VERIFICATION REPORT

Document Prepared By

TÜV Rheinland Energy GmbH

Accreditation number D-VS-11120-01-00

Project Title	G2P Gornet (Gas to power)
Project Proponent	**OMV Petrom S.A., Upstream Romania, Asset VII Muntenia Est** Str. Coralilor nr. 22, sector 1, Bucureşti ("Petrom City")

Verification period	01.01.2022 – 31.12.2022
Verified UERs	7,898,695,365 $gCO_{2,eq}$
Unique identifier	0936_TUEV_20151216_2022_045.1200N,026.1009E_0014592.0022490

Report Title	Verification of Upstream Emission Reduction for G2P Gornet project for the period 01.01.2022 – 31.12.2022
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Summary:

TÜV Rheinland Energy GmbH was assigned to perform verification of the monitoring period 01.01.2022 – 31.12.2022 for the upstream emission reduction project "G2P Gornet (Gas to power)" against the verification criteria set under the Council Directive (EU) 2015/652 of 20 April 2015 and the Guidance Note of the Council Directive (EU) 2015/652 on approaches to quantify, verify, validate, monitor and report upstream emission reductions as well as on the Austria's "Kraftstoffverordnung" (KVO) and in accordance with the ISO 14064-3: 2019 and all other relevant requirements, considering the reasonable materiality threshold of 5%.

The upstream emission reduction (UER) project activity is implemented in order to reduce GHG emissions related to flaring of associated petroleum gas in Gornet Plant, Romania. The project activity is the construction of a gas to power (G2P) plant to recover and utilize the associated petroleum gas to utilize in order to generate electricity. In the absence of the project activity, the associated petroleum gas was flared; instead now it is transferred to generate electricity.

The verification was performed in 4 main steps, namely

- Desk review – covering all provided documents, i.e. initial monitoring report, PDD, UER calculations, records on volume of associated gas (AG), records on NCV and EF of the recovered AG, calibration certificates, manuals, etc. (listed in section 2.2);
- Verification audit (described in section 2.4) – assessing the correctness of the documents, conducting interviews with the lead partner, stakeholders and the carbon consultant (see Section 2.2f), observation of data processing and storage, confirmation of metering devices, plausibility checks;
- Issuance of verification protocol (see APPENDIX I), a list of corrective action requests, clarification requests and forward action requests (see APPENDIX II);
- Issuance of the verification report "Verification of Upstream Emission Reduction for G2P Gornet project for the period 01.01.2022 – 31.12.2022".

The Verification Team identified 5 (five) corrective action requests (CARs), 7 (seven) clarification requests (CLs) and one FAR from previous verification. The findings were satisfactorily addressed by the project participant and closed accordingly prior to the issuance of this final Verification Report. The Verification Team issued one forward action request (FAR) in order to be considered in the next verification.

Finally based on the provided documentation and site inspection, TÜV Rheinland Energy GmbH issues a positive verification opinion on the UER project activity "G2P Gornet (Gas to power)", confirming that for the monitoring period 01.01.2022 – 31.12.2022 GHG emission reduction of **7,898,695,365 gCO2,eq** are realised from the aforementioned project activity.

Table of Content

1. Introduction

1.1 Project Name

G2P Gornet (Gas to power)

1.2 Project Proponent

OMV Petrom S.A.
Str. Coralilor nr. 22, sector 1,
Bucureşti ("Petrom City")

The above mentioned entity is referred to as the project proponent of the project activity "G2P Gornet (Gas to power)" as indicated in the validated PD v1.1 dated 22.01.2019.

1.3 Verification of monitoring period

01.01.2022 – 31.12.2022

1.4 Period during which Verification was carried out

The Verification Body TÜV Rheinland Energy GmbH was commissioned to perform the verification of the project activity in question for the above mentioned verification period by the OMV Downstream GmbH (identified as project participant and contracting entity for the verification services) on 27.02.2023.

1.5 Date of the Verification Audit

29.03.2023 on-site verification audit.

1.6 Upstream Emission Reduction

7,898,695,365 $gCO_{2,eq}$ for the verification period from 01.01.2022 to 31.12.2022.

1.7 Methodology

The upstream emission reductions achieved by the proposed project activity are quantified based on the approved CDM large-scale methodology AM0009 "Recovery and utilization of gas from oil fields that would otherwise be flared or vented" v07.0.

1.8 Summary Description of the Project

The project activity is designed to recover and utilize associated gas that would otherwise be flared. In 2015, Phase 1 of the project was implemented by installing the first G2P unit. In 2017,

the second G2P unit was installed in order to utilize additional associated gas from a new oil well. Since then, both units have been continuously operating and part of the electricity generated has been used locally and the surplus transferred to other OMV Petrom locations. The G2P plant have been operated, maintained and monitored by a Contractor (Aggreko) and is not within the project boundary.

In September 2021 a new gas pipeline connection was established between the Gornet site and the gas treatment station in Boldesti (via a connection to the exiting input line delivering gas from the "Podeni" field to Boldesti. The pipe was put into function on 17.09.2021. Gas volumes that before could not be used in the G2P facility due to capacity restrictions or temporary unavailability (eg. maintenance times) are now being transferred to the nearby gas processing facility in Boldesti. There the gas is treated to the specifications needed for exporting to the gas transmission grid. The gas pipeline connection is also not within project boundary.

In the absence of the project activity, the associated gas was flared. Hence, the project activity causes a reduction of emissions by avoiding the flaring of this gas, which are claimed as UERs.

The project is located in Romania at Prahova County. The geographical coordinate set of the G2P Gornet plant is 45.120032° North, 26.100950° East. And the geographical coordinate set of the flare stack is 45.120191° North, 26.101827° East.

Figure 1: Project Location

The geographic coordinates of the project site and the geographic coordinates of the flare stack, which are indicated in the final Monitoring Report of monitoring period 01.01.2022 – 31.12.2022, correspond to the ones given in the validated PD and are verified by the Verification Team during on-site inspection.

"G2P Gornet (Gas to power)" is a flaring reduction GHG emission mitigation project, where associated gas from oil fields that has been previously flared at Park 98 Gornet within Asset VII, before project implementation, is recovered and utilized. The project boundary of the project activity "G2P Gornet" was defined in the validated and approved project documentation (PD), in accordance with the applied CDM Methodology AM0009 and ISO 14064-2. The current baseline and project scenario is given below incl. the respective project boundary:

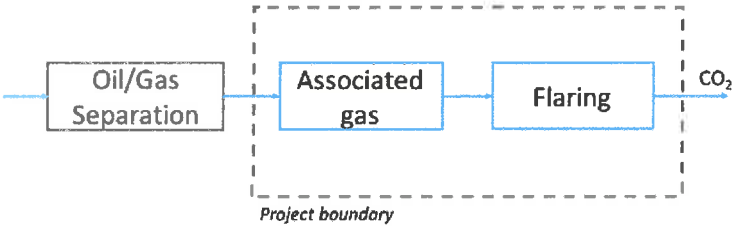

Figure 2: Baseline scenario "flaring of associated gas" with boundary (source Doc. 12)

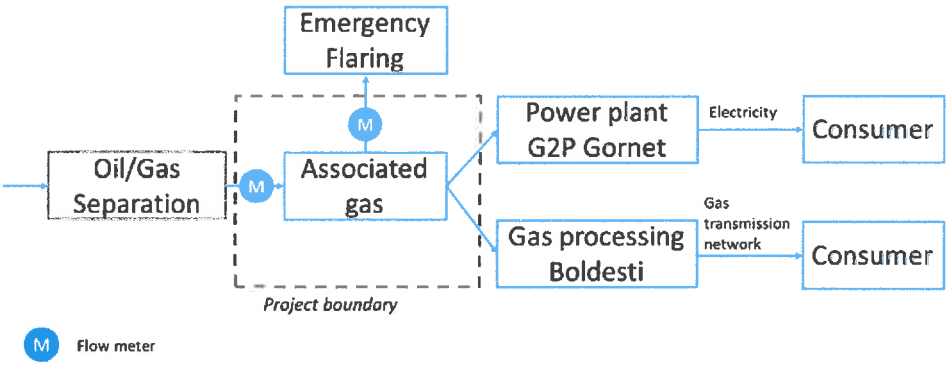

Figure 3: Project scenario „G2P Gornet" with boundary (source Doc. 12)

The greenhouse gases included in the project boundary are CO_2 emission sources from measured fuel consumption delivered to the G2P units.

1.9 Objective

The purpose of the verification is to review the monitoring results and to verify that the monitoring methodology was implemented according to monitoring plan and monitoring data, and to confirm that the reductions in anthropogenic emissions by sources is sufficient, definitive and presented in a concise and transparent manner.

The objective of this verification was

- to confirm that the project has been implemented as documented in the validated PD,
- to confirm that the project has been implemented in line with the Council Directive (EU) 2015/652 and
- to provide qualitative and quantitative evaluation of the upstream emission reductions (UERs), reported for the "G2P Gornet (Gas to power)" for the monitoring period from

01.01.2022 to 31.12.2022 (both days included). In particular, monitoring plan, monitoring report and the project's compliance with the UERs quantification methodology are verified in order to confirm that the project has been implemented in accordance with the approved PD and conservative assumptions, as documented.

1.10 Scope and Criteria

TÜV Rheinland Energy GmbH (in the following referred as TÜV Rheinland), an accredited verification body according to DIN EN ISO 14065 and also registered as validation and verification body under the German Emission Authority (DEHSt), performed a verification of the monitoring report for the project: "G2P Gornet (Gas to power)" in order to confirm compliance of the monitoring report with requirements of ISO 14064-2: 2019, Austria's "Kraftstoffverordnung" (KVO) implementing the COUNCIL DIRECTIVE (EU) 2015/652 of 20 April 2015 laying down calculation methods and reporting requirements pursuant to Directive 98/70/EC of the European Parliament and of the Council relating to the quality of petrol and diesel fuels.

The verification implies a review of the Monitoring Report over the monitoring period from 01.01.2022 to 31.12.2022 against the Council Directive (EU) 2015/652 and associated interpretation and in accordance with the ISO 14064-3: 2019. The verification is based on the validated Project Documentation (PD) v1.1 dated 22.01.2019, in particular considering the sections related to baseline and project emission reductions calculations, parameters to be monitored, monitoring plan and monitoring methodology. In addition, the project participants provided relevant documents and supplementary information to assist the verification process.

The main objective of the verification report is to confirm the amount of the UERs generated from project activity over the monitoring period and following the validated monitoring plan. The report is issued to the project owner and thus, TÜV Rheinland is not responsible for any further use that may be made of this report.

The main steps in the verification process are:

- Desk review – covers the evaluation of all provided documents, i.e. current monitoring report, validated PD, validation report, monitoring report on previous monitoring periods and the corresponding verification reports, ER calculations, records on volume of recovered associated gas (AG), records on NCV and EF of the recovered AG, records on physical parameters and gas composition of the recovered AG, calibration reports, as well as manuals and records;
- Verification audit (on-site inspection) – confirms that the project has been implemented as described in the PD and that all data and information provided in the monitoring report are correct. It has been carried out on 29.03.2023;

- Issuance of verification protocol and list of CARs, CLs and FARs;
- Issuance of final verification report for the monitoring period in question - gives a conclusion whether the reported data are accurate, complete, consistent, and transparent, with a high level of assurance and free of material error or misstatement.

The verification process also considers the correct application of the approved CDM methodology AM0009 v07.0 "Recovery and utilization of gas from oil fields that would otherwise be flared or vented", the referred methodological tools and guidelines, and the criteria given to provide for consistency in project operations, monitoring and reporting.

The verification considers both quantitative and qualitative information on emission reductions. The verification team is not meant to provide any consultancy towards the client. However, stated requests for clarifications, corrective and/or forward actions may provide input for improvement of the monitoring activities.

1.11 Materiality

As per the ISO 14064-3: 2019, materiality is defined as "concept that individual misstatements or the aggregation of misstatements could influence the intended users' decisions." It refers to error in value in the GHG statement, such as misstatements, incomplete inventories, misclassified GHG emissions or misapplication of calculations

The objective of the project verification is to provide assurance to OMV Downstream GmbH that GHG assertions truly reflect the emission reductions achieved. A material discrepancy is, according to ISO 14064-3: 2019, characterized by the possibility that the intended user of the GHG assertions will be influenced by such a discrepancy.

However, no quantitative threshold is defined by the ISO 14064-3: 2019 standard. The verification team set the materiality threshold to 5% of the overall GHG project emission reductions and mutually communicated the value to the client. The materiality threshold is in line with the one stipulated in the EU monitoring guidelines applied to facilities with CO_2 emission of less than 500,000 t $CO_{2,eq}$.

1.12 Verification Team

Verification Body	TÜV Rheinland Energy GmbH
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1.13 Level of Assurance

The verification team has focused on providing a reasonable level of assurance that the emission reduction calculation methodology is appropriate and correctly applied, as well as that Upstream Emission Reductions have been accurately monitored. During the course of verification all primary data at the data source shall be examined in order to verify the UER assertions.

1.14 Summary Result of the Verification Process

The verification team came to the conclusion that based on the provided documentation and the verification audit, GHG assertion was made in accordance with

- the requirements of ISO 14064-2: 2019,
- the Council Directive (EU) 2015/652 of 20 April 2015 laying down calculation methods and reporting requirements pursuant to Directive 98/70/EC (Fuel quality directive),
- the Guidance Note of the Council Directive (EU) 2015/652 on approaches to quantify, verify, validate, monitor and report upstream emission reductions as well as
- the Austria's Fuel Decree "Kraftstoffverordnung" (KVO)

and was material correct and fairly represented the GHG emissions data and information without material discrepancies.

Therefore, TÜV Rheinland Energy GmbH issues a positive verification opinion on the project "G2P Gornet (Gas to power)", confirming that for the monitoring period 01.01.2022 – 31.12.2022, GHG upstream emission reduction of 7,898,695,365 $gCO_{2,eq}$ are realised from the aforementioned project activity.

2. Verification Process

As stipulated in Council Directive (EU) 2015/652 Annex I part 1 (3) d ii "the UERs and baseline emissions are to be monitored, reported and verified in accordance with ISO 14064 and providing results of equivalent confidence of Commission Regulation (EU) No 600/2012 (6) and Commission Regulation (EU) No 601/2012 (7). The verification of methods for estimating UERs must be done in accordance with ISO 14064-3: 2019 and the organisation verifying this must be accredited in accordance with ISO 14065".

The above mentioned general principles and key requirements of verifiers and the verification process, as indicated in Commission Regulation (EU) No 600/2012, are:

- The process of verifying emission reports shall be an effective and reliable tool in support of quality assurance and quality control procedures (Article 6).
- The verifier must carry out verification in the public interest and with an attitude of professional scepticism of the claims being verified (Article 7).
- The verifier shall conduct substantive testing using analytical procedures, including verifying data and checking the monitoring methodology, and shall conduct site visits (Article 14-21).
- All verification reports shall be independently reviewed (Article 25).
- All verification personnel (Article 35) and independent reviewers (Article 38) shall be competent.
- Verifiers shall be impartial and independent from an operator (Article 42).
- All verifiers shall be accredited for the scope of activities being verified (Article 43-44).

The Verification Team confirms that the verification process of the project "G2P Gornet (Gas to power)" for the monitoring period 01.01.2022 – 31.12.2022 is accomplished in compliance with the above listed principles and key requirements.

2.1 Method and Criteria

The verification of the UER project "G2P Gornet (Gas to power)" has been performed in accordance to the internal procedures of TÜV Rheinland Energy GmbH for the verification of UER projects, which strictly follow ISO 14064-3: 2019.

The criteria of data/information management of the GHG project has been referred to standard ISO 14064-2: 2019. The criteria of applied project for quantifying GHG emission reduction has been referred to CDM methodology AM0009 v07.0 including related tool methodology as mentioned on section 1.10.

TÜV Rheinland did not deploy a risk-based approach but applied a 100% coverage of all data used for UER calculations tracked back to its original source.

2.2 Document Review

The desk review phase is characterised by the assessment of the monitoring report and emission reduction workbooks substantiated by additional supportive documents, all of which have been provided to the Verification Team in a digital form. The following table outlines the documents reviewed as part of the verification process:

Nr	Title	Date of submission
1	PDD_G2P-Gornet_v1.1	18.03.2021
2	MR_G2P-Gornet_2022_v1_20230233	22.03.2023
3	MR_G2P-Gornet_2022_Detailed-Quantification-of-Emissions_v1_20230322	22.03.2023
4	Buletin Scanner 2000 (Calibration document for Scanner 2000)	22.03.2023
5	Buletine verificare 047-2019 (Calibration document for fiscal flowmeter SN 047/2019)	22.03.2023
6	12 Monthly Gas Analysis	22.03.2023
7	LI 1017 C OMV PETROM (Accreditation from ICPT valid until 31.03.2026)	17.04.2023
8	MR_G2P-Gornet_2022_v2_20230525	25.05.2023
9	MR_G2P-Gornet_2022_Detailed-Quantification-of-Emissions_v2_20230525	25.05.2023
10	MR_G2P-Gornet_att 2_Flow diagram	25.05.2023
11	PIMMS extract with daily values (Aggreko meters, SN 047/2019, Scanner 2000, MZ50)	25.05.2023
12	MR_G2P-Gornet_2022_v3_20230615_clean	16.06.2023
13	MR_G2P-Gornet_2022_Detailed-Quantification-of-Emissions_v3_20230615	16.06.2023
14	PV service P98 Gornet (Service Report of the verification of the two FARSYS measuring systems)	16.06.2023
15	UER LTS-Boldesti_MR20221231_Monitoring Report_v2_20230405_clean	16.06.2023
16	Verification Report Boldesti 230417	16.06.2023
17	Approved CDM large-scale methodology AM0009 "Recovery and utilization of gas from oil fields that would otherwise be flared or vented" v07.0	

2.3 Interviews

The interview process was conducted during the on-site audit with responsible staff of OMV Petrom, OMV Downstream GmbH and Energy Changes GmbH. The relevancy of methodology and requirement of standard had been discussed during the validation process. Therefore, the discussion was focused on monitoring plan and procedure to maintain GHG data and information for baseline scenario and project emission is complete, verifiable, no misstatement and misapplication of calculation.

The interviews took place on 29.03.2023 and was conducted by Ms. Florencia Tamanini and Mr. Julius Averkorn at Gornet´s facility on-site. Beside the auditor and trainee from TÜV Rheinland the following additional persons participated in the interviews:

Name	Organisation / Function
Neslihan Kumcu	OMV Downstream GmbH/ Biofuels Compliance & UER Mgmt.
Oliver Percl	Energy Changes Projektentwicklung GmbH / Project manager (UER-consultant)
Sylvie Rietmann	Energy Changes Projektentwicklung GmbH / Project manager (UER-consultant)
Mihaela Zaiet	OMV Petrom / UER Key Focal point
Gheorghe Stelu-Sorin	OMV Petrom SA / Supervisor Production
Bobaru Constantin	OMV Petrom SA / Park Operator

2.4 Site inspection

The verification audit of the project activity "G2P Gornet (Gas to power)" for the monitoring period 01.01.2022 – 31.12.2022 took place on 29.03.2023 in Romania at Prahova Country.

The objective of the verification audit is to acquire details on project management and operation, prove validity and authenticity of delivered supporting documents, and to assess the situation on the ground against the description in the documents. The audit was carried out by means of interviews with the persons indicated in section 2.3, assessment of the presented supportive documentation and personal observations.

The verification audit investigates whether the statements given in the project document are complete, technically feasible and plausible, and lead to real and measurable emission reductions or removals. Areas of special interests are project description, baseline methodology and calculation, environmental impact and monitoring plan. The assessment was also devoted for a better understanding of the operations, the data gathering processes and links to data systems, management controls, and overall information systems. This included a review of the baseline, project and potential leakage emissions at the facilities, achieved through interviews with appointed personnel and reviews of the process flow and data flow diagrams. Subsequently, a review of metering and data management processes was discussed with the control room operation staff, including a review of meter calibration and QA/QC procedures.

During the on-site audit, the production site with the two G2P units, the flare pipeline, the flare stack, the additional pipeline to Boldesti facility and all flowmeters implemented as the project activity were visited.

The physical features and points of monitoring for the measured parameters have been confirmed to be in line with the description in the validated PD and the implemented deviations from the monitoring plan and applied methodology, detailed in the latest version of the Monitoring Report (Doc. 12). The evidence (records, database, and documents) that have been checked during the strategic desk analysis, the audit and on punctual request thereafter were clearly presented and are listed in section 2.2.

At the end of the audit a preliminary list has been provided to the PP indicating the need for further clarifications or additional proofs (clarification request), as well as identified non-compliances which require the revision of documents and calculations (corrective action request). See also section 2.5.

Eventually, the conducted Verification Audit for the monitoring period 01.01.2022 – 31.12.2022, confirms that the monitoring and reporting of the achieved upstream emission reductions for the period in question, is carried out in line with the verification principles and criteria postulated by the ISO 14064 and the EU 2015/652 and is in accordance with the monitoring plan specified in the validated PD.

2.5 Resolution of Findings

The objective of this phase of the verification is to resolve any outstanding issues which have to be clarified prior to final verifier's conclusions on the project implementation, monitoring practices and achieved emission reductions. In order to ensure transparency a verification protocol (APPENDIX I) is completed for the project activity. The protocol shows in transparent manner the verification criteria (requirements) as given by the EU 2015/652 and ISO 14064-2/-3: 2019, means of verification and their results against the identified criteria, including findings. The last can be issued either as a non-fulfilment of the applied ER quantification methodology and EU 2015/652 requirements, or where a risk to the fulfilment of project objectives is identified.

In addition to and as a complement to the verification protocol, APPENDIX II List of correction action requests (CARs), clarification requests (CLs), previous and new forward action requests (FARs) is issued, keeping records of all findings identified in the verification process and how those have been solved. Corrective action requests (CAR) are issued where mistakes have been made with a direct influence on project result; whereas clarifications (CL) - where additional information is needed to fully clarify an issue.

In the course of the verification of "G2P Gornet (Gas to power)" for the monitoring period 01.01.2022 – 31.12.2022, the Verification Team identified and issued 5 (five) corrective action requests (CARs), 7 (seven) clarification requests (CLs), 1 (one) forward action request. Additionally, one forward action request (FAR) from the previous verification was identified and closed. All above mentioned findings are transparently organised in APPENDIX II.

The previous Forward Action Request (FAR) was raised in the verification report, Version 1.0 dated 07.07.2022, regarding the new gas pipeline connection to the gas treatment station in Boldesti. It was noted that the new gas pipeline connected on 09.17.2021 will need to be considered in future emission reduction verifications and the baseline and/or project scenario may require a new assessment. The remaining Forward Action Request (FAR) from last verification has been assessed and properly closed (refer to APPENDIX II for further details).

The Verification Report is issued upon closing all above mentioned findings and after an internal review by a Technical Reviewer is conducted, whom is assigned by the verification body, and who was not himself a member of the audit team.

2.6 Forward Action Requests

A new Forward Action Request (as instruction for next verification) has been issued in the course of the verification and is transparently described in APPENDIX II. It refers to the following:

During the interviews with staff on-site, the validation team observed room for improvement in the logbook, in which the readings of the back-up meter MZ50 were manually recorded; the latter are subsequently transferred to the PIMMS system. Gaps and transfer errors to PIMMS system were discovered in the records for manual reading of data from the MZ50 meter located at the gas pipeline connection to Boldesti. The MZ50 data does not directly affect the baseline emissions data quality, but may be used as back-up data to create substitute values in an emergency. Therefore, it is recommended that, until the next review, appropriate work instructions regarding the manual reading process of the flowmeters and the subsequent transfer to PIMMS be established to ensure correct data collection and transfer in the future.

3. Verification Findings

The outcomes of the verification of project activity "G2P Gornet (Gas to power)" for the monitoring period 01.01.2022 – 31.12.2022 performed by TÜV Rheinland Energy GmbH are explicitly discussed in the following sections.

3.1 Implementation Status

The Verification Team witnessed that the project activity "G2P Gornet (Gas to power)" was implemented and operated as described in the validated PD, including the deviations from (validated/registered) monitoring plan and applied methodology stated in the latest version of the MR (Doc. 12).

During the verification audit, it was confirmed that the main components of the Gornet G2P plant are the two gas (piston) engines - electrical generator - HMI (Human Interface Machine) assemblies within an acoustic enclosure, equipped with a Cummins OSK60G gas engine and a Jenbacher J420C gas engine, including all necessary auxiliary equipment (gas skid, transformers and a command room. The equipment at G2P Gornet (Gas to power) is used to use the chemical energy of the previously flared gas, in order to obtain electrical energy partly for local consumption, the surplus is "exported" to other OMV Petrom Upstream locations using the local operator MV distribution line.

It was also confirmed that all procedures relevant to the project are documented electronically as part of OMV Petrom's management system, and those procedures are followed by Petrom´s on-site personnel. During the assessment of the management and operation system a FAR was raised that relates to the manual reading of the meter MZ50 and the subsequent manual transfer to the SCADA system (PIMMS). The details and recommendations for the next verification phase are detailed in section 2.6.

The Verification Team approved that the elaborated monitoring plan, which follows the selected approved CDM Methodology AM0009 v07.0 and is an essential part of the PD, is accurately implemented for the monitoring period in question. The parameters that are subject to monitoring have been monitored in full accordance with the measurement methods and procedures, monitoring frequency and quality assessment specified in the PD, namely

- $F_{total,y}$ - Volume of total recovered gas in the Gornet facility in the monitoring period "y", and
- $F_{flare,y}$ - Volume of associated gas flared in the monitoring period "y", and
- $NCV_{RG,y}$ - Average net calorific value of the fuel gas (recovered gas) in the monitoring period "y", and

- $EF_{CO2,RG,y}$ - Average CO2 emission factor of the fuel gas (reovered gas) in the monitoring period "y".

Furthermore, the Verification Team attests that the G2P Gornet (Gas to power) was validated in February 2019 as upstream emission reduction (UER) project to comply with the requirements of ISO 14064-2: 2019 and with Austria's Fuel Ordinance[1] dated 30 Apr 2018 implementing COUNCIL DIRECTIVE (EU) 2015/652 of 20 April 2015 laying down calculation methods and reporting requirements pursuant to Directive 98/70/EC of the European Parliament and of the Council relating to the quality of petrol and diesel fuels.

In May 2021, the UERs generated by the project over the monitoring period 01.01.2020 – 31.12.2020 have been verified for intended usage under the Austria's Fuel Decree "Kraftstoffverordnung" (KVO). As well as in July 2022, the UERs generated by the project over the monitoring period 01.01.2021 – 16.09.2021 have been verified for intended usage under the same decree.

Verification team confirms that the project "G2P Gornet (Gas to power)" has been erected and is operating as described in the validated PD and the final Monitoring Report for the current verification period 01.01.2022 – 31.12.2022. The monitoring of the generated GHG emissions has been implemented in compliance with the monitoring plan contained in the validated PD, fulfilling all requirements related to data acquisition and storage.

3.2 Accuracy of Upstream Emission Reduction Calculations

The Project Proponent, OMV Petrom S.A., claims the reduction of upstream GHG emission by recovery of associated gas from oil fields and conversion for electricity production, as well as per the selected approved Methodology AM0009 v07.0 and in accordance with the ISO 14064-2, the net GHG emission reductions generated by the project activity are determined as difference between baseline emissions, project emissions and leakage for the monitoring period, i.e.

$$ER_y = BE_y - PE_y - LE_y$$

Where

- baseline emissions (BE) are determined by multiplying volume, net calorific value and carbon emission factor of the gas measured at the metering point, i.e.

  Formula 1:

$$BE_y = FC_y * NCV_{RG,y} * EF_{CO2,RG,y}$$

[1] § 19b of the 'Kraftstoffverordnung'

Formula 2:

$$FC_y = F_{total,y} - F_{flare,y}$$

- project emissions (PE) are determined to be 0 $tCO_{2,eq.}$/year, as the project includes no additional consumption of electricity or fossil fuels.

$$PE_y = 0\ tCO_{2,eq.}$$

- leakage emissions (LE) need not to be considered as per AM0009 v07.0.

$$LE_y = 0\ tCO_{2,eq.}$$

The applied methodology suggests that the LE shall be accounted "for project activities where the recovered gas is transported to a processing plant where it is processed into hydrocarbon products (e.g. dry gas, LPG and condensates) and the dry gas is compressed to CNG first, then transported by trailers/trucks/carriers and then decompressed again, before it finally enters the gas pipeline".

The abovementioned formulas are clearly referred to within the monitoring report and used for the calculation of the generated UER within the final calculation workbook. Therefore, the Verification Team confirms that the claimed UERs are calculated as per the selected approved CDM methodology and as specified in the monitoring plan within the validated PD.

The quantification of generated GHG emission reductions is based on 4 parameters ($F_{total,y}$, $F_{flare,y}$, $NCV_{RG,y}$ and $EF_{CO2,RG,y}$), which have been specified in section 3.1 of this report. As per AM0009 v07.0, those parameters are subject to periodic monitoring. During the verification audit, the Verification Team witnessed that all 4 parameters are measured accordingly. In the course of the desk review and the on-site audit following observation with regard to the above mentioned parameters were made:

- The molecular gas composition is determined by extracting gas samples from a located gas sampling point. The samples are then analysed by an accredited laboratory using the appropriate SR EN ISO 17025 standard for the determination of the CO2 emission factor of the gas and the NCV.
- Volume of associated gas combusted is measured continuously by Petrom´s fiscal flowmeter SN 047/2019, volume of flared gas is measured continuously by flowmeter Scanner 2000. Data of both flowmeters is processed automatically to SCADA. Extract reports on hourly, daily and/or monthly basis can be generated upon request.
- The monthly reports are provided to Ms Zaiet and to Ms Kumcu.

For the desk review, the Verification Team was provided with all primary data on volume, NCV and emission factor of recovered gas, namely extracts from the PIMMS system on a daily basis on volume, as well as calibration certificates of the metering units.

All primary data were provided to the Verification Team in a digital form for the desk review phase of the verification process and were explicitly presented and examined in the course of

the verification audit. Assessment of data collection and processing procedure as well as data quality is subject of the following section 3.3. Nevertheless, the applied values for the aforementioned monitoring parameters have been scrutinised by the Verification Team and deem to be correctly applied for the estimation of upstream emission reductions within the final UER calculation workbook for the verification period in question and accordingly referenced in the final monitoring report.

Eventually, Verification Team attests that the upstream emission reductions realised by the project activity "G2P Gornet (Gas to power)" for the monitoring period 01.01.2022 – 31.12.2022 are calculated correctly and in accordance with the approved CDM methodology AM0009 v07.0, resulting in

$$UER_{01.01.2022-31.12.2022} = BE - PE - LE = 7{,}898{,}695{,}365\ gCO_{2,eq}$$

The ex-ante estimated UERs is 10,308 tCO_{2e}, which has been confirmed by checking the estimated value in approved PDD. Therefore, the actual UERs achieved during this monitoring period is 23.4% lower than the estimates in the validated PD. It is considered to be reasonable.

3.3 Quality of Evidence to Determine GHG Emissions, GHG Emission Reductions and GHG Removal Enhancements

As part of the verification process, TÜV Rheinland Energy GmbH assesses the sufficiency of quantity and appropriateness of quality of evidence used to determine the upstream GHG emission reductions achieved by the project activity undergoing verification.

Therefore, the Verification Team confirms that the lead partner of the G2P Gornet (Gas to power), OMV Petrom S.A., developed specific internal procedures designated for the monitoring of the upstream emission of the project, which is in line with the validated monitoring plan.

All substantiations, which have been disclosed to the Verification Team, are listed in section 2.2 of this report. The provided primary data on volume, calorific value and chemical composition of the recovered associated gas, as discussed and referenced in the previous section 3.2, cover the entire monitoring period from 01.01.2022 to 31.12.2022. Thus, Verification Team experienced no omission of evidences for the project and monitoring period in question.

For the calculation of GHG emission reductions due to the project activity during the monitoring period, the carbon consultant used only primary data for the four monitoring parameters. In order to verify this, all data used in the UER calculation workbook were tracked back to its origin at a coverage rate of 100% using the monthly reports on recovered associated gas.

In addition, Verification Team witnesses that the flow of data from its origin (metering device) to its final destination (UER calculation spreadsheet) is precisely defined within the monitoring plan. In the course of verification audit the involved parties in the monitoring process (park operator, production supervisor, UER key focal point) confirmed that they firmly follow the established and validated monitoring plan and procedures. During the site visit, it was found that the flow of data from its origin (metering device) to its final destination (PIMMS) for the data coming from the flowmeter MZ50 needs improvement. Therefore a FAR is raised. See section 2.6.

A clear assignment of key responsibilities on-site was shown and communicated to the Verification Team during site visit. The assigned personnel have the required professional experience. The same personnel as in previous reviews are still working and properly trained. It was confirmed that the training of the personnel is in accordance with the best practices.

Furthermore, the Verification Team ascertains that all parameters, subject to monitoring as per CDM methodology AM0009 v07.0, are monitored via calibrated measurement devices, which are clearly indicated within the final monitoring report. The calibration reports for the metering systems were submitted to the Verification Team for desk review. During the verification audit maintenance procedures and records on calibration were discussed. The plant manager explained that the frequency of flowmeter calibration is 2 years according to the equipment manufacturer. This statement has been verified by observation during site visit. As per the provided calibration reports, Verification Team witnessed that the latest calibrations were conducted on 04.03.2022 (SN 047/2019) and 18.10.2022 (Scanner 2000).

Hence, the Verification Team attests that the lead partner established sufficient data quality through continuous and automatic data measurement, and clearly defined data reporting and assessment procedures, where the calibration frequency of the respective measuring instruments complies with the stipulations of the manufacturer specifications and of the monitoring plan within the validated PD.

3.4 Findings and Non-Conformities

The verification team identified 5 (five) corrective action requests, 7 (seven) clarification request and one (1) forward action request. All findings (CARs & CLs) have been closed including review of revisions to the monitoring report and UER calculations, before finalising the verification.

4. Verification conclusion

The Verification Team of TÜV Rheinland Energy GmbH has performed the verification for the project "G2P Gornet (Gas to power)" against the Council Directive (EU) 2015/652 of 20 April 2015 laying down calculation methods and reporting requirements pursuant to Directive 98/70/EC (Fuel quality directive), the Austria's Fuel Decree "Kraftstoffverordnung" (KVO) and ISO 14064-3:2019, as well as criteria given to provide for consistent project operations, monitoring and reporting.

The Verification Team concluded that the project activity as described in the final Monitoring Report for the monitoring period 01.01.2022 – 31.12.2022, dated 15.06.2023, meets all relevant requirements of the above-defined regulations. All relevant information and evidence acquired during the verification process are included in the current document, i.e. Verification of Upstream Emission Reduction for G2P Gornet project for the period 01.01.2022 – 31.12.2022, with report ID **21257974** issued on 22.06.2023.

TÜV Rheinland, therefore issues a positive verification opinion, confirming that the upstream emission reductions claimed for the monitoring period 01.01.2022 – 31.12.2022 are verified to be 7,898,695,365 gCO2,eq.

5 VERIFICATION STATEMENT

OMV Petrom S.A.
Str. Coralilor nr. 22, sector 1,
Bucureşti ("Petrom City")

22.06.2023

RE: G2P Gornet (Gas to power)

Monitoring Period: 01.01.2022 – 31.12.2022

OMV Petrom S.A., with its registered office in Bucharest, Romania, has contracted TÜV Rheinland Energy GmbH to review and verify their UER Monitoring Report covering the period from 01.01.2022 to 31.12.2022 and all assertions related to the UER project against the Council Directive (EU) 2015/652 of 20 April 2015 laying down calculation methods and reporting requirements pursuant to Directive 98/70/EC (Fuel quality directive), and the Austria's Fuel Decree "Kraftstoffverordnung" (KVO).

The verification of the UER project activity was conducted in accordance to the above mentioned regulations, the standard ISO 14064-3: 2019 and the approved CDM methodology AM0009 v07.0 to a reasonable level of assurance by applying a materiality threshold of 5%. The project activity "G2P Gornet (Gas to power)" is confirmed to be carried out in accordance with the validated project documentation. The monitoring report is consistent with validated monitoring plan. The calibration frequency of the respective metering devices is demonstrated to follow the stipulations of the calculation methods and of the monitoring plan. The project information is verified and the UER Verification Report ID **21257974** "Verification of Upstream Emission Reduction for G2P Gornet project for the period 01.01.2022 – 31.12.2022" delivered on 22.06.2023, includes all relevant information and evidence acquired during the verification process.

Based on the on-site inspection conducted on 29th March 2023 and the review of all available project documentation, the Verification Team comes to the conclusion that the assertions are made in accordance with the requirements of the formerly listed regulations and standard, and are material correct and fairly represent the required parameters without material discrepancies. The Upstream Emission Reductions, claimed for the monitoring period 01.01.2022 – 31.12.2022, are verified to be 7,898,695,365 gCO2,eq

Cologne, 22.06.2023

Florencia Tamanini, TL and Verifier

Denitsa Gaydarova-Itrib, TR

APPENDIX I

Verification Protocol

based on ISO 14064 Part 2/3, the Council Directive (EU) 2015/652 of 20 April 2015 laying down calculation methods and reporting requirements pursuant to Directive 98/70/EC (Fuel quality directive) and the Guidance Note of the Council Directive (EU) 2015/652 on approaches to quantify, verify, validate, monitor and report upstream emission reductions as well as on the Austria's "Kraftstoffverordnung" (KVO) implementing the reporting requirements under the Fuel Quality Directive (FQD)

Checklist question	MoV				Initial Assessment and Comments for Draft Conclusion	Proceeding and Completion for Final Conclusion	Draft conclusion	Final conclusion
	DR	I	FA	www				
1. Implementation								
1.1 Have all physical features proposed in the validated PD been implemented at the project site?	x	x	x		Yes, Phase 1 and phase 2 has been implemented and were on-site witnessed as described in the validated PD. The physical features, such as the two gas (piston) engines, - electrical generator - HMI (Human Interface Machine) assemblies within soundproofing walls, equipped with a Cummins OSK60G gas engine and a Jenbacher J420C gas engine, including all necessary auxiliary equipment (gas skid, transformers and a command room), have been verified during FA and interviews with local experts. In September 2021 a new gas pipeline connection was established between the Gornet site and the gas treatment station in Boldesti. The pipe was put in function on 17.09.2021. During the last verification in 2022 a forward action request (FAR) was raised on how the new pipeline has to be considered in future	During FA and further interviews with PP and Petrom´s on-site personnel, it was explained that the additional gas pipeline connection to Boldesti is used to forward associated gas to the gas processing facility in Boldesti. Only volumes of associated gas exceeding the limits of the G2P plants or due to temporary unavailability (e.g. maintenance) of the G2P plants will be forwarded through the pipeline connection, which would otherwise be flared in the baseline scenario. In Boldesti, the associated gas is then processed and exported to the gas transmission grid. **CL1 is closed.** The MR v2 have been submitted (Doc. 8). Sections 2.2 and 2.3 of the newly submitted MR v2 satisfactorily explain the new situation due to the new pipeline connection.	CL1 CAR1 CAR2 CAR3	OK

Checklist question	MoV				Initial Assessment and Comments for Draft Conclusion	Proceeding and Completion for Final Conclusion	Draft conclusion	Final conclusion
	DR	I	FA	www				
					emission reduction verification and baseline and/or project scenario. Thus CL1, CL2 & CL3 were raised. **CL1:** Please clarify how the gas pipeline connection established in 2021 is considered in the project description? **CAR1:** Please adjust the appropriate sections in the monitoring report to include a detailed explanation of the new gas pipeline connection. **CAR2:** Please adjust figure 2 & 3, so that the forwarding of the associated gas to Boldesti is included. **CAR3**: Please include in the MR that no flaring is happening at Boldesti site.	**CAR1 is closed.** A corrected MR v3 has been submitted (Doc. 12). The current project scenario is correctly displayed within figure 2. A small section that no gas will be flared at Boldesti facility site was added to the MR. The changes have been positively verified. **CAR2 & CAR3 are closed.**		

Checklist question	MoV				Initial Assessment and Comments for Draft Conclusion	Proceeding and Completion for Final Conclusion	Draft conclusion	Final conclusion
	DR	I	FA	www				
1.2 Has the project activity been operated in accordance with the project scenario described in the validated PD and relevant guidance?	x	x	x		Yes, the MR indicates that the project activity operates as described in the PD. PD - item 2: The aim of the project was to recover previously flared gas and to utilize it. For this purpose, the associated gas is used as a source to generate electricity with two G2P plants. Project implementation has been validated and described in MR item 2.1 exactly like in PD. In September 2021 a new gas pipeline connection was established between the Gornet site and the gas treatment station in Boldesti. The pipe was put in function on 17.09.2021. During the last verification in 2022 a forward action request (FAR) was raised on how the new pipeline has to be considered in future emission reduction verification and baseline and/or project scenario. Thus CL1, CL2 & CL3 were raised. **CL2:** Please explain why the new gas pipeline connection established in 2021 does not change the project activity and boundary. **CL3:** Please clarify what happens to the associated gas forwarded to Boldesti and that the gas is not flared. In addition, clarify why double counting can be excluded.	During FA and further interviews with PP and Petrom´s on-site personnel, it was explained that only volumes of associated gas exceeding the limits of the G2P plants or due to temporary unavailability (e.g. maintenance) of the G2P plants will be forwarded through the pipeline connection, which would otherwise be flared in the baseline scenario. As a result, the amount of associated gas that will be flared on-site will be further reduced. It´s not a change of the project design, but an improvement to avoid flaring even further. The new gas pipeline connection is not part of the project boundary, as well as the G2P plants. It was positively verified that the G2P plants have been operated in accordance with the project scenario during the monitoring period from 01.01.2022 to 31.12.2022. **CL2 is closed.** After explanations by the Carbon Consultant and the PP and review of the submitted most recent monitoring and verification report of the UER project in Boldesti (Doc. 15 & 16), it was positively verified that neither flaring at the Boldesti facility site nor double counting of UER emissions occurs. **CL3 is closed.**	CL2 CL3	OK

Checklist question	MoV				Initial Assessment and Comments for Draft Conclusion	Proceeding and Completion for Final Conclusion	Draft conclusion	Final conclusion
	DR	I	FA	www				
1.3. Does the project activity deviates from the documents underlying the approval/validated PD?	x	x	x		Yes. After validation of the project a new Scanner has been installed to measure the gas flow to the flare stack in addition to the existing RLC meter. Also a new fiscal meter integrated into SCADA system was installed on 25.03.2020 in order to measure the total volume of gas consumption. After 18.07.2020 the gas fuel consumptions are taken from the calibrated meter, registered in PIMMS and shown on the invoices between Aggreko and Petrom (as in the validated monitoring plan). In September 2021 a new gas pipeline connection was established between the Gornet site and the gas treatment station in Boldesti. The pipe was put in function on 17.09.2021. During FA, it was verified that the gas pipeline is equipped with an additional meter (MZ50), which is index based and manually read. The gas transferred through the additional pipeline is also recovered gas that would be flared in the baseline scenario. A full description of the current measuring system is included under section 2.2 "Deviations from validated monitoring plan" of the MR.		OK	OK

Checklist question	MoV				Initial Assessment and Comments for Draft Conclusion	Proceeding and Completion for Final Conclusion	Draft conclusion	Final conclusion
	DR	I	FA	www				
1.3.1 If the project activity deviates from the documents underlying the approval, what impact the deviations may have on the level of UER?	x	x	x		With the new addition of the gas pipeline, some associated gas will now also be forwarded to the gas processing plant in Boldesti. This reduces the amount of gas flared. Only gas volumes that previously could not be used at the G2P plant due to capacity constraints or temporary unavailability (e.g. maintenance periods) are transferred to Boldesti. Thus, the amount of UER (UER = BE - PE - LE) increases because baseline emissions are defined as BE = volume of associated gas - volume of flared gas. This is not a change in the project design, which aims to recover and use associated gas that would otherwise be flared, but an improvement to further avoid flaring.		OK	OK
1.4 If the project activity is implemented on a number of different locations, has the Monitoring report provided the verifiable starting dates for each site?	x		x	x	N/A. Project activity is implemented on one location. Coordinates G2P Gornet: Latitude – 45,120032°N ; Longitude – 26,100950°E Coordinates Flare Stack: Latitude – 45,120191°N , Longitude – 26,101827°E		OK	OK

Checklist question	MoV				Initial Assessment and Comments for Draft Conclusion	Proceeding and Completion for Final Conclusion	Draft conclusion	Final conclusion
	DR	I	FA	www				
2. Monitoring methodology								
2.1 Is the monitoring plan established in accordance with the monitoring methodology?	x	x	x		Yes, the monitoring plan is established in accordance with the monitoring methodology AM0009 v07.0. During FA and interviews, it was confirmed that the monitoring plan and monitoring parameters described in section 3 & 4 of the MR ensure the appropriate obtaining recording, compiling and analysis of all relevant data for quantifying and reporting GHG emissions.		OK	OK
3. Monitoring plan								
3.1 Is the monitoring established in full compliance with the monitoring plan, contained in the validated PD (or new monitoring plan approved by the applicable standard)	x	x	x		Yes, during FA and interviews with the local operators, it was verified that the monitoring of the UERs for the period 01.01.2022 - 31.12.2022 has been performed in full compliance with the validated monitoring plan. The volume of the total recovered associated gas ($FC_{total,y}$) and the volume of associated gas flared ($F_{flare,y}$) are continuously metered, read daily and aggregated on a monthly basis. The net calorific value ($NCV_{RG,y}$) and the Emission Factor of the combusted gas ($EF_{CO2,RG,y}$) are measured monthly	A corrected MR v3 and ER calculation v3 has been submitted (Doc. 12 & 13). All parameters for associated and flared gas are correctly specified and described. The changes have been positively verified. **CL4 is closed.**	CL4	OK

Checklist question	MoV				Initial Assessment and Comments for Draft Conclusion	Proceeding and Completion for Final Conclusion	Draft conclusion	Final conclusion
	DR	I	FA	www				
					by sampling and calculated to an average value for the monitoring period. **CL4:** Please clarify why the parameter $E_{flare,y}$ is not listed in the section about monitored parameters.			
3.2 Are all **baseline emission parameters** monitored and updated in accordance with monitoring plan, monitoring methodology and relevant CDM EB decisions?	x	x	x		Yes. MR - section 5.1: All parameter relevant for the estimation of baseline emissions have been monitored as per the validated PD, in accordance to the requirements given in the CDM methodology AM0009, v07.0. **See CL4 above.** **CAR4:** Please adjust paramter Fc_y description to include volumes of recovered gas to Boldesti facility. **CAR5:** Please adjust paramter Fc_y description to include volumes of recovered gas to Boldesti facility in Formula 1 and adjust the Formula to include the subtraction of associated gas minus flared gas.	**CL4 is closed. See above.** Adjustments have been positively verified while closing CL3. **CAR4 & CAR5 are closed.**	CL4 CAR4 CAR5	OK
3.3 Are all **project emission parameters** monitored and updated in accordance with monitoring plan, monitoring methodology and relevant CDM EB decisions?	x				N/A. No project emissions occur, as the project includes no additional consumption of electricity or fossil fuels. Thus PE = 0 $tCO_{2,eq}$.		OK	OK

Checklist question	MoV				Initial Assessment and Comments for Draft Conclusion	Proceeding and Completion for Final Conclusion	Draft conclusion	Final conclusion
	DR	I	FA	www				
3.4 Are all **leakage emission parameters** monitored and updated in accordance with monitoring plan, monitoring methodology and relevant CDM EB decisions?	x				N/A. There is no transport of gas by vehicles, so leakage does not to be considered according to AM0009 v07.0. Thus LE = 0 $tCO_{2,eq}$.		OK	OK
3.4.1 Was the monitoring equipment for **baseline-, project- and leakage emission parameters** controlled and monitoring results recorded as per approved frequency?	x	x	x		Yes. MR - section 4: "Monitoring Parameters and Data Quality". The frequency of calibrations of Petrom fiscal flowmeter (SN 047/2019) and Scanner 2000 is at least 2 years according to equipment manufacturer. Data of Petrom fiscal flowmeter feeds directly into PIMMS (production Information Management & Monitoring System), while data of Scanner 2000 is daily read and manually entered into PIMMS. During FA, the monitoring equipment and recorded results have been verified and proven to be in accordance with the approved frequency.		OK	OK

Checklist question	MoV				Initial Assessment and Comments for Draft Conclusion	Proceeding and Completion for Final Conclusion	Draft conclusion	Final conclusion
	DR	I	FA	www				
3.5 Was the monitoring equipment for baseline-, project- and leakage emission parameters calibrated in accordance with QA&QC procedures described in the validated monitoring plan?	x	x	x		Yes. MR - section 4: "Monitoring Parameters and Data Quality". The two flowmeters from Aggreko were calibrated during commissioning phases. The MZ50 flowmeter was calibrated and installed in 2021. The Petrom Fiscal Meter (SN 047/2019) and Scanner 2000 meter are used to monitor baseline emissions. Both meters are properly calibrated at least every two years. The calibration reports and service reports for SN 047/2019 and Scanner 2000 have been submitted and proven to be correct (Doc. 4 & 5).		OK	OK

Checklist question	MoV				Initial Assessment and Comments for Draft Conclusion	Proceeding and Completion for Final Conclusion	Draft conclusion	Final conclusion
	DR	I	FA	www				
3.6 Were all monitoring parameters available and verifiable through the whole monitoring period?	x		x		Yes, all data required for the calculation of the baseline emissions were available. The SCADA values for total gas production are cross checked daily with the data from two simple RLC meters (located upstream of the main meter). Additionally, the data from the Aggreko meters and the MZ50 flowmeter can be used together with the data from Scanner 2000 to crosscheck data from the Petrom fiscal flowmeter and as a fallback option in case of failure of the main meter. During FA, it was found that SCADA values on 22 days in 2022 were not plausible and incorrect. As well as in the period from 11/04/2022 to 25/04/2022 no reliable data was available due to wrong meter readings. **CL5:** Please clarify the reasons for the incorrect SCADA values for the 22 days in 2022. **CL6**: Please explain the causes of the incorrect meter readings in April.	The reasons for the incorrect SCADA values for the 22 days in 2022 were adequately explained by PP. In support, the document "PV service Park 98 Gornet was submitted (Doc. 14) and positively verified. **CL5 is closed.** The reasons for the incorrect meter readings in April 2022 were sufficiently explained by PP. The data within the affected period were excluded in the consideration of the UERs. This approach is conservative and has been positively verified. **CL6 is closed.**	CL5 CL6	OK
3.6.1 In case, only partial monitoring data is available and PP(s) provide estimations or assumptions for the rest of data, was it possible to verify those	x	x	x		No estimates or assumptions were made. During FA and interviews with PP and on-site personnel it was decided that in the case of the SCADA values for the 22 days in 2022, the meter data from Aggreko are used solely as a fallback option, since no gas volume was transferred to Boldesti during the period in		OK	OK

Checklist question	MoV				Initial Assessment and Comments for Draft Conclusion	Proceeding and Completion for Final Conclusion	Draft conclusion	Final conclusion
	DR	I	FA	www				
estimations and assumptions?					question. For the period from 11/04/2022 to 25/04/2022, it was decided that to be conservative, no emission reductions would be claimed for this period.			
3.7 Was management and operation system established and operated in accordance with the monitoring plan?	x	x	x		The monitoring procedures, as given in the validated PD and latest MR, have been followed by Petrom´s personnel: The associated gas production is measured continuously using the flowmeter SN 07/2019, which feeds directly into PIMMS. The data is double-checked with data from simple RLC meters located before the flowmeter. The volume of associated gas is also measured continuously using flowmeter Scanner 2000. The data of the flowmeter is daily read by the plant operator and manually entered into PIMMS. PIMMS data is then transferred and used for UER calculations by the UER Monitoring responsible. All monitoring parameters have been measured and recorded, and the data processed, checked and transferred in the UER calculation files as described in the validated Monitoring plan. The training topic was discussed during FA with the operators on-site and it was positively verified that there were regular training sessions on-site and well documented. The interviews with the UER Key Focal Point and UER monitoring responsible confirmed that		FAR1	OK

Checklist question	MoV				Initial Assessment and Comments for Draft Conclusion	Proceeding and Completion for Final Conclusion	Draft conclusion	Final conclusion
	DR	I	FA	www				
					the roles and responsibilities for daily operations are in line with the monitoring plan. During the FA and on-site staff interviews, it was observed that the logbook used to record readings and subsequently transfer them to the PIMMS system had room for improvement. Gaps and transfer errors to PIMMS system were discovered in the records for manual reading of data from the MZ50 meter located at the gas pipeline connection to Boldesti. The MZ50 data do not directly affect the baseline emissions data quality, but may be used as back-up data to create substitute values in an emergency. **Therefore a FAR1 for the next verification has been issued.**			
4. Parameters								
4.1 Monitored Parameter 1 *Title: Volume of total recovered gas in the Gornet facility in the monitoring period y* *Indication:* $F_{total,y}$ *Unit:* Sm^3 *Estimated value: N/A*	x	x	x		$F_{total,y}$ is measured continuously via PETROM´s fiscal flowmeter (SN 047/2019). Data from the flowmeter feeds directly into PIMMS system, is then verified and double-checked with data from simple RLC meters before the meter. The volumes measured can also be double-checked with the volumes of the Aggreko meters located inside the Aggreko G2P facilities added with the volume of the flowmeter		OK	OK

Checklist question	MoV				Initial Assessment and Comments for Draft Conclusion	Proceeding and Completion for Final Conclusion	Draft conclusion	Final conclusion
	DR	I	FA	www				
Measured value: 3,623,051 Sm³					MZ50 located at the gas pipeline to Bodesti minus the flared volumes of the flowmeter Scanner 2000.			
4.1 Monitored Parameter 2 Title: Volume of associated gas flared in the monitoring period y Indication: $F_{flare,y}$ Unit: Sm³ Estimated value: N/A Measured value: 54,800 Sm³					$F_{flare,y}$ is measured continuously with Scanner 2000. The gas containing methane that remains unburnt is calculated using an assumed conservative flare efficiency for open flare of 75% = 892,063 Sm3. It has been demonstrated that even with a delayed ignition at times, project emissions from the unburnt share of the associated gas are still significantly lower than in the baseline scenario and therefore conservative.		OK	OK
4.1 Monitored Parameter 3 *Title: Average net calorific value of the fuel gas (recovered gas) in the monitoring period y* *Indication: $NCV_{RG,y}$* *Unit: TJ / Sm³* *Estimated value: 3.91 x 10^{-5} TJ / Sm³* *Measured value: 3.89 x 10^{-5} TJ / Sm³ (average)*	x	x	x		$NCV_{RG,y}$ is calculated by PP based on the chemical analysis reports of associated gas by third party laboratory which comes from on-site sampling by accredited laboratory and gas chromatography analysis. The Institute of Research and Technological Design (ICPT) Campina is an ISO 17025 accredited laboratory for the determination of the natural gas composition and calculation of calorific value by gas chromatography. **CL7:** Please provide gas Laboratory accreditation.	The accreditation from ICPT which is valid until 31.03.2026 has been submitted (Doc. 7). **CL7 is closed.**	CL7	OK

Checklist question	MoV				Initial Assessment and Comments for Draft Conclusion	Proceeding and Completion for Final Conclusion	Draft conclusion	Final conclusion
	DR	I	FA	www				
4.1 Monitored Parameter 4 *Title: Average CO2 emission factor of the fuel gas (recovered gas) in the monitoring period y* *Indication:* $EF_{CO2,RG,y}$ *Unit: t CO_2 / TJ* *Estimated value 57.02 t CO2 / TJ* *Measured value: 56.94 t CO2 / TJ*	x	x	x		$EF_{CO2,RG,y}$ is calculated by PP based on the chemical analysis reports of associated gas by third party laboratory which comes from on-site sampling by accredited laboratory and gas chromatography analysis. The Institute of Research and Technological Design (ICPT) Campina is an ISO 17025 accredited laboratory for the determination of the natural gas composition and calculation of calorific value by gas chromatography. **Also CL7. See above.**	**CL7 is closed. See above.**	CL7	OK
5. Calculations								
5.1 Have all the calculations related to the baseline emissions been carried out according to the formula and methods described in the validated PD and applied methodology?	x	x	x		Yes. The baseline emissions in MR version 1.0 and ER spreadsheet version 1.0 have been calculated on a monthly base as the product of monthly volume, NCV and EF_{CO2} of recovered gas. The Baseline emissions have been quantified as per validated PD and in line with the applied CDM methodology AM0009 v07.0. The UER have been determined as the difference between the baseline emissions and the project emissions and leakage emissions. In the case of the project activity: UER = BE - 0 - 0.		OK	OK

Checklist question	MoV				Initial Assessment and Comments for Draft Conclusion	Proceeding and Completion for Final Conclusion	Draft conclusion	Final conclusion
	DR	I	FA	www				
5.2 Have all the calculations related to the project emissions been carried according to the formulae and methods described in the validated PD and applied methodology?	x				Not relevant, no project emission parameters are considered as the project includes no additional consumption of electricity or fossil fuels in accordance with the validated PDD.	N/A	OK	OK
5.3 Have all the calculations related to the leakage emissions been carried according to the formulae and methods described in the validated PD and applied methodology?	x				Not relevant, no leakage emission parameters are considered in accordance with the validated PDD.	N/A	OK	OK

APPENDIX II

List of correction action requests (CARs) and clarification requests (CLs)

CAR/CL/FAR	Observation	Reference	Summary of project owner response	TÜV Comment
CL1	Please clarify how the gas pipeline connection established in 2021 is considered in the project description?	MR_G2P-Gornet_2022_v1_20230233	During FA and further interview with PP and Petrom´s on-site personnel, it was explained that the additional gas pipeline connection to Boldesti is used to forward associated gas to the gas processing facility in Boldesti. Only volumes of associated gas exceeding the limits of the G2P plants or due to temporary unavailability (e.g. maintenance) of the G2P plants will be forwarded through the pipeline connection, which would otherwise be flared in the baseline scenario. In Boldesti, the associated gas is then processed and exported to the gas transmission grid.	The explanations of PP and on-site personnel on how the gas pipeline connection established in 2021 is considered in the project description were comprehensible and could be positively verified during FA. **CL1 is closed.**
CL2	Please explain why the new gas pipeline connection established in 2021 does not change the project activity and boundary.	MR_G2P-Gornet_2022_v1_20230233	During FA and further interview with PP and Petrom´s on-site personnel, it was explained that only volumes of associated gas exceeding the limits of the G2P plants or due to temporary unavailability (e.g. maintenance) of the G2P plants will be forwarded through the pipeline connection, which would otherwise be flared in the baseline scenario. As a result, the amount of associated gas that will be flared on-site will be further reduced. It´s not a change of the project design, but an improvement to avoid flaring even further.	After FA and explanations by the PP and Petrom´s on-site personnel it was positively verified that the G2P plant has been operated in accordance with the project scenario during the monitoring period from 01.01.2022 to 31.12.2022. **CL2 is closed.**

CAR/CL/FAR	Observation	Reference	Summary of project owner response	TÜV Comment
CL3	Please clarify what happens to the associated gas forwarded to Boldesti and that the gas is not flared. In addition, clarify why double counting can be excluded.	FAR from Verification Report, Version 1.0 dated 07.07.2022	Boldesti is a compressor station and gas processing facility, which treats the local gas before it is exported to the gas network. Besides the compressors the main feature of the facility is the extraction of liquids. There is no flaring in Boldesti. The facility in Boldesti is also location of another UER project. This is not related to the activities in Gornet and there is no double counting. The aim of the Boldesti project is not flare avoidanvce, but it is an energy efficiency project. The old equipment for extraction of liquids ("Dezbenzinare" powered by steam) was replaced by a modern system of Low Temperature Separation ("LTS"). The emission reductions are generated by now using low-emission electricity for the process which was previously done by hot temperature from steam produced on site with high CO2 emissions. The volume of gas processed in Boldesti in the year 2022 was 65,999,106 Sm3. The volume transferred from Gornet to Boldesti in 2022 was 148,878 Sm^3. This is a little less than 0.23%. The gas volume coming from Gornet therefore has no impact on productivity or efficiency of the Boldesti facility.	After explanations by the Carbon Consultant and the PP and review of the submitted monitoring and verification report of the UER project in Boldesti (Doc. 15 & 16), it was positively verified that neither flaring at the Boldesti facility site nor double counting of UER emissions occurs. **CL3 is closed.**

CAR/CL/FAR	Observation	Reference	Summary of project owner response	TÜV Comment
CL4	Please clarify why the parameter $E_{flare,y}$ is not listed in the section about monitored parameters.	MR_G2P-Gornet_2022_v2_20230524	The table with the description of the parameter $F_{flare,y}$ had been included in version 1 of the MR 2022. It was deleted in version 2 because the description of the metering concept has been modified in the table describing parameter FC_y. For more clarity now in version 3 the parameters have again been split up. For the description of monitoring parameters FC_y has been changed to $F_{total,y}$. The new formula $FC_y = F_{total,y} - F_{flare,y}$ has been introduced in the monitoring system.	A corrected MR v3 and ER calculation v3 has been submitted (Doc. 12 & 13). All parameters for associated and flared gas are correctly specified and described. The changes have been positively verified. **CL4 is closed.**
CL5	Please clarify the reasons for the incorrect SCADA values for the 22 days in 2022.	MR_G2P-Gornet_2022_v2_20230525 - Chapter 2.2	Following the verification of the two FARSYS measuring systems, the operating history with events and alarms was downloaded and analyzed, and periods of time with lack of metering due to interruption of communication between the flow computer and the differential pressure transducer were observed. These communication errors occur when electrical grounding and powering digital equipment are common with electric motors, in our case with the two generators. In these situations, parasitic currents occur that overlap and affect the HART communication between the flow computer and the transducer. We mention that the electrical supply for the two measuring systems is made from the same 24/12Vcc converter (located in the SCADA enclosure) and it is recommended that each measuring system has its own converter. (see PV service Park 98 Gornet)	The reasons for the incorrect SCADA values for the 22 days in 2022 were adequately explained by PP. In support, the document "PV service Park 98 Gornet was submitted (Doc. 14) and positively verified. **CL5 is closed.**

CAR/CL/FAR	Observation	Reference	Summary of project owner response	TÜV Comment
CL6	Please explain the causes of the incorrect meter readings in April.	MR_G2P-Gornet_2022_v2_20230525 - Chapter 2.2	During this period (11.04 – 25.04.2022) generator no. 2 was stopped and therefore the surplus gas produced was sent to SC 54 Boldesti. Due to the same reasons as mentioned above under CL 5, the SCADA system delivered erroneous data in this period. It was therefore decided to enter manual readings into PIMMS. However, the data entered for the PIMMS value "Total Gaz" included only the data read from the meter for G2P Phase 1. The volume of gas transferred to Boldesti was not manually added as it should have been. This leads to the situation where data in the PIMMS is not correct for this period. In order to be conservative, the period 11-25/04/2022 is excluded from the calculations of emission reductions.	The reasons for the incorrect meter readings in April 2022 were sufficiently explained by PP. The data within the affected period were excluded in the consideration of the UERs. This approach is conservative and has been positively verified. **CL6 is closed.**
CL7	Please provide gas Laboratory accreditation.		The accreditation has been provided.	The accreditation from ICPT Laboratory which is valid until 31.03.2026 has been submitted (Doc. 7). **CL7 is closed.**
CAR1	Please adjust the appropriate sections in the monitoring report to include a detailed explanation of the new gas pipeline connection.	MR_G2P-Gornet_2022_v1_20230233	Requested adjustments to the MR v1 has been done. A detailed explanation of the new gas pipeline connection can be found in section 2.2 & 2.3 of the new MR v2.	A new MR v2 has been submitted on 25.05.2023. The project situation with the new gas pipeline connection was sufficiently explained and positively verified in the new MR v2. **CAR1 is closed.**

CAR/CL/FAR	Observation	Reference	Summary of project owner response	TÜV Comment
CAR2	Please adjust figure 2 & 3, so that the forwarding of the associated gas to Boldesti is included.	MR_G2P-Gornet_2022_v2_20230525 - Chapter 2.1 & 2.2	The figures have been adjusted in MR v3, chapter 2.1	A corrected MR v3 has been submitted (Doc. 12). The current project scenario is correctly displayed within figure 2. The change has been positively verified. **CAR2 is closed.**
CAR3	Please include that no flaring is happening at Boldesti site.	MR_G2P-Gornet_2022_v2_20230525 - Chapter 2.3	Chapter 2.3 has been updated in MR v3	A corrected MR v3 has been submitted (Doc. 12). A small section that no gas will be flared at Boldesti facility site was added and positively verified. **CAR3 is closed.**
CAR4	Please adjust paramter Fc_y description to include volumes of recovered gas to Boldesti facility.	MR_G2P-Gornet_2022_v2_20230525 - Chapter 4	This has been adjusted in MR v3. See also the response to CL 3	Adjustments have been positively verified while closing CL3. **CAR4 is closed.**
CAR5	Please adjust paramter Fc_y description to include volumes of recovered gas to Boldesti facility in Formula 1 and adjust the Formula to include the subtraction of associated gas minus flared gas.	MR_G2P-Gornet_2022_v2_20230525 - Chapter 5.1	This has been adjusted in MR v3. See also the response to CL 3	Adjustments have been positively verified while closing CL3. **CAR5 is closed.**
FAR from previous verification	The new gas pipeline connected on 17.09.2021 has to be considered in future emission reduction verifications and baseline and/or project scenario might require new evaluation.	Verification Report, Version 1.0 dated 07.07.2022	During FA and interviews with PP and on-site personnel, it was shown that the addition of the new gas pipeline to the gas treatment station in Boldesti does not change the project design, and is an improvement to avoid flaring even further. Gas volumes that before could not be used in the G2P facility due to capacity restrictions or temporary unavailability (eg. maintenance times), which would otherwise been flared, are now being transferred to the nearby gas processing facility in Boldesti.	A full description of the current measuring system was included under section 2.2 "Deviations from validated monitoring plan" of the latest Monitoring Report v3 (Doc. 12). Also see CL1, CL2 & CL3. **FAR from previous verification is closed.**

CAR/CL/FAR	Observation	Reference	Summary of project owner response	TÜV Comment
FAR 1	During the on-site visit and interviews with staff on-site, it was noted that the logbook used to record readings and subsequently transfer them to the PIMMS system had some gaps and desirable quality. Gaps and transfer errors to PIMMS system were discovered in the records for manual reading of data from the MZ50 meter located at the gas pipeline connection to Boldesti. The MZ50 data do not directly affect the baseline emissions data quality, but may be used as back-up data to create substitute values in an emergency. Therefore, it is recommended that, until the next review, appropriate work instructions regarding the manual reading process of the flowmeters and the subsequent transfer to PIMMS be established to ensure correct data collection and transfer in the future.	N/A	N/A	To be considered in the next verification process.