



RINA

# GOLD STANDARD VERIFICATION/CERTIFICATION REPORT


**“Akbük Wind Farm Project - Turkey”  
in  
Turkey**

Monitoring period: 01/04/2011 to 31/12/2011  
(both days included)

Report N°2012-DG-10-MD

Revision N°2

## GOLD STANDARD VERIFICATION/CERTIFICATION REPORT

<b>Project Title:</b> Akbük Wind Farm Project – Turkey	<b>Country:</b> Turkey	<b>Estimated VERs (tCO<sub>2e</sub>):</b> 67,570 annual average
<b>GS Registration Reference N°:</b> GS436	<b>Monitoring period:</b> 01/04/2011 – 31/12/2011 (both days included)	<b>Certified VERs (tCO<sub>2e</sub>):</b> 48,922
<b>Client:</b> Ayen Enerji A.S.	<b>Client contact:</b> Mr. Hakan DEMIR	
<b>Report No.:</b> 2012-DG-10-MD	<b>Revision:</b> 2	<b>Date of this report:</b> 05/06/2012
<b>Approved by:</b>   Roberto Cavanna		<b>Date of approval:</b> 29/06/2012

### Methodology

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

RINA Services S.p.A. (RINA), commissioned by Ayen Enerji A.S., has verified the greenhouse gas emission reductions reported for the project activity “Akbük Wind Farm Project – Turkey” in Turkey, GS Registration Reference N° 436, for the period 01/04/2011 – 31/12/2011 (both days included), 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 TÜV Rheinland (validation report N°2008-9215 issued on 18/12/2008) and it was registered on 17/03/2009 under the Gold Standard Project IDGS436.

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 03 of 03/03/2009.

In conclusion, it is RINA’s opinion that the project activity “Akbük Wind Farm Project – Turkey” in Turkey, as described in the Monitoring Report version 4.0 of 04/06/2012, 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 01/04/2011 – 31/12/2011 amount to 48,922 tCO<sub>2e</sub>.

Baseline Emissions	48,922 tCO <sub>2e</sub>
Project Emissions	0 tCO <sub>2e</sub>
Leakage	0 tCO <sub>2e</sub>
Net GHG emission reductions/removal	48,922 tCO <sub>2e</sub>

<b>Work carried out by:</b> Sergio Degener Hasan Zor	<input checked="" type="checkbox"/> No distribution without permission from the Client or organizational unit responsible <input type="checkbox"/> Strictly confidential <input type="checkbox"/> Unrestricted distribution
--	---

<b>Work verified by:</b>   Laura Severino	<b>Keywords:</b>  Climate Change, Kyoto Protocol, Verification, Gold Standard
---	---

# GOLD STANDARD VERIFICATION/CERTIFICATION REPORT

## Abbreviations

ACM	Approved consolidated methodology
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 <sub>4</sub>	Methane
CR	Clarification Request
CO <sub>2</sub>	Carbon dioxide
CO <sub>2</sub> e	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
LoA	Letter of Approval
MoV	Means of Verification
MP	Monitoring Plan
MR	Monitoring Report
NGO	Non-governmental Organization
ODA	Official Development Assistance
PDD	Project Design Document
PE	Project Emission
PP(s)	Project Participant(s)
Ref.	Document Reference
RINA	RINA Services Spa
SDI	Sustainable Development Indicator
SS(s)	Sectoral Scope(s)
TEİAŞ	Türkiye Elektrik İletim Anonim Şirketi (National grid company)
UNFCCC	United Nations Framework Convention on Climate Change
VERs	Verified Emission Reduction(s)
VVM	Validation and Verification Manual

# GOLD STANDARD VERIFICATION/CERTIFICATION REPORT

<b>Table of Contents</b>		<b>Page</b>
1	INTRODUCTION .....	5
1.1	Objective	5
1.2	Scope	5
2	METHODOLOGY .....	5
2.1	Desk Review	6
2.2	On-site assessment	8
2.3	Resolution of outstanding issues	8
2.4	Internal quality control	11
2.5	Verification team and the technical reviewer(s)	11
3	VERIFICATION FINDINGS .....	11
3.1	Description of the project activity	11
3.2	Remaining issues (FARs) from previous validation or verification	12
3.3	Project implementation	12
3.4	Methodology for determining Emission Reductions.	12
4	VERIFICATION AND CERTIFICATION OPINION .....	19

Appendix A: Gold Standard Verification Protocol

# GOLD STANDARD VERIFICATION/CERTIFICATION REPORT

## 1 INTRODUCTION

Ayen Enerji A.S. has commissioned RINA to carry out the verification and certification of emission reductions reported for the registered “Akbük Wind Farm Project – Turkey” project in Turkey, GS Registration Reference N°436, for the period 01/04/2011 – 31/12/2011.

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 “Akbük Wind Farm Project – Turkey” project in Turkey for the period 01/04/2011 – 31/12/2011.

### 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:

## GOLD STANDARD VERIFICATION/CERTIFICATION REPORT

- 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 4.0 of 04/06/2012 /2/, the emission reduction calculations provided in the form of a spreadsheet, “120120 3PV Emission Reduction Calculation” of 20/01/2012 /23/, were assessed as part of the verification. In addition, the Project Design Document (PDD) /01/, in particular as regards the baseline estimations and the monitoring plan, the previous verification report revision 01 of 30/06/2011/08/ and the validation report, revision 01 of 18/12/2008 /07/ for the project, were reviewed.

#### Issues open from previous verification periods:

During the 2 week review period for the second verification, the following Forward Action Request has been raised by Gold Standard: FAR#1 “The PP shall include a simple diagram of the monitoring points, i.e. transmission lines, primary and secondary electricity meters, transformers, turbines, in future monitoring reports.”

The diagram has been included in the monitoring report /02/, therefore, the FAR raised during the second monitoring period is considered closed.

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

/01/	Ecofys Netherlands BV: GS-CDM-PDD for project activity “Akbük Wind Farm Project – Turkey” in Turkey, version 03 of 3/3/2009.
/02/	ORBEO: Monitoring report for project activity “Akbük Wind Farm Project – Turkey” in Turkey, version 4.0 of 04/06/2012 related to the monitoring period 01/04/2011 to 31/12/2011 (both days included)
/03/	The Gold Standard: Requirements, version 2.0 of 1 August 2008
/04/	The Gold Standard: Toolkit and related Annexes (A – S), version 2.0 of 1 August 2008
/05/	CDM Executive Board: Validation and Verification Manual, version 01.2 of 30/07/2010
/06/	CDM Executive Board: Baseline and monitoring methodology ACM0002, Consolidated baseline methodology for grid-connected electricity generation from renewable sources, version 07 of 30/11/2007.
/07/	TÜV Rheinland – Validation Report for “Akbük 31.5 MW Wind Farm Project” No. 2008-9215 revision 01 of 18/12/2008.
/08/	RINA: Second Verification report n. 2011-DG-MD-03 revision 1, 30/06/2011
/09/	TEİAŞ Türkiye Elektrik İletim Anonim Şirketi Genel Müdürlüğü – Measuring protocol April 2011 of 01/05/2011
/10/	TEİAŞ Türkiye Elektrik İletim Anonim Şirketi Genel Müdürlüğü – Measuring protocol May 2011 of 01/06/2011
/11/	TEİAŞ Türkiye Elektrik İletim Anonim Şirketi Genel Müdürlüğü – Measuring protocol June 2011 of 01/07/2011
/12/	TEİAŞ Türkiye Elektrik İletim Anonim Şirketi Genel Müdürlüğü – Measuring protocol July 2011 of 01/08/2011
/13/	TEİAŞ Türkiye Elektrik İletim Anonim Şirketi Genel Müdürlüğü – Measuring protocol August 2011 of 01/09/2011
/14/	TEİAŞ Türkiye Elektrik İletim Anonim Şirketi Genel Müdürlüğü – Measuring protocol September 2011 of 01/10/2011
/15/	TEİAŞ Türkiye Elektrik İletim Anonim Şirketi Genel Müdürlüğü – Measuring protocol October 2011 of 01/11/2011
/16/	TEİAŞ Türkiye Elektrik İletim Anonim Şirketi Genel Müdürlüğü – Measuring protocol November 2011 of 01/12/2011
/17/	TEİAŞ Türkiye Elektrik İletim Anonim Şirketi Genel Müdürlüğü – Measuring protocol December 2011 of 01/01/2012

## GOLD STANDARD VERIFICATION/CERTIFICATION REPORT

/18/	Ajen Enerji A.S.; desemployment proclamation Ozgur Soylu, 24/08/2011
/19/	Ajen Enerji A.S.; desemployment proclamation Suleyman Yetkin Soker, 04/01/2012
/20/	Ajen Enerji A.S.; desemployment proclamation Tekin Oksuz, 20/04/2011
/21/	Ajen Enerji A.S.; re-employment proclamation Özgür Soylu, 24/08/2011
/22/	Ajen Enerji A.S.; re-employment proclamation Tekin Oksuz, 20/04/2011
/23/	ORBEO: 120120 3PV Emission Reduction Calculation version 3 of 20/1/2012
/24/	Ayen: Certificate of completion Fire Protection course, dated 16/12/2011, Ahmet Demir
/25/	Ayen: Certificate of completion Fire Protection course, dated 16/12/2011, Arif Cam
/26/	Ayen: Certificate of completion Fire Protection course, dated 16/12/2011, Durmus Mersin
/27/	Ayen: Certificate of completion Fire Protection course, dated 16/12/2011, Erdinc Akay
/28/	Ayen: Certificate of completion Fire Protection course, dated 16/12/2011, Hakan Oz
/29/	Ayen: Certificate of completion Fire Protection course, dated 16/12/2011, Kagan Turan
/30/	Ayen: Certificate of completion Fire Protection course, dated 16/12/2011, Mustafa Oz
/31/	Ayen: Certificate of completion Fire Protection course, dated 16/12/2011, Mustafa Sanli Vural
/32/	Ayen: Certificate of completion Fire Protection course, dated 16/12/2011, Nuri Soydan
/33/	Ayen: Certificate of completion Fire Protection course, dated 16/12/2011, Orguz Ercakir
/34/	Ayen: Certificate of completion Fire Protection course, dated 16/12/2011, Oznur Yamankacar
/35/	Ayen: Certificate of completion Fire Protection course, dated 16/12/2011, Serdar Gumrukcu
/36/	Ayen: Certificate of completion Fire Protection course, dated 16/12/2011, Suleyman Efe
/37/	Ayen: Certificate of completion Fire Protection course, dated 16/12/2011, Suleyman Herdemgil
/38/	Ayen: Certificate of completion Health and Safety course, dated 16/12/2011, Ahmet Demir
/39/	Ayen: Certificate of completion Health and Safety course, dated 16/12/2011, Arif Cam
/40/	Ayen: Certificate of completion Health and Safety course, dated 16/12/2011, Durmus Mersin
/41/	Ayen: Certificate of completion Health and Safety course, dated 16/12/2011, Erdinc Akay
/42/	Ayen: Certificate of completion Health and Safety course, dated 16/12/2011, Hakan Oz
/43/	Ayen: Certificate of completion Health and Safety course, dated 16/12/2011, Kagan Turan
/44/	Ayen: Certificate of completion Health and Safety course, dated 16/12/2011, Mustafa Oz
/45/	Ayen: Certificate of completion Health and Safety course, dated 16/12/2011, Mustafa Sanli Vural
/46/	Ayen: Certificate of completion Health and Safety course, dated 16/12/2011, Nuri Soydan
/47/	Ayen: Certificate of completion Health and Safety course, dated 16/12/2011, Orguz Ercakir
/48/	Ayen: Certificate of completion Health and Safety course, dated 16/12/2011, Oznur Yamankacar
/49/	Ayen: Certificate of completion Health and Safety course, dated 16/12/2011, Serdar Gumrukcu
/50/	Ayen: Certificate of completion Health and Safety course, dated 16/12/2011, Suleyman Efe
/51/	Ayen: Certificate of completion Health and Safety course, dated 16/12/2011, Suleyman Herdemgil
/52/	TEİAŞ Genel Müdürlüğü: Main and backup meter test protocol, serial number 368746 and 368745 respectively, dated 20/01/2011.
/53/	Germanischer Lloyd: Statement of Compliance for the Wind Park design, dated 22/06/2007
/54/	CDM Executive Board: Methodological Tool "Tool to calculate the emission factor for an electricity system", version 01.1 of 29 July 2008.
/55/	Gold Standard: Voluntary emission reductions (VERs) Manual for project developers, version 5 of May 2006.
/56/	ORBEO – GS VER Monitoring Manual: Akbuk Wind Farm Project – Turkey, version 1.1 of May 2010
/57/	Turkish Standards and International Electro technical Commission standard

## GOLD STANDARD VERIFICATION/CERTIFICATION REPORT

	<a href="http://www.epdk.gov.tr/web/guest;jsessionid=27C831F4376EA017FEF4BB165A1E01B8">http://www.epdk.gov.tr/web/guest;jsessionid=27C831F4376EA017FEF4BB165A1E01B8</a>
/58/	Turkish social security: List of employees, 20/01/2012.
/59/	RINA; Participant List, 28/02/2012
/60/	TEİAŞ Türkiye Elektrik İletim Anonim Şirketi Genel Müdürlüğü – First index evaluation protocol of 19/3/2009 – commissioning date.
/61/	TEİAŞ Türkiye Elektrik İletim Anonim Şirketi Genel Müdürlüğü – Annex measuring protocol from 31/3/2009 to 3/4/2009 – commissioning date.
/62/	AYEN ENERJİ A.S. ; Gold Standard Local Stakeholder Consultation Report for the Mordogan Wind Farm Project, version 1. Meeting held on 17 March 2011.
/63/	AYEN ENERJİ A.S. ; Gold Standard Local Stakeholder Consultation Report for the Korkmaz Wind Farm Project, version 1. Meeting held 18 March 2011.
/64/	Gold Standard: 2-week issuance review period for the second monitoring period (from 01/04/2010 to 31/03/2011), dated 17/08/2011.

### 2.2 On-site assessment

On 28/02/2012, RINA visited /59/ the wind farm located in Didim district, Aydın Province, Aegean Region. During the on-site assessment of the project, 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, to prevent violation or the risk of violating a safeguarding principle of the “Do No Harm” Assessment or to “neutralize” a Sustainable Development Indicator.

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

	Date	Name and Role	Organization	Topic
/a/	28/02/2012	Hakan DEMİR Project Developer	AYEN ENERJİ A.S.	Personnel issues Monitoring data
/b/	28/02/2012	Altuğ GÜMRÜKÇÜ Site Engineer	AYEN ENERJİ A.S.	Monitoring equipment, calibration certificates Operation

### 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.



RINA

## **GOLD STANDARD VERIFICATION/CERTIFICATION REPORT**

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.

## GOLD STANDARD VERIFICATION/CERTIFICATION 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.

\*Table 2 and 3 are deleted since no issues have been raised during this verification process.

## GOLD STANDARD VERIFICATION/CERTIFICATION REPORT

### 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
Team Leader CDM/GS in training, CDM/GS Verifier	Degener	Sergio	Germany
Local Expert	Zor	Hasan	Turkey
Technical Reviwer	Valoroso	Rita	Italy
Technical Reviewer in Training – Technical Expert	Tong	Wing Yu	Italy

## 3 VERIFICATION FINDINGS

The findings of the verification related to the monitoring period from 01/04/2011 to 31/12/2011 as documented and described in the monitoring report version 4.0 of 04/06/2012 /02/ are stated in the following sections.

The verification requirements, 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)	Ayen Enerji A.S.		
Project Title	Akbük Wind Farm Project - Turkey		
Location of the project	Turkey		
Methodology(ies)	ACM0002, Consolidated baseline methodology for grid-connected electricity generation from renewable sources, version 07 of 30/11/2007 /06/		
Sectoral Scope(s)	1	RINA's Technical Area(s)	1.2
Registered PDD	Version 03 of 03/03/2009		
Date of registration	17/03/2009	GS Registration Reference N°	GS436
Starting date of the crediting period	7/11/2008 (stated in the registered PDD) 19/3/2009 (crediting period starting date based on the commissioning date of the power plant).		

## GOLD STANDARD VERIFICATION/CERTIFICATION REPORT

Project's crediting period	07/11/2008 to 06/11/2015 (as per registered PDD) 19/03/2009 to 18/03/2016 (based on the commissioning date of the power plant)
Monitoring period	01/04/2011 to 31/12/2011
Project documentation link	<a href="https://gs2.apx.com/mymodule/ProjectDoc/EditProjectDoc.asp?id1=436">https://gs2.apx.com/mymodule/ProjectDoc/EditProjectDoc.asp?id1=436</a>

The project activity is a wind farm project which involves the installation of 15 wind turbines, each with a 2.1 MW capacity and making the total installed capacity of 31.5 MW. The electricity produced is delivered to the Turkish national grid (TEİAŞ). The estimated net electricity production is 105,000 MWh/year and the annual emission reductions are estimated to be 67,570 tCO<sub>2e</sub> per year. During the monitoring period of 01/04/2011 to 31/12/2011 (both days included), the net electricity supplied to the grid amount to 75,967 MWh /9-17/ and the emission reductions is 48,922 tCO<sub>2e</sub>. As per the registered PDD /1/, the starting date of the crediting period was fixed on 7/11/2008, the project was registered on 17/3/2009. However, the actual starting date of the crediting period was 19/3/2009 /60/. As per Gold Standard requirement, the actual start of crediting period for projects under regular cycle is defined as the start date of operation /60/, hence since the start date of the operation is 19/3/2009 the crediting period can start with this date .

The monitoring of the parameters is discussed in the following sections of this verification report.

### 3.2 Remaining issues (FARs) from previous validation or verification

Based on the review of the previous verification report /8/, no FARs were raised during the validation, the first periodic or second periodic verification.

### 3.3 Project implementation

From the on-site inspection of 28/02/2012, it is confirmed that the proposed project activity has been implemented and it is in operation in accordance with the project activity described in the registered PDD /01/. The project activity consists of the installation and operation of 15 wind turbines having 2.1 MW capacity each. All 15 wind turbines have been installed and the commissioning has been done in two different phases. In the 1<sup>st</sup> phase, 8 turbines (No. 1, 2, 3, 4, 5, 6, 10 and 15) were commissioned on 19/3/2009 /60/ and the remaining 7 turbines (No. 7, 8, 9, 11, 12, 13 and 14) were commissioned on 3/4/2009 in the 2<sup>nd</sup> phase /61/. Moreover, the project boundary in the registered PDD is in line with the actual project boundary. Anyway no change in the registered project activity /1/ occurred during the monitoring period from 01/04/2011 to 31/12/2011. The technical details of the wind turbines in the registered PDD /1/ have been checked with the technical specification from the "Statement of Compliance" issued by Germanischer Lloyd on 22/06/ 2007 /53/.

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

$$ER_y = BE_y - PE_y - LE_y$$

Where:

## GOLD STANDARD VERIFICATION/CERTIFICATION REPORT

BE<sub>y</sub> baseline emissions in year *y* (tCO<sub>2</sub>e/yr)

PE<sub>y</sub> project emissions in year *y* (tCO<sub>2</sub>e/yr)

LE<sub>y</sub> leakage emissions in year *y* (tCO<sub>2</sub>e/yr)

The baseline emissions include the CO<sub>2</sub> emissions from electricity generation in fossil fuel fired power plants that are displaced due to the project activity, which is calculated by multiplying the electricity supplied to the grid (MWh) with the combined margin CO<sub>2</sub> emission factor for grid connected power generation in year. Since the project activity involves the generation of electricity by wind farm and does not result in greenhouse gas emission, and the energy generating equipments is not transferred from or to another activity, the project and leakage emissions account to zero.

### 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/ and in addition the methodological tool "Tool to calculate the emission factor for an electricity system" version 01.1 /54/. 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 /55/.

### 3.4.2 Deviation in GHG emission reduction

Not applicable, as there is no deviation in additionality or baseline to the GS guidance.

### 3.4.3 Compliance of monitoring with monitoring plan

The monitoring plan in the monitoring report version 4.0 of 04/06/2012 for the period of 01/04/2011 to 31/12/2011 (both days included) /2/ complies with the monitoring plan in the registered PDD /1/, moreover, it is confirmed that the monitoring plan and the monitoring methodology have been properly implemented and any changes in the monitoring plan occurred during the above monitoring period.

The only monitoring indicator is the electricity supplied by the project activity to the grid monitored by the calibrated electricity meter located at the transformer station (delivery point to the national grid) as described in the monitoring plan of the registered PDD /01/ and monitoring report /2/. Two electricity bi-directional meters have been installed, one is the main meter (serial number 368746) and the other is the backup meter (serial number 368745). All wind turbines (15) are connected to the described metering point. As per test protocol /52/, both electricity meters have the accuracy of 0.2s. Both the electricity meters, as confirmed through the on site visit, are sealed by the grid company. TEİAŞ, the grid company is responsible for the installation, calibration and maintenance of the devices based on national requirements/standards that means every year. Calibration reports issued by the grid company /52/ covering the whole monitoring period were checked and demonstrated the maintenance of the accuracy and that the electricity meters measured correctly.

The net power delivered from the project activity is determined by the electricity supplied to the grid minus the imported electricity from the grid, taking into account the transmission losses at the same time. This is the basis of the emission reductions calculations. The monthly protocols, signed by the project owner and the grid company, are used for the invoicing, which can be considered as the most reliable data sources. The net electricity exported to the grid during this monitoring period is 75,967 MWh, which has been double checked against the monthly protocols /9 – 17/. RINA can confirm that the values are consistent and complete for the whole monitoring period.

According to the monitoring plan in the registered PDD /01/ and in the monitoring report /02/, the project owner provided the monitoring of the sustainable indicators, including the employment quality and employment numbers. As per the Gold Standard requirements /55/, the "employment quality" indicator is used to evaluate the qualitative value of employment and the project owner considered training as an important issue to improve the job quality of employees. In December 2011, 14 employees of the wind power plant participated to the training course "Fire Protection" and "Health and Safety" organized by Sonas /24-51/. From 15 employees, the only person that did not attend the course was the site engineer. Due to development of other wind farms in the region by Ayen Enerji A.S., the site engineer is not staying more than 2 days per week at the project site, and is working in the development of the Korkmaz Wind Farm (24 MW) and Mordogan Wind Farm (30.75 MW) projects. Both projects are ongoing Gold Standard

## GOLD STANDARD VERIFICATION/CERTIFICATION REPORT

approval process with the project ID GS1017 for Mordogan and GS 1018 for Korkmaz. The local stakeholder consultation reports from these projects have been presented to the audit team /62-63/ to confirm the participation of the site engineer (Mr. GÜMRÜKÇÜ) as responsible in the interaction with the stakeholders and presentation of all technical matters of the projects mentioned above. Therefore it can be considered acceptable that the site engineer could not participate in the courses due to his excessive workload, as he is also responsible for the development of Mordogan and Korkmaz Wind Farms in addition to his involvement in the daily operation of Akbuk Wind Farm.

As mentioned in previous sections, RINA carried out a site inspection visiting the Akbuk Wind Farm. During the site visit, the key personnel of the plant were interviewed, confirming the operational and data collection procedure conducting in the renewable energy power plant. During the on site visit, Mr. Altuğ GÜMRÜKÇÜ, the Site Engineer, interfaced with the verification team. Based on that, RINA can confirm that the trainings provided by the PP during the monitoring period have been oriented to improve the employment quality of the employees.

The “livelihood of the poor (access to essential services)” indicator is used to evaluate contribution of the project to equitable distribution of wealth and opportunity. The project owner, as established in the monitoring plan of the registered PDD /01/, built a bazaar area for the public in Akyeniköy Municipality. From the on-site inspections during first and second verification/08/, it is confirmed that the new bazaar area at Akyeniköy, financed by the project owner has been completed. The bazaar is operating throughout the year, which is organized once per week. The bazaar area, which is located in a public area within the Akyeniköy Municipality; can be used by people from the closest villages for selling/buying products in a comfortable and clean condition. It thus enhances their access to essential services. Before the implementation of the bazaar, as stated in the registered PDD /1/, there was no bazaar area in the region and the streets were used by the locals as the bazaar area once a week, which led to congestion and product hygiene problems. The bazaar was not visited any more in this periodic verification, as it is stated in the registered PDD /01/ that the bazaar should be monitored only during first verification.

The “employment (numbers)” 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. The total employees actually involved in operation at the plant are 15. During the on site inspection, it was confirmed that 3 persons left the project company /18-20/, 2 of them started in another projects that are being developed by the company /21-22/. The contract cancelling agreements and the re-employment agreements have been assessed.

The following parameters have been monitored in accordance to the monitoring plan in the registered PDD /01/ 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 <sub>grid,CM</sub> Combined Margin emission factor.	TEİAŞ – grid company official data source.. Registered PDD /01/	0.644 tCO <sub>2</sub> /MWh.	According to the approved methodology ACM0002 version 07 and the methodological tool “tool to calculate the emission factor for an electricity system” version 01.1, 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.

## GOLD STANDARD VERIFICATION/CERTIFICATION REPORT

### 3.4.3.2 Monitored data

DATA/PARAMETER	EGy
Data Unit	MWh
Description	Electricity supplied by the project activity to the grid.
Source of data to be used	Electricity meters; monthly grid company protocols.
Value data for the monitoring period	75,967 MWh
Measuring and reporting frequency; recording procedure.	Data are recorded every 15 minutes, hourly and monthly aggregation is made. This is in line with the monitoring plan in the registered PDD /1/ and in the monitoring report /02/.
Type of monitoring equipment and its accuracy.	Two electricity bi-directional meters (ELSTER, with an accuracy of 0.2s) are installed, one is the main meter (serial number 368746) and the other one is the backup meter (serial number 368745) as it could be observed during site visit and is also included in the meter test protocol /52/.
Is accuracy of the monitoring equipment as stated in the PDD?	The registered PDD /1/ does not mention the accuracy of the monitoring equipment as it was not confirmed at the time for preparing the PDD, but it can be confirmed at this step that the meter accuracy is in line with local regulations as is controlled by the national electricity authority/52/.
Calibration frequency/interval	TEİAŞ, the grid company, is responsible for the calibration and maintenance of the devices. The calibration frequency is established based on national requirements/standards /57/ that means every year. The following calibration reports have been checked and confirm that the electricity meters correctly functioned for the whole monitoring period. Main meter – serial number 368746: Electricity meter test protocol issued by TEİAŞ Türkiye Elektrik İletim Anonim Şirketi Genel Müdürlüğü on 20/01/2011 /52/.  Back up meter – serial number 368745: Electricity meter test protocol issued by TEİAŞ Türkiye Elektrik İletim Anonim Şirketi Genel Müdürlüğü on 20/01/2011 /52/.
How were the values in the monitoring report verified and cross-checked?	The net electricity exported to the grid has been double checked against the monthly protocols /9 – 17/ signed in conjunction by the project owner and the grid company. Furthermore, the measured electricity of the main metered is compared with the check meters, no significant deviation was found, and the data was within the permissible limit for the period under verification. The registered PDD /1/ does not mention the exact frequency but it refers to regular calibration and

## GOLD STANDARD VERIFICATION/CERTIFICATION REPORT

	<p>maintenance. The meter test results confirmed the correct function of the measurement instrument, no replacement or calibration was necessary.</p>
<p>Does the data management (from monitoring equipment to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions?</p>	<p>The electricity meter records data every 15 minutes and the aggregated hourly. A monthly aggregation is made. By the end of each month, a personnel from the grid company in conjunction with the project owner read the value on the electricity meter and considers it for invoicing. A protocol is issued and signed by both parties; data from the monthly protocols are transferred to the excel sheet used for the emission reduction calculations /23/. The plant manager is responsible for monitoring issues within the project activity.</p>
<p>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?</p>	<p>All data were available for the whole monitoring period.</p>

## GOLD STANDARD VERIFICATION/CERTIFICATION REPORT

### 3.4.3.3 Gold Standard sustainability monitored parameters

Data variable	Source of Data	Reported value for the project period
Employment Job quality	List and training Certificates	2 trainings
<b>Assessment</b>		
To improve job quality of employees the project owner carried out two specific trainings. The training certificates have been checked /24-51/.		
Data variable	Source of Data	Reported value for the project period
Livelihood of the poor	Building of a new bazaar area at Akyeniköy Municipality.	Completed
<b>Assessment</b>		
During the second verification site visit /08/, a stakeholder was interviewed by RINAs local expert in order to confirm the continuous operation of the Bazaar. The improvement of the region through the construction of the bazaar has been confirmed during the previous site visits. No visit was performed in this site assessment, as it is not required by the registered PDD /01/.		
Data variable	Source of Data	Reported value for the project period
Employment numbers	Number of Jobs created	15 people currently employed.
<b>Assessment</b>		
In this monitoring period (01/04/2011 to 31/12/2011), 3 employees left the company /18-20/, from which 2 were contracted to work in the development of Mordogan and Korkmaz Wind Farm projects of Ayen Enerji A. S. /21-22/. Information from the social security has -been used for cross-checking /58/.		

## GOLD STANDARD VERIFICATION/CERTIFICATION REPORT

### 3.4.4 Accuracy of emission reduction calculations

The emission reduction calculations provided in the spreadsheet /23/ 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 4.0 of 04/06/2012 /2/ is equivalent to 48,922 tCO<sub>2</sub>e. The reported emission reductions are 4% lower than the estimated emission reduction of 50,909 tCO<sub>2</sub>e 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

The accuracy of the GS indicators of sustainable development can be considered as very high, taking into account that all indicators could be assessed with official 3rd party documentation. Job quality through the training and certificates provided by an external company/24-51/, and the employment number through social security documentation/18-22/ /58/.

### 3.4.6 Management system and quality control

The monitoring manual /56/ made in place at beginning of the monitoring activities for the Project which covers all the procedures required as per the approved methodology ACM0002 /06/ and the validated monitoring plan/01/, has been followed for carrying out the monitoring of the actual monitoring period. To guarantee the accuracy of the monitoring data periodical calibration of the installed monitoring equipment has been carried out; the original data from the electricity meters are edited monthly in the protocol provided by the grid company /9-17/. The data from the protocols are transferred to the Excel sheet used for the emission reductions calculation.

The calculation of VERs for the third verification period is carried out through the spreadsheet "1201120 3PV Emission Reduction Calculation" /23/. The on-site visit at Akbük plant confirmed that the monitoring and reporting is carried out consistently and in line with the established procedures.

# GOLD STANDARD VERIFICATION/CERTIFICATION REPORT

## 4 VERIFICATION AND CERTIFICATION OPINION

RINA Services Spa (RINA) has performed verification of the emission reductions reported for the project activity “Akbük Wind Farm Project - Turkey” in Turkey, GS Registration Reference N° 436, for the period 01/04/2011 to 31/12/2011, with regard to the relevant requirements for GS activities.

The project participants of the “Akbük 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 03 of 03/03/2009
- 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 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 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 4.0 of 04/06/2012 for the “Akbük Wind Farm Project - Turkey” project in Turkey for the period 01/04/2011 to 31/12/2011 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 generation 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 01/04/2011 to 31/12/2011 amount to 48,922 tCO<sub>2</sub>e.

GHG Emission Reductions or Removals	tCO <sub>2</sub> e
Baseline Emissions	<b>48,922</b>
Project Emissions	<b>0</b>
Leakage	<b>0</b>
<b>Net GHG emission reductions or removals</b>	<b>48,922</b>

Munich, 05/06/2012



Sergio Degener  
CDM/GS Team Leader  
RINA Services S.p.A.

Genova, 29/06/2012



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

## **GOLD STANDARD VERIFICATION/CERTIFICATION REPORT**

### **APPENDIX A**

### **GOLD STANDARD VERIFICATION PROTOCOL**

## GOLD STANDARD VERIFICATION/CERTIFICATION REPORT

### TABLE 1 REQUIREMENTS CHECKLIST

Checklist Question		Reference	MoV <sup>1</sup>	Comments	Draft Conclusion	Final Conclusion
<b>A Description of Project Activity</b>						
A.1	Title of the project activity, revision number and date of Monitoring Report	/1/	DR	The title of the project activity as per the registered PDD and per the monitoring plan is: Akbük Wind Farm Project – Turkey. The monitoring report is dated 04/06/2012 and the version is 4.0.		OK
A.2	Is the actual implementation and operation of the proposed project activity in accordance with the project activity in the registered PDD?	/53/	DR I	The Monitoring Report version 4.0 of 04/06/2012 includes an explanation about the two commissioning phases. Technical details of the wind turbines in the registered PDD have been checked with the technical specification from the “Statement of Compliance” prepared by Germanischer Lloyd. The technical details in the PDD are in compliance with the technical documentation provided by the manufacturer.  The installation and operation of 15 wind turbines having 2.1 MW capacity each have been installed and the commissioning has been done in two different phases. In the 1 <sup>st</sup> phase 8 turbines (No. 1, 2, 3, 4, 5, 6, 10 and 15) have been commissioned on 19/3/2009 and the in the 2 <sup>nd</sup> phase the remaining 7 turbines (No. 7, 8, 9, 11, 12, 13 and 14) were commissioned on 3/4/2009.		OK
A.3	Methodology applied for the registered project activity	/1/	DR	The registered project activity applies		OK

<sup>1</sup> MoV: DR document review, I interview, CC cross checking

**GOLD STANDARD VERIFICATION/CERTIFICATION REPORT**

Checklist Question		Reference	MoV <sup>1</sup>	Comments	Draft Conclusion	Final Conclusion
		/6/ /54/		the approved baseline and monitoring methodology ACM0002 version 07 of 30/11/2007; in addition it has been applied the methodological tool to calculate the emission factor for an electricity system, version 01.1 of 29 July 2008.		
<b>B Monitoring</b>						
<b>B.1 Monitoring plan</b>						
B.1.1	Does the monitoring plan included in the registered GS project activity comply with the applied methodology?	/1/ /2/ /6/	DR I	Yes, the monitoring plan complies with the applied methodology ACM0002 version 07 by the registered GS project activity.		OK
B.1.2	Does the monitoring comply with the monitoring plan in the registered PDD?	/1/ /2/ /3/ /6/ /7/	DR I	Yes, the monitoring plan complies with the monitoring plan in the registered PDD. Data and parameters monitored are listed in the following section of this verification protocol.		OK
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/	DR I	Yes, the sustainability indicators in the monitoring report comply with the sustainability indicators established by the Appendix D of the Gold Standard requirements.		OK
B.1.4	Have any changes been made to the key sustainable development indicators?	/1/ /2/ /3/	DR I	No, any change occurred to the key sustainable development indicators during the monitoring period from 01/04/2011 to 31/12/2011.		OK
<b>B.2 Data and parameters that are available at validation and that are not monitored</b>						
B.2.1	Which parameters were available at validation and how were they verified?	/1/ /2/	DR	The only parameter available at validation and that no need to be		OK

## GOLD STANDARD VERIFICATION/CERTIFICATION REPORT

Checklist Question		Reference	MoV <sup>1</sup>	Comments	Draft Conclusion	Final Conclusion
		/6/ /7/ /8/		monitored is the Combined emission factor of the national grid. According to the approved methodology ACM002 version 07 and the methodological tool to calculate the emission factor for an electricity system version 01.1, 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 0.644 tCO <sub>2</sub> /MWh		
<b>B.3 Data and parameters monitored</b>						
B.3.1	Data/Parameter monitored / Data unit / Description / Source of data to be used / Value data for the monitoring period	/1/ /2/ /6/ /7/	DR I	EGy : electricity supplied by the project activity to the grid. The parameter is measured in MWh and it is measured by the electricity meter located at the transformer station at the delivery point to the national grid.		OK
B.3.2	Is the measurement equipment described? Is the accuracy of the measurement equipment addressed and deemed appropriate?	/1/ /2/ /3/ /52/	DR I	Yes. Two electricity bi-directional meters are installed, one is the main meter (serial number 368746) and the other one is the backup meter (serial number 368745). As per the manufacturer's specification the electricity meter has the accuracy of 0.2s.		OK
B.3.3	Are the requirements for maintenance and calibration of measurement equipment described and deemed appropriate?	/1/ /2/ /52/	DR I	As per the registered PDD the electricity meters are subjected to a regular maintenance and regime by the grid company to ensure the accuracy of the		OK

**GOLD STANDARD VERIFICATION/CERTIFICATION REPORT**

Checklist Question	Reference	MoV <sup>1</sup>	Comments	Draft Conclusion	Final Conclusion
			instruments. TEİAŞ is responsible for calibration and maintenance of the devices. Both electricity meters has been checked for correct recording as demonstrated in the test protocols dated 20/01/2011.		
B.3.4 Is the monitoring frequency adequate for all monitoring parameters? Is it in line with the registered monitoring plan?	/1/ /2/ /7/ /52/	DR I	The calibration frequency is established based on national requirements/standards that means every year. The registered PDD does not mention the exact frequency but it refers to regular calibration and maintenance. During the on site inspection the calibration reports were checked and they covers the monitoring period. TEİAŞ Türkiye Elektrik İletim Anonim Şirketi Genel Müdürlüğü – Electricity meter test protocol (serial number 368745) of 20/01/2011; TEİAŞ Türkiye Elektrik İletim Anonim Şirketi Genel Müdürlüğü – Electricity meter test protocol (serial number 368746) of 20/01/2011.  The test result shows a correct function of the electricity meters.		OK
B.3.5 Is the recording frequency adequate for all monitoring parameters? Is it in line with the registered monitoring plan?	/1/ /2/ /9-17/	DR I	Data are recorded every 15 minutes, hourly and monthly aggregation is made. This is in line with the monitoring plan in the registered PDD. The net electricity production supplied to the grid is measured taking into account the line losses and the electricity consumed by the power plant.		OK

## GOLD STANDARD VERIFICATION/CERTIFICATION REPORT

Checklist Question		Reference	MoV <sup>1</sup>	Comments	Draft Conclusion	Final Conclusion
B.3.6	Does data management (from monitoring equipment to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions?	/1/ /2/ /9-17/ /23/	DR, I	Every end of month the grid company in conjunction with the PP read the value on the electricity meter and considers it for invoicing. The protocol is signed by both parties. Protocols related to the monitoring period have been checked during the on site inspection. The data from the protocols are transferred to the excel sheet used for the emission reduction calculations. The plant manager is responsible for monitoring issues within the project activity.		OK
<b>B.4 Monitoring of GS indicators of sustainable development environmental impacts</b>						
B.4.1	Data/Parameter monitored / Data unit / Description / Source of data to be used / Value data for the monitoring period	/1/ /2/ /3/ /7/		No. The project owner according to the Gold Standard requirements provided to monitor the sustainable indicators as per the registered PDD like: employment quality, livelihood of the poor (access to essential services), employment numbers.		OK
B.4.2	Is the monitoring in line with the registered monitoring plan?	/24-51/ /18-22/ /58/	DR I	Yes. 1) Employment (quality). The number of trainings and attendance of employees have been monitored. During the monitoring period (during December 2011) two different trainings were performed, Health and Safety and Fire Protection (14 participants each). At this purpose the list of participants and the related certificates of completion of the training have been checked during the on site inspection.		OK

**GOLD STANDARD VERIFICATION/CERTIFICATION REPORT**

Checklist Question	Reference	MoV <sup>1</sup>	Comments	Draft Conclusion	Final Conclusion
			<p>2) Livelihood of the poor (access to essential services). The project owner, as established in the registered PDD, built a new bazaar area for within Akyeniköy Municipality area for the use of public. The bazaar was not visited during this site visit, as it is established in the PDD that it shall be monitored only during the first verification.</p> <p>3) Employment (numbers). The project creates jobs in the project area. The total employees actually in operation at the plant are 15. During the on site inspection the job contracts and the proof of social security have been checked. 3 employees left the company, from which 2 were contracted to work in the development of Mordogan and Korkmaz Wind Farm projects of Ayen Enerji A. S..</p>		
B.4.3	Does the monitoring report provide for the collection and archiving of relevant data concerning environmental, social and economic impacts?	/2/	DR I	Yes, all the documented evidences related to the sustainable parameters monitored is collected and kept.	OK
<b>B.5 Management, quality assurance and quality control</b>					
B.5.1	How has it been assessed that the monitoring arrangements described in the monitoring plan are feasible within the project design?	/2/ /23/	DR I	An on site inspection has been performed on 28/02/2012 and it is confirmed that the monitoring arrangements in the monitoring plan are feasible within the project design.	OK

**GOLD STANDARD VERIFICATION/CERTIFICATION REPORT**

Checklist Question	Reference	MoV <sup>1</sup>	Comments	Draft Conclusion	Final Conclusion
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)?	/9-17/ /23/	DR I	The original data from the electricity meter are edited monthly in the protocol signed by the project owner and by grid company. The data from the protocols are transferred to the excel sheet used for the emission reduction calculations.		OK
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?	/1/ /2/	DR	A Monitoring Manual has been provided establishing quality assurance and quality control procedures to ensure that the emission reductions resulting from the project can be reported and verified.		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 CERs, for this project activity, whichever occurs later?	/1/ /4/ /2/	DR I	The registered PDD expects storing the collected data during the monitoring period at least two years after the last issuance of VERs.		OK



RINA

**CERTIFICATO DI QUALIFICA  
QUALIFICATION CERTIFICATE**

Si attesta che il sig./sig.ra:  
We declare that Mr/Mrs/Ms:

**Sergio Alejandro Degener**

è qualificato come<sup>1</sup>:  
is qualified as:

**CDM-TEC, CDM-VAL, CDM-VER, CDM-TL  
VCS-VAL, VCS-VER, VCS-TL  
GS-VAL, GS-VER, GS-TL  
SCS-VAL, SCS-VER, SCS-TL**

per le seguenti aree tecniche:  
for the following technical areas:

**1.2, 13.1, 13.2, 15.2**

AREE TECNICHE TECHNICAL AREAS	DESCRIZIONE DELL'AREA TECNICA TECHNICAL AREA DESCRIPTION	SCOPO SETTORIALE SECTORAL SCOPE
1.2	Energy generation from renewable energy sources	1
13.1	Waste handling and disposal	13
13.2	Animal Waste Management	13
15.2	Animal Waste Management	15

in accordo alle istruzioni della Divisione Certificazione.  
in accordance with the instructions of the Certification Division.

REVISIONE REVISION	DATA DATE	MOTIVAZIONI PER LA REVISIONE REASON FOR THE REVISION
0	04-04-2011	-
1	06-06-2011	Main changes: VCS-TL, GS-TL and SCS-VAL, SCS-VER, SCS-TL

Il Responsabile di Schema  
Scheme Manager

Il Resp. Tecnico della Divisione  
Head of CRT

<sup>1</sup> Legend:

VAL: Validator  
VER: Verifier  
TEC: Technical Expert  
TL: Team Leader  
FIN-EXP: Financial Expert  
DET: Determiner

CDM: Clean Development Mechanism  
VCS: Verified Carbon Standard:  
GS: Gold Standard  
SCS: SocialCarbon Standard  
JI: Joint Implementation

RINA Services S.p.A. è accreditato da UNFCCC, quale Entità Operativa Designata (DOE), per condurre la Validazione e la Verifica di Progetti CDM, da VCSA per condurre la Validazione e la Verifica di Progetti VCS, da GS Foundation, per condurre la Validazione e la Verifica di Progetti GS, da Ecologica Institute per condurre la Validazione e la Verifica di rapporti SCS

RINA Services S.p.A. is accredited by the UNFCCC, as Designated Operational Entity (DOE), to carry out Validation and Verification of CDM Projects, by the VCSA, to carry out Validation and Verification of VCS Projects, by the GS Foundation, to carry out Validation and Verification of GS Projects and by the Ecologica Institute, to carry out Validation and Verification of SCS Reports



RINA

**CERTIFICATO DI QUALIFICA GHG  
GHG QUALIFICATION CERTIFICATE**

Si attesta che il sig./sig.ra:  
We declare that Mr/Mrs/Ms:

**Hasan Zor**

è qualificato come<sup>1</sup>:  
is qualified as:

**LOCAL EXPERT  
(Turkish mother tongue)**

per le seguenti aree tecniche:  
for the following technical areas:

-

AREA TECNICA TECHNICAL AREA	CODICE RINA RINA CODE	SCOPO SETTORIALE SECTORAL SCOPE	CODICE RINA RINA CODE
-	-	-	-

in accordo alle istruzioni della Divisione Certificazione.  
in accordance with the instructions of the Certification Division.

REVISIONE REVISION	DATA DATE	MOTIVAZIONI PER LA REVISIONE REASON FOR THE REVISION
0	23-03-2011	-

Il Responsabile di Schema  
Scheme Manager

Il Resp. Tecnico della Divisione  
Head of CRT

<sup>1</sup> Legend:

VAL: Validator  
 VER: Verifier  
 TEC: Technical Expert  
 TL: Team Leader  
 TEC-FIN: Financial Expert  
 DET: Determiner

CDM: Clean Development Mechanism  
 VCS: Verified Carbon Standard:  
 GS: Gold Standard  
 SCS: Social Carbon Standard  
 JI: Joint Implementation

RINA Services S.p.A. è accreditato da UNFCCC, quale Entità Operativa Designata (DOE), per condurre la Validazione e la Verifica di Progetti CDM, da VCSA, quale Validatore /Verificatore VCS, per condurre la Validazione e la Verifica di Progetti VCS, da GS Foundation, quale Validatore / Verificatore GS, per condurre la Validazione e la Verifica di Progetti GS, da Ecologica Institute quale Validatore/Verificatore SCS, per condurre la Validazione e la Verifica di rapporti SCS

*RINA Services S.p.A. is accredited by the UNFCCC, as Designated Operational Entity (DOE), to carry out Validation and Verification of CDM Projects, by the VCSA, as VCS Validator/Verifier, to carry out Validation and Verification of VCS Projects, by the GS Foundation, as GS Validator/Verifier, to carry out Validation and Verification of GS Projects and by the Ecologica Institute, as SCS Validator/Verifier, to carry out Validation and Verification of SCS Reports*



RINA

### CERTIFICATO DI QUALIFICA QUALIFICATION CERTIFICATE

Si attesta che il sig./sig.ra:  
We declare that Mr/Mrs/Ms:

Rita Valoroso

è qualificato come<sup>1</sup>:  
is qualified as:

CDM-TEC, CDM-VAL, CDM-VER, CDM-TL, CDM-FIN-EXP  
VCS-VAL, VCS-VER, VCS-TL  
GS-VAL, GS-VER, GS-TL  
SCS-VAL, SCS-VER, SCS-TL

per le seguenti aree tecniche:  
for the following technical areas:

1.2, 13.1

AREE TECNICHE TECHNICAL AREAS	DESCRIZIONE DELL'AREA TECNICA TECHNICAL AREA DESCRIPTION	SCOPO SETTORIALE SECTORAL SCOPE
1.2	Energy generation from renewable Energy sources	1
13.1	Waste Handling and Disposal	13

in accordo alle istruzioni della Divisione Certificazione.  
in accordance with the instructions of the Certification Division.

REVISIONE REVISION	DATA DATE	MOTIVAZIONI PER LA REVISIONE REASON FOR THE REVISION
0	18-01-10	-
1	03-05-10	Annual Revision
2	18-10-10	Changes in certificate module
3	04-01-11	Removed TAs taken through the ETS/EPD verifications/validations
4	17-03-11	Changes due to new accreditation standard
5	14-07-11	Annual Revision

Il Responsabile di Schema  
Scheme Manager

Il Resp. Tecnico della Divisione  
Head of CRT

<sup>1</sup> Legend:

VAL: Validator  
VER: Verifier  
TEC: Technical Expert  
TL: Team Leader  
FIN-EXP: Financial Expert  
DET: Determiner

CDM: Clean Development Mechanism  
VCS: Verified Carbon Standard:  
GS: Gold Standard  
SCS: SocialCarbon Standard  
JI: Joint Implementation

RINA Services S.p.A. è accreditato da UNFCCC, quale Entità Operativa Designata (DOE), per condurre la Validazione e la Verifica di Progetti CDM, da VCSA per condurre la Validazione e la Verifica di Progetti VCS, da GS Foundation, per condurre la Validazione e la Verifica di Progetti GS, da Ecologica Institute per condurre la Validazione e la Verifica di rapporti SCS

RINA Services S.p.A. is accredited by the UNFCCC, as Designated Operational Entity (DOE), to carry out Validation and Verification of CDM Projects, by the VCSA, to carry out Validation and Verification of VCS Projects, by the GS Foundation, to carry out Validation and Verification of GS Projects and by the Ecologica Institute, to carry out Validation and Verification of SCS Reports



RINA

**CERTIFICATO DI QUALIFICA  
QUALIFICATION CERTIFICATE**

Si attesta che il sig./sig.ra:

**Wing Yu Tong**

We declare that Mr/Mrs/Ms:

è qualificato come<sup>1</sup>:  
is qualified as:

**CDM-TEC, VCS-TEC, GS-TEC, VCS-VAL**

per le seguenti aree tecniche:  
for the following technical areas:

**1.2**

AREE TECNICHE TECHNICAL AREAS	DESCRIZIONE DELL'AREA TECNICA TECHNICAL AREA DESCRIPTION	SCOPO SETTORIALE SECTORAL SCOPE
1.2	Energy generation from renewable Energy sources	1

in accordo alle istruzioni della Divisione Certificazione.  
in accordance with the instructions of the Certification Division.

REVISIONE REVISION	DATA DATE	MOTIVAZIONI PER LA REVISIONE REASON FOR THE REVISION
0	04-12-2010	-
1	17-03-2011	Changes due to new accreditation standard
2	25-07-2011	Annual Revision
3	09-03-2012	Updating qualification as VCS validator
4	19-03-2012	Updating qualification as VCS-TEC, GS-TEC

Il Responsabile di Schema  
Scheme Manager

Il Resp. Tecnico della Divisione  
Head of CRT

<sup>1</sup> Legend:

VAL: Validator  
VER: Verifier  
TEC: Technical Expert  
TL: Team Leader  
FIN-EXP: Financial Expert  
DET: Determiner

CDM: Clean Development Mechanism  
VCS: Verified Carbon Standard  
GS: Gold Standard  
SCS: SocialCarbon Standard  
JI: Joint Implementation

RINA Services S.p.A. è accreditato da UNFCCC, quale Entità Operativa Designata (DOE), per condurre la Validazione e la Verifica di Progetti CDM, da VCSA per condurre la Validazione e la Verifica di Progetti VCS, da GS Foundation, per condurre la Validazione e la Verifica di Progetti GS, da Ecologica Institute per condurre la Validazione e la Verifica di rapporti SCS

RINA Services S.p.A. is accredited by the UNFCCC, as Designated Operational Entity (DOE), to carry out Validation and Verification of CDM Projects, by the VCSA, to carry out Validation and Verification of VCS Projects, by the GS Foundation, to carry out Validation and Verification of GS Projects and by the Ecologica Institute, to carry out Validation and Verification of SCS Reports