FINAL VALIDATON REPORT
"KARACABEY WIND POWER PROJECT"

RINA

RINA SERVICES S.P.A.

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Summary:

RINA Services S.p.A. (RINA), commissioned by Yalova Ruzgar Enerjisinden Elektrik Uretim Anonim Sirketi, has performed the validation of the project activity "Karacabey Wind Power Project" in Turkey, with regard to the relevant requirements for CDM and VCS activities.

The objective of the Validation is to have an independent evaluation of a project activity by a designated operational entity against the requirements of the VCS Version 3 and GHG program applied, on the basis of the project design document. The validation scope is to review the VCS PD against the UNFCCC criteria for CDM and VCS Version 3 Requirements.

Validation was conducted using RINA procedures in line with the requirements specified in the 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. The validation consisted of desk review, on-site assessment and the resolution of outstanding issues and the issuance of the final validation report.

The verification shall ensure that reported emission reductions are complete and accurate in accordance with applicable VCS Version 3 requirements, which refer to CDM rules, in order to be certified.

In conclusion, it is RINA's opinion that the project activity "Karacabey Wind Power Project", in "Turkey", as described in the VCS-PD version 03 of 26/08/2016, meets all relevant requirements for VCS activities and all relevant host Party criteria and correctly applies the baseline and monitoring methodology "ACM0002", "Grid-connected electricity generation from renewable sources", version 17.0 of 13/05/2016.

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1 INTRODUCTION

Yalova Ruzgar Enerjisinden Elektrik Uretim Anonim Sirketi has commissioned RINA to carry out the validation of the grouped project "Karacabey Wind Power Project" project in Turkey.

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

1.1 Objective

The objective of the Validation is to have an independent evaluation of a project activity by a designated operational entity against the requirements of the VCS Version 3 and GHG program applied, on the basis of the project design document. In particular, the project's baseline, monitoring plan, and the project's compliance with relevant VCS Version 3 requirements, GHG program requirements and host Party criteria are validated in order to confirm that the project design, as documented, is sound and reasonable and meets the identified criteria. Validation is a requirement for all VCS projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of Voluntary Carbon Units (VCUs).

1.2 Scope and Criteria

The validation scope is to review the VCS PD against the UNFCCC criteria for CDM and VCS Version 3 Requirements.

UNFCCC criteria for CDM refer to Article 12 of the Kyoto Protocol, the CDM modalities and procedures, the procedures for registration of programme of activity as a single CDM and the subsequent decisions by the CDM Executive Board.

Validation 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 project design.

1.3 Level of Assurance

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

In line with VCS Standard and as per 14064-3:2006 para A.2.3.2, a reasonable level of assurance is defined for the validation of the project activity. The technical review was performed by a technical reviewer(s) qualified in accordance with RINA's qualification scheme VCS VER validation and verification. The validation team and the technical reviewers consist of the following personnel:

Role/Qualification	Last Name	First Name	Country
VCS Team Leader, VCS Validator, Technical Expert	Kiratli	Tugce	Turkey
Technical Reviewer	Alfieri	Felice	Italy

1.4 Summary Description of the Project

The purpose of the project activity is to install wind power plant with a total installed capacity of 33.3 MWm / 27.9 MWe as per the Generation License /15/. The generated electricity will be fed to national grid. The project is within boundaries of Marmara Region, Bursa Province of Turkey, located at near Yaris Village. The project qualifies as a large-scale CDM project activity.

2 VALIDATION PROCESS

2.1 Method and Criteria

Validation was conducted using RINA procedures in line with the VCS Version 3 requirements and the requirements specified in the 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.

The validation consisted of the following three phases:

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

2.2 Document Review

The VCS PD version 3 of 26/08/2016 /1/, in particular the applicability of the methodology, the baseline determination, the additionality of the project activity, the starting date of the project, the monitoring plan, the emission reduction calculations provided in the form of a spreadsheet, "CM_Karacabey_19.07.2016.xlsx" /2/ were assessed as part of the validation.

The following table lists the documentation that was reviewed during the validation:

/1/	Life Enerji: VCS PD for "Karacabey Wind Power Project" in Turkey, version 03 of 26/08/2016 Life Enerji: VCS PD for "Karacabey Wind Power Project" in Turkey, version 02 of 19/07/2016 Life Enerji: VCS PD for "Karacabey Wind Power Project" in Turkey, version 01 of 14/06/2016
/2/	Life Enerji: Baseline Emission Factor "CM_Karacabey_19.07.2016.xlsx" version 02 of 19/07/2016 Life Enerji: Baseline Emission Factor "CM_Karacabey_14.06.2016.xlsx" version 01 of 14/06/2016
/3/	GAIA Carbon Finance: Common Practice Calculation Spreadsheet "Common-Practice_Karacabey_14.06.2016.xlsx" version 01 of 14/06/2016
/4/	GAIA Carbon Finance: Financial Calculation Spreadsheet "IRR_Karacabey WPP_19.07.2016.xlsx" version 02 of 19/07/2016 GAIA Carbon Finance: Financial Calculation Spreadsheet "IRR_Karacabey WPP_14.06.2016.xlsx" version 01 of 14/06/2016
/5/	VCS Verified Carbon Standard: VCS Program Guide, VCS Version 03, v3.5 of 08/10/2013
/6/	VCS Verified Carbon Standard: VCS Standard, VCS Version 03, v3.5 of 25/03/2015

/7/	VCS Verified Carbon Standard: VCS Validation Report Template VCS Version 03, v3.3 of 08/10/2013
/8/	VCS Verified Carbon Standard: VCS Project Description Template VCS Version 03, v3.2 of 08/10/2013
/9/	VCS Verified Carbon Standard: VCS Validation and Verification Manual VCS Version 03, v3.1 of 08/10/2013
/10/	CDM Executive Board: Clean Development Mechanism Project Standard, version 09.0 of 20/02/2015
/11/	CDM Executive Board: Clean Development Mechanism Validation and Verification Standard, version 09.0 of 20/02/2015
/12/	CDM Executive Board: Baseline and Monitoring Methodology "ACM0002", "Grid-connected electricity generation from renewable sources", version 17.0 of 13/05/2016
/13/	CDM Executive Board: Methodological Tool "Tool to calculate the emission factor for an electricity system", version 05.0 of 27/11/2015
/14/	CDM Executive Board, Glossary of CDM terms, version 08.0 of 20/02/2015
/15/	Energy Market Regulatory Authority: Generation License numbered EU/5863-13/03384 of 12/11/2015
/16/	Deutsche Wind Guard: Wind Farm Energy Yield Assessment of 11/07/2013
/17/	Turkiye Is Bankasi: Credit Commission of 08/12/2015
/18/	Printscreen of Google Maps for the Distance of Nearest Settlement, submitted on 27/06/2016
/19/	Printscreen of Google Maps for the Distance of Yaris Village, submitted on 27/06/2016
/20/	Uludag Elektrik Dagitim: Correspondence Relating To Expropriation of 19/01/2016
/21/	Bursa Governorship: Correspondence Relating To EIA Not Required Decision after Number of Turbine Changed of 08/11/2013
/22/	Provincial Directorate of Environment and Urban Planning: Correspondence Relating To EIA Not Required Decision after Number of Turbine Changed of 10/10/2013
/23/	Yalova Ruzgar Enerjisinden Elektrik Uretim Santrali Ltd. Sti. And FutureCamp Iklim ve Enerji Ltd. Sti.: Carbon Agreement of 09/12/2011
/24/	Bursa Governorship, Provincial Directorate of Environment and Urban Planning: EIA Not Required Certificate of 28/12/2012
/25/	Bayerische Landesbank: Loan Agreement for the Financing of Nordex Energy GmbH of 16/02/2016
/26/	Turkiye Is Bankası A.S. and Bereket Enerji A.S.: General Cash and Non-Cash Loan Agreement of 26/11/2015
/27/	Nordex Enerji A.S.: Maintenance and Service Agreement of 25/11/2015
/28/	Yalova Ruzgar Enerjisinden Elektrik Uretim Santrali Ltd. Sti. And Nordex Energy GmbH: Field Delivery Report for Turbine Construction of 01/04/2016
/29/	Nordex Enerji A.S.: Supply and Installation Agreement of 25/11/2015
/30/	Energy Market Regulatory Authority: Electricity Market Law, No: 6446 of 14/03/2013
/31/	Energy Market Regulatory Authority: Renewable Energy Sources Law No:6094 of 29/12/2010
/32/	Energy Market Regulatory Authority: Environmental Law No: 2872 of 09/08/1983
/33/	Website: http://mer.markit.com/br-reg/public/index.jsp?s=cp Argument: Gold Standard Registry Language: English, Retrieved on: 08/07/2016

/34/	CDM Executive Board: Methodological Tool "Tool for the demonstration and assessment of additionality", version 07.0 of 23/11/2012
/35/	Turkish Energy Market Regulatory Authority: Communiqué for Measurement Devices used in the Electricity Market of 22/03/2003
/36/	CDM Executive Board: Methodological Tool: "Guidelines for reporting and validation of plant load factors", version 01 of 17/07/2009
/37/	Website: http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2009/05/11/000333037_20090511030724/Rendered/PDF/468080PAD0P112101Official0Use0Only1.pdf Argument: Project Appraisal Document on a Proposed IBRD Loan, pp 81 Language: English Retrieved on: 11/07/2016
/38/	CDM Executive Board: Guidelines on the Assessment of Investment Analysis, Version 05 of 15/07/2011
/39/	Energy Market Regulatory Authority: Electricity Market Law, No: 6446 of 14/03/2013
/40/	Energy Market Regulatory Authority: Renewable Energy Sources Law No:6094 of 29/12/2010
/41/	Website: http://www.tcmb.gov.tr/kurlar/200708/31052010.html Argument: Central Bank of the Republic of Turkey, Exchange Rates Language: English, Retrieved on: 19/02/2016
/42/	Website: http://www.gib.gov.tr/fileadmin/user_upload/Yararli_Bilgiler/amortisman_oranlari2011.html Argument: Amortization Rates Language: Turkish, Retrieved on: 11/07/2016
/43/	The Presidency of the Turkish Revenue Administration: General Communique on Tax Procedural Law, Depreciation Rate List, Official Gazette No: 28405, Enactment Date: 08/09/2012
/44/	Website: http://www.enerji.gov.tr/mevzuat/5346/5346_Sayili_Yenilenebilir_Enerji_Kaynaklarinin_Elektrik_Enerjisi_Uretimi_Amacli_Kullanimina_Iliskin_Kanun.pdf Argument: Feed-in tariff for electric energy generated by HEPP Language: Turkish, Retrieved on 11/07/2016
/45/	Website: http://www.epdk.gov.tr/documents/elektrik/tarife/iletim/ELK_TARIFE_ILETIM_2360.doc Argument: Interconnection fees reported by Turkish energy authority (TEIAS) Language: Turkish & English, Retrieved on 11/07/2016
/46/	Website: http://www.epdk.gov.tr/index.php/4b360128-53aa-4174-8104-a6c10434ac9c Argument: Electricity tariffs – Turkey Language: Turkish, Retrieved on 11/07/2016
/47/	Website: http://www.kpmg.com/global/en/services/tax/tax-tools-and-resources/pages/corporate-tax-rates-table.aspx Argument: KPMG, Corporate tax rate in Turkey Language: English, Retrieved on: 11/07/2016
/48/	CDM Executive Board: Methodological Tool: "Tool to determine the remaining lifetime of equipment", version 01 of 16/10/2009
/49/	Picture for Showing the Distance Between Turbines-Village and Turbines-The Closest Settlement, submitted on 13/07/2016

/50/	Nordex: Technical Description Sheet of Nordex N100/2500, submitted on 14/07/2016
/51/	Yalova Ruzgar Enerjisinden Elektrik Uretim A. S.: Board Decision of 04/04/2014
/52/	Turkish Electricity Transmission Company (TEIAS): Turkish Electrical Energy 10-Year Generation Capacity Projection (2012-2021), of December 2012
/53/	Intergovernmental Panel on Climate Change: 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 2, Chapter 1, Table 1.4 "Default CO_2 Emission Factors for Combustion"
/54/	The Ministry of Trade and Industry: Regulation of Metering and Testing of Metering Systems of 24/07/1994
/55/	The Ministry of Environment and Forestry: Environmental Impact Assessment Regulation, Gazette No:26939 of 17/07/2008
/56/	Website: http://eud.teias.gov.tr/ITUM_IletimTarifeleri.asp Argument: TEIAS annual usage fees Language: Turkish, Retrieved on: 11/07/2016
/57/	CDM Executive Board: Methodological tool "Common Practice", Version 03.1 of 03/06/2015

2.3 Interviews

On 23/06/2016, RINA visited project site located at Karacabey County within boundaries of Bursa Province to resolve questions and issues identified during the document review and to perform interviews with relevant stakeholders in the host country.

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

	Date	Name and Role	Organization	Topic
/a/	23/06/2016	Elif OZDEMIR *Carbon Consultant*	Life Enerji	Description of the project activity Baseline and Additionality Eligibility Criteria Emission reductions calculations Monitoring plan and monitoring arrangements Investment Analysis
/b/	23/06/2016	Iklim SAHIN *Carbon Consultant*	Life Enerji	
/c/	23/06/2016	Gaye DEMIR BASBILEN *Site Manager*	Yalova Ruzgar Enerjisinden Elektrik Uretim A. S.	
/d/	23/06/2016	Zemine KURTBAY *Biolog*	Yalova Ruzgar Enerjisinden Elektrik Uretim A. S.	
/e/	23/06/2016	Cagri Neset ERGUN Civil Engineer	Yalova Ruzgar Enerjisinden Elektrik Uretim A. S.	

2.4 Site Inspections

On 23/06/2016, RINA visited project site located at Karacabey District within boundaries of Bursa Province to resolve questions and issues identified during the document review and to perform interviews with relevant stakeholders in the host country.

Representatives of project owner (Yalova Ruzgar Enerjisinden Elektrik Uretim Anonim Sirketi) and carbon consultant (Life Iklim ve Enerji Ltd. Sti.) were interviewed about the applicability of the methodology, eligibility criteria, baseline scenario, and project boundary.

2.5 Resolution of Findings

The objective of this phase of the validation is to resolve any outstanding issues, which need to be clarified for RINA's positive conclusion on the project design.

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

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

- The project participants have made mistakes that will influence the ability of the project activity to achieve real, measurable additional emission reductions.
- The VCS Version 3 requirements have not been met.
- There is a risk that the emission reductions cannot be monitored or calculated.

A clarification request (CR) is raised if information is insufficient or not clear enough to determine whether the applicable VCS Version 3 requirements have been met.

Figure 1 VCS Validation Protocol Tables

Validation Protocol, Table 1 - Requirement checklist				
Checklist Question	**Ref.**	**MoV**	**Comments**	**Conclusion**
The various requirements in Table 1 are linked to checklist questions the project should meet. The checklist is 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, CR and FAR see the definitions above. OK is used if the information and evidence provided is adequate to demonstrate compliance with CDM/VCS requirements.

Validation 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**	**Validation Conclusion**
The CAR and/or CLs 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 validation team's assessment and final conclusion of the CARs and/or CRs.

Validation Protocol, Table 3 - Forward Action Requests (if no FAR the table 3 is deleted)		
Forward action request	**Reference to Table 1**	**Response by project participants** **Validation 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 prior to first verification.

2.6 Forward Action Requests

No FAR is raised during the Validation.

3 VALIDATION FINDINGS

3.1 Project Details

The project is large-scale wind power plant, which has a total installed capacity of 33.3 MWm/27.9 MWe according to the Generation License /15/. The scope of the Karacabey Wind Power Project was outlined in Section 1.2 of this report as Type I, Renewable Energy Projects and Category: I.D, Grid connected renewable electricity generation.

The proposed project is a Greenfield project where no other power plant was located at the same site prior to the implementation of the project activity, which is confirmed during the on-site inspection. The project consists of 12 turbines each having 2.5 MW capacities. Total output of the project is 27.9 MWe as per the Generation License /15/.

Karacabey Wind Power Project has been implemented as a wind power plant in order to provide electricity to the Turkish National Grid. Due to its technology, it uses wind as fuel and provides energy without any GHG emission. Therefore, the project has not been implemented to generate GHG emissions for the purpose of their subsequent reduction, removal or destruction.

RINA was able to verify all the documented evidence listed above during the validation process and can confirm that data and considerations are complete and accurate.

RINA confirms that the description of the proposed VCS project activity, as contained in the VCS-PD sufficiently covers all relevant elements, is accurate and complete and that it provides the reader with a clear understanding of the nature of the proposed VCS project activity.

Project proponent

The project proponents and their responsibility are clearly defined under Section 1.3 of the VCS PD /1/. Yalova Ruzgar Enerjisinden Elektrik Uretim Anonim Sirketi is the project owner and developer and Life Iklim ve Enerji Ltd. Sti. is project consultant.

Project start date

The estimated starting date of project activity is 01/12/2016 and it is in line with the VCS Standard /6/.

As per the VCS Standard /6/, the project start date is the date on which the project began generating GHG emission reductions or removals. The defined starting date is also in line with the ACM0002 /12/.

Project crediting period

A two-times renewable crediting period of 10 years has been chosen for the project activity.

The estimated first crediting period starts from 01/12/2016-30/11/2026.

Project scale and estimated GHG emission reductions or removals

The estimated average annual emission reductions from the project are estimated to be on the average 56,264 tCO_2e per year over the selected 10 year crediting period.

Projects are categorized by size according to their estimated average annual emission reductions or removals according to VCS Standard /6/. Since the estimated annual emission reductions resulting from the project is less than 300,000 tCO_2e, the category of the project is defined as "Project" as per the VCS Standard /6/.

Project location

The project is within boundaries of Bursa Province of Turkey, located at Karacabey County.

The coordinates of the project areas are given below:

Turbine No.	Latitude (N)	Longitude (E)
1	40^0 19' 09,6420''	28^0 21' 30,8147''
2	40^0 19' 00,8148''	28^0 21' 36,9930''
3	40^0 19' 02,3124''	28^0 21' 50,1576''
4	40^0 19' 03,3312''	28^0 22' 02,9313''
5	40^0 18' 34,6392''	28^0 21' 28,8422''
6	40^0 18' 07,0524''	28^0 21' 16,8525''
7	40^0 18' 02,0736''	28^0 21' 26,2838''
8	40^0 17' 57,0984''	28^0 21' 35,7148''
9	40^0 17' 57,7212''	28^0 21' 51,7386''
10	40^0 17' 52,3860''	28^0 22' 04,2113''
11	40^0 17' 44,5200''	28^0 22' 11,0414''
12	40^0 18' 35,0820''	28^0 21' 40,9673''

Project compliance with applicable laws, statutes and other regulatory frameworks

The relevant applicable local laws and regulations related to the project are given below:

- Electricity Market Law /30/
- Law on Utilization of Renewable Energy Resources for the Purpose of Generating Electrical Energy /31/
- Environmental Law /32/

The project is in compliance with the given laws.

According to the Electricity Law, the generation license is required to operate in the energy market. The project activity already has a generation license as confirmed through the site visit /15/.

Law on Utilization of Renewable Energy Resources for the Purpose of Generating Electrical Energy covers protection of renewable energy resource areas, certification of the electricity obtained from these sources and principles and procedures for the use of these resources. Karacabey WPP is using wind as a source and called renewable energy project. The project activity generated electricity within the framework of this law.

In order to comply with the Environment Law, the project introduction file prepared by the 3rd party and has been sent to the Bursa Governorship. According to the decision of Bursa Governorate, EIA is not required certificate is given for the project activity.

Ownership and other programs

Right of use: The legal right to control and operate the project activityis belong to Yalova Ruzgar Enerjisinden Elektrik Uretim Anonim Sirketi as confirmed through the Generation License /15/.

Emissions trading programs and other binding limits: Net GHG emission reductions or removals generated by the project will not be used for compliance with an emissions trading program or for meeting binding limits on GHG emissions.

Participation under other GHG programs: The project has not been registered or seeking registration under other GHG programs as confirmed through the GS or VCS project activity /33/.

Other forms of environmental credit sought or received: The project has not created another form of Environmental Credit.

Rejection by other GHG programs: The project has not been rejected by other GHG programs as confirmed through the GS and VCS project data base /33/.

Additional information relevant to the project

Eligibility criteria for grouped projects:

The project is a grouped project.

Commercially sensitive information:

The financial analysis of the project investment as a whole and the values that have been discussed are considered as commercially sensitive information. In addition, the variables and their explanations that are used for the benchmark calculations in investment analysis that are subject to extensive research and effort which are classified as commercially sensitive information for the project developer Yalova Ruzgar Enerjisinden Elektrik Uretim Anonim Sirketi. Baseline Information is confidential as well. The information suggested above has been excluded from the public version of the project description document.

Any further information:

Not applicable.

3.2 Application of Methodology

3.2.1 Title and Reference

The CDM approved baseline and monitoring methodology ACM0002 version 17.0: “Grid Connected Renewable Electricity Generation” /12/ is correctly applied for the project activity.

3.2.2 Applicability

The project correctly applies the approved baseline and monitoring methodology “ACM0002”, “Grid-connected electricity generation from renewable sources”, version 17.0 of 13/05/2016 /12/.

The proposed project activity meets the criteria defined in the baseline methodology as it ensures that:

- The project activity is the installation of a new wind power plant at a site where no renewable power plant was operated prior to the implementation of the project. The project is a Greenfield plant as validated through the site visit.
- The installed capacity of the project activity is 33.3 MWm / 27.9 MWe that is larger than the 15 MW as validated through the Generation License /15/.
- The proposed project activity does not involve switching from fossil fuels to renewable energy sources at the site of project activity as confirmed during the site visit.
- The proposed project activity does not involve combined heat and power (co-generation) systems as confirmed during on-site visit.
- The proposed project activity does not involve addition of renewable energy generation units at an existing renewable power generation facility.
- The proposed project activity does not involve biomass fired power plants.
- The project activity is not retrofit or replacement project. The project is a Greenfield plant as validated through the site visit.

The project activity applies the following methodological tools:

- Methodological Tool "Tool to calculate the emission factor for an electricity system", version 05.0 of 27/11/2015 /13/
- Methodological Tool "Tool for the demonstration and assessment of additionality", version 07.0 of 23/11/2012 /34/

and meets the defined criteria as it ensures that:

- Additionality tool is applicable to the project activity since Verified Carbon Standard VER project activities, of whatever scale and type, are required to use either UNFCCC-approved or a Verified Carbon Standard-approved additionality tool to demonstrate project additionality /34/.
- Baseline tool is applicable to the project activity since the project activity supplies electricity to the national grid /13/.

RINA hereby confirms that the selected baseline and monitoring methodology has been previously approved by the CDM Executive Board and allowed the use of VCS Board, and is applicable to the Project, which complies with all the applicability conditions therein and the selected version is valid at the time of submission of the proposed project activity for registration. It is also confirmed that the methodology is correctly applied by comparing it with the actual text of the applicable version of the methodology.

3.2.3 Project Boundary

The project boundary clearly defined in accordance with the applied methodology, According to the approved baseline and monitoring methodology "ACM0002 /12/.", "Grid-connected electricity generation from renewable sources", version 17.0 of 13/05/2016 the project boundary includes the project power plant and all power plants connected physically to the electricity system that the project is connected to.

Emissions sources included in the project boundary are shown in the table below:

	GHGs involved	Description
Baseline emissions	CO_2	According to ACM0002, only CO_2 emissions from

		electricity generation should be accounted for.
	CH_4	Excluded according to methodology of ACM0002.
	N_2O	Excluded according to methodology of ACM0002.
Project emissions	CO_2	As net electricity approach is adopted, emissions that occur during construction and operation are negligible and non-existent respectively.
	CH_4	Excluded according to methodology of ACM0002.
	N_2O	Excluded according to methodology of ACM0002.
Leakage emissions	CO_2	Excluded according to methodology of ACM0002.
	CH_4	Excluded according to methodology of ACM0002.
	N_2O	Excluded according to methodology of ACM0002.

By checking the information by the physical site, RINA can confirm that all the emission sources, gases have been included in the project boundary, and the description in the VCS PD is accurate and complete, and also that the selected sources and gases are justified for the proposed project activity.

The project does not involve other emission sources not foreseen by the methodology /12/, which contribute by more than 1%.

3.2.4 Baseline Scenario

According to the approved baseline methodology ACM0002 /12/, the baseline scenario is "Electricity delivered to the grid by the project would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources into the grid". Since the baseline is defined by the approved methodology, no further analysis is required as per the paragraph 124 of the VVS /11/.

The approved baseline methodology "Grid connected renewable electricity generation" has been correctly applied to identify the most reasonable baseline scenario and the identified baseline scenario reasonably represents what would occur in the absence of the proposed VCS project activity.

3.2.5 Additionality

In order to assess the demonstration of the additionality of the Project the audit team studied the VCS PD /1/ and the CDM Tools applied for that purpose.

In order to demonstrate the additionality of the project the Project Proponent (PP) has followed the requirements of the "Tool for the demonstration and assessment of additionality" version 7.0.0 (the Tool) /34/, which defines a step-wise approach to be applied to the proposed project.

The project has not been identified as "First of its kind" so Step 0 has not been considered and the assessement followed the recommended Step 1, Sub-step 1a of the Tool /34/ where the PP has identified 2 credible and realistic alternatives of the proposed project:

a. The proposed project activity undertaken without being registered as a VCS project activity;
b. Continuation of the current situation, i.e. Karacabey WPP is not built and adequate electric energy is supplied from the grid.

A third scenario which envisages investment in a source of electricity generation by means other than wind power has been ruled out as unrealistic due to the fact that there were no alternative energy sources (like hydro or coal) in the area of the project. From the other hand the PP had been issued a Generation License for wind power only.

The alternatives discussed and identified correspond completely to the ones, recommended in Paragraph 20 of the applied Tool /34/.

Further more, by following Step-1b of the Tool /34/ the PP demonstrated that the project was consistent with mandatory local laws and regulations.
The assessment of that statement is described in Section 3.1 of this Report.

The conclusion of the audit team is that the PP has followed the step-wise matrix required by the Tool /34/ and has defined properly all credible and realistic alternatives to the project activity.

3.2.5.1. Choice of approach

For the demonstration of additionality the PP has used the "Tool for the demonstration and assessment of additionality", ver. 07.0.0 /34/,choosing Step 2: Investment Analysis, Option III: Benchmark analysis as appropriate for the project.

According to the PDD /1/ the proposed project generates financial and economic benefits other than carbon revenues so Option I: Simple cost analysis cannot be used.

The investment comparison analysis is also not applicable for the proposed project because the baseline scenario, providing the same annual electricity output by the Turkish National Grid, is not an investment project.

The PP has adopted Option III- benchmark analysis method based on the consideration of the equity IRR of the proposed project.

The Investment analysis is performed according to the requirements of the "Guidelines on the assessment of investment analysis", version 05 of 15/07/2011 /38/.

3.2.5.2. Benchmark selection

As stated above the Project Proponent used a benchmark calculated according to the requirements of the Tool for the Demonstration and Assessment of Additionality ver. 07.0.0 /34/ - Sub-step 2b: Option III. Apply benchmark analysis.

The benchmark is defined at 15% following the estimation in the Report "Project Appraisal Document on a Proposed IBRD Loan" /37/ which is acceptable because according to the "Tool for the demonstration and assessment of additionality" /34/, benchmark can be derived from 'Estimates of the cost of financing and required return on capital (e.g. commercial lending rates and guarantees required for the country and the type of project activity concerned), based on bankers views and private equity investors/funds'.

3.2.5.3. Choice of financial indicators

The PP has identified the equity IRR as the most suitable financial indicator for the project.

The equity IRR of 8.70% is calculated based on the input parameters that are the latest available at the time of the investment decision taking.

The IRR is calculated after taxes to match the type of the benchmark chosen.

According to the Tax Revenue Administration /42/ & /43/, depreciation period of electromechanical equipment such as wind turbines and transformers is 10 years.

The IRR is calculated for 25 years (+ 2 years construction period) which reflects the default technical lifetime of in-land wind turbines as defined by the 'Tool to determine the remaining lifetime of equipment' /48/.

The fair value of the equipment is added to the cash-flow at the last year of the investment analysis period as required by the Guidance /38/.

3.2.5.4. Input parameters

The following parameters have been used for the investment analysis:

Input name	Input Value	Reference Document	Date of Document
Installed power (MWe)	27.9	Energy Market Regulatory Authority: Generation License numbered EU/5863-13/03384 /15/	12/11/2015
Operational lifetime (years)	25	'Tool to determine the remaining lifetime of equipment' /48/	16/10/2009
Annual energy generation (net) (MWh)	99,436	Energy Market Regulatory Authority: Generation License numbered EU/5863-13/03384 /15/; Deutsche Wind Guard: Wind Farm Energy Yield Assessment /16/	12/11/2015 11/07/2013
Electricity sales price (US$/MWh)	73	Guaranteed purchase price by law number: 6094 Ratification Date: 29.12.2010 ("Law on Utilization of Renewable Energy Resources for the Purpose of Generating Electrical Energy") /40/	29/12/2010
Income Tax Rate	20%	KPMG, Corporate tax rate in Turkey /47/	-
Loan Share (EUR)	27,616,105	Bayerische Landesbank: Loan Agreement for the Financing of Nordex Energy GmbH /25/; Turkiye Is Bankası A.S. and Bereket Enerji A.S.: General Cash and Non-Cash Loan Agreement /26/	16/02/2016 26/11/2015
Annual Operating Cost (EUR/year)	1,746,802	Nordex Enerji A.S.: Maintenance and Service Agreement /27/; TEIAS annual System usage fees /56/	25/11/2015 -
Total Project Cost (EUR)	40,939,444	Nordex Enerji A.S.: Supply and Installation Agreement /29/; Bayerische Landesbank: Loan Agreement for the Financing of Nordex Energy GmbH /25/; Turkiye Is Bankası A.S. and Bereket Enerji A.S.: General Cash and Non-Cash Loan Agreement /26/	25/11/2015 16/02/2016 26/11/2015
EUR/USD Rate	1.38	Loan Agreement Date (Investment Decision Date)	22/04/2014

1. **Net output**: 99,436 MWh/year. The Plant Load Factor (PLF) of the WPP was defined based on the energy assessment report, issued by Deutsche Wind Guard on 11/07/2013 /16/. In this particular case the PLF of the plant can be calculated as 0.407 at probability of exceedance of

p75[1]which is adequate for such projects. The electric energy generation has been crosschecked and verified also with the Energy Generation License issued by EMRA /15/.

The estimated output of electric energy was verified and confirmed.

2. **The price of electric energy**, set for the project at 73 US$/MWh. In order to check this, the audit team studied local laws and tariffs in Turkey as follows:
Energy Law No 6094, 10/2010 /40/ and Electricity Market Law No 6446 of 14/03/2013 /39/. According to Turkish laws and regulations referred, this price is guaranteed and fixed.
The laws referred do not fix the period of guaranteed price. The influence of eventual price increase or decrease is regarded in the Sensitivity analysis of the VCS PD /1/.

   The price was confirmed.

3. **Total investment: 40,939,444 EUR.** In order to crosscheck the amount of the Investment costs the audit team studied the following documents:
Nordex Enerji A.S.: Supply and Installation Agreement /29/;
Bayerische Landesbank: Loan Agreement for the Financing of Nordex Energy GmbH /25/;
Turkiye Is Bankası A.S. and Bereket Enerji A.S.: General Cash and Non-Cash Loan Agreement /26/.
The audit team also checked the following documents and agreements in order to verify the estimated prices:
   - Turkiye Is Bankasi: Credit Commission /17/;
   - Uludag Elektrik Dagitim: Correspondence Relating To Expropriation /20/;
   - Carbon Agreement /23/;
   - Financial Calculation Spreadsheet "IRR_Karacabey WPP_14.06.2016.xlsx" /4/;
   - Field Delivery Report for Turbine Construction /28/;

   The amount of the investment listed in the PDD was confirmed.

4. **O&M costs.** The costs are estimated in the VCS PD /1/ at 1,746,802 EUR/year
The O&M expenses have been stated in the Maintenance and Service Agreement /27/ signed with Nordex.
In order to crosscheck the values applied the audit team studied also the following document:
   - TEIAS annual System usage fees /56/;
   - Financial Calculation Spreadsheet "IRR_Karacabey WPP_14.06.2016.xlsx" /4/.

   The O&M costs were verified and confirmed.

5. **Depreciation rate:** The rate is set at 10 years for the electromechanical equipment. In order to verify the values used the audit team studied the website of the Turkish Revenue Administration /42/, /43/.
The rate was confirmed.

6. **Loan conditions: Loan amount – 27,626,105 EUR; Interest on loan 3.14%; Tenor – 15 years; Grace period – 2 years.**
In order to verify the values used the audit team studied the following documents:
   - Nordex Enerji A.S.: Supply and Installation Agreement /29/;
   - Bayerische Landesbank: Loan Agreement for the Financing of Nordex Energy GmbH /25/;

[11] The net energy predictions presented above represent the long-term mean, 75% exceedance level, for the annual energy production of the wind farm. These values are the best estimate of the long-term mean value to be expected from the project. There is therefore a 75% chance that, even when taken over very long periods, the mean energy production will be less than the value given.

- Turkiye Is Bankası A.S. and Bereket Enerji A.S.: General Cash and Non-Cash Loan Agreement /26/

7. **Corporate tax rate of 20%.** The value was verified and confirmed by visiting the website of KPMG /47/.

All parameters checked were valid at 22/04/2014 which is the date of investment decision taking (loan agreement signing date).

The audit team checked the relevant data and parameters and confirmed their correctness and justification.

3.2.5.5 Sensitivity analysis

The following parameters have been identified by the PP as relevant for a sensitivity analysis:

- Electricity selling price;
- Investment cost;
- Energy yield;
- Annual operating costs.

The range of variation of the main parameters is +/-10% which is reasonable for the project activity.

	IRR Sensitivity with electricity selling price		
Change in %	**-10%**	**0%**	**10%**
Equity IRR	5.72%	8.70%	11.32%
	IRR Sensitivity with Investment cost		
Change in %	**-10%**	**0%**	**10%**
Equity IRR	12.03%	8.70%	6.39%
	IRR Sensitivity with the energy yield		
Change in %	**-10%**	**0%**	**10%**
Equity IRR	5.72%	8.70%	11.32%
	IRR Sensitivity with Annual Operating cost		
Change in %	**-10%**	**0%**	**10%**
Equity IRR	10.31%	8.70%	6.73%

1. **Electricity tariff.** The tariff should increase by 24.74% to 91.06 US$/MWh in order to reach the benchmark of 15%. The PP stated that considering the fact that the tariffs in Turkey are fixed, it is unrealistic to expect such an increase of the feed-in-tariff.

2. **Investment costs**. The sensitivity in the investment has been applied to the investment items which represent equal or above 20% of the total investment amount. The variations do not allow reaching the benchmark at 10% decrease of the investment costs. In order to hit the benchmark the Investment costs have to be decreased by more than 15% which is unlikely for such investment projects that always undertake thorough prefeasibility assessment. Since the electromechanical equipment solely form a major part of the investment costs and no change is expected in agreed purchasing price of the equipment, a change greater than 10% in overall investment cost is highly unlikely to occur.

3. **Energy yield.** It is based on the Annual net energy generation which is defined in the Generation license /15/ and the Energy Yield Report /16/ after thorough assessment of wind power potential. The energy production is the main source of income and represents 100 % of the revenues (without revenue from selling VER). The energy yield being calculated at a conservative probability of exceedance of p75, it is very unlikely for the project to generate higher electric energy for a long period of time so the probability to reach the benchmark is very low. The PP has calculated that to hit the benchmark of 15% the revenues, respectively the energy generation has to increase with ~25% which is highly unlikely.

4. **Operational costs.** In order to hit the benchmark the O&M costs have to decrease with 152.52%, i.e. no O&M costs at all which is impossible. Since the wind turbines have already been specified and no change in installed capacity is expected due to the production license and contract with the supplier, no change more than 10% in annual operational and maintenance costs is likely to happen.

The final conclusion is that the PP has performed a thorough assessment of all possibilities for reaching and exceeding the benchmark and has demonstrated that this possibility is very low.

The audit team approves the abovementioned sensitivity analysis as well as the analysis of the possibilities of realisation of all assessed scenarios.

3.2.5.6 Common Practice

According to the methodological tool for the common practice /57/, the common practice analysis shall be conducted applying the following steps:

Step 1: The applicable output range is calculated as +/-50%of the capacity of the project activity in line with the tool. The project comprises an installed capacity of 27.9 MWe; therefore, the applicable output range is 13.95 MW to 41.85 MW.

Step 2: (a) The applicable geographical area for the proposed project covers the entire host country (Turkey) as the default area specified in the guideline. (b) The project activity a green-field wind power project and uses measure “Switch of technology with or without change of energy source including energy efficiency improvement as well as use of renewable energies”. (c) The project use wind as an energy source, than all wind power plants are filtered. (d) Since all the power plants are produce electricity, all projects are candidates for this step. (e) The capacity range of the projects is within the applicable capacity range from 13.95 MW to 41.85 MW. (f) There are 28 projects started commercial operation before the start date of proposed activity.

Step 3: Within the projects identified in Step 2, identify those that are neither registered CDM project activities, project activities submitted for registration, nor project activities undergoing validation. Note their number Nall

The total number of N_{all} is calculated as 0 in the “Common-Practice_Karacabey_14.06.2016.xlsx” common practice calculation spreadsheet /3/ which could be confirmed through the Turkish Electrical Energy 10-Year Generation Capacity Projection Report /52/.

Step 4: Within similar projects identified in Step 3, identify those that apply technologies that are different to the technology applied in the proposed project activity. Note their number N_{diff}.

The power plants apply technologies different that the technology applied in the proposed project activity is identified as N_{diff}. Thus, N_{diff} is therefore the same as Nall.

Step 5: Factor F = (1 - N_{diff}) / N_{all} representing the share of plants using technology similar to the technology used in the proposed project activity in all plants that deliver the same output or capacity as the proposed project activity. The N_{all}-N_{dif} is calculated as 0, which are not greater than 3. Therefore, the project is not common practice.

3.2.6 Quantification of GHG Emission Reductions and Removals

The emission reduction ER_y by the proposed project activity during the crediting period is the difference between baseline emissions (BE_y), project emission (PE_y).

Baseline Emissions

The baseline emissions (BEy in tCO2e) are the product of the baseline emission factor (EFgrid,CM,y in tCO2e) times the net electricity supplied by the project activity to the grid (EGfacility,y in MWh). The baseline emission factor for the project activity is determined ex-ante as a combined margin (CM) consisting of the combination of operating margin (OM) and build margin (BM) according the methodological "Tool to calculate the emission factor for an electricity system". The relevant electric power system is identified in accordance with the tool /13/.

The OM is calculated to be tCO2e/MWh 0.6285 and the BM is calculated to be tCO2e/MWh 0.3230. The combined grid emission factor of the grid is determined ex-ante for the ten years crediting period and it has been calculated as weighted average (wOM = 0.75 and wBM = 0.25) of the operating margin emission factor and the build margin emission factor. The combined margin emission factor is calculated as 0.5521 tCO2e/MWh and the net electricity supplied by the project activity to the grid is estimated to be 101,9 MWh/year.

The annual baseline emissions generated by the project activity is calculated to be 56,264 tCO2e/year.

Project Emissions

Project emissions are neglected since the project activity is a wind power plant in line with the ACM0002 /12/.

Leakage

Since energy generating equipment is not transferred from or to another activity as validated equipment agreement /27/.

Emission Reductions

The emission reductions (ERy) are calculated as the following formula:

$ER_y = BE_y – PE_y - LE_y$

$ER_y = BE_y$

= 56,264 tCO_2e/year

The annual emission reductions generated by the project activity is calculated to be 56,264 tCO_2e/year over the selected 10 years renewable crediting period.

The estimation of the emission reductions can be replicated using the data and parameter values provided in the VCS-PD /1/ and supporting file /2/. The data sources mentioned have been verified by RINA and confirms that the GHG emissions reduction calculation is complete and transparent, and the data accuracy has been verified.

3.2.7 Methodology Deviations

There are no deviations about the methodology of the project activity.

3.2.8 Monitoring Plan

The approved baseline and monitoring methodology "ACM0002", "Grid-connected electricity generation from renewable sources", version 17.0.0 of 13/05/2016 /12/ has been applied.

The monitoring plan is in accordance with the monitoring methodology; the monitoring plan will give opportunity for real measurement of achieved emission reductions.

RINA has checked all the parameters presented in the monitoring plan against the requirements of the methodology; no deviations relevant to the project activity have been found in the plan.

RINA confirms that the monitoring arrangements described in the monitoring plan are feasible within the project design, and the means of implementation of the monitoring plan are sufficient to ensure the emission reductions achieved by/resulting from the proposed VCS project activity can be reported ex post and verified.

Parameters Determined Ex-ante

The ex-ante parameters that are mentioned in the methodology are included in the VCS PD and are provided in compliance with the methodology:

	Data / Parameter	Unit	Value applied	Assessment
/1/	Operating Margin of Turkey National Grid (OM)	tCO_2e/ MWh	0.6285	The data used to determine the OM emission factor of the grid is obtained from "Electricity Generation & Transmission Statistics of Turkey, 2014" /52/, which is published by TEIAS. The validation team has confirmed that this is the most updated data at the time for submission for validation, which is considered as appropriate. The emission factors of fuels used in the calculations are based on IPCC default values at the lower limit of uncertainty at a 95% confidence interval as provided in table 1.4 of Chapter 1 of Volume 2 of the 2006 IPCC Guidelines on National GHG Inventories /53/, which is in line with the methodological tool, and considered as appropriate.
/2/	Build Margin of Turkey National Grid (BM)	tCO_2e/ MWh	0.3230	The data used to determine the OM emission factor of the grid is obtained from "Turkish Electrical Energy 10-Year Generation Capacity Projection (2012-2021)" /52/, which is published by TEIAS. The validation team has confirmed that this is the most updated data at the time for

				submission for validation, which is considered as appropriate. The net energy conversion efficiencies of power unit are taken from Tool to calculate the emission factor for an electricity system /13/ which is deemed reasonable. The emission factors of fuels used in the calculations are based on IPCC default values at the lower limit of uncertainty at a 95% confidence interval as provided in table 1.4 of Chapter 1 of Volume 2 of the 2006 IPCC Guidelines on National GHG Inventories /53/, which is in line with the methodological tool, and considered as appropriate.
/3/	Combined Margin of Turkey National Grid (CM)	tCO_2e/ MWh	0.5521	The emission factor is calculated as a combined margin (CM), consisting of the combination of operating margin (OM) and build margin (BM) according to the procedures prescribed in the tool /13/.

Parameters Monitored Ex-post

The ex-post parameters that are mentioned in the methodology are included in the VCS-PD and are provided in compliance with the methodology, and they will be monitored during the crediting period:

	Parameter	Description/Assessment
/1/	$EG_{facility,y}$ (MWh/y)	Quantity of net electricity generation supplied by the project plant to the grid in year y. The quantity of electricity supplied by the project plants/units to the grid and the quantity of electricity delivered to the project plant/unit from the grid will be measured. Net generation will be calculated via subtracting energy delivered by the project activity to the grid for internal consumption from electricity fed to the grid. The electricity generation of the plant will be crosschecked with PMUM records that are the basis of sold electricity. The net electricity will be measured continuously and recorded at least monthly. Net electricity generation will be measured by two meters. The meters will comply with EMRA (Energy Market Regulatory Authority) regulation /54/. The electricity meters have not been purchased yet. However, the accuracy class of the meters will be in line with the "Communiqué for Measurement Devices used in the Electricity Market" /35/ as explained in the VCS-PD /1/. The maintenance and calibration of meters are under TEIAS responsibility. If any major discrepancy occurs between the two meters, TEIAS performs necessary calibration.

Management System and Quality Assurance

The electricity generation and consumption is measured in line with the TEIAS rules and requirements /35/. The generated electricity fed to grid will be measured by two meters, which will

be sealed by TEIAS. Two meters will be installed, the main meter is used for monitoring, and the secondary meter is used for quality control and back-up purposes.

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 a password to access this data on the web site. As indicated in the VCS-PD /1/, the monitored data will be kept for two years after the end of the crediting period or the last issuance of VERs in line with the methodology /12/.

3.3 Non-Permanence Risk Analysis

There is not any risk for the project activity.

3.4 Environmental Impact

The project activity is environmentally licensed by the competent authority. “Ministry of Environment and Urban Planning of Bursa Province” have issued a Certificate of EIA Not Required Certificate dated 28/12/2012 /24/. The environmental impact of the project activity is evaluated in the VCS-PD /1/.

The project is not required any analysis of environment impacts according to the national regulations /55/.

3.5 Comments by Stakeholders

The stakeholder consultation meeting is not a requirement, since the project is developed under VCS Version 3.5. Also, the stakeholder consultation process is not required by regulations/laws in the host Country.

4 VALIDATION CONCLUSION

RINA Services Spa (RINA) has performed validation of the project activity "Karacabey Wind Power Project" in Turkey, with regard to the relevant requirements for VCS Version 3.5 activities.

The review of the project design document and the subsequent follow-up interviews have provided RINA with sufficient evidence to determine the fulfillment of the stated criteria.

The project correctly applies the approved baseline and monitoring methodology "ACM0002", "Grid-connected electricity generation from renewable sources", version 17.0 of 13/05/2016.

By generating renewable energy from wind plant, the project results in reduction of CO_2 emissions that are real measurable and giving long-term benefits to the mitigation of climate change. It is demonstrated that the project is not a likely baseline scenario. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity.

The total emission reductions from the "Karacabey Wind Power Project" are estimated to be on average 56,264 tCO_2e per year over the selected 10 years renewable crediting period. The emission reduction forecast has been checked and it is deemed likely that the stated amount is achieved given that the underlying assumptions do not change.

The monitoring plan provides for the monitoring of the project's emission reductions and of the sustainable development indicators. The monitoring arrangements described in the monitoring plan are feasible within the project design and it is RINA's opinion that the project participants are able to implement the monitoring plan.

In conclusion, it is RINA's opinion that the project activity "Karacabey Wind Power Project" in Turkey, as described in the VCS PD version 3 of 26/08/2016, meets all relevant UNFCCC and VCS Version 3.5 requirements for the VCS VER and all relevant host Party criteria and correctly applies the baseline and monitoring methodology "ACM0002", "Grid-connected electricity generation from renewable sources", version 17.0 of 13/05/2016.

APPENDIX A

VALIDATION PROTOCOL

TABLE 1 REQUIREMENTS CHECK LIST

Checklist Question		Reference	MoV[2]	Comments	Conclusion
A Description of Project Activity					
A.1 Title of the project activity					
A.1.1.	Does the used project title clearly enable the reader to identify the unique VCS activity? Are there an indication of a revision number and the date of the revision?	/1/	DR	The title of the project activity is defined as "Karacabey Wind Power Project" in the VCS PD /1/, which is enable the reader to identify the unique VCS activity. However, only in the first page of the PD, "Turkey is also presented. Please clarify. The version and completion date of report are available at cover page of VCS PD version 01 of 14/06/2016 /1/.	~~**CR 1**~~ **OK**
A.1.2	Does the project comply with the applicable requirements for completing the VCS PD (latest version available)?	/1/ /6/ /8/	DR	The VCS PD version 01 /1/ complies with the applicable requirements for completing the VCS PD defined in the VCS Standard /6/ and VCS Project Description Template, version 3.2 of 08/10/2013 /8/.	**OK**
A.1.3	Does the VCS PD comply with the template available (latest version)?	/1/ /8/	DR	The VCS PD version 01 /1/ complies with the latest version of VCS Project Description Template, version 3.5 /8/. However, in Section 3.4 of the VCS-PD the format of the table is not correct.	~~**CR 2**~~ **OK**
A.2 Description of the proposed project activity					
A.2.1	Does the VCS PD contain an accurate description of the project activity and provide the reader with a clear understanding of the precise nature of the project activity and the technical aspects of its implementation? How was the design of the project assessed?	/1/ /2/ /15/	DR, CC, I	The issues given in below should be discussed: - The capacity of the project activity is defined as 27.9 MWm in the VCS-PD which is not in line with the generation license /15/. - The date of the generation license given as March 2014 is not in line with the provided supporting document. - Please give the whole date instead of "last quarter of 2016 given in Section 1.1 of the VCS-PD.	~~**CAR 1**~~ **OK**

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

Checklist Question		Reference	MoV[2]	Comments	Conclusion
				- In Section 1.8, it is stated that operational lifetime is determined by using tool to determine the remaining lifetime of equipment. However, it is related with the technical lifetime of the project activity. Please clarify. - Please provide the calculation for Figure 2 sources. - In section 1.8 of the VCS-PD, The Gold Standard is presented. Please correct. - Footnote 12 and 13, 14 are not available. - Please give a clear definition for the explanation given in Section 1.12.4 of the VCS-PD. - In section 2.1 of the VCS-PD, the name of the methodology is not in correct - In section 2.4, all the figures and tables should be revised as per the last capacity projection report of Turkey. - In section 2.4, Table 3 and Figure 4 are related with the same picture. Please correct. - Please revise the organizational diagram with adding biologist and forest engineer. - In Section 1.9 of the VCS-PD, the distance between the Yaris Village and the turbines are given as 473 m. However, the provided supporting reference for this issue is not in line with the value. Please clarify.	
A.2.2	Does the project activity involve alteration of existing installations? If yes, have the differences between pre-project and post-project activity been clearly described in the VCS PD?	/1/	DR, I	The project activity does not involve any alteration of existing installation.	**OK**
A.2.3	Is all information provided consistent and in compliance with the actual situation or planning?	/1/	DR, I	The VCS PD is consistent and in compliance with the actual situation. As per the VCS PD version 01 /1/, the project is a wind power plant with a capacity of 27.9 MWe.	**OK**
A.3 Project proponent					
A.3.1	Does VCS PD provide contact information and roles/responsibilities for the project	/1/	DR	The project proponents are clearly defined under Section 1.3 of the VCS PD version 01 /1/. Yalova	**OK**

Checklist Question		Reference	MoV[2]	Comments	Conclusion
	proponent(s)?			Ruzgar Enerjisinden Elektrik Uretim Anonim Sirketi is the project owner and Life Enerji is project developer.	
A.4 Technical description of the project					
A.4.1	Does the information provided on the location of the project activity allow for a clear identification of the site(s)?	/1/ /15/	DR, CC	The project is within boundaries of Bursa Province of Turkey at Karacabey County as confirmed during on site visit. The coordinates of the project activity, which are presented in Section 1.9 of VCS PD /1/, are in line with the Generation License /15/. However, for the coordinates of the turbines given in Table 2, please give the whole second's number.	~~**CR 3**~~ **OK**
A.4.2	Is the category(ies) of the project activity correctly identified?	/1/	DR	The category of the project activity is identified correctly under Section 1.2 of the VCS PD version /1/. The project activity is a wind power plant. The sectoral scope is "1 Energy Industries-Renewable Energy" as defined in the VCS PD version 01 /1/.	**OK**
A.4.4	What is the expected operational lifetime of the project activity? Is it reasonable?	/1/ /15/	DR, CC	The expected lifetime of the project activity is defined as 25 years which are not in line with the generation license /15/. Please clarify.	~~**CR 4**~~ **OK**
A.5 Public funding					
A.5.1	Does the information on public funding provided conform to the actual situation or planning as presented by the PPs?	/1/	DR, I	There is no explanation about the public funding given in the VCD-PD. Please clarify.	~~**CR 5**~~ **OK**
A.5.2	If public funding from Parties included in Annex I is used for the project activity, have these Parties provided an affirmation that such funding does not result in a diversion of official development assistance, is separate from, and is not counted towards the financial obligations of these Parties?	/1/	DR	The project activity is a voluntary emission reduction project, which is developed under VCS; hence, the transfer of technology from any Annex I Party is not applicable.	**OK**
B. Application of a baseline and monitoring methodology					
B.1 Methodology applied					
B.1.1	Does the project activity apply an approved methodology and the correct version thereof?	/1/ /12/	DR	The proposed project activity applies "ACM0002 Grid-connected electricity generation from renewable sources, version 17.0 of 13/05/2016" /12/ as indicated in	~~**CR 6**~~ **OK**

<table>
<tr><th colspan="2">Checklist Question</th><th>Reference</th><th>MoV[2]</th><th>Comments</th><th>Conclusion</th></tr>
<tr><td></td><td></td><td></td><td></td><td>the VCS PD version 01 /1/. The applied methodology is approved by CDM and the applied version is the latest version at the time of VCS PD submission.
However, in section 2.1 of the VCS-PD, the name of the methodology is not in correct.</td><td></td></tr>
<tr><td>B.1.2</td><td>Is there any specific guidance, including the methodological tools provided by EB and has these guidance been applied?</td><td>/1/ /13/</td><td>DR</td><td>The methodological tool “Tool to calculate the emission factor for an electricity system, version 04.0 of 04/10/2013” /13/ is applied. However, the applied tool is not the latest version at the time of VCS-PD submission. Please also check all the tool’s versions. Some of them are not up to date.</td><td><s>CR 7</s>
OK</td></tr>
<tr><td>B.1.3</td><td>How was it validated that the project activity complies with the applicability criteria?</td><td>/1/</td><td>DR, I</td><td>Applicability of ACM0002
<table>
<tr><th>Applicability criteria</th><th>Project activity</th><th>Criteria is met?</th></tr>
<tr><td>This methodology is applicable to grid-connected renewable energy power generation project activities that:
(a) Install a Greenfield power plant;
(b) Involve a capacity addition to (an) existing plant(s);
(c) Involve a retrofit of (an) existing operating plants/units;
(d) Involve a rehabilitation of (an) existing plant(s)/unit(s); or
(e) Involve a replacement of (an) existing plant(s)/unit(s).</td><td>The project activity consists of installation of

Greenfield power plant at a site where no renewable power plant was operated prior to the implementation of the project activity.</td><td>OK</td></tr>
<tr><td>The project activity may</td><td>The project</td><td>CAR 2</td></tr>
</table></td><td><s>CAR 2</s>
OK</td></tr>
</table>

Checklist Question		Reference	MoV[2]	Comments			Conclusion
				include renewable energy power plant/unit of one of the following types: hydro power plant/unit with or without reservoir, wind power plant/unit, geothermal power plant/unit, solar power plant/unit, wave power plant/unit or tidal power plant/unit.	activity is the installation of 12 numbers of wind turbine generators (WTGs). However, in applicability conditions 8 turbine is discussed. The explanation is not in line with the generation license. Please clarify.		
				In the case of capacity additions, retrofits, rehabilitations or replacements (except for wind, solar, wave or tidal power capacity addition projects the existing plant/unit started commercial operation prior to the start of a minimum historical reference period of five years, used for the calculation of baseline emissions and defined in the baseline emission section, and no capacity expansion, retrofit, or rehabilitation of the plant/unit has been undertaken between the start of this minimum	The project activity does not involve capacity additions, retrofits, rehabilitations or replacements. Hence this criterion is not applicable to the project activity.	OK	

Checklist Question		Reference	MoV[2]	Comments			Conclusion
				historical reference period and the implementation of the project activity.			
				In case of hydro power plants, one of the following conditions shall apply: (a) The project activity is implemented in existing single or multiple reservoirs, with no change in the volume of any of the reservoirs; or (b) The project activity is implemented in existing single or multiple reservoirs, where the volume of the reservoir(s) is increased and the power density calculated using equation (3), is greater than 4 W/m^2; or (c) The project activity results in new single or multiple reservoirs and the power density, calculated using equation (3), is greater than 4 W/m^2; or (d) The project activity is an integrated hydro power project involving multiple reservoirs, where the power density for any of the reservoirs, calculated using	The project activity is not a hydro power plant. Hence this applicability criterion is not relevant to the project activity.	OK	

Checklist Question		Reference	MoV[2]	Comments			Conclusion
				equation (3), is lower than or equal to 4 W/m^2, all of the following conditions shall apply: (i) The power density calculated using the total installed capacity of the integrated project, as per equation (4), is greater than 4 W/m2; (ii) Water flow between reservoirs is not used by any other hydropower unit which is not a part of the project activity; (iii) Installed capacity of the power plant(s) with power density lower than or equal to 4 W/m2 shall be: a. Lower than or equal to 15 MW; and b. Less than 10 per cent of the total installed capacity of integrated hydro power project.			
				In the case of integrated hydro power projects, project proponent shall: (a) Demonstrate that water flow from upstream power plants/units spill directly to the downstream reservoir and that collectively constitute to the generation capacity of the integrated hydro	The project activity is not a hydro power plant. Hence this applicability criterion is not relevant to the project activity.	OK	

Checklist Question		Reference	MoV[2]	Comments			Conclusion
				power project; or (b) Provide an analysis of the water balance covering the water fed to power units, with all possible combinations of reservoirs and without the construction of reservoirs. The purpose of water balance is to demonstrate the requirement of specific combination of reservoirs constructed under CDM project activity for the optimization of power output. This demonstration has to be carried out in the specific scenario of water availability in different seasons to optimize the water flow at the inlet of power units. Therefore this water balance will take into account seasonal flows from river, tributaries (if any), and rainfall for minimum five years prior to implementation of CDM project activity.			
				The methodology is not applicable to: (a) Project activities that involve switching from	Project activity does not involve: • Switching from	OK	

Checklist Question		Reference	MoV[2]	Comments			Conclusion
				fossil fuels to renewable energy sources at the site of the project activity, since in this case the baseline may be the continued use of fossil fuels at the site; (b) Biomass fired power plants/units	fossil fuels to renewable energy sources at the site of the project activity. • Biomass fired plants. Hence this criterion is not applicable.		
				In the case of retrofits, rehabilitations, replacements, or capacity additions, this methodology is only applicable if the most plausible baseline scenario, as a result of the identification of baseline scenario, is "the continuation of the current situation, i.e. to use the power generation equipment that was already in use prior to the implementation of the project activity and undertaking business as usual maintenance".	The project is not a retrofit, rehabilitations, replacements or capacity addition; hence this applicability criterion is not relevant.	OK	
				In addition, the applicability conditions included in the tools referred to above apply.	Applicability conditions of the applied tool are justified	OK	
B.1.4	Is the selected baseline one of the baseline(s) described in the methodology and this hence confirms the applicability of the methodology?	/1/ /12/	DR	A benchmark approach has been applied to establish the baseline scenario and demonstrate additionality as per the applied methodology ACM0002 /12/.			**OK**

Checklist Question		Reference	MoV[2]	Comments	Conclusion
B.2 Project boundary					
B.2.1	Is the project boundary are clearly defined and in accordance with the applied methodology?	/1/ /12/	DR	The project boundary clearly defined in accordance with the applied methodology, ACM0002 /12/.	**OK**
B.2.2	What are the project's system boundaries (components and facilities used to mitigate GHGs)?	/1/ /15/	DR	The project system boundary consists of 12 wind turbines, which will be connected physically to the grid. It could be confirmed through the Generation License /15/.	**OK**
B.2.3	Which sources are identified for the project? Does the identified project boundary cover all possible sources linked to the project activity?	/1/ /12/	DR	Project boundary is identified the PDD version 01 /1/ for baseline and project activity. The source of baseline emission CO_2 emissions are included in baseline calculation since fossil fuels fired for electricity generation. CH_4 and N_2O emissions are neglected regarding to the methodology. Project emissions are neglected regarding to the methodology since the project activity is a wind power plant. In section 2.3 of the VCS-PD, The included or excluded gases are not determined. In addition, Justification and explanation should be given for all the gases.	~~**CAR 3**~~ **OK**
B.2.4	In case of grid connected electricity project: is the relevant grid correctly identified in accordance with the latest version of tool to calculate emission factor of electricity system and the underlying methodology?	/1/ /13/	DR	The geographic and system boundaries for the relevant electricity grid can be clearly identified and information on the characteristics of the grid is available in the VCS PD /1/ in accordance with the "Tool to calculate emission factor of electricity system" /13/.	**OK**
B.2.5	Does the project involve other emissions sources not foreseen by the methodologies that may question the applicability of the methodology? Do these sources contribute by more than 1% to the estimated emission reductions of the project?	/1/ /12/	DR	It is explained in the VCS-PD that a backup power generator will be installed in power plant. In case, emissions from back-up power generator exceed 1% of the total emission reductions, they will be accounted as project emissions in each verification period. Operating hours of back-up power generator will be monitored with that purpose. However, no parameter is added to the monitoring parameters.	~~**CR 8**~~ **OK**
B.3 Identification of the Baseline Scenario					
B.3.1	Which baseline scenarios have been identified? Is the list of the baseline scenarios complete? Does the VCS PD follow the steps	/1/ /12/	DR	A benchmark approach is applied to establish the baseline scenario and demonstrate additionality as per the ACM0002 /12/.	**OK**

Checklist Question		Reference	MoV[2]	Comments	Conclusion
	to determine the baseline scenario required by the methodology/tool?				
B.3.2	How have the other baseline scenarios been eliminated in order to determine the baseline?	/1/ /12/	DR	A benchmark approach is applied to establish the baseline scenario and demonstrate additionality as per the applied methodology /12/. Therefore, it is not applicable.	**OK**
B.3.3	What is the baseline scenario? Is the determination of the baseline scenario in accordance with the guidance in the methodology?	/1/ /12/	DR	The baseline scenario for the project activity is already defined as Electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources as per the applied methodology, ACM0002 /12/.	**OK**
B.3.4	Has the baseline scenario been determined using conservative assumptions? Does the baseline scenario sufficiently take into account relevant national and/or sectoral policies (E+ / E-), macro-economic trends and political aspirations?	/1/ /12/	DR	Please refer to Section B.3.1 of this validation protocol.	**OK**
B.4 Additionality					
B.4.1	What tool does the project use to assess additionality? Is this in line with the methodology?	/1/ /12/ /34/	DR	It is mentioned in the VCS PD /1/ that, "Tool for the demonstration and assessment of additionality, version 07.0.0" /34/ is used for additionality and it is in line with the methodology ACM0002 /12/.	**OK**
B.4.2	What is the project additionality mainly based on?	/1/	DR	The project additionality is mainly based on investment analysis.	**OK**
B.4.3 Prior consideration					
B.4.3.1	What is the starting date of the proposed project activity? Is it in accordance with the VCS Standard?	/1/ /6/	DR, I	The starting date of project activity is defined as 01/10/2016 in the VCS PD /1/, which is in line with the current situation. The construction is not finished when the site visit was performed. As per the VCS Standard /6/, the project start date is the date on which the project began generating GHG emission reductions or removals.	**OK**
B.4.3.2	Is the project activity a new project activity or existing project?	/1/	DR, I	The project activity is a new project activity as confirmed during the site visit.	**OK**

Checklist Question		Reference	MoV[2]	Comments	Conclusion
B.4.3.3	Does the timeline of the project confirm that continuous actions in parallel with the implementation were taken to secure project status? Please specify the gap between the documented evidences.	/1/	DR	According to the dates given in the project implementation schedule, "Date for start of construction" could not be confirmed since no supporting document is provided. The provided field delivery report is only related with the turbine construction. Please provide the main construction delivery record. In addition, please provide a supporting document to confirm the date of board decision.	~~**CR 9**~~ **OK**
B.4.4 Investment analysis					
B.4.4.1	What is the analysis method used to determine whether the proposed project activity is not (a) the most economically or financially attractive; or (b) economically or financially feasible, without the revenue from the sale of certified emission reductions?	/1/ /34/	DR	For the demonstration of additionality the PP has used the "Tool for the demonstration and assessment of additionality", ver. 07.0.0 /34/, choosing Investment Analysis, Option III: Benchmark analysis as appropriate for the project.	**OK**
B.4.4.2	What the financial indicator is used?	/1/ /4/	DR	The PP has identified the equity IRR as the most suitable financial indicator for the project. The project IRR of 9.02 % is calculated based on the input parameters that are the latest available at the time of the investment decision taking (22/04/2014 – the date of Loan agreement signing). The IRR is calculated after taxes. The IRR is calculated as equity IRR after taxes. This has to be clearly stated in the VCS-PD. The same is for the benchmark – it is by definition calculated after taxes and this also has to be stated in the PD /1/ in order to match the type of the IRR.	~~**CR 10**~~ **OK**
B.4.4.3	If a benchmark is used, is it ensured that it is selected in accordance with the requirements of the EB guidelines and it represents standard returns in the market? Is the benchmark suitable for the type of financial indicator presented? Is it ensured the any risk premiums applied in determining the benchmark reflect the risks	/1/ /4/ /37/	DR	The benchmark for a Project's equity IRR has been derived from the Worldbank loan appraisal document /37/, benchmark for wind power investments (i.e. required returns of equity for wind power plant investors) in Turkey which is 15%.	**OK**

<table>
<tr><th colspan="2">Checklist Question</th><th>Reference</th><th>MoV[2]</th><th>Comments</th><th>Conclusion</th></tr>
<tr><td></td><td>associated with the project type or activity?</td><td></td><td></td><td></td><td></td></tr>
<tr><td>B.4.4.4</td><td>Is the investment analysis carried out in accordance with specific guidance from EB?
Is the investment analysis complete and accurate?
Is the investment analysis provided in a spreadsheet version? Are all the formulas used readable and all relevant cells be viewable and unprotected?</td><td>/1/ /4/ /38/</td><td>DR</td><td>The Investment analysis is carried out in accordance with the requirements of the Guidance on the assessment of the investment analysis ver.05 /38/.
A spread-sheet with the IRR calculations is provided /4/.
All formulas are readable and cells are unprotected.</td><td>OK</td></tr>
<tr><td>B.4.4.5</td><td>Cross-check the parameters used in the financial analysis against third party or publicly available sources (all parameters used as input values shall be cross-checked and assessed).</td><td>/1/ /4/ /15/ /16/ /17/ /20/ /25/ /26/ /27/ /28/ /29/ /36/ /40/ /41/ /42/ /43/ /45/</td><td>DR</td><td>The value of the parameters used is given in the following table:
<table><tr><th>Parameter</th><th>Value</th><th>Unit</th><th>Source</th></tr><tr><td>Installed Power</td><td>27.9</td><td>MWe</td><td>License of The project</td></tr><tr><td>Operational lifetime of the project</td><td>25</td><td>years</td><td>Tool to determine the remaining lifetime of equipment</td></tr><tr><td>Net Generation to be sold</td><td>99,436</td><td>MWh</td><td>Deutsche Wind Guard Consulting, Wind Assessment Report</td></tr><tr><td>Electricity tariff</td><td>73</td><td>USD Per MWh</td><td>For feed-in-tariff</td></tr><tr><td>Income Tax Rate</td><td>20%</td><td>-</td><td>Corporate Tax Rate</td></tr><tr><td>Equity</td><td>13,115,691</td><td>EUR</td><td>Loan</td></tr></table></td><td><s>CAR 4</s>
OK</td></tr>
</table>

Checklist Question		Reference	MoV[2]	Comments	Conclusion

Share			Agreement
Annual Operating Cost	1,708,826	EUR	Financial Analysis Reports
Total Project Cost	40,741,796	EUR	Equipment agreements and Financial Analysis Reports
EUR/USD Rate	1.38	-	Loan Agreement Date (Investment Decision Date TCMB rare (22/04/2014))

Input parameters

The following parameters have been assessed for the approval of the investment analysis:

1- Annual assumed net electricity supply, (99,436,000 kWh/year): In order to verify the stated values the audit team checked the following documents: Deutsche Wind Guard Consulting, Wind Assessment Report /16/ and Generation License numbered EU/5863-13/03384 /15/. The value is confirmed as defined per "Guidelines for reporting and validation of plant load factors" /36/, the plant load factor is calculated by a third party for the feasibility report.

2- Electricity sales tariff, (7.3 $cent/kWh): In order to confirm the stated value the audit team checked the website of the Turkish Energy Authority and other

Checklist Question		Reference	MoV[2]	Comments	Conclusion
				web-sources /40/ /41/ /45/. 3- Total Investment (EUR): 40,741,796 • Project cost: 33,250,000 EUR • Contingency: 3,703,800 EUR • Land: 482.642 EUR • Insurance: 2,774,190 EUR • Line expropriation: 253,644 EUR • Commitment fee: 277,520 EUR In order to verify the stated values the audit team checked the following available documents: - Bayerische Landesbank: Loan Agreement for the Financing of Nordex Energy GmbH of 16/02/2016 /25/; - Nordex Enerji A.S.: Supply and Installation Agreement of 25/11/2015 /29/; - Turkiye Is Bankası A.S. and Bereket Enerji A.S.: General Cash and Non-Cash Loan Agreement of 26/11/2015 /26/ - Yalova Ruzgar Enerjisinden Elektrik Uretim Santrali Ltd. Sti. And Nordex Energy GmbH: Field Delivery /28/ - Uludag Elektrik Dagitim: Correspondence Relating To Expropriation of 19/01/2016 /20/; The values stated were confirmed by the audit team. 4- Annual O&M costs (1,708,826 EURO): In order to verify the stated values the audit team checked the following available documents: - Nordex Enerji A.S.: Maintenance and Service Agreement of 25/11/2015 /27/. The value was confirmed. - Bayerische Landesbank: Loan Agreement for the Financing of Nordex Energy GmbH of 16/02/2016 /25/; - Turkiye Is Bankası A.S. and Bereket Enerji A.S.: General Cash and Non-Cash Loan Agreement	

Checklist Question		Reference	MoV[2]	Comments	Conclusion
				of 26/11/2015 /26/. The value was confirmed. 5- Corporate tax (20%): The audit team verified the stated value by visiting the websites of KPMG /48/. 6- Depreciation (as useful life) (10 years): Turkish Revenue administration /42/ /43/ 7- Average 6 month Euribor rate (1.39 %): 8- Debt/Equity rate (68/32): The audit team verified the stated value by studying the available documents concerning the Loan agreements /17/ /25/ /26/ 9- Interest on loan {3.14 (Euriibor+1.75) %}: Loan agreements /17/ /25/ /26/. 10- Other loan conditions (Tenor: 15 years with 2 years grace period) : Loan agreements /17/ /25/ 26/ 11- EUR/USD Parity of 1.38: Central Bank – 22/04/2014 /41/ The PP has not presented evidence for the value of the Euribor for the time of the investment decision taking.	
B.4.4.6	Are the input values used in the investment analysis valid and applicable at the time of the investment decision taken by the PP?	/1/ /4/ /53/	DR	All parameters used for the calculation of the IRR are valid at the time of the investment decision taking which is stated as 22/04/2014 – the date of Loan agreement signing.	**OK**
B.4.4.7	Where applicable, the PFL has been defined ex-ante according to the applicable EB guideline?	/1/ /4/ /15/ /16/	DR	The output and the PFL of 40.69 % are acceptable as it is defined as required by EB48, Annex 11 and Section II. 3 (b) /37/: The plant load factor determined by a third party contracted by the project participant's - Deutsche Wind Guard Consulting, Wind Assessment Report /16/ and is fixed in the Generation license issued by the Government /15/.	**OK**
B.4.4.8	Does the time period of the investment	/1/ /48/	DR	The period of the investment analysis of 25+1 years	**OK**

Checklist Question		Reference	MoV[2]	Comments	Conclusion
	analysis reflect the expected operation of the underlying project activity (technical lifetime)?			reflects the life-time of the project which is defined as per the default value recommended in the Tool to determine the remaining lifetime of equipment /48/.	
B.4.4.9	Does the fair value of the project activity assets is included at the end of the assessment period as a cash flow in the final year? Is the fair value calculated in accordance with local accounting regulations where available or international best practice?	/1/ /38/ /42/ /43/	DR	According to the Tax Revenue Administration /42/ /43/ depreciation period of electromechanical equipment such as wind turbines and transformers is 10 years at a rate of 10 %. The fair value of the equipment at the end of the period is estimated as 10 % of the initial project cost which is a conservative approach. The fair value is added to the cash-flow at the last year of the investment analysis as required by the Guidelines on the assessment of investment analysis /38/.	**OK**
B.4.4.10	Does the income tax calculation take depreciation into account? Is the depreciation year in accordance with normal accounting practice in the Host Country	/1/ /4/	DR	The income tax calculation considers depreciation. The depreciation is calculated in accordance with the normal accounting practice in Turkey.	**OK**
B.4.4.11	Sensitivity analysis: have the key parameters contributing to more than 20% of the revenue/costs during operating or implementation been identified?	/1/ /4/	DR	The key parameters have been defined however; there is no explanation that the key parameters chosen for variation contribute to more than 20% of the revenue/costs during operating or implementation.	~~**CAR 5**~~ **OK**
B.4.4.12	Sensitivity analysis: is the range of variations is reasonable in the project activity? The main parameters can be changed for the different project category.	/1/ /4/	DR	The following major parameters have been identified by the PP as relevant for a sensitivity analysis: • Electricity price • Investment costs • Energy yield • Operating Costs The range of variation of the main parameters is +/- 10% which is reasonable for the project activity.	**OK**
B.4.4.13	Have the key parameters been varied to reach the benchmark and the likelihood of this happening been justified to be small?	/1/ /4/	DR	The main key parameters are not varied to reach the benchmark and the probability of that being low is not discussed and justified.	~~**CAR 6**~~ **OK**
B.4.5 Barrier analysis					
B.4.5.1	Are the barriers identified complimentary to a	/1/ /12/	DR	The investment barrier is applied.	**OK**

Checklist Question		Reference	MoV[2]	Comments	Conclusion
	potential investment analysis?				
B.4.5.2	How were the investment barriers assessed to be real?	/1/ /12/	DR	Please refer to Section B.4.5.1 of this validation protocol.	**OK**
B.4.5.3	How were the technological barriers assessed to be real?	/1/ /12/	DR	Please refer to Section B.4.5.1 of this validation protocol.	**OK**
B.4.5.4	How were the other barriers assessed to be real?	/1/ /12/	DR	Please refer to Section B.4.5.1 of this validation protocol.	**OK**
B.4.5.5	Barriers due to prevailing practice (First of its kind): does the project apply measures currently covered in the framework (fuel and feedstock switch, switch of technology with or without change of energy source, methane destruction, methane formation avoidance)?	/1/ /12/	DR	Please refer to Section B.4.5.1 of this validation protocol.	**OK**
B.4.5.6	Barriers due to prevailing practice (First of its kind): do the technologies deliver the same output and differ by at least of energy source/fuel, feed stock, size of installation?	/1/ /12/	DR	Please refer to Section B.4.5.1 of this validation protocol.	**OK**
B.4.5.7	Barriers due to prevailing practice (First of its kind): does the applicable geographical area is in compliance with the definition as per the EB guideline?	/1/ /12/	DR	Please refer to Section B.4.5.1 of this validation protocol.	**OK**
B.4.5.8	Is the project activity prevented by the identified barriers and at least one of the possible alternatives to the project activity is feasible under the same circumstances?	/1/ /12/	DR	Please refer to Section B.4.5.1 of this validation protocol.	**OK**
B.4.5.9	How the VCS can alleviate the identified barriers?	/1/ /12/	DR	Please refer to Section B.4.5.1 of this validation protocol.	**OK**
B.4.6 Common practice analysis					
B.4.6.1	Does the project apply measures currently covered in the framework (fuel and feedstock switch, switch of technology with or without change of energy source, methane destruction, methane formation avoidance)?	/1/ /3/ /12/	DR	According to the VCS-PD version 01 /1/, all the wind power plants with an installation range of 13.95 MW_e to 41.85 MW_e are filtered. After VER projects are removed, N_{all} and N_{diff} are defined as 0. Since the factor F is unidentified, the project is not a common practice.	**OK**
B.4.6.2	Do the technologies deliver the same output	/1/ /3/ /12/	DR	Please refer to Section B.4.6.1 of this validation protocol.	**OK**

Checklist Question		Reference	MoV[2]	Comments	Conclusion
	and differ by at least of energy source/fuel, feed stock, size of installation, investment climate in the date of the investment decision, other features?				
B.4.6.3	Does the applicable geographical area is in compliance with the definition as per the EB guideline?	/1/ /3/ /12/	DR	Please refer to Section B.4.6.1 of this validation protocol.	**OK**
B.4.6.4	How many similar non-CDM-projects exist in the region within the scope?	/1/ /3/ /12/	DR	Please refer to Section B.4.6.1 of this validation protocol.	**OK**
B.4.6.5	What is the data source(s) used for the common practice analysis?	/1/ /3/ /12/	DR	Please refer to Section B.4.6.1 of this validation protocol.	**OK**
B.4.7 Conclusion					
B.4.7.1	What is the conclusion with regard to the additionality of the project activity?	/1/ /3/ /4/ /6/ /12/ /15/ /16/ /17/ /20/ /25/ /26/ /27/ /28/ /29/ /34/ /36/ /37/ /38/ /40/ /42/ /43/ /48/	DR	Please refer to Section B.4.3, B.4.4, B.4.5 and B.4.6 of this validation protocol.	~~**CR 9**~~ ~~**CR 10**~~ ~~**CAR 4**~~ ~~**CAR 5**~~ ~~**CAR 6**~~ **OK**
B.5 Algorithms and/or formulae used to determine emission reductions					
B.5.1 Baseline emissions					
B.5.1.1	Are the steps and equations applied to calculate the baseline emissions in compliance with the requirements of selected baseline and monitoring methodology?	/1/ /2/ /12/	DR, CC	The steps and equations applied to calculate the baseline emissions are in compliance with the requirements of ACM0002 /12/.	**OK**
B.5.1.2	Have conservative assumptions been used when calculating the baseline emissions and are the uncertainty estimates properly addressed? Are all the values used in the VCS PD considered reasonable in the context of the	/1/ /2/ /12/ /13/	DR, CC	An approved CDM methodology, ACM0002 /12/ and methodological tool "Tool to calculate the emission factor for an electricity system, version 05.0.0 /13/" are applied. The official published data, TEIAS statistics of 2013 are used to determine the emission factor of the grid.	**OK**

Checklist Question		Reference	MoV[2]	Comments	Conclusion
	proposed project activity?			The emission factor is calculated as a combined margin (CM), consisting of the combination of operating margin (OM) and build margin (BM) according to the tool /13/.	
B.5.1.3	Baseline Emissions estimated	/1/ /2/ /12/ /13/	DR, CC	Please refer to Section B.5.1.3 of this validation protocol.	**OK**
B.5.2	**Project emissions**				
B.5.2.1	Are the steps and equations applied to calculate the project emissions in compliance with the requirements of selected baseline and monitoring methodology? Are all the values used in the VCS PD considered reasonable in the context of the proposed project activity?	/1/ /12/	DR. CC	Project emissions are neglected since the project activity is a wind power plant in line with the ACM0002 /12/.	**OK**
B.5.2.2	Have conservative assumptions been used when calculating the project emissions and are the uncertainty estimates properly addressed?	/1/ /12/	DR. CC	Project emissions are neglected since the project activity is a wind power plant in line with the ACM0002 /12/.	**OK**
B.5.2.3	Project emissions estimated	/1/ /12/	DR. CC	Project emissions are neglected since the project activity is a wind power plant in line with the ACM0002 /12/.	**OK**
B.5.3	**Leakage**				
B.5.3.1	Are the steps and equations applied to calculate the leakage in compliance with the requirements of selected baseline and monitoring methodology? Are all the values used in the VCS PD considered reasonable in the context of the proposed project activity?	/1/ /12/ /29/	DR	The leakage emissions are neglected as per ACM0002 /12/ since energy generating equipment is not transferred from or to another activity as per the equipment agreement /29/.	**OK**
B.5.3.2	Have conservative assumptions been used when calculating the leakage and are the uncertainty estimates properly addressed?	/1/ /12/	DR	The leakage emissions are neglected as per ACM0002 /12/ since energy generating equipment is not transferred from or to another activity.	**OK**
B.5.3.3	Leakage estimated	/1/ /12/	DR	The leakage emissions are neglected as per ACM0002 /12/ since energy generating equipment is not transferred from or to another activity.	**OK**
B.5.4	**Emission reductions**				

Checklist Question		Reference	MoV[2]	Comments	Conclusion
B.5.4.1	Has the methodology been correctly applied to calculate the emission reductions and can this be replicated by the data provided in the VCS PD and supporting files to be submitted for registration?	/1/ /12/	DR, CC	During the first crediting period emission reduction is calculated as following equation according to the ACM0002 /12/: $ERy = BE_y – PE_y – LE_y$ The project emission and leakage emissions are identified as zero for the project activity. Therefore, emission reduction is equal to the baseline emission. The calculation of baseline emission reductions is carried out in a conservative manner providing documentation and references to data sources. An approved CDM methodology, ACM0002 /12/ and methodological tool "Tool to calculate the emission factor for an electricity system /13/" is applied. The official published data, TEIAS statistics, are used to determine the emission factor of the grid. The emission factor is calculated as a combined margin (CM), consisting of the combination of operating margin (OM) and build margin (BM) according to the procedures prescribed in the tool. **OM Calculation** Option (a) simple OM is selected to calculate the operating margin (OM) emission factor of the grid as per the tool since the average share of electricity generation by low-cost/must-run plants for five most recent years is found to be less than 50%. The ex-ante option is selected for OM, from the years 2012 to 2014. **BM Calculation** The build margin (BM) emission factor calculation is in line with the latest version of methodological tool "Tool to calculate the emission factor for an electricity system /13/". **CM Calculation** The combined Margin is calculated for Wind and solar power generation project activities: w_{OM} = 0.75 and w_{BM} = 0.25 for the first crediting period and for subsequent crediting periods.	**OK**

Checklist Question		Reference	MoV[2]	Comments	Conclusion
				Therefore; OM: 0.6285 BM: 0.3230 CM: 0.5521	
B.5.4.2	Are all the assumptions and data used by the project participants listed in the VCS PD including their references and sources?	/1/ /12/	DR, CC	Please refer to Section B.5.1.2 of this protocol.	**OK**
B.5.4.3	Is all the documentation used by the project participants as the basis for assumptions and source of data quoted and interpreted in the VCS PD?	/1/ /12/	DR, CC	Please refer to Section B.5.1.2 of this protocol.	**OK**
B.5.4.4	Emission Reductions estimated	/1/ /12/	DR, CC	Please refer to Section B.5.1.2 of this protocol.	**OK**
B.6 Monitoring plan					
B.6.1 Parameters ex-ante					
B.6.1.1	Does the monitoring plan contain the list of all parameters required by the approved methodology and by the applicable methodological tool?	/1/ /12/ /13/	DR, CC	The monitoring plan contains the list of all parameters required by the approved methodology /12/ and the tool /13/.	**OK**
B.6.1.2	How were the parameters available at validation verified?	/1/ /12/ /13/	DR, CC	The monitoring plan contains the list of all parameters required by the approved methodology /12/ and the tool /13/. ***Gross electricity generation:*** TEIAS statistics was used for the calculation. The unit of the parameter is defined as MWh. ***Combined margin CO2 emission factor for the project electricity system ($EF_{grid, CM, y}$):*** The parameter is calculated as per the Data and Parameters Available at Validation. The emission reduction factor is calculated as 0.5521 tCO_2/MWh. ***Net electricity generated in year y (EG_y):*** TEIAS statistics was used for the calculation. The unit of the parameter is defined as MWh. The name of the	~~**CAR 7**~~ **OK**

Checklist Question		Reference	MoV[2]	Comments	Conclusion
				parameter is not in line with the description. Please clarify if plant/unit m will be used or not. ***CO_2 emission factor of fuel type i used in in year y ($EF_{CO2,I,y}$):*** IPCC is used as a source of data. The parameter is used for EF calculations. ***Sample Group for BM emission factor:*** Most recent power plants which compromise 20% of total generation are taken into account. ***Average net energy conversion efficiency of power unit m in year y ($\eta_{m,y}$):*** The net energy conversion efficiency of power unit are taken from Annex I of the "Tool to calculate the emission factor for an electricity system" /13/. The name of the parameter is not in line with the description and the given in the calculation (page 37). In addition, the table number given in the value applied is not correct. Please check. ***Heating Values of fuels consumed for electricity generation in the year ($HV_{i,y}$):*** TEIAS statistics are used for this parameter. In addition, this parameter is used for calculating $NCV_{i,y}$. The table number given in the value applied is not correct. Please check. ***Amount of fuel type i consumed in the project electricity system in year y ($FC_{i,y}$):*** TEIAS statistics are used for this parameter. The table number given in the value applied is not correct. Please check. ***Net calorific value of fuel types ($NCV_{i,y}$):*** It is calculated by using a website for OM calculation. The unit of the parameter is not in line with the tool. In addition, the table number given in the value applied is not correct. Please check.	
B.6.1.3	Which default data have been selected and applied?	/1/ /12/ /13/	DR, CC	Please refer to Section B.6.1.2 of this protocol.	~~**CAR 7**~~ **OK**

Checklist Question		Reference	MoV[2]	Comments	Conclusion
B.6.1.4	Are all the values used in the VCS PD considered reasonable in the context of the proposed project activity?	/1/ /12/ /13/	DR, CC	Please refer to Section B.6.1.2 of this protocol.	~~**CAR 7**~~ **OK**
B.6.2 Parameters ex-post					
B.6.2.1	Does the monitoring plan described in the VCS PD comply with the requirements of the methodology and the applicable methodological tool?	/1/ /12/ /13/	DR, CC	The monitoring plan described in the VCD PD complies with the requirements of the methodology /12/ and the applicable methodological tool /13/.	**OK**
B.6.2.2	Does the monitoring plan contain all necessary parameters and are they clearly described?	/1/ /12/ /13/	DR, CC	The monitoring plan includes all necessary data and parameters ex-post required by the applied methodology /12/ and the applicable methodological tool /13/. ***Quantity of net electricity generation supplied to the grid in year y ($EG_{facility,y}$):*** The parameter will be monitored continuously by the electricity meters. The calculation method of the parameter is defined as continuous measurement and monthly recording which is in line with the methodology /12/.	**OK**
B.6.2.3	Is the measurement equipment described? Is the accuracy of the measurement equipment addressed and deemed appropriate? Are the requirements for maintenance and calibration of measurement equipment described and deemed appropriate?	/1/	DR, CC	The monitoring equipment has not been purchased yet. However, the necessary explanations about the accuracy class and calibration frequency of the electricity meters. Two meters will be placed (one main and one reserve) at the project area. These meters will be sealed by TEIAS and intervention by project proponent is not possible. The accuracy of the measurement equipment is addressed in the PDD /1/.	**OK**
B.6.2.4	Is the monitoring and recording frequency adequate for all monitoring parameters? Is it in line with the monitoring methodology?	/1/ /12/ /13/	DR, CC	Please refer to B.6.2.2 and B.6.2.3 of this report.	**OK**
B.6.2.6	How has it been assessed that the monitoring arrangements described in the monitoring plan are feasible within the project design? Please confirm the ability of the project participants to implement the described monitoring plant.	/1/ /12/ /13/	DR, CC	Please refer to B.6.2.2 and B.6.2.3 of this report.	**OK**

Checklist Question		Reference	MoV[2]	Comments	Conclusion
B.6.3 Management/Quality Assurance/Quality Control					
B.6.3.1	Are procedures identified for day-to-day records handling (including what records to keep, storage area of records and how to process performance documentation)?	/1/ /35/	DR	The electricity generation and consumption is measured in line with the TEIAS rules and requirements /35/.	**OK**
B.6.3.2	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/	DR, I	In the VCS PD the data management and quality assurance and quality control procedures are discussed clearly.	**OK**
B.6.3.3	Will all monitored data required for verification and issuance be kept for two years after the end of the crediting period or the last issuance of CERs, for this project activity, whichever occurs later?	/1/	DR	All data will be kept for at least two years after the end of the each crediting period as mentioned in the VCS PD /1/.	**OK**
C.1 Crediting period					
C.1.1	What is the expected crediting starting date of the proposed project activity?	/1/ /6/	DR, I	The crediting period of project activity is defined as 01/10/2016-30/09/2026 in the VCS PD /1/ which is in line with the VCS Standard /6/.	**OK**
C.1.2	What is the length of the crediting period? Is it clearly defined and reasonable?	/1/ /9/	DR	The length of crediting period is defined as 30 years, which is acceptable for Validation & Verification Manual /9/.	**OK**
D.1 Environmental impacts					
D.1.1	Has an analysis of the environment impacts of the project activity been undertaken? Is it clearly and sufficiently described in the VCS PD?	/1/ /21/	DR	Project Introduction File was prepared for EIA process in line with the domestic laws and regulations in Turkey. "EIA not Required Certificate given by Environment and Urban Ministry" /21/ was submitted to the validation team.	**OK**
D.1.2	Will the project create any adverse environmental effects? Are transboundary environmental impacts considered in the analysis?	/1/ /21/	DR	Please refer to Section D.1.1 of this validation protocol.	**OK**
D.1.3	Is the analysis of the environmental impacts required by the legislation of the host Country? If yes, has the EIA has been	/1/ /21/	DR	Please refer to Section D.1.1 of this validation protocol.	**OK**

Checklist Question		Reference	MoV[2]	Comments	Conclusion
	approved by local Government? Does the approval contain any conditions that need monitoring?				
D.1.4	Is it the project in line with the current environmental legislation in the host Country?	/1/ /21/	DR	Please refer to Section D.1.1 of this validation protocol.	**OK**
D.1.5	Is the monitoring of sustainable development indicators/ environmental impacts warranted by legislation in the host country?	/1/ /21/	DR	Please refer to Section D.1.1 of this validation protocol.	**OK**
D.1.6	Are the sustainable development indicators in line with stated national priorities in the host country?	/1/ /21/	DR	Please refer to Section D.1.1 of this validation protocol.	**OK**
E.1 Local stakeholder consultation					
E.1.1	Are the local stakeholders be invited by the PP prior to the publication of the VCS PD to the UNFCCC website?	/1/	DR	The stakeholder consultation meeting is not a requirement, since the project is developed under VCS. Also, the stakeholder consultation process is not required by regulations/laws in the host Country.	**OK**
E.1.2	Are the stakeholders invited being considered as regards commenting the proposed project activity?	/1/	DR	Please refer to Section E.1.1 of this validation protocol.	**OK**
E.1.3	Is the summary of the comments received from the stakeholders, provided in the VCS PD complete?	/1/	DR	Please refer to Section E.1.1 of this validation protocol.	**OK**
E.1.4	Has due account been taken by the project participants of any stakeholder comments received?	/1/	DR	Please refer to Section E.1.1 of this validation protocol.	**OK**
E.1.5	If a stakeholder consultation process is required by regulations/laws in the host Country, has the stakeholder consultation process been carried out in accordance with such regulations/laws?	/1/	DR	Please refer to Section E.1.1 of this validation protocol.	**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
CAR 1 The issues given in below should be discussed: - The capacity of the project activity is defined as 27.9 MWm in the VCS-PD which is not in line with the generation license /15/. - The date of the generation license given as March 2014 is not in line with the provided supporting document. - Please give the whole date instead of "last quarter of 2016 given in Section 1.1 of the VCS-PD. - In Section 1.8, it is stated that operational lifetime is determined by using tool to determine the remaining lifetime of equipment. However, it is related with the technical lifetime of the project activity. Please clarify. - Please provide the calculation for Figure 2 sources. - In section 1.8 of the VCS-PD, The Gold Standard is presented. Please correct. - Footnote 12 and 13, 14 are not available. - Please give a clear definition for the explanation given in Section 1.12.4 of the VCS-PD. - In section 2.1 of the VCS-PD, the name of the methodology is not in correct - In section 2.4, all the figures and tables should be revised as per the last capacity projection report of Turkey. - In section 2.4, Table 3 and Figure 4 are related with the same picture. Please correct. - Please revise the organizational diagram	A.2.1	- The capacity of the project activity has been revised as 33.3 MWm according to generation license. - The generation license issuance date has been revised in VCS-PD. - Instead of indicating the date as last quarter of 2016, it has been revised as 1st of October 2016. - It has been revised as technical lifetime of the porject activity as described in the tool. - Calculation had already provided in the CM Calculation excel sheet, moreover, reference for the figure has been added. - It has been revised as VCS. - Related footnotes has been revised in VCS-PD. - The reason for chosing VCS has been defined under section 1.12.4. - Name of the methodology ACM0002 version 17.0.0 has been revised. - All the figures and tables have been revised with related recent year data. - Table 3 and Figure 5 have been revised.	**Review 1 (08/08/2016):** - The capacity of the project activity is defined as 33.3 MWm in the VCS-PD which is now in line with the generation license /15/. - The date of the generation license given as 12/11/2015 is now in line with the provided supporting document. - The whole date is now given in Section 1.1 of the VCS-PD. - In Section 1.8, it is now stated that technical lifetime is determined by using tool to determine the remaining lifetime of equipment. - The calculation could now be confirmed. - In section 1.8 of the VCS-PD, the information is corrected as VCS. - Footnote 12 and 13, 14 are now available. - A clear definition is now presented for the explanation given in Section 1.12.4 of the VCS-PD. - In section 2.1 of the VCS-PD, the name of the methodology is now corrected. - In section 2.4, table 4 is now revised. However, the previous presentation is still seen in the report. Please remove. - In section 2.4, Table 3 and Figure 5 are now separated. - The organizational diagram is now revised with adding biologist and forest engineer. - In Section 1.9 of the VCS-PD, the distance between the Yaris Village and

Corrective action and/ or clarification requests	Reference to Table 1	Response by project participants	Verification conclusion
with adding biologist and forest engineer. - In Section 1.9 of the VCS-PD, the distance between the Yaris Village and the turbines are given as 473 m. However, the provided supporting reference for this issue is not in line with the value. Please clarify.		- Organizational diagram has been revised by adding biologist and forest engineer. - The closest settlement distance has been revised as 743 m according to the distance between T10 and Yarış Village. **Response to Review 1:** - Previous representation of Table 4 in Section 2.4 has been removed.	the turbines are now revised as 743 m. **Hence, CAR 1 is not closed.** **Review 2 (19/09/2016):** In section 2.4, table 4 is now revised. **Hence, CAR 1 is closed.**
CAR 2 In applicability conditions 8 turbine is discussed. The explanation is not in line with the generation license. Please clarify.	B.1.3	- Turbine numbers have been revised as 12 according to the generation license.	**Review 1 (08/08/2016):** The number of the turbines is now revised as 12 in the applicability conditions and now it is in line with the generation license. **Hence, CAR 2 is closed.**
CAR 3 In section 2.3 of the VCS-PD, The included or excluded gases are not determined. In addition, Justification and explanation should be given for all the gases.	B.2.3	- Included or excluded gases have been revised and related explanation has been provided. **Response to Review 1:** - The blank table format has been removed in Section 2.3.	**Review 1 (08/08/2016):** In section 2.3 of the VCS-PD, the table is revised. However, a table format (blank) is still presented under the filled table. Please remove. **Hence, CAR 3 is not closed.** **Review 2 (19/09/2016):** In section 2.3, table is now revised. **Hence, CAR 3 is closed.**
CAR 4 The PP has not presented evidence for the value of the Euribor for the time of the investment decision taking.	B.4.4.5	- Necessary link has been provided to the Karacabey IRR Excel Sheet as the reference of interest rate.	**Review 1 (12/08/2016):** The additional information provided is sufficient. **Hence, CAR 4 is closed**
CAR 5 The key parameters have been defined however; there is no explanation that the key parameters chosen for variation contribute to	B.4.4.11	Key parameters' variation has been included to VCS-PD in order to show when they reach %15 benchmark during operation or implementation. Necessary	**Review 1 (12/08/2016):** The PP misinterprets the issue. The parameters are OK. However according to the Guidelines the

Corrective action and/ or clarification requests	Reference to Table 1	Response by project participants	Verification conclusion
more than 20% of the revenue/costs during operating or implementation.		explanation has been given under section 2.5. **Response to Review 1:** In IRR&Sensitivity excel sheet of the Karacabey IRR Calculation excel sheet, it has been showed that total cost of the project is almost 82 million euro. Operating cost of the project is almost 43 million euro and it contributes more than 50% of the total cost. Furthermore, total investment cost of the project is almost 41 million euro which also contributes 50% of the total cost. Therefore, according to the Guidelines of the parameter chosen for variation analysis, investment cost and also operationg cost have been chosen for variation analysis. The electricity price and energy yield contributes to almost 100% of the revenues so, they have been also chosen for the variation analysis. Necessary explanation has been given under Sub-step 2d of the VCS-PD. The table of parameters in Sub-step 2c has been corrected according to the new version of the PD.	parameters chosen for variation analysis should contribute to more than 20% of the **revenues/costs** during implementation or operation and that has to be stated in the PD. F.i., the electricity price and energy yield contribute to almost 100% of the revenues. Please also correct the table of parameters in Sub-step 2c of the new version of the PD – parameter "Equity Share". In fact, the amount listed is the Loan Share. **Hence, CAR 5 is not closed.** **Review 2 (21/09/2016):** The PP has added a sufficient explanation of the choice they have made for the sensitivity analysis. The PD is amended correspondingly. Table "Input Parameters" (Sub-step 2c is corrected. **Hence, CAR 5 is closed.**
CAR 6 The main key parameters are not varied to reach the benchmark and the probability of that being low is not discussed and justified.	B.4.4.13	Key parameters have been varied in order to see whether they reach bencmark. Moreover, it has included to VCS-PD and clear definition has been given.	**Review 1 (12/08/2016):** The main key parameters have been varied to reach the benchmark and the probability of that being low is discussed and justified. **Hence, CAR 6 is closed**.
CAR 7 ***Net electricity generated in year y (EG_y):*** TEIAS statistics was used for the calculation. The unit of the parameter is defined as MWh.	B.6.1.2 B.6.1.3 B.6.1.4	- The unit parameter of ***Net electricity generated in year y*** has been revised as MWh/yr. The	**Review 1 (08/08/2016):** ***Net electricity generated in year y (EG_y):*** The name of the parameter is revised nor as "EGfacility,y" in the monitoring

Corrective action and/ or clarification requests	Reference to Table 1	Response by project participants	Verification conclusion
The name of the parameter is not in line with the description. Please clarify if plant/unit m will be used or not. ***Average net energy conversion efficiency of power unit m in year y ($\eta_{m,y}$):*** The net energy conversion efficiency of power unit are taken from Annex I of the "Tool to calculate the emission factor for an electricity system" /13/. The name of the parameter is not in line with the description and the given in the calculation (page 37). In addition, the table number given in the value applied is not correct. Please check. ***Heating Values of fuels consumed for electricity generation in the year ($HV_{i,y}$):*** TEIAS statistics are used for this parameter. In addition, this parameter is used for calculating $NCV_{i,y}$. The table number given in the value applied is not correct. Please check. ***Amount of fuel type i consumed in the project electricity system in year y ($FC_{i,y}$):*** TEIAS statistics are used for this parameter. The table number given in the value applied is not correct. Please check. ***Net calorific value of fuel types ($NCV_{i,y}$):*** It is calculated by using a website for OM calculation. The unit of the parameter is not in line with the tool. In addition, the table number given in the value applied is not correct. Please check.		description has been revised accordingly. - The name of the parameter has been revised according to the given calculation. The table number for applied values is now in line with the parameter. - The table number has been corrected in VCS-PD for parameter $HV_{i,y.}$ - The table number has been revised for the parameter $FC_{i,y.}$ The unit of the parameter has been revised. The table number for $NCV_{i,y}$ has been corrected. **Response to Review 1:** - The parameter has been revised as $EG_{facility,y}$ in the whole report.	parameters. However, the whole report is seems as "EGy". Please correct. ***Average net energy conversion efficiency of power unit m in year y ($\eta_{m,y}$):*** The name of the parameter is now in line with the description and the given in the calculation (page 37). In addition, the table number given in the value applied is now corrected. ***Heating Values of fuels consumed for electricity generation in the year ($HV_{i,y}$):*** The table number given in the value applied is now corrected. ***Amount of fuel type i consumed in the project electricity system in year y ($FC_{i,y}$):*** The table number given in the value applied is now corrected. ***Net calorific value of fuel types ($NCV_{i,y}$):*** The unit of the parameter is now in line with the tool. In addition, the table number given in the value applied is now corrected. **Hence, CAR 7 is not closed.** **Review 2 (19/09/2016):** ***Net electricity generated in year y (EG_y):*** The name of the parameter is now revised as "$EG_{facility,y}$" in the whole report. **Hence, CAR 7 is closed.**
CR 1 The title of the project activity is defined as "Karacabey Wind Power Project" in the VCS PD /1/, which is enable the reader to identify the	A.1.1	- The title of the project has been revised as "Karacabey Wind Power Project" in the front page.	**Review 1 (11/08/2016):** The name of the project activity is now corrected in the first page of the monitoring report.

Corrective action and/ or clarification requests	Reference to Table 1	Response by project participants	Verification conclusion
unique VCS activity. However, only in the first page of the PD, "Turkey is also presented. Please clarify.			**Hence, CR 1 is closed.**
CR 2 In Section 3.4 of the VCS-PD the format of the table is not correct.	A.1.3	- The format of the table in section 3.4 has been revised.	**Review 1 (11/08/2016):** The format of the table is now corrected in Section 3.4 of the VCS-PD. **Hence, CR 2 is closed.**
CR 3 The coordinates of the project activity, which are presented in Section 1.9 of VCS PD /1/, are in line with the Generation License /15/. However, for the coordinates of the turbines given in Table 2, please give the whole second's number.	A.4.1	- Whole significant figures of the turbine coordinates have been provided in Table 2.	**Review 1 (11/08/2016):** The coordinates of the project activity is now given with the whole number. **Hence, CR 3 is closed.**
CR 4 The expected lifetime of the project activity is defined as 25 years which are not in line with the generation license /15/. Please clarify.	A.4.4	The expected lifetime of the project has been revised as 49 years according to generation license of Karacabey WPP.	**Review 1 (11/08/2016):** The expected lifetime of the project activity is defined as 49 years. **Hence, CR 4 is closed.**
CR 5 There is no explanation about the public funding given in the VCD-PD. Please clarify.	A.5.1	Related explanation is given under summary description of the project. **Response to Review 1:** Explanation about public funding has been given under summary description of the project and no other supporting document is needed.	**Review 1 (11/08/2016):** An explanation is now given in the monitoring report that the project activity does not have any public funding or Official Development Assistance (ODA) funding. However, no supporting document is provided to DOE. **Hence, CR 5 is not closed.** **Review 2 (19/09/2016):** The information is found acceptable. **Hence, CR 5 is closed.**
CR 6 In section 2.1 of the VCS-PD, the name of the methodology is not in correct.	B.1.1	- Name of the methodology ACM0002 version 17.0.0 has been revised.	**Review 1 (11/08/2016):** In section 2.1 of the VCS-PD, the name of the methodology is now corrected. **Hence, CR 6 is closed.**

Corrective action and/ or clarification requests	Reference to Table 1	Response by project participants	Verification conclusion
CR 7 The methodological tool "Tool to calculate the emission factor for an electricity system, version 04.0 of 04/10/2013" /13/ is applied. However, the applied tool is not the latest version at the time of VCS-PD submission. Please also check all the tool's versions. Some of them are not up to date.	B.1.2	- All the tool's versions have been checked and updated according to latest versions.	**Review 1 (11/08/2016):** All the tool versions are now revised in the monitoring report. **Hence, CR 7 is closed.**
CR 8 It is explained in the VCS-PD that a backup power generator will be installed in power plant. In case, emissions from back-up power generator exceed 1% of the total emission reductions, they will be accounted as project emissions in each verification period. Operating hours of back-up power generator will be monitored with that purpose. However, no parameter is added to the monitoring parameters.	B.2.5	Monitoring parameter for observing emissions from back-up power generator has been added to VCS-PD. **Response to Review 1:** In the ACM0002 methodology, it has been stated that "For all renewable energy power generation project activities, emissions due to the use of fossil fuels for the backup generator can be neglected." (In page 13, article 38) Thus, this monitoring parameter has been removed from VCS-PD according to the methodology.	**Review 1 (11/08/2016):** A parameter which is not related with the operating hours of back-up power generator is added to the "not monitoring parameters". The consumed fuel oil should be monitored every verification period and calculated as project emissions. **Hence, CR 8 is not closed.** **Review 2 (19/09/2016):** The given explanation is found acceptable. **Hence, CR 8 is closed.**
CR 9 According to the dates given in the project implementation schedule, "Date for start of construction" could not be confirmed since no supporting document is provided. The provided field delivery report is only related with the turbine construction. Please provide the main construction delivery record. In addition, please provide a supporting document to confirm the date of board decision.	B.4.4.3	Field delivery report is related with the all construction works and it can be considered as the main construction delivery report. Date for start of the construction can be confirmed with the supporting document provided. The document of board decision has been provided.	**Review 1 (11/08/2016):** The date of the construction is now confirmed as per the provided supporting document. In addition, the date of the board decision is also confirmed. **Hence, CR 9 is closed.**
CR 10 The IRR is calculated as equity IRR after taxes. This has to be clearly stated in the VCS-PD. The same is for the benchmark – it is by definition	B.4.4.2	Equity IRR after taxes has been stated clearly in the VCS-PD. It had already been stated in PD however, some other additions have been entrained. It has also	**Review 1 (12/08/2016):** The PD is amended stating clearly that the parameter chosen for comparison to the benchmark is equity IRR after taxes which

Corrective action and/ or clarification requests	Reference to Table 1	Response by project participants	Verification conclusion
calculated after taxes and this also has to be stated in the PD /1/ in order to match the type of the IRR.		been stated clearly for the benchmark.	corresponds to the type of the benchmark chosen. **Hence, CR 10 is closed.**

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CERTIFICATO DI QUALIFICA PER GLI SCHEMI VOLONTARI*
QUALIFICATION CERTIFICATE FOR VOLUNTARY SCHEMES*

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

è qualificato come: **TEC, VAL, VER, TL**
is qualified as:

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

AREE TECNICHE *TECHNICAL AREAS*	DESCRIZIONE DELL'AREA TECNICA *TECHNICAL AREA DESCRIPTION*	SCOPO SETTORIALE *SECTORAL SCOPE*
1.2	Renewables	1
13.1	Solid waste and wastewater	13

REVISIONE *REVISION*	DATA *DATE*	MOTIVAZIONI PER LA REVISIONE *REASON FOR THE REVISION*
0	19/07/2016	First issue with new template

Responsabile di schema
Scheme Leader
Rita Valoroso

*SCHEMI VOLONTARI/ VOLUNTARY SCHEMES: ACR American Carbon Registry, CCB The Climate, Community & Biodiversity Alliance, GS Gold Standard, JI Joint Implementation, SCS Social Carbon Standard, VCS Verified Carbon Standard.

TEC: Technical expert; VAL: Validator; VER: Verifier; TL: Team leader; FIN EXP: Financial Expert; ITRP: Independent technical reviewer

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VCSA	per condurre la Validazione e la Verifica di Progetti VCS *to carry out Validation and Verification of VCS Projects*
GS Foundation	per condurre la Validazione e la Verifica di Progetti GS *to carry out Validation and Verification of GS Projects*
Ecologica Institute	per condurre la Validazione e la Verifica di rapporti SCS *to carry out Validation and Verification of SCS Reports*
American Carbon Registry ACR	per condurre la Validazione e la Verifica di Progetti ACR *to carry out Validation and Verification of ACR projects*
The Climate, Community & Biodiversity Alliance CCB	per condurre la Validazione e la Verifica di Progetti co-benefit CCB *to carry out Validation and Verification of co-benefit CCB projects*

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CERTIFICATO DI QUALIFICA PER GLI SCHEMI VOLONTARI*
QUALIFICATION CERTIFICATE FOR VOLUNTARY SCHEMES*

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

è qualificato come:
is qualified as:
TEC, FIN EXP

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

AREE TECNICHE *TECHNICAL AREAS*	**DESCRIZIONE DELL'AREA TECNICA** *TECHNICAL AREA DESCRIPTION*	**SCOPO SETTORIALE** *SECTORAL SCOPE*
1.1	Thermal energy generation	1
1.2	Renewables	1

REVISIONE *REVISION*	**DATA** *DATE*	**MOTIVAZIONI PER LA REVISIONE** *REASON FOR THE REVISION*
0	19/07/2016	First issue with new template (this certificate is linked to CDM qualification)

Responsabile di schema
Scheme Leader
Rita Valoroso

*SCHEMI VOLONTARI/ VOLUNTARY SCHEMES: ACR American Carbon Registry, CCB The Climate, Community & Biodiversity Alliance, GS Gold Standard, JI Joint Implementation, SCS Social Carbon Standard, VCS Verified Carbon Standard.

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VCSA	per condurre la Validazione e la Verifica di Progetti VCS *to carry out Validation and Verification of VCS Projects*
GS Foundation	per condurre la Validazione e la Verifica di Progetti GS *to carry out Validation and Verification of GS Projects*
Ecologica Institute	per condurre la Validazione e la Verifica di rapporti SCS *to carry out Validation and Verification of SCS Reports*
American Carbon Registry ACR	per condurre la Validazione e la Verifica di Progetti ACR *to carry out Validation and Verification of ACR projects*
The Climate, Community & Biodiversity Alliance CCB	per condurre la Validazione e la Verifica di Progetti co-benefit CCB *to carry out Validation and Verification of co-benefit CCB projects*

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classification, certification, inspection & testing

CERTIFICATO DI QUALIFICA PER GLI SCHEMI VOLONTARI*
QUALIFICATION CERTIFICATE FOR VOLUNTARY SCHEMES*

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

è qualificato come: **VAL, TL, ITRP**
is qualified as:

AREE TECNICHE *TECHNICAL AREAS*	DESCRIZIONE DELL'AREA TECNICA *TECHNICAL AREA DESCRIPTION*	SCOPO SETTORIALE *SECTORAL SCOPE*

REVISIONE *REVISION*	DATA *DATE*	MOTIVAZIONI PER LA REVISIONE *REASON FOR THE REVISION*
0	19/07/2016	First issue with new template (this certificate is linked to CDM qualification)

Responsabile di schema
Scheme Leader

Rita Valoroso

*SCHEMI VOLONTARI/ VOLUNTARY SCHEMES: ACR American Carbon Registry, CCB The Climate, Community & Biodiversity Alliance, GS Gold Standard, JI Joint Implementation, SCS Social Carbon Standard, VCS Verified Carbon Standard.

TEC: Technical expert; VAL: Validator; VER: Verifier; TL: Team leader; FIN EXP: Financial Expert; ITRP: Independent technical reviewer

RINA Services S.p.A. è accreditato/riconosciuto da
RINA Services S.p.A. is accredited /recognized by

UNFCCC	quale Entità Operativa Designata (DOE), per condurre la Validazione e la Verifica di Progetti CDM *as Designated Operational Entity (DOE), to carry out Validation and Verification of CDM Projects*
VCSA	per condurre la Validazione e la Verifica di Progetti VCS *to carry out Validation and Verification of VCS Projects*
GS Foundation	per condurre la Validazione e la Verifica di Progetti GS *to carry out Validation and Verification of GS Projects*
Ecologica Institute	per condurre la Validazione e la Verifica di rapporti SCS *to carry out Validation and Verification of SCS Reports*
American Carbon Registry ACR	per condurre la Validazione e la Verifica di Progetti ACR *to carry out Validation and Verification of ACR projects*
The Climate, Community & Biodiversity Alliance CCB	per condurre la Validazione e la Verifica di Progetti co-benefit CCB *to carry out Validation and Verification of co-benefit CCB projects*

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