



MRAMORAK 1&2 BUNDLED BIOGAS POWER PLANTS VALIDATION REPORT



Version 1.0 | September 2023

VALIDATION REPORT

PROJECT ID

Project Title	Mramorak 1&2 Bundled Biogas Power Plants
Project ID	937
Project holder	Zlatar Mramorak Doo.
Project Type/Project activity	Waste management and disposal” and “energy sector”.
Grouped project	Group Project
Version number of the Project Document to which this report applies	1.4
Applied methodology	AMS-III.AO: Methane recovery through controlled anaerobic digestion, Version 1.0” and “AMS-I.D.: Grid connected renewable electricity generation, Version 18.0”
Project location	Mramorak, Belgrade
Project starting date	24/06/2020
Quantification period of GHG emissions reductions/removals	24/06/2020 – 23/06/2027
Estimated total and mean annual amount of GHG emission reductions/removals	161,587 tCO _{2e}


Contribution to Sustainable Development Goals	SDG 7, SDG 8 and SDG 13
Special category, related to co-benefits	N/A
Document date	24/08/2023
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1 Executive summary

“Mramorak 1&2 Bundled Biogas Power Plants” project is operated by “Zlatar Mramorak Doo.”. Project received electricity generation license from the Ministry of Mining and Energy of Serbia. Mramorak 1 received its license on 17/06/2020 by the “Zlatar Mramorak Doo”. Mramorak 2 received its license on 05/03/2021 by the “BioGold Energy Doo”. Both companies are owned by the same parent company, “Almex Doo”. However, full rights of the carbon credits will be given to “Zlatar Mramorak Doo”. A signed and sealed letter (dated 05/04/2023) has been provided by “BioGold Energy Doo.” to state that “All VERs rights will be given to Zlatar Mramorak Doo.”.

The project activity is located in Mramorak Village, on the eastern part of Belgrade, Republic of Serbia. The project activity consists of two identical biogas power plants, implementing anaerobic treatment process to organic wastes to reduce the GHG emissions and supply clean electricity to Serbian Electrical Power Supply (EPS) grid. The project uses manure from cattle farms, non-hazardous food wastes, plant wastes and agricultural plant residues. However, carbon credits will be requested only for cattle manure and non-hazardous food wastes. There are 2 cattle farms where the cattle manure is taken from. One of them is “Zlatar Mramorak farm” (it is owned and operated by the project owner) and the other one is “Stari Tamiš farm”. Non-hazardous food wastes come from various entities from Belgrade, such as hotels, shopping centers, restaurants and so on.

Each biogas plant has 0.999 MWe installed capacity. Therefore, the total installed capacity of “Mramorak 1&2 Bundled Biogas Power Plants” is 1.998 MWe. The commissioning dates are 24/06/2020 and 26/03/2021 for Mramorak 1 and Mramorak 2, respectively. Mramorak 1&2 project, approximately, generates net amount of 15,500 MWh of renewable electricity annually as per the generation license. The project activity has two major technological components: Anaerobic digesters and co-generation units. Organic waste is anaerobically digested by main- and post-digesters, and co-generation units provide renewable power and heat. The digestate effluent from the post-digester units was converted into a nutrient-rich organic fertilizer, which the project owner used as fertilizer.

Re Carbon Ltd. also confirms the following based on the results of document review for the first crediting period between 24/06/2020 – 23/06/2027:

Year	GHG emission reductions in the baseline scenario (tCO_{2e})	GHG emission reductions in the project scenario (tCO_{2e})	GHG emissions attributable to leakages (tCO_{2e})	Estimated Net GHG Reduction (tCO_{2e})
24/06/2020 – 31/12/2020	7,447	1,309	0	6,138
2021	25,470	4,425	0	21,045
2022	29,108	5,001	0	24,107
2023	29,375	5,001	0	24,374
2024	29,568	5,001	0	24,567
2025	29,703	5,001	0	24,702
2026	29,800	5,001	0	24,799
01/01/2027 – 23/06/2027	14,238	2,383	0	11,855
Total	194,709	33,122	0	161,587

Year GHG emission reductions in the baseline scenario (tCO_{2e}) GHG emission reductions in the project scenario (tCO_{2e}) GHG emissions attributable to leakages (tCO_{2e}) Estimated Net GHG Reduction (tCO_{2e})

During the validation 39 Corrective Action Requests, 06 Clarification Requests were raised, all of which were closed out before the issuance of this validation report. No Forward Action Request was raised during the validation to be addressed during the initial verification of the proposed project activity.

In summary, it is Re Carbon Ltd.’s opinion that the project activity “Mramorak 1&2 Bundled Biogas Power Plants” in Serbia, as described in the BCR-PD, version 1.4 dated 24/06/2023, meets all relevant UNFCCC requirements for the CDM, BCR and all relevant host Party criteria and correctly applies the baseline and monitoring methodologies “AMS-III.AO: Methane recovery through controlled anaerobic digestion, Version 1.0” and “AMS-I.D.: Grid connected renewable electricity generation, Version 18.0”. Hence, Re Carbon Ltd. requests the registration of the proposed project activity as a BCR project activity.

2 Objective, scope and validation criteria

Re Carbon Ltd. was appointed by “Zlatar Mramorak Doo.” to perform the validation of the “Mramorak 1&2 Bundled Biogas Power Plants” in “Serbia” through a service agreement, dated 07/09/2022. The objective of this validation activity is to have an independent third party for the assessment of the project design, and to ensure a thorough assessment of the proposed project activity against the applicable BCR and CDM requirements. In particular;

- the project's baseline was assessed against “AMS-III.AO: Methane recovery through controlled anaerobic digestion, Version 1.0” and “AMS-I.D.: Grid connected renewable electricity generation, Version 18.0”
- the project’s monitoring plan was assessed against “AMS-III.AO: Methane recovery through controlled anaerobic digestion, Version 1.0” and “AMS-I.D.: Grid connected renewable electricity generation, Version 18.0”
- the project’s additionality justification was assessed against “Tool 21: Demonstration of additionality of small-scale project activities, version 13.1”
- the project’s compliance with the requirements of Article 12 of the Kyoto Protocol, the CDM Modalities and Procedures, as agreed in the Marrakech Accords under decision 3/CMP.1, the annexes to this decision, subsequent decisions and guidance made by COP/MOP & CDM Executive Board and other relevant rules, including the Host Country’s legislation and sustainability criteria.
- CDM Validation and Verification Standard for project activities version 3.0
- CDM Project Standard for Project Activities version 3.0
- BCR Standard Version 3.0

Validation is a requirement for all BCR projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of certified emission reductions (CERs).

The scope of the validation is the independent and objective review of the Project Document Template (PD). The purpose of the validation is its usage during the registration process as part of the BCR project cycle. Therefore, Re Carbon Ltd. cannot be held liable by any party for decisions made or not made based on the validation opinion that go beyond that purpose.

3 *Validation planning*

Provide information regarding validation planning based on the validation objectives, scope and, project sector. Include the validation plan, the validation team (roles and responsibilities), duration of validation activities, specific requirements, and the level of assurance and materiality.

3.1 *Validation plan*

Re Carbon Ltd. hereby confirms that the reasonableness of assumptions of this validation report is reasonable, with respect to material errors, omissions and misrepresentations. To guarantee this reasonableness of assumptions all data that is used in the GHG emission reduction calculations have been reviewed without any sampling.

Through a contract, dated 07/09/2022, Re Carbon Ltd. was appointed by “Zlatar Mramorak Doo.” to perform the validation of the “Mramorak 1&2 Bundled Biogas Power Plants”. The objective of this validation activity was to assess, with objective evidence:

- if the BCR-PD version 1.5 dated “24/08/2023” conforms with the requirements of the BCR Standard 3.0 and the approved methodology
- if the project activity conforms with the applied tools, and
- if the data reported in the BCR-PD are complete and transparent.

The scope of the validation is the independent and objective review of the estimated GHG reductions.

The project activity and the BCR-PD are assessed against the requirements of Article 12 of the Kyoto Protocol, CDM Modalities and Procedures as agreed upon in the Marrakech Accords under decision 3/CMP.1., the annexes to this decision, “AMS-III.AO: Methane recovery through controlled anaerobic digestion, Version 1.0”, “AMS-I.D.: Grid connected renewable electricity generation, Version 18.0”, subsequent decisions and guidance made by COP/MOP & CDM Executive Board and other related rules, all according to the guidance given in the CDM Validation and Verification Standard for project activities version 3.0, CDM Project Standard for Project Activities version 3.0, and BCR version 3.0.

The only purpose of the validation process is its usage during the registration process as a part of the BCR project cycle. Therefore, Re Carbon Ltd. cannot be held liable by any party for decisions made or not made based on the validation opinion, which will go beyond that purpose.

The Validation Schedule for this project activity is given in Table 3-1 below:

Table 3-1: Validation Schedule

Activity	Timeline		Total Days
	From	To	
Desk Review	6.11.2022	17.06.2023	224
Review of the PD version 01	6.11.2022	27.03.2023	142
Site Visit	7.11.2022	7.11.2022	1
Issuance of the Validation Protocol version 01	27.03.2023	27.03.2023	1
Review of PPs Initial Set of Responses	21.04.2023	23.04.2023	3
Issuance of the Validation Protocol version 02	23.04.2023	23.04.2023	1
Review of PPs Second Loop Responses	4.06.2023	5.06.2023	2
Issuance of the Validation Protocol version 03	5.06.2023	5.06.2023	1
Review of PPs Third Loop Responses	16.06.2023	17.06.2023	2
Closing of all the CARs and CLs	17.06.2023	17.06.2023	1
Issuance of the Validation Report version 01	17.06.2023	17.06.2023	1
ITR Process	17.06.2023	26.06.2023	10
Issuance of the Validation Report version 02	26.06.2023	26.06.2023	1
Submission for Final Approval	2.07.2023	3.07.2023	2
Submission to the PP	3.07.2023	4.07.2023	2
BCR Review Round 1_ Validation Report version 03	24.08.2023	24.08.2023	1

3.2 Validation team

The appointment process of the validation team considers the technical area(s), sectoral scope(s), and relevant host country experience required amongst team members for the accurate and thorough assessment of the project design. The relevant BCR validation and previous ITR experiences are also assessed during the selection of the team members and the Independent Technical Reviewer (ITR), respectively. The validation team and ITR were assigned to this validation activity on 01/09/2022 (with a team change on 01/10/2022), taking all the above factors into consideration and as a result of the contract review process.

The validation team members and ITR are given in Table 3-2 below:

Table 3-2: Validation team and ITR details

Name	Role	Host Country Experience	Scope Coverage	Technical Expertise	Financial Expertise	Involv.
Sandeep Kanda	Team Leader	☒	☒	☒	☒	A, DR, RA, R

Öykü Yakupoğlu	Trainee Validator	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	A, DR, SV, R
Dragomir Vasic	Regional Expert	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	DR, SV, R
Dr. Seza Danışoğlu	Financial Expert	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	DR, R
Rohit Badaya	ITR	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	ITR

* Explanations for the abbreviations used for involvement types are as follows:

A : Administrative

DR : Desk Review

SV : Site Visit

RA : Remote Assessment

R : Reporting

ITR : Independent Technical Review

3.3 *Level of assurance and materiality*

Re Carbon Ltd. hereby confirms that the reasonableness of assumptions of this validation report is reasonable, with respect to material errors, omissions and misrepresentations. To guarantee this reasonableness of assumptions all data that is used in the GHG emission reduction calculations have been reviewed without any sampling.

3.4 *Sampling plan*

N/A (The sampling approach is not used.)

4 **Validation procedures and means**

4.1 *Preliminary assessment*

As part of this preliminary assessment, the validation team requested the project holder for sufficient information to determine the purpose and scope of the validation considering the following:

- if the GHG project corresponds to a type of project eligible for the Certification Program,
- if the GHG project applies a methodology eligible under the requirements of the Certification program,
- if the monitoring plan complies with the methodology applied by the GHG project,
- if the determination of the baseline considers the considerations provided by the BIOCARBON REGISTRY Program and by existing sectoral and national regulations.

The scope of the validation is the independent and objective review of the Project Document Template (PD). The PD is reviewed against the relevant criteria (see section 2) and decisions by the BCR Organization, including the approved baseline and monitoring methodology. The validation was based on the guidance given in the CDM Validation and Verification Standard for project activities version 3.0, CDM Project Standard for project activities version 3.0, and BCR Standard version 3.0.

The validation team has employed a risk-based approach to assess the completeness and accuracy of the claims and conservativeness of the assumptions in the PD. The focus of the validation team is to identify significant risks for the project implementation and the generation of VCCs. The validation is not meant to provide any consulting towards the project participants. However, stated requests for clarifications and/or corrective actions may have provided input for improvement of the project design.

The only purpose of the validation is its usage during the registration process as part of the BCR project cycle. Therefore, Re Carbon Ltd. cannot be held liable by any party for decisions made or not made based on the validation opinion that go beyond that purpose.

4.2 Document review

The basis for the validation activity is the PD version 1.0, dated 09/02/2023, which was submitted to the validation team on the same day. This PD was revised several times due to the raised CARs and CLs, with version 1.5 dated 24/08/2023 being the final version. The PD was assessed against:

- AMS-III.AO: Methane recovery through controlled anaerobic digestion, Version 1.0
- AMS-I.D.: Grid connected renewable electricity generation, Version 18.0
- AMS-III.D. Small-scale methodology: Methane recovery in animal manure management systems, Version 21.0
- Tool 01: Tool for the demonstration and assessment of additionality, Version 7.0.0
- Tool 04: Emissions from solid waste disposal site Version 8.0

- Tool 07: Tool to calculate the emission factor for an electricity system, Version 7.0
- Tool 20: Assessment of debundling for small-scale project activities, Version 04.0
- Tool 21: Demonstration of additionality of small-scale project activities, Version 13.1
- Tool 27: Investment Analysis Version 12.0
- Annex 24 “Attachment A of Appendix B
- the Host Country criteria
- CDM Validation and Verification Standard for project activities version 3.0
- CDM Project Standard for Project Activities version 3.0
- BCR Standard Version 3.0
- other relevant documents, rules and regulations listed in section 1.1 of this report

4.3 Interviews

During the validation period, follow-up interviews were performed by the validation team to further analyze the correctness and accurateness of the information provided.

The list of individuals who were interviewed during the validation on-site visit, executed on 07/11/2022 is given in Table 2-3 below:

Table 2-3: List of individuals interviewed

Reference Number	Means of Interview ¹	Full Name	Title	Organization
I01	SV	Dusan Dobrikovic	Director	BioGold Energy
I02	SV	Milan Mitrovic	General Manager	Zlatar Mramorak Doo.

¹ SV: Site visit; T: Telephone; E: E-mail; RA: Remote Assessment

Reference Number	Means of Interview ¹	Full Name	Title	Organization
I03	SV	Ersöz Erdoğan	Consultant	Kilittaşı Engineering
I04	SV	İncigül Erdoğan	Consultant	Kilittaşı Engineering
I05	SV	Nikola Sanrovic	Manager of Biogas	Zlata Mramorak Doo.
I06	SV	Pavlica Aleksandar	Mukhtar	Mramorak Village

4.4 On-site visit

As a part of the validation activities a physical site visit was executed to the project activity's location, details of which can be seen in Table 2-4 below:

Table 2-4: Site visit details

Date	07/11/2022	
Location	Mramorak, Belgrade	
Participant	Company Name	Role in the Organization / Role in the Site Visit
Dusan Dobrikovic	BioGold Energy	Director
Milan Mitrovic	Zlata Mramorak Doo.	General Manager
Ersöz Erdoğan	Kilittaşı Engineering	Consultant
İncigül Erdoğan	Kilittaşı Engineering	Consultant
Nikola Sanrovic	Zlata Mramorak Doo.	Manager of Biogas
Pavlica Aleksandar	Mramorak Village	Mukhtar
Dragomir Vasic	Re-Carbon Ltd.	Regional Expert
Öykü Yakupoğlu	Re-Carbon Ltd.	Trainee Validator

Sandeep (Remote)	Kanda	Re-Carbon Ltd.	Team Leader
Points Verified		Source of Information	
To confirm rightness of project description, as per BCR PD including project components and location		Document review and on-site visit interviews with the local stakeholders from Mramorak Village	
To check the project development and operation		Document review and on-site visit	
To interview with the local stakeholders about the project and its impacts		On-site visit interviews with the local stakeholders from Mramorak Village	

4.5 Clarification, corrective and forward actions request

The validation of the proposed BCR project activity includes the following phases:

- Assessment whether the project design of the proposed BCR project activity meets the relevant BCR requirements, via a desk review of the PD between 06/11/2022 and 17/06/2023.
- Assessment of the stakeholders’ comments and how these comments are implemented in the PD
- Assessment whether the applied methodology AMS-III.AO: Methane recovery through controlled anaerobic digestion (version 1.0) and AMS-I.D.: Grid connected renewable electricity generation (version 18.0) had been applied correctly, including the baseline selection and monitoring plan.
- Assessment of the additionality argument of the project activity against the rules and guidance given in “Tool 21: Demonstration of additionality of small-scale project activities, version 13.1”
- A physical site visit was executed on 07/11/2022 in order to assess the implementation process of the project activity and to confirm stakeholders’ comments.
- Assessment of data and calculation of greenhouse gas emission reductions.
- Issuance of the validation report
- Independent technical review (ITR)

- Approval of the validation report and request of registration

The Validation Protocol is used for the assessment of each requirement during the execution of validation activities and is given in Annex 5 of this validation report.

The Validation Protocol consists of Table 1 (BCR Project Description, BCR and CDM Validation Requirements)

The usage description of Table-1 in the Validation Protocol is explained in Table 4.5.1 below:

Table 4.5.1: Explanation about Table-1 in the Validation Protocol

Question	Reference	MoV*	Findings, comments, references and document sources	Draft & Final Conclusion
<i>The requirement related with the BCR project description and BCR and CDM validation Standards and/ or Procedures</i>	<i>Gives reference to the legislation or documents where the relevant requirement is found</i>	<i>Explains how conformance with question is investigated. Examples of means of validation are Document Review (DR), Interview (I) and Not Applicable (NA)</i>	<i>Is used to elaborate and discuss the question and/or conformance to the question by giving related references and document sources based on which the finding is issued or evidence is checked</i>	<i>Either acceptable based on the evidence provided (OK), non-compliance with the requirement (CAR), further clarification (CL) due to insufficient, unclear or not transparent information, forward action request (FAR) that needs to be solved during the first verification</i>

The Validation Protocol is written by the validation team in line with the descriptions above. All CARs, CLs and FARs are listed in a transparent and clear manner.

During the validation period, a Validation Protocol (attached in Annex 5 to this validation report) was used to submit the findings to the project participants.

In line with Re Carbon Ltd. internal terminology and BCR Standard version 3.0, the team reports the non-conformities in the forms of Corrective Action Requests (CARs), Clarification Requests (CLs) and Forward Action Requests (FARs). When and for which type of non-conformities CARs, CLs and FARs are issued are explained below.

The Validation team raises a CAR if one of the following occurs:

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

The Validation team raises a CL if information is insufficient or not clear or not sufficiently transparent to determine whether the applicable CDM and/or BCR requirements have been met.

The Validation team raises a FAR during the validation to highlight issues related to project implementation that require a review during the first verification of the project activity.

The appointment process of the validation team considers the technical area(s), sectoral scope(s), and relevant host country experience required amongst team members for the accurate and thorough assessment of the project design. The relevant BCR validation and previous ITR experiences are also assessed during the selection of the team members and the Independent Technical Reviewer (ITR), respectively. The validation team and ITR were assigned to this validation activity on 01/09/2022 (with a team change on 01/10/2022), taking all the above factors into consideration and as a result of the contract review process.

4.5.1 Clarification requests (CLs)

According to these principles, a total of 06 CLs were raised; all of which are listed in the Validation Protocol.

4.5.2 Corrective actions request (CARs)

According to these principles, a total of 39 CARs were raised; all of which are listed in the Validation Protocol.

4.5.3 Forward action request (FARs)

The Validation team raises a FAR during the validation in order to highlight issues related to project implementation that require review during the first verification of the project activity as explained in the Section 2.5.

According to these principles, no FARs were raised.

5 Validation findings

The Validation Protocol is written by the validation team in line with the descriptions above. All CARs, CLs and FARs are listed in a transparent and clear manner.

During the validation period, a Validation Protocol (attached in Annex 5 to this validation report) was used to submit the findings to the project participants.

In line with Re Carbon Ltd. internal terminology and BCR Standard version 3.0, the team reports the non-conformities in the forms of Corrective Action Requests (CARs), Clarification Requests (CLs) and Forward Action Requests (FARs). When and for which type of non-conformities CARs, CLs and FARs are issued are explained below.

The Validation team raises a CAR if one of the following occurs:

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

The Validation team raises a CL if information is insufficient or not clear or not sufficiently transparent to determine whether the applicable CDM and/or BCR requirements have been met.

The Validation team raises a FAR during the validation to highlight issues related to project implementation that require a review during the first verification of the project activity.

According to these principles, a total of 39 CARs, 06 CLs and 00 FARs were raised; all of which are listed in the Validation Protocol.

5.1 Project description

“Mramorak 1&2 Bundled Biogas Power Plants” project is operated by “Zlatar Mramorak Doo.”. Project received electricity generation license from the Ministry of Mining and Energy of Serbia. Mramorak 1 received its license (the latest one) on 17/06/2020 by the

“Zlatar Mramorak Doo”. Mramorak 2 received its license (the latest one) on 05/03/2021 by the “BioGold Energy Doo”. Both companies are owned by the same parent company, “Almex Doo”. However, full rights of the carbon credits will be given to “Zlatar Mramorak Doo”. A signed and sealed letter (dated 05/04/2023) has been provided by “BioGold Energy Doo.” to state that “All VERs rights will be given to Zlatar Mramorak Doo.”.

Mramorak 1 began generating electricity and supplying the Serbian EPS grid on the start date. After examining the project site and approving the Mramorak 1 plant, the Ministry of Mining and Energy prepared the latest electricity generating license (17/06/2020 with the number 312-01-00353/2020-06) and permitted the project to feed the Serbian EPS grid. The amended license/approval document is mailed to the Zlatar Mramorak Doo. by the Ministry of Mining and Energy. After one week, Zlatar Doo received the message and began feeding the Serbian EPS grid the next day. This is how the government works in the Republic of Serbia. As a result, the date of grid feeding (i.e. 24/06/2020) is regarded as the operation start date and the project crediting period. Same procedure has been applied to Mramorak 2 as well. The operation date of Mramorak 2 is the date on which the project owner received the amended generating license (05/03/2021 with the number 312-01-00021/2021-06) from the Ministry of Mining and Energy. For, Mramorak 2, the mail was received on 26/03/2021, and this is the commissioning date of the Mramorak 2 operation. Briefly, the commissioning dates are 24/06/2020 and 26/03/2021 for Mramorak 1 and Mramorak 2, respectively. The start date of the crediting period is, therefore, 24/06/2020.

The project activity is located in Mramorak Village, on the eastern part of Belgrade, Republic of Serbia. The project activity consists of two identical biogas power plants, implementing anaerobic treatment process to organic wastes to reduce the GHG emissions and supply clean electricity to Serbian Electrical Power Supply (EPS) grid. The project uses manure from cattle farms, non-hazardous food wastes, plant wastes and agricultural plant residues. However, carbon credits will be requested only for cattle manure and non-hazardous food wastes. There are 2 cattle farms where the cattle manure is taken from. One of them is “Zlatar Mramorak farm” where the central treatment plants are located (it is owned and operated by the project owner) and the other one is “Stari Tamiš farm” (18.5 km away from the project site). Non-hazardous food wastes come from various entities from Belgrade, such as hotels, shopping centers, restaurants and so on. The food wastes and the manure from Stari Tamiš farm are transported by non-permeable trucks by the project owner to the project site.

Prior to the implementation of the project activity, manure from Mramorak and Stari Tamiš cattle farms was held in open anaerobic lagoons, where it degraded anaerobically and released methane into the atmosphere. Non-hazardous food wastes from restaurants, hotels, and shopping malls in Belgrade were left to decompose anaerobically in a solid waste disposal site (SWDS-landfill) and released methane into the environment. Plant wastes were kept in open lagoons and allowed to decompose anaerobically. Plant residues were fed to cattle at the Stari Tamiš and Zlatar cattle farms. Furthermore, prior to the project activity, the renewable electricity generated by the project activity would be used

from the carbon-intensive Serbian national EPS grid system, which is dominated by fossil-fuel-based power plants.

Each biogas plant has one gas engine with installed capacity of 0.999 MWe installed capacity. Therefore, the total installed capacity of “Mramorak 1&2 Bundled Biogas Power Plants” is 1.998 MWe. Mramorak 1&2 project, approximately, generates net amount of 15,500 MWh of renewable electricity annually as per the generation license. The project activity has two major technological components: Anaerobic digesters and co-generation units. Organic waste is anaerobically digested by main- and post-digesters, and co-generation units provide renewable power and heat. The digestate effluent from the post-digester units was converted into a nutrient-rich organic fertilizer, which the project owner used as fertilizer.

The technical features of the gas engines are as follows:

Brand	Northeast – Western Energy Systems
Model	Jenbacher
Model Type	J320 GS BL
Fuel Type	Biogas
Electrical Output	1,059 kW
Thermal Output	4,954 MBTU/hr

The technical features of the gas engines have been confirmed by the validation team with examining the technical document of Northeast – Western Energy Systems/ J320 GS BL.

The estimated emission reduction is 23,083 tCO₂ annually, and the total estimated emission reduction is 161,587 tCO₂ for the first crediting period.

5.2 Project type and eligibility

The information presented by the GHG project holder complies with the conditions established in the BCR Standard and Validation and Verification Manual. The scope, the project type, the project activities and the project scale are correctly described in the PD version 1.4, dated 24/06/2023 in accordance with the BCR Standard.

Table 1. Project type and eligibility

Eligibility criteria	Evaluation by validation body
Scope of the BCR Standard	<p>The following greenhouse gases, included in the Kyoto Protocol: Carbon Dioxide (CO₂), Methane (CH₄) and Nitrous Oxide (N₂O). GHG projects using a methodology developed or approved by BioCarbon Registry, applicable to activities in the energy, transportation and waste sectors.</p> <p>Quantifiable GHG emission reductions generated by the implementation of activities in the energy, transportation and waste sectors.</p> <p>CAB (VVB) confirmed that these scopes are in the line with the project.</p>
Project type	<p>Waste management disposal energy sector</p> <p>CAB (VVB) confirmed that correct project types are selected for project.</p>
Project activity(es)	<ul style="list-style-type: none"> • Bundled Biogas Power Plant • Activities in the energy sector • Activities related to Handling and disposing of waste <p>Validation Team confirmed that project activity as above.</p>
Project scale (if applicable)	<p>Small-scale</p> <p>CAB (VVB) confirmed that scale of the project activity correct based on CDM Annex 21 conditions given that it has an annual emission reduction less than 60k tCO₂ with an installed capacity less than 15 MW.</p>

5.3 Grouped project (if applicable)

Mramorak 1&2 project consist of bundled project by bundling two identical biogas power plant systems. It is not a grouped project as per the definition provided in the BioCarbon Registry Voluntary Carbon Market Standard, Version 2.0, Nov 2022.p.36.

5.4 Other GHG program

CAB (VVB) has checked the I-REC Registry (<https://register.evident.global/device-register>), project is not registered to I-REC Registry, so there is no double counting in the

project for this credit period dated 07/09/2009-06/09/2019. A declaration about double counting has been provided by project owner. Similarly, GS project database (<https://registry.goldstandard.org/projects?q=&page=1>), VCS (<https://registry.terra.org/app/search/VCS/All%20Projects>) and GCC project database (https://projects.globalcarboncouncil.com/pages/submitted_projects) were checked for double counting and this project isn't available within GS and GCC projects' databases, either. Given that CDM projects are not applicable in Turkey and the project does not appear on domestic REC scheme, I-REC other registries. The project does not participate under any emission trading program and other GHG Programs including renewable energy certificates (RECs) and this is also confirmed. It could be confirmed that no RECs and other VER carbon credits are being issued for the project at the time of this process.

5.5 Quantification of GHG emission reductions and removals

The emission reduction calculation estimations have been done in the PD as per the latest approved version of the methodology AMS-III.AO (v1.0), AMS-I.D (v18.0) and AMS-III.D (v21.0). For the calculation of the baseline emission, emissions of methane emissions from AWMS, and emissions associated with electricity generation are calculated.

As per the applied methodology, the parameters determined ex-ante and not monitored have been assessed as follows:

GWPC_{CH₄} Global Warming Potential (GWP) of CH₄ (28) as per IPCC 5th Assessment Report (AR5);

DCH₄ CH₄ density (0.00067 t/m³ at 20 °C and 1 atm pressure as per AMS-III.D Ver. 21;

UF_b Model correction factor to account for model uncertainties (0.94) as per AMS-III.D Ver. 21;

MCF_j Methane Conversion Factors (MCF) values for the specific manure management system identified using 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 4, Chapter 10, Table 10.17; the identified manure management system is uncovered anaerobic lagoon, the applied value (73%) is the correct value for the average annual temperature at the project site (11.4 °C);

Bo,LT Maximum methane producing potential of the volatile solid generated for animal (m³ CH₄/kg dm) "Dairy Cow" (0.24) and "Non-dairy or other cattle" (0.17) using default values from the 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 4, Chapter 10, Table 10.16A respectively. The value is correctly applied being the methane producing potential of the volatile solid generated for the animals in Eastern Europe and being the correct livestock category as checked during onsite visit;

VSLT_y Volatile solids production/excretion per animal of livestock LT in year y (on a dry matter weight basis, kg-dm/animal/year) "Dairy Cow" (4.5) and "Non-dairy or other

cattle” (2.7) using default values from the 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 4, Chapter 10, Table 10A-4 and Table 10A-5 respectively.

$MS_{Bl,j}$ Fraction of manure handled in baseline animal manure management system j (100%), as all the waste is used in the project.

$EF_{CO_2,transport}$ CO₂ emission factor of the fossil fuel type f used in transportation vehicles, diesel is appropriately considered and the emission factor (74100 kg/TJ) and net calorific value (43 TJ/Gg) as per 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 2, Chapter 1, Table 1.4 and Table 1.2 respectively;

$\rho_{i,t}$ Density of methane considered at reference conditions (0.716 kg/m³) as per TOOLo6

$TDL_{j,y}$ Average technical transmission and distribution losses for providing electricity to source j in year y considered as default (20%), as per "Tool 05 Methodological tool: Baseline, project and/or leakage emissions from electricity consumption and monitoring of electricity generation";

$LFAD$ Methane emissions due to physical leakages from the digester estimated using a default factor of 0.05 m³ biogas leaked/m³ biogas), as per AMS-III.AO Ver. 01;

The combined margin emission factor is calculated as per the Tool 07: Tool to calculate the emission factor for an electricity system (v07.0). Combined margin (CM) consists of the combination of operating margin (OM) and build margin (BM) as per the applied tool. The relevant formula is as follows:

$$EF_{grid,CM,y} = EF_{grid,OM,y} \times w_{OM} + EF_{grid,BM,y} \times w_{BM}$$

As per Tool 07, 6 steps are followed to calculate the emission factor of the project activity. The steps are specified in the BCR-PDD and each of them is applied sequentially:

Step 1: Project electricity system is the national Serbian grid system which is called as Electrical Power industry Serbia (EPS). There is only one power grid system in Republic of Serbia and all connected power plants are included in the project boundary.

Step 2: Option 1 is chosen and only grid-connected power plants are included in the calculation.

Step 3: Simple OM is chosen to calculate the OM factor of the project activity. The Simple OM method can only be used where low-cost/must run resources constitute less than 50% of total grid generation in recent five years. Low-cost/must-run (LCMR) resources constitute less than 50 per cent of total grid generation (excluding electricity generated by off-grid power plants). This is a valid statement for Serbian EPS system. Hence, Simple OM may be chosen for determining OM .

Step 4: Based on the availability of the data, option A is chosen to calculate the OM value. The validation team has reviewed the calculations and the relevant values (e.g. $FC_{i,m,y}$, $NCV_{i,y}$ and so on) for the OM calculation. The calculations and the values of the relevant parameters (as per the provided references) are done correctly. The validation team reproduced the calculations which are in the ER Calculation Excel sheet. As a result, $EF_{grid,OM,y}$ value is calculated as “1.078674742 tCO₂/MWh”.

Step 5: As per the Tool 07, based on the vintage of data, option 1 is chosen to calculate the BM value. Although Option 1 is chosen, data requirements for calculating build margin are not available. “Electric Power Industry of Serbia Environmental Reports”, which are the only publicly available documents, do not provide capacity additions and electricity generation of these added power units to the Serbian EPS grid system. When data requirements for calculating build margin is not available, as per the Figure 5 of the Tool 07, following conditions are followed:

Are data to determine OM available? YES, then;

Are data to determine BM available? NO, then,

Is grid located in LDC/SIDs/URC or is the grid an isolated system? NO. The Serbian EPS grid system is not located in LDC/SIDs/URC or the grid is not an isolated system. Then,

Simplified CM Based on default BM EF.

Step 6: As per the Simplified CM, “If the project activity is located in: (i) a Least Developed Country (LDC); or in (ii) a country with less than 10 registered CDM projects at the starting date of validation; or a Small Island Developing States (SIDS), the combined margin calculated using equation (16) above with the following conditions:

(a) $w_{BM} = 0$;

(b) $w_{OM} = 1$;

The weighting (w_{BM}) of the BM emission factor is determined to be 0, since the project activity is located in a country with less than 10 registered VER projects (total 8 projects) at the starting date of validation .

Therefore, weightage for OM is 100% and weightage for BM =0%.

$$EF_{grid,CM,y} = 1.078674742 \times 1 + EF_{grid,BM,y} \times 0$$

The grid emission factor has been calculated as 1.078674742 tCO₂/MWh.

When considering the applied methodology, for the 7-year crediting period, the estimations are:

- The total baseline emissions: 194,709 tCO₂e
- The total project emissions: 33,122 tCO₂e
- The total emission reductions: 161,587 tCO₂e

The calculations are accepted by the CAB (VVB).

5.5.1 *Start date and quantification period*

Project start date is 24.06.2020 when the Mramorak 1 started to operation. Quantification period for the project activity is 7 years renewable twice. Therefore, first quantification period is 24.06.2020-23.06.2027 with both days inclusive, renewable twice, which are in the line with the BCR requirements

5.5.2 *Application of the selected methodology and tools*

5.5.2.1 Title and Reference

The applied methodologies for the project activity are “AMS-III.AO: Methane recovery through controlled anaerobic digestion”, Version 1.0 and “AMS-I.D.: Grid connected renewable electricity generation”, Version 18.0 which are the most recent versions of the methodologies.

The project activity applies approved small scale methodologies “AMS-III.AO: Methane recovery through controlled anaerobic digestion”, Version 1.0 and “AMS-I.D.: Grid connected renewable electricity generation”, Version 18.0 and the associated tools:

- Tool 01: Tool for the demonstration and assessment of additionality, version 07.0
- Tool 03: Tool to calculate project or leakage CO₂ emissions from fossil fuel combustion, version 03.0
- Tool 04: Emissions from solid waste disposal site, version 08.0
- Tool 06: Project emissions from flaring, version 04.0
- Tool 07: Tool to calculate the emission factor for an electricity system, version 07.0
- Tool 21: Demonstration of additionality of small-scale project activities, version 13.1
- Tool 27: Investment Analysis Version, version 12.0

According to “AMS-III.AO: Methane recovery through controlled anaerobic digestion”, Version 1.0 and “AMS-I.D.: Grid connected renewable electricity generation”, Version 18.0, the latest approved tools shall be referenced in the PD like, “Tool to calculate the emission factor for an electricity system” (Version 07.0), “Emissions from solid waste disposal site”

(version 08.0) which are the latest versions of the mentioned tools valid at the starting time and the above tools are applied to the BCR-PD. Therefore, it could be concluded that the title, version and reference of the methodology including the associated tools are correct and valid.

5.5.2.2 Applicability

Re Carbon Ltd. has assessed the relevant information contained in the BCR-PD with on-site visit and evidence obtained against the application criteria listed in the methodologies AMS-III.AO version 1.0 and AMS-I.D version 18.0. The applicability conditions of these methodologies are justified as below:

For AMS-III.AO, version 1.0:

- The project activity uses manure from cattle farms, non-hazardous food wastes, plant wastes and agricultural plant residues as waste sources. These wastes are treated at the project site to avoid the emissions of methane to the atmosphere that would have otherwise been left to decay anaerobically in a solid waste disposal site (SWDS), or in an animal waste management system (AWMS). This information has been confirmed by the validation team with interviewing with the project owner and the mukhtar of Mramorak village during the on-site visit dated 07/11/2022.
- In the project activity, the wastes are introduced through anaerobic digestion in closed reactors equipped with biogas recovery and combustion/flaring system. During the on-site visit, the installed equipment was examined. Therefore, the validation team has confirmed this information via the on-site visit.
- Project uses more than one type of substrate, which are cattle manure, plant based organic wastes (starch waste, liquid starch waste, CSL), plant residues (silage corn and silage barley) and non-hazardous food wastes. These organic wastes would otherwise have been treated in an anaerobic treatment system without biogas recovery. This information has been confirmed by the validation team via interviewing with the mukhtar of Mramorak village during the on-site visit.
- In the baseline scenario, manure is left to decay in open lagoons for extended periods of time (> 1 month) under anaerobic conditions. Municipal solid waste (non-hazardous food waste) was sent to the SWDSs and where it would have been decayed anaerobically. These are the common practice activities around the region. The baseline scenario was confirmed via the interviewing with the project owner (who own “Zlatar Mramorak Farm”). Also, the open lagoons were seen during the on-site visit.
- Project does not recover or combust landfill gas and does not undertake controlled combustion of waste that is not treated biologically in a first step. During the on-site visit, the installed equipment was examined. Therefore, the validation team has confirmed this information via the on-site visit.

- Project is a small-scale activity with an annual emission reduction less than 60k tCO₂ (24,874 tCO₂/year is estimated).
- The project activity co-digests the cattle manure. Project activities for co-digestion of animal manure shall also meet the requirements under paragraphs 1 and 2(c) of AMS-III.D.
- Baseline open anaerobic lagoon treatment system of cattle manure is replaced with controlled anaerobic digestion system and generated methane from anaerobic digestion is destructed via the combustion for generating renewable electricity which is supplied to the grid. This information has been confirmed during the on-site visit.
- Maximum distance from the where the food waste is transported is 186 km. This information has been confirmed by the validation team via interviewing with the project owner during the on-site visit.
- Solid part is stored after the mechanical separation on a concrete layer. Solid phase is taken away every second or third day by tractor, and goes to the field for composting to be later used as fertilizer. In autumn, this compost is spread to the field. Liquid part of the digestate flows to the open lagoon located in the vicinity of the project site through underground pipes. Lagoon is covered with an impermeable polyethylene film which does not allow leakage of waste water down to the ground. Digestate stays at the lagoon until autumn. Every autumn it is taken from the lagoon with special machines. A tractor spreads it on the field about 15 cm in dept. In spring, it is cultivated to the farm fields as fertilizer. This information has been confirmed by the validation team via interviewing with the mukhtar of Mramorak village and the employees during the on-site visit. Also, the project area was examined with respect to the solid and liquid remains.
- Residual waste from the digestion is not treated thermally/mechanically. This information has been confirmed during the on-site visit.
- Outflow from digestion is used as fertilizer on the farm lands, not discharged to a subsequent wastewater treatment system or to the natural water receiving body. This information has been confirmed via interviewing with the mukhtar of Mramorak village.
- Biogas is collected in tanks where it is sent to the gensets for combustion. The project entails the combustion of biogas for energy production. A flaring system is included in the project activity in case where biogas pressure exceeds safety limits. Combustion units and flare systems were seen during the on-site visit for both Mramorak 1 and Mramorak 2.

For AMS-I.D, version 18.0:

- This project activity produces electricity from biogas and supplies it to the Serbian EPS grid system. This information has been confirmed via the generation licenses of Mramorak 1 and Mramorak 2.

- Project activity is a new Greenfield plant. Mramorak 1 and Mramorak 2 projects are newly installed at the project site. The KMZ file of the project activity has been provided by the project owner. When looking from the KMZ file for the project area before 2020, it is confirmed that the area was empty.
- The project activity is a biogas power plant (not a hydropower plant.)
- Project activity has no non-renewable component. This information has been confirmed during the on-site visit.
- The total installation capacity of the project activity is 1.998 MWe (less than 15 MW). This information has been confirmed via the generation licenses of Mramorak 1 and Mramorak 2.
- Operation of electricity generation gas engines produce heat as a side product and this heat is used to heat the digesters.
- Project does not use biomass sourced from dedicated plantations. This information has been confirmed during the on-site visit.
- Project does not involve any co-generation in the process of energy generation. This information has been confirmed during the on-site visit.

Moreover, the applied tools have been assessed with on-site visit and evidence obtained against the application criteria listed in the referred tools which are Tool 01, Tool 03, Tool 04, Tool 06, Tool 07, Tool 21, and Tool 27:

- Tool 01 Tool for the demonstration and assessment of additionality (version 07.0.0): The applied methodology AMS-III.AO (version 1.0) and AMS-I.D (version 18.0) refer this tool to demonstrate additionality of the project activity. Also this tool refers to the investment analysis tool.
- Tool 03 Tool to calculate project or leakage CO₂ emissions from fossil fuel combustion (version 03.0): Manure is collected from various sites via trucks. This situation has been confirmed by the validation team during the on-site visit.
- Tool 04 Emissions from solid waste disposal site (version 08.0): Mramorak1&2 project avoids disposal of municipal waste (wet based) to SWDSs.
- Tool 06 Project emissions from flaring (version 04.0): Open flare equipment is used in the project site. This flare was seen during the on-site visit. Methane has the biggest concentration in produced biogas with a concentration of around 55%. The SCADA system was examined during the on-site visit. The source of the residual gas is a gas from a biogenic source (i.e. biogas). Auxiliary fuels are not used in project activity and this situation has been confirmed by the validation team during the on-site visit. Residual gas has sufficient flammable gas present (around 55% methane).

- Tool 07 Tool to calculate the emission factor for an electricity system (version 07.0): Because the project activity generates electricity to the national grid according to the connection agreement, this tool can be applied to calculate the emission factor. Also, Republic of Serbia, is not an Annex 1 country.
- Tool 21 Demonstration of additionality of small-scale project activities (version 13.1): The project activity is a small-scale project activity (1.998 MWe < 15 MWe). Therefore, Tool 21 is applied to demonstrate additionality for the project activity.
- Tool 27 Investment Analysis (version 12.0): Tool 01 “Tool for the demonstration and assessment of additionality”, Version 07.0.0 is used for additionality.

5.5.2.3 Methodology deviations (if applicable)

N/A (There is no methodology deviation.)

5.5.3 *Project boundary, sources and GHGs*

The project boundary consists of:

- Where the solid waste (including animal manure, where applicable) would have been disposed and the methane emission occurs in absence of the proposed project activity
- In the case of projects co-digesting wastewater, where the wastewater would have been treated anaerobically in the absence of the project activity
- Where the treatment of biomass or other organic matters through anaerobic digestion takes place
- Where the residual waste from biological treatment or products from those treatments, like slurry, are handled, disposed, submitted to soil application, or treated thermally/mechanically
- Where biogas is burned/flared or gainfully used, including biogas sale points, if applicable
- And the itineraries between them (a, b, c, d and e), where the transportation of waste, wastewater, where applicable manure, residual waste after digestion, or biogas occurs

All of them are presented in Figure 14 in Section 3.2.1 of the BCR-PD version 1.4, dated 24/06/2023.

There are no emission sources that are not addressed by the applied methodologies which are expected to contribute more than 1% of the annual emission reduction.

The generation electricity is transmitted to Turkish National Grid where all other power plants are connected to. All the units of the project activity are in line with the requirements of the applied methodologies: “AMS-III.AO: Methane recovery through

controlled anaerobic digestion, Version 1.0” and “AMS-I.D.: Grid connected renewable electricity generation, Version 18.0”.

5.5.3.1 Eligible areas in the GHG project boundaries (for AFOLU projects)

N/A.

5.5.4 *Baseline or reference scenario*

Electricity consumption is expected to rise dramatically until 2030 under the EPS grid system. To fulfill those demands, there is an urgent need to build additional power plants.

Baseline Scenario as per the AMS-III.AO: As per the methodology, “The baseline scenario is the situation where, in the absence of the project activity, biomass and other organic matter (including manure where applicable) are left to decay within the project boundary and methane is emitted to the atmosphere. The baseline emissions are the amount of methane emitted from the decay of the degradable organic carbon in the biomass and other organic matter. Baseline emissions shall exclude emissions of methane that would have to be captured, fueled or flared or gainfully used to comply with national or local safety requirement or legal regulations.”. With the project activity, all organic wastes processed in Mramorakı&2 biodigesters were left to decompose anaerobically. Cattle manure was dumped into an open anaerobic lagoon, where it decomposed anaerobically, and methane was released into the atmosphere. Uncovered anaerobic lagoon is one of the suggested methods by the Serbian laws for AWMSs . Non-hazardous food waste was dumped in SWDSs locations, releasing methane into the atmosphere.

Baseline scenario as per the AMS-I.D: As per the AMS-I.D., the baseline scenario is that “the electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources into the grid.”. Prior to the installation of the Mramorakı&2, the amount of renewable electricity generated by the project activities would be used to supplement the carbon-intensive Serbian national EPS grid system, which is dominated by fossil-fuel-based power plants. 2019, 2020 and 2021 electricity generation data of Serbia EPS grid system has shown that major source of electricity generation is from coal-fired power plants.

5.5.5 *Additionality*

The additionality of the project has been demonstrated using the “Demonstration of additionality of small-scale project activities” (version 13.1).

In accordance with the tool, identification of alternatives, compliance with national regulations, investment analysis (with using Tool 01 and Tool 27) and barriers (i.e. investment barrier) have been checked by the validation team through document review, on-site visit and interviews. Re Carbon Ltd. confirm that all data, rationales, assumptions and justifications presented in the PD and documentation provided by PP to support the demonstration of additionality are reliable and credible. Therefore, project activity is

additional as per “Demonstration of additionality of small-scale project activities” (version 13.1).

To demonstrate the investment barrier, an investment analysis has been conducted.

Investment Analysis

“Tool for the demonstration and assessment of additionality”, Version 07.0.0 is used and Project IRR is calculated for the financial analysis.

Project investment decision for both Mramorak 1 and Mramorak 2 biogas plants were taken on 26/07/2018 .

For the investment analysis, the Benchmark Analysis (Option III of Step 2 of Tool 27: Tool for the Demonstration and Assessment of Additionality) is selected in the PD. The same is accepted since simple cost analysis (Option I) and investment comparison analysis (Option II) are not appropriate in line with the tool. The project accrues financial benefits with the sale of electricity to the grid and the alternative baseline scenario of the proposed project is the continuation of the supply of electricity by the grid rather than a comparable investment project. Hence Re Carbon Ltd. Confirms that the adoption of Benchmark analysis (Option III) is appropriate.

In line with the requirements of CDM Tool 27: Investment Analysis, version 12.0, expected rate of return for waste handling and disposal projects for Republic of Serbia is given as 10.91%. This is used as the benchmark value for investment analysis. CAB (VVB) confirms the choice of benchmark as appropriate.

PP has calculated project IRR for a 21-year period, which is conservative. All the input parameters used in the financial analysis are taken from approved and trustworthy documents and all references are shown to the validation team. Re Carbon Ltd. compared the input parameters for the financial analysis included in the PDD and IRR spreadsheet with the parameters stated in the reference documents listed in below table and was able to confirm that the values applied are consistent with the values stated in the references. IRR input documents were valid at the time of investment decision. The inputs considered for the IRR calculations have all been verified, as follows:

Parameters	Unit	Data Value	Source of Data
Installed Capacity	MWe	1.998	Generation License
Investment Cost	€	10,833,933	External financial audit report

Operating Cost	€	1,792,700	External financial audit report
Electricity Sale Price	€ Cents/ kWh	18	Power Purchase Contract
Annual generation	MWh/year	15,500	Generation License
Corporate Tax Rate	%	15	Serbian Regulations
Commercial Loan Interest Rate	%	6	Bank Document
VAT	%	20	Serbian Regulations
Estimated Project Lifetime	Years	20	Tool 10

Project IRR has been calculated as 7.46 % in the absence of the carbon revenue. The Benchmark is 10.91% and it does clearly exceed the resulting Project IRR, thus rendering the project activity economically unattractive. The calculations were verified and found to be correct by Re Carbon Ltd. Similarly, the assumptions used in the calculations were deemed to be correct by Re Carbon.

Sensitivity analysis has been carried out for Investment Cost ($\pm 10\%$), Operation Cost ($\pm 10\%$), Electricity Price ($\pm 10\%$) and Energy Production ($\pm 10\%$). All the variables not included in sensitivity analysis, which constitute less than 20%, do not have material impact on the analysis. Reasonable variations of the above stated parameters were checked as in below:

Variable	1) Fluctuation					
	2)	-10%	3)	0%	4)	10%
5) Investment Cost (IRR %)	6)	8.76%	7)	7.46%	8)	6.35%

9) %)	Operation Cost (IRR	10)	9.49%	11)	7.46%	12)	5.32%
13) %) ²	Electricity Price (IRR	14)	4.03%	15)	7.46%	16)	10.61%
17)	Energy Production	18)	4.18%	19)	7.46%	20)	10.49%
	(IRR %)						

The proposed project activity is unlikely to be the most financially/economically attractive as indicated in the ‘Tool for Demonstration and Assessment of Additionality’ (Version 07.0.0), as per Sub Step 2c Para 42b. The additionality of the project activity has been assessed in the above section through investment analysis and it is concluded that a financially more viable alternative to the project activity would have led to higher emissions.

It is seen that project is not the most attractive option. Therefore, the project is considered as additional to the baseline scenario.

In conclusion, Re Carbon Ltd. confirms that this project activity is financially unattractive even after considering the possible fluctuation of the main parameters, and the above analysis is appropriate.

5.5.6 *Conservative approach and uncertainty management*

The director, who holds the position of General Manager of Zlatar Mramorak doo, the project owner, is in charge of carrying out the monitoring plan. The director will see to it that the monitoring parameters are appropriately tracked, documented, and archived. The accountant office is a natural entity that, as part of its operations, already archives some of the monitoring parameters. The accountant's office archives the average number of dairy and non-dairy cows, the value of the ndy, data on power generation and consumption, and fuel use by the vehicles. The Biogas Plant department keeps track of and records the volumetric flow rate of the collected biogas as well as the volumetric fraction of methane in the captured biogas.

Power meters built into the gas engine units at the Gas Station department will generate supplemental data that will be utilized to double-check the amount of electricity generated by the project activities. The project owner does not keep an eye on the power meters at the grid substation. The government-owned business that purchases power from

² Tariff price is 18 €cents/kWh. Electricity price will change after 10 years since the start date of the operation. But after tariff period of 10 years, electricity price 18 €cents/kWh is assumed. This is conservative approach.

the project owner is called EPS Distribucija doo, and it is in charge of these meters. The EPS Distribucija doo is in charge of all calibration and control of these power meters at the grid substation.

Estimating the project activity's emission reductions is the responsibility of the carbon consultant.

Throughout the study, all data for each monitoring parameter—both ex-post and ex-ante—will be saved and maintained for longer than five years.

For power meters are calibrated every 12 years in accordance with this rule. Please refer to the regulation's line "for direct and semi-indirect connection," number 29. The power meters installed at the substation in accordance with the regulations are the ones that are calibrated every 12 years. As per the regulations, power meters placed in the cogesters at the project activity are exempt from calibration equipment requirements (see to regulation number 28). Furthermore, the power meters at the substation run by EPS Distribucija Doo are not yet calibrated because the project began on June 24, 2020. On June 24, 2030, the first calibration will be used. Power meters installed by the manufacturer business are technically a part of the cogenerations and are located in the gas engine units.

Besides project's emission reduction calculations are based on CDM methodologies, AMS-III.AO and AMS-I.D. According to methodologies, calculations based on a conservative approach.

CAB (VVB) confirms that, information given above are correct and in the line with regulations.

5.5.7 Leakage and non-permanence

According to AMS-III.AO, "Leakage effects are to be considered (LEy) if the project technology is the equipment transferred from another activity or if the existing equipment is transferred to another activity." "Nothing from another activity was transferred to this project activity; everything was built from scratch. Leakage emission is therefore taken to be zero. LEy is equal to zero "The methodology is applicable to a programme of activities, no additional leakage estimations are necessary other than that indicated under leakage section above," according to AMS-I.D. Section 7.

Since the project activity does not employ biomass and makes no claims for the reduction of CO₂ emissions from plant residues, leakage is calculated based on zero according to AMS-I.D.

5.5.8 Mitigation results

Quantification of emission reductions of the project activity is calculated as per the AMS-III.AO and AMS-I.D. For waste handling and disposal component of the project activity, AMS-III.AO is used. Project also claims carbon emission reductions due to the replacement of the electricity from the Serbian EPS grid system with renewable electricity produced by the project activity. For renewable component, AMS-I.D. is used

CAB (VVB) confirmed that calculations are in the line with methodologies

5.5.8.1 GHG emissions reduction/removal in the baseline scenario

The emission reduction calculation estimations have been done in the PD as per the latest approved version of the methodology AMS-III.AO (v1.0), AMS-I.D (v18.0) and AMS-III.D (v21.0). For the calculation of the baseline emission, emissions of methane emissions from AWMS, and emissions associated with electricity generation are calculated.

As per the applied methodology, the parameters determined ex-ante and not monitored have been assessed as follows:

GWPC_{CH₄} Global Warming Potential (GWP) of CH₄ (28) as per IPCC 5th Assessment Report (AR5);

DCH₄ CH₄ density (0.00067 t/m³ at 20 °C and 1 atm pressure as per AMS-III.D Ver. 21;

UF_b Model correction factor to account for model uncertainties (0.94) as per AMS-III.D Ver. 21;

MCF_j Methane Conversion Factors (MCF) values for the specific manure management system identified using 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 4, Chapter 10, Table 10.17; the identified manure management system is uncovered anaerobic lagoon, the applied value (73%) is the correct value for the average annual temperature at the project site (11.4 °C);

Bo,LT Maximum methane producing potential of the volatile solid generated for animal (m³ CH₄/kg dm) "Dairy Cow" (0.24) and "Non-dairy or other cattle" (0.17) using default values from the 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 4, Chapter 10, Table 10.16A respectively. The value is correctly applied being the methane producing potential of the volatile solid generated for the animals in Eastern Europe and being the correct livestock category as checked during onsite visit;

VSLT_y Volatile solids production/excretion per animal of livestock LT in year y (on a dry matter weight basis, kg-dm/animal/year) "Dairy Cow" (4.5) and "Non-dairy or other cattle" (2.7) using default values from the 2019 Refinement to the 2006 IPCC Guidelines

for National Greenhouse Gas Inventories, Volume 4, Chapter 10, Table 10A-4 and Table 10A-5 respectively.

$MS_{Bl,j}$ Fraction of manure handled in baseline animal manure management system j (100%), as all the waste is used in the project.

$EFCO_{2,transport}$ CO₂ emission factor of the fossil fuel type f used in transportation vehicles, diesel is appropriately considered and the emission factor (74100 kg/TJ) and net calorific value (43 TJ/Gg) as per 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 2, Chapter 1, Table 1.4 and Table 1.2 respectively;

$\rho_{i,t}$ Density of methane considered at reference conditions (0.716 kg/m³) as per TOOLo6

$TDL_{j,y}$ Average technical transmission and distribution losses for providing electricity to source j in year y considered as default (20%), as per "Tool 05 Methodological tool: Baseline, project and/or leakage emissions from electricity consumption and monitoring of electricity generation";

$LFAD$ Methane emissions due to physical leakages from the digester estimated using a default factor of 0.05 m³ biogas leaked/m³ biogas), as per AMS-III.AO Ver. 01;

The combined margin emission factor is calculated as per the Tool 07: Tool to calculate the emission factor for an electricity system (vo7.o). Combined margin (CM) consists of the combination of operating margin (OM) and build margin (BM) as per the applied tool. The relevant formula is as follows:

$$EF_{grid,CM,y} = EF_{grid,OM,y} \times w_{OM} + EF_{grid,BM,y} \times w_{BM}$$

As per Tool 07, 6 steps are followed to calculate the emission factor of the project activity. The steps are specified in the BCR-PDD and each of them is applied sequentially:

Step 1: Project electricity system is the national Serbian grid system which is called as Electrical Power industry Serbia (EPS). There is only one power grid system in Republic of Serbia and all connected power plants are included in the project boundary.

Step 2: Option 1 is chosen and only grid-connected power plants are included in the calculation.

Step 3: Simple OM is chosen to calculate the OM factor of the project activity. The Simple OM method can only be used where low-cost/must run resources constitute less than 50% of total grid generation in recent five years. Low-cost/must-run (LCMR) resources constitute less than 50 per cent of total grid generation (excluding electricity generated by off-grid power plants). This is a valid statement for Serbian EPS system. Hence, Simple OM may be chosen for determining OM .

Step 4: Based on the availability of the data, option A is chosen to calculate the OM value. The validation team has reviewed the calculations and the relevant values (e.g. $FC_{i,m,y}$, $NCV_{i,y}$ and so on) for the OM calculation. The calculations and the values of the relevant parameters (as per the provided references) are done correctly. The validation team reproduced the calculations which are in the ER Calculation Excel sheet. As a result, $EF_{grid,OM,y}$ value is calculated as “1.078674742 tCO₂/MWh”.

Step 5: As per the Tool 07, based on the vintage of data, option 1 is chosen to calculate the BM value. Although Option 1 is chosen, data requirements for calculating build margin are not available. “Electric Power Industry of Serbia Environmental Reports”, which are the only publicly available documents, do not provide capacity additions and electricity generation of these added power units to the Serbian EPS grid system. When data requirements for calculating build margin is not available, as per the Figure 5 of the Tool 07, following conditions are followed:

Are data to determine OM available? YES, then;

Are data to determine BM available? NO, then,

Is grid located in LDC/SIDs/URC or is the grid an isolated system? NO. The Serbian EPS grid system is not located in LDC/SIDs/URC or the grid is not an isolated system. Then,

Simplified CM Based on default BM EF.

Step 6: As per the Simplified CM, “If the project activity is located in: (i) a Least Developed Country (LDC); or in (ii) a country with less than 10 registered CDM projects at the starting date of validation; or a Small Island Developing States (SIDS), the combined margin calculated using equation (16) above with the following conditions:

(a) $w_{BM} = 0$;

(b) $w_{OM} = 1$;

The weighting (w_{BM}) of the BM emission factor is determined to be 0, since the project activity is located in a country with less than 10 registered VER projects (total 8 projects) at the starting date of validation .

Therefore, weightage for OM is 100% and weightage for BM =0%.

$$EF_{grid,CM,y} = 1.078674742 \times 1 + EF_{grid,BM,y} \times 0$$

The grid emission factor has been calculated as 1.078674742 tCO₂/MWh.

When considering the applied methodology, for the 7-year crediting period, the estimations are:

- The total baseline emissions: 194,709 tCO_{2e}
- The total project emissions: 33,122 tCO_{2e}
- The total emission reductions: 161,587 tCO_{2e}

The calculations are accepted by the CAB (VVB).

5.5.8.2 GHG emissions reduction/removal in the project scenario

GHG emission reduction and removal information included in Section 5.5.8.1.

5.6 Monitoring plan

The monitoring parameters are in line with the applied methodologies and include the following:

- f_y : Fraction of methane captured at the SWDS and flared, combusted or used in another manner that prevents the emissions of methane to the atmosphere in year y (fraction)
- $W_{j,x}$: Amount of solid waste type j disposed or prevented from disposal in the SWDS in the year x (ton/year)
- $N_{LT,y}$: Annual average number of animals of type LT in year y (number)
- $MS_{\%BI,j}$: Fraction of manure handled in baseline animal manure management system j (fraction)
- $Q_{manure,y}$: Quantity of raw waste/manure treated and/or wastewater co-digested in the year y (tonnes)
- $Q_{SWDS,y}$: Quantity of raw waste/manure treated and/or wastewater co-digested in the year y (tonnes)
- $Q_{res\ waste,y}$: Quantity of residual waste produced in year y (ton)
- CT_y : Average truck capacity for transportation (tonnes/truck)
- $CT_{res\ waste,y}$: Average truck capacity for residual transportation (tonnes/truck)
- DAF_w : Average incremental distance for raw solid waste/manure and/or wastewater transportation (km/truck)
- $DAF_{res\ waste,y}$: Average distance for residual waste transportation (km/truck)
- $FC_{i,f}$: Specific consumption of fuel type f in volume or mass units per km for vehicle type i (kg/km)

- nd_y : Number of days the central treatment plant was operational in year y (number)
- $FV_{RG,h}$: Volumetric flow rate of the captured biogas in dry basis at normal conditions in hour h (m^3/hr)
- $FV_{CH_4,RG,h}$: Volumetric fraction of methane in the captured biogas on dry basis in hour h (fraction)
- $EG_{PJ,y}$: Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the CDM project activity in year y (MWh)
- Average Annual Temperature of Belgrade ($^{\circ}C$)
- $V_{t,db}$: Volumetric flow of the gaseous stream in time interval t on a dry basis (m^3/hr)
- $V_{i,t,db}$: Volumetric fraction of greenhouse gas i in the gaseous stream in a time interval t on a dry basis (m^3/m^3)
- η_{flare} : Flare efficiency in the minute m (%)

The applied methodologies and tools refer to these monitoring parameters. Re Carbon Ltd. has checked Data Unit, Description, Source of Data, Description of the Measurement Method, Frequency of Monitoring, Value Applied, Monitoring Equipment, QA/QC Procedures, and Calculation Method of these parameters in the applied methodology and tools. All information for the monitoring parameters has been indicated correctly in the BCR-PDD.

Director, which is the General Manager of the project owner, Zlatar Mramorak doo, is responsible for implementing the monitoring plan. Director will ensure proper monitoring, recording and archiving of the monitoring parameters. Accountant office is the natural identity that already archives some of the monitoring parameters as part of its business.

Measuring data for electricity and methane volumes is done with calibrated meters. According to the monitoring methodology, the accumulated data on electricity meters, flow meters, and gas analyzer are recorded. All the data will be archived electronically and kept at least two years after the last crediting period.

The technical details of the gas analyzer, flow meters and the electricity meters are as follows:

- Gas Analyzer
 - Brand: Awite
 - Type: AwiFLEX Cool+

- Serial Number: 2774
- Flow Meters
 - Brand: Woodward
 - Type: TecJet 110
 - Serial Number: 22184210 (Mramorak 1) ; 21813660 (Mramorak 2)
- Electricity Meters
 - Main Meters:

Type: Landis+Gyr E650

Serial Number: 43 267 888 (Mramorak 1) ; 44 202 354 (Mramorak 2)

Accuracy Class: 0.5S

At the substation connecting to the Serbian EPS grid system, the following power meter equipment system with the following specifications: ST310FV(0.2) 3x58/100V 5-6A 15A23R55-SN00100 pbdqf kl.0.2 + GPRS/GSM modem CM23S-S2.

Serial numbers of power meters at the substation:

Mramorak 1	Mramorak 2
25 63 21	25 63 23

As the electricity is supplied to the Serbian grid and the meters are regulated, the electricity meters are subject to regular maintenance and testing in accordance with the stipulation of the requirements set by the grid operators or national requirements. The calibration of meters, including the frequency of calibration, is to be done in accordance with the national regulation “The Rulebook on the types of measuring instruments that are subject to legal control”. The accuracy class of the meters is in accordance with the requirements set by the grid operators or national requirements.

Electricity meters are calibrated every 12 years. For the meters installed at the project activity, located in the codigesters, there is no calibration requirement by

the law³. Since the project start date is 24/06/2020, those power meters at the substation operated by the EPS Distribucija Doo are not calibrated yet.

Flow meters and the biogas analyzer are calibrated every 5 years. These meters are called “gas meters” in the line 11 in the regulation. The first calibration to biogas flow meter and biogas analyzers will be applied in 24/06/2025⁴.

$EG_{PJ,y}$ (net amount of electricity generation by the project activity) will be provided by the EPS Distribucija Doo monthly invoices. As a cross-checked method, project owner will use own power meters located in the gas engine units.

Re Carbon Ltd. can certify that the list of parameters to be monitored is complete and consistent with AMS-III.AO (v1.0) and AMS-I.D (v18.0), and that the monitoring plan adheres to the monitoring methodology used.

The contribution of the project to SDG 7 is covered by the electricity metering. Further, for monitoring of contribution under SDG 8 the employment generation parameter is included too.

The validation team confirms that the monitoring plan can be properly implemented, that all monitoring arrangements are feasible within the project design as per the inspections of the on-site visit, and that the means of implementation of the monitoring plan, including data management and quality assurance and quality control procedures, are sufficient to ensure that the ERs to be achieved by the project activity can be properly reported and verified through document review and interview with the project owner.

³ <http://www.pravno-informacioni-sistem.rs/SlGlasnikPortal/eli/rep/sgrs/ministarstva/pravilnik/2021/37/4>

⁴ <http://www.pravno-informacioni-sistem.rs/SlGlasnikPortal/eli/rep/sgrs/ministarstva/pravilnik/2021/37/4>

5.7 Double counting avoidance

Since the avoiding of double counting tool was not available when this project report was completed, double counting assessment is performed as explained in "5.4 Other GHG program".

5.8 Compliance with applicable legislation

Mramorak 1&2 project was implemented in accordance with the Serbian national laws and regulations. Project received all necessary permissions from the related governmental organizations.

Applicable laws and regulations to the project activity:

- 1) The Law on Energy (Zakon O Energetici, "Sl. glasnik RS", br. 145/2014, 95/2018 - dr. zakon i 40/2021);⁵
- 2) Law on Energy Efficiency and Rational Use of Energy (Zakon o Efikasnom Korišćenju Energije, "Sl. glasnik RS", br. 25/2013 i 40/2021 - dr. zakon);⁶
- 3) Waste management law (Zakon o Upravljanju Otpadom, "Sl. glasnik RS", br. 36/2009 i 88/2010);⁷
- 4) Environmental Protection Law (Zakon O Zaštiti Životne Sredine, "Sl. glasnik RS", br. 135/2004, 36/2009, 36/2009 - dr. zakon, 72/2009 - dr. zakon i 43/2011 - odluka US);⁸
- 5) Law on Use of Renewable Energy Sources (Zakon o Korišćenju Obnovljivih Izvora Energije).⁹

Based on these laws, project received the following permissions and licenses to establish and operate the Mramorak 1&2 project.

- 1) **For generating the electricity:** Project received electricity generation license from the Ministry of Mining and Energy of Serbia. Mramorak 1 received its license on 27/11/2018 with the number of 312-01-01059/2018-06 by the Zlatar Mramorak Doo. Mramorak 2 received its license on 04/12/2018 with the number of 312-01-

⁵ <https://mre.gov.rs/dokumenta/sektor-za-elektroenergetiku/zakoni>.

⁶ <https://mre.gov.rs/dokumenta/sektor-za-energetsku-efikasnost-i-toplane/zakoni>.

⁷ Serbian Biogas Association, Legal Frameworks, <https://biogas.org.rs/en/legal-framework/>, Visited on 13 July 2022.

⁸ Serbian Biogas Association, Legal Frameworks, <https://biogas.org.rs/en/legal-framework/>, Visited on 13 July 2022.

⁹ <https://mre.gov.rs/dokumenta/sektor-za-zelenu-energiju/zakoni>.

01058/2018-06 by the BioGold Energy Doo.¹⁰ Both companies are 100% owned by the parent company, Almex doo.¹¹

Electricity generation licenses were revised later. Mramorak 1's revised license is dated as 17/06/2020 with the number of 312-01-00353/2020-06 and Mramorak 2's revised license is dated as 05/03/2021 with the number of 312-01-00021/2021-06.¹²

- 2) **For the storage and treatment of non-hazardous wastes:** Permit (with the registration number 12) was issued to the project owner, "Zlatar", by the Kovin Municipal Administration-Department for Urban Planning and Housing Communal Affairs based on the Law on Waste Management ("Official Gazette of the RS", No. 36/09, 88/10, 14/16 and 95/18 - other laws).

Evidences are provided in Appendix 501-56/2021-IV for Zlatar doo.

For the storage and treatment of non-hazardous wastes: permit (with the registration number 13) was issued to the project owner, "Bio Gold Energy doo", by the Kovin Municipal Administration-Department for Urban Planning and Housing Communal Affairs based on the Law on Waste Management ("Official Gazette of the RS", No. 36/09, 88/10, 14/16 and 95/18 - other laws). Permit number is 13. The validity of the permit was 10 years from 02.11.2021 to 02.11.2031. After 10 years, it will be renewed.

CAB (VVB) confirmed that the project complies with the relevant regulations.

5.9 Carbon ownership and rights

The holder of project activity is Zlatar Mramorak Doo. Carbon consultant company of the project activity is "Kilittaşı Mühendislik Müşavirlik İnşaat Tic. Ltd. Şti". Carbon ownership of the project activity is belonged to the project owner, which is the Zlatar Mramorak Doo. BioGold Energy Doo has transferred its carbon credit related rights to the Zlatar Mramorak Doo by the agreement dated as 05/04/2023. As a note, both BioGold Energy and Zlatar Mramorak Doo companies are belonged to the same parent company, Zlatar Doo.

5.10 Risk management

Since the beginning of its operation, project activity has run well. The project poses no danger with regard to the input of organic waste. The project owner owns the farms that

¹⁰ Ministry of Mining and Energy,
<https://mre.gov.rs/sites/default/files/registri/RegistarPovlasPro12-8-2022.html>.

¹¹ These licenses are provided as complementary document to the DOE.

¹² These licenses are provided as complementary document to the DOE.

supply manure for the project's activities. Since non-hazardous food waste is produced in large quantities in Belgrade, it is easy to identify food waste from eateries, retail establishments, etc. Furthermore, the project owner has no trouble moving food waste from the sources to the project site. Other sources are produced by the project owner's commercial operations, such as starch waste and silage barley and maize. Thus, there is no problem with the waste input to the biogas plants continuing. Project's performance risk is considerably low in terms of managerial and regulatory aspects. There is no regulatory barrier in Serbia to operate biodigesters. There is no problem regarding waste receiptment, given that except food waste all the ones are generated by the project owner. Biodigester plants are operated as per the Waste Management Law of Serbia, and received all the necessary permits for waste management from the Kovin Municipality.

5.11 Environmental aspects

According to the Environmental Protection Law of Serbia, biogas power plants with an installed capacity of less than 1 MWe are exempted from environmental impact analysis due to their minimal environmental impacts. In the project activity, each biogas plant has an installed capacity of 999 kWe which is less than 1 MWe. Therefore, conducting environmental impact analysis was not required. However, as per the legal obligations of laws and regulations of Serbia, project complies with all the environmental and waste management regulations to prevent any potential negative impacts. Regarding the waste management, project received the permits with the registration numbers of 12 and 13 from the Kovin Municipal Administration-Department for Urban Planning and Housing Communal Affairs. The relevant permits have been provided by the project owner.

5.12 Socioeconomic aspects

The community supports the initiative in terms of its socioeconomic effects. The project was seen by the local population as having a favorable environmental impact. Six individuals are employed by the project, two of whom are locals, supporting the local economy.

When it comes to the distance between the project site and nearby facilities that could be impacted by the waste management operation of the project, there are none, including sports fields, playgrounds for kids, schools, etc. Therefore, the project's activities have no detrimental effects on the lives of the locals.

In addition, Kovin Municipality works with interested parties to get their perspectives on the project during the permit application process. The project owner published the project on the Kovin Municipality website during the application procedure, and no public comments or suggestions regarding the project activities were received.

Stakeholders are notified during the meeting and further in-person communications that they can always get in touch with the project plant manager in person or over the phone at any time to voice their complaints in the future. Additionally, it was guaranteed that a grievance record notebook would be available for stakeholders to file complaints at the Mramorak village municipality office.

As of right now, interested parties can contact the plant manager via phone or in person, and they can also use the grievance notebook to voice their objections.

In the event that stakeholders offer unfavorable comments, the project manager will get in touch with them and address the matter.

5.13 Stakeholders' Consultation

Local stakeholders were invited to provide feedback on the Mramorak project during a stakeholder consultation meeting dated 22/08/2022 (at the public community center in Mramorak). Participants were invited to the conference ten days in advance by public notice invites posted in easily accessible and frequent areas. One of the announcements was put on the municipality building's official public notice board. The other one was displayed on the village bulletin board where everyone passes. Meeting was also announced by the local radio.

Moreover, during the on-site visit dated 07/11/2022, the mukhtar of Mramorak village confirmed that all the questions which were asked on the stakeholder consultation meeting were answered adequately. Moreover, the local stakeholders were informed about the project activity.

5.13.1 Public Consultation

There had not been any complaint raised by the interviewed local stakeholders during the on-site visit as detailed in Sections 2.3 and 2.4 of the report. The local stakeholders as stated in the Table 2-2 above were interviewed about the following issues and there had not been any complaint by the interviewed local stakeholders during the on-site visit:

- Flies and odor problems due to the project activity
- Any harms to animals and agricultural lands
- Sufficiency of local employment (The interviewed local stakeholders were pleased about the provided local employment opportunities by the PP)
- Waste and leachate management practices implemented by PP

It was also concluded that the grievance mechanism is in place and this was also confirmed by the interviewed local stakeholders during the on-site visit.

5.14 Sustainable Development Goals (SDG)

Regarding the United Nations Sustainable Development Goals (SDGs), Mramorak 1&2 project achieves the following SDGs:

SDG 7 Affordable and Clean Energy / SDG 7.2 By 2030, increase substantially the share of renewable energy in the global energy mix / SDG 7.2.1 Renewable energy share in the total final energy consumption:

CAB (VVB) checked and confirmed that project activity generates renewable energy, about 15.5 GWh annually, by capturing biogas from cattle manure, non-hazardous food wastes, plant wastes (starch waste, liquid starch wastes, CSL) and agricultural plant residues (slage corn and slage barley) via anaerobic digestion and supplies it to the fossil fuel dominated Serbian EPS grid system. Through this way, project contributes to the SDG 7.2. target, and the relevant indicator is SDG 7.2.1.

SDG Goal 8 Decent Work and Economic Growth /SDG 8.5 By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value / 8.5.1 Average hourly earnings of employees, by sex, age, occupation and persons with disabilities

CAB (VVB) checked and confirmed that project created job opportunities during both construction and operation phases. During operation, project employs 6 people and 2 of them are from local villages.

SDG Goal 13 Climate Action/ SDG 13.2 Integrate climate change measures into national policies, strategies and planning / SDG 13.2.2 Total greenhouse gas emissions per year:

CAB (VVB) checked and confirmed that project will naturally play an important role in global climate change mitigation activities through preventing emissions of methane that would otherwise be released to the atmosphere in the baseline conditions. Project annually achieves 23,083 tCO₂ emission reduction. Through this way, it contributes to SDG 13 goals of the UN.

When project completed and submitted to the BCR, SDG Tool didn't exist. However Validation Team checked and confirmed that project related SDG7, SDG8 and SDG13.

5.15 REDD+ safeguards (if applicable)

N/A

5.16 Climate change adaptation

"The Kyoto Protocol (Protocol) and the United Framework Convention on Climate Change (UNFCCC) (Convention) have both been ratified by the Republic of Serbia since 2008. Concerning climate change, the Ministry of Environmental Protection (MoEP) is in

charge. In 2012, the Republic of Serbia endorsed the Copenhagen Accords and sought assistance for the execution of 12 Nationally Appropriate Mitigation Actions (NAMAs)”. “The Republic of Serbia's government filed "Intended nationally determined contributions" (INDCs) in June 2015. The document also includes a section on losses from natural disasters and stresses the need for adaptation to the effects of climate change. A variety of initiatives were started in collaboration with appropriate ministries in order to fulfill commitments made under the Paris Agreement and reach the objectives outlined in INDCs.”

“The Republic of Serbia is completely in favor of putting climate change adaptation and mitigation plans into action. In order to reduce greenhouse gas emissions through methane recovery and replace carbon-intensive Serbian Electrical Power Supply (EPS) grid electricity with renewable biogas energy, the Mramorak 1&2 project applies anaerobic treatment technique to organic wastes. Many environmental benefits result from project implementation, such as decreased emissions of methane and ammonia from manure, decreased nitrate wash-out into groundwater, decreased use of organic fertilizer, and decreased carbon dioxide emissions from burning fossil fuels. This is the project's contribution to adapting to climate change.”

5.17 Special categories related to co-benefits.

N/A

6 Internal quality control

As a final step of validation, the final documentation including the validation report and annexes must undergo an internal quality control by Re Carbon Ltd. This quality control is also referred to as the “Independent Technical Review” process.

The Independent Technical Review is performed by another Team Leader of RE-Carbon Ltd. who was not involved in the validation activities of this specific project activity. When the appointed Team Leader finalizes the Validation Report, the report is sent to the (for this project specifically appointed) Independent Technical Reviewer who reviews not only the validation report itself, but also all supporting documents such as the emission factor calculations, additionality justifications, relevant excel sheets etc.

Further CLs and CARs may be raised by the Independent Technical Reviewer during this review, in order to cover all the points that may need further clarification.

After all CLs and CARs are closed, the validation report is again reviewed and finally approved by the Team Leader, ITR and the Certification Manager, and the request for registration is submitted to the Project Developer along with the relevant documents.

7 Validation opinion

Re Carbon Ltd. performed the validation of the “Mramorak 1&2 Bundled Biogas Power Plants” in “Serbia” between 06/11/2022 and 17/06/2023. The GHG Statement is the responsibility of the “Zlatar Mramorak Doo”. The validation was performed based on Validation criteria for projects set out in BCR Standard Version 3, UNFCCC criteria for the CDM and Host Party criteria, as well as per criteria given to provide for consistent project operations, monitoring and reporting.

The validation was performed by a validation team consisting of “Sandeep Kanda as the Team Leader, Öykü Yakupoğlu as the Trainee Validator, Dragomir Vasic as the Regional Expert, Dr. Seza Danişoğlu as the Financial Expert and Rohit Badaya as the ITR” and the project activity was checked against the applicable rules and regulations of CDM including CDM Validation and Verification Standard for project activities version 3.0, CDM Project Standard for project activities version 3.0 and BCR Standard Version 3.

Re Carbon Ltd. hereby confirms that the proposed project activity “Mramorak 1&2 Bundled Biogas Power Plants” in Serbia, applied all relevant EB-guidance as the selected baseline and monitoring methodologies and the associated methodological tools have been applied correctly. Validation of the GHG statement was conducted in accordance with ISO 14064-3; 2019. The total emission reductions from the project are estimated to be on the average 23,083 tCO_{2e} per year over the selected 7 year crediting period.

As a result, the validation team assigned by the Re Carbon Ltd. concludes that the proposed Project Activity “Mramorak 1&2 Bundled Biogas Power Plants” in Serbia, as described in the BCR-PDD (version 1.5 dated 24/08/2023).

- meets all relevant Host Country criteria;
- meets all relevant requirements of the BCR project activities [including BCR Standard version 3, Article 12 of the Kyoto Protocol, the Modalities and Procedures for CDM (Marrakesh Accords) and the subsequent decisions and guidance by the COP/MOP and the CDM Executive Board];
- applies correctly the baseline and monitoring methodology “AMS-III.AO: Methane recovery through controlled anaerobic digestion, Version 1.0” and “AMS-I.D.: Grid connected renewable electricity generation, Version 18.0”;
- its additionality is sufficiently justified in the PD;
- is likely to achieve estimated emission reductions;

The validated GHG emission reductions over the entire quantification period of the proposed project:

Year GHG emission reductions in the baseline scenario (tCO_{2e}) GHG emission reductions in the project scenario (tCO_{2e}) GHG emissions attributable to leakages (tCO_{2e}) Estimated Net GHG Reduction (tCO_{2e})

Year	GHG emission reductions in the baseline scenario (tCO _{2e})	GHG emission reductions in the project scenario (tCO _{2e})	GHG emissions attributable to leakages (tCO _{2e})	Estimated Net GHG Reduction (tCO _{2e})
24/06/2020 - 31/12/2020	7,447	1,309	0	6,138
2021	25,470	4,425	0	21,045
2022	29,108	5,001	0	24,107
2023	29,375	5,001	0	24,374
2024	29,568	5,001	0	24,567
2025	29,703	5,001	0	24,702
2026	29,800	5,001	0	24,799
01/01/2027 - 23/06/2027	14,238	2,383	0	11,855
Total	194,709	33,122	0	161,587

Therefore, Re Carbon Ltd. requests the registration of the proposed project activity as a BCR project activity.

8 Validation statement

Validation or verification statement upon achievement of the validation or verification, which complies with the following:

(a) the intended users of the GHG declaration:

Carbon ownership of the project activity is belonged to the project owner, which is the Zlatar Mramorak Doo. BioGold Energy Doo has transferred its carbon credit related rights to the Zlatar Mramorak Doo by the agreement dated as 05/04/2023.

(b) the level of assurance of the validation is reasonable

(c) objectives, scope, and criteria for validation or verification:

Re Carbon Ltd. was appointed by “Zlatar Mramorak Doo.” to perform the validation of the “Mramorak 1&2 Bundled Biogas Power Plants” in “Serbia” through a service agreement, dated 07/09/2022. The objective of this validation activity is to have an independent third party for the assessment of the project design, and to ensure a thorough assessment of the proposed project activity against the applicable BCR and CDM requirements. The scope of the validation is the independent and objective review of the Project Document Template (PD). The purpose of the validation is its usage during the registration process as part of the BCR project cycle. Therefore, Re Carbon Ltd. cannot be held liable by any party for decisions made or not made based on the validation opinion that go beyond that purpose.

(d) the data and information supporting the GHG declaration are projected, and historical,

(e) is accompanied by the GHG declaration made by the responsible party,

(f) Validation Teams’s conclusion on the GHG statement is:

Re Carbon Ltd. hereby confirms that the proposed project activity “Mramorak 1&2 Bundled Biogas Power Plants” in Serbia, applied all relevant EB-guidance as the selected baseline and monitoring methodologies and the associated methodological tools have been applied correctly. Validation of the GHG statement was conducted in accordance with ISO 14064-3; 2019. The total emission reductions from the project are estimated to be on the average 23,083 tCO_{2e} per year over the selected 7 year crediting perio

(g) Validation Teams’s conclusion on the project's contribution to sustainable development objectives are:

- *SDG 7 Affordable and Clean Energy,*
- *SDG Goal 8 Decent Work and Economic Growth,*
- *SDG Goal 13 Climate Action.*

(h) Validation Teams’s conclusion on criteria and indicators related to co-benefits: Not Applicable

Re-carbon ltd. as a CAB confirm information which are given above.





Sandeep KANDA

Rohit BADAYA

Esin TUNALI

Team Leader

ITR

Certification Manager

24/08/2023

24/08/2023

24/08/2023

9 Annexes

Annex 1. Competence of team members and technical reviewers

Mr. Rohit BADAYA holds a Master’s degree in “Nanotechnology” and a Bachelor’s degree in “Pulp and Paper Engineering” from the Indian Institute of Technology Roorkee (IIT Roorkee). He is also an Energy Auditor, certified by the Bureau of Energy Efficiency, Ministry of Power, Govt. of India. Rohit has more than 14 years of work experience in the area of Climate Change (CDM, GS, VCS, GCC) and has worked for various DOEs/VVBs in the capacity of Team Leader, Validator/Verifier, Technical Expert, ITR, Manager (Technical & Certification) and Quality Manager. During his previous work experience, Rohit has worked as a Technical Expert for Technical Areas TA 1.1 (Thermal energy generation from fossil fuels and biomass including thermal electricity from solar), TA 1.2 (Energy generation from renewable energy sources), TA 2.1 (Energy Distribution), TA 3.1 (Energy Demand), TA 13.1 (Waste Handling and Disposal) and TA 13.2 (Manure). Within the context of CDM/GS/VCS/GCC, Rohit has a record of accomplishment of more than 200 projects as Team Leader, Validator, Verifier, Technical Expert and Technical Reviewer. He is well versed with various local regulations related to CDM/GS/VCS/ GCC projects, located in countries in Asia, Africa, Middle East, Asia Pasific as well as in Turkey. With re-carbon, Rohit is a free-lance Team Leader, ITR and a TA 1.1, 1.2, 2.1, 3.1, 13.1, 13.2 expert. Rohit is also a Regional Expert for Bhutan, Brazil, Cambodia, Chile, Democratic Republic of Congo, Egypt, El Salvador, Ethiopia, The Gambia, India, Indonesia, Iran, Kenya, Madagascar, Malawi, Mauritius, Mexico, Morocco, Myanmar, Nepal, Nicaragua, Nigeria, Papua New Guinea (PNG), Republic of Madagascar, Senegal, South Africa, Sri Lanka, Thailand, Türkiye, Uganda, Vietnam and Zambia.

Prof. Dr. Seza DANIŞOĞLU holds a B.Sc. degree in “Management” from Middle East Technical University/Ankara as well as a M.Sc. in “Business Statistics” and a Ph.D. in “Finance Degrees” from Texas Tech University in Lubbock. Seza an Assistant Professor of Finance with Middle East Technical University in Ankara. She conducts academic research in the areas of investments and banking, teaches courses in Financial Management, Financial Derivatives and Microeconomics and. Seza is also employed as a visiting professor by Texas Tech University during summer semesters. With re-carbon, Seza is a free-lance Financial Expert.

Mr. Sandeep KANDA holds a Bachelor’s degree in “Mechanical Engineering”, a Master’s degree in “Energy Systems Engineering” from the Indian Institute of Technology/Bombay and a Post Graduate Diploma in “Industrial Safety & Environmental Management” from the National Institute of Industrial Engineering in India. He has over 20 (twenty) years of professional experience working in the area of energy and environmental management, capacity building, climate change adaptation and mitigation activities, sustainability, auditing and product development. Sandeep has been involved in various capacities in the development and impact assessment of more than 500 climate change mitigation projects

and programmatic activities worldwide, covering a range of sectoral scopes, such as Energy industries (renewable-/non-renewable), Energy distribution, Energy demand, Manufacturing industries, Chemical industries, Transport, Metal production, Waste handling & disposal and Agriculture. With re-carbon, Sandeep is a free-lance Team Leader, ITR and a TA 1.1, 1.2, 2.1, 3.1, 4.1, 9.1, 9.2, 13.1, 13.2 & 15.1 expert. Sandeep is also a Regional Expert for China, India, Indonesia, Mexico, Nepal, Philippines, Tanzania, Thailand, Türkiye and Vietnam.

Mr. Dragomir Vasić holds a M.Sc. degree in “Electrical Engineering” from the University of Novi Sad. With re-carbon, Dragomir is a free-lance Regional Expert for Bosnia and Herzegovina, Croatia, Kosovo, Montenegro, North Macedonia, Serbia and Slovenia.

Ms. Öykü YAKUPOĞLU holds a B.Sc. degree in “Environmental Engineering” from Middle East Technical University/Ankara and currently undergoes a M.Sc. program in “Chemistry”. She is experienced in ISO 14001: 2015 - Environment Management System, ISO 50001: 2018 - Energy Management System, ISO 45001: 2018 - Occupational Health and Safety, Management System, ISO 9001: 2015 - Quality Management System Internal Auditor, ISO 14001: 2015 - Environment Management System Internal Auditor and an ISO 50001: 2018 - Energy Management System Internal Auditor. With re-carbon, Öykü is an internal Team Leader (TA 1.2, 13.1 and 13.2), a Regional Expert for Türkiye (TA 1.2, 13.1 and 13.2) and a trainee validator/verifier for TA 1.1, 2.1, 3.1 and 15.1.

CERTIFICATE OF APPOINTMENT



Within the scope and in strict accordance to the appointments indicated below, the bearer may:

- Participate in assessments conducted by re-carbon Ltd.
- Take the appointed positions within and outside of an assessment team
- Bring specific expertise to assessments

This Certificate of Appointment is valid unless there are changes in the related requirements for the qualification and appointment and/or the personnel's work agreement is terminated. There is no defined validity period for this Certificate. However, The Certificate may be updated, suspended or cancelled at any time, as a result of performance assessments and/or other reasons as defined above.

This Appointment Certificate is granted on the date of **08.03.2023** by:

Christian Johannes
(General Manager)

This Certificate of Appointment is given to

Mr. Rohit Badaya

as a confirmation of compliance with re-carbon's internal qualification requirements for the following positions:



Gold Standard
Climate Security & Sustainable Development



SECTORAL SCOPE	TECHNICAL AREA	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT
SS 01: Energy industries	TA 1.1: Thermal energy generation	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021
	TA 1.2: Renewables	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021
SS 02: Energy distribution	TA 2.1: Energy distribution	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021
SS 03: Energy demand	TA 3.1: Energy demand	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021
SS 13: Waste handling and disposal	TA 13.1: Solid waste and wastewater	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021
	TA 13.2: Manure	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021	25.10.2021
SS 16: Agriculture	TA 16.1: Agriculture															



ICR International Carbon Registry

BioCarbon Registry

SECTORAL SCOPE	TECHNICAL AREA	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT
SS 01: Energy industries	TA 1.1: Thermal energy generation	07.07.2022	07.07.2022	07.07.2022	07.07.2022	07.07.2022	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023
	TA 1.2: Renewables	07.07.2022	07.07.2022	07.07.2022	07.07.2022	07.07.2022	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023
SS 02: Energy distribution	TA 2.1: Energy distribution	07.07.2022	07.07.2022	07.07.2022	07.07.2022	07.07.2022	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023
SS 03: Energy demand	TA 3.1: Energy demand	07.07.2022	07.07.2022	07.07.2022	07.07.2022	07.07.2022	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023
SS 13: Waste handling and disposal	TA 13.1: Solid waste and wastewater	07.07.2022	07.07.2022	07.07.2022	07.07.2022	07.07.2022	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023
	TA 13.2: Manure	07.07.2022	07.07.2022	07.07.2022	07.07.2022	07.07.2022	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023
SS 16: Agriculture	TA 16.1: Agriculture						02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023

COUNTRY EXPERTISE:

Bhutan, Brazil, Cambodia, Chile, Democratic Republic of Congo, Egypt, El Salvador, Ethiopia, The Gambia, India, Indonesia, Iran, Kenya, Madagascar, Malawi, Mauritius, Mexico, Morocco, Myanmar, Nepal, Nicaragua, Nigeria, Papua New Guinea (PNG), Republic of Madagascar, Senegal, South Africa, Sri Lanka, Thailand, Turkey, Uganda, Vietnam and Zambia

F-C-044 / 23.01.2023 - 00

CERTIFICATE OF APPOINTMENT



Within the scope and in strict accordance to the appointments indicated below, the bearer may:

- Participate in assessments conducted by re-carbon Ltd.
- Take the appointed positions within and outside of an assessment team
- Bring specific expertise to assessments

This Certificate of Appointment is valid unless there are changes in the related requirements for the qualification and appointment and/or the personnel's work agreement is terminated. There is no defined validity period for this Certificate. However, The Certificate may be updated, suspended or cancelled at any time, as a result of performance assessments and/or other reasons as defined above.

This Appointment Certificate is granted on the date of **01.02.2022** by:

Christian Johannes
(General Manager)

This Certificate of Appointment is given to

Ass. Prof. Dr. Seza Danişoğlu (Financial Expert)

as a confirmation of compliance with re-carbon's internal qualification requirements for the following positions:

SECTORAL SCOPE	TECHNICAL AREA	Gold Standard					Verified Carbon Standard									
		VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT					
SS 01: Energy industries	TA 1.1: Thermal energy generation					01.02.2022					01.02.2022					01.02.2022
	TA 1.2: Renewables					01.02.2022					01.02.2022					01.02.2022
SS 02: Energy distribution	TA 2.1: Energy distribution					01.02.2022					01.02.2022					01.02.2022
SS 03: Energy demand	TA 3.1: Energy demand					01.02.2022					01.02.2022					01.02.2022
SS 13: Waste handling and disposal	TA 13.1: Solid waste and wastewater					01.02.2022					01.02.2022					01.02.2022
	TA 13.2: Manure					01.02.2022					01.02.2022					01.02.2022
SS 16: Agriculture	TA 16.1: Agriculture					01.02.2022					01.02.2022					01.02.2022

SECTORAL SCOPE	TECHNICAL AREA	GCC					ICR					BioCarbon Registry				
		VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT
SS 01: Energy industries	TA 1.1: Thermal energy generation					06.06.2022										
	TA 1.2: Renewables					06.06.2022										
SS 02: Energy distribution	TA 2.1: Energy distribution					06.06.2022										
SS 03: Energy demand	TA 3.1: Energy demand					06.06.2022										
SS 13: Waste handling and disposal	TA 13.1: Solid waste and wastewater					06.06.2022										
	TA 13.2: Manure					06.06.2022										
SS 16: Agriculture	TA 16.1: Agriculture					06.06.2022										

COUNTRY EXPERTISE: N/A for Financial Experts

CERTIFICATE OF APPOINTMENT



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- Bring specific expertise to assessments

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This Appointment Certificate is granted on the date of **08.03.2023** by:

Christian Johannes
(General Manager)

This Certificate of Appointment is given to

Mr. Sandeep Kanda

as a confirmation of compliance with re-carbon's internal qualification requirements for the following positions:



SECTORAL SCOPE	TECHNICAL AREA	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT
SS 01: Energy industries	TA 1.1: Thermal energy generation	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022
	TA 1.2: Renewables	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022
SS 02: Energy distribution	TA 2.1: Energy distribution	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022
SS 03: Energy demand	TA 3.1: Energy demand	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022
SS 13: Waste handling and disposal	TA 13.1: Solid waste and wastewater	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022
	TA 13.2: Manure	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022
SS 15: Agriculture	TA 15.1: Agriculture	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022



SECTORAL SCOPE	TECHNICAL AREA	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT
SS 01: Energy industries	TA 1.1: Thermal energy generation	07.07.2022	07.07.2022	07.07.2022	07.07.2022	07.07.2022	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023
	TA 1.2: Renewables	07.07.2022	07.07.2022	07.07.2022	07.07.2022	07.07.2022	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023
SS 02: Energy distribution	TA 2.1: Energy distribution	07.07.2022	07.07.2022	07.07.2022	07.07.2022	07.07.2022	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023
SS 03: Energy demand	TA 3.1: Energy demand	07.07.2022	07.07.2022	07.07.2022	07.07.2022	07.07.2022	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023
SS 13: Waste handling and disposal	TA 13.1: Solid waste and wastewater	07.07.2022	07.07.2022	07.07.2022	07.07.2022	07.07.2022	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023
	TA 13.2: Manure	07.07.2022	07.07.2022	07.07.2022	07.07.2022	07.07.2022	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023
SS 15: Agriculture	TA 15.1: Agriculture	07.07.2022	07.07.2022	07.07.2022	07.07.2022	07.07.2022	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023	02.02.2023

COUNTRY EXPERTISE:

China, India, Indonesia, Mexico, Nepal, Philippines, Tanzania, Thailand, Türkiye and Vietnam

CERTIFICATE OF APPOINTMENT



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- Bring specific expertise to assessments

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This Appointment Certificate is granted on the date of **01.10.2022** by:

Handwritten signature of Christian Johannes
 Christian Johannes
 General Manager

Christian Johannes
(General Manager)

This Certificate of Appointment is given to

Mr. Dragomir Vasic (Regional Expert)

as a confirmation of compliance with re-carbon's internal qualification requirements for the following positions:



SCOPAL SCOPE	TECHNICAL AREA	CC					Gold Standard					Verified Carbon Standard				
		VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT
SS 01: Energy industries	TA 1.1: Thermal energy generation															
	TA 1.2: Renewables															
SS 02: Energy distribution	TA 2.1: Energy distribution															
SS 03: Energy demand	TA 3.1: Energy demand															
	TA 3.2: Manure															
SS 13: Waste handling and disposal	TA 13.1: Solid waste and wastewater															
	TA 13.2: Manure															
SS 15: Agriculture	TA 15.1: Agriculture															



SCOPAL SCOPE	TECHNICAL AREA	GCC					ICR					BioCarbon Registry				
		VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT
SS 01: Energy industries	TA 1.1: Thermal energy generation															
	TA 1.2: Renewables															
SS 02: Energy distribution	TA 2.1: Energy distribution															
SS 03: Energy demand	TA 3.1: Energy demand															
	TA 3.2: Manure															
SS 13: Waste handling and disposal	TA 13.1: Solid waste and wastewater															
	TA 13.2: Manure															
SS 15: Agriculture	TA 15.1: Agriculture															

COUNTRY EXPERTISE: All ex-Yugoslav countries for all schemes listed above in this certificate

CERTIFICATE OF APPOINTMENT



Within the scope and in strict accordance to the appointments indicated below, the bearer may:

- Participate in assessments conducted by re-carbon Ltd.
- Take the appointed positions within and outside of an assessment team
- Bring specific expertise to assessments

This Certificate of Appointment is valid unless there are changes in the related requirements for the qualification and appointment and/or the personnel's work agreement is terminated. There is no defined validity period for this Certificate. However, The Certificate may be updated, suspended or cancelled at any time, as a result of performance assessments and/or other reasons as defined above.

This Appointment Certificate is granted on the date of **20.02.2023** by:

Christian Johannes
(General Manager)

This Certificate of Appointment is given to

Ms. Öykü Yakupoğlu

as a confirmation of compliance with re-carbon's internal qualification requirements for the following positions:



SECTORAL SCOPE	TECHNICAL AREA	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT	
SS 01: Energy industries	TA 1.1: Thermal energy generation																
	TA 1.2: Renewables					30.05.2022	30.05.2022	30.05.2022	21.12.2022		30.05.2022	30.05.2022	30.05.2022	21.12.2022			30.05.2022
SS 02: Energy distribution	TA 2.1: Energy distribution																
SS 03: Energy demand	TA 3.1: Energy demand																
SS 13: Waste handling and disposal	TA 13.1: Solid waste and wastewater					20.02.2023	20.02.2023	20.02.2023			20.02.2023	20.02.2023	20.02.2023				20.02.2023
	TA 13.2: Manure					20.02.2023	20.02.2023	20.02.2023			20.02.2023	20.02.2023	20.02.2023				20.02.2023
SS 15: Agriculture	TA 15.1: Agriculture																



SECTORAL SCOPE	TECHNICAL AREA	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT	
SS 01: Energy industries	TA 1.1: Thermal energy generation																
	TA 1.2: Renewables	30.05.2022	30.05.2022	21.12.2022		30.05.2022	30.05.2022	30.05.2022	21.12.2022		30.05.2022	30.05.2022	30.05.2022	21.12.2022			30.05.2022
SS 02: Energy distribution	TA 2.1: Energy distribution																
SS 03: Energy demand	TA 3.1: Energy demand																
SS 13: Waste handling and disposal	TA 13.1: Solid waste and wastewater	20.02.2023	20.02.2023	20.02.2023		20.02.2023	20.02.2023	20.02.2023			20.02.2023	20.02.2023	20.02.2023				20.02.2023
	TA 13.2: Manure	20.02.2023	20.02.2023	20.02.2023		20.02.2023	20.02.2023	20.02.2023			20.02.2023	20.02.2023	20.02.2023				20.02.2023
SS 15: Agriculture	TA 15.1: Agriculture																

COUNTRY EXPERTISE:

Türkiye (27.05.2022)

F-C-044 / 23.01.2023 - 00

Annex 2. Clarification requests, corrective action requests and forward action requests

<i>Finding ID</i>	¹	<i>Type finding</i>	<i>of</i>	<i>Corrective action</i>	<i>Date</i> 27/03/2023
Section No.					
<i>Description of finding</i>					
<i>Please indicate the dates which are specified on the BCR-PD in “DD/MM/YYYY” format.</i>					
Project holder response (21/04/2023)					
<i>All the dates are corrected in DD/MM/YYYY format throughout the BCR-PD.</i>					
Documentation provided by the project holder					
<i>CAB assessment (23/04/2023)</i>					
<i>Review-1:</i>					
<i>Ok Closed (The format of the dates were revised accordingly.)</i>					

<i>Finding ID</i>	²	<i>Type finding</i>	<i>of</i>	<i>Corrective action</i>	<i>Date</i> 27/03/2023
Section No.					

Description of finding
Please revise the project type of the project activity on the cover page.
Project holder response (21/04/2023)
Sectoral scope is revised, “organ” is deleted which is mistakenly written.
Documentation provided by the project holder
CAB assessment (23/04/2023)
Review-1: Ok Closed (The project type was corrected on the cover page.)

Finding ID	3	Type of finding	Corrective action	Date
				27/03/2023
Section No.				
Description of finding				
Please re-evaluate “Grouped project” row on the cover page with considering the difference between a bundled project activity and a grouped project activity. Also, re-evaluate the relevant parts in the BCR PD.				
Project holder response (21/04/2023)				

<p>Grouped project is changed to “bundled project” type. The title of the project is also changed accordingly.</p> <p>As per the CDM EB21 Report Annex 21: General Principles for Bundling, and BCR Standard (section 20), bundling is decided to be applied.</p> <p>Section 1.10 is revised accordingly.</p>
<p>Documentation provided by the project holder</p>
<p>CAB assessment (23/04/2023)</p>
<p>Review-1:</p> <p>Ok Closed (The relevant statements were revised in the BCR report.)</p>

Finding ID	4	Type of finding	Corrective action	Date
27/03/2023				
Section No.				
Description of finding				
Please clarify the reason why the total estimated emission reduction is calculated as “170,203” while the annual estimated emission reduction is calculated as “24,874 tCO ₂ ” (170,203 / 7 does not equal to 24,874).				
Project holder response (21/04/2023-04/06/2023)				
Corrected as 24,315 tCO ₂ /year throughout the BCR-PD.				
Response to the Review 1:				

<p><i>Excel sheet and BCR-PD is corrected according to the revised grid emission factor.</i></p> <p><i>Response to Review 2:</i></p> <p><i>Z was missing in the “Zadružna“, and this is corrected on the cover page.As per the CDM EB21 Report Annex 21: General Principles for Bundling, and BCR Standard (section 20), bundling is decided to be applied.</i></p> <p><i>Section 1.10 is revised accordingly.</i></p>
<p>Documentation provided by the project holder</p>
<p>CAB assessment (23/04/2023-05/06/2023)</p>
<p><i>Review-1:</i></p> <p><i>Please apply the round down function for the estimated annual emission reduction value. Also, in “Cell J17” in “Mramorak_ERstCO2” Excel sheet, the relevant value is indicated as 24,874 tCO2/year. Please correct the contradiction.</i></p> <p><i>Review-2:</i></p> <p><i>On the cover page, in “Project proponent’s contact information” and “Project holder’s contact information” rows, the mail addresses are indicated wrongly. Please correct the information in these rows on the cover page. Also, the page numbers in “Table of Contents” are to be updated.</i></p> <p><i>Review-3:</i></p> <p><i>Ok Closed (The relevant information was revised on the cover page.)</i></p>

<i>Finding ID</i>	<i>5</i>	<i>Type finding</i>	<i>of</i>	<i>Corrective action</i>	<i>Date</i>
					<i>27/03/2023</i>

Section No.
Description of finding
<i>Please re-evaluate Section 1.2 since the project activity is not an AFOLU project. Also, please consider the difference between the project type and sectoral scope.</i>
Project holder response (21/04/2023)
<p><i>Section 1.2. , the table is corrected.</i></p> <p><i>The following sentences are deleted: As per the CDM guidelines, project falls under the following categories:</i></p> <p><i>Sectoral Scope 1: Energy industries (renewable - / non-renewable sources)</i></p> <p><i>Sectoral Scope 13: Waste handling and disposal.”</i></p>
Documentation provided by the project holder
CAB assessment (23/04/2023)
<p><i>Review-1:</i></p> <p><i>Ok Closed (Section 1.2 was revised accordingly.)</i></p>

Finding ID	6	Type of finding	Corrective action	Date
				27/03/2023
Section No.				

Description of finding
<i>Please re-evaluate Section 1.3 with considering the difference between a bundled project activity and a grouped project activity.</i>
Project holder response (21/04/2023)
<i>Section 1.3. is revised as. Grouped changed to Bundled as per the UNFCCC CDM Annex21: General Principles.</i>
Documentation provided by the project holder
CAB assessment (23/04/2023)
<i>Review-1: Ok Closed (The relevant statements were revised accordingly throughout the report.)</i>

Finding ID	7	Type of finding	Corrective action	Date
				27/03/2023
Section No.				
Description of finding				
<p><i>a) Please revise the date of the generation license of Mramorak 2 in Section 2.</i></p> <p><i>b) Please indicate clearly all waste sources which are accepted by the project activity in Section 2.</i></p> <p><i>c) Please also include “the road itineraries, where the transportation of residual waste after digestion” to the project boundary in Section 2.</i></p>				

<p>d) Please indicate how non-hazardous food waste is brought to the project site from its source points in Section 2.</p>
<p>Project holder response (21/04/2023)</p>
<p>a) Corrected as 04/12/2018 according to the generation license document.</p> <p>b) The paragraph starting with “Regarding the sources of feedstocks to the digesters..” is revised as per the comment in Section 2.</p> <p>c) “and the road itineraries, where the transportation of residual waste after digestion.” Added to the paragraphs starting with “Based on this claim...” in Section 2.</p> <p>d) “These food wastes are transported by non-permeable trucks by the project owner from the sources to the project site” added to the Section 2.</p>
<p>Documentation provided by the project holder</p>
<p>CAB assessment (23/04/2023)</p>
<p>Review-1:</p> <p>a) Ok Closed (The date was corrected in Section 2.)</p> <p>b) Ok Closed (Section 2 was revised accordingly.)</p> <p>c) Ok Closed (The project boundary was revised accordingly in Section 2.)</p> <p>d) Ok Closed (The way of the transportation was included in Section 2.)</p>

Finding ID	8	Type of finding	Corrective action	Date
				27/03/2023

- b) Please provide the calibration documents of the monitoring equipment (flow meters, electricity meters and gas analyzer).
- c) There are 2 internal meters and 2 official meters (which belong to EPS Distribucija Doo.) at the project site. Please indicate the brands and the serial numbers of these four meters separately in Section 2.3.
- d) Please provide the evidence document for the technical features of the anaerobic digesters.
- e) Please provide the photographic evidences of the internal electricity meters which have serial numbers 43267888 and 44202354.

Project holder response (21/04/2023-04/06/2023)

- a) Figure 2 is revised in Section 2.3.
- b) Please see Section 16.4 for explanation. Calibration times have not come for equipments. Therefore there are no calibration documents yet.
- c) Section 2.3 is revised as per the comment. For the power meters at the substation operated by the EPS Distribucija Doo, the following info is provided: ST310FV(0.2) 3x58/100V 5-6A 15A23R55-SN00100 pbdqf kl.o.2 + GPRS/GSM modem CM23S-S2. , and serial numbers are provided.
Power meter details are requested from the EPS Distribucija Doo by the project owner. EPS Distribucija Doo responded the following document.

CAR-9_EPS Distribucija Doo_Power_Meters.pdf
- d) Technical features of anaerobic digesters are provided Tehnical Fermentation Mramorak 1_biodigesters.pdf and Tehnical Fermentation Mramorak 2_biodigesters under the CAR-9 file.
- e) Photographic evidences are provided.
Mramorak2_power meter.jpg
Mramorak1_power meter.jpg
Under the CAR-9 file.
- Response to the Review 1:

- a) *“Project has an emergency flare unit located in each power plant. The purpose of it is to combust the biogas during the emergency situations and plant maintenance. Emergency flare units do not have biogas flow meters.” Added*
- b) *Project owner contacted with the manufacturer of both biogas flow meter and biogas analyzer for calibration documents. Response has not been received yet.*

Response to Review 2:

- a) *This sentence is deleted from Section 1.3. “Project is not a debundled component of a larger CDM project.”*
- b) *Section 2, in the table it is corrected as 15,500 MWh.*

Calculation corrected as $(150,000/(365 \times 24))$ 17.12 years.

Documentation provided by the project holder

CAB assessment (23/04/2023-05/06/2023)

Review-1:

- a) *Please confirm that there is no separate flow meter for the flare unit in the project site.*
- b) *Please provide factory calibrations for installed monitoring equipment.*
- c) *Ok Closed (Section 2.3 was revised accordingly.)*
- d) *Ok Closed (Technical documents of the anaerobic digesters were provided.)*
- e) *Ok Closed (The photographic evidences of the electricity meters were provided.)*

Review-2:

- a) *Please provide a justification for the statement “Project is not a debundled component of a larger CDM project.” in Section 1.3.*
- b) *In Section 2, “Mramorak 1&2 project, approximately, generates net amount of 16,600 MWh of renewable electricity annually” is stated. However, in “Cell E16” in “Parameters” Excel sheet, the value is 16,500 MWh. Please correct the contradiction. Also, please recalculate “ $(150,000/(365 \times 24))$ ” in Section 2.3.*

Review-3:

- a) *Ok Closed (The relevant sentence was deleted.)*

b) Ok Closed (The relevant revisions were made.)

Finding ID	10	Type of finding	Corrective action	Date
Section No.				
Description of finding				
<p>a) Please indicate the name of the “parent company” in Section 2.5.</p> <p>b) Please re-evaluate Section 2.5 with considering the difference between a bundled project activity and a grouped project activity.</p>				
Project holder response (21/04/2023)				
<p>a) Parent company is indicated in Section 2.5.</p> <p>b) Project is changed as bundled throughout the PD.</p>				
Documentation provided by the project holder				
CAB assessment (23/04/2023)				
<p>Review-1:</p> <p>a) Ok Closed (The parent company was included in Section 2.5.)</p> <p>b) Ok Closed (The relevant statements were revised accordingly throughout the report.)</p>				

Finding ID	11	Type of finding	Corrective action	Date
27/03/2023				

Section No.
Description of finding
<p>a) Please re-evaluate Section 3.1 with considering the difference between a bundled project activity and a grouped project activity.</p> <p>b) Please use all of the necessary tools with considering the applied methodologies (e.g. Tool o6: Project emissions from flaring) in Section 3.1 and throughout the BCR PD.</p> <p>c) Please include the references of all methodologies and tools in Section 3.1.</p>
Project holder response (21/04/2023-04/06/2023)
<p>a) Project changed as bundled project throughout the PSF.</p> <p>b) Flaring is not applied to the project activity. It is only used for emergency situations. Even so far, flaring has not been used at the project. Therefore, using this Tool is o6 is not applicable. Tool o6 is used for combusting residual gas. However Mramorak project does use all its biogas, it has no residual gas.</p> <p>c) references of all methodologies and tools in Section 3.1 is already present in the PD. Tool o6 is not applicable due to that flaring is only used for emergency conditions. So project emissions from flaring is zero.</p> <p>Response to the Review 1:</p> <p>a) Tool o6 is added to Section 3.1, 3.1.1 and calculations are provided in the Section 3.7.4. According to the calculation.</p> <p>Tool o3 is added to the Section 3.1 and 3.1.1. For section 3.7.4 the following sentence is added: “For the project activity, there are no other sources of project emissions that will require the use of “Tool o3: Tool to calculate project or leakage CO₂ emissions from fossil fuel combustion”. Project activity’s only source of CO₂ emissionf rom fossil fuel combustion is transportation which is already calculated by the PEtransp,y equation.”</p> <p>c)References for AMS-I.D and the tools are added as foonote.</p> <p>Response to Review 2:</p>

<p>b) Repeating figure is deleted. Flare emissions is added to the GHG Sources table in Section 3.2.2.</p> <p>c) Emission factor is rounded down as 1,078674742. PDD is corrected.</p>
<p>Documentation provided by the project holder</p>
<p>CAB assessment (23/04/2023-05/06/2023)</p>
<p>Review-1:</p> <p>a) Ok Closed (The relevant statements were revised accordingly throughout the report.)</p> <p>b) Even the flare unit has not been used so far, the relevant tool, the relevant calculations and the relevant parameters are to be indicated in the BCR PDD. Also, “Tool to calculate project or leakage CO₂ emissions from fossil fuel combustion” is to be applied in the relevant sections of the BCR PDD.</p> <p>c) The references for AMS-I.D and the relevant tools are not included in Section 3.1.</p> <p>Review-2:</p> <p>b) There are two same figures in Section 3.2.1. Please remove one of them. Also, please include the “flare emissions” in the GHG sources table in Section 3.2.2.</p> <p>c) As per “Cell F32” in “AMS-I.D & III.D-BE” Excel sheet, the emission factor is “1,078674742” tCO₂/MWh. This value should not be rounded in the PDD. Therefore, please revise the value of emission factor throughout the PDD.</p> <p>Review-3:</p> <p>b) Ok Closed (The relevant revisions were made.)</p> <p>c) Ok Closed (The value was corrected in the BCR-PDD.)</p>

Finding ID	¹²	Type of finding	Corrective action	Date
				27/03/2023
Section No.				

<p>Description of finding</p>
<p>a) Please re-justify “No:1-a” for “AMS-III.AO: Methane recovery through controlled anaerobic digestion” methodology applicability in Section 3.1.1.</p> <p>b) Please re-justify “No:1-e” for “AMS-III.AO: Methane recovery through controlled anaerobic digestion” methodology applicability in Section 3.1.1.</p> <p>c) Please re-justify “No:3” for “AMS-III.AO: Methane recovery through controlled anaerobic digestion” methodology applicability in Section 3.1.1.</p> <p>d) Please provide all applicability conditions of “AMS-III.AO: Methane recovery through controlled anaerobic digestion” in Section 3.1.1.</p> <p>e) Please re-evaluate AMS-III.D applicability for the project activity with considering AMS-III.AO applicability conditions.</p> <p>f) In “6” condition for “AMS-I.D. Grid connected renewable electricity generation” in Section 3.1.1, please indicate where the rest of the fraction of the heat is used.</p> <p>g) Please re-justify the condition “3” of “AMS-I.D. Grid connected renewable electricity generation” in Section 3.1.1.</p> <p>h) Please use “Figure 2 in Tool 20 document (on page 8) to demonstrate the applicability of Tool 20 in Section 3.1.1.</p> <p>i) Please include all the applicability conditions of the applied tools (e.g. Tool 06) in Section 3.1.1.</p>
<p>Project holder response (21/04/2023-04/06/2023)</p>
<p>a) No-1a justification provided in the Mramorak PD seems sufficient enough, not applicable due that there are more than one substrate. However, this methodology, in its second criteria (No.1b) allows that co-digestion of multiple sources are allowed, including manure, municipal waste, wastewater etc.</p> <p>b) AMS-III.AO, by this condition, states that if you use only manure in biodigesters, don't use AMS-III.AO instead suggest to use the AMS-III.D. This AMS-III.AO is a parent integrator methodology where it allows the use of more than substrates. Hence, the explanation for this condition in the Mramorak PD is legitimate.</p> <p>c) “Methane emission reduction from plant residues (biomass) are not claimed. Therefore baseline emissions are not calculated. This is a conservative approach.” Added to the No.3.</p> <p>d) AMS-III.AO applicability conditions are revised. In case not satisfied, please provide clarification about the specific correction requested.</p>

e) AMS-III.D is referred by the parent integrator methodology, AMS-III.AO (which allows co-digestion of multiple sources). Therefore using AMS-III.D is legitimate and a requirements by the AMS-III.AO.

f) "The rest of the heat that comes from the exhaust of the gas engines are released to the atmosphere" added to the AMS-I.D. Condition 6 in Section 3.1.1.

g) "Mramorak 1 and Mramorak 2 projects are newly installed at the project, not transported from another place. They are brand new systems." Added to the Condition 3 of AMS-I.D. in Section 3.1.1. Mramorak 1 and 2 are brand new systems installed. Therefore they are GreenField.

h) The Mramorak projects are not like wind power plants, solar power plants where it is possible to de-bundle the some of it. These Mramorak 1 and 2 are single units, and by logic it is impossible to debundle such units. We are not even sure even if we really need to use The Tool 20. I would suggest to remove the Tool 20 given that project is not like wind and solar power plants.

i) Tool 06 is N/A because flaring is not a process applied to the project.

Response to the Review 1:

b) The AMS-III.AO states the use of AMS-III.D if project only uses manure. Here the AMS-III.AO reminds the project owner.

f) AMS-I.D row 6 is revised.

i) Tool 03 and Tool 06 are added to the Section 3.1 and 3.1.1.

Response to the Review 2:

a) $PE_{power,y}$ value, 1063.7 MW/year, is included into the emission reduction calculation. This value is used within the AMS-I.D. value. Project supplies to the grid 16500 MW annually, project consume about 1063.7 MW electricity. And net electricity generation as per the AMS-I.D is included in the calculations. Since 1063.7 MW is used in AMS-I.D., $PE_{power,y}$ is not used here.

b) The following sentence is added to the Section 3.7.4. "Since it is only used for emergency purposes, for simplification and to be on the conservative side, $F_{CH_4,y}$ is accepted as the maximum combustion capacity of the flare chamber."

c) Excel is revised because net electricity is changed by AMS-I.D. hence Section 3.7.4 is corrected also.

d) Repeating $V_{t,db}$ table is deleted.

Documentation provided by the project holder

CAB assessment (23/04/2023-05/06/2023)

Review-1:

- a) *Ok Closed (The clarification was made.)*
- b) *AMS-III.D is used for the manure part in the BCR PDD. However, in Section 3.1.1, a justification is made as if AMS-III.D was not used. Please correct the contradiction.*
- c) *Ok Closed (Section 3.1.1 was revised accordingly.)*
- d) *Ok Closed (The applicability conditions were completed in Section 3.1.1.)*
- e) *Ok Closed (The clarification was made.)*
- f) *Please re-evaluate of condition “6” for “AMS-I.D. Grid connected renewable electricity generation” in Section 3.1.1.*
- g) *Ok Closed (The justification was revised accordingly in Section 3.1.1.)*
- h) *Ok Closed (The clarification was made.)*
- i) *Please include all the applicability conditions of the applied tools in Section 3.1.1.*

Review-2:

- b) *PEpower,y is indicated as zero in Section 3.7.4. However, the value of ECPJ,y is indicated as “1063.7 MWh/year”. Please correct the contradiction. Also, please include a justification for “PEflaring,y” in Section 3.7.4.*
- f) *“GHG emission reductions in the baseline scenario (tCO_{2e})” value for 2026 is indicated differently in the Excel sheet compared to the value in Section 3.7.4. Please correct the contradiction.*
- i) *Vt,db is demonstrated twice in Section 16.1. Also, ηflare is to be included in Section 16.1.*

Review-3:

- b) *Ok Closed (The clarification was made.)*
- f) *Ok Closed (The relevant information in Section 3.7.4 was included.)*
- i) *Ok Closed (Section 16.1 was revised accordingly.)*

Finding ID	13	Type of finding	Corrective action	Date
				<i>27/03/2023</i>
Section No.				

Description of finding
Please remove the statement “As per AMS-III.AO and AMS-I.D, the baseline scenario of the project activity is as follows.” from Section 3.2.
Project holder response (21/04/2023)
Sentence is removed from Section 3.2.
Documentation provided by the project holder
CAB assessment (23/04/2023)
Review-1: Ok Closed (The relevant statement was removed from Section 3.2.)

Finding ID	¹⁴ Type of finding	Corrective action	Date
			27/03/2023
Section No.			
Description of finding			
Please indicate the relevant GHGs as well in Figure 14 in Section 3.2.2.			
Project holder response (21/04/2023-04/06/2023)			

<p><i>Relevant GHGs already indicated in Figure 14 in Section 3.2.2.</i></p> <p><i>Response to the Review 1:</i></p> <p><i>GHG sources are added to the Figure 14 in Section 3.2.2.</i></p> <p><i>Response to the Review 2:</i></p> <p><i>This contradiction is corrected in the excel sheet.</i></p>
<p>Documentation provided by the project holder</p>
<p>CAB assessment (23/04/2023)</p>
<p><i>Review-1:</i> <i>CO₂, CH₄ and N₂O are to be demonstrated for the relevant sources in Section 14 in Section 3.2.2.</i></p> <p><i>Review-2:</i> <i>The values in "Column E" in "Mramorak_ERstCO2" Excel sheet are not the same with the values in "Column Y" in "AMS-III.AO-Tool4-BE" Excel sheet.</i></p> <p><i>Review-3:</i> <i>Ok Closed (The ER Calculation Excel sheet was corrected.)</i></p>

<i>Finding ID</i>	<i>15</i>	<i>Type finding</i>	<i>of</i>	<i>Corrective action</i>	<i>Date</i>
					27/03/2023
Section No.					
Description of finding					

<p>a) Please provide the relevant evidence documents for the construction start dates (12/12/2018 and 01/07/2019) of both plants (Mramorak 1&2).</p> <p>b) Please select a single start date of the project in Section 3.2.3.</p>
<p>Project holder response (21/04/2023)</p>
<p>a) First page of the construction contract documents are provided. This contract date is the date accepted as the start of the construction. Only first page of the contract is provided, the rest is confidential.</p> <p>b) "Project start date is 24.06.2020 when the Mramorak 1 started to operation." Only this sentence is indicated in Section 3.2.2.</p>
<p>Documentation provided by the project holder</p>
<p>CAB assessment (23/04/2023)</p>
<p>Review-1:</p> <p>a) Ok Closed (The construction agreements were provided.)</p> <p>b) Ok Closed (Section 3.2.3 was revised accordingly.)</p>

Finding ID	16	Type of finding	Corrective action	Date
				27/03/2023
Section No.				

Description of finding
The start date is indicated as “12/12/2018” in Section 3.2.3. However, in the same section, the first quantification period is indicated as “24/06/2020 – 23/06/2027”. Please correct the contradiction.
Project holder response (21/04/2023)
Contradiction is corrected.
Documentation provided by the project holder
CAB assessment (23/04/2023)
Review-1: Ok Closed (Section 3.2.3 was revised.)

Finding ID	¹⁷	Type finding	of	Corrective action	Date
					27/03/2023
Section No.					
Description of finding					
Please indicate the planned monitoring “periods” in Section 3.2.3.					
Project holder response (21/04/2023)					
Monitoring periods are indicated as					

<p>“First monitoring period: 24/06/2020- 23/06/2024</p> <p>Second monitoring period: 24/06/2024-23/06/2027.”</p> <p>In Section 3.2.3.</p>
<p>Documentation provided by the project holder</p>
<p>CAB assessment (23/04/2023)</p>
<p>Review-1:</p> <p>Ok Closed (The estimated monitoring periods were included in Section 3.2.3.)</p>

Finding ID	18	Type of finding	Corrective action	Date
27/03/2023				
Section No.				
Description of finding				
<p>a) Please revise the weblink in Footnote 14.</p> <p>b) Please include in Section 3.3 the statistical results (with indicating references) proving that there is an increasing need for electricity in Serbia.</p>				
Project holder response (21/04/2023)				
<p>a) web link revised. Original law is also provided, CAR-18_LawofSerbia-on-LivestockManagement.pdf.</p> <p>b) Section 3.3. is revised as per the comment. CAR-18_Legislative-Energy-Sector-Development-Strategy-of-Serbia-for-the-period-by-2025-with-projections-by-2030.pdf is provided also.</p>				

Documentation provided by the project holder
CAB assessment (23/04/2023)
<p>Review-1:</p> <p>a) Ok Closed (The relevant web link was corrected.)</p> <p>b) Ok Closed (The relevant information was included in Section 3.3.)</p>

Finding ID	19	Type of finding	Corrective action	Date
				27/03/2023
Section No.				
Description of finding				
<p>CAR-19</p> <p>Please provide an analysis of compliance of the mandatory laws and regulations in Section 3.4.</p>				
Project holder response (21/04/2023)				
Section 3.4 is revised as per the comment.				
Documentation provided by the project holder				
CAB assessment (23/04/2023)				
<p>Review-1:</p> <p>Ok Closed (Mandatory laws and regulations were included in Section 3.4.)</p>				

<i>Finding ID</i>	<i>20</i>	<i>Type finding</i>	<i>of</i>	<i>Corrective action</i>	<i>Date</i>
					27/03/2023
Section No.					
Description of finding					
<i>Please indicate the investment decision date in Section 3.4 and provide the relevant evidence document.</i>					
Project holder response (21/04/2023)					
<i>Investment decision date is indicated in Section 3.4 as 26/07/2018, and proof documents are provided.</i>					
Documentation provided by the project holder					
CAB assessment (23/04/2023)					
<i>Review-1: Ok Closed (The investment decision date was included in Section 3.4 and the relevant evidence document was provided.)</i>					

<i>Finding ID</i>	<i>21</i>	<i>Type finding</i>	<i>of</i>	<i>Corrective action</i>	<i>Date</i>
					27/03/2023
Section No.					
Description of finding					

<p>a) Please provide the actual years (2018, 2019, etc.) as column headings in the Excel worksheet “Mramorak_IRR_Calculation”.</p> <p>b) The source document for the cost of borrowing (commercial loan interest rate, cell I7 in Excel worksheet Mramorak_IRR_Calculation) is not provided.</p> <p>c) Loan interest payments are included in the calculation of the pre-tax Project IRR. However, this is not appropriate since, according to Tool27, V12, page 5, “The cost of financing expenditures (i.e. loan repayments and interest) shall not be included in the calculation of project IRR since the purpose of the project IRR calculation is to determine the viability of the project to service debt. Therefore, to include the cost of financing as an expense in this calculation would result in a double counting of this cost in the ultimate analysis.”</p> <p>The cash flows provided on Row 83 of the Excel worksheet “Mramorak_IRR_Calculation” include a deduction of loan interest.</p> <p>d) The current set of calculations demonstrate that the proposed project activity is not financially feasible without the CDM revenues since the calculated pre-tax Project IRR (8.34%) is below the benchmark (10.91%).</p> <p>However, this result may change when the financing expenditures are excluded from the cash flows.</p>
<p>Project holder response (21/04/2023)</p>
<p>a) Years added in the IRR excel file.</p> <p>b) Interest costs are not considered in calculations of IRR therefore evidence documents are not provided.</p> <p>c) Loan payments are excluded in the IRR calculations.</p> <p>d) Financial expenditures are excluded.</p>
<p>Documentation provided by the project holder</p>
<p>CAB assessment (23/04/2023)</p>
<p>Review-1:</p> <p>a) Ok Closed (The IRR sheet was revised accordingly.)</p> <p>b) Ok Closed (The clarification was made.)</p> <p>c) Ok Closed (The IRR sheet was revised accordingly.)</p>

d) Ok Closed (The IRR sheet was revised accordingly.)

Finding ID	22	Type of finding	Corrective action	Date
Section No.				
Description of finding				
<p>Please present and justify a mechanism to manage uncertainty in the quantification of baseline and mitigation results in Section 3.5. (the underlying choice of parameters and they being conservatively used among other aspects are missing.)</p>				
Project holder response (21/04/2023)				
<p>a) We have calculated the baseline emissions and mitigation results according to the CDM, AMS-III.AO and AMS-I.D. methodologies. These methodologies clearly determine the quantification of baseline emissions and mitigation results in a conservative manner. Section 3.5 is revised.</p>				
Documentation provided by the project holder				
CAB assessment (23/04/2023)				
<p>Review-1: Ok Closed (Section 3.5 was revised accordingly.)</p>				

<i>Finding ID</i>	²³	<i>Type finding</i>	<i>of</i>	<i>Corrective action</i>	<i>Date</i> 27/03/2023
Section No.					
Description of finding					
The requirement for leakage emissions in “AMS-I.D” is different from the requirement in “AMS-III.AO”. Therefore, please indicate the requirements for leakage emissions separately for both methodologies. Then, please include the relevant justifications in Section 3.6.					
Project holder response (21/04/2023)					
Section 3.6. is revised as per the comment.					
Documentation provided by the project holder					
CAB assessment (23/04/2023)					
Review-1: Ok Closed (Section 3.6 was revised accordingly.)					

<i>Finding ID</i>	²⁴	<i>Type finding</i>	<i>of</i>	<i>Corrective action</i>	<i>Date</i> 27/03/2023
Section No.					

Description of finding
Please indicate the results as well of the mitigations which are demonstrated in Sections 3.7, 3.7.3 and 3.7.4.
Project holder response (21/04/2023)
<p>Please provide clarification what is requested exactly.</p> <p>Response to the Review 1: A new worksheet is added to the emission reduction excel sheet, named “ERy,expostMin”. This sheet provides values for both parts for each year of crediting period. Since it is indicated in excel sheet, it is not indicated in BCR-PD.</p> <p>Response to the Review 2: PEflare is corrected and included in the project emission calculations.</p>
Documentation provided by the project holder
CAB assessment (23/04/2023-05/06/2023)
<p>Review-1: Please indicate the estimated values for the parts in Equation 4 in Section 3.7.</p> <p>Review-2: PEflare is calculated in “PEflare-Tool o6” Excel sheet. However, in the PDD, the parameter is taken into consideration as zero.</p> <p>Review-3: Ok Closed (The value was corrected.)</p>

Finding ID	25	Type of finding	Corrective action	Date
				27/03/2023

Section No.
Description of finding
<p>a) Please indicate the definitions of “$BE_{elect,y}$” and “$BE_{ww,y}$” in Section B.7.3 as well.</p> <p>b) Please correct the statement “Project activity claims carbon emission reduction for manure ($BE_{ww,y}$) and municipal solid waste ($BESWDS,y$)” in Section B.7.3.</p> <p>c) Please clearly indicate the calculation “$BE_y = BESWDS,y + BE_{manure,y}$” is related to AMS-III.AO. Since otherwise it will be confusion with the calculation “$BE_{Mramorak1\&2,y} = BESWDS,y + BE_{manure,y} + BE_{elect,y}$”.</p> <p>d) To calculate $BE_{manure,y}$, AMS-III.D is used. However, in “Applicability” section in “AMS-III.AO” methodology, it is stated “Project activities treating animal manure as single source substrate shall apply AMS-III.D”. However, in this project, animal manure is not the single source. Please re-evaluate $BE_{manure,y}$.</p> <p>e) For the emission factor value, please use the IFI default value and revise the emission reduction values according to this.</p>
Project holder response (21/04/2023-04/06/2023)
<p>a) $BE_{ww,y}$ is indicated. $BE_{elect,y}$ is already indicated as “Baseline emissions in year y) under the title of “AMS-I.D. Baseline emission from renewable energy part of the project activity” in Section B.7.3.</p> <p>b) Corrected as “Project activity claims carbon emission reduction for manure ($BE_{manure,y}$) and municipal solid waste ($BESWDS,y$)”</p> <p>c) This sentence added to the Section B.7.3. :” In this formula, baseline emission as per the AMS-III.AO is indicated as “$BE_{SWDS,y} + BE_{manure,y}$”. Baseline emission that comes from AMS-I.D is indicated as $BE_{elect,y}$. Following parts of this section provides how this formula is derived from AMS-III.AO and AMS-I.D”.</p> <p>d) AMS-III.AO is the parent integrator methodology that allows the use of more than one substrate, including manure. This methodology, AMS-III.AO refers different tools and methodologies to calculate the baseline emissions of each substrate, such as for manure it refers to the AMS-III.D, for waste water it refers AMS-III.H. Therefore, AMS-III.D is used for baseline emissions that comes from manure. For municipal waste, “Tool to determine methane emissions avoided from disposal of waste at a solid waste disposal site” is used.</p> <p>e) We have calculate the grid emission factor as per the applicable tools of CDM. Please evaluate the correctness our calculations, and re-evaluate this comment.</p> <p>Response to the Review 1:</p>

e) Choise of data set is indicated by the following sentence, added to the **Step 3**: Select a method to determine the operating margin (OM) in the BCR-PD. “Data used in grid emission factor calculation are taken from the annual Environmental Reports prepared and published by the Public Enterprise Electric Power Industry of Serbia (Elektroprivreda Srbije company in Serbian language) which is the joint-stock electric utility power company fully owned by the Government of Serbia.”

BCR-PD and emission reduction excel fine aer revised as per the latest available data. Public Enterprise Electric Power Industry of Serbia has just released 2021 data also. Hence revision applied accordingly.

Besides of UNFCCC CDM projects, other voluntary carbon standards are also checked. There are only 7 projects at CDM,even some of which are not implemented. At other standards, there are not projects registered or applied which have operation start date before 26 June 2020. 26 June 2020 is the operation start date of Mramorak project.

Grid emission factor is revised as per the latest data, and accordingly BCR-PD is revised.

Response to the Review 2:
Vinca is added to the PDD.

Documentation provided by the project holder

CAB assessment (23/04/2023)

Review-1:

- a) Ok Closed (Section B.7.3 was revised accordingly.)
- b) Ok Closed (Section B.7.3 was revised accordingly.)
- c) Ok Closed (Section B.7.3 was revised accordingly.)
- d) Ok Closed (Section B.7.3 was revised accordingly.)
- e) The choice of dataset for the OM calculation is to be justified and most recent available dataset should be used. Also, for the BM calculation reference to just CDM projects is in context of para 90 of the Toolo7 is not appropriate and other standards too are to be looked. In light of the same the grid emission factor is to be revised.

Review-2:

e) Basis of determination of the grid emission factor noting that for OM and BM weights only CDM Projects are not to be considered for the count of 10. Further, the value from UNFCCC data base as used in case of Vinca landfill is much lower.

Review-3:

e) Ok Closed (The project list was revised.)

Finding ID	26	Type finding	of	Corrective action	Date
27/03/2023					
Section No.					
Description of finding					
There is no section as “3.7.5. Leakage” in BCR PD Template, version 1.0. Therefore, please indicate leakage and emission reductions information under Section 3.7.4.					
Project holder response (21/04/2023)					
This title is removed.					
Documentation provided by the project holder					
CAB assessment (23/04/2023)					
Review-1:					
Ok Closed (The layout of the BCR PDD was revised accordingly.)					

Finding ID	27	Type finding	of	Corrective action	Date
27/03/2023					

Section No.
Description of finding
<i>Please indicate if there is any uncertainty management for the project emissions in Section 3.7.4.</i>
Project holder response (21/04/2023)
<i>Section 3.7.4 is revised. Parameters used to calculate project emissions are monitoring paramaters. Monitoring parameters are already collected in a provable way as per the AMS-III.AO and AMS-I.D.</i>
Documentation provided by the project holder
CAB assessment (23/04/2023)
<i>Review-1: Ok Closed (Section 3.4 was revised accordingly.)</i>

Finding ID	28	Type of finding	Corrective action	Date
				27/03/2023
Section No.				
Description of finding				
<i>Please revise the date of the generation license of Mramorak 2 in Section 4.</i>				

Project holder response (21/04/2023)
<i>Mramorak 2 generation license date is revised in Section 4.</i>
Documentation provided by the project holder
CAB assessment (23/04/2023)
Review-1: <i>Ok Closed (The relevant date was revised in Section 4.)</i>

Finding ID	29	Type of finding	Corrective action	Date
				27/03/2023
Section No.				
Description of finding				
<p><i>There are two companies mentioned. One of them is “Zlatar Mramorak Doo.” and the other one is “BioGold Energy Doo.”. Although they own the same parent company, the carbon rights have been given to Zlatar Mramorak Doo. Please provide an agreement regarding this from the parent company or between Zlatar and BioGold Energy Doo.</i></p> <p><i>Also, please indicate information about the relevant agreement in Section 5.3.</i></p>				
Project holder response (21/04/2023-04/06/2023)				
<p><i>Section 5.3. is revised as per the comment.</i></p> <p><i>Lette is provided.</i></p> <p><i>CAR-29_BioGold_to_ZlatarMramorakDoo.pdf</i></p>				

<p><i>Response to the Review 1:</i></p> <p><i>„Carbon ownership of the project activity is belonged to the project owner, which is the Zlatar Mramorak Doo. BioGold Energy Doo has transferred its carbon credit related rights to the Zlatar Mramorak Doo by the agreement dated as 05/04/2023.“ Bold part is added to the sentence in Section 5.3.</i></p>
<p><i>Documentation provided by the project holder</i></p>
<p><i>CAB assessment (23/04/2023-05/06/2023)</i></p>
<p><i>Review-1:</i> <i>Please include the provided agreement dated 05/04/2023 in Section 5.3.</i></p> <p><i>Review-2:</i> <i>Ok Closed (Section 5.3 was revised accordingly.)</i></p>

<i>Finding ID</i>	<i>30</i>	<i>Type of finding</i>	<i>Corrective action</i>	<i>Date</i>
				<i>27/03/2023</i>
<i>Section No.</i>				
<i>Description of finding</i>				
<p><i>a) Please indicate whether there will be a problem with the transport of waste sources in Section 7.</i></p> <p><i>b) Please indicate the relevant risks with respect to the local stakeholders in Section 7.</i></p> <p><i>c) Please indicate the relevant risks with respect to employments in Section 7.</i></p>				

Project holder response (21/04/2023)
<p>a) the following sentence is added to the Section 7: “In addition, transportation of food wastes from the sources to the project site is also not a problem for the project owner.”</p> <p>b) the following sentence is added to the Section 7: “There is continuous communication with the stakeholders, who can reach easily to the project owner through phone call. In addition to that, some of employees are local people, from Mramorak village. Stakeholders have no problem with the project activity as they present their positive comments during the stakeholder meetings. Therefore, there is no risk from the site of the stakeholders. “</p> <p>c)) the following sentence is added to the Section 7: “Project activity has no problem for hiring employees to operate the project activity.”</p>
Documentation provided by the project holder
CAB assessment (23/04/2023)
<p>Review-1:</p> <p>a) Ok Closed (The relevant information was included in Section 7.)</p> <p>b) Ok Closed (The relevant information was included in Section 7.)</p> <p>c) Ok Closed (The relevant information was included in Section 7.)</p>

Finding ID	31	Type of finding	Corrective action	Date
				27/03/2023
Section No.				
Description of finding				

a) Please remove the repeated sentences in Section 8 (there are no environmental and socio-economic impacts that can be counted as negative by the project activity. On the contrary project has more positive benefits to environment and society. Most important ones are the prevention of methane emissions to the atmosphere that would happen in the absence of the project activity.).

b) For the noise title in Section 8, also indicate how far the nearest settlement is (please indicate the name of the settlement as well).

c) Please provide some of the disposal records of the hazardous waste as an example.

d) Please provide some of the disposal records of the waste water as an example.

e) Please provide the social security records of the employees.

Project holder response (21/04/2023)

a) Repeating sentence is deleted.

b) "The closest settlement to the project activity is the Mramorak village. Houses at the boundary of the Mramorak village are about 250-300 m away from the Mramorak 1&2 project site." Added to the Section 8.

c) Disposal records are provided.

d) Wastewater from the facility which are produced by the employees are given to the municipal underground sewage system. Therefore, there is no disposal records. It is given to the municipal pipeline.

e) Social security records are provided.

Documentation provided by the project holder

CAB assessment (23/04/2023)

Review-1:
 a) Ok Closed (The repeated sentence was removed from Section 8.)
 b) Ok Closed (The relevant information was included in Section 8.)
 c) Ok Closed (The disposal records were provided.)
 d) Ok Closed (The clarification was made.)
 e) Ok Closed (Social security records were provided.)

Finding ID	32	Type of finding	Corrective action	Date
Section No.				
Description of finding				
Please provide information related to the grievance mechanism in Section 9 with indicating evidence documents. Please also indicate what actions the project owner takes when there is a negative comment from local stakeholders in Section 9.				
Project holder response (21/04/2023)				
Section 9 is revised.				
Documentation provided by the project holder				
CAB assessment (23/04/2023)				
Review-1: Ok Closed (Section 9 was revised accordingly.)				

Finding ID	33	Type of finding	Corrective action	Date
Section No.				
Description of finding				
<p>a) Please indicate the relevant SDG indicators as well in Section 11.</p> <p>b) Please indicate the reference link for the tool to demonstrate the SDG contributions in Section 11 (https://biocarbonregistry.com/es_en/ods/).</p>				
Project holder response (21/04/2023-04/06/2023)				
<p>a) SDGs are already indicated. Please provide clarification regarding what it meant with the SDG indicator.</p> <p>b) the the following reference link is indicated as footnote in Section 11. https://biocarbonregistry.com/es_en/ods/.</p> <p>Response to the Review 1: Section 11 is revised as per the comment. Targets and indicators of each SDG are indicated.</p> <p>Response to the Review 2: Value are taken from the 2019 refinement to IPCC. We checked again. Bo and VS values and others are taken from the Table 10A.4 and 10A.5, eastern Europe is taken. https://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/4_Volume4/V4_10_Ch10_Livestock.pdf, p. 77-78.</p>				
Documentation provided by the project holder				
CAB assessment (23/04/2023-05/06/2023)				
<p>Review-1:</p> <p>a) For example, SDG is 7, target is SDG 7.2, the indicator is SDG 7.2.2.</p>				

b) Ok Closed (The relevant reference link was included.)

Review-2:

a) The ER sheet although gives reference to 2019 refinement to IPCC, however the underlying values are not to be found from the reference. For e.g. for Bo, VS. Please check and correct.

Review-3:

a) Ok Closed (The clarification was made.)

Finding ID	34	Type of finding	Corrective action	Date
				27/03/2023
Section No.				
Description of finding				
Please re-evaluate Section 14 with considering the difference between a bundled project activity and a grouped project activity.				
Project holder response (21/04/2023)				
Section 14 is revised. Table is removed. Mramoraki&2 is not a grouped project as per the definition provided in the BioCarbon Registry Voluntary Carbon Market Standard, Version 2.0, Nov 2022.p.36. It is a bundled project, and this is stated in Section 14.				
Documentation provided by the project holder				

CAB assessment (23/04/2023)
Review-1: Ok Closed (Section 14 was revised accordingly.)

Finding ID	35	Type of finding	Corrective action	Date
				27/03/2023
Section No.				
Description of finding				
<p>a) Since the default value will be used for the emission factor, please delete the ones used in the emission factor calculation.</p> <p>b) Please include all parameters used in Section 16.1 (e.g. LFAD).</p> <p>c) In Section 16.1, the values of NLT,y are indicated as 1310 for dairy cow and 2050 for non-dairy cow. However, the relevant values are indicated differently in “AMS-I.D & III.D – BE” Excel spreadsheet. Please correct the contradiction.</p> <p>d) Please revise the statement “Project methane emissions occurring in year y generated from waste disposal at a SWDS during a time period ending in year y (t CO_{2e}/yr)” in “AMS-III.AO – Tool₄ – BE” Excel sheet.</p> <p>e) Please indicate W_{j,x} values for each waste source in the PD and in the ER Calculation Excel spreadsheet with indicating the relevant evidence documents.</p> <p>f) EFCO_{2,f} is indicated as 74.1 tCO₂/TJ in Section 16.1. However, the relevant value is indicated differently in “AMS-III.AO-PE” Excel sheet. Please correct the contradiction.</p> <p>g) Please provide the calibration documents of the monitoring equipment (flow meters, gas analyzer, electricity meters and weighbridge).</p>				
Project holder response (21/04/2023-04/06/2023)				
<p>a) Rejecting this comment, instead asking the evaluation of the grid emission factor calculated in the Mramorak PD and relevant excel sheet.</p> <p>b) LFAD is added to the Section 16.1.</p> <p>c) Corrected according to the excel sheet (1340, 2021)</p>				

d) Project emission is corrected as Baseline emission in the “AMS-III.AO – Tool₄ – BE” Excel sheet.

e) To the excel sheet “AMS-III.AO – Tool₄ – BE”, this explanation is added “Mramorak project receives only one type of municipal waste, which is organic solid waste (municipal food waste)”

To the PD, the following sentence is added to the Section 16.1.: “Project received one type of solid waste, which is the municipal food waste.”

f). 74.1 is tonCO₂ (tCO₂). In excel sheet it is stated as kgCO₂. They are the same value.

g) Calibration documents are provided. Please see the CAR-9_Calibration_Documents file.

Response to the Review 1:

a) Grid emission factor (OM) is revised in BCR-PD and excel sheet according to the latest available dataset.

b) Monitoring parameters seems as complete. Tool o₃ and o₆ are added to the BCR-PD, but as it can be seen in the BCR-PD there are no parameters that require monitoring. Flaring, there is no biogas flow meter in flaring because it is not used routinely. Since there is no flowmeter, monitoring parameter can not be indicated. In addition to that, the following sentence is added to the BCR-PD “Project also does not claim carbon credits that will be generated by flaring that takes place during emergency conditions.” When flaring is activated during emergency conditions, biogas will be combusted in flare unit. Flare unit does not have flow meter. Hence, we are not claiming emission reductions when flare is activated. Hence, there is no need to monitor that those parameters.

Regarding Tool o₃, project emissions from fossil fuel combustion are calculated by the AMS-III.AO methodology (only source of fossil fuel combustion is transportation). Project emission by transportation is calculated by the AMS-III.AO. Other than transportation, project does not have any other source of fossil fuel combustion as these other sources are indicated in the Tool o₃. Therefore, although the tool o₃ is indicated in the BCR-PD, practically it has no use in the PCR-PD due that other than transportation there is no any other source of fossil fuel combustion. If there are other source of fossil fuel combustion in the project other than transportation, then Tool o₃ would be used.

g) Project owner contacted with the manufacturer of both biogas flow meter and biogas analyzer for calibration documents. Response has not been received yet.

Response to the Review 2:

a) Vinca is added to the PDD.

b) Calibration documents of flow meters and gas analyzers were already provided. But will be sent again.

Documentation provided by the project holder
CAB assessment (23/04/2023-05/06/2023)
<p><i>Review-1:</i></p> <p>a) The OM is to be revised using the most recent available dataset and the BM too is to be calculated. Accordingly the CM is to be revised.</p> <p>b) Please include all monitoring parameters in Section 16.1.</p> <p>c) Ok Closed (The values were corrected in Section 16.1.)</p> <p>d) Ok Closed (The relevant statement was corrected in Section 16.1.)</p> <p>e) Ok Closed (The clarification was made.)</p> <p>f) Ok Closed (The clarification was made.)</p> <p>g) The calibration documents of the flow meters and gas analyzer are not available.</p> <p><i>Review-2:</i></p> <p>a) Basis of determination of the grid emission factor noting that for OM and BM weights only CDM Projects are not to be considered for the count of 10. Further, the value from UNFCCC data base as used in case of Vinca landfill is much lower.</p> <p>b) Ok Closed (All monitoring parameters were included.)</p> <p>g) The calibration documents of the flow meters and gas analyzer are not available.</p> <p><i>Review-3:</i></p> <p>a) Ok Closed (The project list was revised.)</p> <p>g) Ok Closed (The calibration documents were provided.)</p>

Finding ID	36	Type of finding	Corrective action	Date
				27/03/2023
Section No.				

Description of finding
<p>a) Please indicate the monitoring equipment details (e.g. brands, serial numbers and so on) in Section 16.4. Please also indicate their measuring data frequencies in Section “16.4.</p> <p>b) Please indicate the calibration dates and calibration frequencies of the monitoring equipment in Section 16.4.</p> <p>c) Please indicate the main source and cross-checked method for the electricity generation in Section 16.4.</p> <p>d) Please indicate the storage time of the data in Section 16.4.</p> <p>e) Please indicate SDG contributions in Section 16.4.</p>
Project holder response (21/04/2023)
<p>a) Section 16.4 is revised.</p> <p>b) Calibration frequencies are indicated in Section 16.4. Equipments are not calibrated yet because their calibration time has not arrived.</p> <p>c) Section 16.4 is revised as per the comment.</p> <p>d) storage time of the data is already indicated in Section 16.4 with the following sentence: “All data for each monitoring parameters, both ex-post and ex-ante, will be archived during the project and will be kept for more 5 years following the end of the crediting period.”</p> <p>e) SDG contributions are added to the Section 16.4.</p>
Documentation provided by the project holder
CAB assessment (23/04/2023)
<p>Review-1:</p> <p>a) Ok Closed (The meter details were included in Section 16.4.)</p> <p>b) Ok Closed (The dates were included.)</p> <p>c) Ok Closed (The relevant information was included in Section 16.4.)</p> <p>d) Ok Closed (The relevant information was indicated in Section 16.4.)</p> <p>e) Ok Closed (SDG contributions were included in Section 16.4.)</p>

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<i>Finding ID</i>	<i>1</i>	<i>Type finding</i>	<i>of</i>	<i>Clarification</i>	<i>Date</i>
<i>27/03/2023</i>					
Section No.					
Description of finding					
<i>Please indicate the mail address and landline telephone as well in “Project proponent’s contact information” on the cover page.</i>					
Project holder response (21/04/2023)					
<i>On the cover page, email and phone number are indicated as Project proponent’s contact information.</i>					
Documentation provided by the project holder					
CAB assessment (23/04/2023)					
<i>Review-1:</i>					
<i>Ok Closed (The relevant information was included on the cover page.)</i>					

<i>Finding ID</i>	<i>2</i>	<i>Type finding</i>	<i>of</i>	<i>Clarification</i>	<i>Date</i>
<i>27/03/2023</i>					
Section No.					

Description of finding
Please indicate the physical address of “Project holder’s contact information” as well on the cover page.
Project holder response (21/04/2023)
Mail address of the Project holder’s contact is added to the cover page.
Documentation provided by the project holder
CAB assessment (23/04/2023)
Review-1: Ok Closed (The relevant information was included on the cover page.)

Finding ID	3	Type of finding	Clarification	Date
				27/03/2023
Section No.				
Description of finding				
Please provide “EIA Not Required” Decisions for both biogas power plants.				
Project holder response (21/04/2023)				

EIA not required decisions are provided.

Documentation provided by the project holder

CAB assessment (23/04/2023)

Review-1:

Ok Closed (The relevant documents were provided.)

Annex 3. Documentation review

<i>Document Title / Version</i>	<i>Author</i>	<i>Organization</i>	<i>Document provider (if applicable)</i>
<i>BCR-PD v1.0 09/02/2023</i>	<i>İncigül Erdoğan Polat</i>	<i>Kilittaşı Mühendislik Müşavirlik İnşaat Tic. Ltd. Şti.</i>	<i>Consultant</i>
<i>BCR-PD v1.1 29/04/2023</i>	<i>İncigül Erdoğan Polat</i>	<i>Kilittaşı Mühendislik Müşavirlik İnşaat Tic. Ltd. Şti.</i>	<i>Consultant</i>
<i>BCR-PD v1.2 25/05/2023</i>	<i>İncigül Erdoğan Polat</i>	<i>Kilittaşı Mühendislik Müşavirlik İnşaat Tic. Ltd. Şti.</i>	<i>Consultant</i>
<i>BCR-PD v1.3 08/06/2023</i>	<i>İncigül Erdoğan Polat</i>	<i>Kilittaşı Mühendislik Müşavirlik İnşaat Tic. Ltd. Şti.</i>	<i>Consultant</i>
<i>ER Calculation Excel Sheet v1.0 09/02/2023</i>	<i>İncigül Erdoğan Polat</i>	<i>Kilittaşı Mühendislik Müşavirlik İnşaat Tic. Ltd. Şti.</i>	<i>Consultant</i>
<i>ER Calculation Excel Sheet</i>	<i>İncigül Erdoğan Polat</i>	<i>Kilittaşı Mühendislik Müşavirlik</i>	<i>Consultant</i>

VI.1 29/04/2023			İnşaat Tic. Ltd. Şti.	
ER Calculation Excel Sheet VI.2 25/05/2023	İncigül Erdoğan	Polat	Kilittaş Mühendislik Müşavirlik İnşaat Tic. Ltd. Şti.	Consultant
ER Calculation Excel Sheet VI.3 08/06/2023	İncigül Erdoğan	Polat	Kilittaş Mühendislik Müşavirlik İnşaat Tic. Ltd. Şti.	Consultant
IRR Calculation Excel Sheet VI.0 09/02/2023	İncigül Erdoğan	Polat	Kilittaş Mühendislik Müşavirlik İnşaat Tic. Ltd. Şti.	Consultant
IRR Calculation Excel Sheet VI.1 25/05/2023	İncigül Erdoğan	Polat	Kilittaş Mühendislik Müşavirlik İnşaat Tic. Ltd. Şti.	Consultant
IRR Calculation Excel Sheet VI.2 08/06/2023	İncigül Erdoğan	Polat	Kilittaş Mühendislik Müşavirlik İnşaat Tic. Ltd. Şti.	Consultant
Generation License of Mramorak (unrevised one) 1	-	-	-	Consultant

- 27/11/2018			
Generation License of Mramorak (unrevised one) - 17/06/2020	-	-	Consultant
Generation License of Mramorak (revised one) - 04/12/2018	-	-	Consultant
Generation License of Mramorak (revised one) - 05/03/2021	-	-	Consultant
Proof of Project Owner Document - 26/10/2021	Project Owner	-	Consultant
Signed and Sealed Letter by BioGold Energy Doo. about the Project Owner	BioGold Energy Doo	-	Consultant

- 05/04/2023			
<i>Law of Serbia on Livestock Management</i>	-	-	<i>Consultant</i>
<i>waste management permit from Kovin Municipal Administration- Department to the Project Owner (Zlatar Mramorak Doo.)</i> - 23/07/2021	<i>Kovin Municipal Administration</i>	-	<i>Consultant</i>
<i>The waste management permit from Kovin Municipal Administration- Department to BioGold Energy Doo.</i> - 02/11/2021	<i>Kovin Municipal Administration</i>	-	<i>Consultant</i>
<i>Technical Documents of Monitoring Equipment (Flow Meter, Electricity Meters, Gas Analyser)</i>	-	-	<i>Consultant</i>

<i>Technical Documents of the Installed Technology (Desulphurization unit, Separator, Gas Engines, Anaerobic Digester)</i>	-	-	<i>Consultant</i>
<i>KMZ file of the Project Activity</i>	<i>Project owner and Kilittaşı Engineering</i>	-	<i>Consultant</i>
<i>ODA Declaration</i> - <i>01/02/2023</i>	<i>Project Owner</i>	-	<i>Consultant</i>
<i>The photographic evidences of the Grievance Book</i>	<i>Project Owner</i>	-	<i>Consultant</i>
<i>The photographic evidences of the Electricity Meters</i>	<i>Project Owner</i>	-	<i>Consultant</i>
<i>Construction Agreements</i> - <i>12/12/2018 (Mramorak 1)</i> <i>01/07/2019 (Mramorak 2)</i>	-	-	<i>Consultant</i>
<i>Social Security Records of the Employees</i>	-	-	<i>Consultant</i>

<p><i>The photographic evidences of the name plates of the Monitoring Equipment</i></p>	-	-	<p><i>Consultant</i></p>
<p><i>Energy Sector Development Strategy of the Republic of Serbia for the Period by 2025 with Projections by 2030</i></p> <p>-</p> <p>2016</p>	<p><i>Republic of Serbia</i></p>	-	<p><i>Consultant</i></p>
<p><i>Received license to be implemented from the Electrodistribution company of Republic of Serbia for Mramorak 1 and Mramorak 2 (Investment Decision Date)</i></p> <p>-</p> <p>26/07/2018</p>	<p><i>Republic of Serbia</i></p>	-	<p><i>Consultant</i></p>
<p><i>Environmental Impact Assessment Report (Mramorak 1)</i></p> <p>-</p> <p>20/10/2021</p>	-	-	<p><i>Consultant</i></p>

<i>Environmental Impact Assessment Report (Mramorak 2)</i> - 01/07/2021	-	-	Consultant
<i>Calibration Documents of Gas Analyzer</i> - 21/05/2019 10/01/2020 05-06/08/2021	-	-	Consultant
<i>Calibration Documents of Flow Meters</i> - 18/07/2019 10/04/2020	-	-	Consultant
<i>AMS-III.AO: Methane recovery through controlled anaerobic digestion</i> vi.o 26/11/2010	CDM	CDM	N/A
<i>AMS-I.D.: Grid connected</i>	CDM	CDM	N/A

<i>renewable electricity generation</i> <i>v18.0</i> <i>28/11/2014</i>			
<i>AMS-III.D. Small-scale methodology: Methane recovery in animal manure management systems</i> <i>v21.0</i> <i>22/09/2017</i>	<i>CDM</i>	<i>CDM</i>	<i>N/A</i>
<i>Tool 01: Tool for the demonstration and assessment of additionality</i> <i>v07.0.0</i> <i>23/11/2012</i>	<i>CDM</i>	<i>CDM</i>	<i>N/A</i>
<i>Tool 04: Emissions from solid waste disposal site</i> <i>v08.0</i> <i>04/05/2017</i>	<i>CDM</i>	<i>CDM</i>	<i>N/A</i>
<i>Tool 07: Tool to calculate the emission factor for an electricity system</i>	<i>CDM</i>	<i>CDM</i>	<i>N/A</i>

v07.0 31/08/2018			
Tool 20: Assessment of debundling for small-scale project activities v04.0 16/04/2015	CDM	CDM	N/A
Tool 21: Demonstration of additionality of small-scale project activities v13.1 25/11/2005	CDM	CDM	N/A
Tool 27: Investment Analysis Version v12.0 02/11/2022	CDM	CDM	N/A
Annex 24 "Attachment A of Appendix B v08 29/09/2011	-	-	N/A
CDM Validation and Verification	CDM	CDM	N/A

Standard for project activities v3.0 09/09/2021			
CDM Project Standard for Project Activities v3.0 09/09/2021	CDM	CDM	N/A
BCR Standard v3.0 07/03/2023	BCR	BCR	N/A
BCR-PD v1.4 24/06/2023	İncigül Erdoğan	Polat	Kilittaşı Mühendislik Müşavirlik İnşaat Tic. Ltd. Şti. Consultant
ER Calculation Excel Sheet v1.4 24/06/2023	İncigül Erdoğan	Polat	Kilittaşı Mühendislik Müşavirlik İnşaat Tic. Ltd. Şti. Consultant
BCR-PD v1.5 24/08/2023	İncigül Erdoğan	Polat	Kilittaşı Mühendislik Müşavirlik İnşaat Tic. Ltd. Şti. Consultant
ER Calculation Excel Sheet	İncigül Erdoğan	Polat	Kilittaşı Mühendislik Müşavirlik Consultant

vi.5 24/08/2023		İnşaat Tic. Ltd. Şti.	
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Annex 4. Abbreviations

<i>Abbreviations</i>	<i>Full texts</i>
BM	Build Margin
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER(s)	Certified Emission Reduction(s)
CL	Clarification request
CM	Combined Margin
CO ₂	Carbon dioxide
CO _{2e}	Carbon dioxide equivalent
DNA	Designated National Authority
DOE	Designated Operational Entity
DR	Document Review
EF	Emission Factor
EIA	Environmental Impact Assessment
ER	Emission Reductions
ERPA	Emission Reduction Purchase Agreement
FAR	Forward Action Request
FSR	Feasibility Study Report
GHG	Greenhouse gas(es)
GWP	Global Warming Potential
I	Interview
IPCC	Intergovernmental Panel on Climate Change

IRR	Internal Rate of Return
kWh	Kilo Watt Hour
LoA	Letter of approval
MoV	Means of Validation
MW	Mega Watt
MWh	Mega Watt Hour
NCV	Net Calorific Value
NGO	Non-governmental Organisation
ODA	Official Development Assistance
OM	Operating Margin
PD	Project Design Document
PD	Project Developer(s)
tCO _{2e}	Tonnes of CO ₂ equivalents
UNFCCC	United Nations Framework Convention on Climate Change
VCC	Verified Carbon Credits

Annex 5. Validation Protocol

Table 1 – BCR Project Description, BCR and CDM Validation Requirements

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
Cover Page and General Requirements					
1. Are the followings provided at the cover page in a tabular format?	BCR PD Template Version 1.0	DR	Please see below.		
1.1. The name of the project	BCR PD Template Version 1.0	DR	This is available as “Mramorak 1&2 Grouped Biogas Power Plants”.	OK	OK
1.2. Project proponent (Individual or entity proposing the project)	BCR PD Template Version 1.0	DR	This is available as “Zlatar Mramorak Doo”.	OK	OK
1.3. Project proponent’s contact information including “E-mail address, landline telephone, cell phone and physical address”	BCR PD Template Version 1.0	DR	Please indicate the mail address and landline telephone as well in “Project proponent’s contact information” on the cover page.	CL-1	OK
1.4. Project holder (Individual or entity owning the project)	BCR PD Template Version 1.0	DR	This is available as “Milan Mitrovic” (General Director).	OK	OK

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
1.5. Project holder's contact information including "E-mail address, landline telephone, cell phone and physical address"	BCR PD Template Version 1.0	DR	Please indicate the physical address of "Project holder's contact information" as well on the cover page.	CL-2	OK
1.6. Project participants (Individuals or entities participating in the project)	BCR PD Template Version 1.0	DR	The project participants are indicated as "Zlatar Mramorak Doo" (Project Owner) and "Kilittaşı Mühendislik Müşavirlik İnşaat Tic. Ltd. Şti." (Carbon Consultant).	OK	OK
1.7. Version number of the BCR PD?	BCR PD Template Version 1.0	DR	This is available as "Rev 1.0" for the first submission.	OK	OK
1.8. The date of the document? (DD/MM/YYYYY of preparation of this version of the document)	BCR PD Template Version 1.0	DR	Please indicate the dates which are specified on the BCR-PD in "DD/MM/YYYY" format.	CAR-1	OK
1.9. Project Type	BCR PD Template Version 1.0	DR	Please revise the project type of the project activity on the cover page.	CAR-2	OK
1.10. If it is a grouped project or not	BCR PD Template Version 1.0	DR	Please re-evaluate "Grouped project" row on the cover page with considering the difference between a bundled project activity and a grouped project activity. Also, re-evaluate the relevant parts in the BCR PD.	CAR-3	OK

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
1.11. Applied methodology and version	BCR PD Template Version 1.0	DR	The applied methodologies are indicated as “AMS-III.AO” (version 1.0) and “AMS-I.D” (version 18.0).	OK	OK
1.12. Project location (City, Country)	BCR PD Template Version 1.0	DR	This is available as “Belgrade, Serbia”.	OK	OK
1.13. Starting date of the project’s activities in “DD/MM/YYYY” format	BCR PD Template Version 1.0	DR	Please refer to 1.8.	CAR-1	OK
1.14. Quantification Period of GHG emissions (DD/MM/YYYY to DD/MM/YYYY) reductions	BCR PD Template Version 1.0	DR	Please refer to 1.8.	CAR-1	OK
1.15. Estimated total (during the quantification period) and average annual GHG emission reduction amount	BCR PD Template Version 1.0	DR	Please clarify the reason why the total estimated emission reduction is calculated as “170,203” while the annual estimated emission reduction is calculated as “24,874 tCO ₂ ” (170,203 / 7 does not equal to 24,874).	CAR-4	OK
1.16. Sustainable Development Goals (List the sustainable development objectives with which the project complies (demonstrated))	BCR PD Template Version 1.0	DR	SDG 7, SDG 8 and SDG 13 are indicated on the cover page.	OK	OK

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
1.17. Special category, related to co-benefits (special category to which the project applies, demonstrating results.)	BCR PD Template Version 1.0	DR	N/A (This project is not an AFOLU project.)	OK	OK
1. PROJECT ELIGIBILITY					
1.1. Scope of the BCR Standard					
1.1.1. Are one or more of the conditions meeting the requirements of BCR Standard indicated in the BCR PD showing that the project is eligible under the scope of the BCR Standard?	BCR Standard Version 3.0	DR	The scope of the BCR Standard is indicated in Section 1.1 and the relevant justifications are provided.	OK	OK
1.1.2. Is the how the project is eligible under the scope of the BCR Standard clearly described and justified by the PP?	BCR PD Template Version 1.0	DR	Eligibility criteria of the BCR standard is indicated in Section 1.1 and the relevant justifications are provided.	OK	OK
1.2. Project type					
1.2.1. Has the project type been indicated following the definitions of the CDM?	CDM Methodology Booklet	DR	Please re-evaluate Section 1.2 since the project activity is not an AFOLU project. Also, please consider the difference between the project type and sectoral scope.	CAR-5	OK

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
1.3. Project Scale					
1.3.1. <i>Has the scale been indicated following the definitions of the CDM?</i>	CDM Methodology Booklet	DR	<i>Please re-evaluate Section 1.3 with considering the difference between a bundled project activity and a grouped project activity.</i>	CAR-6	OK
2. General description of the project					
1. <i>Are the project objectives and activities, including all activities that will result in GHG emission reductions described in the BCR PD?</i>	BCR PD Template Version 1.0	DR	<ul style="list-style-type: none"> a) <i>Please revise the date of the generation license of Mramorak 2 in Section 2.</i> b) <i>Please indicate clearly all waste sources which are accepted by the project activity in Section 2.</i> c) <i>Please also include “the road itineraries, where the transportation of residual waste after digestion” to the project boundary in Section 2.</i> d) <i>Please indicate how non-hazardous food waste is brought to the project site from its source points in Section 2.</i> 	CAR-7	OK
(a) <i>A brief description of the existing scenario prior to the implementation of the project activities.</i>	BCR PD Template Version 1.0	DR	<i>This is indicated for each type of waste source in Section 2.</i>	OK	OK

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
(b) Details on how project activities will result in GHG emission reductions.	BCR PD Template Version 1.0	DR	Details on how project activities are provided in Section 2.	OK	OK
(c) The special category(ies) to which the project is proposed to apply, briefly describing the criteria under which the project demonstrates compliance.	BCR PD Template Version 1.0	DR	N/A (The project activity is not an AFOLU project.)	OK	OK
(d) A brief summary on the fulfillment of the Sustainable Development Goals.	BCR PD Template Version 1.0	DR	Brief summary on the fulfillment of the SDGs is included in Section 2.	OK	OK
(e) An average estimate of emission reductions attributable to project activities.	BCR PD Template Version 1.0	DR	The estimated annual emission reduction and total emission reduction values are indicated in Section 2.	OK	OK
2.1. Name of the GHG project					
2.1.1. Is the GHG Project name indicated identical throughout the documentation and not changed after project registration	BCR PD Template Version 1.0	DR	This is available as “Mramorak 1&2 Grouped Biogas Power Plants”.	OK	OK
2.2. Objectives					
2.2.1. Are the objectives of the GHG Project described in detail?	BCR PD Template Version 1.0	DR	Please indicate what would have been the electricity generation source in absent of the project activity in Section 2.2.	CAR-8	OK

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
2.3. Project activities					
<p>2.3.1. Are the project activities described including technologies or measures employed?</p>	<p>BCR PD Template Version 1.0</p>	<p>DR</p>	<p>a) Please indicate more clearly where the biogas flow meters are in the system in Figure 2 in Section 2.3.</p> <p>b) Please provide the calibration documents of the monitoring equipment (flow meters, electricity meters and gas analyzer).</p> <p>c) There are 2 internal meters and 2 official meters (which belong to EPS Distribucija Doo.) at the project site. Please indicate the brands and the serial numbers of these four meters separately in Section 2.3.</p> <p>d) Please provide the evidence document for the technical features of the anaerobic digesters.</p> <p>e) Please provide the photographic evidences of the internal electricity meters which have serial numbers 43267888 and 44202354.</p>	<p>CAR-9</p>	<p>OK</p>
<p>2.3.2. Are how the project activities will result in GHG emission reductions described in detail?</p>	<p>BCR PD Template Version 1.0</p>	<p>DR</p>	<p>This is available.</p>	<p>OK</p>	<p>OK</p>

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
2.4. Project Location					
2.4.1. <i>Is the location and geographical boundary of the project activity clearly identified including:</i>	BCR PD Template Version 1.0	DR	Please see below.		
2.4.1.1 <i>Host Party(ies)?</i>	BCR Standard Version 3.0	DR	Republic of Serbia	OK	OK
2.4.1.2 <i>Region/State/Province etc.?</i>	BCR Standard Version 3.0	DR	Belgrade Province	OK	OK
2.4.1.3 <i>City/Town/Community etc.?</i>	BCR Standard Version 3.0	DR	Mramorak	OK	OK
2.4.1.4 <i>a single project activity instance shall be specified by a single geodetic coordinates</i>	BCR Standard Version 3.0	DR	The geodetic coordinates in Section 2.4 are in line with the KMZ file of the project activity.	OK	OK
2.4.2. <i>where there are multiple project activity instances, is the project location specified according the following:</i>	BCR Standard Version 3.0	DR	Please see below.		
2.4.2.1 <i>A geodetic coordinate shall be provided for each instance and provided in a KML file; or</i>	BCR Standard Version 3.0	DR	2 biogas plants are side by side.	OK	OK

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
<p>2.4.2.2 Where there are a large number of project activity instances (e.g., cookstoves or energy efficient light bulbs), at least one geodetic coordinate shall be provided, together with geodetic polygons to delineate the project's geographic area or areas provided in a KML file , and sufficient additional geographic information (with respect to the location of the instances) to enable evidence gathering by the validation team</p>	BCR Standard Version 3.0	DR	N/A	OK	OK
<p>2.4.3. For group project is a KML file together with sufficient additional geographic information (with respect to the location of the instances) to enable evidence gathering for validation. (Project location for grouped projects shall be specified using geodetic polygons to</p>	BCR Standard Version 3.0	DR	N/A	OK	OK

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
<i>delineate the project's geographic area or areas)</i>					
2.5. Additional information about the GHG Project					
2.5.1. <i>Are the additional information about the GHG Project provided in the BCR PD?</i>	<i>BCR PD Template Version 1.0</i>	<i>DR</i>	<i>a) Please indicate the name of the “parent company” in Section 2.5. b) Please re-evaluate Section 2.5 with considering the difference between a bundled project activity and a grouped project activity.</i>	<i>CAR-10</i>	<i>OK</i>
3. QUANTIFICATION OF GHG EMISSIONS REDUCTION					
3.1. Quantification methodology					
1. <i>Does the project apply the correct and valid version of the approved methodology and referred tools at the time of submission for registration?</i>	<i>BCR PD Template Version 1.0</i>	<i>DR</i>	<i>a) Please re-evaluate Section 3.1 with considering the difference between a</i>	<i>CAR-11</i>	<i>OK</i>

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
			<p><i>bundled project activity and a grouped project activity.</i></p> <p><i>b) Please use all of the necessary tools with considering the applied methodologies (e.g. Tool o6: Project emissions from flaring) in Section 3.1 and throughout the BCR PD.</i></p> <p><i>c) Please include the references of all methodologies and tools in Section 3.1.</i></p>		
<p>2. Does the BCR PD indicate the title and version of the methodology and the related tool(s) correctly?</p>	<p>BCR PD Template Version 1.0</p>	<p>DR</p>	<p>Please refer to CAR-11.</p>	<p>CAR-11</p>	<p>OK</p>
<p>3.1.1. Applicability conditions of the methodology</p>					
<p>3.1.1.1 Is the choice of the methodology justified by showing that the proposed project activity meets all the applicability conditions of the methodology?</p>	<p>BCR PD Template Version 1.0 BCR Standard Version 3.0. CDM project standard for</p>	<p>DR</p>	<p>a) Please re-justify “No:1-a” for “AMS-III.AO: Methane recovery through controlled anaerobic digestion” methodology applicability in Section 3.1.1.</p> <p>b) Please re-justify “No:1-e” for “AMS-III.AO: Methane recovery through controlled anaerobic digestion”</p>	<p>CAR-12</p>	<p>OK</p>

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
	<p><i>project activities §54</i></p> <p><i>CDM validation and verification standard for project activities §67</i></p>		<p><i>methodology applicability in Section 3.1.1.</i></p> <p><i>c) Please re-justify “No:3” for “AMS-III.AO: Methane recovery through controlled anaerobic digestion” methodology applicability in Section 3.1.1.</i></p> <p><i>d) Please provide all applicability conditions of “AMS-III.AO: Methane recovery through controlled anaerobic digestion” in Section 3.1.1.</i></p> <p><i>e) Please re-evaluate AMS-III.D applicability for the project activity with considering AMS-III.AO applicability conditions.</i></p> <p><i>f) In “6” condition for “AMS-I.D. Grid connected renewable electricity generation” in Section 3.1.1, please</i></p>		

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
			<p>indicate where the rest of the fraction of the heat is used.</p> <p>g) Please re-justify the condition “3” of “AMS-I.D. Grid connected renewable electricity generation” in Section 3.1.1.</p> <p>h) Please use “Figure 2 in Tool 20 document (on page 8) to demonstrate the applicability of Tool 20 in Section 3.1.1.</p> <p>i) Please include all the applicability conditions of the applied tools (e.g. Tool 06) in Section 3.1.1.</p>		
<p>3.1.1.2 Does the project activity meet each of the applicability conditions of the tools or other methodology components referred to in the applied methodology?</p>	<p>BCR PD Template Version 1.0 CDM validation and verification standard for project activities §67</p>	<p>DR</p>	<p>Please refer to 3.1.1.1.</p>	<p>CAR-12</p>	<p>OK</p>
<p>3.1.1.3 If the project holder uses more than one methodology, is separate information submitted for each methodology applied?</p>	<p>BCR PD Template Version 1.0</p>	<p>DR</p>	<p>Please refer to 3.1.1.1.</p>	<p>CAR-12</p>	<p>OK</p>

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
3.2. Project boundaries					
3.2.1. Spatial limits of the project: <i>Is the diagram or map of the project boundary, showing clearly the physical locations of the various installations or management activities taking place as part of the project activity given?</i>	<i>BCR PD Template Version 1.0</i>	<i>DR</i>	<i>Please remove the statement “As per AMS-III.AO and AMS-I.D, the baseline scenario of the project activity is as follows:” from Section 3.2.</i>	<i>CAR-13</i>	<i>OK</i>
3.2.2. Carbon reservoirs and GHG sources: <i>Has the PP described the emission sources and GHGs included in the project boundary for the purpose of calculating project emissions and baseline emissions, in the tabular format?</i>	<i>BCR PD Template Version 1.0 BCR Standard 4.4</i>	<i>DR</i>	<i>The emission sources and GHGs are included in Section 3.2.2.</i>	<i>OK</i>	<i>OK</i>
3.2.2.1 <i>Has the PP presented a flow diagram of the project boundary, physically delineating the project activity, based on the</i>	<i>BCR Standard 4.4</i>	<i>DR</i>	<i>The flow diagram for the project boundary is available.</i>	<i>OK</i>	<i>OK</i>

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
<i>description provided in section 1.8 of the PD?</i>					
3.2.2.2 <i>Has the PP included in the flow diagram the equipment, systems and flows of mass and energy described in PD</i>	BCR Standard 4.4BCR PD Template Version 1.0	DR	A flow diagram which includes the equipment is presented in Section 2.3 (Figure 2).	OK	OK
3.2.2.3 <i>Has it been indicated in the diagram the emission sources and GHGs included in the project boundary?</i>	BCR Standard 4.4BCR PD Template Version 1.0	DR	Please indicate the relevant GHGs as well in Figure 14 in Section 3.2.2.	CAR-14	OK
3.2.2.4 <i>Does the selected methodology allow the PPs to choose whether a source or gas is to be included in the project boundary?</i>	CDM project standard for project activities §58	DR	N/A	OK	OK
3.2.2.5 <i>If the selected methodology allows the project participants to choose whether a source or gas is to be included in the project boundary, do the project participants explain and justify their choices?</i>	CDM project standard for project activities §58	DR	N/A	OK	OK

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
3.2.2.6 Have all sources and GHGs necessary for the calculation of emissions been included within the project boundary?	CDM validation and verification standard for project activities §69	DR	All sources and GHGs necessary for the calculation of the emissions are included in Section 3.2.2.	OK	OK
3.2.2.7 Does the PD correctly describe the project boundary and the physical delineation of the proposed project activity?	CDM project standard for project activities §57	DR	The project boundary is correctly described.	OK	OK
3.2.2.8 Has the selected methodology been correctly applied with respect to project boundary?	CDM validation and verification standard for project activities §63a	DR	The selected methodology is applied with respect to the project boundary.	OK	OK
3.2.3. Time limits and analysis periods					
3.2.3.1 Are the quantification periods used as defined in section 10.5 of the BCR Standard.	BCR Standard Version 3.0	DR	a) Please provide the relevant evidence documents for the construction start	CAR-15	OK

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
			<p>dates (12/12/2018 and 01/07/2019) of both plants (Mramorak 1&2).</p> <p>b) Please select a single start date of the project in Section 3.2.3.</p>		
<p>3.2.3.2 Is the Project start date indicated as the date on which implementation, construction or actual action of a GHG project begins (Section 10.4 of the BCR Standard)</p>	<p>BCR Standard Version 3.0</p>	<p>DR</p>	<p>The start date is indicated as “12/12/2018” in Section 3.2.3. However, in the same section, the first quantification period is indicated as “24/06/2020 – 23/06/2027”. Please correct the contradiction.</p>	<p>CAR-16</p>	<p>OK</p>
<p>3.2.3.3 Do periodicity of the monitoring periods comply with the methodologies and the BCR Standard</p>	<p>BCR Standard Version 3.0</p>	<p>DR</p>	<p>Please indicate the planned monitoring “periods” in Section 3.2.3.</p>	<p>CAR-17</p>	<p>OK</p>
<p>3.3. Identification and description of baseline scenario</p>					
<p>3.3.1. Is the baseline defined in accordance with the provisions contained in the most recent version of the methodological documents and also as described</p>	<p>BCR Standard Version 3.0</p>	<p>DR</p>	<p>a) Please revise the weblink in Footnote 14. b) Please include in Section 3.3 the statistical results (with indicating references) proving that there is an increasing need for electricity in Serbia.</p>	<p>CAR-18</p>	<p>OK</p>

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
<i>in section 11.2 of the BCR Standard</i>					
3.3.2. <i>Does the approved methodology that is selected by the proposed project activity prescribe the baseline scenario and hence no further analysis is required?</i>	CDM validation and verification standard for project activities §94 CDM project standard for project activities §59	DR	<i>The baseline scenario is indicated correctly in Section 3.3.</i>	OK	OK
3.3.3. <i>Does the PD identify the baseline for the proposed project activity, defined as the scenario that reasonably represents the anthropogenic emissions by sources of GHGs that would occur in the absence of the proposed project activity?</i>	CDM validation and verification standard for project activities §75 CDM project standard for project activities §61	DR	<i>The baseline for the proposed project activity is indicating with including the relevant evidences.</i>	OK	OK

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
3.3.4. <i>If the methodology requires use of the tools to identify the baseline scenario, have all those been applied?</i>	CDM validation and verification standard for project activities §77	DR	<i>The methodologies are used to demonstrate the baseline scenarios.</i>	OK	OK
3.3.5. <i>Are there relevant national and/or sectoral policies to identify the baseline scenario?</i>	CDM validation and verification standard for project activities §81 CDM project standard for project activities §64	DR	<i>Please refer to 3.3.1.</i>	CAR-18	OK
3.3.6. <i>If there are relevant national and/or sectoral policies to identify the baseline scenario, have those been considered correctly in the PDD?</i>	CDM validation and verification standard for project activities §83d	DR	<i>Please refer to 3.3.1.</i>	CAR-18	OK
3.3.7. <i>Are there relevant circumstances to identify the baseline scenario?</i>	CDM validation and verification	DR	<i>The circumstances are taken into consideration.</i>	OK	OK

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
	<i>standard for project activities §81</i>				
<p>3.3.8. <i>Does the methodology require several alternative scenarios to be considered in the identification of the most reasonable baseline scenario?</i></p>	<p>CDM validation and verification standard for project activities §78</p>	<p>DR</p>	<p>N/A</p>	<p>OK</p>	<p>OK</p>
<p>3.3.9. <i>If the methodology requires several alternative scenarios to be considered in the identification of the most reasonable baseline scenario, are all credible scenarios that are in the PD and are supplementary to those required by the methodology reasonable in the context of the proposed project activity?</i></p>	<p>CDM validation and verification standard for project activities §78</p>	<p>DR</p>	<p>N/A</p>	<p>OK</p>	<p>OK</p>
<p>3.3.10. <i>If the proposed project activity includes several different facilities, technologies, outputs or services, do the alternative</i></p>	<p>CDM TOOLo1 Tool for the demonstration and</p>	<p>DR</p>	<p>The biogas power plants are exactly same with each other.</p>	<p>OK</p>	<p>OK</p>

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
<i>scenarios for each of them be identified separately?</i>	assessment of additionality				
3.3.11. <i>If the alternative scenarios for each of them be identified separately, are the realistic combinations of these be considered as possible alternative scenarios to the proposed project activity?</i>	CDM TOOLo1 Tool for the demonstration and assessment of additionality	DR	<i>The biogas power plants are exactly same with each other.</i>	OK	OK
3.3.12. <i>Does the list of alternative scenarios given in the PD include the following?</i>	CDM validation and verification standard for project activities §93	DR	N/A	OK	OK
3.3.12.1 <i>The project activity is undertaken without being registered as a CDM project activity</i>	CDM validation and verification standard for project activities §93a	DR	N/A	OK	OK
3.3.12.2 <i>All plausible alternatives</i>	CDM validation and verification	DR	N/A	OK	OK

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
	<i>standard for project activities §93b</i>				
3.3.12.3 <i>Comply with all applicable and enforced legislation</i>	<i>CDM validation and verification standard for project activities §93c</i>	<i>DR</i>	<i>N/A</i>	<i>OK</i>	<i>OK</i>
3.3.13. <i>Has the PP explained how the baseline scenario is established in accordance with the selected methodology(ies)?</i>	<i>BCR PD Template Version 1.0 CDM Project Standard for Project activities §59</i>	<i>DR</i>	<i>The selected baseline scenarios are in line with the methodologies.</i>	<i>OK</i>	<i>OK</i>
3.3.14. <i>Where the procedure in the selected methodology(ies) involves several steps, has the PPs described how each step is applied and transparently documented the outcome of each step?</i>	<i>BCR PD Template Version 1.0 BCR Standard 4.4 CDM project standard for</i>	<i>DR</i>	<i>N/A</i>	<i>OK</i>	<i>OK</i>

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
	<i>project activities §59</i>				
3.3.15. <i>Has the PP provided and explained all data used to establish the baseline scenario (variables, parameters, data sources, etc.)?</i>	BCR PD Template Version 1.0	DR	<i>Please refer to 3.3.1.</i>	CAR-18	OK
3.3.16. <i>Is the identified baseline scenario reasonably supported by correct and verifiable references, assumptions, calculations and rationales?</i>	BCR PD Template Version 1.0 BCR Standard 4.4	DR	<i>Please refer to 3.3.1.</i>	CAR-18	OK
3.3.17. <i>Has a transparent description of the baseline scenario been provided including the technology(ies) that would be employed and/or the activities that would take place in the absence of the project activity?</i>	BCR PD Template Version 1.0 CDM Validation and Verification Standard for Project activities §80	DR	<i>A transparent description was provided.</i>	OK	OK
3.3.18. <i>Has the selected methodology been correctly applied with</i>	BCR PD Template Version 1.0	DR	<i>The selected methodologies are applied correctly with respect to the baseline identification.</i>	OK	OK

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
respect to baseline identification?	CDM validation and verification standard for project activities §63b				
3.4. Additionality					
<p>3.4.1. Has the PP demonstrated the additionality of the project, taking into account the following:</p> <p>Project activities must not be mandated by any law, statute, or other regulatory framework, or for UNFCCC non-Annex I countries, any systematically enforced law, statute, or other regulatory framework</p>	BCR PD Template Version 1.0	DR	Please provide an analysis of compliance of the mandatory laws and regulations in Section 3.4.	CAR-19	OK
<p>3.4.2. Has it been clearly stated in the PD which analysis method(s) has been chosen for additionality assessment?</p>	CDM TOOL01 Tool for the demonstration and assessment of additionality	DR	Tool 21 is used to demonstrate the additionality of the project activity (i.e. investment barrier is chosen.)	OK	OK

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
	ACM 0002 version 20.0 BCR PD Template Version 1.0 CDM-PDD- FORM Version 12.0				
Sub-Step 1a: Definition of alternatives	CDM TOOL01 Tool for the demonstration and assessment of additionality				
Sub-Step 1b: Consistency with mandatory laws and regulations	CDM TOOL01 Tool for the demonstration and assessment of additionality				
3.4.3. Has the analysis of compliance of the defined alternatives with the mandatory laws and	CDM TOOL01 Tool for the demonstration	DR	Please refer to 3.4.1.	CAR-19	OK

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
<i>regulations carried out appropriately?</i>	<i>and assessment of additionality</i>				
Step 2: Investment analysis	CDM TOOL01 <i>Tool for the demonstration and assessment of additionality</i>				
<ul style="list-style-type: none"> <i>Are the input values used in all investment analysis valid, consistent and applicable at the time of the investment decision taken by the PP?</i> 	CDM TOOL27: <i>Investment analysis CDM validation and verification standard for project activities §96</i>	DR	<i>Please indicate the investment decision date in Section 3.4 and provide the relevant evidence document.</i>	CAR-20	OK
<i>Are all the listed input values been consistently applied in all calculations?</i>	CDM TOOL27: <i>Investment analysis</i>				

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
<p>3.4.4. Do the PPs rely on values from Feasibility Study Report (FSR) that are approved by national authorities for proposed project activities?</p>	<p>CDM validation and verification standard for project activities §101</p>	<p>DR</p>	<p>a) Please provide the actual years (2018, 2019, etc.) as column headings in the Excel worksheet “Mramorak_IRR_Calculation”.</p> <p>b) The source document for the cost of borrowing (commercial loan interest rate, cell I7 in Excel worksheet Mramorak_IRR_Calculation) is not provided.</p> <p>c) Loan interest payments are included in the calculation of the pre-tax Project IRR. However, this is not appropriate since, according to Tool27, V12, page 5, “The cost of financing expenditures (i.e. loan repayments and interest) shall not be included in the calculation of project IRR since the purpose of the project IRR calculation is to determine the viability of the project to service debt. Therefore, to include the cost of financing as an expense in this calculation would result in a double counting of this cost in the ultimate analysis.”</p> <p>The cash flows provided on Row 83 of the Excel worksheet “Mramorak_IRR_Calculation” include a deduction of loan interest.</p> <p>d) The current set of calculations demonstrate that the proposed project activity is not financially feasible without the CDM revenues</p>	<p>CAR-21</p>	<p>OK</p>

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
			<p>since the calculated pre-tax Project IRR (8.34%) is below the benchmark (10.91%).</p> <p>However, this result may change when the financing expenditures are excluded from the cash flows.</p>		
<p>3.4.5. <i>If PPs rely on FSR,</i></p>					
<p>3.4.5.1 <i>Is it possible to conclude that in the period of time between the finalization of the FSR and the investment decision input values would not have materially changed?</i></p>	<p>CDM validation and verification standard for project activities §101a</p>	<p>DR</p>	<p>Please refer to 3.4.4.</p>	<p>CAR-21</p>	<p>OK</p>
<p>3.4.5.2 <i>Are the values used in the PD and associated annexes fully consistent with the FSR?</i></p>	<p>CDM validation and verification standard for project activities §101b §101c</p>	<p>DR</p>	<p>Please refer to 3.4.4.</p>	<p>CAR-21</p>	<p>OK</p>
<ul style="list-style-type: none"> <i>Is the plant load factor defined ex-ante in the PD appropriately?</i> 	<p>Guidelines for the reporting and validation</p>	<p>DR</p>	<p>Please refer to 3.4.4.</p>	<p>CAR-21</p>	<p>OK</p>

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
	of plant load factors				
Sub-step 2a: Determine appropriate analysis method	CDM TOOL ₁ Tool for the demonstration and assessment of additionality				
3.4.6. Has the PD described the selection process of investment analysis method (simple cost, investment comparison and benchmark analysis) for the proposed project activity?	CDM TOOL ₁ Tool for the demonstration and assessment of additionality	DR	Please refer to 3.4.4.	CAR-21	OK
Is the choice of the investment analysis method appropriate to the proposed project activity?	CDM TOOL ₁ Tool for the demonstration and assessment of additionality CDM TOOL ₂₇ : Investment analysis	DR	Please refer to 3.4.4.	CAR-21	OK

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
Sub-step 2b: Option I-Simple cost analysis	CDM TOOLo1 Tool for the demonstration and assessment of additionality				
3.4.7. <i>Have all costs associated with the project activity and the alternatives identified in Step 1 been documented?</i>	CDM TOOLo1 Tool for the demonstration and assessment of additionality	DR	N/A	OK	OK
3.4.8. <i>Has it been demonstrated and supported by valid evidence that at least one of the alternatives defined in Step 1 is less costly than the proposed project activity?</i>	CDM TOOLo1 Tool for the demonstration and assessment of additionality	DR	N/A	OK	OK
Sub-step 2b: Option II-Apply investment comparison analysis	CDM TOOLo1 Tool for the demonstration and assessment of additionality				

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
<p>3.4.9. Has the PPs identified a financial indicator (such as IRR, NPV, cost benefit ratio, or unit cost of service (e.g., levelized cost of electricity production in \$/kWh or levelized cost of delivered heat in \$/G)) which is most suitable for the project type and decision-making context regarding the investment comparison analysis?</p>	<p>CDM TOOLo1 Tool for the demonstration and assessment of additionality</p>	<p>DR</p>	<p>N/A</p>	<p>OK</p>	<p>OK</p>
<p>Sub-step 2b: Option III. Apply benchmark analysis</p>	<p>CDM TOOLo1 Tool for the demonstration and assessment of additionality</p>				
<p>3.4.10. Has the PPs identified a financial indicator (such as IRR) which is most suitable for the project type and decision-making context including the alternatives for the benchmark analysis?</p>	<p>CDM TOOLo1 Tool for the demonstration and assessment of additionality</p>	<p>DR</p>	<p>Please refer to 3.4.4.</p>	<p>CAR-21</p>	<p>OK</p>

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
	CDM TOOL27: Investment analysis CDM validation and verification standard for project activities §99a				
3.4.11. <i>Has a pre-tax benchmark been applied?</i>	CDM TOOL27: Investment analysis	DR	Please refer to 3.4.4.	CAR-21	OK
3.4.12. <i>If post tax benchmark is applied, has actual interest payable been taken into account in the calculation of income tax?</i>	CDM TOOL27: Investment analysis	DR	Please refer to 3.4.4.	CAR-21	OK
<i>If the project participant has applied investment comparison or benchmark analysis</i>	CDM TOOL01 Tool for the demonstration and assessment of additionality				

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
<p>3.4.13. <i>If the benchmark is based on parameters that are standard in the market, is the cost of equity determined appropriately? Guideline either by:</i></p>	<p>CDM TOOL27: Investment analysis</p>	<p>DR</p>	<p>Please refer to 3.4.4.</p>	<p>CAR-21</p>	<p>OK</p>
<p>3.4.13.1 <i>selecting the values provided in the latest applicable version of Appendix of Investment Analysis Tool? or</i></p>	<p>CDM TOOL27: Investment analysis</p>	<p>DR</p>	<p>Please refer to 3.4.4.</p>	<p>CAR-21</p>	<p>OK</p>
<p>3.4.13.2 <i>by calculating the cost of equity using Capital Asset Pricing Model (CAPM)?</i></p>	<p>CDM TOOL27: Investment analysis</p>	<p>DR</p>	<p>Please refer to 3.4.4.</p>	<p>CAR-21</p>	<p>OK</p>
<p>3.4.14. <i>If the benchmark based on parameters that are standard in the market, has the cost of debt been calculated as the cost of financing in the capital markets (e.g. commercial lending rates and guarantees required for the country and the type of project activity concerned), based on documented evidence from</i></p>	<p>CDM TOOL27: Investment analysis CDM TOOL01 Tool for the demonstration and assessment of additionality</p>	<p>DR</p>	<p>Please refer to 3.4.4.</p>	<p>CAR-21</p>	<p>OK</p>

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
<i>financial institutions with regard to the cost of debt financing of comparable projects?</i>					
<ul style="list-style-type: none"> <i>Has the discount rates and benchmarks been derived and supported appropriately?</i> 	CDM TOOL01 <i>Tool for the demonstration and assessment of additionality</i>	DR	<i>Please refer to 3.4.4.</i>	CAR-21	OK
<i>If the company's internal benchmark has been used for the expected return on equity: (Only applicable to benchmark analysis)</i>	CDM TOOL27: <i>Investment analysis</i>				
3.4.15. <i>Has it been demonstrated that there is only one possible project developer?</i>	CDM TOOL27: <i>Investment analysis</i>	DR	N/A	OK	OK
3.4.16. <i>Has it been demonstrated that same benchmark values are used for similar projects with similar risks, developed by the same company or, if the company is brand new, would have been used</i>	CDM TOOL27: <i>Investment analysis</i>	DR	N/A	OK	OK

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
<i>for similar projects in the same sector in the country/region?</i>					
<ul style="list-style-type: none"> <i>If the company's expected return on equity is used as a benchmark, does the percentage of debt financing and equity financing reflect the long-term debt/equity finance structure of the legal entity owning the assets of the project activity?</i> 	CDM TOOL27: Investment analysis	DR	N/A	OK	OK
<p>3.4.17. <i>If the company's expected return on equity is used as a benchmark, has the cost of debt been based on the weighted average cost of debt financing of the legal entity owning the project activity?</i></p>	CDM TOOL27: Investment analysis	DR	N/A	OK	OK
<p>3.4.18. <i>In case of loans, is the weighted average cost of outstanding long-term debt used as a benchmark?</i></p>	CDM TOOL27: Investment analysis	DR	N/A	OK	OK
<p>3.4.19. <i>In case of bonds, is the weighted average yield of the bonds used as a benchmark?</i></p>	CDM TOOL27: Investment analysis	DR	N/A	OK	OK

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
<p>3.4.20. <i>In case of bonds, are the key parameters of the bond including the time of maturity, yield, registration issuance in the financial system and set-up in the market documented?</i></p>	<p>CDM TOOL27: Investment analysis</p>	<p>DR</p>	<p>N/A</p>	<p>OK</p>	<p>OK</p>
<p>3.4.21. <i>In case of debt financing from a parent company, is the transfer of capital to the legal entity documented?</i></p>	<p>CDM TOOL27: Investment analysis</p>	<p>DR</p>	<p>N/A</p>	<p>OK</p>	<p>OK</p>
<p>3.4.22. <i>In case of loans from a financial institution, is the contract of lending between the financial institution and the legal entity owning the assets of the project activity, or, in absence of the contract, a letter from the bank stating its intention to award the loan and the key terms for the loan documented and supported by the appropriate evidence?</i></p>	<p>CDM TOOL27: Investment analysis</p>	<p>DR</p>	<p>N/A</p>	<p>OK</p>	<p>OK</p>

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
<i>Sub-step 2c: Calculation and comparison of financial indicators (Only applicable to investment comparison and benchmark analysis)</i>	CDM TOOL01 Tool for the demonstration and assessment of additionality				
3.4.23. <i>Has the period of assessment including IRR and equity IRR calculations been chosen appropriately?</i>	CDM TOOL27: Investment analysis	DR	Please refer to 3.4.4.	CAR-21	OK
3.4.24. <i>Have the PPs justified the period of assessment in the context of the underlying project activity?</i>	CDM TOOL27: Investment analysis	DR	Please refer to 3.4.4.	CAR-21	OK
3.4.25. <i>In case IRR assessment period doesn't cover the technical lifetime of the project, does the cash flow in the final year include a fair value of the project activity assets at the end of the assessment period?</i>	CDM TOOL27: Investment analysis	DR	Please refer to 3.4.4.	CAR-21	OK

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
<p>3.4.26. <i>Has the fair value of the project activity assets been calculated in accordance with local accounting regulations where available, or international best practice?</i></p>	<p>CDM TOOL27: Investment analysis</p>	<p>DR</p>	<p>Please refer to 3.4.4.</p>	<p>CAR-21</p>	<p>OK</p>
<p>3.4.27. <i>Do the fair value calculations include both the book value of the asset and the reasonable expectation of the potential profit or loss on the realization of the assets?</i></p>	<p>CDM TOOL27: Investment analysis</p>	<p>DR</p>	<p>Please refer to 3.4.4.</p>	<p>CAR-21</p>	<p>OK</p>
<p>3.4.28. <i>Have all relevant costs been included for the calculation of IRR or other relevant financial indicator?</i></p>	<p>CDM TOOL01 Tool for the demonstration and assessment of additionality CDM TOOL27: Investment analysis</p>	<p>DR</p>	<p>Please refer to 3.4.4.</p>	<p>CAR-21</p>	<p>OK</p>

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
<p>3.4.29. <i>In case of project IRR, has the cost of financing expenditures (i.e. loan repayments and interest) been included?</i></p>	<p>CDM TOOL27: Investment analysis</p>	<p>DR</p>	<p>Please refer to 3.4.4.</p>	<p>CAR-21</p>	<p>OK</p>
<p>3.4.30. <i>Has the depreciation, and other non-cash items related to the project activity, (those deducted in estimating gross profits on which tax is calculated) been added back to net profits in the calculation of the financial indicator (e.g. IRR, NPV)?</i></p>	<p>CDM TOOL27: Investment analysis</p>	<p>DR</p>	<p>Please refer to 3.4.4.</p>	<p>CAR-21</p>	<p>OK</p>
<p>3.4.31. <i>In case of using post-tax benchmark, has taxes been included as an expense in the IRR/NPV calculation?</i></p>	<p>CDM TOOL27: Investment analysis</p>	<p>DR</p>	<p>Please refer to 3.4.4.</p>	<p>CAR-21</p>	<p>OK</p>
<p>3.4.32. <i>In case any risk premiums are applied in determination of the benchmark, are the same risks associated with the project type or activity, too?</i></p>	<p>CDM validation and verification standard for project</p>	<p>DR</p>	<p>Please refer to 3.4.4.</p>	<p>CAR-21</p>	<p>OK</p>

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
	activities §100b CDM TOOL01 Tool for the demonstration and assessment of additionality				
3.4.33. <i>In the equity IRR, has the cost of debt (loan, bond etc.) been considered as the net cash outflow?</i>	CDM TOOL27: Investment analysis	DR	Please refer to 3.4.4.	CAR-21	OK
3.4.34. <i>In cases where an investment analysis is carried out in nominal terms and the available IRR benchmarks are in real terms, have PPs converted the real term values of benchmarks to nominal values by adding the inflation rate?</i>	CDM TOOL27: Investment analysis	DR	Please refer to 3.4.4.	CAR-21	OK
3.4.35. <i>Has it been demonstrated that proposed project activity isn't</i>	CDM TOOL01	DR	Please refer to 3.4.4.	CAR-21	OK

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
economically or financially feasible without the revenue from CDM?	Tool for the demonstration and assessment of additionality CDM validation and verification standard for project activities §96b				
Sub-step 2d: Sensitivity analysis (Only applicable to investment comparison and benchmark analysis)	CDM TOOL01 Tool for the demonstration and assessment of additionality				
3.4.36. Has a sensitivity analysis showing whether the conclusion regarding the financial/economic attractiveness is robust to reasonable variations in the	CDM TOOL01 Tool for the demonstration and	DR	The sensitivity analysis has been conducted correctly.	OK	OK

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
<i>critical assumptions, been included in the PD?</i>	<i>assessment of additionality CDM TOOL27: Investment analysis</i>				
3.4.37. <i>Has the range of variations selected been justified in the context of the project?</i>	<i>CDM TOOL27: Investment analysis</i>	<i>DR</i>	<i>The sensitivity analysis has been conducted correctly.</i>	<i>OK</i>	<i>OK</i>
Step-3: Barrier analysis	<i>CDM TOOL01 Tool for the demonstration and assessment of additionality</i>				
3.4.38. <i>Have the PPs used and referred the “Guidelines for Objective Demonstration and Assessment of Barriers”?</i>	<i>Guidelines for objective demonstration and assessment of barriers</i>	<i>DR</i>	<i>N/A</i>	<i>OK</i>	<i>OK</i>

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
<i>Sub-step 3a: Identify barriers that would prevent the implementation of the proposed project activity</i>					
<p>3.4.39. <i>Has the PPs established realistic and credible barriers that would prevent the implementation of the proposed project activity?</i></p>	<p>CDM TOOLo1 Tool for the demonstration and assessment of additionality ACM 0002 Version 20.0</p>	<p>DR</p>	<p>Investment barrier is chosen.</p>	<p>OK</p>	<p>OK</p>
<i>Sub-step 3b: Show that the identified barriers would not prevent the implementation of at least one of the alternatives (except the proposed project activity)</i>	<p>CDM TOOLo1 Tool for the demonstration and assessment of additionality</p>				
<p>3.4.40. <i>Has the identified barriers that would prevent the implementation of the proposed project activity, but not the implementation of at least one of</i></p>	<p>CDM TOOLo1 Tool for the demonstration and</p>	<p>DR</p>	<p>The calculated IRR is below the benchmark (i.e. market basis).</p>	<p>OK</p>	<p>OK</p>

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
<p><i>the alternatives in particular the identified baseline scenario, been supported by the clear and valid evidence?</i></p>	<p><i>assessment of additionality CDM validation and verification standard for project activities §103 Guidelines for objective demonstration and assessment of barriers</i></p>				
<p>3.4.41. <i>Is it demonstrated and supported by proper evidence how the BCR alleviates each of the identified barriers to a level that the project is not prevented anymore from occurring by any of the barriers?</i></p>	<p><i>Guidelines for objective demonstration and assessment of barriers CDM TOOL01 Tool for the demonstration and</i></p>	<p><i>DR</i></p>	<p><i>The evidence documents for the investment analysis are provided.</i></p>	<p><i>OK</i></p>	<p><i>OK</i></p>

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
	assessment of additionality				
Investment, technological and other barriers					
3.4.42. <i>In case of investment barriers, is it demonstrated in the PD that the financing of the project was assured only due to the benefit of the BCR?</i>	Guidelines for objective demonstration and assessment of barriers	DR	It is shown.	OK	OK
3.4.43. <i>Can any of the indicated barriers be eliminated by additional financial investments into the proposed project activity?</i>	Guidelines for objective demonstration and assessment of barriers	DR	N/A	OK	OK
3.4.44. <i>While demonstrating barriers related to the lack of access to capital, technologies and skilled labour, do the PPs provide information on the nature of the companies and entities involved</i>	Guidelines for objective demonstration and assessment of barriers	DR	N/A	OK	OK

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
<i>in the financing and implementation of the project?</i>					
Barriers due to prevailing practice					
<ul style="list-style-type: none"> <i>In case PPs claim that project activity is “first-of-its-kind” have those claims been substantiated and supported by proper evidence?</i> 	CDM TOOL ₀₁ <i>Tool for the demonstration and assessment of additionality</i> CDM TOOL ₂₃ <i>Additionality of first-of-its-kind project Activities §12</i>	DR	N/A	OK	OK
Step-4: Common practice analysis					
3.4.45. <i>If the project is not “first-of-its-kind”, have PPs applied the common practice analysis appropriately?</i>	CDM TOOL ₀₁ <i>Tool for the demonstration and</i>	DR	N/A	OK	OK

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
	assessment of additionality CDM Validation and Verification Standard for Project activities §108 CDM TOOL24 Common practice				
3.4.46. <i>Is the selection of the assessment region explained and justified completely and correctly?</i>	CDM Validation and Verification Standard for Project activities §108a CDM TOOL24 Common practice §9	DR	N/A	OK	OK
Sub-step 4a: <i>The proposed CDM project activity(ies) applies measure(s) that are listed below</i>	CDM TOOL01 Tool for the demonstration and				

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
<p><u>(Questions from 3.5.68 to 3.5.74 are applicable)</u></p> <ul style="list-style-type: none"> • 	<p>assessment of additionality CDM TOOL₂₄ Common practice §10</p>				
<p>3.4.47. Have all projects within an applicable output range (+/- 50%) been included into the common practice analysis?</p>	<p>CDM TOOL₂₄ Common practice §13</p>	<p>DR</p>	<p>N/A</p>	<p>OK</p>	<p>OK</p>
<p>3.4.48. Have the similar projects (both CDM and non-CDM) been identified?</p>	<p>CDM TOOL₂₄ Common practice §14</p>	<p>DR</p>	<p>N/A</p>	<p>OK</p>	<p>OK</p>
<p>3.4.49. If the similar projects have been identified, are the following conditions fulfilled?</p>	<p>CDM TOOL₂₄ Common practice §14</p>	<p>DR</p>	<p>N/A</p>	<p>OK</p>	<p>OK</p>
<p>3.4.49.1 Are the projects located in the applicable geographical area?</p>	<p>CDM TOOL₂₄ Common practice §14</p>	<p>DR</p>	<p>N/A</p>	<p>OK</p>	<p>OK</p>
<p>3.4.49.2 Are the projects applied the same measure as the proposed project activity?</p>	<p>CDM TOOL₂₄</p>	<p>DR</p>	<p>N/A</p>	<p>OK</p>	<p>OK</p>

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
	Common practice §14				
3.4.49.3 Do the projects use the same energy source/fuel and feedstock as the proposed project activity, if a technology switch measure is implemented by the proposed project activity?	CDM TOOL24 Common practice §14	DR	N/A	OK	OK
3.4.49.4 Do the plants in which the projects have been implemented produce goods or services with comparable quality, properties and applications areas (e.g. clinker) as the proposed project plant?	CDM TOOL24 Common practice §14	DR	N/A	OK	OK
3.4.49.5 Are the capacity or output of the projects within the applicable capacity or output range calculated in Question 3.5.68?	CDM TOOL24 Common practice §14	DR	N/A	OK	OK
3.4.49.6 Do the projects start commercial operation	CDM TOOL24	DR	N/A	OK	OK

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
<i>before the PDD published for global stakeholder consultation or before the start date of proposed project activity, whichever is earlier for the proposed project activity?</i>	<i>Common practice §14</i>				
3.4.50. <i>Within the projects identified in Question 3.5.68, have the following project activities been identified?</i>	CDM TOOL ²⁴ <i>Common practice §15</i>	DR	N/A	OK	OK
3.4.50.1 <i>Non registered CDM project activities</i>	CDM TOOL ²⁴ <i>Common practice §15</i>	DR	N/A	OK	OK
3.4.50.2 <i>Project activities not submitted for registration</i>	CDM TOOL ²⁴ <i>Common practice §15</i>	DR	N/A	OK	OK
3.4.50.3 <i>Project activities not undergoing validation</i>	CDM TOOL ²⁴ <i>Common practice §15</i>	DR	N/A	OK	OK
○ <i>Within similar projects identified in Question 3.5.68, have the projects</i>	CDM TOOL ²⁴	DR	N/A	OK	OK

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
<p><i>applying technologies that are different to the technology applied in the proposed project activity been identified?</i></p>	<p><i>Common practice §16 CDM TOOL01 Tool for the demonstration and assessment of additionality CDM Validation and Verification Standard for Project activities §108c</i></p>				
<p>3.4.51. <i>Has the factor $(F=1-N_{diff} / N_{all})$ been calculated correctly?</i></p>	<p><i>CDM TOOL24 Common practice §17</i></p>	<p><i>DR</i></p>	<p><i>N/A</i></p>	<p><i>OK</i></p>	<p><i>OK</i></p>

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
<p>3.4.52. Based on an analysis provided in the PD, is it possible to conclude that the proposed project activity is not common practice?</p>	<p>CDM TOOL24 Common practice §18</p>	<p>DR</p>	<p>N/A</p>	<p>OK</p>	<p>OK</p>
<p><i>Sub-step 4b: The proposed CDM project activity(ies) doesn't apply any of the measures that are listed in Sub-step 4a above</i></p> <p><i>(Questions 3.5.75 and 3.5.76 are applicable):</i></p>					
<p>Has the PPs provided an analysis of any other activities that are operational and that are similar to the proposed project activity in the PD?</p>	<p>CDM TOOL01 Tool for the demonstration and assessment of additionality CDM Validation and</p>	<p>DR</p>	<p>N/A</p>	<p>OK</p>	<p>OK</p>

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
	Verification Standard for Project activities §109b				
<p>3.4.53. <i>If similar activities have been identified, has it been demonstrated that there are essential distinctions between them and proposed project activity, which demonstrate the necessity of the BCR benefits?</i></p>	<p>CDM TOOL for the demonstration and assessment of additionality CDM Validation and Verification Standard for Project activities §109c</p>	DR	N/A	OK	OK
<p><i>In all cases to check additionality at the final stage</i></p>					
<p>3.4.54. <i>Has the selected methodology been correctly applied with respect to additionality?</i></p>	<p>CDM Validation and Verification Standard for</p>	DR	<p>Please refer to above CARs.</p>	CARs	OK

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
	<i>Project activities §63d</i>				
3.4.55. <i>As a result, has the PPs demonstrated that the project activity is additional in accordance with the selected methodology(ies) and tool(s)?</i>	CDM Validation and Verification Standard for Project activities §88	DR	<i>Please refer to above CARs.</i>	CARs	OK
3.5. Uncertainty management					
3.5.1. <i>Has the PP demonstrated that, they used conservative assumptions, values, and procedures to ensure that they do not overestimate emission reductions or increases in GHG removals?</i>	BCR PD Template Version 1.0	DR	<i>Please present and justify a mechanism to manage uncertainty in the quantification of baseline and mitigation results in Section 3.5. (the underlying choice of parameters and they being conservatively used among other aspects are missing.)</i>	CAR-22	OK
3.5.2. <i>Have the PP presented and justified how mechanisms are established and applied to manage uncertainty in the</i>	BCR PD Template Version 1.0	DR	<i>Please refer to 3.5.1.</i>	CAR-22	OK

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
<i>quantification of baseline and mitigation results?</i>					
3.6. Leakage and non-permanence					
3.6.1. <i>Have the PP described the procedures applied for the quantification and management of the risk of leakage, according to the methodology applied?</i>	BCR PD Template Version 1.0 BCR Standard Version 3.0	DR	<i>The requirement for leakage emissions in “AMS-I.D” is different from the requirement in “AMS-III.AO”. Therefore, please indicate the requirements for leakage emissions separately for both methodologies. Then, please include the relevant justifications in Section 3.6.</i>	CAR-23	OK
3.6.2. <i>If applicable, is it explained and justified that the data and parameters selected and include the relevant equations by the PPs?</i>	BCR PD Template Version 1.0 BCR Standard Version 3.0	DR	<i>Please refer to 3.6.1.</i>	CAR-23	OK
3.7. Mitigation results					

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
<p>Have the PP(s) justified and demonstrated that the mitigation results obtained as a consequence of the implementation of the project activities are verifiable within the framework of ISO 14064-3:2019, or the one that updates it?</p>	<p>BCR PD Template Version 1.0 BCR Standard Version 3.0</p>	<p>DR</p>	<p>Please indicate the results as well of the mitigations which are demonstrated in Sections 3.7, 3.7.3 and 3.7.4.</p>	<p>CAR-24</p>	<p>OK</p>
<p>3.7.1. Eligible areas in the GHG project boundary (if applicable)</p>					
<p>1- Have the PP(s) demonstrated that the areas within the geographical boundaries of the project correspond to the land cover/land use categories in accordance with the requirements of the applied methodology?</p>	<p>BCR PD Template Version 1.0 BCR Standard Version 3.0</p>	<p>DR</p>	<p>N/A</p>	<p>OK</p>	<p>OK</p>
<p>2- Have the PP(s) demonstrated compliance with the requirement considering the country definitions (if applicable) for the applicable land use categories?</p>	<p>BCR PD Template Version 1.0 BCR Standard Version 3.0</p>	<p>DR</p>	<p>N/A</p>	<p>OK</p>	<p>OK</p>
<p>3- Have the PP(s) demonstrated that the areas in the geographical limits of the project comply with the condition on presence/absence of coverages referred to in the applied methodology, and in the</p>	<p>BCR PD Template Version 1.0 BCR Standard Version 3.0</p>	<p>DR</p>	<p>N/A</p>	<p>OK</p>	<p>OK</p>

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
<i>reference, dates established by the BCR STANDARD</i>					
4- <i>Have the PP(s) indicated and justified the selection of the cartographic scale used to carry out the multi-temporal land cover/land use analysis</i>	<i>BCR PD Template Version 1.0 BCR Standard Version 3.0</i>	<i>DR</i>	<i>N/A</i>	<i>OK</i>	<i>OK</i>
5- <i>Have the PP(s) demonstrated that they have identified land covers/uses according to the land use and/or land cover classifications that apply for the country in which the project activities are proposed</i>	<i>BCR PD Template Version 1.0 BCR Standard Version 3.0</i>	<i>DR</i>	<i>N/A</i>	<i>OK</i>	<i>OK</i>
6- <i>Have the PP(s) demonstrated that geographic data are handled following international standards defined by organizations such as ISO, OGC or the American Society for Photogrammetry and Remote Sensing?</i>	<i>BCR PD Template Version 1.0 BCR Standard Version 3.0</i>	<i>DR</i>	<i>N/A</i>	<i>OK</i>	<i>OK</i>
3.7.2. Stratification (Projects in the AFOLU sector)					

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
	BCR PD Template Version 1.0 BCR Standard Version 3.0	DR	N/A	OK	OK
3.7.3. GHG emission reductions in the baseline scenario					
3.7.3.1 Are the procedures carried out for the quantification of GHG emission reductions, including all the provisions of the methodology applied described?	BCR PD Template Version 1.0 BCR Standard Version 3.0	DR	<p>a) Please indicate the definitions of “$BE_{elect,y}$” and “$BE_{ww,y}$” in Section B.7.3 as well.</p> <p>b) Please correct the statement “Project activity claims carbon emission reduction for manure ($BE_{ww,y}$) and municipal solid waste ($BE_{SWDS,y}$)” in Section B.7.3.</p> <p>c) Please clearly indicate the calculation “$BE_y = BE_{SWDS,y} + BE_{manure,y}$” is related to AMS-III.AO. Since otherwise it will be confusion with the calculation “$BE_{Mramoraki\&2,y} = BE_{SWDS,y} + BE_{manure,y} + BE_{elect,y}$”.</p> <p>d) To calculate $BE_{manure,y}$, AMS-III.D is used. However, in “Applicability” section in “AMS-III.AO” methodology, it is stated</p>	CAR-25	OK

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
			<p><i>“Project activities treating animal manure as single source substrate shall apply AMS-III.D”. However, in this project, animal manure is not the single source. Please re-evaluate $BE_{manure,y}$.</i></p> <p><i>e) For the emission factor value, please use the IFI default value and revise the emission reduction values according to this.</i></p>		
<p><i>3.7.3.2 Are relevant data, parameters, and equations included?</i></p>	<p><i>BCR PD Template Version 1.0</i></p>	<p><i>DR</i></p>	<p><i>Please refer to 3.7.3.1.</i></p>	<p><i>CAR-25</i></p>	<p><i>OK</i></p>
<p><i>3.7.3.3 Are any additional assumptions or considerations used indicated in detail?</i></p>	<p><i>BCR PD Template Version 1.0</i></p>	<p><i>DR</i></p>	<p><i>Please refer to 3.7.3.1.</i></p>	<p><i>CAR-25</i></p>	<p><i>OK</i></p>
<p><i>3.7.3.4 Are the selection of data and parameters explained, justified and is the uncertainty assessment included?</i></p>	<p><i>BCR PD Template Version 1.0</i></p>	<p><i>DR</i></p>	<p><i>Please refer to 3.7.3.1.</i></p>	<p><i>CAR-25</i></p>	<p><i>OK</i></p>

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
3.7.4. GHG emission reductions in the project- scenario					
3.7.4.1 Are the procedures for ex ante quantifying GHG emission reductions attributable to project activities fully described?	BCR PD Template Version 1.0	DR	There is no section as “3.7.5. Leakage” in BCR PD Template, version 1.0. Therefore, please indicate leakage and emission reductions information under Section 3.7.4.	CAR-26	OK
3.7.4.2 Are relevant data, parameters, and equations included?	BCR PD Template Version 1.0	DR	All relevant parameters and equations are indicated in Section 3.7.4.	OK	OK
3.7.4.3 Are any additional assumptions or considerations used indicated in detail?	BCR PD Template Version 1.0	DR	N/A	OK	OK
3.7.4.4 Are information related to uncertainty management presented?	BCR PD Template Version 1.0	DR	Please indicate if there is any uncertainty management fort he project emissions in Section 3.7.4.	CAR-27	OK
3.7.4.5 Are the ex-ante calculations, that is, the estimated GHG emission reductions over the entire quantification period of the	BCR PD Template Version 1.0	DR	All calculations are presented in Section 3.7.4.	OK	OK

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
<i>proposed project presented in the Tabular Format provided in the BCR PD?</i>					
3.7.4.6 <i>Are the total estimated emission reductions during the project's quantification period and the estimated annual average indicated in the BCR PD?</i>	BCR PD Template Version 1.0	DR	<i>Please refer to 3.7.3.1 option (d).</i>	CAR-25	OK
3.7.4.7 <i>Summary of GHG Emission Reductions and Removals</i>					
3.7.4.7.1. <i>Have the project proponents included the description of the procedure for quantification of the net GHG emission reductions and removals including all relevant equations?</i>	BCR PD Template Version 1.0	DR	<i>The calculation of the emission reduction is included in Section 3.7.4.</i>	OK	OK

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
<p>3.7.4.7.2. Are the ex-ante calculation (estimate) of baseline emissions/removals, project emissions/removals, leakage emissions and net emission reductions and removals provided in a tabular format?</p>	<p>BCR PD Template Version 1.0</p>	<p>DR</p>	<p>All calculations are provided.</p>	<p>OK</p>	<p>OK</p>
<p>3.7.4.7.3. Has it been documented how each equation is applied in a manner that enables the reader to reproduce the calculation?</p>	<p>BCR PD Template Version 1.0</p>	<p>DR</p>	<p>Please refer to 3.7.3.1 option (d).</p>	<p>CAR-25</p>	<p>OK</p>
<p>3.7.4.7.4. Are the example calculations for all key equations provided to allow the reader to reproduce the calculation of estimated net GHG emission reductions or removals?</p>	<p>BCR PD Template Version 1.0</p>	<p>DR</p>	<p>Please refer to 3.7.4.1.</p>	<p>CAR-26</p>	<p>OK</p>

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
4. Compliance with applicable legislation					
4.1. Have the PP(s) demonstrate that they have implemented a documented procedure (Document Management System) in which they identify and have access, on an ongoing basis, to relevant legislation and regulations, demonstrating that they have a procedure in place to periodically review compliance with them?	BCR PD Template Version 1.0	DR	Please revise the date of the generation license of Mramorak 2 in Section 4.	CAR-28	OK
5. Carbon ownership and rights					
5.1. Project holder					
Have the PP(s) provided contact information for the GHG Project holder in the tabular format?	BCR PD Template Version 1.0	DR	This is available as “Zlatar Mramorak Doo.”	OK	OK

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
5.2. Other project participants					
<i>Have the PP(s) provided contact information for the Other Project participants in the tabular format?</i>	BCR PD Template Version 1.0	DR	This is available as “Kilittaşı Mühendislik Müşavirlik İnşaat Tic. Ltd. Şti.”	OK	OK
5.3. Agreements related to carbon rights					
5.3.1. <i>Have the PP(s) explained, justified and demonstrated that all project participants agree to the management of carbon rights?</i>	BCR PD Template Version 1.0	DR	<p>There are two companies mentioned. One of them is “Zlatar Mramorak Doo.” and the other one is “BioGold Energy Doo.”. Although they own the same parent company, the carbon rights have been given to Zlatar Mramorak Doo. Please provide an agreement regarding this from the parent company or between Zlatar and BioGold Energy Doo.</p> <p>Also, please indicate information about the relevant agreement in Section 5.3.</p>	CAR-29	OK
5.3.2. <i>Have the PP(S) demonstrated transparently and, if necessary, with evidence of a process based</i>	BCR PD Template Version 1.0	DR	Please refer to 5.3.1.	CAR-29	OK

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
<i>on full, prior and informed consent?</i>					
<p>5.3.3. <i>Is the following provided by the PP(s):</i> <i>Particularly when the project develops activities within the territories of ethnic groups and/or local traditional communities, both their members, as well as individuals and environmental authorities must guarantee respect for their rights, warn and develop the procedures provided by law</i></p>	<p><i>BCR PD Template Version 1.0</i></p>	<p><i>DR</i></p>	<p><i>N/A</i></p>	<p><i>OK</i></p>	<p><i>OK</i></p>
<p>5.3.4. <i>In cases where the project owner is a natural or legal person other than the ethnic groups and/or local traditional communities, have the project owner, in the first instance, requested from the appropriate person a certification to determine whether or not there are Ethnic Communities in the project area on which the Fundamental Right</i></p>	<p><i>BCR PD Template Version 1.0</i></p>	<p><i>DR</i></p>	<p><i>N/A</i></p>	<p><i>OK</i></p>	<p><i>OK</i></p>

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
<i>to Prior Consultation must be guaranteed, when applicable?</i>					
5.3.5. <i>Have the PP(s) demonstrated carbon rights based on agreements and documents that ensure that the requirement is met, with at least the following information:</i>	<i>BCR PD Template Version 1.0</i>	<i>DR</i>	<i>Please refer to 5.3.1.</i>	<i>CAR-29</i>	<i>OK</i>
<i>5.3.5.1 parties signing the agreement(s);</i>	<i>BCR PD Template Version 1.0</i>	<i>DR</i>	<i>Please refer to 5.3.1.</i>	<i>CAR-29</i>	<i>OK</i>
<i>5.3.5.2 purpose of the agreement;</i>	<i>BCR PD Template Version 1.0</i>	<i>DR</i>	<i>Please refer to 5.3.1.</i>	<i>CAR-29</i>	<i>OK</i>
<i>5.3.5.3 date of the agreement;</i>	<i>BCR PD Template Version 1.0</i>	<i>DR</i>	<i>Please refer to 5.3.1.</i>	<i>CAR-29</i>	<i>OK</i>
<i>5.3.5.4 name of the GHG project;</i>	<i>BCR PD Template Version 1.0</i>	<i>DR</i>	<i>Please refer to 5.3.1.</i>	<i>CAR-29</i>	<i>OK</i>
<i>5.3.5.5 period of quantification of GHG removals/reductions;</i>	<i>BCR PD Template Version 1.0</i>	<i>DR</i>	<i>Please refer to 5.3.1.</i>	<i>CAR-29</i>	<i>OK</i>

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
5.3.5.6 responsibilities, obligations, and rights of each of the signatory parties.	BCR PD Template Version 1.0	DR	Please refer to 5.3.1.	CAR-29	OK
5.4. Land tenure (Projects in the AFOLU sector)	BCR PD Template Version 1.0				
	BCR PD Template Version 1.0	DR	N/A	OK	OK
6. Climate change adaptation					
6.1. Have the PP(s) demonstrated, with appropriate criteria and indicators, that the project holder carries out actions related to climate change adaptation, demonstrating that these are derived from the GHG project activities in compliance with the BCR STANDARD?	BCR Standard Version 3.0 BCR PD Template Version 1.0	DR	This situation is indicated clearly in Section 6.	OK	OK
7. Risk management					
1- Have the PP(s) adequately, accurately and objectively demonstrated that they have conducted a risk assessment and	BCR PD Template Version 1.0	DR	a) Please indicate whether there will be a problem with the transport of waste sources in Section 7.	CAR-30	OK

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
<p>risk management? (The risks related to the implementation of the project activities, in the environmental, financial, and social areas shall be indicated by the PP(s)).</p>			<p>b) Please indicate the relevant risks with respect to the local stakeholders in Section 7.</p> <p>c) Please indicate the relevant risks with respect to employments in Section 7.</p>		
<p>2- Have the PP(s) justified the measures designed to manage the risks so that GHG emissions reductions and/or removals are maintained during the project quantification period?</p>	<p>BCR PD Template Version 1.0</p>	<p>DR</p>	<p>Project has a Operation Book which well defines all the operational activities of the biodigesters, and instructions in the Book clearly shows what to do in for smooth operation.</p>	<p>OK</p>	<p>OK</p>
<p>3- For risk assessment and management, have the PP(s) include the following:</p>	<p>BCR PD Template Version 1.0</p>	<p>DR</p>	<p>Please see below.</p>		
<p>a. the potential natural and anthropogenic risks that GHG mitigation actions may face and determine the measures necessary to mitigate such risks;</p>	<p>BCR PD Template Version 1.0</p>	<p>DR</p>	<p>N/A</p>	<p>OK</p>	<p>OK</p>
<p>b. the potential financial risks related to expected costs and investments, as well as the cash flows of the project and define the necessary measures to mitigate the financial risks;</p>	<p>BCR PD Template Version 1.0</p>	<p>DR</p>	<p>The potential financial risks are included in Section 7.</p>	<p>OK</p>	<p>OK</p>

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
c. determine, in the medium and short term, the risks associated with the participation of local communities and stakeholders in the activities proposed by the project owner.	BCR PD Template Version 1.0	DR	Please refer to CAR-29.	CAR-30	OK
4- Have the PP(s) demonstrated that they have employed appropriate methodologies to carry out the assessment of anticipated risks (direct and indirect) and considered mitigation measures, within the framework of adaptive management?	BCR PD Template Version 1.0	DR	Please refer to CAR-29.	CAR-30	OK
7.1. Reversal risk management					
7.1.1. Have the PP(s) explained and justified the actions that have been taken to ensure that the project is maintained over time, as reflected in agreements or contracts, clauses or provisions focused on this objective, or through the implementation of a management plan associated with the risk of reversion?	BCR PD Template Version 1.0	DR	Please refer to CAR-29.	CAR-30	OK

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
8. Environmental Aspects					
<p>8.1. <i>Have the PP(s) presented and explained in detail the results of the environmental assessment, analyzing the foreseeable effects on biodiversity and ecosystems within the project boundaries.</i></p>	<p>BCR PD Template Version 1.0</p>	<p>DR</p>	<p>a) <i>Please remove the repeated sentences in Section 8 (there are no environmental and socio-economic impacts that can be counted as negative by the project activity. On the contrary project has more positive benefits to environment and society. Most important ones are the prevention of methane emissions to the atmosphere that would happen in the absence of the project activity.).</i></p> <p>b) <i>For the noise title in Section 8, also indicate how far the nearest settlement is (please indicate the name of the settlement as well).</i></p> <p>c) <i>Please provide some of the disposal records of the hazardous waste as an example.</i></p> <p>d) <i>Please provide some of the disposal records of the waste water as an example.</i></p> <p>e) <i>Please provide the social security records of the employees.</i></p>	<p>CAR-31</p>	<p>OK</p>

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
8.2. Have the PP(s) demonstrated that the analysis is supported by reliable and recent references?	BCR PD Template Version 1.0	DR	Please refer to 8.1.	CAR-31	OK
8.3. If it is determined that the project activities could generate negative effects, have the PP(s) explained the actions and corrective measures that will be carried out in order to manage and minimize the effects derived from the development of the GHG project activities?	BCR PD Template Version 1.0	DR	Actions and corrective measures are indicated in Section 8.	OK	OK
9. Socio-economic aspects					
9.1. Have the PP(s) explained and justified in detail the analysis of the potential socio-economic effects of the activities, within the limits of the project, clearly explaining the assumptions used and justifying the results of the analysis?	BCR PD Template Version 1.0	DR	Please provide information related to the grievance mechanism in Section 9 with indicating evidence documents. Please also indicate what actions the project owner takes when there is a negative comment from local stakeholders in Section 9.	CAR-32	OK
9.2. Have the PP(s) provided the evaluation referring to related documentation and evidence.	BCR PD Template Version 1.0	DR	Please refer to 9.1.	CAR-32	OK

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
<p>9.3. If such assessment leads to the conclusion that relevant negative effects would be generated, have the PP(s) defined corrective actions and measures with the purpose of preventing and/or reducing the socioeconomic effects derived from the development of the GHG project activities?</p>	<p>BCR PD Template Version 1.0</p>	<p>DR</p>	<p>Please refer to 9.1.</p>	<p>CAR-32</p>	<p>OK</p>
<p>10. Consultation with interested parties (stakeholders)</p>					
<p>1- Have the PP(s) explained and demonstrated that stakeholder consultation has been carried out through appropriate and widely distributed consultation processes?</p>	<p>BCR PD Template Version 1.0</p>	<p>DR</p>	<p>The stakeholder consultation was carried out on 22/08/2022.</p>	<p>OK</p>	<p>OK</p>
<p>2- Have the PP(s) described the stakeholder consultation process and demonstrate how the process meets the requirements related to:</p>	<p>BCR PD Template Version 1.0</p>	<p>DR</p>	<p>Please see below.</p>		
<p>a. the scope of stakeholder consultations;</p>	<p>BCR PD Template Version 1.0</p>	<p>DR</p>	<p>At the meeting, local participants were informed about how a biogas plant works, as well as its environmental benefits through transforming</p>	<p>OK</p>	<p>OK</p>

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
			<i>organic wastes into nutrient rich organic fertilizers.</i>		
<i>b. the number of stakeholders consulted;</i>	<i>BCR PD Template Version 1.0</i>	<i>DR</i>	<i>The participant list is provided in Appendix I.</i>	<i>OK</i>	<i>OK</i>
<i>c. the means used to invite interested parties to participate in the consultations;</i>	<i>BCR PD Template Version 1.0</i>	<i>DR</i>	<i>The means used to invite interested parties to participate in the consultations are available in Section 10.</i>	<i>OK</i>	<i>OK</i>
<i>d. the information that was made available to stakeholders during the consultation process;</i>	<i>BCR PD Template Version 1.0</i>	<i>DR</i>	<i>This is available.</i>	<i>OK</i>	<i>OK</i>
<i>e. the meetings, workshops and other processes developed in the framework of the stakeholder consultation;</i>	<i>BCR PD Template Version 1.0</i>	<i>DR</i>	<i>This is available.</i>	<i>OK</i>	<i>OK</i>
<i>3- In addition, have the PP(s) provided documentary (or other) evidence to ensure that invitations were sent to relevant stakeholders, inviting them to comment?</i>	<i>BCR PD Template Version 1.0</i>	<i>DR</i>	<i>The assessment forms are provided in Appendix I.</i>	<i>OK</i>	<i>OK</i>

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
10.1. Summary of comments received					
10.1.1. Have the PP(s) prepared and documented a report containing the comments received during the stakeholder consultation. The PP shall provide a complete listing of the comments, including contact information for the stakeholder who made the comment.	BCR PD Template Version 1.0	DR	The assessment forms are provided in Appendix I.	OK	OK
10.2. Consideration of comments received					
10.2.1. Have the PP(s) prepared and documented a report containing the comments received during the stakeholder consultation. The PP shall provide a complete listing of the comments, including contact information for the stakeholder who made the comment.	BCR PD Template Version 1.0	DR	Project owner shared its communication information with the local stakeholders.	OK	OK
11. Sustainable Development Objectives (SDG)					

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
<p>11.1. Have the PP(s) demonstrated, with relevant criteria and indicators, the project's contribution to sustainable development objectives applicable to the project activities proposed by the project owner?</p>	<p>BCR PD Template Version 1.0</p>	<p>DR</p>	<p>a) Please indicate the relevant SDG indicators as well in Section 11. b) Please indicate the reference link for the tool to demonstrate the SDG contributions in Section 11 (https://biocarbonregistry.com/es_en/ods/).</p>	<p>CAR-33</p>	<p>OK</p>
<p>11.2. To demonstrate compliance with the SDGs, have the PP(s) used the Tool for the determination of contributions to the achievement of the Sustainable Development Goals (SDGs) of Greenhouse Gas projects. This tool, developed by BIOCARBON REGISTRY, is available at https://biocarbonregistry.com/es_en/ods/.</p>	<p>https://biocarbonregistry.com/es_en/ods/</p>	<p>DR</p>	<p>Please refer to 11.1.</p>	<p>CAR-33</p>	<p>OK</p>
<p>12. REDD+ Safeguards (For REDD+ projects)</p>					
	<p>BCR PD Template Version 1.0</p>	<p>DR</p>	<p>N/A</p>	<p>OK</p>	<p>OK</p>

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
13. Special categories, related to co-benefits (optional)					
13.1. <i>If the project intends to achieve one of the special categories, have the PP(s) demonstrated that they have defined additional actions on social and environmental components and explain that they have developed a model of criteria and indicators to monitor and verify compliance?</i>	BCR PD Template Version 1.0	DR	N/A (This is not and AFOLU project.)	OK	OK
13.2. <i>Have the PP(s) demonstrated compliance with the conditions defined for the component(s) that constitute additional benefits (biodiversity conservation, community benefits, gender equity and climate change adaptation), in accordance with those proposed to be achieved?</i>	BCR Standard Version 3.0	DR	N/A (This is not and AFOLU project.)	OK	OK
13.3. <i>Have the PP(s) explained in detail the model of criteria and indicators that</i>	BCR PD Template Version 1.0	DR	N/A (This is not and AFOLU project.)	OK	OK

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
<i>allow monitoring of each of the conditions and demonstrated compliance with them?</i>					
13.4. <i>Does the monitoring plan include a section that includes the measurement and follow-up of co-benefits?</i>	BCR PD Template Version 1.0	DR	N/A (This is not and AFOLU project.)	OK	OK
14. Grouped Project (if applicable)					
14.1. <i>If the project holder proposes to develop a clustered project, have the PP(s) demonstrated compliance with the conditions that apply to clustered projects, as described in the BCR STANDARD and methodologies?</i>	BCR Standard Version 3.0	DR	<i>Please re-evaluate Section 14 with considering the difference between a bundled project activity and a grouped project activity.</i>	CAR-34	OK
14.2. <i>If it is a grouped project have the PP(s) described and fully explained compliance with the conditions applicable to the grouped projects?</i>	BCR PD Template Version 1.0	DR	<i>Please refer to 14.1.</i>	CAR-34	OK
15. Other GHG programs					

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
<p>15.1. <i>If a project that has been registered under another GHG program intends to become certified and registered under the BCR STANDARD, have the project holder demonstrated that it complies with the following:</i></p>	<p><i>BCR PD Template Version 1.0</i></p>	<p><i>DR</i></p>	<p><i>The signed and sealed letter about double counting is provided to the VVB.</i></p>	<p><i>OK</i></p>	<p><i>OK</i></p>
<p>15.1.1. <i>the registration of the project has been cancelled in the registration system of the standard or program from which the project originates;</i></p>	<p><i>BCR PD Template Version 1.0</i></p>	<p><i>DR</i></p>	<p><i>The signed and sealed letter about double counting is provided to the VVB.</i></p>	<p><i>OK</i></p>	<p><i>OK</i></p>
<p>15.1.2. <i>the GHG reductions or removals generated by the project are not part of another project registered in BIOCARBON REGISTRY or in another GHG program;</i></p>	<p><i>BCR PD Template Version 1.0</i></p>	<p><i>DR</i></p>	<p><i>The signed and sealed letter about double counting is provided to the VVB.</i></p>	<p><i>OK</i></p>	<p><i>OK</i></p>
<p>15.1.3. <i>the requirements established in the national legal framework, as well as the rules and procedures established by BIOCARBON REGISTRY are complied with;</i></p>	<p><i>BCR PD Template Version 1.0</i></p>	<p><i>DR</i></p>	<p><i>The signed and sealed letter about double counting is provided to the VVB.</i></p>	<p><i>OK</i></p>	<p><i>OK</i></p>

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
<p>15.1.4. <i>the BIOCARBON REGISTRY Project Cycle is complied with.</i></p>	<p><i>BCR PD Template Version 1.0</i></p>	<p><i>DR</i></p>	<p><i>The signed and sealed letter about double counting is provided to the VVB.</i></p>	<p><i>OK</i></p>	<p><i>OK</i></p>
<p>16. MONITORING plan</p>					
<p>16.1. Data and parameters for quantifying emission reductions</p>					
<p>16.1.1. <i>Have the PP(s) designed and explained a monitoring plan that, as required by the BCR STANDARD and the applied methodology, contains the following:</i></p>	<p><i>BCR Standard Version 3.0</i></p>	<p><i>DR</i></p>	<ul style="list-style-type: none"> a) <i>Since the default value will be used for the emission factor, please delete the ones used in the emission factor calculation.</i> b) <i>Please include all parameters used in Section 16.1 (e.g. LF_{AD}).</i> c) <i>In Section 16.1, the values of N_{LT,y} are indicated as 1310 for dairy cow and 2050 for non-dairy cow. However, the relevant values are indicated differently in “AMS-I.D & III.D – BE” Excel spreadsheet. Please correct the contradiction.</i> d) <i>Please revise the statement “Project methane emissions occurring in year y generated from waste disposal at a SWDS during a time period ending in</i> 	<p><i>CAR-35</i></p>	<p><i>OK</i></p>

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
			<p>year y ($t\ CO_2e/yr$)” in “AMS-III.AO – Tool4 – BE” Excel sheet.</p> <p>e) Please indicate $W_{i,x}$ values for each waste source in the PD and in the ER Calculation Excel spreadsheet with indicating the relevant evidence documents.</p> <p>f) $EF_{CO_2,f}$ is indicated as 74.1 tCO_2/TJ in Section 16.1. However, the relevant value is indicated differently in “AMS-III.AO-PE” Excel sheet. Please correct the contradiction.</p> <p>g) Please provide the calibration documents of the monitoring equipment (flow meters, gas analyzer, electricity meters and weighbridge).</p>		
16.1.1.1 Project monitoring boundary	BCR PD Template Version 1.0	DR	Please refer to 16.1.1.	CAR-35	OK
16.1.1.2 Monitoring of the execution of project activities	BCR PD Template Version 1.0	DR	Please refer to 16.1.1.	CAR-35	OK

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
16.1.1.3 Monitoring of the quantification of project removals	BCR PD Template Version 1.0	DR	Please refer to 16.1.1.	CAR-35	OK
16.1.1.4 Quality control and quality assurance procedures	BCR PD Template Version 1.0	DR	Please refer to 16.1.1.	CAR-35	OK
16.1.1.5 Verification of field data	BCR PD Template Version 1.0	DR	Please refer to 16.1.1.	CAR-35	OK
16.1.1.6 Review of information processing	BCR PD Template Version 1.0	DR	Please refer to 16.1.1.	CAR-35	OK
16.1.1.7 Data recording and archiving system	BCR PD Template Version 1.0	DR	Please refer to 16.1.1.	CAR-35	OK
16.1.2. Are all data sources and assumptions for the ex-ante values, appropriate, and correct?	BCR PD Template Version 1.0 BCR Standard Version 3.0	DR	Please refer to 16.1.1.	CAR-35	OK
16.1.3. Are all ex-ante values applicable to the proposed BCR project activity?	BCR PD Template Version 1.0	DR	Please refer to 16.1.1.	CAR-35	OK

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
	BCR Standard Version 3.0				
16.1.4. Are all ex-ante values resulting in an accurate or otherwise conservative estimate of the emission reductions?	BCR Standard Version 3.0	DR	Please refer to 16.1.1.	CAR-35	OK
16.1.5. Are the ex-ante data and parameters, correct?	BCR Standard Version 3.0	DR	Please refer to 16.1.1.	CAR-35	OK
16.1.6. Are the units of the data and parameters specified correctly?	BCR PD Template Version 1.0 BCR Standard Version 3.0	DR	Please refer to 16.1.1.	CAR-35	OK
16.1.7. Are the description of data and parameters given correctly?	BCR PD Template Version 1.0 BCR Standard Version 3.0	DR	Please refer to 16.1.1.	CAR-35	OK
16.2. Have the PP presented in detail the appropriate information to monitor project activities and mitigation results:	BCR PD Template Version 1.0 BCR Standard Version 3.0	DR	N/A	OK	OK

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
16.2.1. <i>the data and information necessary to estimate GHG emission removals or reductions during the project quantification period;</i>	BCR PD Template Version 1.0 BCR Standard Version 3.0	DR	N/A	OK	OK
16.2.2. <i>data and complementary information to determine the baseline or reference scenario;</i>	BCR PD Template Version 1.0 BCR Standard Version 3.0	DR	N/A	OK	OK
16.2.3. <i>specification of all potential emissions that would occur outside the project boundary attributable to GHG project activities (leakage);</i>	BCR PD Template Version 1.0 BCR Standard Version 3.0	DR	N/A	OK	OK
16.2.4. <i>information related to the environmental effects assessment of the GHG project activities;</i>	BCR PD Template Version 1.0 BCR Standard Version 3.0	DR	N/A	OK	OK
16.2.5. <i>the procedures established for the management of GHG emission reductions or removals and related</i>	BCR PD Template Version 1.0	DR	N/A	OK	OK

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
<i>quality control for monitoring activities;</i>	BCR Standard Version 3.0				
16.2.6. <i>description of defined procedures for periodic calculation of GHG emission reductions or removals and leakage;</i>	BCR PD Template Version 1.0 BCR Standard Version 3.0	DR	N/A	OK	OK
16.2.7. <i>the assignment of roles and responsibilities for monitoring and reporting of variables relevant to the calculation of GHG emission reductions or removals;</i>	BCR PD Template Version 1.0 BCR Standard Version 3.0	DR	N/A	OK	OK
16.2.8. <i>procedures related to the assessment of the project's contribution to the Sustainable Development Goals (SDGs);</i>	BCR PD Template Version 1.0 BCR Standard Version 3.0	DR	N/A	OK	OK
16.2.9. <i>criteria and indicators related to the project's contribution to sustainable development objectives, applicable to the project activities proposed by the project holder;</i>	BCR PD Template Version 1.0 BCR Standard Version 3.0	DR	N/A	OK	OK

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
<p>16.2.10. procedures related to co-benefits and special category follow-up, when applicable;</p>	<p>BCR PD Template Version 1.0 BCR Standard Version 3.0</p>	<p>DR</p>	<p>N/A</p>	<p>OK</p>	<p>OK</p>
<p>16.2.11. the criteria and indicators defined to demonstrate the additional benefits and the measurement of co-benefits and the special category, when applicable.</p>	<p>BCR PD Template Version 1.0 BCR Standard Version 3.0</p>	<p>DR</p>	<p>N/A</p>	<p>OK</p>	<p>OK</p>
<p>16.3. Information related to environmental impact assessment of GHG project activities</p>					
	<p>BCR PD Template Version 1.0</p>	<p>DR</p>	<p>Please provide “EIA Not Required” Decisions for both biogas power plants.</p>	<p>CL-3</p>	<p>OK</p>
<p>16.4. Procedures established for the management of GHG emission reductions or removals and related to quality control</p>					

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
<p>16.4.1. <i>In the data/parameter tabular formats for monitoring, has the name of each data/parameter been included?</i></p>	<p>BCR PD Template Version 1.0 BCR Standard Version 3.0 AM0058 Version 5.0</p>	<p>DR</p>	<p>a) Please indicate the monitoring equipment details (e.g. brands, serial numbers and so on) in Section 16.4. Please also indicate their measuring data frequencies in Section 16.4.</p> <p>b) Please indicate the calibration dates and calibration frequencies of the monitoring equipment in Section 16.4.</p> <p>c) Please indicate the main source and cross-checked method for the electricity generation in Section 16.4.</p> <p>d) Please indicate the storage time of the data in Section 16.4.</p> <p>e) Please indicate SDG contributions in Section 16.4.</p>	<p>CAR-36</p>	<p>OK</p>
<p>16.4.2. <i>Has the unit of the each data/parameter been included?</i></p>	<p>BCR PD Template Version 1.0 BCR Standard Version 3.0</p>	<p>DR</p>	<p>Please refer to 16.4.1.</p>	<p>CAR-36</p>	<p>OK</p>
<p>16.4.3. <i>Has the description of the each data/parameter been included?</i></p>	<p>BCR PD Template Version 1.0</p>	<p>DR</p>	<p>Please refer to 16.4.1.</p>	<p>CAR-36</p>	<p>OK</p>

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
	BCR Standard Version 3.0				
16.4.4. <i>Has the source of the each data/parameter been included?</i>	BCR PD Template Version 1.0 BCR Standard Version 3.0	DR	Please refer to 16.4.1.	CAR-36	OK
16.4.5. <i>Where several sources of data/parameters are used, is the choice of data sources explained and justified?</i>	BCR PD Template Version 1.0 BCR Standard Version 3.0	DR	N/A	OK	OK
16.4.6. <i>Has the frequency of monitoring/recording been included?</i>	BCR PD Template Version 1.0	DR	Please refer to 16.4.1.	CAR-36	OK
16.4.7. <i>Are the applied actual values provided correctly?</i>	BCR PD Template Version 1.0 BCR Standard Version 3.0	DR	Please refer to 16.4.1.	CAR-36	OK
16.4.8. <i>Has the measurement methods and procedures been included?</i>	BCR PD Template Version 1.0	DR	Please refer to 16.4.1.	CAR-36	OK

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
	BCR Standard Version 3.0				
16.4.9. Has the PPs included which measurement equipment is used for monitoring?	BCR PD Template Version 1.0 BCR Standard Version 3.0	DR	Please refer to 16.4.1.	CAR-36	OK
16.4.10. Has the PPs included how the measurement is undertaken?	BCR PD Template Version 1.0 BCR Standard Version 3.0	DR	Please refer to 16.4.1.	CAR-36	OK
16.4.11. Have the PPs included description of calibration procedures for the monitoring equipment?	BCR PD Template Version 1.0 BCR Standard Version 3.0	DR	Please refer to 16.4.1.	CAR-36	OK
16.4.12. Has the accuracy level of the measurement method included?	BCR PD Template Version 1.0 BCR Standard Version 3.0	DR	Please refer to 16.4.1.	CAR-36	OK

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
<p>16.4.13. Has the responsible person/entity and the interval for the measurements included?</p>	<p>BCR PD Template Version 1.0 BCR Standard Version 3.0</p>	<p>DR</p>	<p>Please refer to 16.4.1.</p>	<p>CAR-36</p>	<p>OK</p>
<p>16.4.14. If applicable, has the calculation method been included?</p>	<p>BCR PD Template Version 1.0</p>	<p>DR</p>	<p>N/A</p>	<p>OK</p>	<p>OK</p>
<ul style="list-style-type: none"> If the data and parameters monitored in Section 5.2 of the PD are to be determined by a sampling approach, has the PP provided a description of the sampling plan in accordance with the recommended outline for a sampling plan in the latest applicable version of “Standard for Sampling and Surveys for CDM Project Activities and Programme of Activities”? 	<p>BCR Standard Version 3.0 CDM Standard: Sampling and surveys for CDM project activities and programmes of activities §29 §30 §31 §32 §33</p>	<p>DR</p>	<p>N/A (The sampling approach is not used.)</p>	<p>OK</p>	<p>OK</p>
<p>16.4.15. If the sampling approach is used by the PPs, does the sampling plan present a reasonable approach for obtaining</p>	<p>CDM Guideline: Sampling and surveys for</p>	<p>DR</p>	<p>N/A (The sampling approach is not used.)</p>	<p>OK</p>	<p>OK</p>

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
<i>unbiased, reliable estimates of the variables?</i>	CDM project activities and programmes of activities §40a				
16.4.16. <i>If the sampling approach is used by the PPs, are the elements of objectives and reliability requirements complete?</i>	CDM Guideline: Sampling and surveys for CDM project activities and programmes of activities §40a-i	DR	N/A (The sampling approach is not used.)	OK	OK
16.4.17. <i>If the sampling approach is used by the PPs, do the requirements specified agree with those stated in the appropriate standards?</i>	CDM Guideline: Sampling and surveys for CDM project activities and programmes of activities §40a-i	DR	N/A (The sampling approach is not used.)	OK	OK
16.4.18. <i>If the sampling approach is used by the PPs, is the population in</i>	CDM Guideline:	DR	N/A (The sampling approach is not used.)	OK	OK

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
<i>the sampling plan clearly defined?</i>	<i>Sampling and surveys for CDM project activities and programmes of activities §4ob</i>				
16.4.19. <i>If the sampling approach is used by the PPs, is the proposed sampling approach clear?</i>	<i>CDM Guideline: Sampling and surveys for CDM project activities and programmes of activities §4oc</i>	<i>DR</i>	<i>N/A (The sampling approach is not used.)</i>	<i>OK</i>	<i>OK</i>
16.4.20. <i>If the sampling approach is used by the PPs, does the sampling approach comply with the description of the population?</i>	<i>CDM Guideline: Sampling and surveys for CDM project activities and programmes of activities §4oc-ii</i>	<i>DR</i>	<i>N/A (The sampling approach is not used.)</i>	<i>OK</i>	<i>OK</i>

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
<p>16.4.21. <i>If the sampling approach is used by the PPs, is the proposed sample size adequate to achieve the minimum confidence/precision requirements?</i></p>	<p>CDM Guideline: Sampling and surveys for CDM project activities and programmes of activities §4od</p>	<p>DR</p>	<p>N/A (The sampling approach is not used.)</p>	<p>OK</p>	<p>OK</p>
<p>16.4.22. <i>If the sampling approach is used by the PPs, is the ex-ante estimate of the population variance needed for the calculation of the sample size adequately justified?</i></p>	<p>CDM Guideline: Sampling and surveys for CDM project activities and programmes of activities §4od</p>	<p>DR</p>	<p>N/A (The sampling approach is not used.)</p>	<p>OK</p>	<p>OK</p>
<p>16.4.23. <i>If the sampling approach is used by the PPs, is the sample representative of the population?</i></p>	<p>CDM Guideline: Sampling and surveys for CDM project activities and programmes</p>	<p>DR</p>	<p>N/A (The sampling approach is not used.)</p>	<p>OK</p>	<p>OK</p>

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
	<i>of activities §40e</i>				
16.4.24. <i>If the sampling approach is used by the PPs, is it identified how the sampling frame would be kept?</i>	CDM Guideline: Sampling and surveys for CDM project activities and programmes of activities §40e-ii	DR	N/A (The sampling approach is not used.)	OK	OK
16.4.25. <i>If the sampling approach is used by the PPs, are the methods of data collection clear and unambiguous?</i>	CDM Guideline: Sampling and surveys for CDM project activities and programmes of activities §40f-i	DR	N/A (The sampling approach is not used.)	OK	OK
16.4.26. <i>If the sampling approach is used by the PPs, are the procedures for the data measurements defined appropriately and clearly?</i>	CDM Guideline: Sampling and surveys for CDM project	DR	N/A (The sampling approach is not used.)	OK	OK

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
	activities and programmes of activities §40g				
<p>16.4.27. If the sampling approach is used by the PPs, do the procedures for measurements adequately provide for minimizing non-sampling errors?</p>	<p>CDM Guideline: Sampling and surveys for CDM project activities and programmes of activities §40g</p>	<p>DR</p>	<p>N/A (The sampling approach is not used.)</p>	<p>OK</p>	<p>OK</p>
<p>16.4.28. If the sampling approach is used by the PPs, is the quality control and assurance strategy adequate?</p>	<p>CDM Guideline: Sampling and surveys for CDM project activities and programmes of activities §40g-i</p>	<p>DR</p>	<p>N/A (The sampling approach is not used.)</p>	<p>OK</p>	<p>OK</p>

Question	Reference	Means of validation*	Findings, comments, references and document sources	Draft opinion	Final opinion
<p>16.4.29. <i>If the sampling approach is used by the PPs, are the proposed skill sets, qualifications and experience of the personnel to be engaged to conduct sampling adequate?</i></p>	<p>CDM Guideline: Sampling and surveys for CDM project activities and programmes of activities §40h-i</p>	<p>DR</p>	<p>N/A (The sampling approach is not used.)</p>	<p>OK</p>	<p>OK</p>