

Validation Report for BATICIM BATI ANADOLU CIMENTO SANAYII A.S. 9 MW Cement WHR Project

Project Title	BATICIM BATI ANADOLU CIMENTO SANAYII A.S. 9 MW Cement WHR Project
Version	Validation Report version 3

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Client	BATICIM BATI ANADOLU CIMENTO CO. Ltd.
Pages	11
Date of Issue	24-April-2012
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Summary:

The certification body “Climate and Energy” of TÜV SÜD Industrie Service GmbH has been ordered by BATICIM BATI ANADOLU CIMENTO CO. Ltd. Ankara Cad, Izmir, Turkey, to perform the Validation against the Voluntary Carbon Standard (VCS) VCS Version 3 of the project “BATICIM BATI ANADOLU CIMENTO SANAYII A.S. 9 MW Cement WHR Project” in Turkey. The project “BATICIM BATI ANADOLU CIMENTO SANAYII A.S. 9 MW Cement WHR Project” complies with the requirements of the Voluntary Carbon Standard (VCS) VCS ver. 3.

The validation process of the above mentioned project was performed against the criteria set by Voluntary Carbon Standard (VCS) version VCS ver. 3 and the approved UNFCCC CDM methodology ACM0012 version 04.

The project also applies the UNFCCC CDM methodological tool “Tool to calculate the emission factor for an electricity system” version 02.1.0. Its additionality has been demonstrated using Tool for demonstration and assessment of additionality”, Version 05.2.

During the validation process according to the CDM VVM, version 2.1, TÜV SÜD issued several corrective action and clarification requests, which were addressed by the project owner Baticim and the consultant Future Camp.

Additionally the assessment team reviewed the estimation of the projected emission reductions. In the validation report it is confirmed that the indicated total amount of annual verified emission reductions of 25,180 tones CO₂e represents a conservative estimation using the assumptions given by the project documents. For a 10-year crediting period, the emission reductions correspond to 251,800 tones CO₂e.

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1 INTRODUCTION

1.1 Objective

BATICIM BATI ANADOLU CIMENTO CO. Ltd., Izmir, Turkey, has commissioned TÜV SÜD Industrie Service GmbH to validate the “BATICIM BATI ANADOLU CIMENTO SANAYII A.S. 9 MW Cement WHR Project” located in Izmir, Turkey. The validation serves as design verification and is recommended for all VER projects. The validation objective is to have an independent Third Party assessment of the proposed project activity against all criteria of Voluntary Carbon Standard VCS ver. 3 and against the approved Clean Development (CDM) methodologies and tools set by UNFCCC. This validation report summarizes the findings of the validation. The VCS project activity was assessed against the CDM methodology ACM0012 version 04.0.0, “Consolidated baseline methodology for GHG emission reductions from waste energy recovery projects”. The audit team was provided with the VCS PD in June 2011. The project activity discussed by this validation report has been submitted under the project title:

“BATICIM BATI ANADOLU CIMENTO SANAYII A.S. 9 MW Cement WHR Project”

1.2 Scope and Criteria

The validation is not meant to provide any consulting towards the client. However, stated requests for clarifications and/or corrective actions may provide input for improvement for the project design. Once TÜV SÜD receives a first VCS PD version, it is made publicly available on the internet at TÜV SÜD’s web page for starting 30 day global stakeholder consultation process (GSP).

http://www.netinform.net/KE/Wegweiser/Guide2.aspx?ID=7258&Ebene1_ID=49&Ebene2_ID=2425&mode=4

1.3 Level of assurance

BATICIM BATI ANADOLU CIMENTO CO. Ltd. and TÜV SÜD have agreed on a reasonable level of assurance for the validation. TÜV SÜD has focused on means of appropriate methodologies for assessment of additionality, calculation of grid emission factors and the estimation of emission reductions. Based on the submitted documents, TÜV SÜD can provide a reasonable level of assurance.

1.4 Summary Description of the Project

The project shall implement a 9 MW waste heat recovery solution at BATICIM-IZMIR cement plant. It entails the installation of

- One 9MW turbine
- One 9MW generator
- Two AQC boilers
- Two SP boilers

AQC boiler is installed between the middle cooler outlet and filter, produce superheated steam and hot water. The heat-receiving surface of the boiler is divided into two stages:

The first stage is high pressure superheated steam stage; the second stage is hot water stage. The superheated steam produced in the AQC boilers and SP boilers merges and is introduced to the turbine for power generation.

2 VALIDATION PROCESS

2.1 Method and Criteria

The project activity has been assessed on a risk based approach. TÜV SÜD has developed a methodology specific validation protocol based on the templates in CDM Validation and Verification Manual ("VVM"), version 1.2. The protocol shows criteria (requirements), the discussion of each criterion by the assessment team and the results from validating the identified criteria. The protocol refers to:

- Conformity of project activity and the VCS PD
- Resolution of corrective action and clarification requests
- Unresolved corrective action and clarification requests.

Appointment of the Assessment Team

According to the technical scopes and experiences, TÜV SÜD has composed a project team in accordance with the appointment rules of TÜV SÜD Certification Body "climate and energy". It is required that the sectoral scope linked with the methodology has to be covered by the assessment team. The validation team for this project activity was consisting of the following experts:

Name	Qualification	Coverage of sectoral scope	Coverage of technical area	Coverage of financial aspects	Host country experience
Robert Mitterwallner	Assessment Team Leader	☒	☒	-	☒
Dr. Nuri Mol	Trainee	☒	☒	-	☒
Constantin Zaharia	Trainee	☒	☒	-	☒
Nevena Pingarova	GHG-Auditor	-	-	☒	-

Robert Mitterwallner is located at TÜV SÜD Industrie Service in Munich since 1990 and has a background as auditor for environmental management systems, as expert in environmental permit procedures for industrial plants and as expert for environmental impact studies assessment.

He has received training in the JI determination/verification and CDM validation/verification process and applied successfully as GHG Determiner, GHG Validator, GHG Verifier as well as Assessment Team Leader and Technical Reviewer for climate change projects, among others, in the scope energy industries. Moreover, he has been appointed as Auditor for Renewable Energy Certification.

Dr. Nuri Mol is a GHG Auditor working for VER and JI project assessments for "TÜV SÜD Carbon Management Service" located in the head office of TÜV SÜD Industrie Service GmbH in Munich, Germany. He has been working for 20 years as expert and consultant in environmental and renewable energy sector, serving to various industries, e.g. iron & steel, food, water supply, hazardous waste management. He received intensive training at Carbon Management Service with TÜV SÜD and participated in more than 40 validation and verification processes.

Constantin Zaharia is environmental engineer and is working as GHG Verifier in the Carbon Management Service Department of TÜV SÜD Industrie Service GmbH, Germany. He has several years of experience in JI/CDM projects.

Mrs. Nevena Pingarova is an expert in Investment analysis assessment and auditor trainee for greenhouse gas emissions at Carbon Management Service Department in TÜV SÜD Industrie Service GmbH. She has a Masters degree in Forecasting and Planning of Economic Systems from the University of World and National Economy, Sofia. Prior to joining TÜV SÜD Nevena Pingarova had 5 years experience as a JI project developer.

Internal Quality Control

As final step of validation, the validation report and the protocol have to follow an internal quality control procedure by the Certification Body "climate and energy" and each report has to be approved.

2.2 Document Review

A preliminary VCS PD version submitted by the project participant and additional background documents related to the VCS PD and the baseline were reviewed as initial step of the validation process. A complete list of all documents and proofs reviewed is attached as Annex 2.

2.3 Interviews

TÜV SÜD has performed on site visit during 18 August 2010 and interviews with project stakeholders to confirm selected information and to resolve issues identified in the first document review. The table below provides a list of all persons interviewed in the context of this on site visit.

Name	Organisation
Engin Mert	Future Camp Turkey
Daniel Scholz	Future Camp Germany
Cenk Ozdemir	Baticim Plant
Onur Aykut	Baticim Plant
Savas Yucel	Baticim Plant
Volkan Buker	Baticim Plant

2.4 Site Inspections

It was verified during the site-visit that:

- The plant is operational
- The WHR system is not yet installed

Cross-check of the information provided in the VCS PD documentation with other sources has also been performed during the site visit.

-

2.5 Resolution of Any Material Discrepancy

The objective of this phase of the validation is to resolve the requests for corrective actions and clarifications and any other outstanding issues which needed to be clarified for TÜV SÜD's positive conclusion on the project design. The comments and requests raised by TÜV SÜD during the onsite meeting were taken into account in the final VCS PD version 03, dated November 03, 2011. To guarantee the transparency of the validation process, the remaining concerns raised and responses that have been given are summarized in chapter 3 below and documented in more detail in the validation protocol in Annex 1. In April 2012, the VCS PD has been updated with the project starting date of 20/05/2012, hence, the validation report has been revised accordingly.

3 VALIDATION FINDINGS

3.1 Project Design

The project shall be staged at BATICIM-IZMIR cement plant which started clinker production in 1966. Annual clinker production is 1,400,000 tonnes.

The proposed WHR system will efficiently utilize the waste heat from the clinker production process to generate electricity. The project developer plans to install one captive power station (9 MW), based on waste heat recovery. The steam generated from the boilers will be sent to a turbine that feeds a generator for electricity production. Lifetime of the project is 25 years.

The generated electricity will be consumed within the plant only, thereby substituting electricity for cement production that would otherwise be purchased from the Turkish power grid.

The project shall implement a 9 MW waste heat recovery solution at BATICIM-IZMIR cement plant. It entails the installation of

- One 9MW turbine
- One 9MW generator
- Two AQC boilers
- Two SP boilers

The project applies a CDM EB approved methodology and related tools in their latest version. The CDM program is a VCS approved program. The respective CDM sectoral scopes are scope 01 (Energy industries) – and scope 04 (Manufacturing industries).

The VCS project proponent is BATICIM BATI ANADOLU CIMENTO CO. Ltd. (short: Baticim). Baticim is involved in the engineering tasks of the project and also responsible party for the management of the VER project.

The envisaged starting date of the project is 20/05/2012.

A once renewable crediting period of 10 years will apply

The project is neither a grouped project nor a mega-scale one.

The estimated amount of GHG emission reduction over the crediting period is 251,800 t CO_{2e}.

The cement production plant BATICIM-IZMIR of BATICIM BATI ANADOLU CIMENTO CO. Ltd. is located in Bornova district of Izmir province, Ankara Asfalti Uzeri, Naldoken Koyu No. 335, Bornova Izmir, 35050 Turkey.

The project activity is neither included in an emission trading program nor does it take place in a jurisdiction or sector in which binding limits are established on GHG emissions.

The project does not participate/has not participated under any other GHG program.

The project has not created any form of other credit. Batıcim does not obtain any public funding.

Batıcim WHR has not applied for crediting of any other GHG program nor has it been rejected from any other GHG program.

Commercially sensitive information that has been excluded from the public version of the VCS PD (for display on the VCS Project Database) is related to the financial analysis documentation.

The validation has been done according to paragraphs 59 to 64 of the VVM Version 2.1.

3.2 Application of Methodology

3.2.1 Title and Reference

The project at hand applies CDM-EB approved consolidated baseline and monitoring methodology ACM0012, Version 04.0.0, "Consolidated baseline methodology for GHG emission reductions from waste energy recovery projects".

Also along ACM0012 requirements, five CDM EB-approved methodological tools shall be applied. As per project design, three of those are relevant to the project at hand, i.e.

- "Tool to calculate the emission factor for an electricity system", Version 02.1.0;
- "Tool for demonstration and assessment of additionality", Version 05.2;
- "Tool to determine the remaining lifetime of equipment, Version 01

3.2.2 Applicability

The project is applicable as respective applicability requirements set by ACM0012 are fulfilled:

(1) The project recovers and utilizes waste heat at an existing facility for the generation of electricity, while in the absence of the project activity all waste gas would continue to be released to the atmosphere.

(2) There are no regulations that require the project facility to recover and/or utilize the waste energy prior to the implementation of the project activity.

(3) It is guaranteed that energy that is released under abnormal operation of the project facility (for example emergencies or shut downs) shall not be included in the emission reduction calculations.

(4) The extent of use of waste energy from the waste energy generation facilities in the absence of the VCS project activity will be determined in accordance with the procedures provided in Annex 2 (for existing project facilities) to this methodology.

(5) Applicability conditions of the Tools are considered

3.2.3 Project Boundary

The generated power from the waste heat recovery shall substitute the plant utilization of conventional electricity from the local grid. The spatial boundary of the project includes the relevant WECM stream(s), equipment and energy distribution system in the cement production facility.

The recipient facility is the cement plant as consumer of the generated electricity.

3.2.4 Baseline Scenario

The identification of the baseline scenario follows the prescribed 5-step approach of ACM0012. There the baseline scenario is identified as the most plausible baseline scenario among all realistic and credible alternative(s).

Generally applicable as realistic and credible alternatives and thus further analysed in the PD are both

- Waste energy use in the absence of the project activity, and
- Power generation in the absence of the project activity.

The following two alternatives are in the same sense not applicable (as they are incompatible with the plant design):

- Heat generation (process heat and/or heat reaction) in the absence of the project activity for each recipient facility
- Mechanical energy generation in the absence of the project activity for each recipient facility.

After performing the 5-step analyse, the only remaining scenario is the scenario that corresponds to the status-quo situation before WHR project implementation, i.e. all waste energy is vented while electricity supply is provided from the grid.

3.2.5 Additionality

For demonstration of additionality, the latest version (version 05.2) of the “Tool for demonstration and assessment of additionality”, approved by the CDM Executive Board, is applied. Benchmark analysis is chosen as applied method in this investment analysis (Option III as per Tool).

The applicable benchmark is from World Bank. It was calculated as a benchmark for IBRD and CTF investments schemes. It is indicating an IRR threshold on equity of 40% (IRL 18).

Based on financial input parameters, a project-specific IRR (after tax) of 27.46 % is calculated.

The comparison of IRR and the benchmark (40%; see above) shows that the project activity is much less attractive in terms of returns on investment, much lower than the benchmark.

The comparison shows that the proposed project activity faces a prohibitive barrier due to insufficient financial attractiveness. It thus cannot be considered financially attractive.

For sensitivity analysis the main critical parameters/assumptions are analysed with a variation in value of +/-10%.

In all scenarios the project attractiveness remains significantly below the benchmark. Thus results from the sensitivity analysis show that the project is robust to reasonable variations in the critical assumptions. It reconfirms the statement that the planned WHR project faces significant economic constraints and thus cannot be considered financially attractive.

Similar activities to the planned WHR project are cement production plants where WHR technology is either applied at the pre-heater stage or at the clinker cooling stage for the purpose of electricity generation.

In general there are so far no WHR installations installed at cement production facilities in Turkey at all. At Turkish clinker plants, it is common practice to have power supplied from the public electricity grid.

Thus BATICIM BATI WHR Project is a first-of-its kind in Turkey.

Based on the above mentioned analyse and according to paragraph 95 and 96 of the VVM, TÜV SÜD assessment team concluded that the project is additional.

3.2.6 Quantification of GHG Emission Reductions and Removals

The emissions reduction calculations were estimated by considering the correct balance equations. No project emissions and leakage were expected.

The uncertainty was considered by choosing 1- σ approach. The emission reduction are conservative and in line with the approved methodology/tool.

The ex-ante emission factor for the grid, 0.5267 tCO₂/MWh, as calculated in the Annex 1 of the PD, has been verified by the TÜV SÜD assessment team and found correct.

With an annual electricity generation of 47,802 MWh and the ex-ante determined grid emission factor of 0.5267, GHG reductions (annual) are calculated to 25,180 t CO_{2e}.

DOE confirms that the calculation is correct.

3.2.7 Methodology Deviations

There are no deviations from the Methodology ACM0012.

3.2.8 Monitoring Plan

The monitoring plan was set according to the approved Monitoring Methodology ACM0012, version 4.0.0, which is applicable for this project. Responsibilities regarding the implementation of the Monitoring Plan were indicated; the monitoring frequency, recording and back-up system were described transparently. Estimations of emission reduction data were calculated with a conservative approach.

According to paragraph 123 of the VVM, TÜV SÜD assessment team concluded that the monitoring plan is appropriate.

3.3 Environmental Impact

According to the relevant Environmental Impact Assessment Regulation (Law Nr. 2872 / 16.12.2003) for BATICIM WHR Project, an Environmental Impact Assessment is not required. The official letter from Environment and Forestry Ministry confirming non-applicability of this regulation has been checked (IRL 8).

3.4 Comments by stakeholders

Global Stakeholder consultation started with publication of the PD on the TÜV SÜD website: July 06 2011 and lasted 30 days. There were no comments received.

4 VALIDATION CONCLUSION

TÜV SÜD has performed a validation of the following proposed VER project activity:

BATICIM BATI ANADOLU CIMENTO SANAYII A.S. 9 MW Cement WHR Project

The review of the project design documentation and the subsequent follow-up interviews have provided TÜV SÜD with sufficient evidence to determine the fulfilment of the stated criteria. In our opinion, the project meets all relevant VCS ver. 3 criteria and UNFCCC requirements regarding the CDM methodologies / tools. It can be confirmed that the submitted project documentation is in line with all requirements of the Voluntary Carbon Standard VCS ver.3. Therefore the Certification Body "climate and energy" within TÜV SÜD Industrie Service GmbH agrees registering the project as VCS project according to VCS ver. 3 and issuance of a certificate confirming this registration.

An analysis as provided by the applied methodology demonstrates that the proposed project activity is not a likely baseline scenario. Emission reductions attributable to the project activity are hence additional to any that would occur in the absence of the VCS project activity. Given that the project is implemented as designed, the project is likely to achieve the estimated amount of emission reductions as specified within the final VCS PD version.

The validation is based on the information made available to TÜV SÜD and the engagement conditions detailed in this report. The validation has been performed using a risk based approach as described above.

Munich, 24/04/2012



Thomas Kleiser
Certification body
"Climate and energy"

Munich, 24/04/2012



Robert Mitterwallner
Assessment Team Leader

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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
A. General description of project activity				
<u>Corrective Action Request No.1</u>				
The PD has to be fully consistent with the VCS template in terms of head and foot lines.				
A.1. Title of the project activity				
A.2. Description of the project activity				
A.2.1. Is the description delivering a transparent overview of the project activities?	2	The project shall implement a 9 MW waste heat recovery solution at BATICIM-IZMIR cement plant. It entails the installation of • One 9MW turbine • One 9MW generator • Two AQC boilers • Two SP boilers The superheated steam produced in the AQC boilers and SP boilers merges and is introduced to the turbine for power generation. However, See CAR 2.	CAR #2	☒
A.2.2. Are references to the baseline/project scenarios, emission sources and gases and the technology employed given? If yes, please name them.	2	The identification of the baseline scenario follows the prescribed 5-step approach of ACM0012. Scenario that corresponds to the status-quo situation before WHR project implementation, i.e. all waste energy is vented while electricity supply is provided from the grid represents the project baseline.	CAR #2	☒

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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
		However, See CAR 2.		
A.2.3. What proofs are available demonstrating that the project description is in compliance with the actual situation or planning?	8 19 16 6 10 12 11 14	Following proofs are available: - EIA conformity letter - Environmental License for the plant - Operational License - Board Decision for carbon credit consideration - Equipment, construction works contracts. - Single line diagram of electrical connection for the Project - Sinoma Contract - Print screens control room of operation mode during the audit.	☒	☒
A.2.4. Is the information provided by these proofs consistent with the information provided by the PDD?	10, 2	Yes, the information provided in PDD is consistent with the design documents.	☒	☒
A.2.5. Is all information presented consistent with details provided by further chapters of the PDD, in particular chapters A.4.3 "Technology to be employed by the project activity", B.3 "Description of the sources and gases included in the project boundary" and B.4. "Identification of the baseline scenario"?	2	Yes, in general, but see CAR 1. <u>Clarification Request No.1</u> According to the PDD, chap. 1.8, generated electricity will be consumed in the plant. As information has gathered during the on-site audit, the generated power shall be fed into the grid. Clarification on this inconsistency is needed. Please also consider the interaction with the MP.	CL #1	☒

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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
A.2.6. What scenario was existing prior to the implementation of the project activity?	(Interview, on site)	Waste heat released to the atmosphere, apart from the heat used for preheating the raw meal and the coal. The Power baseline is Grid power supply, confirmed during the on-site visit.	☒	☒
A.2.7. Does the project scenario, including a summary of the scope of activities/measures that are being implemented within the proposed project activity.	2	Yes, the proposed WHR system will efficiently utilize the waste heat from the clinker production process to generate electricity. The project developer plans to install one captive power stations (9 MW), based on waste heat recovery. The steam generated from the boilers will be sent to a turbine that feeds a generator for electricity production.	☒	☒
A.3. Project participants: BATICIM BATI ANADOLU CEMENTO CO. Ltd., Turkey and FutureCamp Türkiye (PD consultancy)				
A.4. Technical description of the project activity				
A.4.1. Location of the project activity: Izmir, Turkey, 35050, Lat: 38° 27' 25" N, Lon: 27° 15' 45" E				
A.4.2. <i>Category(ies) of project activity:</i> scope 01 (Energy industries) – and scope 04 (Manufacturing industries)				
A.4.3. <i>Technology to be employed by the project activity:</i> Waste Heat Recovery				
A.4.3.1. Does the description of the technology to be applied provide sufficient and transparent input/ information to evaluate its impact on the greenhouse gas balance (see A.2.)?	2, 10	<u>Corrective Action Request No.2</u> Please include in the PDD a simple graphical scheme of the project himself, including all facilities and a list of the technical data of the equipment as from supplier Contract. The name/location of the supplier should also be included.	CAR #2	☒
A.4.3.2. Is the project technology likely to be substituted by other or more efficient technologies within the project period?	2	No	☒	☒
A.4.3.3. Does the project require extensive initial training and maintenance ef-	10	The training is guaranteed in the Contract.	☒	☒

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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
orts in order to be carried out as scheduled during the project period?				
A.4.3.4. Is information available on the demand and requirements for training and maintenance?	10	See above. Yes, according to the Contract with Sinoma, the plant will allocate 16 employees with different training, according to the job description.	☒	☒
A.4.3.5. Is a schedule available for the implementation of the project and are there any risks for delays?	2	<u>Corrective Action Request No.3</u> The envisaged starting date is October 2011. As from information received on site the starting date is foreseen for 20/05/2012 Please update it.	CAR #3	☒
A.4.3.6. Is information available on the equipment (s) and systems that would have been in place in the absence of the project activity / baseline scenario (see B.4. also)?	-	N/A	☒	☒
A.4.3.7. Is information available on the scenario existing prior to the start of the implementation of the project activity, with a list of equipment (s) and systems in operation at that time?	2	Yes, included in PDD	☒	☒
A.4.3.8. Is information available on the scope of activities in the project scenario, with a list of equipment (s) and systems that will be installed / modified?	2	See CAR 6	CAR #6	☒
A.4.3.9. Does the description of the scenarios provide detailed, sufficient and transparent information about the technologies, systems, equipments,	2	Yes, but see CL 3	CL #3	☒

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the GHG emission sources involved as well as the types and levels of services delivered?				
A.4.4. <i>Estimated amount of emission reductions over the chosen crediting period (figures should be given in international accepted standard format)</i> <u>Corrective Action Request No.4</u> <i>Please comment the amount of 66,800 MWh on which the ERs are based. (PDD page 5), taking into account the efficiency of the generator and turbine and internal consumption.</i> <i>The applied value for operating hours should be referenced.</i>				
A.4.5. <i>Public funding of the project activity</i> <u>Clarification Request No.2</u> Please clarify the position of the company regarding Energy Efficiency Law.				
B. Application of a baseline and monitoring methodology				
B.1. Title and reference of the approved baseline and monitoring methodology				
B.1.1 Are reference number, version number, and title of the baseline and monitoring methodology clearly indicated?	2	Yes, v02.	☒	☒
B.1.2. Is the applied version the most recent one and / or is this version still applicable?	20	Yes, ACM0012, Version 04.0.0	☒	☒
B.1.3. Does the methodology refer to the following tools with its latest approved versions? 1) Tool to calculate the emission factor for an electricity system.	2, 21, 22	Yes, "Tool to calculate the emission factor for an electricity system", Version 02.1.0; "Tool for demonstration and assessment of additionality", Version 05.2;	☒	☒

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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD								
2) Tool for the demonstration and assessment of additionality.												
B.2. Justification of the choice of the methodology and why it is applicable to the project activity												
B.2.1 Criteria 1 The consolidated methodology is applicable to project activities implemented in an existing or Greenfield facility converting waste energy carried in identified WECM stream(s) into useful energy. The WECM stream may be an energy source for: • Generation of electricity; • Cogeneration; • Direct use as process heat source; • Generation of heat in element process; • Generation of mechanical energy; or • Supply of heat of reaction with or without process heating.	2, 20	<table><tr><th>Applicability checklist</th><th>Yes / No</th></tr><tr><td>Criteria discussed in the PDD?</td><td>Yes</td></tr><tr><td>Compliance provable?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table> The waste heat recovery project will generate electricity and therefore this criterion is applicable.	Applicability checklist	Yes / No	Criteria discussed in the PDD?	Yes	Compliance provable?	Yes	Compliance verified?	Yes	☒	☒
Applicability checklist	Yes / No											
Criteria discussed in the PDD?	Yes											
Compliance provable?	Yes											
Compliance verified?	Yes											
B.2.2. Criteria 2 In the absence of the project activity, the WECM stream: (a) Would not be recovered and therefore would be flared, released to atmosphere, or remain unutilized in the absence of the project activity at the existing or Greenfield project facility; or (b) Would be partially recovered, and the unrecovered portion of WECM stream would be flared, vented or remained unutilized at the existing or Greenfield project facility.	2, 20	<table><tr><th>Applicability checklist</th><th>Yes / No</th></tr><tr><td>Criteria discussed in the PDD?</td><td>Yes</td></tr><tr><td>Compliance provable?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table> Number a) of this criteria is applicable, as confirmed during the on-site visit (waste heat released to the atmosphere).	Applicability checklist	Yes / No	Criteria discussed in the PDD?	Yes	Compliance provable?	Yes	Compliance verified?	Yes	☒	☒
Applicability checklist	Yes / No											
Criteria discussed in the PDD?	Yes											
Compliance provable?	Yes											
Compliance verified?	Yes											

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B.2.3. <u>Criterion 3:</u> Project activities improving the WECM recovery may (i) capture and utilize a larger quantity of WECM stream as compared to the historical situation in existing facility, or capture and utilize a larger quantity of WECM stream as compared to a .reference waste energy generating facility.; and/or (ii) apply more energy efficient equipment to replace/modify/expand waste energy recovery equipment, or implement a more energy efficient equipment than the .reference waste energy generating facility.	2, 20	<table><tr><th>Applicability checklist</th><th>Yes / No</th></tr><tr><td>Criterion discussed in the PDD?</td><td>No</td></tr><tr><td>Compliance provable?</td><td>No</td></tr><tr><td>Compliance verified?</td><td>No</td></tr></table> There is no WECM recovery in place at the plant, as confirmed during the on-site visit (waste heat released to the atmosphere).	Applicability checklist	Yes / No	Criterion discussed in the PDD?	No	Compliance provable?	No	Compliance verified?	No	☒	☒
Applicability checklist	Yes / No											
Criterion discussed in the PDD?	No											
Compliance provable?	No											
Compliance verified?	No											
B.2.4. <u>Criterion 4:</u> The methodology is applicable under the following conditions: • For project activities which recover waste pressure, the methodology is applicable where waste pressure is used to generate electricity only and the electricity generated from waste pressure is measurable; • Regulations do not require the project facility to recover and/or utilize the waste energy prior to the implementation of the project activity; • The methodology is applicable to both Greenfield and existing waste energy generation facilities. If the production capacity of the project facility is expanded as a result of the project activity, the added production capacity must be treated as a Greenfield facility; • Waste energy that is released under abnormal operation (for example, emergencies, shut down)	2, 20	<table><tr><th>Applicability checklist</th><th>Yes / No</th></tr><tr><td>Criterion discussed in the PDD?</td><td>Yes</td></tr><tr><td>Compliance provable?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table> Bullet 1 is not applicable. Bullet 2, as information has been gathered on site, there is no regulation that requires WHR Bullet 3 is applicable for greenfield, as for the on-site audit, there is no existing Power Plant. Bullet 4, not applicable.	Applicability checklist	Yes / No	Criterion discussed in the PDD?	Yes	Compliance provable?	Yes	Compliance verified?	Yes	☒	☒
Applicability checklist	Yes / No											
Criterion discussed in the PDD?	Yes											
Compliance provable?	Yes											
Compliance verified?	Yes											

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of the project facility shall not be included in the emission reduction calculations.												
B.2.5. Criterion 5: The methodology is not applicable to the cases where a WECM stream is partially recovered in the absence of the CDM project activity to supply the heat of reaction, and the recovery of this WECM stream is increased under the project activity to replace fossil fuels used for the purpose of supplying heat of reaction.	2, 20	<table><tr><td>Applicability checklist</td><td>Yes / No</td></tr><tr><td>Criterion discussed in the PDD?</td><td>Yes</td></tr><tr><td>Compliance provable?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table>	Applicability checklist	Yes / No	Criterion discussed in the PDD?	Yes	Compliance provable?	Yes	Compliance verified?	Yes	☒	☒
Applicability checklist	Yes / No											
Criterion discussed in the PDD?	Yes											
Compliance provable?	Yes											
Compliance verified?	Yes											
B.2.6. Criterion 6: This methodology is also not applicable to project activities where the waste gas/heat recovery project is implemented in a single-cycle power plant (e.g. gas turbine or diesel generator) to generate power. However, the projects recovering waste energy from single cycle and/or combined cycle power plants for the purpose of generation of heat only can apply this methodology.	2, 20	<table><tr><td>Applicability checklist</td><td>Yes / No</td></tr><tr><td>Criterion discussed in the PDD?</td><td>Yes</td></tr><tr><td>Compliance provable?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table>	Applicability checklist	Yes / No	Criterion discussed in the PDD?	Yes	Compliance provable?	Yes	Compliance verified?	Yes	☒	☒
Applicability checklist	Yes / No											
Criterion discussed in the PDD?	Yes											
Compliance provable?	Yes											
Compliance verified?	Yes											
B.2.7. Criterion 7: This methodology is also not applicable to project activities where the waste gas/heat recovery project is implemented in a single-cycle power plant (e.g. gas turbine or diesel generator) to generate power.³ However, the projects recovering waste energy from single cycle and/or combined cycle power plants for the purpose of generation of heat only can apply this methodology.	2, 20	<table><tr><td>Applicability checklist</td><td>Yes / No</td></tr><tr><td>Criterion discussed in the PDD?</td><td>N/A</td></tr><tr><td>Compliance provable?</td><td>N/A</td></tr><tr><td>Compliance verified?</td><td>N/A</td></tr></table>	Applicability checklist	Yes / No	Criterion discussed in the PDD?	N/A	Compliance provable?	N/A	Compliance verified?	N/A	☒	☒
Applicability checklist	Yes / No											
Criterion discussed in the PDD?	N/A											
Compliance provable?	N/A											
Compliance verified?	N/A											

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B.2.8. Criterion 8 The emission reduction credits can be claimed up to the end of the lifetime of the waste energy generation equipment. The remaining lifetime of the equipment should be determined using the latest version of the .Tool to determine the remaining lifetime of equipment.	2, 20	<table><tr><td>Applicability checklist</td><td>Yes / No</td></tr><tr><td>Criterion discussed in the PDD?</td><td>No</td></tr><tr><td>Compliance provable?</td><td>No</td></tr><tr><td>Compliance verified?</td><td>No</td></tr></table> <u>Corrective Action Request No.5</u> The remaining life time of the Project equipment has not been determined. Please include this analyse in the PD.		Applicability checklist	Yes / No	Criterion discussed in the PDD?	No	Compliance provable?	No	Compliance verified?	No	CAR #5	☑
Applicability checklist	Yes / No												
Criterion discussed in the PDD?	No												
Compliance provable?	No												
Compliance verified?	No												
B.2.9. Criterion 9 The extent of use of waste energy from the waste energy generation facilities in the absence of the CDM project activity will be determined in accordance with the procedures provided in Annex 1 (for Greenfield project facilities) and in Annex 2 (for existing project facilities) to this methodology.	-	<table><tr><td>Applicability checklist</td><td>Yes / No</td></tr><tr><td>Condition discussed in the PDD?</td><td>N/A</td></tr><tr><td>Compliance provable?</td><td>N/A</td></tr><tr><td>Compliance verified?</td><td>N/A</td></tr></table>		Applicability checklist	Yes / No	Condition discussed in the PDD?	N/A	Compliance provable?	N/A	Compliance verified?	N/A	☑	☑
Applicability checklist	Yes / No												
Condition discussed in the PDD?	N/A												
Compliance provable?	N/A												
Compliance verified?	N/A												
B.3. Description of the sources and gases included in the project boundary													
B.3.1. Does the PDD present a flow diagram of the project boundary, physically delineating the project activity, based on the descriptions provided in section “A.4.3.	2	See CAR 2		CAR #2	☑								
B.3.2. Does the flow diagram of the project boundary clearly indicate all the equipments, systems and flows of mass and energy, emissions sources and gases included in the project boundary and the	2	See CAR 2		CAR #2	☑								

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monitoring variables and is the geographical extent transparently described as well?														
B.3.3. Source: electricity generation, grid or captive source Description of Source: main emission Gas(es): CO ₂ Type: Baseline Emissions	2	<table><tr><td>Boundary checklist</td><td>Yes / No</td></tr><tr><td>Source and gas(es) discussed in the PDD?</td><td>Yes</td></tr><tr><td>Inclusion / exclusion justified?</td><td>Yes</td></tr><tr><td>Explanation / Justification sufficient?</td><td>Yes</td></tr><tr><td>Consistency with monitoring plan?</td><td>Yes</td></tr></table>	Boundary checklist	Yes / No	Source and gas(es) discussed in the PDD?	Yes	Inclusion / exclusion justified?	Yes	Explanation / Justification sufficient?	Yes	Consistency with monitoring plan?	Yes	☒	☒
Boundary checklist	Yes / No													
Source and gas(es) discussed in the PDD?	Yes													
Inclusion / exclusion justified?	Yes													
Explanation / Justification sufficient?	Yes													
Consistency with monitoring plan?	Yes													
B.3.4. Source: fossil fuel consumption in boiler for thermal energy Description of Source: main emission Gas(es): CO ₂ Type: Baseline Emissions	2	<table><tr><td>Boundary checklist</td><td>Yes / No</td></tr><tr><td>Source and gas(es) discussed in the PDD?</td><td>N/A</td></tr><tr><td>Inclusion / exclusion justified?</td><td>N/A</td></tr><tr><td>Explanation / Justification sufficient?</td><td>N/A</td></tr><tr><td>Consistency with monitoring plan?</td><td>N/A</td></tr></table>	Boundary checklist	Yes / No	Source and gas(es) discussed in the PDD?	N/A	Inclusion / exclusion justified?	N/A	Explanation / Justification sufficient?	N/A	Consistency with monitoring plan?	N/A	☒	☒
Boundary checklist	Yes / No													
Source and gas(es) discussed in the PDD?	N/A													
Inclusion / exclusion justified?	N/A													
Explanation / Justification sufficient?	N/A													
Consistency with monitoring plan?	N/A													
B.3.5. Source: fossil fuel consumption in cogeneration plant Description of Source: main emission Gas(es): CO ₂ Type: Baseline Emissions	-	<table><tr><td>Boundary checklist</td><td>Yes / No</td></tr><tr><td>Source and gas(es) discussed in the PDD?</td><td>N/A</td></tr><tr><td>Inclusion / exclusion justified?</td><td>N/A</td></tr><tr><td>Explanation / Justification sufficient?</td><td>N/A</td></tr><tr><td>Consistency with monitoring plan?</td><td>N/A</td></tr></table>	Boundary checklist	Yes / No	Source and gas(es) discussed in the PDD?	N/A	Inclusion / exclusion justified?	N/A	Explanation / Justification sufficient?	N/A	Consistency with monitoring plan?	N/A	☒	☒
Boundary checklist	Yes / No													
Source and gas(es) discussed in the PDD?	N/A													
Inclusion / exclusion justified?	N/A													
Explanation / Justification sufficient?	N/A													
Consistency with monitoring plan?	N/A													
B.3.6. Source:	-		☒	☒										

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emissions from generation of steam used in the flaring process Description of Source: main emission Gas(es): CO2 Type: Baseline Emissions		Boundary checklist	Yes / No		
		Source and gas(es) discussed in the PDD?	N/A		
		Inclusion / exclusion justified?	N/A		
		Explanation / Justification sufficient?	N/A		
		Consistency with monitoring plan?	N/A		
B.3.7. Source: supplemental fossil fuel consumption at the project plant Description of Source: main emission Gas(es): CO2 Type: Project Emissions	-	Boundary checklist	Yes / No	☒	☒
		Source and gas(es) discussed in the PDD?	N/A		
		Inclusion / exclusion justified?	N/A		
		Explanation / Justification sufficient?	N/A		
		Consistency with monitoring plan?	N/A		
B.3.8. Source: supplemental electricity consumption Description of Source: main emission Gas(es): CO2 Type: Project Emissions	2	Boundary checklist	Yes / No	☒	☒
		Source and gas(es) discussed in the PDD?	Yes		
		Inclusion / exclusion justified?	Yes		
		Explanation / Justification sufficient?	Yes		
		Consistency with monitoring plan?	Yes		
B.3.9. Source: Electricity import to replace captive electricity, which was generated using waste gas in absence of project activity Description: Only in case captive electricity in the baseline is replaced by import electricity Gas(es): CO2 Type: Project Emissions	-	Boundary checklist	Yes / No	☒	☒
		Source and gas(es) discussed in the PDD?	N/A		
		Inclusion / exclusion justified?	N/A		
		Explanation / Justification sufficient?	N/A		
		Consistency with monitoring plan?	N/A		
B.3.10. Source:	-			☒	☒

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emissions from cleaning of gas Description of Source: only in case waste gas cleaning is required and leads to emissions related to the energy requirement of the cleaning Gas(es): CO2 Type: Project Emissions		Boundary checklist	Yes / No		
		Source and gas(es) discussed in the PDD?	N/A		
		Inclusion / exclusion justified?	N/A		
		Explanation / Justification sufficient?	N/A		
		Consistency with monitoring plan?	N/A		
B.3.11. Do the spatial and technological boundaries as verified on-site comply with the discussion provided by / indication included to the PDD?	2	Yes		☒	☒
B.4. Description of how the baseline scenario is identified and description of the identified baseline scenario					
B.4.1. Has the determination of the baseline scenario considered all realistic and credible alternatives?	2	Alternatives in absence of the proposed project		Yes / No	
		Waste energy use		Yes	
		Power generation		Yes	
		Steam/heat generation		Yes	
		Mechanical energy generation		Yes	
		Alternatives that would provide an output equivalent to the combined output of all the sub-systems in the project activity scenario		N/A	
B.4.2. Does the project identify correctly and do the project participants exclude those baseline options not in line with	2	Yes, however <u>Corrective Action Request No.6</u> a) In PDD, at page 13 (W3), it's mentioned "...there are		CAR #6	☒

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regulatory or legal requirements?		relevant institutional barriers to the sale of waste energy to outside consumers". Please explain in more detail this statement. b) In the same time, the alternative W5 should be discussed in more detail. c) More details on P8 exclusion should be included in the revised PDD.		
B.4.3. Have applicable regulatory or legal requirements been identified and checked?	2	Laws as relevant to the project are (Law No. and Enactment Date): (1) Electricity Market Law (Nr. 4628 / 03.03.2001) (2) Law on Utilization of Renewable Energy Resources for the Purpose of Generating Electricity Energy (Nr. 5346 / 10.05.2005) (3) Energy Efficiency Law (Nr. 5627/ 18.04.2007) (4) Environment Law (Nr. 2872 / 16.12.2003) – for results of the Environmental Impact (5) Occupational Health and Safety Regulation (Nr. 25311, 09.12.2003)	☒	☒
B.4.4. Do the project participants exclude baseline options that depend on fuels (used for generating heat, power or mechanical energy) that are not available at the project site?	-	N/A	☒	☒
B.4.5. Have all technically feasible baseline scenario alternatives to the project activity been identified and discussed by the PDD? Why can this list be considered	2	Baseline candidates which should be considered:	☒	☒
		Defined and discussed in PDD?		
		industrial facility where waste energy is gener-		

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as being complete (Step 1)?		ated				
		facility where the energy is produced		Yes		
		facility where the energy is consumed		Yes		
B.4.5.1. Have all realistic and credible alternatives been discussed for the use of waste energy and the exclusion of options justified (Step 1, W1 – 6)?	2	Alternative(s) may include, inter alia:		☒	☒	
		Categories				Yes / No
		W1	WECM is directly vented to atmosphere without incineration or waste heat is released to atmosphere or waste pressure energy is not utilized;			Yes
		W2	WECM is released to the atmosphere (e.g. after incineration) or waste heat is released to the atmosphere or waste pressure energy is not utilized;			Yes
		W3	Waste energy is sold as an energy source;			No
		W4	Waste energy is used for meeting energy demand;			No
		W5	A portion of waste gas produced at the facility is captured and used for captive electricity generation, while the rest of the waste gas produced at the facility is vented/flared.			No
		W6	All the waste gas produced at the industrial facility is captured and used for ex-			No

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			port electricity generation.			
B.4.5.2. Have all realistic and credible alternatives been discussed for power generation and the exclusion of options justified (Step 1, P1 – 12)?	2, 20	Alternative(s) may include, inter alia:			☒	☒
		Categories		Yes / No		
		P1	Proposed project activity not undertaken as a CDM project activity;	Yes		
		P2	On-site or off-site existing/new fossil fuel fired cogeneration plant;	No		
		P3	On-site or off-site Greenfield fossil fuel fired cogeneration plant;	No		
		P4	On-site or off-site existing renewable energy based cogeneration plant;	No		
		P5	On-site or off-site Greenfield renewable energy based cogeneration plant;	No		
		P6	On-site or off-site existing fossil fuel based existing identified captive power plant;	No		
		P7	On-site or off-site existing identified renewable energy or other waste energy based captive power plant;	No		
		P8	On-site or off-site Greenfield fossil fuel based captive plant;	No		
		P9	On-site or off-site Greenfield renewable energy or other waste energy based captive plant;	No		

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		P10	Sourced from grid-connected power plants;	Yes		
		P11	Existing captive electricity generation using waste energy (if the project activity is captive generation using waste energy, this scenario represents captive generation with lower efficiency or lower recovery than the project activity);	No		
		P12	Existing cogeneration using waste energy, but at a lower efficiency or lower recovery			
B.4.5.3. Have all realistic and credible alternatives been discussed for heat generation and the exclusion of options justified (Step 1, H1 – 14)?	2, 20	Alternative(s) may include, inter alia:			☒	☒
		Categories		Yes / No		
		H1	Proposed project activity not undertaken as a CDM project activity;	N/A		
		H2	On-site or off-site existing fossil fuel based cogeneration plant;	N/A		
		H3	On-site or off-site Greenfield fossil fuel based cogeneration plant;	N/A		
		H4	On-site or off-site existing renewable energy based cogeneration plant;	N/A		

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		H5	On-site or off-site Greenfield renewable energy based cogeneration plant;	N/A				
		H6	An existing fossil fuel based element process;	N/A				
		H7	A new fossil fuel based element process;	N/A				
		H8	An existing renewable energy or other waste energy based element process to supply heat;	N/A				
		H9	A new renewable energy or other waste energy based element process to supply heat;	N/A				
		H10	Any other source such as district heat.	N/A				
		H11	Other heat generation technologies (e.g. heat pumps or solar energy);	N/A				
		H12	Steam/process heat generation from waste energy, but with lower efficiency or lower recovery;	N/A				
		H13	Cogeneration with waste energy, but at a lower efficiency or lower recovery;	N/A				
		H14	On-site fossil fuel consumption to supply heat.	N/A				
B.4.5.4. Have all realistic and credible alternatives been discussed for mechanical energy generation and the exclusion	2, 20	<table><tr><td>Categories</td><td>Yes / No</td></tr></table>			Categories	Yes / No	☒	☒
Categories	Yes / No							

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of options justified (Step 1, M1 – 8)?		M1	The proposed project activity is not undertaken as a CDM project activity	N/A		
		M2	Steam produced by existing fossil fuel based boilers driving mechanical turbines;	N/A		
		M3	Steam produced by new fossil fuel based boilers driving mechanical turbines;	N/A		
		M4	Steam produced by existing renewable energy or other waste energy based boilers driving mechanical turbines;	N/A		
		M5	Steam produced by new renewable energy or other waste energy based boilers driving mechanical turbines;	N/A		
		M6	Waste gas pressure based mechanical energy generation;	N/A		
		M7	Existing electrical motors are used as motive power to generate mechanical energy.	N/A		
		M8	New electrical motors are used as motive power to generate mechanical energy.	N/A		
B.4.5.5. Has a baseline scenario matrix been developed?	2	Yes			☑	☑
B.4.6. Has the fuel been identified and justified which were used in the baseline scenario (Step 2)?		N/A			☑	☑
B.4.7. Has the latest approved version of	2, 22	Yes, version 05.2			☑	☑

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the “Tool for the demonstration and assessment of additionality” been used to eliminate non feasible baseline options (Step 3)?																																											
B.4.8. Is it demonstrated that the option with the lowest baseline emissions is considered as the most likely baseline scenario, if more than one feasible alternative remain (Step 4)?	2	Yes, PD page 14, there is only one scenario remaining (S1).	☑	☑																																							
B.4.8.1. Follows the identified baseline scenario one of the two project scenarios resulting from combinations of baseline options and scenarios applicable to the methodology?	2	Applicability criteria of ACM0012: <table><tr><th colspan="5">Project Scenario: Generation of Electricity or Heat only</th></tr><tr><th rowspan="2">Scenario</th><th colspan="3">Baseline options</th><th rowspan="2">Yes / No</th></tr><tr><th>Waste energy</th><th colspan="2">Power/Heat/ Mechanical energy</th></tr><tr><td>1</td><td>W2</td><td colspan="2">M2 and/or M5 and/or P4 or P6 H4</td><td>Yes</td></tr><tr><td>2</td><td>W5</td><td colspan="2">P11</td><td>No</td></tr></table> Project Scenario: Cogeneration of energy <table><tr><th rowspan="2">Scenario</th><th colspan="4">Baseline options</th><th rowspan="2">Yes / No</th></tr><tr><th>Waste energy</th><th>Power</th><th>Heat</th><th>Me- chanical Energy</th></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>	Project Scenario: Generation of Electricity or Heat only					Scenario	Baseline options			Yes / No	Waste energy	Power/Heat/ Mechanical energy		1	W2	M2 and/or M5 and/or P4 or P6 H4		Yes	2	W5	P11		No	Scenario	Baseline options				Yes / No	Waste energy	Power	Heat	Me- chanical Energy							☑	☑
Project Scenario: Generation of Electricity or Heat only																																											
Scenario	Baseline options			Yes / No																																							
	Waste energy	Power/Heat/ Mechanical energy																																									
1	W2	M2 and/or M5 and/or P4 or P6 H4		Yes																																							
2	W5	P11		No																																							
Scenario	Baseline options				Yes / No																																						
	Waste energy	Power	Heat	Me- chanical Energy																																							

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		1	W2	P4/P6	H4	M2 and/or M5	N/A		
		2	W2	P2	H2	M2 and/or M5	N/A		
B.4.8.2. Is there another source of gas available at the plant, e.g. natural gas?	-	No						☒	☒
B.5. Description of how the anthropogenic emissions of GHG by sources are reduced below those that would have occurred in the absence of the registered CDM project activity (assessment and demonstration of additionality):									
B.5.1. Does an implementation timeline of the proposed project activity clearly indicate the date of the investment decision, start of the construction works, start of the commissioning, start-up? Please indicate the timeline of the project here.	2	<u>Clarification Request No.3</u> Signed letter regarding Board Decision for carbon credits, is available. [Board Decision dated 30.06.2010, IRL 6], but it has to be clarified on which base this Decision has been made, supporting documents are not underlying this decision.						CL #3	☒
B.5.2. Has a timeline of events and actions which have been taken to achieve CDM registration been described in the PDD and which evidence has been delivered?	-	The documents regarding early consideration of the Project as VCS have been presented during the on-site visit (e-mails and other correspondence documents).						☒	☒
B.5.3. In case the project activity started before the validation activity, how is demonstrated that the CDM was seriously taken into account for the decision to start the project?	-	N/A						☒	☒
B.5.4. Is only a portion of the waste gas captured and utilized in the baseline of the industrial facility to generate captive	-	No						☒	☒

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electricity and is the project activity the implementation of more energy efficient equipment?				
B.5.5. Is an economic analysis used to demonstrate the additionality of the CDM project activity?	3, 18	Yes, the economic analyse has been presented (IRL 3), however, <u>Clarification Request No.4</u> There is a need to clarify why assurance costs and tax have not been taken into account for the IRR calculation	CL #4	☒
B.5.6. “Tool for the demonstration and assessment of additionality”				
B.5.7. Step 1 – Identification of alternatives to the project activity				
B.5.8. Is the realisation of the project activity based on an approved, a proposed new methodology or on ACM0002?	2, 20	The project applies CDM-EB approved consolidated baseline and monitoring methodology ACM0012, Version 04.0.0, “Consolidated baseline methodology for GHG emission reductions from waste energy recovery projects”.	☒	☒
B.5.9. In case the project activity started before the validation activity, how is demonstrated that the CDM was seriously taken into account for the decision to start the project?	-	N/A	☒	☒
Step 1 – Identification of alternatives to the project activity				
B.5.10. Are alternative scenarios defined that provide outputs or services comparable with the proposed CDM project activity?	2	Yes, the defined scenarios are: Waste energy use in the absence of the project activity, and Power generation in the absence of the project activity.	☒	☒
B.5.11. Can the list of alternatives considered to be complete, why? Is the scenario project activity without being registered as	2, 20	Yes, the identification of the baseline scenario follows the prescribed 5-step approach of ACM0012. The scenario project activity without being registered as CDM	☒	☒

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CDM project included?		project is included.		
B.5.12. In case several different facilities, technologies, outputs or services are present in the project, are separately alternative scenarios for each of them included? Have realistic combinations been considered as project scenario?	-	N/A	☒	☒
B.5.13. Describe why the alternative scenarios are credible and realistic (technology, practices, services, status of implementation)?	2, 15	The alternative scenarios are credible and realistic because of the plant design – cement production.	☒	☒
B.5.14. Do the alternative scenarios comply with mandatory laws and regulations?	2	Yes, the compliance is discussed in chapter 1.11 of the PD.	☒	☒
B.5.15. If a scenario does not comply with the mandatory laws and regulations, it is clearly demonstrated that the law and/or regulation is systematically not enforced in the country?	-	N/A	☒	☒
Step 2 – Investment analysis (could be optional if step 3 is used)				
B.5.16. Is the analysis method identified appropriately?	-	Benchmark analysis is chosen as applied method in this investment analysis (Option III as per Tool).	☒	☒
B.5.17. In case of Option I (<u>simple cost analysis</u>): Is it demonstrated that the activity and the alternatives identified in step 1 produce no economic benefits other than CDM income?	-	N/A	☒	☒
B.5.18. In case of Option II (<u>investment comparison analysis</u>): Is the most suitable	-	N/A	☒	☒

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financial indicator clearly identified (IRR, NPV, cost benefit ratio, or (levelised) unit cost).				
B.5.19. In case of use of IRR, it is clearly demonstrated why is equity of project IRR used?	-	N/A	☒	☒
B.5.20. In case of Option III (<u>benchmark analysis</u>): Is the most suitable financial/economic indicator clearly identified (project or equity IRR)?	3	Yes, a project-specific IRR.	☒	☒
B.5.21. How is it demonstrated that the financial/economic analysis (benchmark) represents standard returns in the market, considers the specific risk of the project type, but is not linked to the subjective profitability expectation or risk profile of a particular project developer (Option II and Option III)?	18	The applicable benchmark is from World Bank. It was calculated as a benchmark for IBRD and CTF investments schemes. It is indicating an IRR threshold on equity of 40%.	☒	☒
B.5.22. In case of company internal benchmark, is it clearly demonstrate that there is only one potential project developer and that the benchmark has been consistently used in the past (Option II and Option III)?	-	N/A	☒	☒
B.5.23. In case of Option II or Option III: Is the calculation of financial figures for this indicator correctly done for all alternatives (Option II) and the project activity?	3	Yes, the calculation is correctly performed.	☒	☒
B.5.24. In case of Option II or Option III: Is the analysis presented in a transparent	3, 10	Corrective Action Request No.7 The "confidential" input parameters for the investment analy-	CAR #7	☒

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manner including publicly available proofs for the utilized data?		sis as of the PD should be presented for more transparency of the investment analysis.		
B.5.25. Are all assumptions and input data clearly presented, documented, evidenced and consistent with the rest of the PDD?	2, 3	<u>Corrective Action Request No.8</u> The excel file for IRR calculation shall be revised for clearly referencing all raw data.	CAR #8	☒
B.5.26. How have the input values been assessed? Have they been cross-checked?	3, 18, 2	<u>Clarification Request No.5</u> Grid connection costs should be discussed in relation to the Project. <u>Corrective Action Request No.9</u> There is an inconsistency between benchmark equity IRR as calculated in the World Bank document and Project IRR stated in the PD.	CL #5 CAR #9	☒
B.5.27. Does the <u>sensitivity analysis</u> shows that the conclusion of financial/economical attractiveness is robust to reasonable variations in the critical assumptions?	3	Yes, in all scenarios the project attractiveness remains significantly below the benchmark: 27.46% and equity benchmark is 40%..	☒	☒
B.5.28. How is demonstrate that this variations have been adequately taken (range is adequate)?	3	For sensitivity analysis the main critical parameters/assumptions are analyzed with a variation in value of +/- 10% which is considered reasonable.	☒	☒
Step 3 – Barriers analysis (is mandatory if step 2 is not used or does not shows additionality)				
B.5.29. Is a complete list of barriers developed that prevent the implementation of the proposed project and the different alternatives to occur?	-	N/A	☒	☒
B.5.30. Is transparent and documented evidence provided on the existence and sig-	-	N/A	☒	☒

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nificance of these barriers?				
B.5.31. Is it transparently shown that the execution of at least one of the alternatives is not prevented by the identified barriers?	-	N/A	☒	☒
B.5.32. How is confirmed that the CDM does alleviate the barriers presented?	-	N/A	☒	☒
Step 4 – Common practice analysis (is to complement based on the information given in step1 and reinforce step2 / step3)				
B.5.33. Have other activities in the host country / region similar to the project activity been identified and are these activities appropriately analysed by the PDD?	2	<u>Clarification Request No.6</u> Please add references in supporting the “first of its kind” statement, in Turkey (chapter 2.5 in PDD)	CL #6	☒
B.5.34. How have the capacity boundary, the historical boundary and the geographical boundary be assessed? Please name references.	2	The validation team checked the layouts of the plant including the design documents. The geographical boundary has been assessed with the help of appropriate maps.	☒	☒
B.5.35. If similar activities are occurring: Is it demonstrated that in spite of these similarities the project activity would not be implemented without the CDM component?	3	There are no similar activities observed in the area, however, see CL #6.	CL #6	☒
B.5.35.1. Is the additionality demonstrated via the “Tool for the demonstration and assessment of additionality”?	2, 22	Yes, version 05.2	☒	☒
B.5.35.2. Is an economic analysis used to demonstrate additionality?	3,10	Yes, however, see CAR #7	CAR #7	☒

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B.6. Emissions reductions				
B.6.1. Explanation of methodological choices				
B.6.1.1. Are the formulae required for the determination of baseline emissions correctly presented? And is it explained on which Scenario?	2, 20	Yes, the formula is: $BE_y = BE_{En,y} + BE_{flst,y}$ The scenario is W5 (a portion of the quantity or energy of WECM is recovered for generation of heat and/or electricity and/or mechanical energy, while the rest of the waste energy produced at the project facility is flared/released to atmosphere/ unutilized) and P10 (sourced from grid-connected power plants).	☒	☒
B.6.1.2. If Scenario 1, is chosen to calculate the baseline emissions and if the displaced electricity for recipient is supplied by a connected grid system is the "Tool to calculate the emission factor for an electricity system" correctly applied as well as described in the PD? If the total electricity generated by the project activity is less than 60 GWh/year is the approved small-scale methodology AMS I. D. correctly applied and described in the PD?	2, 21	Yes, the "Tool to calculate the emission factor for an electricity system" is well described and correctly applied in PD (Annex 1).N/A, the expected output is 47.8 GWh/year	☒	☒
B.6.1.3. Are the formulae required for the determination of project emissions correctly presented, enabling a com-	2, 20	Yes, the formula used: $PE_y = PE_{AF,y} + PE_{EL,y}$	☒	☒

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plete identification of parameter to be used and / or monitored?		is the correct one.								
B.6.1.4. If electricity is purchased from the grid, and the CO ₂ emission factor for electricity is determined as the combined margin emission factor according to the “Tool to calculate the emission factor for an electricity system”: Are the six steps as defined in this tool correctly applied and described in the PDD?	2, 20	Yes, the six steps (seven in PD, because the PP split the step 5 in Step 5: “Identify the group of power units to be included in the build margin” + Step 6: “Calculate the build margin emission factor”) are correctly applied.	☑	☑						
B.6.1.5. Are the formulae required for the determination of emission reductions correctly presented?	2, 20	Yes,	☑	☑						
B.6.2. <i>Data and parameters that are available at validation:</i> <i>The calculation of baseline emissions ($BE_{En,v}$) depends on the identified baseline scenario.</i> <i>Scenario 1 represents the situation where the electricity is obtained from a specific existing power plant or from the grid, mechanical energy is obtained by electric motors and heat from a fossil fuel based element process.</i> <i>Scenario 2(3) represents the situation where the recipient plant(s) obtain electricity and/or heat generated by a fossil fuel based existing/new cogeneration plant.</i>										
B.6.2.1. Is the list of parameters presented in chapter B.6.2 considered to be complete with regard to the requirements of the applied methodology?	2, 20	Yes, it is.	☑	☑						
Integrate the required amount of sub-checklists for monitoring parameter and comment on any line answered with “No”.										
B.6.2.2. Parameter Title: ☐ E,P,I,j	-	<table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>N/A</td></tr><tr><td>Data unit correctly expressed?</td><td>N/A</td></tr></table>	Data Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	☑	☑
Data Checklist	Yes / No									
Title in line with methodology?	N/A									
Data unit correctly expressed?	N/A									
Baseline efficiency of the element process										

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		<table><tr><td>Appropriate description of parameter?</td><td>N/A</td></tr><tr><td>Source clearly referenced?</td><td>N/A</td></tr><tr><td>Correct value provided?</td><td>N/A</td></tr><tr><td>Has this value been verified?</td><td>N/A</td></tr><tr><td>Choice of data correctly justified?</td><td>N/A</td></tr><tr><td>Measurement method correctly described?</td><td>N/A</td></tr></table>	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided?	N/A	Has this value been verified?	N/A	Choice of data correctly justified?	N/A	Measurement method correctly described?	N/A									
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Source clearly referenced?	N/A																						
Correct value provided?	N/A																						
Has this value been verified?	N/A																						
Choice of data correctly justified?	N/A																						
Measurement method correctly described?	N/A																						
B.6.2.3. Parameter Title: ☐ mec,mot,l,j Baseline efficiency of mechanical energy conversion equipment	-	<table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>N/A</td></tr><tr><td>Data unit correctly expressed?</td><td>N/A</td></tr><tr><td>Appropriate description of parameter?</td><td>N/A</td></tr><tr><td>Source clearly referenced?</td><td>N/A</td></tr><tr><td>Correct value provided?</td><td>N/A</td></tr><tr><td>Has this value been verified?</td><td>N/A</td></tr><tr><td>Choice of data correctly justified?</td><td>N/A</td></tr><tr><td>Measurement method correctly described?</td><td>N/A</td></tr></table>	Data Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided?	N/A	Has this value been verified?	N/A	Choice of data correctly justified?	N/A	Measurement method correctly described?	N/A		☒	☒
Data Checklist	Yes / No																						
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Data unit correctly expressed?	N/A																						
Appropriate description of parameter?	N/A																						
Source clearly referenced?	N/A																						
Correct value provided?	N/A																						
Has this value been verified?	N/A																						
Choice of data correctly justified?	N/A																						
Measurement method correctly described?	N/A																						
B.6.2.4. Parameter Title: ☐ mech,tur,k Baseline efficiency of captive power plant	-	<table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>N/A</td></tr><tr><td>Data unit correctly expressed?</td><td>N/A</td></tr><tr><td>Appropriate description of parameter?</td><td>N/A</td></tr><tr><td>Source clearly referenced?</td><td>N/A</td></tr><tr><td>Correct value provided?</td><td>N/A</td></tr><tr><td>Has this value been verified?</td><td>N/A</td></tr></table>	Data Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided?	N/A	Has this value been verified?	N/A		☒	☒				
Data Checklist	Yes / No																						
Title in line with methodology?	N/A																						
Data unit correctly expressed?	N/A																						
Appropriate description of parameter?	N/A																						
Source clearly referenced?	N/A																						
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		Choice of data correctly justified?	N/A																				
		Measurement method correctly described?	N/A																				
B.6.2.5. Parameter Title: $\square_{\text{cogen}}$ Baseline efficiency of cogeneration plant in recipient plant j	-	<table><tr><th>Data Checklist</th><th>Yes / N</th></tr><tr><td>Title in line with methodology?</td><td>N/A</td></tr><tr><td>Data unit correctly expressed?</td><td>N/A</td></tr><tr><td>Appropriate description of parameter?</td><td>N/A</td></tr><tr><td>Source clearly referenced?</td><td>N/A</td></tr><tr><td>Correct value provided?</td><td>N/A</td></tr><tr><td>Has this value been verified?</td><td>N/A</td></tr><tr><td>Choice of data correctly justified?</td><td>N/A</td></tr><tr><td>Measurement method correctly described?</td><td>N/A</td></tr></table>		Data Checklist	Yes / N	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided?	N/A	Has this value been verified?	N/A	Choice of data correctly justified?	N/A	Measurement method correctly described?	N/A	☒	☒
Data Checklist	Yes / N																						
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Source clearly referenced?	N/A																						
Correct value provided?	N/A																						
Has this value been verified?	N/A																						
Choice of data correctly justified?	N/A																						
Measurement method correctly described?	N/A																						
B.6.2.6. Parameter Title: $Q_{\text{WCM,BL}}$ Average quantity of WECM released in atmosphere in three years prior to the start of the project activity	2, 20	<table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided?</td><td>Yes</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Choice of data correctly justified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>Yes</td></tr></table> The plant doesn't have regular measurements for WECM for three years prior to the start of the project activity. Instead of that, the plant performed some test measurements in order to establish the capacity of the future equipment (boiler, generator). These measurements have been repeated by the sup-		Data Checklist	Yes / No	Title in line with methodology?	Yes	Data unit correctly expressed?	Yes	Appropriate description of parameter?	Yes	Source clearly referenced?	Yes	Correct value provided?	Yes	Has this value been verified?	Yes	Choice of data correctly justified?	Yes	Measurement method correctly described?	Yes	☒	☒
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		plier of the equipment – SINOMA – (IRL 13)																				
B.6.2.7. Parameter Title: t_{ref} (Set “0” °C by default) Reference temperature	-	<table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>N/A</td></tr><tr><td>Data unit correctly expressed?</td><td>N/A</td></tr><tr><td>Appropriate description of parameter?</td><td>N/A</td></tr><tr><td>Source clearly referenced?</td><td>N/A</td></tr><tr><td>Correct value provided?</td><td>N/A</td></tr><tr><td>Has this value been verified?</td><td>N/A</td></tr><tr><td>Choice of data correctly justified?</td><td>N/A</td></tr><tr><td>Measurement method correctly described?</td><td>N/A</td></tr></table>	Data Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided?	N/A	Has this value been verified?	N/A	Choice of data correctly justified?	N/A	Measurement method correctly described?	N/A	☒	☒
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Correct value provided?	N/A																					
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Measurement method correctly described?	N/A																					
B.6.2.8. Parameter Title: p_{ref} (Set “1” atm by default) Reference pressure	-	<table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>N/A</td></tr><tr><td>Data unit correctly expressed?</td><td>N/A</td></tr><tr><td>Appropriate description of parameter?</td><td>N/A</td></tr><tr><td>Source clearly referenced?</td><td>N/A</td></tr><tr><td>Correct value provided?</td><td>N/A</td></tr><tr><td>Has this value been verified?</td><td>N/A</td></tr><tr><td>Choice of data correctly justified?</td><td>N/A</td></tr><tr><td>Measurement method correctly described?</td><td>N/A</td></tr></table>	Data Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided?	N/A	Has this value been verified?	N/A	Choice of data correctly justified?	N/A	Measurement method correctly described?	N/A	☒	☒
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Has this value been verified?	N/A																					
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Measurement method correctly described?	N/A																					
B.6.2.9. Parameter Title: H_{ref} (Set “0” TJ/kg by default) Reference enthalpy		<table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>N/A</td></tr><tr><td>Data unit correctly expressed?</td><td>N/A</td></tr><tr><td>Appropriate description of parameter?</td><td>N/A</td></tr><tr><td>Source clearly referenced?</td><td>N/A</td></tr><tr><td>Correct value provided?</td><td>N/A</td></tr></table>	Data Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided?	N/A	☒	☒						
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		Choice of data correctly justified?	N/A																					
		Measurement method correctly described?	N/A																					
B.6.2.10. Parameter Title: $t_{WCM,BL}$ Average temperature of WECM in three years prior to the start of the project activity	2, 20	<table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided?</td><td>Yes</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Choice of data correctly justified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>Yes</td></tr></table> The plant has only spot measurements performed by SI-NOMA and internally			Data Checklist	Yes / No	Title in line with methodology?	Yes	Data unit correctly expressed?	Yes	Appropriate description of parameter?	Yes	Source clearly referenced?	Yes	Correct value provided?	Yes	Has this value been verified?	Yes	Choice of data correctly justified?	Yes	Measurement method correctly described?	Yes	☒	☒
Data Checklist	Yes / No																							
Title in line with methodology?	Yes																							
Data unit correctly expressed?	Yes																							
Appropriate description of parameter?	Yes																							
Source clearly referenced?	Yes																							
Correct value provided?	Yes																							
Has this value been verified?	Yes																							
Choice of data correctly justified?	Yes																							
Measurement method correctly described?	Yes																							
B.6.2.11. Parameter Title: $P_{WCM,BL}$ Average pressure of WECM in three years prior to the start of the project activity	2, 20	<table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided?</td><td>Yes</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Choice of data correctly justified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>Yes</td></tr></table> The plant has only spot measurements performed by SI-NOMA and internally.			Data Checklist	Yes / No	Title in line with methodology?	Yes	Data unit correctly expressed?	Yes	Appropriate description of parameter?	Yes	Source clearly referenced?	Yes	Correct value provided?	Yes	Has this value been verified?	Yes	Choice of data correctly justified?	Yes	Measurement method correctly described?	Yes	☒	☒
Data Checklist	Yes / No																							
Title in line with methodology?	Yes																							
Data unit correctly expressed?	Yes																							
Appropriate description of parameter?	Yes																							
Source clearly referenced?	Yes																							
Correct value provided?	Yes																							
Has this value been verified?	Yes																							
Choice of data correctly justified?	Yes																							
Measurement method correctly described?	Yes																							
B.6.2.12. Parameter Title: $H_{WCM,BL}$	2, 20				☒	☒																		

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Average specific enthalpy of WECM in three years prior to the start of the project activity		<table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided?</td><td>Yes</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Choice of data correctly justified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>Yes</td></tr></table> The plant has only spot measurements performed by SI-NOMA and internally.	Data Checklist	Yes / No	Title in line with methodology?	Yes	Data unit correctly expressed?	Yes	Appropriate description of parameter?	Yes	Source clearly referenced?	Yes	Correct value provided?	Yes	Has this value been verified?	Yes	Choice of data correctly justified?	Yes	Measurement method correctly described?	Yes			
Data Checklist	Yes / No																						
Title in line with methodology?	Yes																						
Data unit correctly expressed?	Yes																						
Appropriate description of parameter?	Yes																						
Source clearly referenced?	Yes																						
Correct value provided?	Yes																						
Has this value been verified?	Yes																						
Choice of data correctly justified?	Yes																						
Measurement method correctly described?	Yes																						
B.6.2.13. Parameter Title: $d_{wcm,BL}$ Density of WECM at actual temperature and pressure in three years prior to the start of the project activity	2, 20	<table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided?</td><td>Yes</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Choice of data correctly justified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>Yes</td></tr></table> The plant has only spot measurements performed by SI-NOMA and internally.	Data Checklist	Yes / No	Title in line with methodology?	Yes	Data unit correctly expressed?	Yes	Appropriate description of parameter?	Yes	Source clearly referenced?	Yes	Correct value provided?	Yes	Has this value been verified?	Yes	Choice of data correctly justified?	Yes	Measurement method correctly described?	Yes		☒	☒
Data Checklist	Yes / No																						
Title in line with methodology?	Yes																						
Data unit correctly expressed?	Yes																						
Appropriate description of parameter?	Yes																						
Source clearly referenced?	Yes																						
Correct value provided?	Yes																						
Has this value been verified?	Yes																						
Choice of data correctly justified?	Yes																						
Measurement method correctly described?	Yes																						
B.6.2.14. Parameter Title: $Q_{OE,BL}$ Output/intermediate energy that can be produced, to be determined on the basis of maximum energy that could be recovered from the WECM (MER).	2, 20	<table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr></table>	Data Checklist	Yes / No	Title in line with methodology?	Yes	Data unit correctly expressed?	Yes	Appropriate description of parameter?	Yes		☒	☒										
Data Checklist	Yes / No																						
Title in line with methodology?	Yes																						
Data unit correctly expressed?	Yes																						
Appropriate description of parameter?	Yes																						

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which would have been released (or WECM would have been flared or energy content of WECM would have been wasted) in the absence of VCS project activity		Source clearly referenced?	Yes																				
		Correct value provided?	Yes																				
		Has this value been verified?	Yes																				
		Choice of data correctly justified?	Yes																				
		Measurement method correctly described?	Yes																				
		The plant has only spot measurements performed by SI-NOMA and internally.																					
B.6.2.15. Parameter Title: $Q_{ff,fl,B}$ Fossil fuel used to flare (directly) the waste gas prior to the implementation of the project activity. Three years historic data should be used	-	<table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>N/A</td></tr><tr><td>Data unit correctly expressed?</td><td>N/A</td></tr><tr><td>Appropriate description of parameter?</td><td>N/A</td></tr><tr><td>Source clearly referenced?</td><td>N/A</td></tr><tr><td>Correct value provided?</td><td>N/A</td></tr><tr><td>Has this value been verified?</td><td>N/A</td></tr><tr><td>Choice of data correctly justified?</td><td>N/A</td></tr><tr><td>Measurement method correctly described?</td><td>N/A</td></tr></table>		Data Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided?	N/A	Has this value been verified?	N/A	Choice of data correctly justified?	N/A	Measurement method correctly described?	N/A	☒	☒
Data Checklist	Yes / No																						
Title in line with methodology?	N/A																						
Data unit correctly expressed?	N/A																						
Appropriate description of parameter?	N/A																						
Source clearly referenced?	N/A																						
Correct value provided?	N/A																						
Has this value been verified?	N/A																						
Choice of data correctly justified?	N/A																						
Measurement method correctly described?	N/A																						
B.6.2.16. Parameter Title: $Q_{WG,FI,B}$ The amount of waste gas flared using steam prior to the implementation of the project activity. Three years his-toric data should be used	-	<table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>N/A</td></tr><tr><td>Data unit correctly expressed?</td><td>N/A</td></tr><tr><td>Appropriate description of parameter?</td><td>N/A</td></tr><tr><td>Source clearly referenced?</td><td>N/A</td></tr><tr><td>Correct value provided?</td><td>N/A</td></tr><tr><td>Has this value been verified?</td><td>N/A</td></tr><tr><td>Choice of data correctly justified?</td><td>N/A</td></tr><tr><td>Measurement method correctly described?</td><td>N/A</td></tr></table>		Data Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided?	N/A	Has this value been verified?	N/A	Choice of data correctly justified?	N/A	Measurement method correctly described?	N/A	☒	☒
Data Checklist	Yes / No																						
Title in line with methodology?	N/A																						
Data unit correctly expressed?	N/A																						
Appropriate description of parameter?	N/A																						
Source clearly referenced?	N/A																						
Correct value provided?	N/A																						
Has this value been verified?	N/A																						
Choice of data correctly justified?	N/A																						
Measurement method correctly described?	N/A																						
B.6.2.17. Parameter Title: $Q_{BL,product}$	2, 15			☒	☒																		

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B.6.2.1. Production associated with the relevant waste energy generation as it occurs in the baseline scenario. The minimum of the following two figures should be used: (1) historical production data from start-up, if project facility operational history is less than three years, of the project facility or (2) the most relevant manufacture's data for normal operating conditions. In the case of Greenfield facilities or where data is not available, the manufacture's data for normal operating conditions should be used		Data Checklist	Yes / No																				
		Title in line with methodology?	Yes																				
		Data unit correctly expressed?	Yes																				
		Appropriate description of parameter?	Yes																				
		Source clearly referenced?	Yes																				
		Correct value provided?	Yes																				
		Has this value been verified?	Yes																				
		Choice of data correctly justified?	Yes																				
		Measurement method correctly described?	Yes																				
The parameter is the clinker production.																							
B.6.2.18 Parameter Title: $q_{wcm,product}$	-	<table><tr><td>Data Checklist</td><td>Yes / No</td></tr><tr><td>Title in line with methodology?</td><td>N/A</td></tr><tr><td>Data unit correctly expressed?</td><td>N/A</td></tr><tr><td>Appropriate description of parameter?</td><td>N/A</td></tr><tr><td>Source clearly referenced?</td><td>N/A</td></tr><tr><td>Correct value provided?</td><td>N/A</td></tr><tr><td>Has this value been verified?</td><td>N/A</td></tr><tr><td>Choice of data correctly justified?</td><td>N/A</td></tr><tr><td>Measurement method correctly described?</td><td>N/A</td></tr></table> The plant has only spot measurements for pressure and temperature performed by SINOMA and internally.		Data Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided?	N/A	Has this value been verified?	N/A	Choice of data correctly justified?	N/A	Measurement method correctly described?	N/A	☒	☒
Data Checklist	Yes / No																						
Title in line with methodology?	N/A																						
Data unit correctly expressed?	N/A																						
Appropriate description of parameter?	N/A																						
Source clearly referenced?	N/A																						
Correct value provided?	N/A																						
Has this value been verified?	N/A																						
Choice of data correctly justified?	N/A																						
Measurement method correctly described?	N/A																						
B.6.2.19 Parameter Title: TE_p	-			☒	☒																		

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Specific enthalpy of steam from steam table, if steam is a product of a process (steam boiler)		Data Checklist	Yes / No		
		Title in line with methodology?	N/A		
		Data unit correctly expressed?	N/A		
		Appropriate description of parameter?	N/A		
		Source clearly referenced?	N/A		
		Correct value provided?	N/A		
		Has this value been verified?	N/A		
		Choice of data correctly justified?	N/A		
		Measurement method correctly described?	N/A		
B.6.2.20 Parameter Title: TE_r Specific enthalpy of steam from steam table, if steam is reactant in the process (e.g. chemical reaction where steam is one of the reactants)	-			☑	☑
		Data Checklist	Yes / No		
		Title in line with methodology?	N/A		
		Data unit correctly expressed?	N/A		
		Appropriate description of parameter?	N/A		
		Source clearly referenced?	N/A		
		Correct value provided?	N/A		
		Has this value been verified?	N/A		
		Choice of data correctly justified?	N/A		
		Measurement method correctly described?	N/A		
B.6.2.21 Parameter Title: HF_p Standard heat of formation of product p in the product mix at the outlet of the reactor	-			☑	☑
		Data Checklist	Yes / No		
		Title in line with methodology?	N/A		
		Data unit correctly expressed?	N/A		
		Appropriate description of parameter?	N/A		
		Source clearly referenced?	N/A		
		Correct value provided?	N/A		
		Has this value been verified?	N/A		
		Choice of data correctly justified?	N/A		

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		Measurement method correctly described?	N/A		
B.6.2.22 Parameter Title: HF_r Standard heat of formation of reactant r in the reactant mix at the inlet of the reactor	-	Data Checklist	Yes / No	☒	☒
		Title in line with methodology?	N/A		
		Data unit correctly expressed?	N/A		
		Appropriate description of parameter?	N/A		
		Source clearly referenced?	N/A		
		Correct value provided?	N/A		
		Has this value been verified?	N/A		
		Choice of data correctly justified?	N/A		
		Measurement method correctly described?	N/A		
B.6.2.23 Parameter Title: EG_{BL,x} The quantity of electricity generated in absence of project activity from the identified WECM stream(s) during the year x	-	Data Checklist	Yes / No	☒	☒
		Title in line with methodology?	N/A		
		Data unit correctly expressed?	N/A		
		Appropriate description of parameter?	N/A		
		Source clearly referenced?	N/A		
		Correct value provided?	N/A		
		Has this value been verified?	N/A		
		Choice of data correctly justified?	N/A		
		Measurement method correctly described?	N/A		
B.6.2.24 Parameter Title: MG_{BL,j,x} The total quantity of mechanical energy supplied by the steam turbine operated by steam generated using waste energy of the identified WECM stream(s) (in terms of TJ in the year x)	-	Data Checklist	Yes / No	☒	☒
		Title in line with methodology?	N/A		
		Data unit correctly expressed?	N/A		
		Appropriate description of parameter?	N/A		
		Source clearly referenced?	N/A		
		Correct value provided?	N/A		
		Has this value been verified?	N/A		
		Choice of data correctly justified?	N/A		
		Measurement method correctly described?	N/A		

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		Measurement method correctly described?	N/A		
B.6.2.25 Parameter Title: $H_{wcm,BL}$ Energy supplied, using WECM stream(s), as heat for process and/or as a heat of reaction to the chemical reaction, in project year y	-	Data Checklist	Yes / No	☒	☒
		Title in line with methodology?	N/A		
		Data unit correctly expressed?	N/A		
		Appropriate description of parameter?	N/A		
		Source clearly referenced?	N/A		
		Correct value provided?	N/A		
		Has this value been verified?	N/A		
		Choice of data correctly justified?	N/A		
		Measurement method correctly described?	N/A		
B.6.2.26 Parameter Title: $Q_{st,fl,B}$ Steam used to flare the waste gas prior to the implementation of the project activity. Three years historic should be used	-	Data Checklist	Yes / No	☒	☒
		Title in line with methodology?	N/A		
		Data unit correctly expressed?	N/A		
		Appropriate description of parameter?	N/A		
		Source clearly referenced?	N/A		
		Correct value provided?	N/A		
		Has this value been verified?	N/A		
		Choice of data correctly justified?	N/A		
		Measurement method correctly described?	N/A		
B.6.2.27 Parameter Title: $Q_{WG,BL}$ Quantity of waste gas captured and used for energy generation in the absence of the project activity, use the maximum figure from 3	-	Data Checklist	Yes / No	☒	☒
		Title in line with methodology?	N/A		
		Data unit correctly expressed?	N/A		

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years historic data		Appropriate description of parameter?	N/A			
		Source clearly referenced?	N/A			
		Correct value provided?	N/A			
		Has this value been verified?	N/A			
		Choice of data correctly justified?	N/A			
		Measurement method correctly described?	N/A			
B.6.2.28 Parameter Title: $HG_{BL,n,j,x}$ Net quantity of heat (enthalpy) supplied to the to the element process/unit process/reactor n (only for process heating and not for heat of reaction) in recipient facility j in year x from the identified WECM stream(s). In the case of steam this is expressed as the difference of energy content between the steam supplied to the recipient facility and the feed water to the boiler. (TJ)	-	Data Checklist	Yes / No		☒	☒
		Title in line with methodology?	N/A			
		Data unit correctly expressed?	N/A			
		Appropriate description of parameter?	N/A			
		Source clearly referenced?	N/A			
		Correct value provided?	N/A			
		Has this value been verified?	N/A			
		Choice of data correctly justified?	N/A			
		Measurement method correctly described?	N/A			
B.6.2.29 Parameter Title: $NCV_{WCM,BL}$ Average net calorific value of waste gas (if WECM is waste gas), three years prior to implementation of project activity which has unburnt components such as carbon particles, CO or CH4 that will provide energy in waste energy recovery equipment on com-	-	Data Checklist	Yes / No		☒	☒
		Title in line with methodology?	N/A			
		Data unit correctly expressed?	N/A			
		Appropriate description of parameter?	N/A			
		Source clearly referenced?	N/A			

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bustion of gas		Correct value provided?	N/A			
		Has this value been verified?	N/A			
		Choice of data correctly justified?	N/A			
		Measurement method correctly described?	N/A			
B.6.3. Ex-ante calculation of emission reductions						
B.6.3.1. Is the data provided in this section consistent with data as presented in other chapters of the PDD?	2	Yes			☑	☑
B.6.3.2. Does the parameter of efficiency (n _{BL}) follow one of the stated demands?	2				☑	☑
		Demand	Yes/No			
		i) Assume a constant efficiency of the element process / captive power plant / cogeneration plant / mechanical energy conversion equipment and determine the efficiency, as a conservative approach, for optimal operation conditions i.e. design fuel, designed steam extraction, optimal load, optimal oxygen content in flue gases, adequate fuel conditioning (temperature, viscosity, moisture, size/mesh etc), representative or favorable ambient conditions (temperature and humidity); or	Yes			
		ii) Highest of the efficiency figure provided by two or more manufacturers for similar element process / captive power plant / cogeneration plant / mechanical energy conversion equipment , as used in the project activity; or	No			

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		iii) Maximum efficiency of 100%/60%/90% respectively based on net calorific activity; or iv) Estimated from load v/s efficiency curve(s) established for equipment(s) / each element process through measurement and described in Annex I; or Estimated from load v/s efficiency curve(s) established through measurement of the co-generation plants and described in Annex I. Follow international standards for estimation of efficiency of power plants / individual element process / cogeneration plants.	No No	
B.6.3.3. Are the baseline emissions capped following one of the three methods described in the methodology (ACM0012)? Which method has been applied?	2, 20	Yes. Method 3 is used (equation 40).	☒	☒
B.6.4. Summary of the ex-ante estimation of emission reductions				
B.6.4.1. Is the data provided in this section in consistency with data as presented in other chapters of the PDD?	2	Yes	☒	☒
B.7. Application of the monitoring methodology and description of the monitoring plan				
B.7.1. Data and parameters monitored				
B.7.1.1. Is the list of parameters presented in chapter B.7.1 considered to be complete with regard to the requirements of the applied methodology?	2	Yes	☒	☒

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B.7.1.2. Parameter Title: $ws_{i,j}$ Fraction of total heat that is used by the recipient j in the project that in absence of the project activity would have been supplied by the i^{th} element process	-	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>N/A</td></tr><tr><td>Data unit correctly expressed?</td><td>N/A</td></tr><tr><td>Appropriate description of parameter?</td><td>N/A</td></tr><tr><td>Source clearly referenced?</td><td>N/A</td></tr><tr><td>Correct value provided for estimation?</td><td>N/A</td></tr><tr><td>Has this value been verified?</td><td>N/A</td></tr><tr><td>Measurement method correctly described?</td><td>N/A</td></tr><tr><td>Correct reference to standards?</td><td>N/A</td></tr><tr><td>Indication of accuracy provided?</td><td>N/A</td></tr><tr><td>QA/QC procedures described?</td><td>N/A</td></tr><tr><td>QA/QC procedures appropriate?</td><td>N/A</td></tr></table>	Monitoring Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided for estimation?	N/A	Has this value been verified?	N/A	Measurement method correctly described?	N/A	Correct reference to standards?	N/A	Indication of accuracy provided?	N/A	QA/QC procedures described?	N/A	QA/QC procedures appropriate?	N/A	☒	☒
Monitoring Checklist	Yes / No																											
Title in line with methodology?	N/A																											
Data unit correctly expressed?	N/A																											
Appropriate description of parameter?	N/A																											
Source clearly referenced?	N/A																											
Correct value provided for estimation?	N/A																											
Has this value been verified?	N/A																											
Measurement method correctly described?	N/A																											
Correct reference to standards?	N/A																											
Indication of accuracy provided?	N/A																											
QA/QC procedures described?	N/A																											
QA/QC procedures appropriate?	N/A																											
B.7.1.3. Parameter Title: $Q_{wcm,y}/Q_{wg,y}$ Quantity of WECM/Waste gas used for energy generation during year y	-	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>N/A</td></tr><tr><td>Data unit correctly expressed?</td><td>N/A</td></tr><tr><td>Appropriate description of parameter?</td><td>N/A</td></tr><tr><td>Source clearly referenced?</td><td>N/A</td></tr><tr><td>Correct value provided for estimation?</td><td>N/A</td></tr><tr><td>Has this value been verified?</td><td>N/A</td></tr><tr><td>Measurement method correctly described?</td><td>N/A</td></tr><tr><td>Correct reference to standards?</td><td>N/A</td></tr><tr><td>Indication of accuracy provided?</td><td>N/A</td></tr><tr><td>QA/QC procedures described?</td><td>N/A</td></tr><tr><td>QA/QC procedures appropriate?</td><td>N/A</td></tr></table>	Monitoring Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided for estimation?	N/A	Has this value been verified?	N/A	Measurement method correctly described?	N/A	Correct reference to standards?	N/A	Indication of accuracy provided?	N/A	QA/QC procedures described?	N/A	QA/QC procedures appropriate?	N/A	☒	☒
Monitoring Checklist	Yes / No																											
Title in line with methodology?	N/A																											
Data unit correctly expressed?	N/A																											
Appropriate description of parameter?	N/A																											
Source clearly referenced?	N/A																											
Correct value provided for estimation?	N/A																											
Has this value been verified?	N/A																											
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Indication of accuracy provided?	N/A																											
QA/QC procedures described?	N/A																											
QA/QC procedures appropriate?	N/A																											

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B.7.1.4. Parameter Title: EF _{CO2, is,j} CO2 emission factor per unit of energy of the fossil fuel used in the baseline generation source <i>i</i> (<i>i</i> =is) providing energy to recipient <i>j</i>	2, 4	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided for estimation?</td><td>Yes</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>N/A</td></tr><tr><td>Correct reference to standards?</td><td>N/A</td></tr><tr><td>Indication of accuracy provided?</td><td>N/A</td></tr><tr><td>QA/QC procedures described?</td><td>N/A</td></tr><tr><td>QA/QC procedures appropriate?</td><td>N/A</td></tr></table> Table A1-12 from Annex 1 of PD.	Monitoring Checklist	Yes / No	Title in line with methodology?	Yes	Data unit correctly expressed?	Yes	Appropriate description of parameter?	Yes	Source clearly referenced?	Yes	Correct value provided for estimation?	Yes	Has this value been verified?	Yes	Measurement method correctly described?	N/A	Correct reference to standards?	N/A	Indication of accuracy provided?	N/A	QA/QC procedures described?	N/A	QA/QC procedures appropriate?	N/A	☒	☒
Monitoring Checklist	Yes / No																											
Title in line with methodology?	Yes																											
Data unit correctly expressed?	Yes																											
Appropriate description of parameter?	Yes																											
Source clearly referenced?	Yes																											
Correct value provided for estimation?	Yes																											
Has this value been verified?	Yes																											
Measurement method correctly described?	N/A																											
Correct reference to standards?	N/A																											
Indication of accuracy provided?	N/A																											
QA/QC procedures described?	N/A																											
QA/QC procedures appropriate?	N/A																											

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B.7.1.5. Parameter Title: EF _{CO2, rs,j} CO2 emission factor per unit of energy of the fossil fuel used in the reference baseline generation source <i>i</i> (<i>i</i> =rs) providing energy to recipient <i>j</i>	2, 4	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided for estimation?</td><td>Yes</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>N/A</td></tr><tr><td>Correct reference to standards?</td><td>N/A</td></tr><tr><td>Indication of accuracy provided?</td><td>N/A</td></tr><tr><td>QA/QC procedures described?</td><td>N/A</td></tr><tr><td>QA/QC procedures appropriate?</td><td>N/A</td></tr></table> Table A1-12 from Annex 1 of PD. The reference years are 2007, 2008 and 2009. The PP has chosen the ex-ante approach. EF_{CO2} = 0.5267 tCO2/MWh	Monitoring Checklist	Yes / No	Title in line with methodology?	Yes	Data unit correctly expressed?	Yes	Appropriate description of parameter?	Yes	Source clearly referenced?	Yes	Correct value provided for estimation?	Yes	Has this value been verified?	Yes	Measurement method correctly described?	N/A	Correct reference to standards?	N/A	Indication of accuracy provided?	N/A	QA/QC procedures described?	N/A	QA/QC procedures appropriate?	N/A	☒	☒
Monitoring Checklist	Yes / No																											
Title in line with methodology?	Yes																											
Data unit correctly expressed?	Yes																											
Appropriate description of parameter?	Yes																											
Source clearly referenced?	Yes																											
Correct value provided for estimation?	Yes																											
Has this value been verified?	Yes																											
Measurement method correctly described?	N/A																											
Correct reference to standards?	N/A																											
Indication of accuracy provided?	N/A																											
QA/QC procedures described?	N/A																											
QA/QC procedures appropriate?	N/A																											
B.7.1.6. Parameter Title: EF _{CO2, COGEN} CO2 emission factor per unit of energy of the fuel that would have been used in the baseline cogeneration plant	-	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>N/A</td></tr><tr><td>Data unit correctly expressed?</td><td>N/A</td></tr><tr><td>Appropriate description of parameter?</td><td>N/A</td></tr><tr><td>Source clearly referenced?</td><td>N/A</td></tr><tr><td>Correct value provided for estimation?</td><td>N/A</td></tr><tr><td>Has this value been verified?</td><td>N/A</td></tr><tr><td>Measurement method correctly described?</td><td>N/A</td></tr><tr><td>Correct reference to standards?</td><td>N/A</td></tr><tr><td>Indication of accuracy provided?</td><td>N/A</td></tr></table>	Monitoring Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided for estimation?	N/A	Has this value been verified?	N/A	Measurement method correctly described?	N/A	Correct reference to standards?	N/A	Indication of accuracy provided?	N/A	☒	☒				
Monitoring Checklist	Yes / No																											
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Correct value provided for estimation?	N/A																											
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Correct reference to standards?	N/A																											
Indication of accuracy provided?	N/A																											

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		QA/QC procedures described?	N/A																											
		QA/QC procedures appropriate?	N/A																											
B.7.1.7. Parameter Title: EG_{i,j,y} Quantity of electricity supplied to the recipient <i>j</i> by the generator, which in the absence of the project activity would have sourced from <i>i</i> th source (<i>i</i> can be either grid or identified source) during the year <i>y</i> in MWh	2	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided for estimation?</td><td>Yes</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>Yes</td></tr><tr><td>Correct reference to standards?</td><td>Yes</td></tr><tr><td>Indication of accuracy provided?</td><td>No</td></tr><tr><td>QA/QC procedures described?</td><td>N/A</td></tr><tr><td>QA/QC procedures appropriate?</td><td>N/A</td></tr></table> <u>Corrective Action Request No.10</u> The table from the PD (page 27) for this parameter (EG_{i,j,y}) shall be filled.			Monitoring Checklist	Yes / No	Title in line with methodology?	Yes	Data unit correctly expressed?	Yes	Appropriate description of parameter?	Yes	Source clearly referenced?	Yes	Correct value provided for estimation?	Yes	Has this value been verified?	Yes	Measurement method correctly described?	Yes	Correct reference to standards?	Yes	Indication of accuracy provided?	No	QA/QC procedures described?	N/A	QA/QC procedures appropriate?	N/A	CAR #10	☒
Monitoring Checklist	Yes / No																													
Title in line with methodology?	Yes																													
Data unit correctly expressed?	Yes																													
Appropriate description of parameter?	Yes																													
Source clearly referenced?	Yes																													
Correct value provided for estimation?	Yes																													
Has this value been verified?	Yes																													
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Correct reference to standards?	Yes																													
Indication of accuracy provided?	No																													
QA/QC procedures described?	N/A																													
QA/QC procedures appropriate?	N/A																													
B.7.1.8. Parameter Title: EG_{j,y} Quantity of electricity supplied to the recipient facility <i>j</i> by the project activity during the year <i>y</i> in MWh	2	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided for estimation?</td><td>Yes</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr></table>			Monitoring Checklist	Yes / No	Title in line with methodology?	Yes	Data unit correctly expressed?	Yes	Appropriate description of parameter?	Yes	Source clearly referenced?	Yes	Correct value provided for estimation?	Yes	Has this value been verified?	Yes	☒	☒										
Monitoring Checklist	Yes / No																													
Title in line with methodology?	Yes																													
Data unit correctly expressed?	Yes																													
Appropriate description of parameter?	Yes																													
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Correct value provided for estimation?	Yes																													
Has this value been verified?	Yes																													

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		Measurement method correctly described?	Yes																											
		Correct reference to standards?	Yes																											
		Indication of accuracy provided?	Yes																											
		QA/QC procedures described?	Yes																											
		QA/QC procedures appropriate?	Yes																											
B.7.1.9. Parameter Title: F_{j,y} Fraction of total electricity generated by the project activity, that is supplied to recipient <i>j</i> in year <i>y</i> .	-	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>N/A</td></tr><tr><td>Data unit correctly expressed?</td><td>N/A</td></tr><tr><td>Appropriate description of parameter?</td><td>N/A</td></tr><tr><td>Source clearly referenced?</td><td>N/A</td></tr><tr><td>Correct value provided for estimation?</td><td>N/A</td></tr><tr><td>Has this value been verified?</td><td>N/A</td></tr><tr><td>Measurement method correctly described?</td><td>N/A</td></tr><tr><td>Correct reference to standards?</td><td>N/A</td></tr><tr><td>Indication of accuracy provided?</td><td>N/A</td></tr><tr><td>QA/QC procedures described?</td><td>N/A</td></tr><tr><td>QA/QC procedures appropriate?</td><td>N/A</td></tr></table> As checked on-site, the total amount of electricity generated will be supplied to the grid.			Monitoring Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided for estimation?	N/A	Has this value been verified?	N/A	Measurement method correctly described?	N/A	Correct reference to standards?	N/A	Indication of accuracy provided?	N/A	QA/QC procedures described?	N/A	QA/QC procedures appropriate?	N/A	☑	☑
Monitoring Checklist	Yes / No																													
Title in line with methodology?	N/A																													
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Appropriate description of parameter?	N/A																													
Source clearly referenced?	N/A																													
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Measurement method correctly described?	N/A																													
Correct reference to standards?	N/A																													
Indication of accuracy provided?	N/A																													
QA/QC procedures described?	N/A																													
QA/QC procedures appropriate?	N/A																													
B.7.1.10. Parameter Title: HG_{j,y} Net quantity of heat supplied to the recipient facility <i>j</i> by the project activity during the year <i>y</i> in TJ. For element process like boilers, this is expressed as the difference of energy content between the steam supplied to the recipient facility and feed water to the boiler. The enthalpy of	-	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>N/A</td></tr><tr><td>Data unit correctly expressed?</td><td>N/A</td></tr><tr><td>Appropriate description of parameter?</td><td>N/A</td></tr><tr><td>Source clearly referenced?</td><td>N/A</td></tr><tr><td>Correct value provided for estimation?</td><td>N/A</td></tr><tr><td>Has this value been verified?</td><td>N/A</td></tr><tr><td>Measurement method correctly described?</td><td>N/A</td></tr></table>			Monitoring Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided for estimation?	N/A	Has this value been verified?	N/A	Measurement method correctly described?	N/A	☑	☑								
Monitoring Checklist	Yes / No																													
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Correct value provided for estimation?	N/A																													
Has this value been verified?	N/A																													
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feed water to the boiler takes into account the enthalpy of condensate returned to the boiler (if any) and any other waste heat recovery (including economiser, blow down heat recovery etc.). (refer to equation 9 and guidance below the equation).		Correct reference to standards?	N/A																										
		Indication of accuracy provided?	N/A																										
		QA/QC procedures described?	N/A																										
		QA/QC procedures appropriate?	N/A																										
B.7.1.11. Parameter Title: MG _{i,j,y,mot} Mechanical energy generated by the steam turbine in the project activity and supplied to the mechanical equipment (e.g. pump, compressor) of recipient <i>j</i> , which in the absence of the project activity would be driven by electric motor <i>i</i> or steam turbine <i>k</i>	-	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>N/A</td></tr><tr><td>Data unit correctly expressed?</td><td>N/A</td></tr><tr><td>Appropriate description of parameter?</td><td>N/A</td></tr><tr><td>Source clearly referenced?</td><td>N/A</td></tr><tr><td>Correct value provided for estimation?</td><td>N/A</td></tr><tr><td>Has this value been verified?</td><td>N/A</td></tr><tr><td>Measurement method correctly described?</td><td>N/A</td></tr><tr><td>Correct reference to standards?</td><td>N/A</td></tr><tr><td>Indication of accuracy provided?</td><td>N/A</td></tr><tr><td>QA/QC procedures described?</td><td>N/A</td></tr><tr><td>QA/QC procedures appropriate?</td><td>N/A</td></tr></table>		Monitoring Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided for estimation?	N/A	Has this value been verified?	N/A	Measurement method correctly described?	N/A	Correct reference to standards?	N/A	Indication of accuracy provided?	N/A	QA/QC procedures described?	N/A	QA/QC procedures appropriate?	N/A	☒	☒
Monitoring Checklist	Yes / No																												
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Indication of accuracy provided?	N/A																												
QA/QC procedures described?	N/A																												
QA/QC procedures appropriate?	N/A																												
B.7.1.12. Parameter Title: EF _{co2,i,j} CO2 emission factor per unit of energy of the baseline fuel used in <i>i</i> th element process used by recipient <i>j</i> , in tCO2/TJ, in absence of the project activity.	2, 4	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided for estimation?</td><td>Yes</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>N/A</td></tr></table>		Monitoring Checklist	Yes / No	Title in line with methodology?	Yes	Data unit correctly expressed?	Yes	Appropriate description of parameter?	Yes	Source clearly referenced?	Yes	Correct value provided for estimation?	Yes	Has this value been verified?	Yes	Measurement method correctly described?	N/A	☒	☒								
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Measurement method correctly described?	N/A																												

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		Correct reference to standards?	Yes																											
		Indication of accuracy provided?	No																											
		QA/QC procedures described?	No																											
		QA/QC procedures appropriate?	No																											
B.7.1.13. Parameter Title: ws_{ij} Fraction of total heat that is used by the recipient <i>j</i> in the project that in absence of the project activity would have been supplied by the <i>i</i> th element process.	-	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>N/A</td></tr><tr><td>Data unit correctly expressed?</td><td>N/A</td></tr><tr><td>Appropriate description of parameter?</td><td>N/A</td></tr><tr><td>Source clearly referenced?</td><td>N/A</td></tr><tr><td>Correct value provided for estimation?</td><td>N/A</td></tr><tr><td>Has this value been verified?</td><td>N/A</td></tr><tr><td>Measurement method correctly described?</td><td>N/A</td></tr><tr><td>Correct reference to standards?</td><td>N/A</td></tr><tr><td>Indication of accuracy provided?</td><td>N/A</td></tr><tr><td>QA/QC procedures described?</td><td>N/A</td></tr><tr><td>QA/QC procedures appropriate?</td><td>N/A</td></tr></table>			Monitoring Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided for estimation?	N/A	Has this value been verified?	N/A	Measurement method correctly described?	N/A	Correct reference to standards?	N/A	Indication of accuracy provided?	N/A	QA/QC procedures described?	N/A	QA/QC procedures appropriate?	N/A	☒	☒
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Correct reference to standards?	N/A																													
Indication of accuracy provided?	N/A																													
QA/QC procedures described?	N/A																													
QA/QC procedures appropriate?	N/A																													
B.7.1.14. Parameter Title: EF_{CO2,j,,} CO2 emission factor of fossil fuel (tCO2/TJ) that would have been used at facility <i>j</i> for flaring the waste gas.	-	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>N/A</td></tr><tr><td>Data unit correctly expressed?</td><td>N/A</td></tr><tr><td>Appropriate description of parameter?</td><td>N/A</td></tr><tr><td>Source clearly referenced?</td><td>N/A</td></tr><tr><td>Correct value provided for estimation?</td><td>N/A</td></tr><tr><td>Has this value been verified?</td><td>N/A</td></tr><tr><td>Measurement method correctly described?</td><td>N/A</td></tr><tr><td>Correct reference to standards?</td><td>N/A</td></tr><tr><td>Indication of accuracy provided?</td><td>N/A</td></tr><tr><td>QA/QC procedures described?</td><td>N/A</td></tr></table>			Monitoring Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided for estimation?	N/A	Has this value been verified?	N/A	Measurement method correctly described?	N/A	Correct reference to standards?	N/A	Indication of accuracy provided?	N/A	QA/QC procedures described?	N/A	☒	☒		
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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS			PDD in GSP	Final PDD																								
		QA/QC procedures appropriate?	N/A																											
B.7.1.15. Parameter Title: $Q_{i,h}$ or, $Q_{in,,h}$ Amount of individual fuel (and other fuel(s)) i consumed at the energy generation unit/or unit process n during hour h	-	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>N/A</td></tr><tr><td>Data unit correctly expressed?</td><td>N/A</td></tr><tr><td>Appropriate description of parameter?</td><td>N/A</td></tr><tr><td>Source clearly referenced?</td><td>N/A</td></tr><tr><td>Correct value provided for estimation?</td><td>N/A</td></tr><tr><td>Has this value been verified?</td><td>N/A</td></tr><tr><td>Measurement method correctly described?</td><td>N/A</td></tr><tr><td>Correct reference to standards?</td><td>N/A</td></tr><tr><td>Indication of accuracy provided?</td><td>N/A</td></tr><tr><td>QA/QC procedures described?</td><td>N/A</td></tr><tr><td>QA/QC procedures appropriate?</td><td>N/A</td></tr></table>			Monitoring Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided for estimation?	N/A	Has this value been verified?	N/A	Measurement method correctly described?	N/A	Correct reference to standards?	N/A	Indication of accuracy provided?	N/A	QA/QC procedures described?	N/A	QA/QC procedures appropriate?	N/A	☒	☒
Monitoring Checklist	Yes / No																													
Title in line with methodology?	N/A																													
Data unit correctly expressed?	N/A																													
Appropriate description of parameter?	N/A																													
Source clearly referenced?	N/A																													
Correct value provided for estimation?	N/A																													
Has this value been verified?	N/A																													
Measurement method correctly described?	N/A																													
Correct reference to standards?	N/A																													
Indication of accuracy provided?	N/A																													
QA/QC procedures described?	N/A																													
QA/QC procedures appropriate?	N/A																													
B.7.1.16. Parameter Title: $Q_{wcm,h}$ or, $Q_{wcm,n,h}$ Amount of individual fuel (WECM and other fuel(s)) i consumed at the energy generation unit or unit process n during hour h	-	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>N/A</td></tr><tr><td>Data unit correctly expressed?</td><td>N/A</td></tr><tr><td>Appropriate description of parameter?</td><td>N/A</td></tr><tr><td>Source clearly referenced?</td><td>N/A</td></tr><tr><td>Correct value provided for estimation?</td><td>N/A</td></tr><tr><td>Has this value been verified?</td><td>N/A</td></tr><tr><td>Measurement method correctly described?</td><td>N/A</td></tr><tr><td>Correct reference to standards?</td><td>N/A</td></tr><tr><td>Indication of accuracy provided?</td><td>N/A</td></tr><tr><td>QA/QC procedures described?</td><td>N/A</td></tr><tr><td>QA/QC procedures appropriate?</td><td>N/A</td></tr></table>			Monitoring Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided for estimation?	N/A	Has this value been verified?	N/A	Measurement method correctly described?	N/A	Correct reference to standards?	N/A	Indication of accuracy provided?	N/A	QA/QC procedures described?	N/A	QA/QC procedures appropriate?	N/A	☒	☒
Monitoring Checklist	Yes / No																													
Title in line with methodology?	N/A																													
Data unit correctly expressed?	N/A																													
Appropriate description of parameter?	N/A																													
Source clearly referenced?	N/A																													
Correct value provided for estimation?	N/A																													
Has this value been verified?	N/A																													
Measurement method correctly described?	N/A																													
Correct reference to standards?	N/A																													
Indication of accuracy provided?	N/A																													
QA/QC procedures described?	N/A																													
QA/QC procedures appropriate?	N/A																													
B.7.1.17. Parameter Title: NCV_i or $NCV_{wcm,y}$	-	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr></table>			Monitoring Checklist	Yes / No	☒	☒																						
Monitoring Checklist	Yes / No																													

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Net Calorific Value annual average for each individual consumed fuel and/or WECM		Title in line with methodology?	N/A			
		Data unit correctly expressed?	N/A			
		Appropriate description of parameter?	N/A			
		Source clearly referenced?	N/A			
		Correct value provided for estimation?	N/A			
		Has this value been verified?	N/A			
		Measurement method correctly described?	N/A			
		Correct reference to standards?	N/A			
		Indication of accuracy provided?	N/A			
		QA/QC procedures described?	N/A			
		QA/QC procedures appropriate?	N/A			
B.7.1.18. Parameter Title: Cp_{wcm} or Cp_i Specific Heat of WECM or fuel	-	Monitoring Checklist Yes / No Title in line with methodology? N/A Data unit correctly expressed? N/A Appropriate description of parameter? N/A Source clearly referenced? N/A Correct value provided for estimation? N/A Has this value been verified? N/A Measurement method correctly described? N/A Correct reference to standards? N/A Indication of accuracy provided? N/A QA/QC procedures described? N/A QA/QC procedures appropriate? N/A			☒	☒
B.7.1.19. Parameter Title: Cp_p or Cp_r Specific Heat of product <i>p</i> of product mix or reactant <i>r</i> of reactant mix to an unit process <i>n</i>	-	Monitoring Checklist Yes / No Title in line with methodology? N/A Data unit correctly expressed? N/A Appropriate description of parameter? N/A			☒	☒

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		Correct reference to standards?	N/A																										
		Indication of accuracy provided?	N/A																										
		QA/QC procedures described?	N/A																										
		QA/QC procedures appropriate?	N/A																										
B.7.1.20. Parameter Title: $t_{wcm,h}$ or $t_{i,h}$ The temperature of WECM (or fuel) in hour h	-	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>N/A</td></tr><tr><td>Data unit correctly expressed?</td><td>N/A</td></tr><tr><td>Appropriate description of parameter?</td><td>N/A</td></tr><tr><td>Source clearly referenced?</td><td>N/A</td></tr><tr><td>Correct value provided for estimation?</td><td>N/A</td></tr><tr><td>Has this value been verified?</td><td>N/A</td></tr><tr><td>Measurement method correctly described?</td><td>N/A</td></tr><tr><td>Correct reference to standards?</td><td>N/A</td></tr><tr><td>Indication of accuracy provided?</td><td>N/A</td></tr><tr><td>QA/QC procedures described?</td><td>N/A</td></tr><tr><td>QA/QC procedures appropriate?</td><td>N/A</td></tr></table>		Monitoring Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided for estimation?	N/A	Has this value been verified?	N/A	Measurement method correctly described?	N/A	Correct reference to standards?	N/A	Indication of accuracy provided?	N/A	QA/QC procedures described?	N/A	QA/QC procedures appropriate?	N/A	☒	☒
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Indication of accuracy provided?	N/A																												
QA/QC procedures described?	N/A																												
QA/QC procedures appropriate?	N/A																												
B.7.1.21. Parameter Title: t_o and t_i Temperature of the product mix at the outlet of the process/reactor j (°C) and Temperature of the reactant mix at the inlet of the process/reactor j (°C)	-	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>N/A</td></tr><tr><td>Data unit correctly expressed?</td><td>N/A</td></tr><tr><td>Appropriate description of parameter?</td><td>N/A</td></tr><tr><td>Source clearly referenced?</td><td>N/A</td></tr><tr><td>Correct value provided for estimation?</td><td>N/A</td></tr><tr><td>Has this value been verified?</td><td>N/A</td></tr></table>		Monitoring Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided for estimation?	N/A	Has this value been verified?	N/A	☒	☒										
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		Correct reference to standards?	N/A																											
		Indication of accuracy provided?	N/A																											
		QA/QC procedures described?	N/A																											
		QA/QC procedures appropriate?	N/A																											
B.7.1.22. Parameter Title: EG_{p,j,y} The total quantity of electricity gener- ated from the identified WECM stream(s) during the year y	-	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>N/A</td></tr><tr><td>Data unit correctly expressed?</td><td>N/A</td></tr><tr><td>Appropriate description of parameter?</td><td>N/A</td></tr><tr><td>Source clearly referenced?</td><td>N/A</td></tr><tr><td>Correct value provided for estimation?</td><td>N/A</td></tr><tr><td>Has this value been verified?</td><td>N/A</td></tr><tr><td>Measurement method correctly described?</td><td>N/A</td></tr><tr><td>Correct reference to standards?</td><td>N/A</td></tr><tr><td>Indication of accuracy provided?</td><td>N/A</td></tr><tr><td>QA/QC procedures described?</td><td>N/A</td></tr><tr><td>QA/QC procedures appropriate?</td><td>N/A</td></tr></table>			Monitoring Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided for estimation?	N/A	Has this value been verified?	N/A	Measurement method correctly described?	N/A	Correct reference to standards?	N/A	Indication of accuracy provided?	N/A	QA/QC procedures described?	N/A	QA/QC procedures appropriate?	N/A	☑	☑
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Indication of accuracy provided?	N/A																													
QA/QC procedures described?	N/A																													
QA/QC procedures appropriate?	N/A																													
B.7.1.23. Parameter Title: MG_{P,J,j,y} The total quantity of mechanical en- ergy supplied by steam turbine oper- ated by steam generated using waste energy of identified WECM stream(s) (in terms of TJ in the year y)	-	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>N/A</td></tr><tr><td>Data unit correctly expressed?</td><td>N/A</td></tr><tr><td>Appropriate description of parameter?</td><td>N/A</td></tr><tr><td>Source clearly referenced?</td><td>N/A</td></tr><tr><td>Correct value provided for estimation?</td><td>N/A</td></tr><tr><td>Has this value been verified?</td><td>N/A</td></tr><tr><td>Measurement method correctly described?</td><td>N/A</td></tr><tr><td>Correct reference to standards?</td><td>N/A</td></tr><tr><td>Indication of accuracy provided?</td><td>N/A</td></tr></table>			Monitoring Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided for estimation?	N/A	Has this value been verified?	N/A	Measurement method correctly described?	N/A	Correct reference to standards?	N/A	Indication of accuracy provided?	N/A	☑	☑				
Monitoring Checklist	Yes / No																													
Title in line with methodology?	N/A																													
Data unit correctly expressed?	N/A																													
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		QA/QC procedures described?	N/A																										
		QA/QC procedures appropriate?	N/A																										
B.7.1.24. Parameter Title: $H_{PJ,n,j,y}$ Net quantity of heat (enthalpy) supplied to the element process/unit process/reactor n (only for process heating and not for heat of reaction) in recipient facility j during the year y from the identified WECM stream(s). In the case of steam this is expressed as difference of energy content between the steam supplied to the recipient facility and the feed water to the boiler	-	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>N/A</td></tr><tr><td>Data unit correctly expressed?</td><td>N/A</td></tr><tr><td>Appropriate description of parameter?</td><td>N/A</td></tr><tr><td>Source clearly referenced?</td><td>N/A</td></tr><tr><td>Correct value provided for estimation?</td><td>N/A</td></tr><tr><td>Has this value been verified?</td><td>N/A</td></tr><tr><td>Measurement method correctly described?</td><td>N/A</td></tr><tr><td>Correct reference to standards?</td><td>N/A</td></tr><tr><td>Indication of accuracy provided?</td><td>N/A</td></tr><tr><td>QA/QC procedures described?</td><td>N/A</td></tr><tr><td>QA/QC procedures appropriate?</td><td>N/A</td></tr></table>		Monitoring Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided for estimation?	N/A	Has this value been verified?	N/A	Measurement method correctly described?	N/A	Correct reference to standards?	N/A	Indication of accuracy provided?	N/A	QA/QC procedures described?	N/A	QA/QC procedures appropriate?	N/A	☒	☒
Monitoring Checklist	Yes / No																												
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Data unit correctly expressed?	N/A																												
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Measurement method correctly described?	N/A																												
Correct reference to standards?	N/A																												
Indication of accuracy provided?	N/A																												
QA/QC procedures described?	N/A																												
QA/QC procedures appropriate?	N/A																												
B.7.1.25. Parameter Title: $H_{wcm,y}$ Energy supplied, using WECM stream(s), as heat for process and/or as a heat of reaction to chemical reaction, in project year y	-	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>N/A</td></tr><tr><td>Data unit correctly expressed?</td><td>N/A</td></tr><tr><td>Appropriate description of parameter?</td><td>N/A</td></tr><tr><td>Source clearly referenced?</td><td>N/A</td></tr><tr><td>Correct value provided for estimation?</td><td>N/A</td></tr><tr><td>Has this value been verified?</td><td>N/A</td></tr><tr><td>Measurement method correctly described?</td><td>N/A</td></tr><tr><td>Correct reference to standards?</td><td>N/A</td></tr><tr><td>Indication of accuracy provided?</td><td>N/A</td></tr><tr><td>QA/QC procedures described?</td><td>N/A</td></tr><tr><td>QA/QC procedures appropriate?</td><td>N/A</td></tr></table>		Monitoring Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided for estimation?	N/A	Has this value been verified?	N/A	Measurement method correctly described?	N/A	Correct reference to standards?	N/A	Indication of accuracy provided?	N/A	QA/QC procedures described?	N/A	QA/QC procedures appropriate?	N/A	☒	☒
Monitoring Checklist	Yes / No																												
Title in line with methodology?	N/A																												
Data unit correctly expressed?	N/A																												
Appropriate description of parameter?	N/A																												
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Measurement method correctly described?	N/A																												
Correct reference to standards?	N/A																												
Indication of accuracy provided?	N/A																												
QA/QC procedures described?	N/A																												
QA/QC procedures appropriate?	N/A																												
B.7.1.26. Parameter Title: $t_{wcm,y}$	-			☒	☒																								

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Average temperature of Waste Energy Carrying Medium (WECM) in year y		Monitoring Checklist	Yes / No		
		Title in line with methodology?	N/A		
		Data unit correctly expressed?	N/A		
		Appropriate description of parameter?	N/A		
		Source clearly referenced?	N/A		
		Correct value provided for estimation?	N/A		
		Has this value been verified?	N/A		
		Measurement method correctly described?	N/A		
		Correct reference to standards?	N/A		
		Indication of accuracy provided?	N/A		
		QA/QC procedures described?	N/A		
		QA/QC procedures appropriate?	N/A		
B.7.1.27. Parameter Title: $p_{wcm,y}$ Average pressure of WECM in year y	-			☒	☒
		Monitoring Checklist	Yes / No		
		Title in line with methodology?	N/A		
		Data unit correctly expressed?	N/A		
		Appropriate description of parameter?	N/A		
		Source clearly referenced?	N/A		
		Correct value provided for estimation?	N/A		
		Has this value been verified?	N/A		
		Measurement method correctly described?	N/A		
		Correct reference to standards?	N/A		
		Indication of accuracy provided?	N/A		
		QA/QC procedures described?	N/A		
		QA/QC procedures appropriate?	N/A		
B.7.1.28. Parameter Title: $H_{wcm,y}$ Average enthalpy of WECM in year y	-			☒	☒
		Monitoring Checklist	Yes / No		
		Title in line with methodology?	N/A		
		Data unit correctly expressed?	N/A		

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		Appropriate description of parameter?	N/A		
		Source clearly referenced?	N/A		
		Correct value provided for estimation?	N/A		
		Has this value been verified?	N/A		
		Measurement method correctly described?	N/A		
		Correct reference to standards?	N/A		
		Indication of accuracy provided?	N/A		
		QA/QC procedures described?	N/A		
		QA/QC procedures appropriate?	N/A		
B.7.1.29. Parameter Title: $d_{wcm,y}$ Average density of WECM at actual temperature and pressure in year y	-	Monitoring Checklist	Yes / No	☒	☒
		Title in line with methodology?	N/A		
		Data unit correctly expressed?	N/A		
		Appropriate description of parameter?	N/A		
		Source clearly referenced?	N/A		
		Correct value provided for estimation?	N/A		
		Has this value been verified?	N/A		
		Measurement method correctly described?	N/A		
		Correct reference to standards?	N/A		
		Indication of accuracy provided?	N/A		
		QA/QC procedures described?	N/A		
		QA/QC procedures appropriate?	N/A		
B.7.1.30. Parameter Title: $Q_{OE,y}$ Quantity of actual output/intermediate energy generated during year y	-	Monitoring Checklist	Yes / No	☒	☒
		Title in line with methodology?	N/A		
		Data unit correctly expressed?	N/A		
		Appropriate description of parameter?	N/A		
		Source clearly referenced?	N/A		
		Correct value provided for estimation?	N/A		

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		Measurement method correctly described?	N/A																										
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		Indication of accuracy provided?	N/A																										
		QA/QC procedures described?	N/A																										
		QA/QC procedures appropriate?	N/A																										
B.7.1.31. Parameter Title: $m_{p,n,j,y} / m_{r,n,j,y}$ Quantity of product p in the product mix at the outlet of the process (or reactor) 'n' in recipient facility j during the year y / Quantity of reactant r in the reactant mix at the inlet of the process (or reactor) n during the year y	-	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>N/A</td></tr><tr><td>Data unit correctly expressed?</td><td>N/A</td></tr><tr><td>Appropriate description of parameter?</td><td>N/A</td></tr><tr><td>Source clearly referenced?</td><td>N/A</td></tr><tr><td>Correct value provided for estimation?</td><td>N/A</td></tr><tr><td>Has this value been verified?</td><td>N/A</td></tr><tr><td>Measurement method correctly described?</td><td>N/A</td></tr><tr><td>Correct reference to standards?</td><td>N/A</td></tr><tr><td>Indication of accuracy provided?</td><td>N/A</td></tr><tr><td>QA/QC procedures described?</td><td>N/A</td></tr><tr><td>QA/QC procedures appropriate?</td><td>N/A</td></tr></table>		Monitoring Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided for estimation?	N/A	Has this value been verified?	N/A	Measurement method correctly described?	N/A	Correct reference to standards?	N/A	Indication of accuracy provided?	N/A	QA/QC procedures described?	N/A	QA/QC procedures appropriate?	N/A	☒	☒
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Indication of accuracy provided?	N/A																												
QA/QC procedures described?	N/A																												
QA/QC procedures appropriate?	N/A																												
B.7.1.32. Parameter title: $M_{p,n,j,y} / M_{r,n,j,y}$ Flow of product p in the product mix at the outlet of the process (or reactor) n in recipient facility j in time interval t /flow rate of reactant r in the reactant mix at the inlet of the process (or reactor) n in time interval t	-	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>N/A</td></tr><tr><td>Data unit correctly expressed?</td><td>N/A</td></tr><tr><td>Appropriate description of parameter?</td><td>N/A</td></tr><tr><td>Source clearly referenced?</td><td>N/A</td></tr><tr><td>Correct value provided for estimation?</td><td>N/A</td></tr><tr><td>Has this value been verified?</td><td>N/A</td></tr><tr><td>Measurement method correctly described?</td><td>N/A</td></tr><tr><td>Correct reference to standards?</td><td>N/A</td></tr></table>		Monitoring Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided for estimation?	N/A	Has this value been verified?	N/A	Measurement method correctly described?	N/A	Correct reference to standards?	N/A	☒	☒						
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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS			PDD in GSP	Final PDD																								
		Indication of accuracy provided?	N/A																											
		QA/QC procedures described?	N/A																											
		QA/QC procedures appropriate?	N/A																											
B.7.1.33. Parameter Title: ST_{whr, y} Energy content of the steam generated in waste heat recovery boiler fed to turbine via common steam header	-	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>N/A</td></tr><tr><td>Data unit correctly expressed?</td><td>N/A</td></tr><tr><td>Appropriate description of parameter?</td><td>N/A</td></tr><tr><td>Source clearly referenced?</td><td>N/A</td></tr><tr><td>Correct value provided for estimation?</td><td>N/A</td></tr><tr><td>Has this value been verified?</td><td>N/A</td></tr><tr><td>Measurement method correctly described?</td><td>N/A</td></tr><tr><td>Correct reference to standards?</td><td>N/A</td></tr><tr><td>Indication of accuracy provided?</td><td>N/A</td></tr><tr><td>QA/QC procedures described?</td><td>N/A</td></tr><tr><td>QA/QC procedures appropriate?</td><td>N/A</td></tr></table>			Monitoring Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided for estimation?	N/A	Has this value been verified?	N/A	Measurement method correctly described?	N/A	Correct reference to standards?	N/A	Indication of accuracy provided?	N/A	QA/QC procedures described?	N/A	QA/QC procedures appropriate?	N/A	☒	☒
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Indication of accuracy provided?	N/A																													
QA/QC procedures described?	N/A																													
QA/QC procedures appropriate?	N/A																													
B.7.1.34. Parameter Title: ST_{other, y} Energy content of the steam generated in other boilers fed to turbine via common steam header	-	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>N/A</td></tr><tr><td>Data unit correctly expressed?</td><td>N/A</td></tr><tr><td>Appropriate description of parameter?</td><td>N/A</td></tr><tr><td>Source clearly referenced?</td><td>N/A</td></tr><tr><td>Correct value provided for estimation?</td><td>N/A</td></tr><tr><td>Has this value been verified?</td><td>N/A</td></tr><tr><td>Measurement method correctly described?</td><td>N/A</td></tr><tr><td>Correct reference to standards?</td><td>N/A</td></tr><tr><td>Indication of accuracy provided?</td><td>N/A</td></tr><tr><td>QA/QC procedures described?</td><td>N/A</td></tr><tr><td>QA/QC procedures appropriate?</td><td>N/A</td></tr></table>			Monitoring Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided for estimation?	N/A	Has this value been verified?	N/A	Measurement method correctly described?	N/A	Correct reference to standards?	N/A	Indication of accuracy provided?	N/A	QA/QC procedures described?	N/A	QA/QC procedures appropriate?	N/A	☒	☒
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B.7.1.35. Parameter Title: $EF_{heat, j, y}$ CO2 emission factor of the heat source that would have supplied the recipient plant j in absence of the project activity, expressed in tCO2/TJ	-	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>N/A</td></tr><tr><td>Data unit correctly expressed?</td><td>N/A</td></tr><tr><td>Appropriate description of parameter?</td><td>N/A</td></tr><tr><td>Source clearly referenced?</td><td>N/A</td></tr><tr><td>Correct value provided for estimation?</td><td>N/A</td></tr><tr><td>Has this value been verified?</td><td>N/A</td></tr><tr><td>Measurement method correctly described?</td><td>N/A</td></tr><tr><td>Correct reference to standards?</td><td>N/A</td></tr><tr><td>Indication of accuracy provided?</td><td>N/A</td></tr><tr><td>QA/QC procedures described?</td><td>N/A</td></tr><tr><td>QA/QC procedures appropriate?</td><td>N/A</td></tr></table>		Monitoring Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided for estimation?	N/A	Has this value been verified?	N/A	Measurement method correctly described?	N/A	Correct reference to standards?	N/A	Indication of accuracy provided?	N/A	QA/QC procedures described?	N/A	QA/QC procedures appropriate?	N/A	☒	☒
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Indication of accuracy provided?	N/A																												
QA/QC procedures described?	N/A																												
QA/QC procedures appropriate?	N/A																												
B.7.1.36. Parameter Title: Abnormal operation of the project facility including emergencies and shut down. The hours of abnormal operation of parts of project facility that can have an impact on waste energy generation and recovery.	-	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>N/A</td></tr><tr><td>Data unit correctly expressed?</td><td>N/A</td></tr><tr><td>Appropriate description of parameter?</td><td>N/A</td></tr><tr><td>Source clearly referenced?</td><td>N/A</td></tr><tr><td>Correct value provided for estimation?</td><td>N/A</td></tr><tr><td>Has this value been verified?</td><td>N/A</td></tr><tr><td>Measurement method correctly described?</td><td>N/A</td></tr><tr><td>Correct reference to standards?</td><td>N/A</td></tr><tr><td>Indication of accuracy provided?</td><td>N/A</td></tr><tr><td>QA/QC procedures described?</td><td>N/A</td></tr><tr><td>QA/QC procedures appropriate?</td><td>N/A</td></tr></table>		Monitoring Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided for estimation?	N/A	Has this value been verified?	N/A	Measurement method correctly described?	N/A	Correct reference to standards?	N/A	Indication of accuracy provided?	N/A	QA/QC procedures described?	N/A	QA/QC procedures appropriate?	N/A	☒	☒
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QA/QC procedures described?	N/A																												
QA/QC procedures appropriate?	N/A																												
B.7.2. Description of the monitoring plan																													
B.7.2.1. Is the operational and management structure clearly described	2	Corrective Action Request No.11		CAR #11	☒																								

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and in compliance with the envisioned situation?		Please clearly define the roles and responsibilities for the Project Monitoring period. The PP should ensure in the MP that metering system is appropriately calibrated.		
B.7.2.2. Are responsibilities and institutional arrangements for data collection and archiving clearly provided?	2	In general yes, however see CAR #11	CAR #11	☒
B.8. Date of completion of the application of the baseline study and monitoring methodology and the name of the responsible person(s)/entity(ies)				
B.8.2.1. Is information provided whether this person / entity is also considered a project participant?	2	The baseline study has been prepared by Future Camp Turkey which is not project participant. The date of completion is 27.06.2011.	☒	☒
C. Duration of the project activity / crediting period				
C.1. Duration of the project activity				
C.1.2. Are the project's starting date and operational lifetime clearly defined and reasonable (see B.5. also)?	2	See CAR #3 and CAR #5.	CAR #3 CAR #5	☒
C.1.3. How the starting date of the project activity has been determined and which evidence supports this start date has been delivered?	2	See above.	CAR #3	☒
C.2. Choice of the crediting period and related information				
C.2.1. Is the assumed crediting time clearly defined and reasonable (renewable crediting period of max 7 years with potential for 2 renewals or fixed crediting	2	A once renewable crediting period of 10 years shall apply.	☒	☒

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period of max. 10 years)? 10 years; start after date of project registration)?				
C.2.2. Is it explained in the PDD, that the credit period of the project will not start before registration.	2	Yes.	☒	☒
D. Environmental impacts				
D.1. Documentation on the analysis of the environmental impacts, including transboundary impacts				
D.2. If environmental impacts are considered significant by the project participants or the host Party, please provide conclusions and all references to support documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the host Party				
E. Stakeholders' comments				
<u>Corrective Action Request No.12</u>				
Please state in the PDD the National Requirements regarding stakeholder consultation and the applicability for this project.				
E.1. Brief description how comments by local stakeholders have been invited and compiled				
E.2. Summary of the comments received				
E.3. Report on how due account was taken of any comments received				
F. Annexes				
F.1. Annex 1: Baseline information				
F.1.2. If additional background information on baseline is provided: Is this information consistent with data presented in other sections of the PDD?	2, 4	Annex 1 of PD represents Combined Margin (Build Margin) calculations. This part has been assessed in chapters B1 and B2 of the present Protocol and no inconsistencies with other sections of the PD found. The calculated EF for the grid, 0.5267 tCO2/MWh, is consi-	☒	☒

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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
		dered correct.		

Table 2 Resolution of Corrective Action and Clarification Requests

Clarifications and corrective action requests by validation team	Ref. to table 1	Summary of project owner response	Validation team conclusion
<u>Corrective Action Request No.1</u> The PD has to be fully consistent with the VCS template in terms of head and foot lines	A	The PD has been checked and it is in line with the VCS template	The new template VCS ver. 3 has been used for PD. This issue is closed.
<u>Clarification Request No.1</u> According to the PDD, chap. 1.8, generated electricity will be consumed in the plant. As information has gathered during the on-site audit, the generated power shall be fed into the grid. Clarification on this inconsistency is needed. Please also consider the interaction with the MP	A.2.5	This was clarified. There is no feed-in to the grid. The respective discussion at the audit was based on a mis-interpretation. The facilities will receive both electricity from the WHR installation (100% of that available electricity) and the rest from the grid. This can also be seen in the single line diagram.	The single line diagram (IRL 12) has been received and checked. There will be no electricity fed into the grid. This issue is closed.
<u>Corrective Action Request No.2</u> Please include in the PDD a simple graphical scheme of the project himself, including all facilities and a list of the technical data of the equipment as from supplier Contract. The name/location of the supplier should also be included	A.4.3.1	Simple graphical scheme of the project is given in figure 2-2 of the VCS PD. Technical data of the equipments are added to the VCS PD. Also name/location of the supplier is indicated in the section 1.10 of the VCS PD.	The new version of the PD (IRL 2) has been checked and a simple graphical scheme of the project, including all facilities and a list of the technical data has been included.

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			This issue is closed
<u>Corrective Action Request No.3</u> The envisaged starting date is October 2011. As from information received on site the start- ing date is foreseen for 20/05/2012. Please update it	A.4.3.4	The wrong date is corrected in the sections 1.5 and 1.6 of the VCS PD.	Checked in the new version of the PD (IRL 2). The start- ing date is May 2012. This issue is closed.
<u>Corrective Action Request No.4</u> Please comment the amount of 66,800 MWh on which the ERs are based. (PDD page 5), taking into account the efficiency of the gene- rator and turbine and internal consumption. The applied value for operating hours should be referenced	A.4.4	Generated electricity is taken from licence and own power consumption is taken from Sinoma Contract. Generated electricity is corrected to 51,289,700 kWh and own power consumption is said to be 6.8%. Net annual electricity generation is calculated by multiplying these figures which is 47,802 MWh.	Checked in the new version of the PD (IRL 2), in the effi- ciency tables (IRL 7) and Sinoma Contract (IRL 10). This issue is closed.
<u>Clarification Request No.2</u> Please clarify the position of the company regarding Energy Efficiency Law	A.4.5	Energy Efficiency Law and Law on Utilization of Re- newable Energy Resources for the Purpose of Generat- ing Electricity Energy are deleted since they are not related to the project. The Electricity Market License Regulation is included in the list of section 1.11 of the VCS PD.	Checked in the new version of the PD (IRL 2). This issue is closed.
<u>Corrective Action Request No.5</u> The remaining life time of the Project equip- ment has not been determined. Please include this analyse in the PD	B.2.8	The remaining lifetime of the project equipment is de- fined as 25 years. This is in line with the "Tool to de- termine the remaining lifetime of equipment" where default values for lifetime for boilers and turbines are defined as 25 years. Also IRR analysis is revised ac- cordingly.	Checked in the new version of the PD (IRL 2) and IRR analyse (IRL 3). This issue is closed.
<u>Corrective Action Request No.6</u> a) In PDD, at page 13 (W3), it's mentioned "...there are relevant institutional barriers to the sale of waste energy to out- side consumers". Please explain in	B.4.2	a) The statement regarding scenario W3 was mislead- ing and has accordingly been deleted. b) The discussion of W5 has been amended. c) The discussion of P8 has been amended.	Checked in the new version of the PD (IRL 2). The dis- cussion is clear now.

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more detail this statement. b) In the same time, the alternative W5 should be discussed in more detail. c) More details on P8 exclusion should be included in the revised PDD			This issue is closed.
<u>Clarification Request No.3</u> Signed letter regarding Board Decision for carbon credits, is available. [Board Decision dated 30.06.2010, IRL 6], but it has to be clarified on which base this Decision has been made, supporting documents are not underlying this decision	B.5.1	There was early consideration of carbon credits. All discussions on potential investment in project implicitly included the calculation of carbon proceeds. Such calculation was already available in the feasibility study of one of the technology provider companies. This document was provided to the DOE in the meeting.	During the site visit, the validation team checked (on confidential basis) the correspondence documents (e-mails) between Baticim and WHR technology providers and can confirm that carbon credit analyse has been performed. This issue is closed.
<u>Clarification Request No.4</u> There is a need to clarify why assurance costs and tax have not been taken into account for the IRR calculation	B.5.5	There is no reliable reference for the assurance cost. In order to be conservative it was not taken into account in the IRR calculations. For the tax; in the world bank document it is not clarified that whether tax is taken account or not. So again in order to be conservative we did not consider tax while preparing IRR calculations	The approach is conservative. This issue is closed.
<u>Corrective Action Request No.7</u> The "confidential" input parameters for the investment analysis as of the PD should be presented for more transparency of the investment analysis	B.5.21	We will not disclose this in the PD. But in the IRR calculation there is transparent and already checked indication of input parameters. We should only provide such explanation and reference. Our approach is transparent for the auditor. It is acceptable that sensitive parts of the investment data are not disclosed in the PD. We have made this judgement explicit also in the section on confidential data by providing a brief explanation.	The new IRR calculation (IRL 3) and Sinoma Contract (IRL 10) contains clear references to costs. This issue is closed.

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<u>Corrective Action Request No.8</u> The excel file for IRR calculation shall be re-vised for clearly referencing all raw data	B.5.25	IRR calculation has been revised accordingly.	The new IRR calculation (IRL 3) has been checked and there is clear referencing to raw data. This issue is closed.
<u>Clarification Request No.5</u> Grid connection costs should be discussed in relation to the Project	B.2.26	Please see CL 01.	There is no feeding into the grid (IRL 12). This issue is closed.
<u>Corrective Action Request No.9</u> There is an inconsistency between bench-mark equity IRR calculated in the World Bank document and Project IRR stated in the PD	B.5.26	As there is no finance utilized for this project, IRR is same as the equity IRR which is stated in the world bank document.	This issue is closed.
<u>Clarification Request No.6</u> Please add references in supporting the “first of its kind” statement, in Turkey (chapter 2.5 in PDD)	B.5.33	Cross-checking of data bases (VCS). No Turkish pro-ject shows up there. So we conclude that the project is first of its kind in Turkey.	The TÜV SÜD validation team checked also the VCS data base and can confirm that there is no similar project registered. This issue is closed.
<u>Corrective Action Request No.10</u> The table from the PD (page 27) for this pa-rameter ($EG_{i,j,y}$) shall be filled	B.7.2.7	The corresponding value has been amended.	Checked in the new version of the PD (IRL 2). The dis-cussion is clear now. This issue is closed.
<u>Corrective Action Request No.11</u>	B.7.3.1	Roles and responsibilities are defined in the section 4.3	Checked in the new version

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Please clearly define the roles and responsibilities for the Project Monitoring period. The PP should ensure in the MP that metering system is appropriately calibrated		of the VCS PD.	of the PD (IRL 2). The discussion is clear now. This issue is closed.
<u>Corrective Action Request No.12</u> Please state in the PDD the National Requirements regarding stakeholder consultation and the applicability for this project	E	In the revised PD it is now explicitly stated that there is no national requirement for conducting any local stakeholder meetings. Furthermore, with no external parties being affected by any effects from the project, no meeting is conducted.	Checked in the new version of the PD (IRL 2). The discussion is clear now. This issue is closed.

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Table 3 Resolution of Corrective Action and Clarification Requests raised by Certification Body

Clarifications and / or corrective action requests by CB	Ref.	Summary of project owner response	Validation team conclusion
<u>Corrective Action Request No.13</u> In the PD, (PD page 2). Last sentence of chap. 1.1: ...” and is introduced to the turbine for power generation.” In order to make the statement more precise, please add “for on-site utilization”	PD	Last sentence of the Chap. 1.1 is revised accordingly.	Checked in the new version (ver. 3) of the PD (IRL 22). This issue is closed.
<u>Clarification Request No.7</u> In the PD (page 5): “Lifetime of the project is 25 years”. For Batisoke, the lifetime was 20 years. Please clarify the difference with Batisoke.	PD	Lifetime of the project is 25 years for both projects as per “Tool to determine the remaining lifetime of equipment.” It is corrected for Batisoke.	Checked in the new version (ver. 3) of the PD for Batisoke. This issue is closed.
<u>Clarification Request No.8</u> In the PD (page 18): “Thus BATICIM WHR Project is a first-of-its kind in Turkey.” Please clarify the relation with the “sister” project Batisoke, also the first-of-its kind in Turkey.	PD	Baticim and Batisoke are owned by the same group which’s name is Batı Anadolu Group (http://www.baticim.com.tr/?page=kurumsal&sp=batianadolu). Also it can be seen that in Board decision letter (was provided to the DOE) of the both projects, same names are signed the decisions.	The link and the Board Decision (IRL 5) have been checked. This issue is closed.
<u>Corrective Action Request No.14</u> The name of the Plant is not consistent in the PD: “Energy Chief of the Batı-Cim will...” – PD page 31. Please check the PD for consistency.	PD	The name of the plant is corrected to Baticim.	Checked in the new version (ver. 3) of the PD (IRL 22). This issue is closed.

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Table 4 Unresolved Corrective Action and Clarification Requests (in case of denials)

Clarifications and / or corrective action requests by validation team	Id. of CAR/CR	Explanation of Conclusion for Denial
-	-	-

Annex 2	10-11-2011	Validation of the VCS Project BATICIM BATI ANADOLU CIMENTO SANAYII A.S. 9 MW Cement WHR Project Information Reference List	Page 1 of 3	 Industrie Service
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Ref. No.	Issuance and/or submission date(dd/mm/yyyy)	Title/Type of Document. Publication place	Author/Editor/ Issuer	Additional Information (Relevance in VCS Context)
		Onsite interview (18.08.2011) carried out by TÜV SÜD: Validation Team: Robert Mitterwallner, ATL Dr. Nuri Mol Constantin Zaharia Interviewed Persons: - Engin Mert Future Camp Turkey - Daniel Scholz Future Camp Grmany - Cerik Ozdemir Baticim Plant - Onur Aykut Baticim Plant - Savas Yucel Baticim Plant - Volkan Buker Baticim Plant - Fariz Tardan Future Camp Turkey		Participation list
0.	2006	Guidelines for National Greenhouse Gas Inventories. Volume 2. Energy,	IPCC	
1.	23.09.2011	VCS-PDD_ Baticim _v2_2011-09-23	Future Camp	
2.	23.09.2011	IRR_ Baticim _2011-09-23	Future Camp	IRR calculation
3.	23.09.2011	CM-Calculation__ Baticim -2011-09-23	Future Camp	Combined Margin calculation
4.	23.09.2011	fcap- Baticim.2011.09.23	Future Camp	Energy production cap calculation
5.	23.09.2011	Board Decision of Baticim. Dated 27.07.2010	Baticim	Board Decision for VCS consideration

Annex 2	10-11-2011	Validation of the VCS Project BATICIM BATI ANADOLU CIMENTO SANAYII A.S. 9 MW Cement WHR Project Information Reference List	Page 2 of 3	 Industrie Service
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Ref. No.	Issuance and/or submission date(dd/mm/yyyy)	Title/Type of Document. Publication place	Author/Editor/ Issuer	Additional Information (Relevance in VCS Context)
6.	23.09.2011	Efficiency tables	Baticim	Energy efficiency calculation (turbine, electricity generator)
7.	23.09.2011	EIA is not required for Baticim. Environment Law (Nr. 2872 / 16.12.2003).	Baticim	
8.	23.09.2011	Generation License of Baticim	Baticim	Electricity generation license
9.	19.08.2011	Contract dated 12.10.2010	Baticim	Purchasing Contract-Technical Data Batiçim with Sinoma
10.	17.08.2011	MOM dated 27.10.2010	Baticim	MOM with Sinoma
11.	23.09.2011	SINGLE LINE DIAGRAM for Baticim	Baticim	Electricity connection diagram
12.	23.09.2011	Technical Study of Sinoma for Baticim	Sinoma	
13.	22.08.2011	Baticim pictures 18082011	TÜV SÜD	
14.	22.08.2011	Information_Kiln	Baticim	Technical information for the Line 1 and Line 2
15.	22.08.2011	Licenses	Baticim	Operating Permit,
16.	22.08.2011	Trade Registry	Baticim	Registration Certificate
17.	28.07.2011	World_Bank Financial Analyze	World_Bank	
18.	-	ACM0012, Version 04.0.0	UNFCCC	

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Ref. No.	Issuance and/or submission date(dd/mm/yyyy)	Title/Type of Document. Publication place	Author/Editor/ Issuer	Additional Information (Relevance in VCS Context)
19.	-	Tool to calculate the emission factor for an electricity system", Version 02.1.0	UNFCCC	
20.	-	Tool for demonstration and assessment of additionality", Version 05.2	UNFCCC	
21.	23.09.2011	Construction Permission for Baticim	Baticim	
22.	03.11.2011	VCS-PDD_Baticim_v3_2011-11-03	FC	