
Report No.:	**Revision:**	**Date of this report:**
2012-TQ-07-MD	1.1	27/09/2012
Approved by: Roberto Cavanna		**Date of approval:** 28/09/2012

Methodology

Number:	Version:	Title:	Scale	SS(s):
ACM0002	07 of 30/11/2007	Consolidated baseline methodology for grid-connected electricity from renewable sources	Large	1

RINA Services S.p.A. (RINA), commissioned by Alize Enerji Elektrik Uretim A.S., has verified the greenhouse gas emission reductions reported for the project activity "Çataltepe 16 MW Wind Farm Project, Turkey" in Turkey, GS Registration Reference N° 574, for the period 19/04/2011 to 31/07/2012, with regard to the relevant requirements for CDM and GS activities. The verification shall ensure that reported emission reductions are complete and accurate in accordance with applicable GS VER requirements, which refer to CDM rules, in order to be certified.

The project was validated by SGS United Kingdom Limited (validation report N° CCP.Val0356 issued on revision 05 of 17/03/2011) and it was registered on 15/04/2011 under the GS registration reference N° 574.

The GHG emission reductions were calculated on the basis of the approved methodology ACM0002, version 07, "Consolidated baseline methodology for grid-connected electricity from renewable sources" of 30/11/2007 and the monitoring plan included in the registered Project Design Document, version 10 of 14/03/2011.

In conclusion, it is RINA's opinion that the project activity "Çataltepe 16 MW Wind Farm Project, Turkey", in "Turkey", as described in the Monitoring Report version 1.2 of 06/09/2012, meets all relevant requirements for GS and CDM activities and all relevant host Party criteria and correctly applies the baseline and monitoring methodology "ACM0002", "Consolidated baseline methodology for grid-connected electricity from renewable sources", version 07 of 30/11/2007. Hence, RINA is able to certify that the emission reductions from the project during the monitoring period 19/04/2011 to 31/07/2012 amount to 35,869 tCO_2e.

Baseline Emissions	35,869	tCO_2e
Project Emissions	0	tCO_2e
Leakage	0	tCO_2e
Net GHG emission reductions/removal	35,869	tCO_2e

Work carried out by:
Isil TIMUROGLU

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

☐ Strictly confidential

☐ Unrestricted distribution

Work verified by:
Laura Severino

Keywords:
Climate Change, Kyoto Protocol, Verification, Gold Standard

GOLD STANDARD VERIFICATION/CERTIFICATION REPORT

Abbreviations

AF	Adjustment Factor
BE	Baseline Emissions
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CDM M&P	Modalities and Procedures CDM
CEF	Carbon Emission Factor
CH_4	Methane
CR	Clarification Request
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
CRT	Coordination and Technical Control Staff
DCI	Certification Division of RINA Services Spa
DNA	Designated National Authority
DOE	Designated Operational Entity
EB	Executive Board
ER	Emission Reductions
GHG(s)	Greenhouse gas(es)
GS	Gold Standard
GWP	Global Warming Potential
IPCC	Intergovernmental Panel on Climate Change
LFG	Landfill gas
LoA	Letter of Approval
MoV	Means of Verification
MP	Monitoring Plan
MR	Monitoring Report
NGO	Non-governmental Organization
ODA	Official Development Assistance
OSOS	Automatic Meter Reading System
PDD	Project Design Document
PE	Project Emission
PMUM	Market Financial Conciliation Center (Piyasa Mali Uzlastirma Merkezi)
PP(s)	Project Participant(s)
Ref.	Document Reference
RINA	RINA Services Spa
SDI	Sustainable Development Indicator
SS(s)	Sectoral Scope(s)
TEIAS	Turkish Electricity Transmission Company (Turkiye Elektrik Iletim A.S.)
UEDAS	Uludag Electricity Transmission Company (Uludag Elektrik Dagitim A.S.)
UNFCCC	United Nations Framework Convention on Climate Change
VERs	Verified Emission Reduction(s)
VVM	Validation and Verification Manual

GOLD STANDARD VERIFICATION/CERTIFICATION REPORT

Table of Contents Page

GOLD STANDARD VERIFICATION/CERTIFICATION REPORT

1 INTRODUCTION

Alize Enerji Elektrik Uretim A.S. has commissioned RINA to carry out the verification and certification of emission reductions reported for the registered “Çataltepe 16 MW Wind Farm Project, Turkey” project in Turkey, GS Registration Reference N°574 , for the period 19/04/2011 to 31/07/2012.

This report summarizes the findings of the verification of the project, performed on the basis of GS VER requirements, which refer to CDM rules, as well as criteria given to provide for consistent project operations, monitoring and reporting.

1.1 Objective

The objective of the verification is to have an independent review ex post determination by a Designated Operational Entity (DOE) of the monitored reductions in GHG emissions that have occurred as a result of the registered GS project activity during a defined monitoring period and to monitor the impact of project activity on sustainable development, throughout the monitoring of the non-neutral Sustainable Development Indicators and moreover to monitor all the mitigation and compensation measures put in place. Certification is the written assurance by the DOE that, during a specific time period, a proposed GS project activity achieved the reductions in anthropogenic emissions by sources of GHGs as verified and that all the defined Sustainable Development Indicators to be monitored have been monitored according to the sustainability monitoring plan and that all the mitigation measures forecast have been correctly and effectively implemented.

The objective of this verification/certification was to verify and certify emission reductions and effective implementation of the monitoring of sustainable development indicators and mitigation measures, reported for the “Çataltepe 16 MW Wind Farm Project, Turkey” project in Turkey for the period 19/04/2011 to 31/07/2012.

1.2 Scope

The verification scope is:

- to verify that actual monitoring systems and procedures are in compliance with the monitoring systems and procedures described in the monitoring plan;
- to evaluate the GHG emission reduction data and express a conclusion with a reasonable level of assurance about whether the reported GHG emission reduction data is free from material misstatement;
- to verify that reported GHG emission data is sufficiently supported by evidence;
- to evaluate whether all the mitigation measures have been effectively put in place according to the monitoring plan and that all the sustainable development indicators have been correctly monitored.

Verification shall ensure that reported emission reductions are complete and accurate in accordance with applicable GS VER requirements, which refer to CDM rules, in order to be certified.

UNFCCC criteria for CDM refer to Article 12 of the Kyoto Protocol, the CDM modalities and procedures, and the subsequent decisions by the CDM Executive Board.

The GS criteria refer to GS requirements, GS Toolkit and supporting annexes.

Verification is not meant to provide any consultancy towards the project participants. However, stated requests for clarifications and/or corrective actions may have provided input for improvement of the monitoring.

2 METHODOLOGY

Verification was conducted using RINA procedures in line with the requirements specified in the GS Requirements, CDM M&P, the latest version of the CDM Validation and Verification Manual, and relevant decisions of the COP/MOP and the CDM EB and applying standard auditing techniques.

The verification consisted of the following three phases:

- Desk review;
- On-site assessment;
- The resolution of outstanding issues and the issuance of the final verification report and certification.

The following sections outline each step in more detail.

2.1 Desk Review

The monitoring report version 01 of 03/05/2012, 1.0 of 28/08/2012 and version 1.2 of 06/09/2012 /2/, the emission reduction calculations provided in the form of a spreadsheet "ER-Calculations-Cataltepe-MR01-20120426-v.1.0" version 01, "ER-Calculations-Cataltepe-MR01-20120828-v.1.1" version 01.1 and "ER-Calculations-Cataltepe-MR01-20120906" version 1.2 /8/, the approved baseline and monitoring methodology ACM0002 version 07 of 30/11/2007 /6/ and all the documentation provided to support the monitoring period /01 – 42/ were assessed as part of the verification. In addition, the Project Design Document (PDD) /1/, in particular as regards the baseline estimations and the monitoring plan, and the validation report, revision 05 of 17/03/2011 /7/ for the project, were reviewed.

The following table lists the documentation that was reviewed during the verification.

/1/	MAVI Surdurulebilir Kalkinma Proje ve Danismanlik Hizmetleri Ltd. Sti.: PDD for "Çataltepe 16 MW Wind Farm Project, Turkey" in Turkey, version 10 of 14/03/2011
/2/	MAVI Surdurulebilir Kalkinma Proje ve Danismanlik Hizmetleri Ltd. Sti.: Monitoring report for "Çataltepe 16 MW Wind Farm Project, Turkey" in Turkey, version 01 of 03/05/2012 related to the monitoring period 19/04/2011 to 31/03/2012 MAVI Surdurulebilir Kalkinma Proje ve Danismanlik Hizmetleri Ltd. Sti.: Monitoring report for "Çataltepe 16 MW Wind Farm Project, Turkey" in Turkey, version 1.0 of 28/08/2012 related to the monitoring period 19/04/2011 to 30/06/2012 MAVI Surdurulebilir Kalkinma Proje ve Danismanlik Hizmetleri Ltd. Sti.: Monitoring report for "Çataltepe 16 MW Wind Farm Project, Turkey" in Turkey, version 1.2 of 06/09/2012 related to the monitoring period 19/04/2011 to 31/07/2012
/3/	The Gold Standard: The Gold Standard Validation & Verification Manual for Voluntary Offset Projects of June 2007
/4/	The Gold Standard: Voluntary Emission Reductions (VERs) Manual for Project Developers, of May 2006
/5/	CDM Executive Board: Clean Development Mechanism Validation and Verification Standard, version 02.0 of 25/11/2011
/6/	CDM Executive Board: Baseline and monitoring methodology "ACM0002", "Consolidated baseline methodology for grid-connected electricity from renewable sources", version 07 of 30/11/2007
/7/	SGS United Kingdom Limited: Validation Report for "Çataltepe 16 MW Wind Farm Project, Turkey" No. CCP.Val0356 revision 05 of 17/03/2011
/8/	MAVI Surdurulebilir Kalkinma Proje ve Danismanlik Hizmetleri Ltd. Sti.: Emission Reduction Calculation Spreadsheet "ER-Calculations-Cataltepe-MR01-20120426-v.1.0" version 01, submitted on 07/05/2012 related to the monitoring period from 19/04/2011 to 31/03/2012 MAVI Surdurulebilir Kalkinma Proje ve Danismanlik Hizmetleri Ltd. Sti.: Emission Reduction Calculation Spreadsheet "ER-Calculations-Cataltepe-MR01-20120828-v.1.1" version 1.1, submitted on 28/08/2012 related to the monitoring period from 19/04/2011 to 30/06/2012

GOLD STANDARD VERIFICATION/CERTIFICATION REPORT

	MAVI Surdurulebilir Kalkinma Proje ve Danismanlik Hizmetleri Ltd. Sti.: Emission Reduction Calculation Spreadsheet "ER-Calculations-Cataltepe-MR01-20120906" version 1.2, submitted on 06/09/2012 related to the monitoring period from 19/04/2011 to 31/07/2012
/9/	CDM Executive Board: Guidelines for Completing the Monitoring Report Form, version 02.0 of 02/03/2012
/10/	CDM Executive Board: Methodological Tool "Tool to calculate the emission factor for an electricity system", version 01.1 of 29/07/2008
/11/	Uludag Electricity Transmission Company (UEDAS): First Index Protocol of 22/04/2011
/12/	Aktif Enerji Insaat San. Tic. Ltd. Sti.: Technical Specification of Actaris SL761 Meter Serial Number 53064334 of 25/03/2010
/13/	Aktif Enerji Insaat San. Tic. Ltd. Sti.: Technical Specification of Actaris SL761 Meter Serial Number 53064335 of 25/03/2010
/14/	Itron France: Initial Calibration Record of Actaris SL761 Meter Serial Number 53064334 and 53064335 of 22/01/2010
/15/	Uludag Electricity Transmission Company (UEDAS): Electricity Meters Sealing Protocol of 03/05/2011
/16/	Energy Market Regulatory Authority: Generation License numbered EU/1167-2/835 of 18/04/2007
/17/	The Ministry of Energy and Natural Resources: Temporary Acceptance Protocol of 19/04/2011
/18/	Market Financial Settlement Center (PMUM): PMUM Registration Letter of 25/04/2011
/19/	Turkish Electricity Transmission Company (TEIAS) Monthly Meter Reading Protocol April 2011 of 01/05/2011 Monthly Meter Reading Protocol May 2011 of 01/06/2011 Monthly Meter Reading Protocol June 2011 of 30/06/2011 Monthly Meter Reading Protocol July 2011 of 31/07/2011 Monthly Meter Reading Protocol August 2011 of 31/08/2011 Monthly Meter Reading Protocol September 2011 of 30/09/2011 Monthly Meter Reading Protocol October 2011 of 31/10/2011 Monthly Meter Reading Protocol November 2011 of 30/11/2011 Monthly Meter Reading Protocol December 2011 of 31/12/2012 Monthly Meter Reading Protocol January 2012 of 31/01/2012 Monthly Meter Reading Protocol February 2012 of 29/02/2012 Monthly Meter Reading Protocol March 2012 of 31/03/2012 Monthly Meter Reading Protocol April 2012 of 30/04/2012 Monthly Meter Reading Protocol May 2012 of 31/05/2012 Monthly Meter Reading Protocol June 2012 of 30/06/2012 Monthly Meter Reading Protocol July 2012 of 31/07/2012
/20/	Market Financial Conciliation Center (PMUM): All Monthly Electricity Records with in the Monitoring Period (from 19/04/2011 to 31/07/2012)
/21/	Alize Enerji Elektrik Uretim A.S.: Electricity Generation Invoices Electricity Generation Invoice April 2011 of 30/04/2011 Electricity Generation Invoice May 2011 of 31/05/2011 Electricity Generation Invoice June 2011 of 30/06/2011 Electricity Generation Invoice July 2011 of 31/07/2011 Electricity Generation Invoice August 2011 of 31/08/2011 Electricity Generation Invoice September 2011 of 30/09/2011 Electricity Generation Invoice October 2011 of 31/10/2011

	Electricity Generation Invoice November 2011 of 30/11/2011 Electricity Generation Invoice December 2011 of 17/01/2012 Electricity Generation Invoice January 2012 of 17/02/2012 Electricity Generation Invoice February 2012 of 21/03/2012 Electricity Generation Invoice March 2012 of 18/04/2012 Electricity Generation Invoice April 2011 of 18/05/2011 Electricity Generation Invoice May 2011 of 18/06/2011 Electricity Generation Invoice June 2011 of 19/07/2011 Electricity Generation Invoice July 2011 of 18/08/2011
/22/	District Directorate of Civil Registry: Residence Certificates of all Employees
/23/	Social Security Institution: Payroll Sheets of all Employees for each month during the monitoring period from 19/04/2011 to 31/07/2012
/24/	Social Security Institution: Statement of Employments for all Employees
/25/	Ekolab Environmental Analysis Laboratory: Noise Emission Report of April 2011
/26/	Enercon: Wind Turbines Specifications
/27/	Cevat Salin Yavuz Petrol: Diesel Oil Invoices Diesel Oil Invoice of 19/04/2011 (14.4 liter) Diesel Oil Invoice of 20/05/2011 (62.32 liter) Diesel Oil Invoice of 23/05/2011 (42.49 liter) Diesel Oil Invoice of 30/06/2011 (41.44 liter) Diesel Oil Invoice of 08/05/2012 (26.46 liter) Diesel Oil Invoice of 02/06/2012 (53.05 liter) Diesel Oil Invoice of 03/06/2012 (53.05 liter) Diesel Oil Invoice of 04/06/2012 (26.53 liter) Diesel Oil Invoice of 06/06/2012 (27.10 liter)
/28/	Ema Elektrik Makina Arastirma Ticaret A.S.: Block Diagram of Electrcity Circuit of 13/04/2011
/29/	Ada Engineering and Planning Ltd. Sti.: Technical Drawing, Turbine Coordinates
/30/	Enercon Servis Ltd. Sti.: Emergency Plan
/31/	Enercon Servis Ltd. Sti.: Occupational Health and Safety Training, 09-11/08/2011, Certificates issued to Edip Erdogan, Birsat Al, Emre Efe
/32/	Enercon Servis Ltd. Sti.: Occupational Health and Safety Training, 20/04/2011, Certificates issued to Edip Erdogan, Birsat Al, Emre Efe
/33/	Enercon Servis Ltd. Sti.: Special Electrical Training, 30/05/2011-03/06/2011, Certificates issued to Edip Erdogan, Birsat Al, Emre Efe
/34/	Enercon Servis Ltd. Sti.: Wind Farm Management Training, 11/04/2011, Certificates issued to Birsat Al, Emre Efe
/35/	Demirer Enerji Uretim San. ve Tic. A.S.: Protection and Relay 154 kV Systems Training, 23/09/2011, Certificates issued to Engin Safak Demirer Enerji Uretim San. ve Tic. A.S.: Protection and Relay 154 kV Systems Training, 11/04/2012, Certificates issued to Engin Safak
/36/	Turkish Red Crescent: First Aid Training, 14-15/06/2011, Certificates issued to Birsat Al
/37/	The Ministry of Trade and Industry: Regulation of Metering and Testing of Metering Systems of 24/07/1994
/38/	Energy Market Regulatory Authority: Communiqué for Measurement Devices used in the Electricity Market of 22/03/2003
/39/	Australian Government, National Health and Medical Research Council: Wind Turbines and Health of July 2010

/40/	Astek Kaplama ve Asfalt A.S.: Delivery Protocol of Road Construction of 29/06/2011
/41/	Astek Kaplama ve Asfalt A.S.: Road Construction Invoice No A009207 of 12/07/2011
/42/	Ornithological Report for Çataltepe Wind Farm Project 16 MW Havran, Balikesir, Turkey prepared by Kerem Ali Boyla, MSc Ecologist, Ornithologist of May 2012

2.2 On-site assessment

On 24/05/2012, RINA visited the wind power plant located in Havran district, Balikesir province of Turkey. During the on-site assessment of the project, all the equipments and the systems were accessible. RINA assessed the implementation and operation of the proposed project activity, reviewed the information flows for generating, aggregating and reporting the monitoring parameters, interviewed key personnel of the plant to confirm the operational and data collection procedures, cross-checked between information provided in the monitoring report and data plant, checked the monitoring equipment including calibration performance, reviewed calculations and assumptions made in determining the GHG data and emission reductions, checked the quality control and quality assurance procedures in place to prevent or identify and correct any errors or omissions in the reported monitoring parameters, checked the correct and effective implementation of the mitigation measures foreseen in the sustainability monitoring plan.

The wind farm engineer was interviewed during the site visit. To see how the monitoring procedures were implemented, the whole process was explained to the verification team during the site visit on 24/05/2012. During the site visit, the employees were interviewed about the trainings, working conditions and the bird death. Also the villagers were interviewed about local employment, bird death, road condition and noise pollution caused by the project activity. The villagers confirmed that they have not observed any bird deaths and no complaints were received regarding noise.

The carbon consultant, was interviewed about the monitoring report and related parameters on 30/05/2012. Whole process related emission reduction calculation and sustainability monitoring plan was explained.

The key personnel interviewed and the main topics of the interviews are summarized in the table below.

	Date	**Name and Role**	**Organization**	**Topic**
/a/	30/05/2012	Mr. Yagmur KARABULUT Carbon Consultant	MAVI Surdurulebilir Kalkinma Proje ve Danismanlik Hizmetleri Ltd. Sti.	Monitoring plan Monitoring methodology Monitoring data Implementation status of the project Monitoring equipments and operation Calibration certificates Emission Reductions calculation Monitoring of Gold Standard Parameters
/b/	24/05/2012	Mr. Edip ERDOGAN Wind Farm Engineer	Enercon Servis Ltd. Sti.	
/c/	24/05/2012	Mr. Engin SAFAK Service Technician	Alize Enerji Elektrik Uretim A.S.	
/d/	24/05/2012	Mr. Mustafa CAKIRCI	Villager	Benefit of the project to the village Local Employment Project Effects Noise Emissions Bird Migration Road Conditions
/e/	24/05/2012	Mr. Emin GEZGIN	Villager	
/f/	24/05/2012	Mr. Hasan OZYURT	Villager	
/g/	24/05/2012	Mr. Mehmet Ali DOGDU	Villager	
/h/	24/05/2012	Mr. Faruk BASKURT	Villager	

2.3 Resolution of outstanding issues

The objective of this phase of the verification is to resolve any outstanding issues, which need to be clarified for RINA's positive conclusion on the monitoring report and emission reductions.

To guarantee transparency a verification protocol has been customized for the project. The protocol shows in a transparent manner the requirements, means of verification and the results from verifying the identified criteria. The verification protocol consists of three tables; the different columns in these tables are described in the figure below (see Figure 1).The completed verification protocol is enclosed in Appendix A to this report.

A corrective action request (CAR) is raised if one of the following occurs:

- Non-conformities with the monitoring plan or methodology are found in monitoring and reporting, or if the evidence provided to prove conformity is insufficient;
- Mistakes have been made in applying assumptions, data or calculations of emission reductions that will impair the estimate of emission reductions;
- Issues identified in a FAR during validation to be verified during verification have not been resolved by the project participants.

A clarification request (CR) is raised if information is insufficient or not clear enough to determine whether the applicable GS VER requirements, which refer to CDM rules, have been met.

CARs, CRs identified are included in the verification protocol in Appendix A of this report.

Figure 1 Gold Standard Verification protocol tables

Verification Protocol, Table 1 - Requirement checklist					
Checklist Question	**Ref.**	**MoV**	**Comments**	**Draft Conclusion**	**Final Conclusion**
Checklist questions organized in seven different sections.	Makes reference to documents where the answer to the checklist question or item is found.	Explain how conformance with the checklist question is investigated. Examples are document review (DR), interview or any other follow-up actions (I), cross checking (CC) with available information relating to projects, (N/A) means not applicable.	The discussion on how the conclusion is arrived at and the conclusion on the compliance with checklist question so far.	For CAR, CR and FAR see the definitions above.	OK is used if the information and evidence provided is adequate to demonstrate compliance with GS VER requirements, which refer to CDM rules.

Verification Protocol, Table 2: Resolution of Corrective Action Requests and Clarification			
Corrective action requests and/or clarification requests	**Reference to Table 1**	**Response by project participants**	**Verification Conclusion**
The CAR and/or CRs raised in table 1 are repeated here.	Reference to the checklist question number in Table 1 where the CAR or CR is explained.	The responses given by the project participants to address the CARs and/or CRs.	The verification team's assessment and final conclusion of the CARs and/or CRs.

Verification Protocol, Table 3 - Forward Action Requests		
Forward action request	**Reference to Table 1**	**Response by project participants Verification Conclusion**
The FAR raised in table 1 is repeated here.	Reference to the checklist question number in Table 1 where the FAR is explained.	Response by the project participants on how forward action request will be addressed.

2.4 Internal quality control

All the revisions of the verification report, before being submitted to the client, were subjected to an independent internal technical review to confirm that all verification activities had been completed according to the pertinent RINA instructions.

The technical review was performed by a technical reviewer(s) qualified in accordance with RINA's qualification scheme for CDM/GS validation and verification.

2.5 Verification team and the technical reviewer(s)

The verification team and the technical reviewers consist of the following personnel:

Role/Qualification	Last Name	First Name	Country
GS Team Leader – GS Verifier – Technical Expert	Timuroglu	Isil	Turkey
Technical Reviewer	Valoroso	Rita	Italy
Technical Reviewer in Training	Alfieri	Felice	Italy

3 VERIFICATION FINDINGS

The findings of the verification related to the monitoring period from 19/04/2011 to 31/07/2012 as documented and described in the monitoring report version 01 of 03/05/2012, version 1.0 of 28/08/2012 and version 1.2 of 06/09/2012 /2/ are stated in the following sections.

The verification requirements, the means of verification and the results from verifying the identified criteria are documented in more detail in the verification protocol in Appendix A.

3.1 Description of the project activity

The main information of the project is summarized in the table below.

Project Participant(s)	Alize Enerji Elektrik Uretim A.S. / Mavi Consultants		
Project Title	Çataltepe 16 MW Wind Farm Project, Turkey		
Location of the project	Havran District, Balikesir Province of Turkey		
Methodology(ies)	ACM0002", "Consolidated baseline methodology for grid-connected electricity from renewable sources", version 07 of 30/11/2007 /6/		
Sectoral Scope(s)	1	**RINA's Technical Area(s)**	1.2
Registered PDD	Revision 05 of 17/03/2011		
Date of registration	23/09/2009	**GS Registration Reference N°**	574
Starting date of the crediting period	19/04/2011 (as confirmed through the Temporary Acceptance Protocol /17/ and PMUM Registration Letter /18/)		
Project's crediting period	19/04/2011 to 18/04/2018		
Monitoring period	19/04/2011 to 31/07/2012 (both days included)		
Project documentation link	https://gs2.apx.com/mymodule/ProjectDoc/EditProjectDoc.asp?id1=574		

The project activity is a wind power plant consists of 8 wind turbines, each with a 2 MW capacity and making the total installed capacity of 16 MW. The generated electricity is fed to the national grid. The estimated net electricity production is 62,414 MWh/year and the annual emission reductions are estimated to be 39,618 tCO_2e per year. During the 1st and initial monitoring period of 19/04/2011 to 31/07/2012 (both days included) the net electricity supplied to the grid amount to 56,486.807 MWh and the emission reductions to 35,869 tCO_2e.

The project activity aims to reduce the greenhouse gas emissions in Turkey by replacing fossil fuel power generation and contribute to the development of the wind energy sector in Turkey, as well as aims to support the local economy by creating local employment and providing equipment locally.

3.2 Remaining issues (FARs) from previous validation or verification

During the validation, 1 FAR has been raised by the DOE and 2 FARs have been raised by the Gold Standard.

FAR 1, DOE: Noise emission levels for housing zones (morning-afternoon-night of 65, 60, 55 dB(A)) shall be checked at periods of morning-afternoon-night and shall be verified during first verification.

The noise emission is monitored by interviewing local people and noise emission report. The villagers were interviewed during the site visit and no complaints were received about the noise. Also, Noise Emission Report was prepared by an accredited third party laboratory. The noise emission of the project activity is under the legal limits as per the Noise Emission Report /25/.

FAR 1, Gold Standard: PP shall please monitor the effect of the project on bird migration and local birds during the first monitoring period and the DOE shall please check results during the first verification and recommend continued monitoring if needed.

A bird migration report is prepared by a third party. The bird migration report prepared by an Ornithologist dated May 2012 is submitted to the verification team /42/. As per the report, the project activity does not have any negative impact on the birds.

FAR 2, Gold Standard: Noise emission levels for housing zones (morning-afternoon-night of 65, 60, 55 dB(A)) shall be checked at periods of morning-afternoon-night and shall be verified during first verification.

The noise emission is monitored by interviewing local people and noise emission report. The villagers were interviewed during the site visit and no complaints were received about the noise. Also, Noise Emission Report was prepared by an accredited third party laboratory. The noise emission of the project activity is under the legal limits as per the Noise Emission Report /25/.

3.3 Project implementation

It was verified during the site visit conducted on 24/05/2012 that the proposed project activity has been implemented and it is in operation in accordance with the project activity described in the registered PDD /1/. The starting date of operation and crediting period is 19/04/2011 as confirmed through the Temporary Acceptance Protocol /17/ and PMUM Registration Letter /18/.

The project activity consists of 8 wind turbines, each with a 2 MW capacity and making the total installed capacity of 16 MW. Technical details of the wind turbines comply with the registered PDD /1/ as verified through the Wind Turbines Specifications obtained from Enercon /26/ and on-site observation. It is confirmed during the site visit that all installed turbines are Enercon type E82 turbine with an output of 2 MW. The project boundary in the registered PDD /1/ is in line with the actual project boundary. Generated electricity is supplied to the grid at the Edremit II Transformer Station with a 34.5 kV transmission line as per the generation license /16/. The geographic coordinates of the turbines were verified through the technical drawing includes the turbine coordinates /29/. The coordinates are in line with the coordinates given in the monitoring report /2/, registered PDD /1/ and generation license /16/.

No change in the registered PDD /1/ has been occurred during the initial and first monitoring period of 19/04/2011 to 31/07/2012.

Based on the on-site inspection and checking the above documents, RINA confirms that the project activity has been implemented and it is in operation as described above in accordance with the project activity in the registered PDD /1/.

3.4 Methodology for determining Emission Reductions

According to the applied methodology "ACM0002", "Consolidated baseline methodology for grid-connected electricity from renewable sources", version 07 of 30/11/2007 /6/, the emission reductions have been calculated based on the following formula:

$ERy = BEy – PEy – Ly$

Where:

BEy = Baseline emissions in year y (tCO_2e/yr)

PEy = Project emissions in year y (tCO_2e/yr)

Ly = Leakage emissions in year y (tCO_2e/yr)

The baseline emissions include the CO_2 emissions from electricity generation in fossil fuel fired power plants that are displaced due to the project activity, multiplying the electricity supplied to the grid (MWh) with the combined margin CO_2 emission factor for grid connected power generation in year.

BEy = EGy x EFy

Where:

EGy = Net electricity supplied to the grid (MWh)

EFy = Combined margin grid emission factor (tCO_2/MWh)

The project emissions are assumed to be zero as per the ACM0002 version 07 /6/ since the project is a renewable energy project as defined in the registered PDD /1/ and validation report /7/. The leakage emissions are assumed to be zero as per the ACM0002 version 07 /6/ as defined in the registered PDD /1/. Since the project and leakage emissions are zero, the emission reduction equals to baseline emissions.

3.4.1 Compliance of the monitoring plan with the monitoring methodology

The registered project activity applies the approved baseline and monitoring methodology ACM0002 version 07 /6/. RINA confirms that the monitoring plan in the registered PDD /1/ complies with the applied CDM methodology and with the sustainability indicators established by the Appendix D of the Gold Standard requirements /4/.

3.4.2 Deviation in GHG emission reduction

Additionality assessment has been performed according to the "Tool for the demonstration and assessment of additionality" approved by UNFCCC in the registered PDD /1/. The baseline scenario selection and the calculation of emission reductions have been carried out in a conservative manner. An approved CDM methodology, ACM0002 version 07 /6/ has been applied in order to determine the baseline scenario and calculate emission reductions.

3.4.3 Compliance of monitoring with monitoring plan

The monitoring plan presented in the monitoring report version 1.2 of 06/09/2012 for the period of 19/04/2011 to 31/07/2012 (both days included) /2/ complies with the monitoring plan in the registered PDD /1/.

The only monitoring parameter is net electricity generation supplied by the project activity to the grid as per the registered monitoring plan presented in the registered PDD /1/. The parameter is monitored continuously by two electricity meters that are located at the project activity. Two electricity meters are installed at the project site. The main meter is ACTARIS SL761 with serial number 53064334 and the

backup meter is ACTARIS SL761 with serial number 53064335. The meters have the accuracy of 0.5s as confirmed through the test report and technical specification of the meters /11/ /12/ /13/ /14/. The accuracy class of the meters complies with the "Communiqué for Measurement Devices used in the Electricity Market" /38/. The electricity meters are sealed by TEIAS as confirmed during the site visit and sealing protocol /15/. TEIAS is responsible for calibration and maintenance of the devices as per the registered PDD /1/. The project owner has no control on the meters since the meters are sealed by the TEIAS as confirmed during the site visit and sealing protocol /15/. If any major discrepancy occurs between the two meters, TEIAS performs necessary calibration. The calibration records of the meters were checked /11/ /14/. The meters were calibrated by the supplier on 22/01/2010 as confirmed through the initial calibration record /14/. Also, the meters were tested by the electricity transmission company at the project site on 22/04/2011 after the meters were installed /11/. As per the "'Regulation of Metering and Testing of Metering Systems", the meters shall be calibrated every 10 years. The calibration of meters is deemed appropriate and in compliance with the national regulation /37/. At the last day of each month, the electricity generation supplied to the grid and electricity consumption from the grid is read remotely from the electricity meters by Automatic Meter Reading System (OSOS) by the TEIAS. The plant staff explained the monitoring procedures during the site visit. As confirmed through the observation, the plant personnel records the electricity generation from the meters and fills the monthly reading protocols. These monthly meter reading protocols are sent to TEIAS. In case of difference between the monthly meter reading protocol and OSOS readings, TEIAS read the meters on project site. The net electricity generation is based on the PMUM official records /20/, which is the basis of invoices. The PMUM records are crosschecked with the invoices /21/ and monthly meter reading protocols /19/. The PMUM records and emission reduction calculation spreads sheet /8/ are consistent. During the 1st and initial monitoring period of 19/04/2011 to 31/07/2012 (both days included) the net electricity supplied to the grid amount to 56,486.807 MWh and the emission reductions to 35,869 tCO_2e.

According to the monitoring plan in the registered PDD /1/ and in the monitoring report /2/, the following sustainability parameters are monitored: "Local Employment (number)", "Air Quality", "Diesel Oil Consumption", "Noise Emission", "Health Impact of Electromagnetic Radiation" and "Road Quality". "ID.2 Local Employment (number)" indicator represents an indicator of economic sustainability measuring the number of additional jobs directly created by the project. The project creates jobs in the project area. 7 people are employed by the project activity and all of them are local people as confirmed through the "Payroll Sheets of Social Security Institution" /23/ /24/ and "Residence Certificates" /22/. The "ID.3 Air Quality" indicator is used to evaluate the reduction of SO_2 and NO_X emissions by the project activity. The SO_2 and NO_X emission intensities, which are fixed in the registered PDD /1/, are multiplied with the net electricity generation of the project activity. In parallel to the electricity generation SO_2 emission reduction has been realized as 262.8 tons and NO_X emission reduction has been realized as 56.7 tons during crediting period. The "ID.4 Diesel Oil Consumption" of the project activity is monitored through the invoices. 346.48 liters diesel oil was consumed by the backup generator during the monitoring period as confirmed through the invoices /27/. The "ID.5 Noise Emission" is monitored by interviewing local people and noise emission report. The villagers were interviewed during the site visit and no complaints were received about the noise. Also, Noise Emission Report was prepared by an accredited third party laboratory. The noise emission of the project activity is under the legal limits as per the Noise Emission Report /25/. "ID.6 Health Impact of Electromagnetic Radiation" from wind turbines is assessed in the monitoring report. As per the Wind Turbines and Health report of National Health and Medical Research Council of Australian Government /39/, electrical cables between wind turbine generators to each other and shielding with metal armor effectively eliminate any electromagnetic field. The electromagnetic fields produced by the generation and export of electricity from a wind farm do not pose a threat to public health. The "ID.7 Road Quality" in the project region is monitored. It was confirmed through the protocol signed between project owner and Astek Kaplama ve Asfalt A.S. /40/ and the invoices /41/ that the construction of road in Kocadag Village was completed as of 29/06/2011. The invoices of the Also, it was confirmed via stakeholder interviews that the road was constructed.

The following parameters have been monitored in accordance with the monitoring plan in the registered PDD /1/ and the monitoring report /2/.

3.4.3.1 Data fixed ex-ante

DATA/PARAMETER	Source of data	Reported value for the project period	Assessment/Observation
$EF_{grid,CM,y}$ Baseline emission factor	TEIAS statistics	0.635 tCO_2/MWh	According to the approved methodology ACM0002 version 07, the combined emission factor has been determined using the ex-ante option and so it is not requested to monitor and recalculate the emission factors during the crediting period. The combined emission factor is determined to be 0.635 tCO_2/MWh in the registered PDD /1/ and validation report /7/.

3.4.3.2 Monitored data

DATA/PARAMETER	ID.1 EGy
Data Unit	MWh
Description	Annual electricity amount fed to the grid by the project activity
Source of data to be used	PMUM records
Value data for the monitoring period	56,486.807 MWh
Measuring and reporting frequency; recording procedure	Continuously monitoring and monthly recording
Type of monitoring equipment and its accuracy	The main meter is ACTARIS SL761 with serial number 53064334 and the backup meter is ACTARIS SL761 with serial number 53064335. The meters have the accuracy of 0.5s as confirmed through the test report and technical specification of the meters /11/ /12/ /13/ /14/. The accuracy class of the meters complies with the "Communiqué for Measurement Devices used in the Electricity Market" /38/.
Calibration frequency/interval	TEIAS is responsible for calibration and maintenance of the devices as per the registered PDD /1/. The project owner has no control on the meters since the meters are sealed by the TEIAS as confirmed during the site visit and sealing protocol /15/. If any major discrepancy occurs between the two meters, TEIAS performs necessary calibration. The calibration records of the meters were checked /11/ /14/. The meters were calibrated by the supplier on 22/01/2010 as confirmed through the initial calibration record /14/. Also, the meters were tested by the electricity transmission company at the project site on 22/04/2011 after the meters were installed /11/. As per the "'Regulation of Metering and Testing of Metering Systems", the meters shall be calibrated every 10 years. The calibration of

	meters is deemed appropriate and in compliance with the national regulation /37/. During on-site assessment, it was confirmed that the meters are in place and functions well. During the monitoring period, no brake down has been recorded.
How were the values in the monitoring report verified and cross-checked?	The net electricity generation is based on the PMUM official records /20/, which is the basis of invoices. The PMUM records are crosschecked with the invoices /21/ and monthly meter reading protocols /19/.
Does the data management (from monitoring equipment to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions?	At the last day of each month, the electricity generation supplied to the grid and electricity consumption from the grid is read remotely from the electricity meters by Automatic Meter Reading System (OSOS) by the TEIAS. As confirmed through the observation, the plant personnel records the electricity generation from the meters and fills the monthly reading protocols. These monthly meter reading protocols are sent to TEIAS. In case of difference between the monthly meter reading protocol and OSOS readings, TEIAS read the meters on project site. The electricity generation supplied to the grid and the electricity consumption from the grid is stored by PMUM on the web site. The Project owner has an ID and password to access this data on the web site. The project owner can easily access the data by using this portal.
If only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	All the data were available for the whole monitoring period.

3.4.3.3 Gold Standard sustainability monitored parameters

Data variable	Source of Data	Reported value for the project period
Local Employment (number) (ID. 2)	Residence Certificates Payroll Sheets of Social Security Institution	7 employees (all of them are local employees) - 1 wind farm engineer - 2 service technician - 4 security personnel
Assessment		
The project activity creates local employment as confirmed through the Payroll Sheets of Social Security Institution /23/ /24/ and Residence Certificates /22/.		

GOLD STANDARD VERIFICATION/CERTIFICATION REPORT

Data variable	Source of Data	Reported value for the project period
Air Quality (ID. 3)	Turkey 2007 National Inventory Report Net electricity generation of the project activity	262.8 tons SO_2 56.7 tons NO_X
Assessment		
The SO_2 and NO_X emission intensities, which are fixed in the registered PDD /1/, are multiplied with the net electricity generation of the project activity. In parallel to the electricity generation SO_2 emission reduction has been realized as 262.8 tons and NO_X emission reduction has been realized as 56.7 tons during crediting period.		

Data variable	Source of Data	Reported value for the project period
Diesel Oil Consumption (ID. 4)	Fuel Invoices	346.48 liters
Assessment		
The diesel oil consumption of the project activity is monitored through the invoices /27/.		

Data variable	Source of Data	Reported value for the project period
Noise Emission (ID. 5)	Noise Emission Report Interviews	No noise emissions
Assessment		
The noise emission is monitored by interviewing local people and noise emission report. The villagers were interviewed during the site visit and no complaints were received about the noise. Also, Noise Emission Report was prepared by an accredited third party laboratory. The noise emission of the project activity is under the legal limits as per the Noise Emission Report /25/.		

Data variable	Source of Data	Reported value for the project period
Health Impact of Electromagnetic Radiation (ID. 6)	Health report of National Health and Medical Research Council of Australian Government	No negative impact
Assessment		
As per the Wind Turbines and Health report of National Health and Medical Research Council of Australian Government /39/, electrical cables between wind turbine generators to each other and shielding with metal armor effectively eliminate any electromagnetic field. The electromagnetic fields produced by the generation and export of electricity from a wind farm do not pose a threat to public health.		

Data variable	Source of Data	Reported value for the project period
Road Quality (ID. 7)	Protocol and invoices Interviews	The quality of road is improved.
Assessment		
It was confirmed through the protocol signed between project owner and Astek Kaplama ve Asfalt A.S. /40/ and the invoices /41/ that the construction of road in Kocadag Village was completed as of 29/06/2011. The invoices of the Also, it was confirmed via stakeholder interviews that the road was constructed.		

3.4.4 Accuracy of emission reduction calculations

The emission reduction calculations provided in the spreadsheet /8/ have been verified to be correct and in line with the registered PDD /1/.

The emission reductions from the project for the monitoring period as reported in the monitoring report version 1.2 of 06/09/2012 /2/ is equivalent to 35,869 tCO_2e. Even monitoring period is longer than 12 months, the reported emission reductions are 9.5% lower than the estimated emission reduction of 39,618 tCO_2e for the period as per the registered PDD /1/.

The data presented in the monitoring report /2/ were assessed by reviewing in detail project documentation, collection of monitored data, observation of established monitoring and reporting practices and assessment of the reliability of monitoring equipment. Sufficient evidence was presented and verified by RINA for the reported emission reductions as listed in the above Section 3.4.2.2.

3.4.5 Accuracy of the GS indicators of sustainable development

All the documented evidences related to the sustainable monitored parameters such as payroll sheets of social security institution /23/ /24/ and residence certificates /22/, diesel oil invoices /27/, the protocol signed for road construction /40/ are provided as objective evidence.

3.4.6 Management system and quality control

The electricity generation supplied to the grid and electricity consumption from the grid are read remotely from the electricity meters by Automatic Meter Reading System (OSOS) by the TEIAS personnel. The plant personnel records the electricity generation from the meters and fills the monthly reading protocols. These monthly meter reading protocols are sent to TEIAS. In case of difference between the monthly meter reading protocol and OSOS readings, TEIAS read the meters on project site.

The electricity generation supplied to the grid and the electricity consumption from the grid is stored by PMUM on the web site. The Project owner has an ID and password to access this data on the web site. The project owner can easily access the data by using this portal

The collected data during the monitoring period will be kept by the project owner at least two years after the last issuance of VERs as stated in the registered PDD /1/ and monitoring report /2/ in line with the ACM0002 version 07 /6/.

4 VERIFICATION AND CERTIFICATION OPINION

RINA Services Spa (RINA) has performed verification of the emission reductions reported for the project activity "Çataltepe 16 MW Wind Farm Project, Turkey" in Turkey, GS Registration Reference N° 574, for the period 19/04/2011 to 31/07/2012, with regard to the relevant requirements for GS activities.

The project participants of the "Çataltepe 16 MW Wind Farm Project, Turkey" project are responsible for:

- the preparation of greenhouse gas emissions data and the reported greenhouse gas emission reductions from the project on the basis set out in the monitoring plan contained in the registered project design document version 10 of 14/03/2011
- the development and maintenance of records and reporting procedures in accordance with that plan, including the calculation and determination of greenhouse gas emission reductions of the project

It is the responsibility of RINA to express an independent verification opinion about the project's conformity with the requirements of paragraph 62 of the CDM modalities and procedures, GS requirements and on the reported greenhouse gas emission reductions from 10 of 14/03/2011 the project.

Based on documented evidence and corroborated by an on-site assessment RINA can confirm that:

- the project has been implemented and operated as per the registered PDD;
- the monitoring report and other supporting documents provided are complete and verifiable and in accordance with the applicable CDM and GS VER requirements;
- monitoring is in place as per the applied baseline and monitoring methodology;
- monitoring complies with the monitoring plan in the registered PDD;
- the monitoring plan in the registered PDD is as per the applied baseline and monitoring methodology.

It is RINA's opinion that the GHG emission reductions stated in the monitoring report version 1.2 of 06/09/2012 for the "Çataltepe 16 MW Wind Farm Project, Turkey" project in Turkey for the period 19/04/2011 to 31/07/2012 are fairly stated. The GHG emission reductions were calculated correctly, the sustainability development indicators were correctly monitored, on the basis of the approved monitoring methodology "ACM0002", "Consolidated baseline methodology for grid-connected electricity from renewable sources", version 07 of 30/11/2007 and the monitoring plan contained in the registered PDD.

Hence, RINA is able to certify that the emission reductions from the project during the monitoring period 19/04/2011 to 31/07/2012 amount to 35,869 tCO_2e.

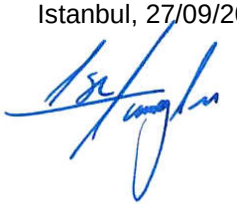
Year 2011 19/04/2011 to 31/12/2011 20,736 tCO2e

Year 2012 01/01/2012 to 31/07/2012 15,133 tCO2e

GHG Emission Reductions or Removals	**tCO_2e**
Baseline Emissions	35,869
Project Emissions	0
Leakage	0
Net GHG emission reductions or removals	**35,869**

GOLD STANDARD VERIFICATION/CERTIFICATION REPORT

Istanbul, 27/09/2012



Isil TIMUROGLU
GS Team Leader
RINA Denizcilik ve Belgelendirme Ltd. Sti.

Genova, 28/09/2012

Laura Severino
Authorized officer signing for the DOE
RINA Services S.p.A.

APPENDIX A

GOLD STANDARD VERIFICATION PROTOCOL

TABLE 1 REQUIREMENTS CHECKLIST

Checklist Question		Reference	MoV[1]	Comments	Draft Conclusion	Final Conclusion
A	**Description of Project Activity**					
A.1	Title of the project activity, revision number and date of Monitoring Report	/1/ /2/ /7/ /9/	DR	The title of the project activity is given as "Çataltepe 16 MW Wind Farm Project, Turkey" in the Monitoring Report version 01 dated 03/05/2012. The title is also in line with the registered PDD and Validation Report. *The cover page of the monitoring report is not in line with the "Guidelines for Completing the Monitoring Report Form, version 02.0 of 02/03/2012" /9/.* *The date of registration, 15/04/2011, could not be justified since the date is not available in the GS web site.* *As per the "Guidelines for Completing the Monitoring Report Form, version 02.0 of 02/03/2012" /9/, Section A.4 of the monitoring report shall refer to UNFCCC CDM web site for the exact reference.*	~~**CAR 1**~~	**OK**
A.2	Is the actual implementation and operation of the proposed project activity in accordance with the project activity in the registered PDD?	/1/ /2/ /16/ /17/ /18/ /26/ /29/	DR, CC, I	It is confirmed during the site visit performed on 24/05/2012 that project activity is implemented and operated as per the registered PDD /1/. The starting date of operation and crediting period is 19/04/2011 as confirmed through the Temporary Acceptance Protocol /17/ and PMUM Registration Letter /18/. The project activity consists of 8 wind turbines with a 16 MW total installed capacity. Technical details of the wind turbines comply		**OK**

[1] MoV: DR document review, I interview, CC cross checking

Checklist Question		Reference	MoV[1]	Comments	Draft Conclusion	Final Conclusion
				with the registered PDD /1/ as verified through the Wind Turbines Specifications obtained from Enercon /26/ and on-site observation. It is confirmed during the site visit that all installed turbines are Enercon type E82 turbine with an output of 2 MW. The project boundary in the registered PDD /1/ is in line with the actual project boundary. Generated electricity is supplied to the grid at the Edremit II Transformer Station with a 34.5 kV transmission line as per the generation license /16/. The geographic coordinates of the turbines were verified through the technical drawing includes the turbine coordinates /29/. The coordinates are in line with the coordinates given in the monitoring report /2/, registered PDD /1/ and generation license /16/.		
A.3	Methodology applied for the registered project activity	/1/ /6/	DR	The registered project activity applies the approved baseline and monitoring methodology ACM0002 version 07 of 30/11/2007 /6/.		**OK**
B	**Monitoring**					
B.1	**Monitoring plan**					
B.1.1	Does the monitoring plan included in the registered GS project activity comply with the applied methodology?	/1/ /3/ /4/ /6/	DR, CC	The monitoring plan of the registered GS project activity complies with the applied methodology ACM0002 version 07 /6/.		**OK**
B.1.2	Does the monitoring comply with the monitoring plan in the registered PDD?	/1/ /2/ /3/ /4/ /6/	DR, CC	The monitoring complies with the monitoring plan presented in the registered PDD /1/. The only parameter that needs to be monitored is net electricity generation supplied to the grid (EGy) as per the ACM0002 version 07 /6/ and registered PDD /1/. Also, diesel oil consumption is monitored to justify that project emissions are negligible.		**OK**

Checklist Question		Reference	MoV[1]	Comments	Draft Conclusion	Final Conclusion
				In addition, since the project is developed under Gold standard, the following GS sustainable development parameters are included in the monitoring plan: "Local Employment (number)", "Air Quality", "Diesel Oil Consumption", "Noise Emission", "Health Impact of Electromagnetic Radiation" and "Road Quality"		
B.1.3	Do the sustainability indicators included in the monitoring report comply with the minimum contents specified in paragraph 4.1 of the GS toolkit?	/1/ /2/ /3/ /4/ /6/	DR, CC	The project activity is developed and registered under Gold standard Version 01; therefore, GS Toolkit is not applicable to the project activity. However, the sustainability indicators in the monitoring report complies with the sustainability indicators established by the Gold Standard Version 01 rules ("The Gold Standard Validation & Verification Manual for Voluntary Offset Projects" /3/ and "Voluntary Emission Reductions (VERs) Manual for Project Developers" /4/).		**OK**
B.1.4	Have any changes been made to the key sustainable development indicators?	/1/ /2/ /7/ /9/	DR, CC, I	No change has been occurred during the monitoring period of 19/04/2011 to 31/07/2012 as confirmed through the site inspection and interviews.		**OK**
B.2	**Data and parameters that are available at validation and that are not monitored**					
B.2.1	Which parameters were available at validation and how were they verified?	/1/ /6/ /7/	DR, CC	As per the approved methodology ACM0002 version 07, the combined emission factor has been determined using the ex-ante option, so it is not requested to monitor and recalculate the emission factors during this crediting period. The combined emission factor is determined to be 0.635 tCO_2/MWh in the registered PDD /1/ and validation report /7/.		**OK**
B.3 Data and parameters monitored						

Checklist Question		Reference	MoV[1]	Comments	Draft Conclusion	Final Conclusion
B.3.1	Data/Parameter monitored / Data unit / Description / Source of data to be used / Value data for the monitoring period	/1/ /2/ /6/ /8/ /19/ /20/ /21/	DR, CC, I	***ID.1 Annual electricity amount fed to the grid by the project activity (EGy):*** The parameter is measured in MWh and it is monitored by two electricity meters that are located at the project activity. The net electricity generation is based on the PMUM official records /20/, which is the basis of invoices. The PMUM records are crosschecked with the invoices /21/ and monthly meter reading protocols /19/. *The source of data, which should be the basis of net electricity generation defined in footnote 3, is not correct.* *There is an error in March 2012 PMUM records. The minus value is recorded which is not logical and does not match with the ER calculation.* *The ISVM, which does not include transmission losses, is used as a basis of emission reduction from April 2011 to December 2011. However, the electricity generation which includes transmission loss is applied for 2012 (January 2012, February 2012 and March 2012).*	~~**CAR 2**~~	**OK**
B.3.2	Is the measurement equipment described? Is the accuracy of the measurement equipment addressed and deemed appropriate?	/2/ /11/ /12/ /13/ /14/ /15/ /38/	DR, CC,I	Two electricity meters are installed at the project site. The main meter is ACTARIS SL761 with serial number 53064334 and the backup meter is ACTARIS SL761 with serial number 53064335. The meters have the accuracy of 0.5s as confirmed through the test report and technical specification of the meters /11/ /12/ /13/ /14/. The accuracy class of the meters complies with the "Communiqué for Measurement Devices used in the Electricity Market" /38/. The electricity meters are sealed by TEIAS as confirmed during the site visit and		**OK**

Checklist Question		Reference	MoV[1]	Comments	Draft Conclusion	Final Conclusion
				sealing protocol /15/. The description of the meters presented in the monitoring report is in line with the operation as confirmed through the site visit observation.		
B.3.3	Are the requirements for maintenance and calibration of measurement equipment described and deemed appropriate?	/1/ /2/ /11/ /14/ /15/ /37/	DR, CC,I	TEIAS is responsible for calibration and maintenance of the devices as per the registered PDD /1/. The project owner has no control on the meters since the meters are sealed by the TEIAS as confirmed during the site visit and sealing protocol /15/. If any major discrepancy occurs between the two meters, TEIAS performs necessary calibration. The calibration records of the meters were checked /11/ /14/. The meters were calibrated by the supplier on 22/01/2010 as confirmed through the initial calibration record /14/. Also, the meters were tested by the electricity transmission company at the project site on 22/04/2011 after the meters were installed /11/. As per the "'Regulation of Metering and Testing of Metering Systems", the meters shall be calibrated every 10 years. The calibration of meters is deemed appropriate and in compliance with the national regulation /37/. *The date of initial calibration is defined as 22/04/2011 in the monitoring report /2/, which is date of first index protocol /11/. This date is not in line with the initial calibration record /14/.*	~~**CR 1**~~	**OK**
B.3.4	Is the monitoring frequency adequate for all monitoring parameters? Is it in line with the registered monitoring plan?	/1/ /2/ /6/	DR, CC, I	The electricity generation supplied to the grid and electricity consumption from the grid is monitored continuously by two meters as verified during the site visit. Monitoring frequency is in line with the applied methodology /6/ and registered PDD /1/.		**OK**
B.3.5	Is the recording frequency adequate for all monitoring parameters? Is it in line with the	/1/ /2/ /6/	DR, CC, I	The electricity generation supplied to the grid, electricity consumption from the grid is		**OK**

Checklist Question		Reference	MoV[1]	Comments	Draft Conclusion	Final Conclusion
	registered monitoring plan?			recorded monthly. This is in line with the monitoring plan in the registered PDD /1/.		
B.3.6	Does data management (from monitoring equipment to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions?	/2/ /6/ /8/	DR, CC, I	At the last day of each month, the electricity generation supplied to the grid and electricity consumption from the grid is read remotely from the electricity meters by Automatic Meter Reading System (OSOS) by the TEIAS. The plant staff explained the monitoring procedures during the site visit. As confirmed through the observation, the plant personnel records the electricity generation from the meters and fills the monthly reading protocols. These monthly meter reading protocols are sent to TEIAS. In case of difference between the monthly meter reading protocol and OSOS readings, TEIAS read the meters on project site. *It is mentioned in the monitoring report that ISVM figures include transmission losses. Please clarify whether the electricity production supplied to the grid and the electricity consumed by the power plant includes transmission losses.* *The starting date of Automatic Meter Reading System (OSOS), 03/05/2011, could not be justified.*	~~**CAR 3**~~	**OK**
B.4 Monitoring of GS indicators of sustainable development /environmental impacts						
B.4.1	Data/Parameter monitored / Data unit / Description / Source of data to be used / Value data for the monitoring period	/1/ /2/ /3/ /4/ /8/ /22/ /23/ /24/ /25/ /27/ /31/ /32/ /33/ /34/ /35/ /36/ /39/ /40/ /41/	DR, CC, I	The following GS sustainable development parameters are monitored as per the monitoring plan presented in the registered PDD: “Local Employment (number)”, “Air Quality”, “Diesel Oil Consumption”, “Noise Emission”, “Health Impact of Electromagnetic Radiation” and “Road Quality”. ***ID.2 Local Employment (number):*** The	~~**CAR 4**~~	**OK**

Checklist Question		Reference	MoV[1]	Comments	Draft Conclusion	Final Conclusion
				number of local employment created by the project is monitored through the monthly salary payment sheets. 7 people are employed by the project activity and all of them are local people as confirmed through the "Payroll Sheets of Social Security Institution" /23/ /24/ and "Residence Certificates" /22/. The employee classification is as follows: - 1 wind farm engineer - 2 service technician - 4 security personnel ***ID.3 Air Quality:*** The reduction of SO_2 and NO_X emissions is monitored by calculation. The SO_2 and NO_X emission intensities, which are fixed in the registered PDD, are multiplied with the net electricity generation of the project activity. *The applied SO_2 and NO_X emission intensities (4.07 kg SO_2/MWh and 2.50 kg NO_X/MWh) in the monitoring report are not in line with the registered PDD.* ***ID.4 Diesel Oil Consumption:*** The diesel oil consumption of the project activity is monitored through the invoices. 346.48 liters diesel oil was consumed by the backup generator during the monitoring period as confirmed through the invoices /27/. ***ID.5 Noise Emission:*** The noise emission is monitored by interviewing local people and noise emission report. The villagers were interviewed during the site visit and no complaints were received about the noise. Also, Noise Emission Report was prepared by an accredited third party laboratory. The noise emission of the project activity is under the		

Checklist Question		Reference	MoV[1]	Comments	Draft Conclusion	Final Conclusion
				legal limits as per the Noise Emission Report /25/. ***ID.6 Health Impact of Electromagnetic Radiation:*** Health impact of electromagnetic radiation from wind turbines is assessed in the monitoring report. As per the Wind Turbines and Health report of National Health and Medical Research Council of Australian Government /39/, electrical cables between wind turbine generators to each other and shielding with metal armor effectively eliminate any electromagnetic field. The electromagnetic fields produced by the generation and export of electricity from a wind farm do not pose a threat to public health. ***ID.7 Road Quality:*** The quality of the road in the project region is monitored. It was confirmed through the protocol signed between project owner and Astek Kaplama ve Asfalt A.S. /40/ and the invoices /41/ that the construction of road in Kocadag Village was completed as of 29/06/2011. The invoices of the Also, it was confirmed via stakeholder interviews that the road was constructed. ***Trainings:*** All training certificates were checked during the on-site inspection /31/ /32/ /33/ /34/ /35/ /36/. *Some of the trainings listed at Table 13 of the monitoring report are not within the monitoring period.* *The First Aid Training dated 14-15/06/2011 /36/ is not stated at Table 13 of the monitoring report.* *The Protection and Relay 154 kV Systems Training dated 23/09/2011 /35/ is not stated at*		

Checklist Question		Reference	MoV[1]	Comments	Draft Conclusion	Final Conclusion
				Table 13 of the monitoring report. ***Bird Migration:*** As per the FAR raised by Gold Standard, the effect of project on bird migration and local birds shall be monitored during the first monitoring period. A bird migration report is prepared by a third party. *The report could not be provided during the site visit since it has not been completed yet.*		
B.4.2	Is the monitoring in line with the registered monitoring plan?	/1/ /2/	DR, CC, I	The monitoring complies with the monitoring plan presented in the registered PDD. The following GS sustainable development parameters are monitored as per the registered monitoring plan: Local Employment (number)", "Air Quality", "Diesel Oil Consumption", "Noise Emission", "Health Impact of Electromagnetic Radiation" and "Road Quality".		**OK**
B.4.3	Does the monitoring report provide for the collection and archiving of relevant data concerning environmental, social and economic impacts?	/1/ /2/ /3/ /4/ /22/ /23/ /24/ /25/ /27/ /31/ /32/ /33/ /34/ /35/ /36/ /39/ /40/ /41/	DR, CC, I	All the documented evidences related to the sustainable monitored parameters such as reports, invoices, protocols, training records, payroll sheets of social security institution and residence certificates etc. are collected and kept.		**OK**
B.5 Management, quality assurance and quality control						
B.5.1	How has it been assessed that the monitoring arrangements described in the monitoring plan are feasible within the project design?	/2/ /6/	DR, I	An on site inspection has been performed on 25/05/2012 and it is confirmed that the monitoring arrangements in the monitoring plan are feasible within the project design.		**OK**
B.5.2	Are procedures identified for day-to-day record handling (including what records to keep, storage area of records and how to process performance documentation)?	/2/ /8/	DR, I	At the last day of each month, the electricity generation supplied to the grid and electricity consumption from the grid is read remotely from the electricity meters by Automatic Meter		**OK**

Checklist Question		Reference	MoV[1]	Comments	Draft Conclusion	Final Conclusion
				Reading System (OSOS) by the TEIAS. The plant personnel records the electricity generation from the meters and fills the monthly reading protocols. These monthly meter reading protocols are sent to TEIAS. In case of difference between the monthly meter reading protocol and OSOS readings, TEIAS read the meters on project site.		
B.5.3	Are the data management and quality assurance and quality control procedures sufficient to ensure that the emission reductions achieved by/resulting from the project can be reported ex post and verified?	/2/ /8/	DR, I	The generated electricity is measured by two meters that were sealed by TEIAS. The project owner has no control on the meters. The electricity generation supplied to the grid and electricity consumption from the grid is stored by PMUM on the web site. The Project owner has an ID and password to access this data on the web site. The project owner can easily access the data by using this portal. The project owner also archives a hardcopy of these protocols, scanned and stored electronically.		**OK**
B.5.4	Will all monitored data required for verification and issuance be kept for two years after the end of the crediting period or the last issuance of VERs, for this project activity, whichever occurs later?	/1/ /2/ /6/	DR, I	The collected data during the monitoring period will be kept by the project owner at least two years after the last issuance of VERs as stated in the registered PDD /1/ and monitoring report /2/ in line with the ACM0002 version 07 /6/.		**OK**

TABLE 2 RESOLUTIONS OF CORRECTIVE ACTION REQUESTS AND CLARIFICATION REQUESTS

Corrective action and/ or clarification requests	Reference to Table 1	Response by project participants	Verification conclusion
CAR 1 The cover page of the monitoring report is not in line with the "Guidelines for Completing the Monitoring Report Form, version 02.0 of 02/03/2012" /9/. The date of registration, 15/04/2011, could not be justified since the date is not available in the GS web site. As per the "Guidelines for Completing the Monitoring Report Form, version 02.0 of 02/03/2012" /9/, Section A.4 of the monitoring report shall refer to UNFCCC CDM web site for the exact reference.	A.1	The cover page is changed accordingly. The registration date is changed to 23.09.2009, in line with the recent update at the GS website. The reference is added as footnote.	The cover page is revised as per the "Guidelines for Completing the Monitoring Report Form, version 02.0 of 02/03/2012" /9/. The registration date is defined as 23/09/2009 as confirmed through the GS Registry web site. Section A.4 of the monitoring report refers to UNFCCC CDM web site for the reference of applied methodology. The revision of the monitoring report can be considered satisfactory, thus the CAR 1 is closed.
CAR 2 ***ID.1 Annual electricity amount fed to the grid by the project activity (EGy)*** The net electricity generation is based on the PMUM official records /20/, which is the basis of invoices. The PMUM records are crosschecked with the invoices /21/ and monthly meter reading protocols /19/. The source of data, which should be the basis of net electricity generation defined in footnote 3, is not correct. There is an error in March 2012 PMUM records. The minus value is recorded which is not logical and does not match with the ER calculation. The ISVM, which does not include transmission losses, is used as a basis of emission reduction from April 2011 to December 2011. However, the electricity generation which includes transmission loss is applied for 2012 January 2012, February 2012 and March 2012.	B.3.1	Footnote 3 is removed. The PMUM Record for March 2012 is submitted again. Additionally, since the values without transmission losses are used, the minus value is not used. The emission reduction calculations are revised by using electricity values which do not include transmission losses.	Footnote 3 is excluded from the Monitoring Report. March 2012 figures is based on the figures without transmission losses. The emission reduction calculation is revised. The revision of the monitoring report can be considered satisfactory, thus the CAR 2 is closed.

Corrective action and/ or clarification requests	Reference to Table 1	Response by project participants	Verification conclusion
CAR 3 ID.1 Annual electricity amount fed to the grid by the project activity (EGy) It is mentioned in the monitoring report that ISVM figures include transmission losses. Please clarify whether the electricity production supplied to the grid and the electricity consumed by the power plant includes transmission losses. The starting date of Automatic Meter Reading System (OSOS), 03/05/2011, could not be justified.	B.3.6	The transmission losses are neither included in the electricity production supplied to the grid, nor in the electricity consumed by the power plant. No document is received from TEIAS regarding the start date of OSOS. Therefore, the reference to the start date of the system in the monitoring report is removed.	The statement, which mentions that ISVM figures include transmission losses are removed from the Monitoring Report. It is clarified that the electricity production supplied to the grid and the electricity consumed by the power plant does not include transmission losses. The starting date of Automatic Meter Reading System (OSOS) is excluded from the Monitoring Report. The revision of the monitoring report can be considered satisfactory, thus the CAR 3 is closed.
CAR4 ***ID.3 Air Quality*** The applied SO_2 and NO_X emission intensities (4.07 kg SO_2/MWh and 2.50 kg NO_X/MWh) in the monitoring report are not in line with the registered PDD. ***Trainings*** Some of the trainings listed at Table 13 of the monitoring report are not within the monitoring period. The First Aid Training dated 14-15/06/2011 /36/ is not stated at Table 13 of the monitoring report. The Protection and Relay 154 kV Systems Training dated 23/09/2011 /35/ is not stated at Table 13 of the monitoring report. ***Bird Migration:*** As per the FAR raised by Gold Standard, the effect of project on bird migration and local birds shall be monitored during the first monitoring period. A bird migration report is prepared by a third party. The report could not be provided during the site	B.4.1	***ID.3 Air Quality*** The applied SO_2 and NOx emission intensities of 4.07 kg SO2/MWh and 2.50 kg NOX/MWh are reported as deviations from the monitoring plan in the monitoring report. However, as requested, they are replaced with the corresponding values found in the registered PDD. ***Trainings*** The trainings that are not within the monitoring period are removed. The mentioned trainings are included in the report. ***Bird Migration*** The ornithological report is submitted. The explanations are included in the report.	***ID.3 Air Quality*** The SO_2 and NO_X emission intensities are applied as per the registered PDD. ***Trainings*** The trainings, which are not within this monitoring period, are excluded from monitoring report. And the missing trainings are included. ***Bird Migration*** The bird migration report prepared by an Ornithologist dated June 2012 is submitted to the verification team /42/. CAR 3 is closed.

Corrective action and/ or clarification requests	Reference to Table 1	Response by project participants	Verification conclusion
visit since it has not been completed yet.			
CR 1 The date of initial calibration is defined as 22/04/2011 in the monitoring report /2/, which is date of first index protocol /12/. This date is not in line with the initial calibration record /14/.	B.3.3	The initial calibration date is corrected to 22.01.2010.	This initial calibration date is revised in line with the initial calibration record /14/. The revision of the monitoring report can be considered satisfactory, thus the CR 1 is closed.