



RINA

GOLD STANDARD VERIFICATION/CERTIFICATION REPORT

Final


“Balıkesir Susurluk 45 MW Wind Farm Project – Turkey”
in
Turkey

Monitoring period: 13/02/2011 to 31/05/2013

Report N°2014-TQ-44-MD

Revision N°1.1Aa

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Project Title: Balikesir Susurluk 45 MW Wind Farm Project – Turkey	Country: Turkey	Estimated VERs (tCO₂e): 159,609
GS Registration Reference N°: GS 854	Monitoring period: 13/02/2011 to 31/05/2013	Certified VERs (tCO₂e): 189,855
Client: Susurluk Enerji A.S.	Client contact: Hasan Samancioglu	
Report No.: 2014-TQ-44-MD	Revision: 1.1Aa	Date of this report: 27/10/2014
Approved by (Final Report – Authorized officer signing for the DOE):  Laura Severino		Date of approval: 29/10/2014

Methodology

Number:	Version:	Title:	Scale	SS(s):
ACM0002	12.0.0 of 17/09/2010	Consolidated baseline methodology for grid-connected electricity from renewable sources	Large	1

RINA Services S.p.A. (RINA), commissioned by Susurluk Enerji A.S., has verified the greenhouse gas emission reductions reported for the project activity “Balikesir Susurluk 45 MW Wind Farm Project – Turkey” in Turkey, GS Registration Reference N°854, for the period 13/02/2011 to 31/05/2013, with regard to the relevant requirements for 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 Bureau Veritas (validation report N° TURKEY-/CER.1173.10.C45/2010, version 01 of 08/07/2011) and it was registered on 25/06/2012 under the GS registration reference N° 854.

The GHG emission reductions were calculated on the basis of the approved methodology ACM0002, version 12.0.0, “Consolidated baseline methodology for grid-connected electricity from renewable sources” of 17/09/2010 and the monitoring plan included in the registered Project Design Document, version 04 of 05/05/2011.

In conclusion, it is RINA’s opinion that the project activity “Balikesir Susurluk 45 MW Wind Farm Project – Turkey”, as described in the Monitoring Report version 4 of 27/10/2014, 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 12.0.0 of 17/09/2010. Hence, RINA is able to certify that the emission reductions from the project during the monitoring period 13/02/2011 to 31/05/2013 amount to 189,855 tCO₂e.

Baseline Emissions	189,855 tCO ₂ e
Project Emissions	0 tCO ₂ e
Leakage	0 tCO ₂ e
Net GHG emission reductions/removal	189,855 tCO ₂ e

Work carried out by: Tugce KIRATLI	<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
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Work verified by (Final Report)  Rita Valoroso	Keywords: Climate Change, Kyoto Protocol, Verification, Gold Standard
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Abbreviations

BE	Baseline Emissions
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CDM M&P	Modalities and Procedures CDM
CDM-PCP	Clean Development Mechanism Project Cycle Procedure
CDM-PS	Clean Development Mechanism Project Standard
CDM-VVS	Clean Development Mechanism Validation and Verification Standard
CER(s)	Certified Emission Reduction (s)
CH ₄	Methane
CR	Clarification Request
CO ₂	Carbon dioxide
CO ₂ e	Carbon dioxide equivalent
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
LSC	Large scale
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
PMUM	Market Financial Conciliation Center (Piyasa Mali Uzlastirma Merkezi)
PP(s)	Project Participant(s)
Ref.	Document Reference
RINA	RINA Services Spa
SDI	Sustainable Development Indicator
SS(s)	Sectoral Scope(s)
SSC	Small Scale
TEIAS	Turkish Electricity Transmission Company (Turkiye Elektrik Iletim A.S.)
UNFCCC	United Nations Framework Convention on Climate Change
VERs	Verified Emission Reduction(s)

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1 INTRODUCTION

Susurluk Enerji A.S. has commissioned RINA to carry out the verification and certification of emission reductions reported for the registered “Balikesir Susurluk 45 MW Wind Farm Project – Turkey” project in Turkey, GS Registration Reference N°854, for the period 13/02/2011 to 31/05/2013.

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 “Balikesir Susurluk 45 MW Wind Farm Project – Turkey” project in Turkey for the period 13/02/2011 to 31/05/2013.

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.

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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 4 of 27/10/2014 /3/, the emission reduction calculations provided in the form of a spreadsheet “Susurluk RES first verif work-2 PMUM.xlsx-verification.xlsx” version 02 of 16/09/2014 /9/, the approved baseline and monitoring methodology ACM0002 version 12.0.0 of 17/09/2010 /7/ and all the documentation provided to support the monitoring period /1 – 47/ 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 Passport version 04 of 24/09/2013 /2/ and the validation report revision 01 of 08/07/2011 /8/ for the project, were reviewed.

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

/1/	GAIA CF: GS-PDD for “Balikesir Susurluk 45 MW Wind Farm Project – Turkey” in Turkey, version 04 of 05/05/2011
/2/	GAIA CF: GS-Passport for “Balikesir Susurluk 45 MW Wind Farm Project – Turkey” in Turkey version 04 of 24/09/2013
/3/	FutureCamp: Monitoring Report for “Balikesir Susurluk 45 MW Wind Farm Project – Turkey” in Turkey, version 4 of 27/10/2014 FutureCamp: Monitoring Report for “Balikesir Susurluk 45 MW Wind Farm Project – Turkey” in Turkey, version 3 of 02/10/2014 FutureCamp: Monitoring Report for “Balikesir Susurluk 45 MW Wind Farm Project – Turkey” in Turkey, version 2 of 16/09/2014 FutureCamp: Monitoring Report for “Balikesir Susurluk 45 MW Wind Farm Project – Turkey” in Turkey, version 1 of 06/08/2014
/4/	Gold Standard Foundation: Gold Standard Requirements, version 2.1 of 01/07/2009
/5/	Gold Standard Foundation: Gold Standard Toolkit, version 2.1 of 01/07/2009
/6/	CDM Executive Board: Clean Development Mechanism Validation and Verification Standard, version 07.0 of 01/06/2014
/7/	CDM Executive Board: Baseline and monitoring methodology “ACM0002”, “Consolidated baseline methodology for grid-connected electricity from renewable sources”, version 12.0.0 of 17/09/2010
/8/	Bureau Veritas: Validation Report for “Balikesir Susurluk 45 MW Wind Farm Project – Turkey” No. TURKEY-/CER. 1173.10.C45/2010, revision 01 of 08/07/2011
/9/	GAIA CF: Emission Reduction Calculation Spreadsheet “ Susurluk RES first verif work-2 PMUM.xlsx-verification.xlsx ” version 02 of 16/09/2014 GAIA CF: Emission Reduction Calculation Spreadsheet “Susurluk RES first verif work-2 PMUM.xlsx” version 01 of 11/08/2014
/10/	CDM Executive Board: Monitoring Report Form (CDM-MR-FORM), version 04.0 of 25/06/2014
/11/	CDM Executive Board: Methodological Tool “Tool to calculate the emission factor for an electricity system”, version 02.0.0 of 16/10/2009
/12/	CDM Executive Board: Methodological Tool “ Tool for the demonstration and assessment of additionality”, version 05.2.0 of 26/08/2008
/13/	The Gold Standard Foundation: Balikesir Susurluk 45 MW Wind Farm Project – Turkey (GS 854) 8-week Registration Review Period Document of 11/11/2013



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/14/	Market Financial Conciliation Center (PMUM): Monthly Electricity Records within the Monitoring Period (from 13/02/2011 to 31/05/2013)
/15/	Turkish Electricity Transmission Company (TEIAS): Monthly Meter Readings within the Monitoring Period (from 13/02/2011 to 31/05/2013)
/16/	Energy Market Regulatory Authority: Communiqué for Measurement Devices used in the Electricity Market of 22/03/2003
/17/	The Ministry of Trade and Industry: Regulation of Metering and Testing of Metering Systems of 24/07/1994
/18/	The Ministry of Energy and Natural Resources: Temporary Acceptance Protocol of 13/02/2011 (for 5 turbines) The Ministry of Energy and Natural Resources: Temporary Acceptance Protocol of 25/03/2011 (for 4 turbines) The Ministry of Energy and Natural Resources: Temporary Acceptance Protocol of 22/04/2011 (for 5 Turbines) The Ministry of Energy and Natural Resources: Temporary Acceptance Protocol of 20/05/2011 (for 4 Turbines)
/19/	Energy Market Regulatory Authority: Generation License numbered EU/1690-2/1224 of 24/07/2008
/20/	Social Insurance Institution: Registration Document for All the Employees, submitted on 11/08/2014 (13 employees)
/21/	Social Insurance Institution: Registration Document for the Security Employees, submitted on 11/08/2014 (5 employees)
/22/	Susurluk Enerji A.S.: The Excel Date List for Entry and Exit of the Employees, submitted on 11/08/2014
/23/	Susurluk Enerji A.S.: Organizational Chart of the Company and Susurluk Project, submitted on 11/08/2014
/24/	Susurluk Enerji A.S.: Line Diagram of the Balikesir Susurluk 45 MW Wind Farm Project – Turkey, submitted on 11/08/2014
/25/	Energy Market Regulatory Authority: Correspondance About the Forest Land Permit by Ministry of Environment and Forests of 30/05/2013
/26/	Regional Directorate of Forestry: Correspondance About the Delivery Record of the Project Area of 26/05/2010
/27/	Detam Group: Correspondance About the Noise Measurement for Turbine 19 of 11/02/2014
/28/	Detam Ltd. Sti.: Certificate of Health and Safety Training for 12 Employees of 27/05/2013
/29/	Adex Akademi: Safe Driving Techniques Training for 2 Employees, No. 10-2483 and 10-2484 of 17/12/2012
/30/	Yanki Egitim & Danismanlik Hizmetleri: Log Out-Tag Out Training for 2 Employees of 26/12/2012
/31/	Detam Ltd. Sti.: OHSAS 18001 Management System and Internal Audit Training for 1 Employee of 19/04/2013
/32/	The Chamber of Electrical Engineers: High Voltage Facility Authorization Certificate in Business Responsibility for 1 Employee, No. 16200 of 08/02/2013
/33/	The Chamber of Electrical Engineers: Grounding Authorization Document for 1 Employee, No. 16221 of 08/02/2013
/34/	Yekare Danismanlik: Project Cycle Management Specialist Seminar for 1 Employee of 27/12/2013
/35/	Ministry of Labour and Social Security: Occupational Safety Specialist Certificate for 1 Employee of 07/06/2012
/36/	Balikesir Provincial Health Directorate: First Aid Certificate for 1 Employee of 18-19/02/2012

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/37/	Alpha Zähler: Kalibration Report of Elster Electricity Meters with serial no 00416274 and 00416275 of 20/05/2010
/38/	Antalya Sanayi Teknolojileri Yazilimi AR-GE Danismanlik Cevre ve Enerji, Sanayi ve Ticaret A.S.: Ornithology Report of 04/2013
/39/	Balıkesir Regional Directorate of Forestry: Correspondance for 4,000 tree planting of 17/04/2013
/40/	General Directorate of Forestry: Sapling Invoice for 1136 Trees of 27/03/2013
/41/	Trade Registry Gazette: Correspondance About the Change of the Title of the Company, No. 8207 of 04/12/2012
/42/	General Directorate of Forestry: Sapling Invoice for 250 Seedlings of 02/01/2013
/43/	General Directorate of Forestry: Sapling Invoice for 70 Seedlings of 04/06/2012
/44/	General Directorate of Forestry: Sapling Invoice for 100 Seedlings of 25/12/2012
/45/	TEIAS: Test Report of the Electricity Meters 02/08/2012
/46/	TEIAS: Test Report of the Electricity Meters 31/12/2013
/47/	Pictures of the Safety Equipment Distributed to the Employees, taken on 12/09/2014
/48/	Website: http://www.oecd.org/about/membersandpartners/list-oecd-member-countries.htm Argument: Convention on the Organisation for Economic Co-operation and Development Countries Language: English, Retriewed on: 24/10/2014

2.2 On-site assessment

On 12/09/2014, RINA visited the wind power plant located in the city of Balıkesir in Western Turkey, near Ömerköy and Demirkapı Villages of Turkey. 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 project area was visited on 12/09/2014. The project employee were interviewed about the implementation status of the project, monitoring equipment and operation, generated electricity, dust emission, trainings, local employment of the project activity.

During the construction of the project activity, Yenikoy paths are used in order to transfer the turbines to the project area. Therefore, the stakeholders living in Yenikoy District were interviewed about the dust emission, expropriation, bird migration, enlarging the roads, planting and local employment. As per the interviews, they mentioned that, with the expansion of roads the number of vehicles passing by the roads were increases. Thus, dust emission –not only caused by the project activity- is observed permanently. They also confirmed that there is no expropriation for this project. All the land is belongs to Regional Directorate of Forestry.

In addition, a local employee (Hakan Sahin) from another nearest village (Gokcedere Village) was interviewed about the local employment of the project activity.

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

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	Date	Name and Role	Organization	Topic
/a/	12/09/2014	Gurkan BAYRAKTAR <i>Carbon Consultant</i>	GAIA CF	Implementation status of the project
/b/	12/09/2014	Ahmet OZKAN <i>Carbon Consultant</i>	GAIA CF	Monitoring equipments and operation Generated Electricity
/c/	12/09/2014	Bora AYZIT <i>Plant Specialist</i>	Susurluk Enerji	Monitoring of Gold Standard Parameters Dust Emission
/d/	12/09/2014	Hasan SAMANCIOGLU <i>Director</i>	EKSIM Holding	Trainings Expropriation Bird Migration
/e/	12/09/2014	Ethem KORKUT <i>Technical Personnel</i>	Susurluk Enerji	Road Widening Planting
/f/	12/09/2014	Hakan SAHIN <i>Security</i>	Susurluk Enerji	Local Employment
/g/	12/09/2014	Ahmet DIRMEN <i>Farmer</i>	Yenikoy District	Benefit of the project to the village Dust Emission
/h/	12/09/2014	Sitki EFE <i>Farmer</i>	Yenikoy District	Expropriation Road Widening Planting

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.

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Figure 1 Gold Standard Verification protocol tables

Verification Protocol, Table 1 - Requirement checklist				
Checklist Question	Ref.	MoV	Comments	Conclusion
Checklist questions organized in five 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 and CR see the definitions above. OK is used if the information and evidence provided is adequate to demonstrate compliance with GS VER/CDC 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.

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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	Type of involvement*					
			DR	SV	REP	TE	TR	TER
Team Leader, GS Verifier, Technical Expert (TA 1.2)	Kiratli	Tugce	X	X	X	X	-	-
Technical Reviewer	Valoroso	Rita	-	-	-	-	X	-

*DR: Document Review; SV: Site Visit/Interview; REP: Reporting; TE: Technical Expert in Technical Area; TR: Technical Review; TER: Technical Expert in Technical Area for Technical Review.

3 VERIFICATION FINDINGS

The findings of the verification related to the monitoring period from 13/02/2011 to 31/05/2013 as documented and described in the monitoring report version 4 of 27/10/2014 [/3/](#) are stated in the following sections.

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

3.1 Description of the project activity

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

Project Participant(s)	Susurluk Enerji A.S.		
Project Title	Balıkesir Susurluk 45 MW Wind Farm Project – Turkey		
Location of the project	Balıkesir in Western Turkey, near Ömerköy and Demirkapı Villages of Turkey		
Methodology(ies)	ACM0002, “Consolidated baseline methodology for grid-connected electricity from renewable sources”, version 12.0.0 of 17/09/2010 /7/		
Sectoral Scope(s)	1	RINA's Technical Area(s)	1.2
Registered PDD	Revision 04 of 05/05/2011		
Date of registration	25/06/2012	GS Registration Reference N°	854
Starting date of the	13/02/2011		

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crediting period	
Project's crediting period	13/02/2011 to 12/02/2018
Monitoring period	13/02/2011 to 31/05/2013
Project documentation link	http://mer.markit.com/br-reg/public/project.jsp?project_id=103000000002075

The project activity is a wind power plant consists of 18 wind turbines, each with a 2.5 MW capacity and making the total installed capacity of 45 MW. The generated electricity is fed to the national grid. The estimated net electricity production is 121,939 MWh/year and the annual emission reductions are estimated to be 169,732 tCO₂e per year.

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

3.2 Remaining issues (FARs) from previous validation or verification

Based on the review of the validation report /8/ and GS 8-week registration review period document /13/, 3 FARs were raised during the validation. All FARs have been successfully closed.

FAR#1: Based on the available information on bird migration map of Turkey (sourced from Society of Nature), the project area is considered to be on a major bird route that is active during the migration of birds from Europe. Hence, a detailed investigation/ study by an independent third party ornithologist should be prepared before the next request for issuance. The study should also discuss whether the project site is in fact on a bird migration route or not and if it is, what mitigation measures will be undertaken during the migration season to ensure there is no negative impact on migrating bird. The report shall also discuss the bird movements of local species including bats and other.

An Ornithology Report was prepared during this monitoring period. As per the report /38/, it is considered that there is no effect on birds and wildlife caused by the project activity

This issue was closed.

FAR#2: "During the first verification the road enlargement works should be evaluated according to permissions from the national authorities. Also removed trees near the road should be checked by the verification team"

Road enlargement works were interviewed with the stakeholders in Yenikoy District. According to their statement, the project owner finished the enlargement works during the construction phase to transfer the turbines easily. In addition, removed threes were planted with the permission of Regional Directorate of Forestry as confirmed through the correspondence and the invoices of the seedlings /39/ /40/ /42/ /43/ /44/.

This issue was closed.

FAR#3: Expropriation of the project land is not completed during the site visit. Expropriation process should be checked during the first verification period through feedbacks from local authorities/locals if there has been any private land acquisition.

According to the interviews with the stakeholders, there is no expropriation for the project activity. In addition, a correspondence /25/ /26/ about the turbines is in forest land between Regional Directorate of Forestry and Alentek Enerji A.S. (hereinafter referred to as the Susurluk Energy) was provided to the verification team.

This issue was closed.

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3.3 Monitoring Report

The Monitoring Report for the project activity “Balıkesir Susurluk 45 MW Wind Farm Project – Turkey”, in “Turkey”, version 4 of 27/10/2014 submitted by the Susurluk Enerji A.S. has been the basis for the verification process.

The main changes between the MR version 1 of 06/08/2014 at the starting date of the verification activity and the MR version 4 of 27/10/2014 submitted for registration are the following:

Section of the MR	Description and reason for changing the information in that section
First Page	The format of the date is revised as DD/MM/YYYY. The project title is written twice. One of them is removed.
A.5. Crediting period of project activity	The date of the crediting period was revised as from 13/02/2011 to 13/02/2018.
D.2. Data and parameters monitored	A new parameter “dust emission“ is added to the monitoring plan. The table formats are revised as per the new monitoring report template and all the corrections were made for all the parameters to be in line with the registered PDD.
E.6. Remarks on difference from estimated value in registered PDD	A clear explanation was added to the monitoring report about the difference between the estimated and the actual emission reduction.
Appendix 1. Contact information of project participants and responsible persons/entities	Contact information for the project proponent were added.

RINA confirms that the above MR is based on the currently valid MR template [/10/](#) and is completed in accordance with the applicable guidance document [/10/](#).

3.4 Project implementation

Actual implementation of the registered project activity

It was verified during the site visit conducted on 12/09/2014 that the proposed project activity has been implemented and it is in operation in accordance with the project activity described in the registered PDD [/1/](#). The starting date of operation and crediting period is 13/02/2011 as confirmed through the Temporary Acceptance Protocol [/18/](#). All turbines have been commissioned in four phase as explained below:

- On 13/02/2011, five power generation units have commissioned as confirmed through the Temporary Acceptance Protocol [/18/](#).
- On 25/03/2011, four power generation units have commissioned as confirmed through the Temporary Acceptance Protocol [/18/](#).
- On 22/04/2011, five power generation units have commissioned as confirmed through the Temporary Acceptance Protocol [/18/](#).
- On 20/05/2011, four power generation units have commissioned as confirmed through the Temporary Acceptance Protocol [/18/](#).

The project activity consists of 18 wind turbines, each with a 2.5 MW capacity and making the total installed capacity of 45 MW. Technical details of the wind turbines comply with the registered PDD [/1/](#). It could be confirmed during the site visit that 3 installed turbines are Nordex N90 type and 15 installed turbines are Nordex N100 turbine, each with an output of 2.5 MW. The project boundary in the registered PDD [/1/](#) is in line with the actual project boundary. Generated electricity is supplied to the

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National Electricity Transmission Grid of Turkey at the 154 kV Balıkesir Seka Transformer Centre via 30 km power transmission line as per the generation license /19/.

Based on the onsite 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/.

Post registration changes

In 02-05/2011, there were some faults in meter readings. Therefore, for this monitoring period, PMUM readings, instead of the meter readings have been taken as primacy to calculate the generated electricity. Monthly Meter readings have been used for cross-check with PMUM.

3.5 Methodology for determining Emission Reductions.

According to the applied methodology “ACM0002”, “Consolidated baseline methodology for grid-connected electricity from renewable sources”, version 12.0.0 of 17/09/2010 /7/, the emission reductions have been calculated based on the following formula:

$$ER_y = BE_y - PE_y - L_y$$

Where:

BE_y = Baseline emissions in year y (tCO₂e/yr)

PE_y = Project emissions in year y (tCO₂e/yr)

L_y = Leakage emissions in year y (tCO₂e/yr)

The baseline emissions include the CO₂ emissions from electricity generation in fossil fuel fired power plants that are displaced due to the project activity, multiplying the electricity supplied to the grid (MWh) with the combined margin CO₂ emission factor for grid connected power generation in year.

$$BE_y = EG_{\text{facility},y} \times EF_{\text{grid},\text{CM},y}$$

Where:

EG_{facility,y} = Net electricity generation supplied by the project activity in year y (MWh)

EF_{grid,CM,y} = Combined margin grid emission factor of the grid (tCO₂/MWh)

The project emissions are assumed to be zero as per the ACM0002 version 12.0.0 /7/ since the project is a renewable energy project as defined in the registered PDD /1/ and validation report /8/. The leakage emissions are assumed to be zero as per the ACM0002 version 12.0.0 /7/ as defined in the registered PDD /1/. Since the project and leakage emissions are zero, the emission reduction equals to baseline emissions.

3.5.1 Compliance of the monitoring plan with the monitoring methodology and applicable methodological tools

The registered project activity applies the approved baseline and monitoring methodology ACM0002 version 12.0.0 /7/. RINA confirms that the monitoring plan in the registered PDD /1/ complies with the applied CDM methodology and with the sustainability indicators established by the Appendix D of the Gold Standard requirements /4/.

3.5.2 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

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selection and the calculation of emission reductions have been carried out as per the approved CDM methodology, ACM0002 version 12.0.0 /7/. RINA considers the same conservative and thus accepted.

3.5.3 Compliance of monitoring with monitoring plan

The monitoring plan presented in the monitoring report version 4 of 27/10/2014 and the previous versions for the period of 13/02/2011 to 31/05/2013 (both days included) /3/ complies with the monitoring plan in the registered PDD /1/.

The only monitoring parameter is “Annual net electricity generation supplied by the project 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 area. Two electricity meters are installed at the project site. The main meter is ELSTER A1500 with serial number 00416275 and the backup meter is ELSTER A1500 with serial number 00416274. The meters have the accuracy of 0.2s as confirmed through the calibration record /37/. The accuracy class of the meters complies with the “Communiqué for Measurement Devices used in the Electricity Market” /16/. The electricity meters are sealed by TEIAS as confirmed during the site visit.

TEIAS is responsible for calibration and maintenance of the devices. 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 were calibrated on 20/05/2010 as confirmed through the calibration record /37/ and also tested by TEIAS on 02/08/2012 and 31/12/2013 as confirmed through the test reports /45/ /46/. The recalibration of these meters will be done in line with the equipment requirements and through the period defined by national metrology institutes country by country and for Turkey this period is defined as 10 years. The calibration of meters is deemed appropriate and in compliance with the national regulation /17/. At the last day of each month, the electricity generation supplied to the grid and electricity consumption from the grid is read and the monthly official electricity metering reports /15/. The monthly reading protocols are filled by the Project personnel and sent to TEIAS. In this way, it is checked if there are inconsistencies between the values read by OSOS and the reading protocols. Also the PMUM records are available for the project participant. All protocols /14/ /15/ within this monitoring period was checked during the site visit. The monthly official electricity metering reports (OSF Forms) /15/ are crosschecked with the PMUM records /14/ during this monitoring period. The Monthly Meter Reading Protocols, PMUM records and emission reduction calculation spreads sheet /9/ are in line. During the monitoring period of 13/02/2011 to 31/05/2013 (both days included) the net electricity supplied to the grid amount to 312,777 MWh and the emission reductions to 189,855 tCO₂e.

According to the monitoring plan in the registered PDD /1/ and in the monitoring report version 4 of 27/10/2014 /3/, the following sustainability parameters are monitored: “Air Quality”, “Quality of Employment”, “Quantitative Employment and Income Generation”, “Balance of Payments and Investment”.

The following parameters have been monitored in accordance with the monitoring plan in the registered PDD /1/ and the monitoring report /3/.

3.5.3.1 Data and parameters fixed ex-ante or at renewal crediting period

DATA/PARAMETER	Source of data	Reported value for the project period	Assessment/Observation
Combined Margin Emission Factor	TEIAS statistics	0.607 tCO ₂ /MWh	As per the approved methodology ACM0002 version 12.0.0, 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. The combined emission factor is determined to be 0.607 tCO ₂ /MWh in the registered PDD /1/ and validation report /8/.

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3.5.3.2 Sampling plan

Not applicable.

3.5.3.3 Data and parameters monitored ex-post

DATA/PARAMETER	EG _y
Data Unit	MWh/yr
Description	Annual net electricity supplied by the Project to the grid
Source of data to be used	PMUM (Market Financial Settlement Center) records are the main sources and Monthly Meter Reading Records of the main meters are cross-checked
Value data for the monitoring period	312,777
Measuring and reporting frequency; recording procedure.	Continuous measurement and monthly recordings
Type of monitoring equipment and its accuracy	Two electricity meters are installed at the project site. The main meter is ELSTER A1500 with serial number 00416275 and the backup meter is ELSTER A1500 with serial number 00416274. The meters have the accuracy of 0.2s as confirmed through the calibration record /37/, performed by TEIAS.
Calibration frequency/interval	<p>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. During this monitoring period no discrepancy was occurred.</p> <p>The meters were calibrated on 20/05/2010 as confirmed through the calibration record /37/ and also tested by TEIAS on 02/08/2012 and 31/12/2013 as confirmed through the test reports /45/ /46/. The recalibration of these meters will be done in line with the equipment requirements and through the period defined by national metrology institutes country by country and for Turkey this period is defined as 10 years. The calibration of meters is deemed appropriate and in compliance with the national regulation /17/.</p> <p>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.</p>
How were the values in the monitoring report verified and cross-checked?	The net electricity supplied to the grid has been crosschecked with the PMUM Screenshots /14/.
Does the data management (from monitoring equipment to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions?	At the last day of each month, the electricity generation supplied to the grid and electricity consumption from the grid is read and the monthly official electricity metering reports /15/. The monthly reading protocols are filled by the Project personnel and sent to TEIAS. In this way, it is checked if there are inconsistencies between the values read by OSOS and the reading protocols. Also the PMUM records are available for the project participant. All protocols /14/ /15/ within this monitoring period was checked during the site visit. The monthly official electricity metering reports (OSF Forms) /15/ are



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	<p>crosschecked with the PMUM records /14/ during this monitoring period.</p> <p>The plant personnel records the electricity generation from the meters every day and the responsible engineer checks the figures regularly. In the 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>

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3.5.3.4 Gold Standard sustainability monitored parameters

Data variable	Source of Data	Reported value for the project period
Air Quality • SO ₂ emission avoided by the project activity • NO _x emission avoided by the project activity • Dust emissions	• UNFCC National Inventory of TURKEY • Interviewing stakeholders with	• 219.3 t SO ₂ • 423.5 t NO _x • No dust pollution
Assessment		
<p><u>SO₂ and NO_x emissions avoided by the project activity:</u> The parameter is monitored by calculation with the generated electricity yearly. For this monitoring period, 219.3 t SO₂ and 423.5 t NO_x was calculated in the monitoring report.</p> <p><u>Dust emissions during the construction phase:</u> The parameter is monitored continuously by Local people. During on the site visit, the stakeholders were interviewed about the dust emission and no negative feedback was received.</p>		

Data variable	Source of Data	Reported value for the project period
Quality of Employment	Certificates and attendance lists of the trainings	Employees participated to the trainings.
Assessment		
<p>The parameter is monitored annually by checking certificates and equipment distributed /28-36/ /47/. All the employees are attending to the various trainings during this monitoring period. During on site visit the safety equipment given for the employees were seen.</p>		

Data variable	Source of Data	Reported value for the project period
Quantitative Employment and Income Generation	Registration Document	13 employees are hired and 7 of them are local. 5 employees are working for subcontractors and all of them are local.
Assessment		
<p>The parameter is monitored continuously by SGK records of the company. According to the excel sheet for Entry and Exit of the Employees /22/ and the Registration Documents /20/ /21/, 13 operation employees and 5 security personnel were hired during this monitoring period. In addition, 12 employees (both operation and security personnel) were local as confirmed through the Registration Documents /21/ /22/.</p>		

Data variable	Source of Data	Reported value for the project period
Balance of Payments and Investment	Electricity Generation and Calculation	20,536,940 USD
Assessment		
<p>This parameter is monitored annually by multiplying the annual electricity generation of the plant through monitoring by the latest available data for the average projected cost of Natural gas fired plants in Convention on the Organisation for Economic Co-operation and Development /48/ countries. 312,777 MWh of electricity has been generated during monitoring period corresponding to 20,536,940 USD.</p>		

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3.5.4 Assessment of data and calculation of emission reductions

Availability of the data

All the monthly meter protocols /15/ are available for the project participant. All PMUM records /14/ within this monitoring period was checked during the site visit. The monthly meter reading protocols /15/ were crosschecked with the PMUM records /14/.

Cross-check reported data

The data of generated electricity are transferred correctly to the excel sheet /9/ and emission reduction is calculated correctly. The excel sheet is crosschecked with the PMUM records /14/ and the monthly meter reading protocols /15/ and it seems appropriate.

3.5.5 Accuracy of emission reduction calculations

The emission reduction calculations provided in the spreadsheet /9/ 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 of 27/10/2014 /3/ is equivalent to 189,855 tCO₂e. The reported emission reductions are 19% higher than the estimated emission reduction of 159,609 tCO₂e for the period as per the registered PDD /1/. For wind power projects energy yield estimations are performed taking into account of 10 years average, and thus 27 months actual generation is not an appropriate reference to compare with the estimated amounts. The only reason for this increase in emission reductions is more wind.

The data presented in the monitoring report /3/ 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 3.5.3.3.

3.5.6 Accuracy of the GS indicators of sustainable development

All the documented evidences related to the sustainable monitored parameters such as the training certificates /28-36/, excel sheet for entry and exit of the employees /22/, registration documents /20/ /21/, pictures of the safety equipment /47/, invoice for seedlings /42/ /43/ /44/, correspondence of Regional Directorate of Forestry /39/, ornithology report /38/ are provided as objective evidences.

3.5.7 Management system and quality control

The electricity generation supplied to the grid and electricity consumption from the grid is read from the electricity meters through Monthly Meter Reading Protocols by the TEIAS personnel. The monthly meter reading protocols are prepared as per these readings. The plant personnel records the electricity generation from the meters every day and the responsible engineer checks the figures regularly. In case of difference between the data, TEIAS will be informed. The generated electricity is measured by two meters that were sealed by TEIAS. The project owner has no control on the meters.

The electricity generation supplied to the grid and electricity consumption from the grid is stored by PMUM on the web site. The Project owner has an ID and password to access this data on the web site. The project owner can easily access the data by using this portal. The project owner also archives a hardcopy of these protocols, scanned and stored electronically.

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 /3/ in line with the ACM0002 version 12.0.0 /7/.

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4 VERIFICATION AND CERTIFICATION OPINION

RINA Services Spa (RINA) has performed verification of the emission reductions reported for the project activity “Balikesir Susurluk 45 MW Wind Farm Project – Turkey” in Turkey, GS Registration Reference N° 854, for the period 13/02/2011 to 31/05/2013, with regard to the relevant requirements for GS activities.

The project participants of the “Balikesir Susurluk 45 MW Wind Farm Project – Turkey” project are responsible for:

- the preparation of greenhouse gas emissions data and the reported greenhouse gas emission reductions from the project on the basis set out in the monitoring plan contained in the registered Project Design Document version 04 of 05/05/2011,
- the development and maintenance of records and reporting procedures in accordance with that plan, including the calculation and determination of greenhouse gas emission reductions of the project.

It is the responsibility of RINA to express an independent verification opinion about the project’s conformity with the requirements of paragraph 62 of the CDM modalities and procedures, GS requirements and on the reported greenhouse gas emission reductions from 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 4 of 27/10/2014 for the “Balikesir Susurluk 45 MW Wind Farm Project – Turkey” project in Turkey for the period 13/02/2011 to 31/05/2013 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 12.0.0 of 17/09/2010 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 13/02/2011 to 31/05/2013 amount to 189,855 tCO₂e.

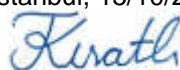
Year 2011 13/02/2011 to 31/12/2011 69,636 tCO₂e

Year 2012 01/01/2012 to 31/12/2012 88,053 tCO₂e

Year 2013 01/01/2013 to 31/05/2013 32,166 tCO₂e

GHG Emission Reductions or Removals	tCO ₂ e
Baseline Emissions	189,855
Project Emissions	0
Leakage	0
Net GHG emission reductions or removals	189,855

Istanbul, 15/10/2014



Tugce KIRATLI
GS Team Leader
RINA Denizcilik ve Belgelendirme Ltd. Sti.

Genova, 29/10/2014



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

APPENDIX A

GOLD STANDARD VERIFICATION PROTOCOL

TABLE 1 REQUIREMENTS CHECKLIST

Checklist Question	Reference	MoV ¹	Comments	Conclusion
<p>A</p> <p>A.1 Description of Project Activity</p> <p>Title of the project activity, revision number and date of Monitoring Report</p>	<p>/1/ /3/ /8/</p>	<p>DR</p>	<p>The title of the project activity is given as “Balikesir Susurluk 45 MW Wind Farm Project – Turkey” in the Monitoring Report version 1 /3/. The title is also in line with the registered PDD/1/ and Validation Report /8/. The company name is changed from Alentek Enerji A.S. to Susurluk Enerji A.S. as confirmed through the Trade Registry Gazette /41/. Please make the necessary changes in the monitoring report. However, the date format should be revised as DD/MM/YYYY in the monitoring report as per the Monitoring Report Form, version 04.0 of 25/06/2014. The Annex-1 given in the last page of the monitoring report should be filled and after from this page should be deleted because of containing only explanation. In addition, in the Section A.6 of the monitoring report should contain the responsible persons and their responsibilities both for the project participants and the carbon consultant. In Section A.5 of the monitoring report, both start and end date of the crediting period should be presented. Please add the last date of the crediting period.</p>	<p>GR-4 OK</p>
<p>A.2 Is the actual implementation and operation of the proposed project activity in accordance with the project activity in the registered PDD?</p>	<p>/1/ /3/ /9/ /19/</p>	<p>DR, CC, I</p>	<p>It is confirmed during the site visit performed on 12/09/2014 that project activity is implemented and operated as per the registered PDD /1/. The project activity consists of 18 wind turbines, each with a 2.5 MW capacity and making the total installed capacity of 45 MW. Technical details of the wind turbines comply with the registered PDD /1/. It could be confirmed during the site visit that 3 installed turbines</p>	<p>CAR-4 OK</p>

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

Checklist Question	Reference	MoV ¹	Comments	Conclusion
A.3			<p>are Nordex N90 type and 15 installed turbines are Nordex N100 turbine, each with an output of 2.5 MW. The project boundary in the registered PDD /1/ is in line with the actual project boundary. Generated electricity is supplied to the National Electricity Transmission Grid of Turkey at the 154 kV Balikesir <u>Seka</u> Transformer Centre via 30 km power transmission line as per the generation license /19/. However, Balikesir <u>Saka</u> is mentioned in the report. Please correct.</p> <p>The estimated annual emission reduction given at the cover page of Monitoring Report /3/ is calculated as 159,609 tCO₂ as confirmed through the calculation excel sheet /9/. However, in the calculation of PMUM data, the first 4 month is not included to the total amount. Please recalculate.</p> <p>The actual emission reduction is calculated as 189,856 tCO₂ in the calculation sheet. However, it is not in line with the monitoring report. Please round down the value calculated in the emission reduction excel sheet.</p> <p>Please correct the value in Section E.4 of the monitoring report as per the tCO₂ not MWh.</p> <p>Also, please give a clear explanation in Section E.6 of the monitoring report about the difference between the estimated and actual emission reduction.</p> <p>The registered project activity applies the approved baseline and monitoring methodology ACM0002 version 12 of 17/09/2010 /7/.</p>	OK
B Monitoring				
B.1 Monitoring plan				
B.1.1	/1/7/	DR, CC	The monitoring plan of the registered GS project activity complies with the applied methodology ACM0002 version 12 /7/.	OK
B.1.2	/1/3/7/	DR, CC	The net electricity generation supplied to the grid (EG _y) needs to be monitored as per the ACM0002 version 12 /7/ and registered PDD /1/.	OK

Checklist Question	Reference	MoV ¹	Comments	Conclusion
B.1.3	/3/ /4/ /5/	DR, CC	In addition, since the project is developed under Gold standard, the following GS sustainable development parameters needs to be monitored as per the registered PDD /1/: "Air Quality", "Quality of Employment", "Quantitative Employment and Income Generation", "Balance of Payments and Investment". The project activity is developed and registered under Gold standard Version 2.1; therefore, GS Toolkit 2.1 is applicable to the project activity. The sustainability indicators in the monitoring report complies with the sustainability indicators established by the Gold Standard.	OK
B.1.4	/1/ /2/ /3/ /7/	DR, CC, I	No change has been occurred to the sustainable development indicators during the monitoring period of 13/02/2011 to 31/05/2013 as confirmed through the site inspection and interviews.	OK
B.2 Data and parameters that are available at validation and that are not monitored				
B.2.1	/1/ /8/	DR, CC	Combined Margin Emission Factor (EF_{grid,CM,y}): As per the approved methodology ACM0002 version 12.0.0, the combined emission factor has been determined using the ex-ante option, so it is not requested to monitor and recalculate the emission factors during this crediting period. The combined emission factor is determined to be 0.607 tCO ₂ /MWh in the registered PDD /1/ and validation report /8/.	OK
B.3 Data and parameters monitored				
B.3.1	/1/ /3/ /14/ /15/	DR, CC, I	Annual net electricity generation supplied by the project to the grid (EG_y): The electricity generation and electricity consumption is measured in MWh/year and it is monitored by two electricity meters that are located at the project area. The electricity generation and electricity consumption of the project activity is based on the PMUM records /14/. The PMUM records are crosschecked with the monthly official electricity metering reports (OSF Forms) /15/ during this monitoring period.	OK

Checklist Question	Reference	MoV ¹	Comments	Conclusion
B.3.2 Is the measurement equipment described? Is the accuracy of the measurement equipment addressed and deemed appropriate?	/3/ /16/ /37/	DR, CC, I	Two electricity meters are installed at the project site. The main meter is ELSTER A1500 with serial number 00416275 and the backup meter is ELSTER A1500 with serial number 00416274. The meters have the accuracy of 0.2s as confirmed through the calibration record /37/ . The accuracy class of the meters complies with the “Communiqué for Measurement Devices used in the Electricity Market” /16/ . The electricity meters are sealed by TEIAS as confirmed during the site visit. The electricity meters are calibrated on 20/05/2010 as confirmed through the calibration record /37/ and also tested by TEIAS on 02/08/2012 and 31/12/2013 as confirmed through the test reports /45/ /46/ . The description of the meters presented in the monitoring report is in line with the operation as confirmed through the site visit observation.	OK
B.3.3 Are the requirements for maintenance and calibration of measurement equipment described and deemed appropriate?	/1/ /3/ /17/ /37/	DR, CC, I	TEAIS is responsible for calibration and maintenance of the devices as per the registered PDD /1/ . The project owner has no control on the meters since the meters are sealed by the TEIAS as confirmed during the site visit. The meters were calibrated by the supplier on 20/05/2010 as confirmed through the initial calibration record /37/ . 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 /17/ . The electricity meters are also tested by TEIAS on 02/08/2012 and 31/12/2013 as confirmed through the test reports /45/ /46/ .	OK
B.3.4 Is the monitoring frequency adequate for all monitoring parameters? Is it in line with the registered monitoring plan?	/1/ /2/ /7/	DR, CC, I	The electricity generation supplied to the grid and electricity consumption from the grid is monitored continuously by two meters as verified during the site visit. Monitoring frequency is in line with the applied methodology /7/ and registered PDD /1/ .	OK
B.3.5 Is the recording frequency adequate for all monitoring	/1/ /2/ /7/	DR, CC, I	The electricity generation supplied to the grid, electricity	OK

Checklist Question	Reference	MoV ¹	Comments	Conclusion
<p>parameters? Is it in line with the registered monitoring plan?</p> <p>B.3.6 Does data management (from monitoring equipment to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions?</p>	<p>/11/3/</p>	<p>DR, CC, I</p>	<p>consumption from the grid is recorded monthly. This is in line with the monitoring plan in the registered PDD /1/.</p> <p>The electricity generation supplied to the grid and electricity consumption from the grid is monitored by two meters as verified during the site visit. The meters are sealed by TEIAS. The electricity generation supplied to the grid and electricity consumption from the grid is read remotely from the electricity meters by Automatic Meter Reading System (OSOS) by the TEIAS. The reading results are stored by PMUM on the web site.</p> <p>The plant staff explained the monitoring procedures during the site visit. As confirmed through the observation, the plant staff records the data on regular basis from both meters and compares the values for consistency. The responsible engineer performs regular checks of this procedure each month. If any difference occurs between the two meters, TEIAS has to be informed.</p>	<p>OK</p>
<p>B.4 Monitoring of GS indicators of sustainable development /environmental impacts</p>				
<p>B.4.1 Data/Parameter monitored / Data unit / Description / Source of data to be used / Value data for the monitoring period</p>	<p>/2/3/20/ /21/22/ /28/29/ /30/31/ /32/33/ /34/35/ /36/47/</p>	<p>DR, CC, I</p>	<p>The following GS sustainable development parameters are monitored as per the monitoring plan presented in the registered PDD: "Air Quality", "Quality of Employment", "Quantitative Employment and Income Generation", "Balance of Payments and Investment".</p> <p>SD.1 Air Quality:</p> <p><u>Dust emissions:</u> The parameter is monitored by onsite observation yearly. However, "Continuously (only applicable for initial verification)" is presented in the monitoring report. Please clarify. Also, the name of the parameter is changed from "dust emission" to "dust emissions during construction phase". Please clarify.</p> <p>As per the interviews with the stakeholders, they confirmed that no dust emission is observed related to the construction phase. Due to the territorial way and the road enlargement works, this road has been a matter of</p>	<p>CAR-2 OK</p>

Checklist Question	Reference	MoV ¹	Comments	Conclusion
			<p>preference and in every using of the road dust emission could be observed near the district. They also represents that the project does not cause dust emission.</p> <p><u>SO₂ and NO_x emissions avoided by the project activity:</u> The parameter is monitored by calculation with the generated electricity yearly. However, no calculation is presented in the monitoring report or discussed in the calculation excel sheet. Please clarify.</p> <p>SD.3 Quality of Employment: The parameter is monitored annually by checking certificates and equipment distributed /28-36/47/. All the employees are attending to the various trainings during this monitoring period. During on site visit the safety equipment given for the employees were seen. However, the name of the chosen parameter and the measuring/reading/recording frequency are not in line with the Gold Standard Passport /2/. Please correct.</p> <p>SD.4 Quantitative Employment and Income Generation:</p> <p>The parameter is monitored continuously by SGK records of the company. According to the excel sheet for Entry and Exit of the Employees /22/, 11 employees were hired. However, as per the Registration Documents /20/ /21/, 10 operation employees and 5 security personnel were hired during this monitoring period. Please clarify.</p> <p>In addition, 12 employees (both operation and security personnel) were local as confirmed through the Registration Documents /21/ /22/. However, this issue is not discussed in the monitoring report. Please add.</p> <p>SD.5 Balance of Payments and Investment:</p> <p>This parameter is monitored annually by comparing electricity generated. 312,777 MWh of electricity has been generated during monitoring period corresponding</p>	

Checklist Question	Reference	MoV ¹	Comments	Conclusion
B.4.2 Is the monitoring in line with the registered monitoring plan?	/1/2/3/	DR, CC, I	to 20,536,940 USD. The monitoring complies with the monitoring plan presented in the registered PDD. The following GS sustainable development parameters are monitored as per the registered monitoring plan: “Air Quality”, “Quality of Employment”, “Quantitative Employment and Income Generation”, “Balance of Payments and Investment”.	OK
B.5 Management, quality assurance and quality control				
B.5.1 How has it been assessed that the monitoring arrangements described in the monitoring plan are feasible within the project design?	/1/2/3/	DR, I	An on-site inspection has been performed on 12/09/2014 and it could be confirmed that the monitoring arrangements in the monitoring plan are feasible within the project design.	OK
B.5.2 Are procedures identified for day-to-day record handling (including what records to keep, storage area of records and how to process performance documentation)?	/1/3/	DR, I	The electricity generation supplied to the grid and electricity consumption from the grid is monitored by two meters as verified during the site visit. The meters are sealed by TEIAS. The electricity generation supplied to the grid and electricity consumption from the grid is read remotely from the electricity meters by Automatic Meter Reading System (OSOS) by the TEIAS. The reading results are stored by PMUM on the web site. The plant staff explained the monitoring procedures during the site visit. As confirmed through the observation, the plant staff records the data on regular basis from both meters and compares the values for consistency. The responsible engineer performs regular checks of this procedure each month. If any difference occurs between the two meters, TEIAS has to be informed.	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?	/1/3/	DR, I	The generated electricity is measured by two meters that were sealed by TEIAS. The project owner has no control on the meters. The electricity generation supplied to the grid and electricity consumption from the grid is stored by PMUM on the web site. The project owner also archives a hardcopy of these protocols, scanned and stored	OK

Checklist Question	Reference	MoV ¹	Comments	Conclusion
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?	/1/3/17/	DR, 1	electronically. 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/ in line with the ACM0002 /7/ . However, it is not discussed in the monitoring report /3/ . Please add.	GR-2 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>CAR 1</p> <p>Generated electricity is supplied to the National Electricity Transmission Grid of Turkey at the 154 kV Balikesir Seka Transformer Centre via 30 km power transmission line as per the generation license /19/. However, Balikesir Saka is mentioned in the report. Please correct.</p> <p>The estimated annual emission reduction given at the cover page of Monitoring Report /3/ is calculated as 159,609 tCO₂ as confirmed through the calculation excel sheet /9/. However, in the calculation of PMUM data, the first 4 month is not included to the total amount. Please recalculate.</p> <p>The actual emission reduction is calculated as 189,856 tCO₂ in the calculation sheet. However, it is not in line with the monitoring report. Please round down the value calculated in the emission reduction excel sheet.</p> <p>Please correct the value in Section E.4 of the monitoring report to be tCO₂ unit not MWh.</p> <p>Also, please give a clear explanation in Section E.6 of the monitoring report about the difference between the estimated and actual emission reduction.</p>	<p>A.2</p>	<ul style="list-style-type: none"> SEKA has been corrected as SAKA. First 4 months have been included in the PMUM data. 189,856 has been rounded down to 189,855 in the report and excel. In section E4, the MWh value has been corrected as 189,855 tCO₂. In section E6, an explanation on windpower has been included to comment on the difference. <p>Response 2:</p> <ul style="list-style-type: none"> All along the report, SEKA, instead of SAKA has been mentioned. All along the report and the calculation sheet, 189,855 tCo2 has been used. In section E6, % difference has been mentioned. 	<p>Review 1 (25/09/2014):</p> <p>Generated electricity is supplied to the National Electricity Transmission Grid of Turkey at the 154 kV Balikesir Seka Transformer Centre via 30 km power transmission line as per the generation license /19/. However, Balikesir Saka is mentioned in the report. Please correct.</p> <p>The first 4 month is now included to the total amount to the calculation of PMUM data.</p> <p>The actual emission reduction is calculated as 189,856 tCO₂ in the calculation sheet. However, it is not in line with the monitoring report. Please round down the value calculated in the emission reduction excel sheet.</p> <p>The value in Section E.4 of the monitoring report is now corrected as 189,855 tCO₂.</p> <p>A clear explanation should be included the estimated emission reduction, actual emission reduction and the percentage of the difference. Please give a clear definition in section A.6 of the monitoring report.</p> <p>Hence, CAR 1 is not closed.</p> <p>Review 2 (14/10/2014):</p> <p>The miswriting is now corrected as Seka Transformer in the monitoring report.</p> <p>The actual emission reduction given in the monitoring report is now in line with the calculation excel sheet.</p>

Corrective action and/ or clarification requests	Reference to Table 1	Response by project participants	Verification conclusion
<p>CAR 2</p> <p>SD.1 Air Quality:</p> <p><u>Dust emissions:</u> The parameter is monitored by onsite observation yearly. However, “Continuously (only applicable for initial verification)” is presented in the monitoring report. Please clarify. Also, the name of the parameter is changed from “dust emission” to “dust emissions during construction phase”. Please clarify.</p> <p><u>SO₂ and NO_x emissions avoided by the project activity:</u> The parameter is monitored by calculation with the generated electricity yearly. However, no calculation is presented in the monitoring report or discussed in the calculation excel sheet. Please clarify.</p> <p>SD.3 Quality of Employment: The name of the chosen parameter and the measuring/reading/ recording frequency are not in line with the Gold Standard Passport /2/. Please correct.</p> <p>SD.4 Quantitative Employment and Income Generation:</p> <p>The parameter is monitored continuously by SGK records of the company. According to the excel sheet for Entry and Exit of the Employees /22/, 11 employees were hired. However, as per the Registration Documents /20/ /21/, 10 operation employees and 5 security personnel were hired during this monitoring period. Please clarify.</p> <p>In addition, 12 employees (both operation and security personnel) were local as confirmed</p>	<p>B.4.1</p>	<p>SD.1: The frequency has been changed to annual. The parameters have been rearranged and handled as SO₂, NO_x and dust emissions as stated in the Passport. Measuring and recording frequencies for the three parameters were stated as ‘yearly’ in the Passport, so are in the monitoring report. The avoided SO₂ and NO_x calculations have been included.</p> <p>SD.3: The name has been changed to ‘Certificates and safety equipment distributed’ and the frequency to ‘Annually’ as in the Passport.</p> <p>SD.4: During the monitoring period, according to the excel sheet for employee entry and exit dates, 13 people seem to be have been employed fully or partially. Ahmet Şan entered in March 2013 and exited in February 2014. And Yunus Sevim left in 8/8/2012. All the other 11 employees fully worked in the monitoring period. The missing SGK records for Yunus Sevim, Ahmet Şan and Gürsu Köksal have been provided to DOE. 5 security personnel worked as subcontractor. Thus they do not have SGK records. Local hiring and subcontractor security have been mentioned in SD4 as 8 operational and 5</p>	<p>A clear definition about the difference between the estimated and actual emission reduction is now added to Section A.6 of the monitoring report.</p> <p>Hence, CAR 1 is closed.</p> <p>Review 1 (25/09/2014):</p> <p>SD.1 Air Quality:</p> <p><u>Dust emissions:</u> The parameter is monitored by onsite observation yearly and now the monitoring report is in line with the registered PDD. Also, the name of the parameter is now corrected as “dust emission”.</p> <p><u>SO₂ and NO_x emissions avoided by the project activity:</u> The parameter and their values are now added to the monitoring report. The calculations are found acceptable.</p> <p>SD.3 Quality of Employment: The name of the chosen parameter and the measuring/reading/ recording frequency are now in line with the Gold Standard Passport /2/.</p> <p>SD.4 Quantitative Employment and Income Generation:</p> <p>Now it could be confirmed that 13 employees are hired during this monitoring period. However, according to the Registration Documents /21/ /22/ it is confirmed that 7 employees (security personnel are excluded) are local. In the monitoring report, 8 are presented. Please clarify.</p> <p>Hence, CAR 2 is not closed.</p>

Corrective action and/ or clarification requests	Reference to Table 1	Response by project participants	Verification conclusion
<p>through the Registration Documents /21/ /22/. However, this issue is not discussed in the monitoring report. Please add.</p>		<p>security personnel as the plant manager confirmed.</p> <p>Response 2:</p> <ul style="list-style-type: none"> 8 local employees have been corrected as 7 according to SGK registrations in . 	<p>Review 2 (14/10/2014):</p> <p>SD.4 Quantitative Employment and Income Generation:</p> <p>Now the number of the local people is corrected as "7" in the monitoring report.</p> <p>Hence, CAR 2 is closed.</p>
<p>CR 1</p> <p>The company name is changed from Alentek Enerji A.S. to Susurluk Enerji A.S. as confirmed through the Trade Registry Gazette /41/. Please make the necessary changes in the monitoring report.</p> <p>The format of the date should be revised as DD/MM/YYYY in the monitoring report as per the Monitoring Report Form, version 04.0 of 25/06/2014.</p> <p>The Annex-1 given in the last page of the monitoring report should be filled and after from this page should be deleted because of containing only explanation. In addition, in the Section A.6 of the monitoring report should contain the responsible persons and their responsibilities both for the project participants and the carbon consultant.</p> <p>In Section A.5 of the monitoring report, both start and end date of the crediting period should be presented. Please add the last date of the crediting period.</p>	<p>A.1</p>	<p>The name has been changed to Susurluk Enerji A.S.. The date format has been changed to DD/MM/YYYY. Annex 1 has been filled out and the rest has been deleted. In section A5 ending date 13/02/2018 has been added. In section A6 and Annex 1, contact info for the carbon consultant has been added.</p> <p>Response 2:</p> <ul style="list-style-type: none"> All along the report, SAKA, instead of SEKA has been mentioned. The last day of the crediting period has been revised as 12/02/2018. 	<p>Review 1 (25/09/2014):</p> <p>The company name is now corrected as Susurluk Enerji A.S. as confirmed through the Trade Registry Gazette /41/.</p> <p>The format of the date is now revised as DD/MM/YYYY in the monitoring report.</p> <p>The Annex-1 given in the last page of the monitoring report is now filled and after from this page is deleted.</p> <p>In the Section A.6 of the monitoring report now contains the responsible persons and their responsibilities both for the project participants and the carbon consultant.</p> <p>In Section A.5 of the monitoring report, the end date of the crediting period is now presented. However, the last day should be the previous date of the crediting period starting date.</p> <p>Hence, CR 1 is not closed.</p> <p>Review 2 (14/10/2014):</p> <p>The end date of the crediting period is now corrected as 12/02/2018 in Section A.5 of the monitoring report.</p> <p>Hence, CR 1 is closed.</p>

Corrective action and/ or clarification requests	Reference to Table 1	Response by project participants	Verification conclusion
<p>CR 2</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/ in line with the ACM0002 /7/. However, it is not discussed in the monitoring report /3/. Please add.</p>	B.5.4	<p>The sentence “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 in line with the ACM0002” has been added to the end of section D.2.</p>	<p>Review 1 (25/09/2014):</p> <p>It is now stated in the monitoring report that the collected data during the monitoring period will be kept by the project owner at least two years after the last issuance of VERs.</p> <p>Hence, CR 2 is closed.</p>

TABLE 3 FORWARD ACTION REQUEST

Forward action request	Reference to Table 1	Response by project participants	Verification conclusion
FAR 1			



RINA

**CERTIFICATO DI QUALIFICA
QUALIFICATION CERTIFICATE**

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

Tugce Kiratli

è qualificato come¹:
is qualified as:

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

*Just for GS and VCS, not for CDM

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
4	14/01/2014	Updated qualification as VCS-GS TL
0	26/11/2012	-

Il Resp. QPT
Head of QPT

¹ 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:
We declare that Mr/Mrs/Ms:

Rita Valoroso

è qualificato come1:
is qualified as:

**CDM/VCS/GS/SCS/JI – TEC
CDM/VCS/GS/SCS – VAL, VER, TL
TECHNICAL REVIEWER**

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	-
8	31-07-14	Update qualification according to IS-QPT-GHG-00 REV13

Il Resp. QPT
Head of QPT

¹ Legend:

VAL:	Validator	CDM: Clean Development Mechanism
VER:	Verifier	VCS : Verified Carbon Standard:
TEC:	Technical Expert	GS: Gold Standard
TL:	Team Leader	SCS: SocialCarbon Standard
FIN-EXP:	Financial Expert	JI: Joint Implementation
DET:	Determiner	

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