



RINA

# GOLD STANDARD VERIFICATION/CERTIFICATION REPORT

**Final**


“Akbuk Wind Farm Project - Turkey”  
in  
Turkey

Monitoring period: 01/01/2012 to 31/12/2012

Report N°2013-DG-01-MD

Revision N°1.2

## GOLD STANDARD VERIFICATION/CERTIFICATION REPORT

|   |   |  |
|---|---|--|
| <b>Project Title:</b><br>Akbük Wind Farm Project - Turkey   | <b>Country:</b><br>Turkey                             | <b>Estimated VERs (tCO<sub>2</sub>e):</b><br>67,570 annual average |
| <b>GS Registration Reference N°:</b><br>436   | <b>Monitoring period:</b><br>01/01/2012 to 31/12/2012 | <b>Ce rtified VERs (tCO<sub>2</sub>e):</b><br>65,266               |
| <b>Client:</b><br>Ayen Enerji A.S.  | <b>Client contact:</b><br>Hakan Demir                 |  |
| <b>Report No.:</b><br>2013-DG-01-MD   | <b>Revision:</b><br>1.2                               | <b>Date of this report:</b><br>11/06/2013                          |
| <b>Approved by (Final Report – Decision Maker):</b><br><br>Roberto Cavanna |   | <b>Date of approval:</b><br>14/06/2013                             |

### Methodology

| Number: | Version:         | Title:   | Scale | SS(s): |
|---------|------------------|--|-------|--------|
| ACM0002 | 07 of 30/11/2007 | Consolidated baseline methodology for grid-connected electricity generation from renewable sources | Large | 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 01/01/2012 to 31/12/2012, 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 TÜV Rheinland (validation report N° 2008-9215 issued on 18/12/2008) and it was registered on 17/03/2009 under the GS registration reference N° 436.

The GHG emission reductions were calculated on the basis of the approved methodology ACM0002, version 07, and consolidated baseline methodology for grid-connected electricity generation 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 2 of 25/03/2013, 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 7.0.0 of 31/11/2007. Hence, RINA is able to certify that the emission reductions from the project during the monitoring period 01/01/2012 to 31/12/2012 amount to 65,266 tCO<sub>2</sub>e.

|  |                                |
|--|--------------------------------|
| Baseline Emissions                         | 65,266 tCO <sub>2</sub> e      |
| Project Emissions                          | 0 tCO <sub>2</sub> e           |
| Leakage                                    | 0 tCO <sub>2</sub> e           |
| <b>Net GHG emission reductions/removal</b> | <b>65,266 tCO<sub>2</sub>e</b> |

|  |   |
|--|---|
| <b>Work carried out by:</b><br>Isil TIMUROGLU<br>Tugce KIRATLI | <input checked="" type="checkbox"/> No distribution without permission from the Client or organizational unit responsible<br><input type="checkbox"/> Strictly confidential<br><input type="checkbox"/> Unrestricted distribution |
|--|---|

|  |   |
|--|---|
| <b>Work verified by (Final Report – Authorized officer signing for the DOE)</b><br><br><br>Laura Severino | <b>Keywords:</b><br>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 <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             |
| 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                       |
| 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)                                     |
| UNFCCC            | United Nations Framework Convention on Climate Change |
| VERs              | Verified Emission Reduction(s)                        |
| VVS               | Validation and Verification Standard                  |



# 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   | 7           |
| 2.3                      | Resolution of outstanding issues                                 | 8           |
| 2.4                      | Internal quality control   | 9           |
| 2.5                      | Verification team and the technical reviewer(s)                  | 10          |
| 3                        | VERIFICATION FINDINGS .....                                      | 10          |
| 3.1                      | Description of the project activity                              | 10          |
| 3.2                      | Remaining issues (FARs) from previous validation or verification | 11          |
| 3.3                      | Project implementation   | 11          |
| 3.4                      | Methodology for determining Emission Reductions.                 | 11          |
| 4                        | VERIFICATION AND CERTIFICATION OPINION.....                      | 16          |

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 01/01 /2012 to 31/12/2012.

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 “Akbük Wind Farm Project - Turkey” project in Turkey for the period 01/01/2012 to 31/12/2012.

### 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 Standard, and relevant decisions of the COP/MOP and the CDM EB and applying standard auditing techniques.

## GOLD STANDARD VERIFICATION/CERTIFICATION REPORT

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 2.0 of 25/03/2013 /2/ and previous versions, the emission reduction calculations provided in the form of a spreadsheet, “130107 4PV Emission Reduction Calculation” version 04 of 07/01/2013 /8/, the approved baseline and monitoring methodology ACM0002 version 07 /6/ and all the documentation provided to support the monitoring period /1-23/ 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, the previous verification report revision 2 of 29/06/2012 /9/ and the validation report revision 01 of 18/12/2008 /7/ for the project, were reviewed.

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

|      |  |
|------|--|
| /1/  | Ecofys Netherlands BV: CDM-PDD for “Akbük Wind Farm Project - Turkey” in Turkey, version 03 of 03/03/2009  |
| /2/  | Solvay Energy Services: Monitoring report for “Akbük Wind Farm Project - Turkey” in Turkey, version 2.0 of 25/03/2013<br>Solvay Energy Services: Monitoring report for “Akbük Wind Farm Project - Turkey” in Turkey, version 1.0 of 06/02/2013   |
| /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: Validation and Verification Standard, version 03.0 of 23/11/2012  |
| /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/  | TÜV Rheinland: Validation Report for “Akbük Wind Farm Project - Turkey” No. 2008-9215 revision 01 of 18/12/2008  |
| /8/  | Solvay Energy Services: Emission Reduction Calculation Spreadsheet “130107 4PV Emission Reduction Calculation” version 04 of 07/01/2013  |
| /9/  | RINA S.p.A: Verification Report for “Akbük Wind Farm Project - Turkey” in Turkey, Report No: 2012-DG-10-MD version 2 of 29/06/2012   |
| /10/ | Turkish Electricity Transmission Company (TEIAS)<br>Monthly Meter Reading Protocol January 2012 of 01/02/2012<br>Monthly Meter Reading Protocol February 2012 of 01/03/2012<br>Monthly Meter Reading Protocol March 2012 of 01/04/2012<br>Monthly Meter Reading Protocol April 2012 of 01/05/2012<br>Monthly Meter Reading Protocol May 2012 of 01/06/2012<br>Monthly Meter Reading Protocol June 2012 of 01/07/2012<br>Monthly Meter Reading Protocol July 2012 of 01/08/2012<br>Monthly Meter Reading Protocol August 2012 of 01/09/2012<br>Monthly Meter Reading Protocol September 2012 of 01/10/2012<br>Monthly Meter Reading Protocol October 2012 of 01/11/2012<br>Monthly Meter Reading Protocol November 2012 of 01/12/2012 |

## GOLD STANDARD VERIFICATION/CERTIFICATION REPORT

|      |   |
|------|---|
|      | Monthly Meter Reading Protocol December 2012 of 01/01/2013  |
| /11/ | Social Security Institution: Disemployment Proclamation of Arif Cam – 30/09/2012<br>Social Security Institution: Disemployment Proclamation of Durmus Mersin – 28/05/2012<br>Social Security Institution: Disemployment Proclamation of Oguz Ercakir – 30/09/2012<br>Social Security Institution: Disemployment Proclamation of Oznur Yamankacar – 30/09/2012<br>Social Security Institution: Disemployment Proclamation of Suleyman Efe – 30/09/2012<br>Social Security Institution: Disemployment Proclamation of Suleyman Herdemgil – 30/09/2012 |
| /12/ | Ayen Enerji A.S.: The excell sheet of Akbuk Wind Farm Personnel List Verification of 2012   |
| /13/ | Ayen Enerji A.S.: Training-Fire Drill and Evacuation Trial Attendance List of 14/06/2012  |
| /14/ | Ayen Enerji A.S.: Training-Fire Drill and Evacuation Trial Protocol of 14/06/2012   |
| /15/ | The Energy Market Regulatory Authority: Communiqué for Measurement Devices used in the Electricity Market of 22/03/2003   |
| /16/ | The Ministry of Trade and Industry: Regulation of Metering and Testing of Metering Systems of 24/07/1994  |
| /17/ | The Energy Market Regulatory Authority: Electricity Market Balancing and Settlement Regulation of 14/04/2009  |
| /18/ | Turkish Electricity Transmission Company (TEIAS): Electricity Meter Test Reports serial number 368746 (main meter), of 25/01/2012<br>Turkish Electricity Transmission Company (TEIAS): Electricity Meter Test Reports serial number 368745 (back up meter) of 25/01/2012  |
| /19/ | Akbuk WPP and SECURITAS: Personnel Information Form for 6 Local Employee submitted on 13/03/2013  |
| /20/ | Social Security Institution: Payroll Sheet List for all Employees   |
| /21/ | Market Financial Settlement Center (PMUM): Screenshots of Monthly Electricity Records from 01/01/2012 to 31/12/12   |
| /22/ | Elster: Main Meter Calibration Report of 18/06/2008<br>Elster: Back-up Meter Calibration Report of 18/06/2008   |
| /23/ | The Gold Standard Foundation: Akbuk Wind Farm Project, Turkey(GS436) 2-week Issuance Review Period Document for 4 <sup>th</sup> Monitoring Period of 23/07/2012   |

### 2.2 On-site assessment

On 12-13/03/2013, RINA visited wind power plant located in Didim district, Aydin 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, to prevent violation or the risk of violating a safeguarding principle of the “Do No Harm” Assessment or to “neutralize” a Sustainable Development Indicator.

During on site visit, the mayor of the Akyenikoy was visited in his place. He was interviewed about the benefits and harms of the project. Also, Akyenikoy bazaar was discussed with him. He said that no negative feedback has been received from the stakeholders. In addition, monitoring report, emission reduction, trainings, calibration of the meters and PMUM data were discussed with the contact person.

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

## GOLD STANDARD VERIFICATION/CERTIFICATION REPORT

|     | Date       | Name and Role                                   | Organization     | Topic   |
|-----|------------|---|------------------|---|
| /a/ | 12/03/2013 | Hakan Demir<br><i>Project Developer</i>         | Ayen Enerji A.S. | Monitoring plan<br>Monitoring methodology<br>Monitoring data                |
| /b/ | 12/03/2013 | Erdinç Akay<br><i>Administrative Supervisor</i> | Ayen Enerji A.S. | Implementation status of the project<br>Monitoring equipments and operation |
| /c/ | 12/03/2013 | Hakan Oz<br><i>Operator</i>                     | Ayen Enerji A.S. | Calibration certificates<br>Training Certificates<br>Electricity Generation |
| /d/ | 13/03/2013 | Altug Gumrukcu<br><i>Technical Director</i>     | Ayen Enerji A.S. | Benefit of the project to the village                                       |
| /e/ | 13/03/2013 | Yusuf Deveci<br><i>Mayor</i>                    | Akyenikoy        | Local Employment<br>Project Effects   |

### 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.

# 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<br>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.

## GOLD STANDARD VERIFICATION/CERTIFICATION REPORT

### 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, GS Technical Expert   | TIMUROGLU | Isil       | Turkey  |
| Verifier in Training, Technical Expert in Training | KIRATLI   | Tugce      | Turkey  |
| Technical Reviewer                                 | VALOROSO  | Rita       | Italy   |

### 3 VERIFICATION FINDINGS

The findings of the verification related to the monitoring period from 01/01/2012 to 31/12/2012 as documented and described in the monitoring report version 2.0 of 25/03/2013 [/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.

|  |   |                                     |     |
|--|---|-------------------------------------|-----|
| <b>Project Participant(s)</b>                | Ayen Enerji A.S.  |                                     |     |
| <b>Project Title</b>                         | Akbük Wind Farm Project - Turkey  |                                     |     |
| <b>Location of the project</b>               | Didim District, Aydin Province of Turkey  |                                     |     |
| <b>Methodology(ies)</b>                      | "ACM0002", "Consolidated baseline methodology for grid-connected electricity from renewable sources", version 07 of 30/11/2007/ <a href="#">/6/</a> |                                     |     |
| <b>Sectoral Scope(s)</b>                     | 1   | <b>RINA's Technical Area(s)</b>     | 1.2 |
| <b>Registered PDD</b>                        | Revision 03 of 03/03/2009   |                                     |     |
| <b>Date of registration</b>                  | 17/03/2009  | <b>GS Registration Reference N°</b> | 436 |
| <b>Starting date of the crediting period</b> | 19/03/2009  |                                     |     |
| <b>Project's crediting period</b>            | 19/03/2009 to 18/03/2016  |                                     |     |
| <b>Monitoring period</b>                     | 01/01/2012 to 31/12/2012  |                                     |     |
| <b>Project documentation link</b>            | <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 power plant that consists of 15 wind turbines, each with a 2100 kW capacity and making the total installed capacity of 31.5 MW. The generated electricity is fed to the national grid. The estimated net electricity production is 105 GWh/year and the annual emission reductions are estimated to be 67,570 tCO<sub>2</sub>e. During the 4<sup>th</sup> monitoring period of 01/01/2012 to 31/12/2012 (both days included) the net electricity supplied to the grid amount to 101,345 MWh and the emission reductions to 65,266 tCO<sub>2</sub>e.

## GOLD STANDARD VERIFICATION/CERTIFICATION REPORT

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. The project activity aims to support the local economy by creating local employment and providing equipment locally.

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

Based on the review of the verification report /9/ and the Gold Standard issuance review period document /23/ no remaining issues were identified.

### 3.3 Project implementation

It was verified during the site visit conducted on 12-13/03/2013 that the proposed project activity has been implemented and it is in operation in accordance to the project activity described in the registered PDD /1/ and the validation report /7/. According to the registered PDD /1/ and first verification report /10/, the 7-year renewable crediting period starts on 7th of November 2008. However, due to a later commissioning, this starting date has been postponed to 19th of March 2009 and a notification of this change was sent to Gold Standards. Therefore the new dates of the crediting period are: 19/03/2009-18/03/2016.

The project activity consists of 15 wind turbines, each with a 2100 kW capacity and making the total installed capacity of 31.5 MW. Technical details of the wind turbines comply with the registered PDD /1/. It is confirmed during the site visit that all installed turbines are SUZLON type S88 turbine, each with an output of 2100 kW. The project boundary in the registered PDD /1/ is in line with the actual project boundary. The generated electricity is fed to the national grid.

No change in the registered PDD /1/ and previous monitoring period /9/ has been occurred during the 4<sup>th</sup> monitoring period of 01/01/2012 to 31/12/2012.

### 3.4 Methodology for determining Emission Reductions

$$ER_y = BE_y - PE_y - LE_y \quad (1)$$

Where:

$ER_y$  = Emission reduction in year y (tCO<sub>2</sub>e/yr)

$BE_y$  = Baseline emissions in year y (tCO<sub>2</sub>e/yr)

$PE_y$  = Project emissions in year y (tCO<sub>2</sub>e/yr)

$LE_y$  = Leakage in year y (tCO<sub>2</sub>e/yr)

Project emissions are negligible and no leakage has to be taken into account. So;

$$PE_y = 0$$

$$LE_y = 0$$

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:

$$ER_y = BE_y - EF_{\text{grid,CM}} * EG_y$$

Where:

$BE_y$  = Baseline emissions in tonnes CO<sub>2</sub>-eq

$EF_{\text{grid,CM}}$  = Grid emission factor in tCO<sub>2</sub>-eq/MWh

$EG_y$  = Electricity supplied to the Grid in MWh

## GOLD STANDARD VERIFICATION/CERTIFICATION REPORT

The electricity meters are measuring two parameters: The electricity supplied to the grid ( $EG_{\text{export}}$ ) and the electricity consumption from the grid ( $EG_{\text{import}}$ ). To achieve the net amount of supplied electricity, the difference has to be calculated:

$$EG_y = EG_{\text{export}} - EG_{\text{import}}$$

Where:

$EG_y$  = Net electricity supplied to the Grid in MWh

$EG_{\text{export}}$  = Electricity supplied to the Grid in MWh

$EG_{\text{import}}$  = Electricity consumption from the Grid in MWh

### 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 7.0.0 /6/. RINA confirms that the monitoring plan in the registered PDD /1/ complies with the applied CDM methodology and the sustainability indicators established by the Appendix D of the Gold Standard requirements /3/.

### 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 7.0.0 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 2 of 25/03/2013 and the previous version for the period of 01/01/2012 to 31/12/2012 (both days included) /2/ complies with the monitoring plan in the registered PDD /1/.

The only monitoring parameter is “Net electricity generation supplied to the grid ( $EG_y$ )” 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 Elster A1500 with serial number 368746 and the backup meter is Elster A1500 with serial number 368745 as confirmed during on site visit. The meters have the accuracy of 0.2s according to the electricity meter test reports /18/. The accuracy class of the meters complies with the “Communiqué for Measurement Devices used in the Electricity Market” /15/. The electricity meters are sealed by TEIAS as confirmed during the site visit. TEIAS is responsible for calibration and maintenance of the devices as per the registered PDD. The project owner has no control on the meters since the meters are sealed by the TEIAS. If any major discrepancy occurs between the two meters, TEIAS performs necessary calibration. The meters have been calibrated by the Elster on 18/06/2008 as confirmed through the calibration record /22/. 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 /15/. By the end of each month, the electricity generation supplied to the grid and electricity consumption from the grid is read remotely from the electricity meters through Automatic Meter Reading System (OSOS) by the TEIAS personnel. Also the PMUM records are available for the project participant. All protocols /10/ /21/ within this monitoring period was checked during the site visit. The PMUM records /21/ were crosschecked with the monthly meter reading protocols /10/. The monthly meter reading protocols, PMUM records and emission reduction calculation spreads sheet /8/ are in line. During the monitoring period of 01/01/2012 to 31/12/2012 (both days included) the net electricity supplied to the grid amount to 101,345 MWh and the emission reductions to 65,266 tCO<sub>2</sub>e.

According to the monitoring plan in the registered PDD /1/ and in the monitoring report version 2 of 25/03/2013 /2/, the following sustainability parameters are monitored: “Employment (job quality)”, “Employment (quantity)” and “Livelihood of the poor”.

## GOLD STANDARD VERIFICATION/CERTIFICATION REPORT

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 <sub>grid,CM</sub><br>Baseline emission factor | TEIAS statistics | 0.644 tCO <sub>2</sub> /MWh           | As per the approved methodology ACM0002 version 7.0.0, 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.<br><br>The combined emission factor is determined to be 0.644 tCO <sub>2</sub> /MWh in the registered PDD <a href="#">/1/</a> and validation report <a href="#">/7/</a> . |

### 3.4.3.2 Monitored data

| DATA/PARAMETER   | EG <sub>y</sub>   |
|--|---|
| Data Unit  | MWh   |
| Description  | Net electricity supplied by the project to the grid   |
| Source of data to be used  | Monthly Reading Protocols   |
| Value data for the monitoring period                                     | 101,344.91  |
| Measuring and reporting frequency; recording procedure.                  | Monitored for every 15 minutes and recorded monthly   |
| Type of monitoring equipment and its accuracy                            | Two electricity meters are installed at the project site, one is the main meter (Elster, Messtechnik GmbH with serial number 368746) and the other one is the backup meter (Elster, Messtechnik GmbH with serial number 368745). The accuracy of the meters is 0.2s as confirmed through the test reports performed by TEIAS <a href="#">/18/</a> .   |
| Calibration frequency/interval   | TEIAS is responsible for calibration and maintenance of the devices as per the registered PDD. The project owner has no control on the meters since the meters are sealed by the TEIAS. If any major discrepancy occurs between the two meters, TEIAS performs necessary calibration. The meters have been calibrated by the Elster on 18/06/2008 as confirmed through the calibration record <a href="#">/22/</a> . 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 <a href="#">/15/</a> .<br><br>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 supplied to the grid has been cross-checked against the PMUM records <a href="#">/21/</a> .   |

## GOLD STANDARD VERIFICATION/CERTIFICATION REPORT

|  |   |
|--|---|
| <p>Does the data management (from monitoring equipment to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions?</p>  | <p>By the end of each month, the electricity generation supplied to the grid and electricity consumption from the grid is read remotely from the electricity meters through Automatic Meter Reading System (OSOS) by the TEIAS personnel. Also the PMUM records are available for the project participant. All protocols /10/ /21/ within this monitoring period was checked during the site visit. The PMUM records /21/ were crosschecked with the monthly meter reading protocols /10/. The plant personnel records the electricity generation from the meters and the responsible engineer checks the figures regularly. In case of difference between the data, TEIAS will be informed.</p> <p>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.</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 the data were available for the whole monitoring period.</p>   |

### 3.4.3.3 Gold Standard sustainability monitored parameters

| Data variable   | Source of Data                           | Reported value for the project period      |
|---|--|--|
| Employment (Quality)  | Attendance List and Protocol of Training | – Fire Drill and Evacuation Trial Training |
| <b>Assessment</b>   |  |  |
| The employees have participated in one training during the monitoring period as confirmed through the Fire Drill and Evacuation Trial Training /13/ /14/. |  |  |

| Data variable   | Source of Data                  | Reported value for the project period |
|---|---------------------------------|---------------------------------------|
| Livelihood of the poor  | Interview with the city manager | A bazaar was built at Akyenikoy.      |
| <b>Assessment</b>   |                                 |                                       |
| According to the interview with the Mayor of Akyenikoy, a new bazaar area was built in 2008 at Akyenikoy Village. |                                 |                                       |

| Data variable  | Source of Data                               | Reported value for the project period                                 |
|--|--|---|
| Employment (Quantity)  | Payroll Sheet of Social Security Institution | 16 employees have been hired during the operation of the power plant. |
| <b>Assessment</b>  |  |   |
| The project activity creates employment as confirmed through the “Payroll Sheets of Social Security Institution” /20/. |  |   |



## GOLD STANDARD VERIFICATION/CERTIFICATION REPORT

### 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 2 of 25/03/2013 /2/ is equivalent to 65,266 tCO<sub>2</sub>e. The reported emission reductions are 3.4% lower than the estimated emission reduction of 67,570 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 3.4.3.2.

### 3.4.5 Accuracy of the GS indicators of sustainable development

All the documented evidences related to the sustainable monitored parameters such as monthly meter reading protocols /10/, misemployment proclamations /11/, training records /13/ /14/, electricity meter test reports /18/, personnel information forms /19/, payroll sheet of social security institution /20/, PMUM records /21/ are provided as objective evidences.

### 3.4.6 Management system and quality control

The electricity generation supplied to the grid and electricity consumption from the grid is read remotely from the electricity meters by monthly meter reading protocols /10/. The project owner collects data for electricity generation and net electricity supplied to the grid. Electricity generation is measured continuously and recorded monthly through two high precision measuring devices sealed and controlled by TEIAS. 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. It is confirmed during on site visit that 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 7.0.0 /6/.

## GOLD STANDARD VERIFICATION/CERTIFICATION REPORT

### 4 VERIFICATION AND CERTIFICATION OPINION

RINA Services S.p.A. (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 01/01/2012 to 31/12/2012, 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:

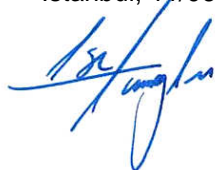
- the project has been implemented and operated as per the registered PDD;
- the monitoring report and other supporting documents provided are complete and verifiable and in accordance with the applicable CDM and GS VER requirements;
- monitoring is in place as per the applied baseline and monitoring 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 2 of 25/03/2013 for the “Akbük Wind Farm Project - Turkey” project in Turkey for the period 01/01/2012 to 31/12/2012 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 7.0.0 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 01/01/2012 to 31/12/2012 amount to 65,266 tCO<sub>2</sub>e.

| GHG Emission Reductions or Removals            | tCO <sub>2</sub> e |
|--|--------------------|
| Baseline Emissions                             | 65,266             |
| Project Emissions                              | 0                  |
| Leakage  | 0                  |
| <b>Net GHG emission reductions or removals</b> | <b>65,266</b>      |

Istanbul, 11/06/2013



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

Genova, 14/06/2013



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 <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   | <a href="#">/1/</a> <a href="#">/2/</a> <a href="#">/7/</a> | DR, CC           | The title of the project activity is given as “Akbuk Wind Farm Project” in the Monitoring Report version 1.0 dated 06/02/2013 <a href="#">/2/</a> . However, the title is not in line with the registered PDD <a href="#">/1/</a> and the previous verification report <a href="#">/9/</a> .  | <b>CR-1</b>      | <b>OK</b>        |
| A.2 Is the actual implementation and operation of the proposed project activity in accordance with the project activity in the registered PDD? | <a href="#">/1/</a>   | DR, CC, I        | It is confirmed during the site visit performed on 12-13/03/2013 that project activity is implemented and operated as per the registered PDD <a href="#">/1/</a> .<br><br>The installation and operation of 15 wind turbines having 2.1 MW capacities with a 31.5 MW total installed capacity each have been installed and the commissioning has been done in two different phases. In the 1st phase 8 turbines (No. 1, 2, 3, 4, 5, 6, 10 and 15) have been commissioned on 19/3/2009 and the in the 2nd phase the remaining 7 turbines (No. 7, 8, 9, 11, 12, 13 and 14) were commissioned on 3/4/2009 as confirmed through the previous verification report <a href="#">/9/</a> . It is confirmed during the site visit that all installed turbines are SUZLON type S88 turbine. |                  | <b>OK</b>        |
| A.3 Methodology applied for the registered project activity  | <a href="#">/1/</a> <a href="#">/6/</a>                     | DR               | The registered project activity applies the approved baseline and monitoring methodology ACM0002 version 07 of 30/11/2007 <a href="#">/6/</a> .   |                  | <b>OK</b>        |
| <b>B Monitoring</b>  |   |                  |   |                  |                  |
| <b>B.1 Monitoring plan</b>   |   |                  |   |                  |                  |

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

| Checklist Question   |   | Reference   | MoV <sup>1</sup> | Comments   | Draft Conclusion | Final Conclusion |
|--|---|---|------------------|--|------------------|------------------|
| B.1.1  | Does the monitoring plan included in the registered GS project activity comply with the applied methodology?                                      | <a href="#">/1/</a> <a href="#">/3/</a> <a href="#">/4/</a> <a href="#">/6/</a>                     | DR, CC           | The monitoring plan complies with the applied methodology ACM0002 version 07 <a href="#">/6/</a> by the registered GS project activity.  |                  | OK               |
| B.1.2  | Does the monitoring comply with the monitoring plan in the registered PDD?  | <a href="#">/1/</a> <a href="#">/2/</a> <a href="#">/3/</a> <a href="#">/4/</a> <a href="#">/6/</a> | DR, CC           | <p>The monitoring complies with the monitoring plan presented in the registered PDD <a href="#">/1/</a>. The only parameter that needs to be monitored is net electricity generation supplied to the grid (EGy) as per the ACM0002 version 07 <a href="#">/6/</a> and registered PDD <a href="#">/1/</a>.</p> <p>In addition, since the project is developed under Gold standard, the following GS sustainable development parameters are included in the monitoring plan: “Employment (quality)”, “Employment (quantity)” and “Livelihood of the poor (Access to essential services)”.</p> <p>However, it is mentioned in the registered PDD <a href="#">/1/</a> that for the “Livelihood of the poor” monitoring frequency will be at the first verification. So it is not necessary to monitor this parameter for this monitoring period.</p> | GR-2             | 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? | <a href="#">/1/</a> <a href="#">/2/</a> <a href="#">/3/</a> <a href="#">/4/</a> <a href="#">/6/</a> | DR, CC           | <p>The project activity is developed and registered under Gold standard Version 01; therefore, GS Toolkit is not applicable to the project activity.</p> <p>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 &amp; Verification Manual for Voluntary Offset Projects” <a href="#">/3/</a> and “Voluntary Emission Reductions (VERs) Manual for Project Developers” <a href="#">/4/</a>).</p>   |                  | OK               |
| B.1.4  | Have any changes been made to the key sustainable development indicators?   | <a href="#">/1/</a> <a href="#">/2/</a> <a href="#">/7/</a> <a href="#">/9/</a>                     | DR, CC           | No change has been occurred to the key sustainable development indicators during the monitoring period of 01/01/2012 to 31/12/2012.  |                  | OK               |
| <b>B.2 Data and parameters that are available at validation and that are not monitored</b> |   |   |                  |  |                  |                  |

| Checklist Question                       |  | Reference   | MoV <sup>1</sup> | Comments  | Draft Conclusion | Final Conclusion |
|--|--|---|------------------|---|------------------|------------------|
| B.2.1                                    | Which parameters were available at validation and how were they verified?  | <a href="#">/1/</a> <a href="#">/6/</a> <a href="#">/7/</a>   | DR, CC           | As per 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 0.644 tCO <sub>2</sub> e/MWh.  |                  | OK               |
| <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  | <a href="#">/1/</a> <a href="#">/2/</a> <a href="#">/6/</a> <a href="#">/8/</a> <a href="#">/12/</a> <a href="#">/13/</a> | DR, CC, I        | <p><b>Net electricity supplied by the project to the grid (EGy):</b> 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 and electricity consumption of the project activity is based on the monthly meter records. However, to cross-checked the data, PMUM records does not provided to the verification team. Also there is no information about PMUM in the monitoring plan <a href="#">/2/</a>.</p> <p>The net electricity generation during the monitoring period is 101,345 MWh as explained in the monitoring report <a href="#">/2/</a>. However, in emission reduction calculate excel sheet, The net electricity generation during the monitoring period is explained as 101,344.91. So, it is not at the conservative side.</p> | <del>CAR-1</del> | OK               |
| B.3.2                                    | Is the measurement equipment described? Is the accuracy of the measurement equipment addressed and deemed appropriate? | <a href="#">/2/</a> <a href="#">/15/</a>  | DR, CC, I        | Two electricity meters are installed at the project site. The main meter is Elster A1500 with serial number 368746 and the backup meter is Elster A1500 with serial number 368745 as confirmed during on site visit. The meters have the accuracy of 0.2s according to the electricity meter test reports <a href="#">/18/</a> . The accuracy class of the meters complies with the “Communiqué for Measurement Devices used in the Electricity Market” <a href="#">/15/</a> . The electricity meters are sealed by TEIAS as confirmed during the site visit.   |                  | OK               |

| Checklist Question   | Reference  | MoV <sup>1</sup> | Comments  | Draft Conclusion | Final Conclusion |
|--|--|------------------|---|------------------|------------------|
|  |  |                  | 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?  | <a href="#">/1/</a> <a href="#">/2/</a> <a href="#">/16/</a>                     | DR, CC, I        | TEAIS is responsible for calibration and maintenance of the devices as per the registered PDD <a href="#">/1/</a> . The project owner has no control on the meters since the meters are sealed by the TEIAS. If any major discrepancy occurs between the two meters, TEIAS performs necessary calibration.<br><br>According to the calibration report <a href="#">/22/</a> , the meters have been calibrated by the Elster on 18/06/2008. 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 <a href="#">/23/</a> . |                  | <b>OK</b>        |
| B.3.4 Is the monitoring frequency adequate for all monitoring parameters? Is it in line with the registered monitoring plan?                                   | <a href="#">/1/</a> <a href="#">/2/</a> <a href="#">/6/</a>                      | DR, CC, I        | The electricity generation supplied to the grid and electricity consumption from the grid is monitored continuously (in every 15 minutes) by two meters as verified during the site visit. Monitoring frequency is in line with the applied methodology <a href="#">/6/</a> and registered PDD <a href="#">/1/</a> .  |                  | <b>OK</b>        |
| B.3.5 Is the recording frequency adequate for all monitoring parameters? Is it in line with the registered monitoring plan?                                    | <a href="#">/1/</a> <a href="#">/2/</a> <a href="#">/6/</a> <a href="#">/10/</a> | DR, CC, I        | The electricity generation supplied to the grid, electricity consumption from the grid is recorded monthly according to the monthly meter readings <a href="#">/10/</a> . This is in line with the monitoring plan in the registered PDD <a href="#">/1/</a> .  |                  | <b>OK</b>        |
| B.3.6 Does data management (from monitoring equipment to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions? | <a href="#">/1/</a> <a href="#">/2/</a> <a href="#">/6/</a> <a href="#">/10/</a> | DR, CC, I        | The project owner collects data for electricity generation and net electricity supplied to the grid. Electricity generation is measured continuously and recorded monthly through two high precision measuring devices sealed and controlled by TEIAS.<br><br>Monthly generation data is measured and recorded by TEIAS and daily generation data is  | <b>CAR-2</b>     | <b>OK</b>        |

| Checklist Question   | Reference   | MoV <sup>1</sup>                    | Comments   | Draft Conclusion  | Final Conclusion |    |
|--|---|-------------------------------------|--|---|------------------|----|
|  |   |                                     | <p>measured by the project owner. A company representative sends the daily generation data and monthly meter reading to TEİAŞ at the end of each month to take the original copy of the meter protocol, which is still signed and approved by the authorized person from TEİAŞ and the project owner’s representative). All protocols /10/ including monitoring period was checked during the site visit.</p> <p>Also by the end 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 personnel. However, there is no explanation about Automatic Meter Reading System (OSOS) in the monitoring report /2/.</p> |   |                  |    |
| <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/ /4/ /11/ /12/ /13/ /14/ | DR, CC, I  | <p>The following GS sustainable development parameters are monitored as per the monitoring plan presented in the registered PDD: “Employment (job quality)”, “Employment (quantity)” and “Livelihood of the poor”.</p> <p><b>Employment (quality):</b> The number of trainings and attendance of employees are monitoring by training certificates or signed participant list. During the 4<sup>th</sup> monitoring period, there was one training session on June 14th 2012. 14 personnel participated to the training organized by the Didim fire-extinguished. Separate certificates were not issued for this training. A participation list was prepared and signed /13/.</p> <p><b>Employment (quantity):</b> The number of jobs created by the project is monitored in the monitoring report. However they are not confirmed through the monthly salary payment sheets since the sheets are not provided to the</p> |                  | OK |

| Checklist Question   | Reference                   | MoV <sup>1</sup> | Comments   | Draft Conclusion  | Final Conclusion |
|--|-----------------------------|------------------|--|---|------------------|
|  |                             |                  | <p>verification team. It is mentioned in the Excel sheet of Personnel List /12/ that, 16 people (9 local people) are employed by the project activity. It is confirmed with the personnel Information Form /19/ that 9 employees are local. However, it is not explained in the monitoring report.</p> <p>Also misemployment proclamations /11/ for 6 employees was provided. The employee classification is as follows:</p> <ul style="list-style-type: none"> <li>- 1 engineer in charge</li> <li>- 1 personnel manager</li> <li>- 6 technician serving as operators</li> <li>- 1 driver</li> <li>- 7 security guards</li> </ul> <p><b>Livelihood of the poor:</b> Please refer to Section B.1.2 of this protocol.</p> | <p><del>CAR-3</del></p> <p><del>CR-3</del></p> <p><del>CR-2</del></p> |                  |
| B.4.2  | /1/ /2/                     | DR, CC, I        | The monitoring does not comply with the monitoring plan presented in the registered PDD. Please refer to Section B.1.2 of this protocol.   | <del>CR-2</del>   | OK               |
| B.4.3  | /1/ /2/ /11/ /12/ /13/ /14/ | DR, CC, I        | All the documented evidences related to the sustainable monitored parameters such as payroll sheets of social security institution from 01/2012 to 12/2012 and PMUM data for this monitoring period have not provided to the verification team.  | <del>CAR-4</del><br><del>CAR-3</del>                                  | OK               |
| <b>B.5 Management, quality assurance and quality control</b> |                             |                  |  |   |                  |
| B.5.1  | /2/ /6/                     | DR, I            | An onsite inspection has been performed on 12-13/03/2013 and it is confirmed that the monitoring arrangements in the monitoring plan are feasible within the project design.   |   | OK               |
| B.5.2  | /2/ /17/                    | DR, I            | The electricity generation supplied to the grid and electricity consumption from the grid is read  |   | OK               |

| Checklist Question |   | Reference   | MoV <sup>1</sup> | Comments  | Draft Conclusion | Final Conclusion |
|--------------------|---|-------------|------------------|---|------------------|------------------|
|                    | storage area of records and how to process performance documentation)?  |             |                  | remotely from the electricity meters by monthly meter reading protocols /10/.<br>The project owner collects data for electricity generation and net electricity supplied to the grid. Electricity generation is measured continuously and recorded monthly through two high precision measuring devices sealed and controlled by TEIAS.   |                  |                  |
| 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/         | DR, I            | The generated electricity is measured by two meters that were sealed by TEIAS. The project owner has no control on the meters.<br>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. It is confirmed during on site visit that the project owner can easily access the data by using this portal. |                  | 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/ which is line with the methodology /6/. However, the explanation is not stated in the 4 <sup>th</sup> monitoring report /2/.   | <b>CAR-4</b>     | OK               |

**TABLE 2 RESOLUTION OF CORRECTIVE ACTION REQUESTS AND CLARIFICATION REQUESTS**

| Corrective action and/ or clarification requests   | Reference to Table 1 | Response by project participants   | Verification conclusion  |
|--|----------------------|--|--|
| <p><b>CAR 1</b><br/> <b>Net electricity supplied by the project to the grid (EGy):</b> 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 and electricity consumption of the project activity is based on the monthly meter records. However, to cross-checked the data, PMUM records does not provided to the verification team.<br/>                     Also there is no information about PMUM in the monitoring plan /2/.<br/>                     The net electricity generation during the monitoring period is 101,345 MWh as explained in the monitoring report /2/. However, in emission reduction calculate excel sheet, The net electricity generation during the monitoring period is explained as 101,344.91. So, it is not at the conservative side.</p> | <p>B.3.1</p>         | <p>PMUM (Market Financial Settlement Centre of Turkey) meter value screenshots and files are provided to the verification team with the present table.</p> <p><b>Supporting documents:</b><br/>                     -Akbuk WPP-PMUM Meter Values Screenshot-2012_01.jpg<br/>                     -Akbuk WPP-PMUM Meter Values Screenshot-2012_02.jpg<br/>                     -Akbuk WPP-PMUM Meter Values Screenshot-2012_03.jpg<br/>                     -Akbuk WPP-PMUM Meter Values Screenshot-2012_04.jpg<br/>                     -Akbuk WPP-PMUM Meter Values Screenshot-2012_05.jpg<br/>                     -Akbuk WPP-PMUM Meter Values Screenshot-2012_06.jpg<br/>                     -Akbuk WPP-PMUM Meter Values Screenshot-2012_07.jpg<br/>                     -Akbuk WPP-PMUM Meter Values Screenshot-2012_08.jpg<br/>                     -Akbuk WPP-PMUM Meter Values Screenshot-2012_09.jpg<br/>                     -Akbuk WPP-PMUM Meter Values Screenshot-2012_10.jpg<br/>                     -Akbuk WPP-PMUM Meter Values Screenshot-2012_11.jpg<br/>                     -Akbuk WPP-PMUM Meter Values Screenshot-2012_12.jpg<br/>                     - "Akbuk WPP-PMUM Meter Values-2012_01.xls" to " Akbuk WPP-PMUM Meter Values-2012_12.xls" (i.e 12 excel files)</p> | <p><b>Review 1 (21/05/2013):</b><br/>                     All the PMUM records /21/ for current monitoring period is provided to the verification team. The records are cross-checked with the monthly meter protocols and emission reduction calculation sheet /8/.</p> <p>The additional explanation is sufficient for the verification team about the information of PMUM.</p> <p>Rounding down is used in the final step of the emission calculations and it is conservative. The explanation is sufficient.</p> <p><b>Hence, CAR 1 is closed.</b></p> |

| Corrective action and/ or clarification requests   | Reference to Table 1 | Response by project participants   | Verification conclusion   |
|--|----------------------|--|---|
|  |                      | <p>PMUM is indeed not mentioned in the monitoring report. In PP's view, this is not mandatory since PMUM has not been mentioned in the registered PDD. In addition, the data quality assurance is ensured through other mean: the electricity protocols are used for invoicing and signed by both parties (the PP and the grid company). For these reasons, the Monitoring Report was not changed.</p> <p>The emission reductions that appear in the ER excel sheet are 65,266.12 tCO<sub>2</sub>e, however the value reported in the Monitoring Report is 65,266 tCO<sub>2</sub>e (p1 and 2), this is conservative. The rounding is applied to the last step of the calculation i.e. to the emission reductions figure. The information reported is considered conservative in terms of emission reductions, therefore it was not changed.</p> <p>In addition, this approach is consistent with the approach taken during the previous verifications. The calculations in the previous verifications were done by applying the rounding down at the last stage, i.e. emission reduction calculation, not at the net electricity generation calculation.</p> |   |
| <p><b>CAR 2</b><br/>By the end 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 personnel. However, there is no explanation about Automatic</p> | <p>B.3.6</p>         | <p>Section D.2 of the Monitoring Report was updated, the Automatic Meter Reading System (OSOS) is now mentioned in the table regarding the parameter ID.9.</p>   | <p><b><u>Review 1 (21/05/2013):</u></b><br/>The Automatic Meter Reading System (OSOS) is now mentioned in Section D.2 of the monitoring report.<br/><b><u>Hence, CAR 2 is closed.</u></b></p> |

| Corrective action and/ or clarification requests  | Reference to Table 1             | Response by project participants  | Verification conclusion   |
|---|----------------------------------|---|---|
| Meter Reading System (OSOS) in the monitoring report /2/.   |                                  |   |   |
| <p><b>CAR 3</b></p> <p>The number of jobs created by the project is monitored in the monitoring report. However they are not confirmed through the monthly salary payment sheets since the sheets are not provided to the verification team.</p>  | <p>B.4.1<br/>B.4.3</p>           | <p>The number of jobs created can be checked with the information available on the SGK website (Social Security employment lists of both Ayen and Securitas). This information is provided to the DOE with the present table of responses.</p> <p><b>Supporting documents:</b></p> <p>-Akbuk WPP-AYEN-Monthly Premium and Service Documents-2012.pdf<br/>-Akbuk WPP-SECURITAS-Monthly Premium and Service Documents-2012_10-2013_02.pdf</p> | <p><b>Review 1 (21/05/2013):</b></p> <p>The monthly salary payment sheets /20/ are now provided to the verification team. The number of jobs created is confirmed as per the sheets. The monthly salary payment sheets are also cross-checked with the Akbuk Employment excel sheet /12/.</p> <p><b>Hence, CAR 3 is closed.</b></p> |
| <p><b>CAR 4</b></p> <p>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/ which is line with the methodology /6/. However, the explanation is not stated in the 4<sup>th</sup> monitoring report /2/.</p> | <p>B.5.4</p>                     | <p>Section C of the Monitoring Report was updated, it is now mentioned that the collected data will be archived for at least two years after the last issuance of VERs, this is consistent with the PDD.</p>  | <p><b>Review 1 (21/05/2013):</b></p> <p>Section C of the Monitoring Report was updated and now it is mentioned that the collected data will be archived for at least two years after the last issuance of VERs.</p> <p><b>Hence, CAR 4 is closed.</b></p>   |
| <p><b>CR 1</b></p> <p>The title of the project activity is given as “Akbuk Wind Farm Project” in the Monitoring Report version 1.0 dated 06/02/2013 /2/. However, the title is not in line with the registered PDD /1/ and the previous verification report /9/.</p>  | <p>A.1</p>                       | <p>This was a typo in the Monitoring Report. The title of the project activity was updated in the Monitoring Report, it is now stated as “Akbuk Wind Farm Project - Turkey”, which is in line with the registered PDD.</p>  | <p><b>Review 1 (21/05/2013):</b></p> <p>The title of the project activity is corrected as “Akbuk Wind Farm Project - Turkey” which is in line with the PDD /1/ and previous verification report /9/.</p> <p><b>Hence, CR 1 is closed.</b></p>   |
| <p><b>CR 2</b></p> <p>It is mentioned in the registered PDD /1/ that for the “Livelihood of the poor” monitoring frequency will be at the first verification. So it is not necessary to monitor this parameter for this</p>   | <p>B.1.2<br/>B.4.1<br/>B.4.2</p> | <p>In section D.2, in the table for the parameter SDI.7, it is mentioned that the parameter “Livelihood of the poor” should be indeed verified only during the 1st verification. However, for clarity purposes</p>  | <p><b>Review 1 (21/05/2013):</b></p> <p>The additional explanation is sufficient from “Livelihood of the poor” monitoring frequency point of view.</p> <p><b>Hence, CR 2 is closed.</b></p>   |

| Corrective action and/ or clarification requests  | Reference to Table 1 | Response by project participants  | Verification conclusion   |
|---|----------------------|---|---|
| monitoring period.  |                      | <p>the PP decided to keep the parameter in section D.2 as the bazaar still exists and contributed to the livelihood of the poor during the monitoring period.</p> <p>The PP takes however note of the DOE's comment for the next monitoring periods.</p>                    |   |
| <p><b>CR 3</b><br/>It is mentioned in the Excel sheet of Personnel List /12/ that, 16 people (9 local people) are employed by the project activity. It is confirmed with the personnel Information Form /19/ that 9 employees are local. However, it is not explained in the monitoring report.</p> | B.4.1                | <p>In the table for the parameter SDI. 10 within section D.2 of the Monitoring Report, it is explained that "the project (...) contributes to sustainable development as nine persons come from the nearby area". Therefore DOE is kindly asked to clarify his request.</p> | <p><b><u>Review 1 (21/05/2013):</u></b><br/>9 local persons are mentioned as "nine persons come from the nearby area" in the monitoring report and it is acceptable.<br/><b><u>Hence, CR 3 is closed.</u></b></p> |