ROMGAZ

DECARBONISATION STRATEGY

CONTENTS

About the Project

- According to the European Green Deal and the European Climate Law, the EU aims to become climate neutral by 2050.
- Thus, the key EU legislative initiatives bring about significant changes for the energy sector. These include changes in the EU Emissions Trade System (ETS), the Renewable Energy Directive, the Energy Efficiency Directive and the Energy Performance Directive – all developed with the aim to decarbonize the natural gas sector.
- Regulations have been introduced that accelerate the use of renewable energy in the energy mix.
- ROMGAZ Group plays a strategic role in Romania's economy, being the main natural gas producer and a guarantor of the national energy security. The Company constantly invests in the development of energy infrastructure and is involved in major projects such as Neptun Deep.
- The main shareholder is the Romanian State, with a 70% stake. ROMGAZ also has a significant impact on the capital market, being one of the most valuable companies listed on the Bucharest Stock Exchange.
- The European Bank for Reconstruction and Development has supported ROMGAZ Group in developing a decarbonisation strategy aligned with the Paris Agreement, as well as with national and international commitments on climate change.
- KPMG Advisory was contracted by the EBRD to provide technical assistance in ROMGAZ energy transition process by developing a decarbonisation strategy, based on consulting services contract No. 2024.010523 of May 2024.

01

CONTEXT OF DEVELOPING THE DECARBONISATION STRATEGY

General Context

Natural gas is the second most important primary energy resource in euro area, after petroleum-based products.

It is the main source of energy consumed in the industrial sector, as well as for the provision of services (others than transport) and households.

Natura gas is also the key marginal energy source in electricity production, due to the flexibility of gas power plants and the overall gas infrastructure, as well as its ability to respond to fluctuations in electricity demand.

The transition to renewable sources – characterized by a variable production capacity - has increased dependence on natural gas as a balancing solution for the energy system.

In this context, assessing the role of natural gas in the EU's energy future must take into account a number of interdependent factors: geopolitics, technological developments, climate change, European and regional policies, and energy security issues.

Although gas demand and prices have been affected by numerous challenges in recent years, this resource remains essential in the medium term to support the transition process towards a low-carbon economy, in compliance with the EU's climate targets.

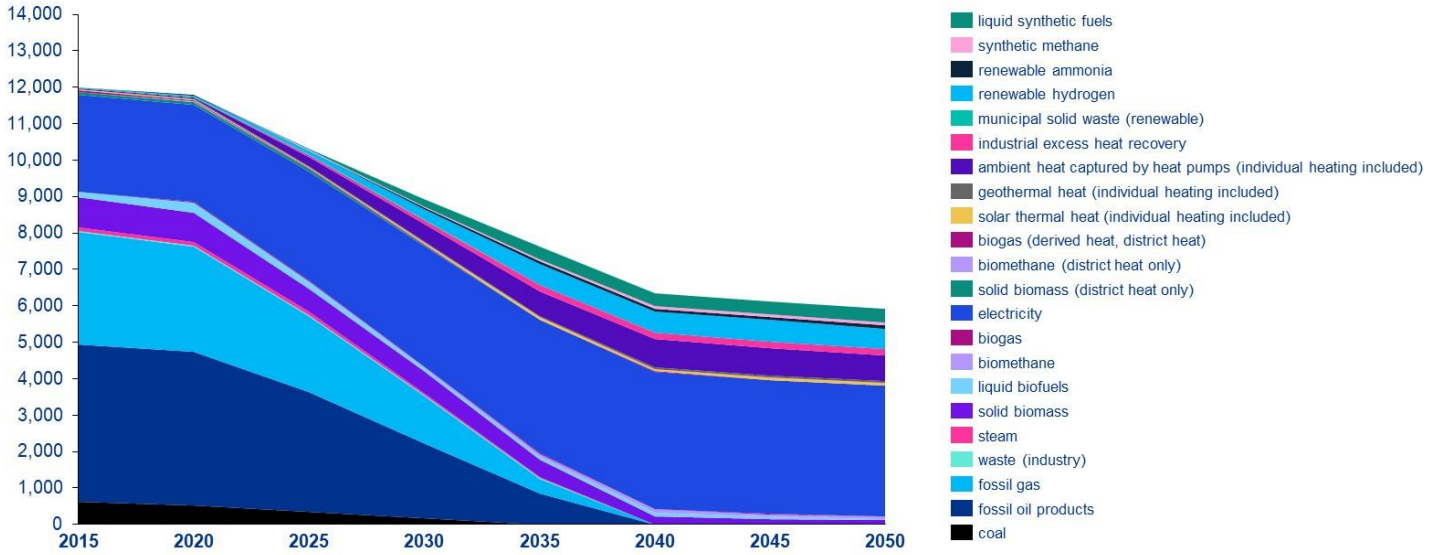
European Context - Legislative Pressure

The European legislation is influenced by the Paris Agreement.

Therefore, in order to achieve the target of limiting global temperature increase by no more than 1.5°C, the EU should significantly reduce greenhouse gas emissions (GHG) from the combustion of natural gas by 2035.

As part of the Fit for 55 package, the European Commission expects a reduction by 32–37% in natural gas use by 2030 as compared to 2015 levels. By 2050, this reduction is estimated to reach 96% (see graph).

Projected changes in fuel types use in the EU by 2050 (TWh) indicate a decline for natural gas



Source: European Climate Action Network (2021) – Scenarios compatible with the Paris Agreement on energy infrastructure

European Context – Legislative Pressure

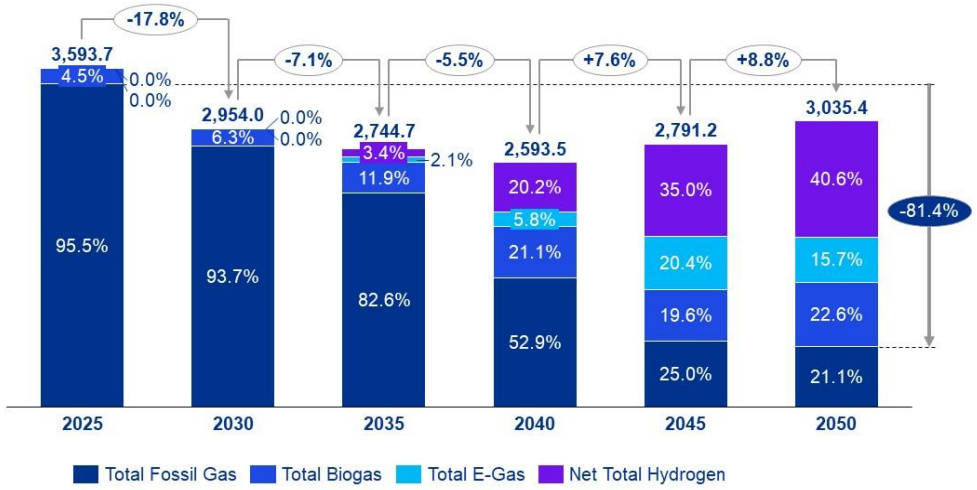
EU Policies operating the Paris Agreement and influencing the gas sector

- The "European Green Deal" legislative Package defines the EU's decarbonization targets for the 2030 and 2050 horizons, placing hydrogen among the most important emerging technologies for EU's decarbonization.
- The RePowerEU Plan – an initiative aimed at gradually reducing the dependence of EU member states on hydrocarbon imports from Russia, by diversifying supply routes, developing the hydrogen market, accelerating the development rhythm of renewable energy sources, improving the interconnection of European gas and electricity networks, strengthening security of supply planning, and increasing energy efficiency. The main source of funding for RePowerEU is the Recovery and Resilience Facility (RRF).
- „A strategy for hydrogen: for a climate neutral Europe" – does not constitute a mandatory legal document, but it represents a valuable source of information for the future development of a legislative framework and regulatory of the European Union in the hydrogen.
- The Net-Zero Industry Act NZIA – sets out obligations for EU member states and industry to achieve climate neutrality targets by 2050. This Regulation requires the development of key technologies, including carbon capture and storage (CSS), to enable the deep decarbonisation of the energy and industrial sectors.
- Regulation (EU) 2024/1787 on the reduction of methane emissions – sets out a framework for monitoring, reporting and reducing methane emission in the energy sector.
- Competitiveness Compass – a new roadmap for revitalizing Europe and stimulating economic growth. It aims to respond to challenges posed by the USA and China, by focusing on innovation, decarbonisation and security, simplifying regulations and encouraging investment. As concerns decarbonisation the target is to achieve climate neutrality by 2050.
- Decarbonisation actions and sustainability reporting are closely linked, as the requirements introduced by the Corporate Sustainability Reporting Directive (CSRD) and ESRS E1 – Climate change Standard are directly related to the transition towards a low-carbon economy.

European Context – Other Types of Pressure

- The European Union's requirements on energy security, in the context of its climate neutrality ambitions, require a complex balance.
- Despite considerable efforts to reduce consumption, in 2023 the EU's dependence rate on natural gas import was still close to 90% (with regard to a total demand of 3,530 TWh).
- In the context of market forces and regulations previously mentioned, which shape the energy sector, it is essential to take into account the inevitable effects of implementing the European Green Deal. It requires a gradual phasing-out of natural gas use in all member states, which creates an immediate need for ROMGAZ to adopt certain clean alternatives.
- Among the options that can ensure compliance with environment requirements and business sustainability, three alternatives have the potential to replace natural gas in the long-term transition of the energy sector: **hydrogen, biogas and synthetic gas**. A projection of the anticipated contribution of gaseous fuels to Europe's energy composition by 2050 is presented in the attached chart.

Projections of total consumption of gaseous fuels in 2025 (TWh) show an increase for alternative fuels



Note: Values are expressed in TWh (converted from Mtoe using the following report: 1 Mtoe = 11.63 TWh)

Source: European Commission, Commission Staff Working Document, Impact Assessment Report, accompanying the Proposal for a Directive of the European Parliament and of the Council on common rules for the internal markets for natural gas, renewable gas and hydrogen (recast) – Official website of the European Union, analyzed by KPMG

Local Context- Legislative Pressures

The regulatory framework in Romania reflects European trends.

- The Integrated National Energy and Climate Change Plan (*Planul Național Integrat în domeniul Energiei și Schimbărilor Climatice* - PNIESC) 2021-2030 defines the national targets for reducing emissions, integrating renewable energy and improving energy efficiency, establishing natural gas as a transition source but also supporting the extensive integration of renewable gas and hydrogen.
- Romania's long-term decarbonisation strategy sets a net-zero target by 2050, aiming for a reduction of 99% of GHG emissions as compared to 1990 levels. The strategy underlines the transition of key sectors, including electricity production and heating, from fossil natural gas to renewable gas and hydrogen, and presents carbon capture and storage (CCS) technologies as playing a key role in the offsetting emissions from hard-to decarbonize sectors.
- GEO No. 108 of June 30, 2022 on decarbonisation of energy sector sets the necessary framework for the gradual phase-out of coil power plants, with natural gas as transition technology, which will lead to increased dependence on natural gas in the short and medium term.
- Romania's Energy Strategy 2025 – 2035 with a view to 2050 focuses on achieving energy security, sustainability and decarbonisation by 2030.
- The National Recovery and Resilience Plan (NRRP) includes important funding mechanisms dedicated to decarbonisation, renewable energy and green gas development, with EUR 28.5 billion allocated for the green and digital transition, including renewable energy, CCS, hydrogen and renewable gas technologies projects.
- The National Hydrogen Strategy 2023-2030 aims to develop a hydrogen-based economy to decarbonize hard-to-electrify sectors, strengthen energy security and integrate renewable energy. The main targets include reducing 2.9 million tons of CO_2 annually by 2030, producing 282,000 tonnes of green hydrogen and establishing five hydrogen hubs.
- Law No. 237/2023 on the integration of renewable and low-carbon hydrogen in the industrial and transport sectors includes provisions on the mandatory integration of renewable hydrogen in industrial processes and transport, while also establishing the obligation for natural gas suppliers to facilitate hydrogen mixing and to support hydrogen-compatible infrastructure.

How Energy Companies Respond to Legislative Pressures

- If we analyze the decarbonisation strategies of companies similar to ROMGAZ, we can see that natural gas producers have set ambitious targets to achieve carbon neutrality by 2050 and significantly reduce methane emissions.
- Their strategies take into account the long-term effects and recognize the need to adopt sustainable methods. It is also clear that these companies have diversified their energy portfolios, already investing in renewable sources, hydrogen and carbon capture and storage (CCS) technologies.

List of European natural gas producers		Source of information –2023 Sustainability Report/Integrated Report							
Name	**Country**	Sustainability Strategy	Net Zero by 2050	Limited Foreign Insurance	Alignment with Paris Green Deal	Alignment with GRI Standards	Alignment with SASB Standards	Risk Analysis based on TCFD	Just Transition Plan/low-carbon emissions
BP	UK	✓	✓	✓	✓	✓	✓	✓	✓
Eni	Italy	✓	✓	✓	✓	✓	✓	✓	✓
Equinor	Norway	✓	✓	✓	✓	✓	✓	✓	✓
Mol Group	Hungary	✓	✓	✓	✗	✓	✓	✓	✗
OMV	Austria	✓	✓	✓	✓	✓	✓	✓	✓
Orlen SA	Polond	✓	✓	✓	✗	✓	✗	✓	✓
Repsol	Spain	✓	✓	✓	✓	✓	✓	✓	✓
ROMGAZ	Romania	✓	✓	✗	✗	✓	✗	✗	✓

ROMGAZ and „NetZeRomGaz”

The business strategy formulated in 2021 proposed achieving climate neutrality by 2050, with intermediate target to reduce CO_2 emissions from Scope 1 and 2 by approximately 72% by 2030, as compared to 2023 levels.

The associated investment plan proposed for 2025 – 2050 was of approximately EUR 113 million.

Comparing the proposed strategic targets, with the requirements of the Paris Agreement, gaps were identified.

The Emissions Gap is a serious transition risk which can lead to increased carbon costs, lower investor confidence and the risk of non-compliance.

At the same time, the analysis of decarbonisation strategies for similar companies has shown that all natural gas producers aim at carbon neutrality by 2050 and significant reductions in methane emissions. The companies analyzed are rapidly diversifying their energy portfolio, by investing in renewable sources, hydrogen and carbon capture and storage technologies. The concept of the circular economy is integrated into some strategies, aiming to reduce waste and extend the life of resources.

Therefore, recent European and local regulations, as well as the broader context, have required a review of this plan and the alignment of the strategy with climate scenarios.

NetZeRomGAZ vs Similar Companies

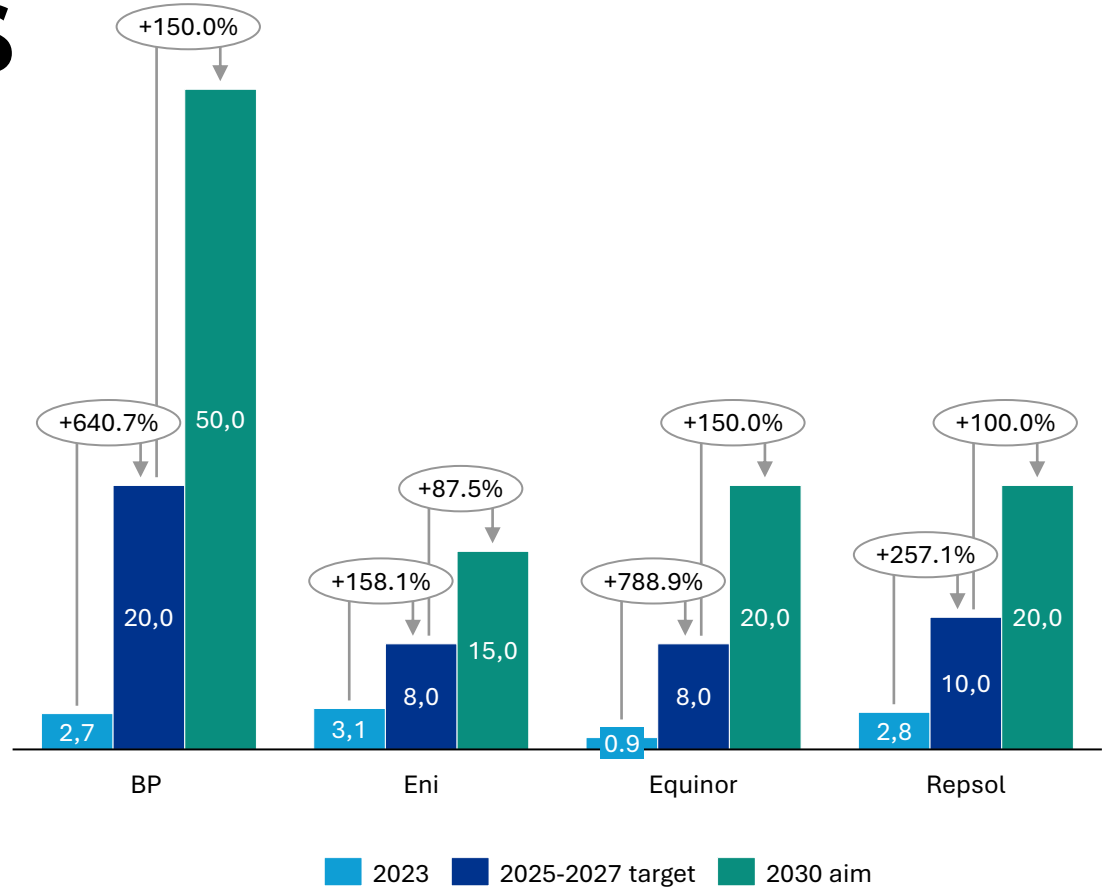
ROMGAZ European counterparts are already implementing transition projects, focusing on electrification, renewable energy, waste management, hydrogen production, and carbon capture.

These efforts reflect a shared commitment to sustainable practices, positioning these companies at the forefront of the energy transition.

All of the companies analyzed have installed and expanded their renewable energy production capacities.

Examples:

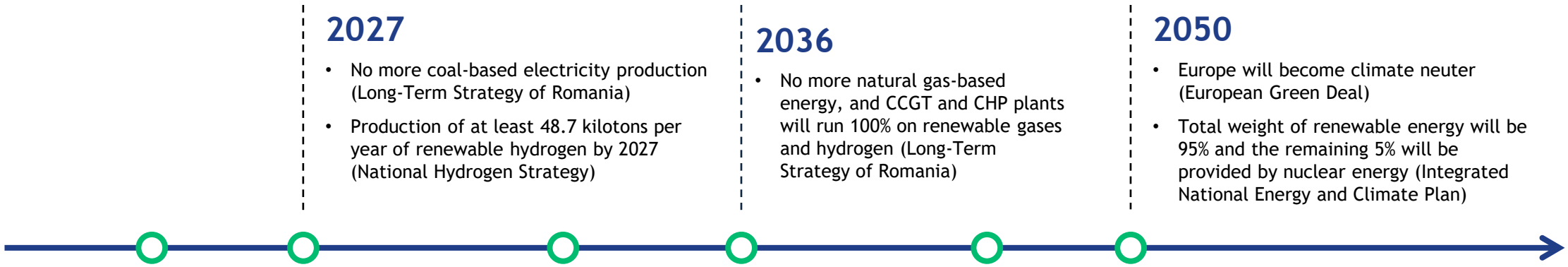
- Orlen (Poland) – aims to reach a 9 GW of renewable capacity by 2030.
- Repsol (Spain) – aims at a 9-10 GW portfolio by 2027, with a strategic structure consisting of 45% solar power, 50% solar power and 5% hydropower.



Renewable energy targets, GW

Benchmarks for the Review of ROMGAZ Decarbonisation Strategy

Based on EU regulations and requirements and considering the developments of other players in the market, ROMGAZ climate targets should be reviewed to take into account the chronology below



2024

- Establishing new CCGT capacities totaling 430 MW (Long-Term Strategy of Romania)

2027

- No more coal-based electricity production (Long-Term Strategy of Romania)
- Production of at least 48.7 kilotons per year of renewable hydrogen by 2027 (National Hydrogen Strategy)

2030

- Reducing GHG emissions by 78% by 2030 as compared to 1990 levels
- Achieving a 55.8% share of renewable energy in the electricity production sector
- Reducing final energy consumption by 45% by 2030 (Integrated National Energy and Climate Change Plan)

2036

- No more natural gas-based energy, and CCGT and CHP plants will run 100% on renewable gases and hydrogen (Long-Term Strategy of Romania)

2040

Transition to 100% hydrogen use in certain segments of the network (The Development Plan for the National Gas Transmission System for 2024 - 2033)

2050

- Europe will become climate neuter (European Green Deal)
- Total weight of renewable energy will be 95% and the remaining 5% will be provided by nuclear energy (Integrated National Energy and Climate Plan)

2030 Vision (1/3)

As part of ROMGAZ long-term vision for sustainability, the company established climate targets to significantly reduce the impact on the environment:

- **Scope 1 and 2 Emissions:** ROMGAZ aims to achieve a 6% reduction by 2030, using 2023 as reference year. In line with the legislative requirements (EU Regulation 2024/1787), all future investments in exploration and production activities will include only zero-emission technologies and equipment (no atmospheric emissions).
- **Scope 3 Emissions:** By admitting that Scope 3 Emissions are mainly generated by the wider energy system, ROMGAZ has not established a reduction target, but by 2030 it will focus on improving data quality and working with stakeholders to reduce emissions along the value chain.

2030 Vision(2/3)

Capital allocation for the transition towards low-carbon emissions carbon

Achieving emission reduction by 2030 requires a change in ROMGAZ investment strategy.

Between 2025–2030, ROMGAZ will allocate approximately EUR 45.5 million of its total capital expenditure (CAPEX) for low-carbon emissions and climate resilient investments. These include:

- Investment in emission reduction technologies, such as methane leak reduction initiatives.
- Upgrading and improving the wells' integrity to minimize emissions associated with natural gas production.
- Developing cleaner energy technologies, such as renewable energy sources.
- Investments in energy efficiency for building and equipment, as well as operational efficiency.

2030 Vision (3/3)

Financial Framework and Risk Management: ROMGAZ undertakes to maintain financial resilience while supporting the energy transition. The strategic approach of the company will focus on prudent financial discipline, in order to maintain a solid financial position.

The average annual CAPEX of EUR 9 million over the period 2025–2030 will ensure continuous investments both in energy security and in decarbonisation. The proposed projects target energy and operational efficiency, reduction of methane leakage, fleet greening.

The company will have rigorous climate risk management, ensuring the integration of physical and transition risks into decision-making processes and governance structures. The company's strategy is designed to be flexible, allowing the investment schedule to be adjusted according to market and regulatory developments.

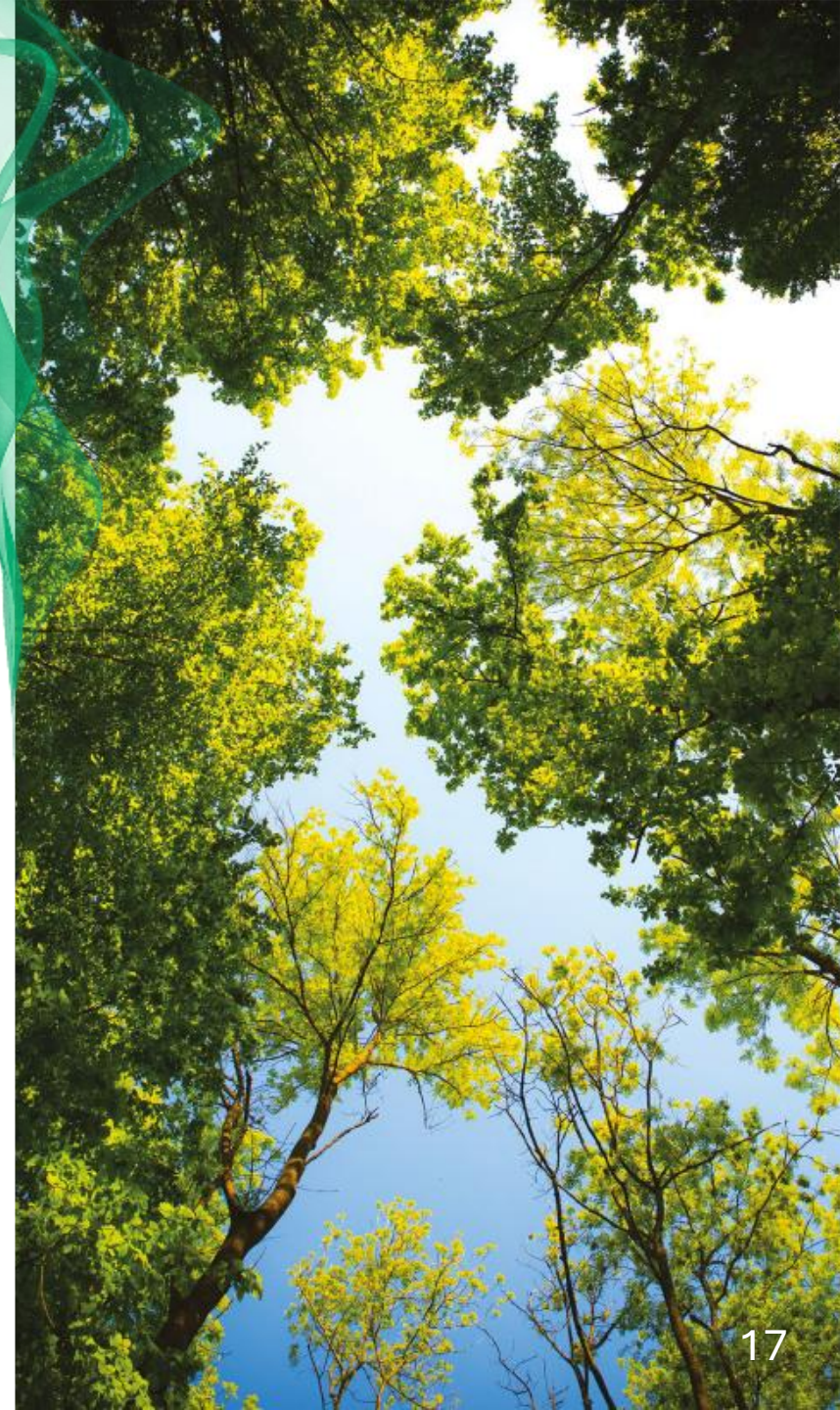
By aligning these financial principles with the EU Taxonomy and the requirements of the CSRD Directive, ROMGAZ strengthens its resilience to future climate risks, while maximizing the long-term value creation for shareholders.

2050 Vision (1/2)

As the global energy sector undergoes a profound transformation to respond to the climate crisis, ROMGAZ finds itself at a crucial juncture, facing major responsibilities but also significant opportunities.

To explore possible future directions, ROMGAZ analyzed three decarbonisation scenarios for the period 2030–2050:

- **”No Measures” Scenario (BAU)**: This assumes no proactive climate measures, apart from the natural decline in production. Emissions fall as a result of reduced volumes, not decarbonization efforts. Although profitable in the short term, this scenario increases exposure to regulatory and financial risks and undermines long-term competitiveness.
- **“Moderate Transition” Scenario:** Introduces electrification of operations and methane management. By reducing direct fossil fuel use and implementing advanced leak detection and repair (LDAR) and emission reduction technologies, ROMGAZ reduces methane emissions. However, natural gas remains central, and total emissions remain relatively high.
- **“Net Zero” Scenario:** Provides for a comprehensive strategy that includes carbon capture and storage (CCS), renewable energy integration, and hydrogen blending (20% in Iernut as of 2036). By 2050, ROMGAZ achieves its net zero target through CCS projects, positioning the company as a climate leader and aligning with the 2050.



2050 Vision (2/2)

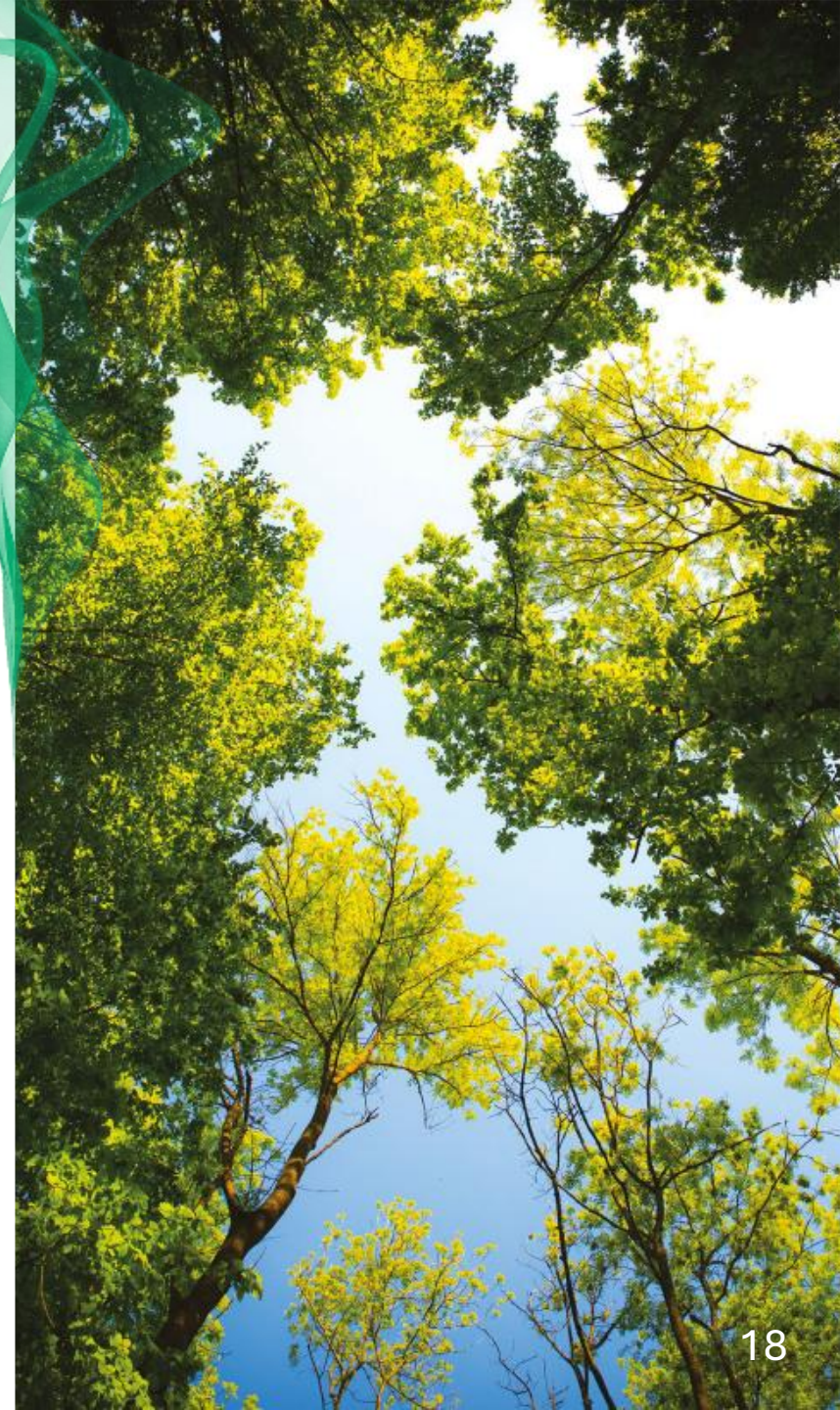
The estimated investment for the Net Zero Scenario is of EUR 2.76 billion, but it currently involves a high degree of uncertainty, mainly due to the incipient maturity of several key technologies, such as large-scale carbon capture and storage, hydrogen blending and integration of renewable sources into gas operations.

These technologies, although promising, require further technical validation, economical feasibility studies and infrastructure readiness assessments to confirm scalability and operational viability.

Furthermore, the ever-changing market dynamic, regulatory framework and consumer expectations introduce an additional complexity, making the long-term planning increasingly difficult.

ROMGAZ acknowledges that the successful implementation of this scenario will depend on continuous innovation, a favorable legislative and regulatory environment, and strat4egic partnerships between industry and authorities.

Thus, the Net Zero Scenario must be viewed as an aspirational but conditional direction, with benchmarks that will be periodically reassessed based on technological progress, the availability of funding sources and the clarity of regulations.



02

ROMGAZ CARBON FOOTPRINT

ROMGAZ Carbon Footprint

Prior to 2024, ROMGAZ published its carbon footprint in its Annual Sustainability Report (see the attached excerpt).

The calculation methodology was not fully aligned with GHG Protocol Requirements, and some emission sources had been omitted (in particular those in Scope 3).

To:

- establish a clear baseline for climate strategy,
- align with CSRD/ESRS E1 requirements on climate change, and
- respond to investor expectations regarding data comparability with other industry players,

it was decided to recalculate the 2023 footprint using the provisions of the GHG Protocol.

At the same time, **2023 was set as the reference year for the decarbonization strategy.**

Emisii de gaze cu efect de seră

În anul 2023, au fost determinate emisiile de CO_2, prin inventarierea surselor de emisii deținute sau controlate în mod direct de către Societate.

Emisii	UM	2022	2023[7]	Variație
Totalul GHG scop 1, din care:	tone	1.020.738,13	908.008,44	-11,04%
CO_2 (dioxid de carbon)	tone	905.045,61	794.605,44	-12,20%
CH_4 (metan)	tone	115.692,52	113.402,99	-1,98%
N_2O (oxid de azot)	tone	559,8	3,88	-99,31%

Intensitatea emisiilor de gaze cu efect de seră este 0,206 tCO_2e/toe și se încadrează în valorile realizate în industrie.

Emisii indirecte de gaze cu efect de seră (scop 2)		2022	2023	Variație
Totalul GHG scop 2, din care:	tone CO_2 echivalent	7.693,99	12.762,42	65.88%
CO_2 (dioxid de carbon)	tone	7.693,99	12.762,42	65.88%

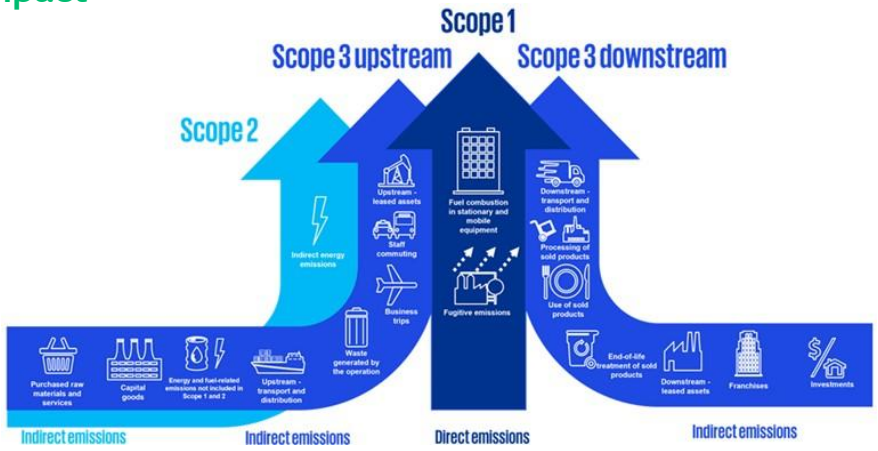
Total emisii scop 3

Sursa emisiei	Cantitate produs vândut 2022	Emisii scop 3 2022	Cantitate produs vândut 2023	Emisii scop 3 2023
Totalul emisiilor scop 3, din care:		10.264.724 t CO_2e		9.770.251 t CO_2e
Gaz natural	49.763.695.248 kWh	10.201.558 t CO_2e	47.320.962.292 kWh	9.700.797 t CO_2e
Condensat de sondă (gazolină)	170.719,33 bbl	63.166 t CO_2e	187.712,545 bbl	69.454 t CO_2e

[7] Pentru fiecare an, s-a efectuat calculul având în vedere faptul că SPEE Iernut deține autorizație GES. Calculul emisiilor anuale de CO_2 s-a efectuat conform Regulamentul (UE) nr. 601/2012 al comisiei privind monitorizarea și raportarea emisiilor de gaze cu efect de seră în conformitate cu Directiva 2003/87/CE a Parlamentului European și a Consiliului) art. 24 Calcularea emisiilor conform metodologie standard.
Emisii de CO_2 = flux de combustibil (t sau Nm^3) x putere calorifică netă (TJ/t sau TJ/Nm^3) x factor de emisie (tCO_2/TJ) x factor de oxidare
Factorul de emisie pentru CO_2 este 55.430 g/GJ (pentru arderea gazelor naturale)
Factorul de emisie, PCN pentru gaz natural se calculează de operator în baza informațiilor preluate din buletinele de analiză cromatografice, emise de laborator, utilizând metodologia CORINAIR.
Emisii de CO_2 (g/106 J) rezultate din arderea benzinei, motorinei și a gazului metan. Lista privind valorile naționale ale factorilor de emisie și puterilor calorifice nete, specifice fiecărui tip de combustibil și categorie de activitate, utilizată în scopul îndeplinirii cerințelor de monitorizare și raportare a emisiilor de dioxid de carbon, în conformitate cu prevederile Regulamentului (UE) nr. 601/2012 privind monitorizarea și raportarea emisiilor de gaze cu efect de seră în conformitate cu Directiva 2003/87/CE
Metoda bazată pe calcul aplicată în conformitate cu prevederile Regulamentului (UE) nr. 2066/2018 privind monitorizarea și raportarea emisiilor de gaze cu efect de seră în temeiul Directivei 2003/87/CE cu modificările și completările ulterioare.

ROMGAZ Carbon Footprint

GHG Emissions - understanding the direct and indirect impact

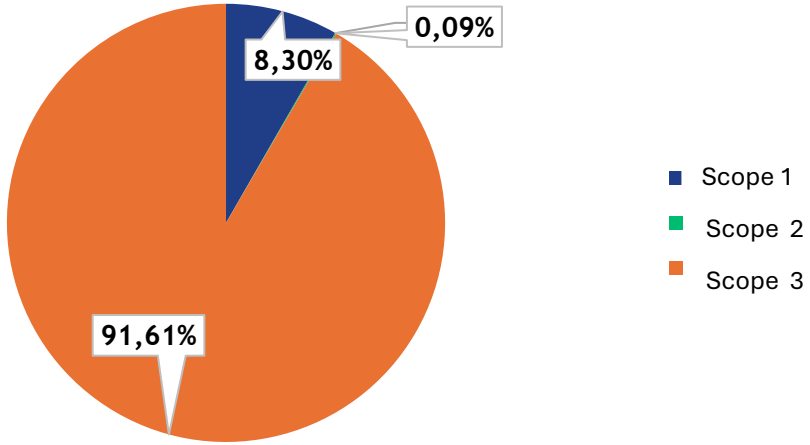


Scope 1 Emissions are direct emissions resulted from the company's own operations, such as electricity production, ventilation, flaring, gas leaks, and other industrial purposes.

Scope 2 Emissions are those associated with purchased electricity

Scope 3 Emissions are significantly influenced by emissions generated by natural gas consumption by end users, accounting for 89.81% of the total carbon footprint.

ROMGAZ GHG Emissions in 2023 - recalculated

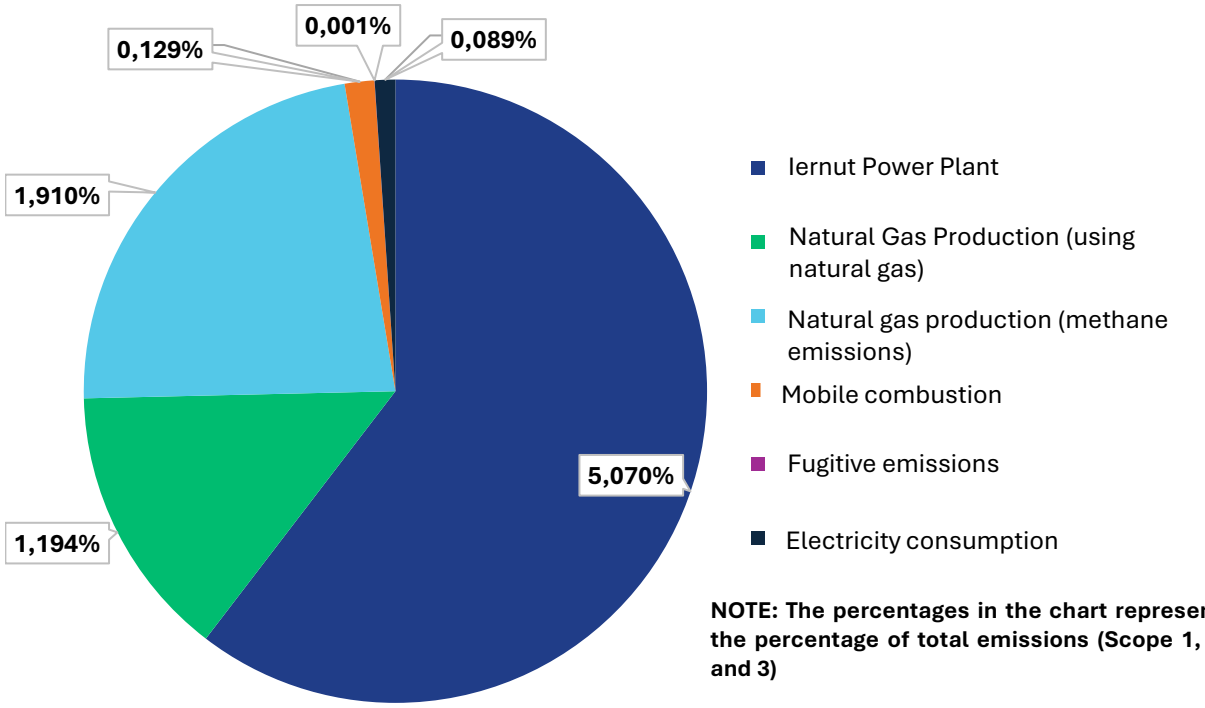


2023 - Market based method	
Scope 1 GHG Emissions	902,538 tCO_2e
Scope 2 GHG Emissions	9,725 tCO_2e
Scope 3 GHG Emissions	9,955,987 tCO_2e
Total GHG Emissions	10,868,250 tCO_2e

ROMGAZ Carbon Footprint

- Natural gas consumption associated with Iernut Power Plant is the main contributor to Scope 1 emissions (direct emissions), followed by gas combustion in upstream production processes, as well as methane emissions from controlled combustion, ventilation and losses.
- Emissions associated with gas production are expected to decrease over time in proportion to production volume, but emissions generated by gas combustion at Iernut are considered constant, considering that the 430 MW combined cycle power plant is expected to reach its designed production capacity in 2026/2027.
- Scope 2 Emissions, generated by purchased electricity, represent less than 1% from the total carbon footprint.

ROMGAZ Greenhouse Gas Emissions – Scope 1 and Scope 2 Emissions expressed in percentage and sources in 2023



NOTE: The percentages in the chart represent the percentage of total emissions (Scope 1, 2 and 3)

Emissions associated to Scope 1 and 2 - market based method		
Scope 1	Iernut Power Plant	551,064 tCO_2e
	Natural Gas Production (using natural gas)	129,804 tCO_2e
	Natural gas production (methane emissions)	207,574 tCO_2e
	Mobile combustion	14,011 tCO_2e
	Fugitive emissions	84 tCO_2e
Scope 2	Electricity consumption	9,725 tCO_2e

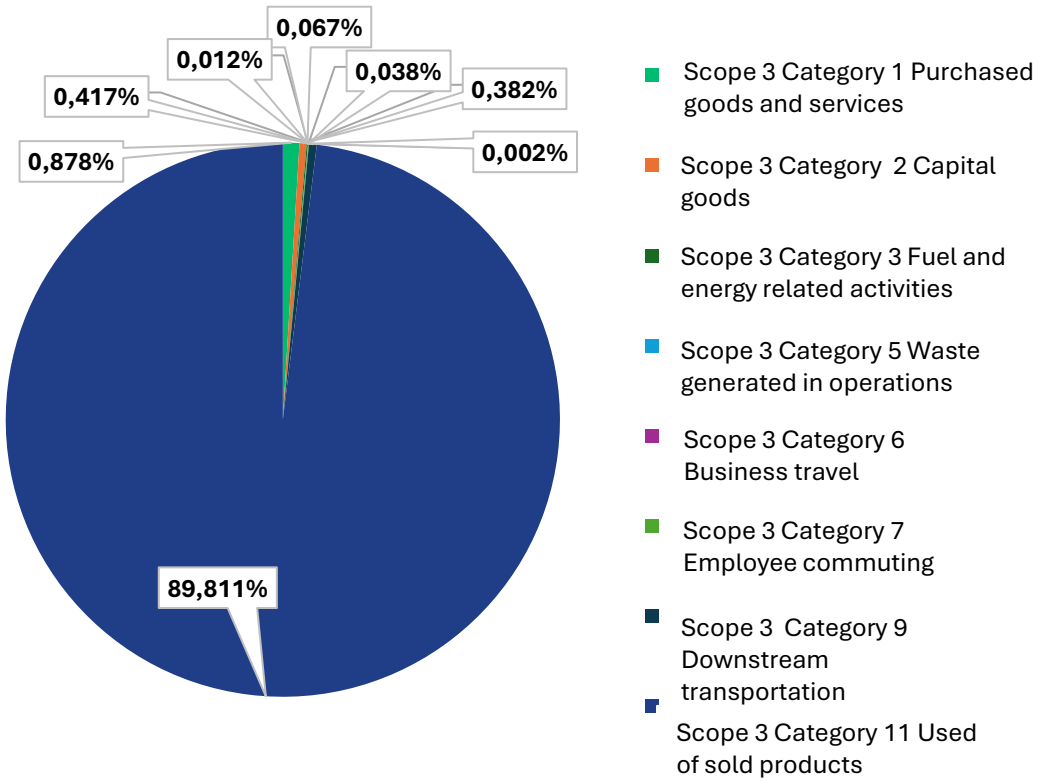
ROMGAZ Carbon Footprint

The GHG Emissions profile is dominated by Scope 3 Emissions, making them the most difficult to reduce out of all three categories:

- 89.81% of Scope 3 Emissions come from the Use of Sold Products (Category 11), meaning that most of ROMGAZ carbon footprint comes from natural gas combustion by customers.
- 0.417% Scope 3 Emissions come from Downstream Transportation and Distribution (Category 1), meaning that emissions related to transportation are secondary as compared to those generated by end users.
- All other Scope 3 categories, inclusive Waste, Employee Commuting and Business Travel, contribute less than 2%, suggesting that while they can be improved, their impact on total emissions is limited.

Scope 3 Emissions	
1. Purchased goods and services	95,455 tCO_2e
2. Capital goods	41,512 tCO_2e
3. Fuel and energy related activities	7,252 tCO_2e
5. Waste generated in operations	1,277 tCO_2e
6. Business travel	186 tCO2e
7. Employee commuting	4,173 tCO_2e
9. Downstream transportation	45,299 tCO_2e
11. Use of sold products	9,760,832 tCO_2e

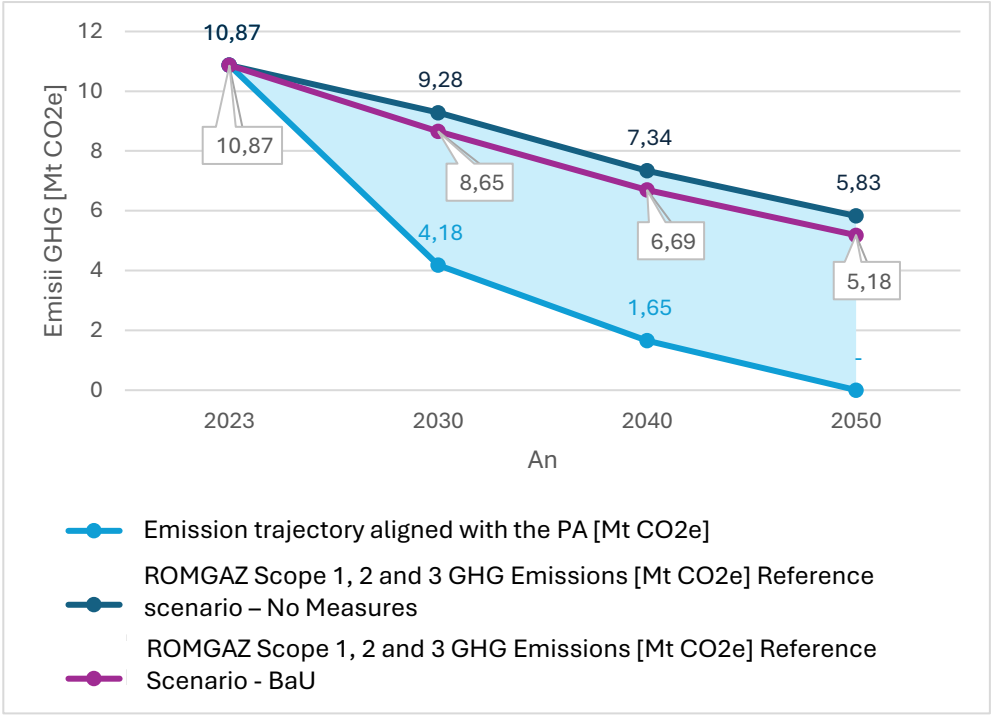
Scope 3 Emissions in 2023, expressed in percentage by categories



2021 Strategy vs Paris Agreement

- The emission gap is a serious risk of transition. Failure to address it can lead to increased carbon costs, decreased investor confidence and the risk of regulatory non-compliance. In this context, the emissions gap to the Paris Agreement serves as a basic reference for the decarbonisation process of ROMGAZ.
- In addition, there are investments risks and concerns about the technological feasibility of decarbonisation strategies, the economic efficiency of low-carbon solutions and the potential impact on financial profitability. These factors highlight the scale of the necessary reductions, the urgency of immediate action and the strategic importance of rigorous decarbonization measures.
- Although reducing the gap poses significant challenges, it is also an opportunity for ROMGAZ to redefine its business model, adopt cleaner energy solutions and align itself with the long-term global direction of energy transition.

The gap between the Paris Agreement and ROMGAZ Business Strategy for 2021



03

SCENARIOS TO REDUCE CARBON EMISSIONS AND INVESTMENTS

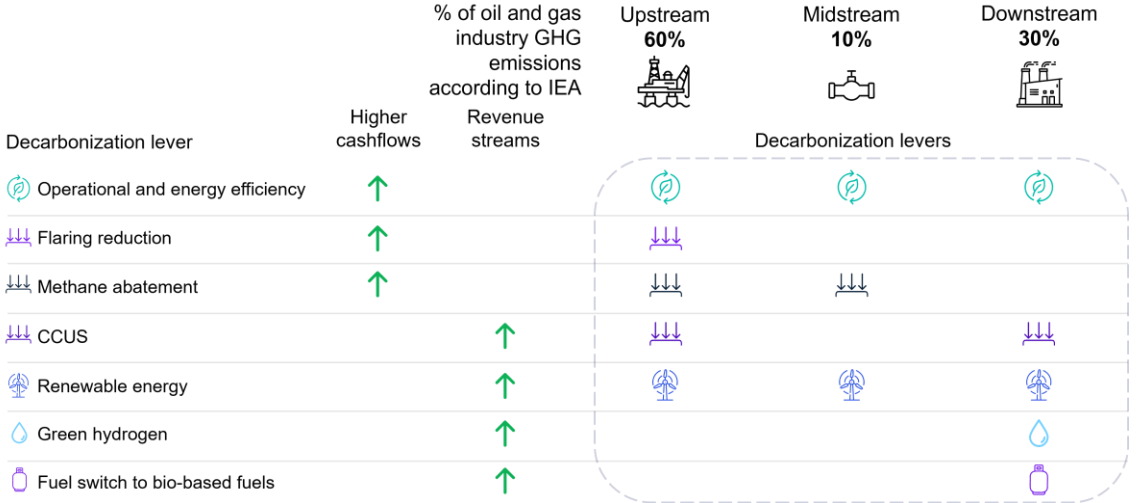
Decarbonisation:
Concept, Challenges and Role of Carbon Reductions Trajectories in the Oil and Gas Industry

- Decarbonisation is the systematic reduction of GHG emissions associated with economic activities, with the aim of achieving the transition towards a low-carbon or zero-emissions economy.
- The low-carbon trajectory (known as Net Zero Scenario) is a structured and strategic approach through which companies transition from high-carbon operations to sustsainable business models, aligned with the climate targets.
- Decarbonisation involves transforming business portfolios, energy supply chains, redesigning processes to reduce emissions, and exploring alternative fuels such as hydrogen, biofuels, and synthetic fuels.
- The transition is not only about reducing direct emissions, but also about reducing emissions across the entire value chain, including in supply chains, transport, and end-use applications.

Decarbonisation:
Concept, Challenges and Role of Carbon Reductions Trajectories in the Oil and Gas Industry

- IPCC Sixth Assessment Report presents several ways to achieve climate targets, integrating solutions such as carbon capture and storage (CCUS/CCS), electrification and sustainable practices to use lands.
- Decarbonisation efforts are specific to each sector, meaning that the level of complexity and difficulty in reducing emissions varies from one industry to another.
- For ROMGAZ, developing and implementing the Net Zero Scenario is essential to maintaining competitiveness in an ever-changing energy landscape.
- The Net Zero Scenario includes a wide range of decarbonization measures, from increasing energy efficiency and reducing methane emissions, to expanding renewable energy sources, developing hydrogen production, implementing CCS, and investing in biomethane.

Examples of decarbonisation levers in natural gas industry - best practices



Source: KPMG analysis based on publicly available data

Decarbonisation:
Concept, Challenges and Role of Carbon Reductions Trajectories in the Oil and Gas Industry

Decarbonisation in the oil and gas sector is a unique challenge, due to long-term asset dependences, high Scope 3 emissions, regulatory uncertainty and economic constraints.

However, a low-carbon strategy can help manage this complexity by establishing realistic targets. Therefore, implementing such a trajectory is an essential step for ROMGAZ in the transition to a decarbonate energy sector, while maintaining operational efficiency and economic competitiveness.

By combining technological progress, regulatory compliance and financial support mechanisms, ROMGAZ can:

- Reduce its carbon footprint and align it with global climate commitments.
- Ensure a long-term business strategy, in line with market expectations and EU climate policies.

With adequate financial support, the company is well positioned to accelerate its decarbonisation efforts, contribute to the Integrated National Energy and Climate Plan (INECP) and the Nationally Determined Contribution (NDC) of Romania, as well as to strengthen its corporate sustainability-based strategy.

Three possible scenarios for the decarbonization plan will be further analyzed:

- **”No Measures” Scenario**
- **”Moderate Transition” Scenario, and**
- **”Net Zero” Scenario**

”No Measures” Scenario

”No Measures” Scenario assumes that ROMGAZ continues its activity without implementing additional decarbonization measures, operating exclusively within the current framework of existing infrastructure and processes.

Emissions reduction occurs only as a result of natural decline in gas production, without technological interventions or investments in green solutions.

ROMGAZ continues its traditional activities without investments in carbon capture and storage technologies (CCS) and without the development of renewable energy capacities.

Although this approach helps to maintain operational continuity and minimize short-term capital expenditure, it exposes the company to significant risks:

- Increasingly stringent regulations regarding emissions and carbon price
- Potential financial penalties
- Loss of competitiveness to low emissions energy suppliers
- Decreased attractiveness for investors and trading partners

Scope	GHG Emissions Percentage (2023)	2023	2030	2040	2050
Scope 1 tCO_2e	8.30%	902,538	934,391	868,545	817,426
Scope 2 tCO_2e	0.09%	9,725	8,145	6,24	4,909
Scope 3 tCO_2e	91.61%	9,955,987	8,337,982	6,461,958	5,005,263
Total GHG Emissions tCO_2e	100%	10,868,250	9,280,519	7,336,826	5,827,598

”Moderate Transition” Scenario

”Moderate Transition” Scenario describes the trajectory that ROMGAZ follows when operating within the limits required by current regulations and by its own strategic priorities defined in 2021.

This includes both mandatory measures required by law voluntary actions undertaken as part of current operations.

”Moderate Transition” Scenario includes measures, such as:

- Installing a CO_2 capture and storage system at Iernut Power Plant (0.64 Mtpa capacity)
- Developing a CO_2 storage capacity of 4.12 Mtpa in line with NZIA requirements
- Implementing the methane management program (LDAR, eliminating flaring/venting)
- Investing in renewable energy (target of 180 MW photovoltaic by 2030)

These measures contribute to improving the company’s sustainability profile and ensure compliance with emerging European regulations. However, as natural gas remains the core business, total emissions remain high and exposure to regulatory risks and market pressures persists.

Scope	GHG Emission Percentage (2023)	2023	2030	2040	2050
Scope 1 tCO_2e	8.30%	902,538	305,898	225,105	169,238
Scope 2 tCO_2e	0.09%	9,724	8,145	6,324	4,909
Scope 3 tCO_2e	91.61%	9,955,987	8,339,051	6,461,958	5,005,263
Total GHG emissions in tCO_2e	100%	10,868,250	8,653,094	6,693,386	5,179,410

”Moderate Transition”Scenario

Activities planned in the “Modern Transition” Scenario

- **Decarbonisation targets:**
  - Reduce carbon, methane and other GHG emissions by at least 10% by 2030, as compared to 2020 levels (target 10-10-10)
  - Achieve carbon neutrality by 2050, in line with the climate neutrality targets of Romania and the European Union.
- **Operational efficiency:**
  - Limit the annual decline in natural gas production to less 2.5%.
  - Upgrade and increase the efficiency of surface facilities for gar production.
  - Reduce technological consumption of natural gas by 10% by 2030 as compared to 2020.
- **Renewable energy integration:**
  - Develop a photovoltaic energy capacity of at least 180MW by 2030.
  - Transition to electricity production based on low-emissions gas through the integration of technologies such as green hydrogen and CCUS (carbon, capture and storage).
- **Emissions management:**
  - Implement a program to detect and reduce fugitive emissions
  - Phasing out flaring and venting by 2030.

”Moderate Transition” Scenario

The progress made so far by ROMGAZ to achieve its targets:

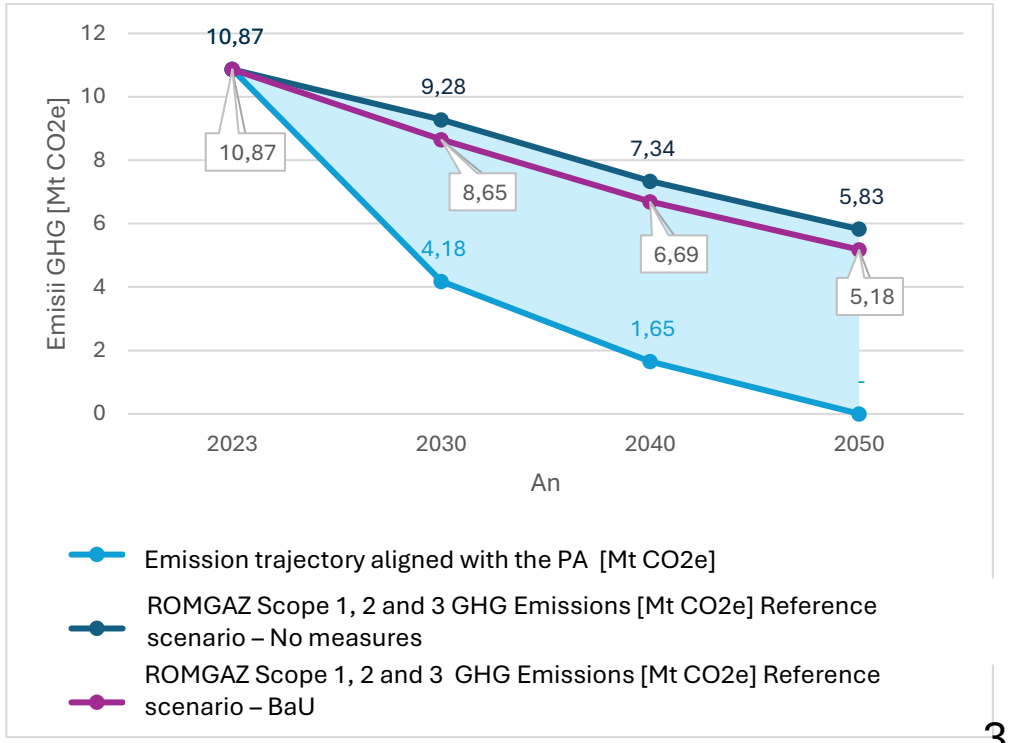
- **Renewable energy projects:** Advanced planning for the development of 180 MW of solar photovoltaic (PV) energy.
- **Natural gas production:** Maintaining an annual gas production volume of 4.79 billion (bcm) in 2023, with efforts to optimize production despite declining reservoir productivity. Mature reservoir rehabilitation projects, such as Filitelnic, Deleni and others, have been implemented, to support production rates.
- **Extension of hydrocarbon reserves:** Conducting exploration operations, including the completion of two new gas wells, ongoing acquisition of 3D seismic data, and active exploration in Northern and Central Transylvania.
- **Carbon capture and use:** starting feasibility studies to assess the technical possibility of using depleted gas reservoirs for CO_2 storage, as first step in integrating CCUS technology into operational flows.
- **Hydrogen use:** The use of hydrogen at the Iernut Power Plant is included in ROMGAZ current strategy, but is not provided for in the Business as Usual (BaU) scenario.(BaU).

Emissions Gap in “No Measures” and “Moderate Transition” Scenarios

- By 2030, ROMGAZ must reduce emissions by more than 50% as compared to current levels in order to maintain the Paris Agreement trajectory.
- By 2040, emissions must be reduced by at least 80%, and by 2050 a complete transition is required. This difference highlights the need for a long-term decarbonissation strategy, that is structured, ambitious, but realistic and financially feasible.

- The discrepancy between ROMGAZ “No Measures” Scenario trajectory and the Paris Agreement targets is most pronounced in the immediate period (2023–2030).
  By 2030, ROMGAZ projected emissions are 9.28 million tonnes of CO_2 equivalent (Mt CO_2e), while the target aligned with the Paris Agreement is 4.18 Mt CO_2e, meaning that an additional 5.10 Mt CO_2e must be eliminated in the coming years.
- A significant part of ROMGAZ emissions come from Scope 3 sources – indirect emissions from natural gas users. Unlike Scope 1 and 2, Scope 3 is largely outside the direct control of ROMGAZ.

  The trajectory of the Paris Agreement imposes a drastic reduction in Scope 3 emissions, which is a major challenge for the company.
- Total estimated GHG emission reduction required for ROGAZ to align with the Paris Agreement targets is 117.63 Mt CO_2e by 2050 (marked with the transparent blue area on the graph).



”Net-Zero”Scenario

“Net-Zero” Scenario is a forward-looking investment strategy designed to achieve ambitious decarbonisation targets.

It combines substantial investments in carbon capture and storage (CCS) technologies with accelerated Extension of renewable energy capacities through the development of photovoltaic parks and wind turbines.

In addition, the scenario includes investments in innovative technologies, such as electrolysers for green hydrogen production, reflecting ROMGAZ commitment to sustainable solutions for reducing GHG emissions.

In addition to the measures included in the “Moderate Transition” Scenario, this strategic vision adds:

- Integration of green hydrogen (mixture with natural gas at a 20% ratio in Iernut Power Plant as of 2036)
- Production of biomethane (with a target of 100MW by 2050)
- Electrification of upstream operations to reduce direct emissions
- Purchase of carbon offset certificates.

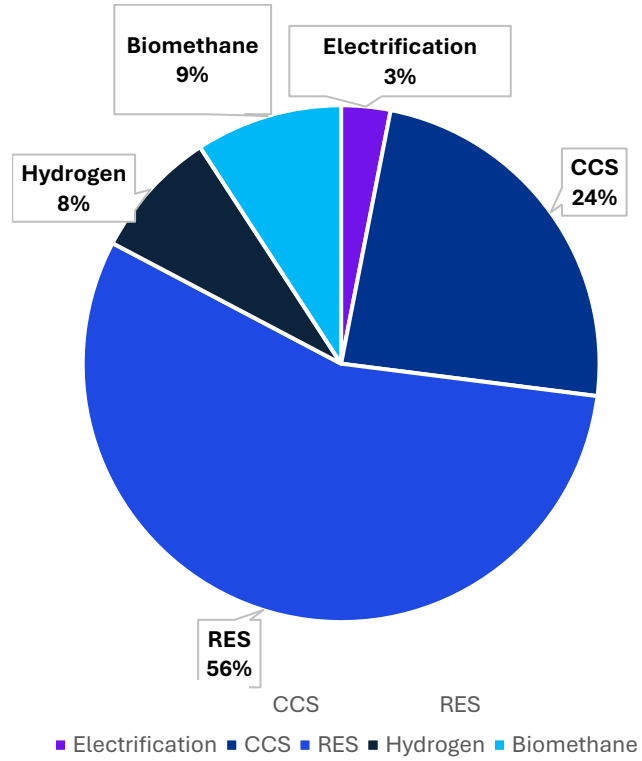
The investment structure related to this scenario reflects the company’s strategic priorities:

- 55.7% of investments are allocated to renewable energy, the central pillar of the transition;
- 23.9% are dedicated to CCS, contributing to almost 60% to the total reduction in emissions;
- 8.1% are directed towards hydrogen, as an emerging energy vector;
- 9.2% is for biomethane as a sustainable alternative to natural gas.

In this scenario, ROMGAZ will be able to reach total emissions of 1.42 Mt CO_2e in 2050.

To achieve neutrality and also offset these residual emissions, the company may decide to invest in addition to legal requirements in CCS projects to store 1.2 Mt CO_2e, with the remaining 0.22 Mt CO_2 to be offset.

Weight of investments in frontier technologies in ROMGAZ decarbonization actions



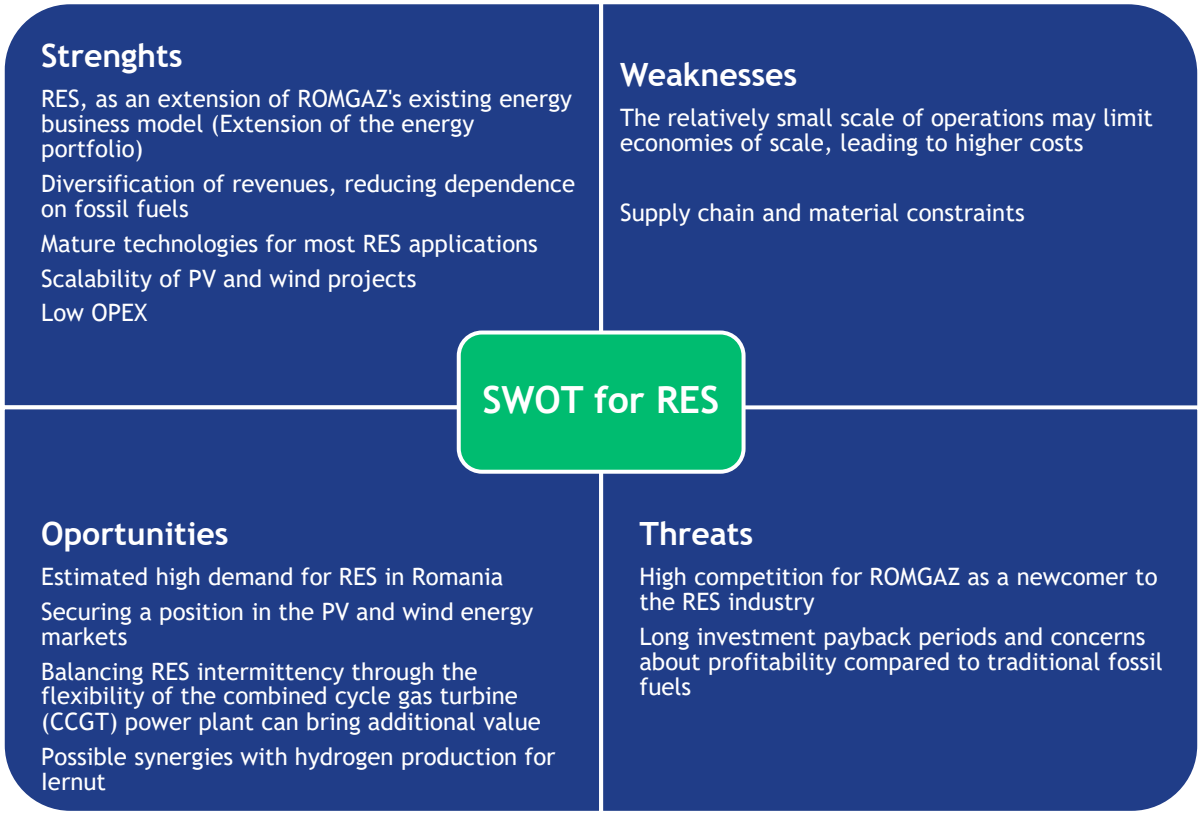
Extension of RES Projects

RES Projects represent a significant market opportunity for ROMGAZ, offering the potential to diversify and decarbonise its income sources and actively participate in the global transition towards economies based on the green energy.

However, their direct impact upon the company’s carbon footprint is limited, as ROMGAZ does not rely significantly on electricity consumption. Therefore, direct and indirect emissions (Scope 1 and 2) account for only one-fifth of the company's total emissions in the value chain.

Nevertheless, these investments can contribute to reducing emissions intensity and decreasing the company's dependence on fossil fuel-based revenues.

The Net-Zero scenario for ROMGAZ includes accelerated investments in the RES segment compared to the "business as usual" scenario.



Extension of RES Projects

The scale of ROMGAZ involvement and its targets in RES field were set based on the following assumptions:

- **Company ambitions:** discussions with the company representatives led to a relatively cautious approach to Extension in the RES segment, given the estimate market share for the future.
- Therefore, ROMGAZ involvement in green energy projects is expected to grow at a slower pace than the overall market rate (According to projections in the PNIESC – Integrated National Plan for Energy and Climate Change). Under these circumstances, ROMGAZ participation in the renewable energy sector remains modest compared to other players in the industry.

- **Current capacities:** between 2021 and 2030, ROMGAZ plans to install 180 MW RES capacity. Over the next two decades (2030-2050) the company will far exceed its historical pace, adding an average of 500MV of RES installed capacity per decade.
- **Financial capacities:** an analysis of the company's historical financial statements confirms that the proposed size of RES investments is financially feasible for ROMGAZ. This is conditional on the generation of cash flows by Neptun Deep Project after 2030. The RES targets are aligned with the current company strategy and are planned for implementation as of 2030, without affecting the ongoing commitments.

Key-assumptions regarding ROMGAZ RES Portfolio

ROMGAZ - RES Portfolio	*UM*	2030	2040	2050
RES installed capacity	*MW*	180	500	1,180.0
○ Wind	*MW*	0	100	500
○ Solar	*MW*	180	400	680
Weight of wind energy in ROMGAZ Portfolio	*%*	0%	20%	42%
Weight of photovoltaic energy in ROMGA Portfolio	*%*	100%	80%	58%
Gross electricity production*	*GWh*	248.9	753.4	1,994.0
○ Wind	*GWh*	0.0	228.4	1,138.8
○ Solar	*GWh*	248.9	525.0	855.2
ROMGAZ share in Romania's RES capacity				
○ Wind	*%*	0%	1%	3%
○ Solar	*%*	2%	3%	4%

Extension of RES Projects

Investment required and financing options

RES projects are estimated to require EUR 1,515.8 million in financing over a 25-year period (in current values).

Most of the expenses (73%) are associated with wind projects, as these involve higher capital costs but provide better usage factors as compared to photovoltaic park.

It is important to note that the final investment value will depend significantly on the mix of chosen RES technologies, such as onshore/offshore or solar wind.

These technologies show significant differences in capital costs per unit of installed capacity.

For example, if ROMGAZ were to invest exclusively in PV projects to achieve the target of 1 GW of installed capacity, the investment costs could be as low as EUR 758.5 million.

In contrast, if ROMGAZ were to opt exclusively for wind projects, the total CAPEX could reach approximately EUR 2,000 million.

The summary and schedule of CAPEX expenditures required for ROMGAZ investments in RES are shown below:

CAPEX		2021-30	2031-40	2041-50
PV	*EUR million*	142.1	168.4	205.3
Wind	*EUR million*		226,8	773.2
Total	*EUR million*	**142.1**	**395.2**	**978.5**

Source: KPMG estimates based on the publicly available information.

Extension of RES Projects

ROMGAZ have several financing options:

- Co-financing through EU grants and support programs (e.g.: Innovation Fund, Horizon Europe, Modernisation Fund, Just Transition Fund).
- Attracting a partner for large-scale investments (such as Equinor sau Ørsted), especially for offshore wind projects, as these requires significant capital investments. This approach not only reduces the financial burden of ROMGAZ, but it also mitigates risks by involving a partner with experience and expertise in such investments.
- Obtaining low-cost financing from European institutions such as the European Investment and Development Bank or the InvestEU Programme.
- Romanian Government support for renewable energy projects – given the ambitious targets set out in the NECP, the Romanian Government aims to provide subsidies to stimulate investments in solar, wind and hydroelectric power production across Romania.
- Private financing through the issuance of green bonds – a method frequently used by companies in the energy sector to attract capital.

Extension of RES Projects

Conclusions for ROMGAZ as regards RES:

- The profitability analysis of the RES segment will depend on several factors as yet unknown, such as the type of RES, location, price trajectory for CO_2 emission allowances and fossil fuel commodities.
- Based on the historical analysis, it can be assumed that the RES segment will be characterised by lower capital returns; however, it will show lower volatility of results compared to the company's current operations.
- The EBITDA margin will be relatively high, as operational expenditure (OPEX) is usually low in RES, and capital expenditure (CAPEX) — not reflected in the EBITDA — results is the main financial burden for projects.

Using 2023 data as a reference, a conservative estimate suggests approximately EUR 75 EBITDA per 1 MWh of electricity generated from RES and approximately EUR 130,000 EBITDA per 1 MW of installed capacity.

Applying these figures to the targets set by the company in this strategy, this would imply an annual EBITDA of:

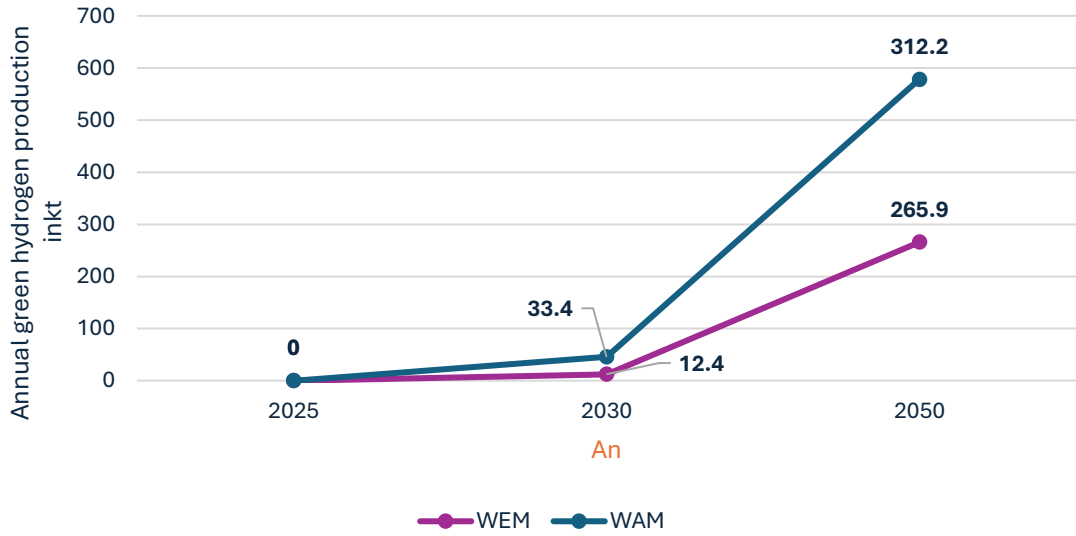
- EUR 23–27 million in 2030;
- EUR 65–85 million in 2040;
- EUR 154–225 million in 2050 (all reported at 2023 prices).

Extension of Hydrogen Projects

Reason for investing in hydrogen production

- Green hydrogen is expected to play an important role in the decarbonization process and in achieving the net-zero emissions target by 2050. It offers scalable solutions for sectors that are difficult to decarbonize, such as heavy industry, transportation, and energy storage.
- According to the IEA report and the Council report on hydrogen, it can contribute significantly to reducing global CO_2 emissions, with up to 80 gigatons of emissions avoided by 2050.

Demand for hydrogen production according to PNIESC (WEM and WAM Scenarios) in 2025, 2030 and 2050



Source: PNIESC and KPMG analysis

WEM (with current measures) and WAM (with additional measures)

Extension of Hydrogen Projects

Alignment with National Targets

- For Romania and ROMGAZ, investments in green hydrogen are in accordance with national energy objectives established in PNIESC (Integrated National Energy and Climate Change Plan) and EU directives.
- The Romanian PNIESC underlines the transition to a decarbonized energy system, aiming an 85% decrease of net GHG emissions by 2030 and close to zero emissions by 2050.
- ROMGAZ could capitalize on its infrastructure and expertise in the gas field to lead the transition to hydrogen and can integrate green hydrogen in its portfolio to reach these ambitious objectives, at the same time consolidating the energy security and economic resilience.
- In accordance with the Romanian PNIESC, hydrogen will contribute almost equally to the final energy consumption compared with biomass and wind power each with a share between 16% and 19%.

Extension of Hydrogen Projects

SWOT for H_2

Strengths

- Use of existing infrastructure and expertise, as a top natural gas producer.
- Projects with hydrogen help ROMGAZ reach the EU climate targets and diversify its energy portfolio.
- Avoided CO_2 emissions
- Relacing natural gas reduces emissions (~273 kt CO_2 by 2050).
- Increasing demand for hydrogen in the industry, mobility and energy storing applications.

Weaknesses

- Significant initial costs for photovoltaic (PV) systems, electrolyzers and network integration.
- Efficiency of electrolyzers (~65-70%) leads to energy losses.
- Is based on technological advances in the field of electrolyzers and storage for cost optimization.

Opportunities

- Alignment to the European Green Deal and hydrogen development objectives provide support from the point of view of policies.
- Cooperation with industrial and technological players to split the weight of investments.
- Improving electrolyzers, storage and transportation efficiency reduces costs over time.

Threats

- Changes in regulation and delays in implementation of hydrogen infrastructure can impede progress.
- Increased competition from other energy companies that invest in green hydrogen.

Extension of Hydrogen Projects

By 2050, ROMGAZ could annually produce up to 38 thousand tonnes of green hydrogen, which will play an essential role in reducing CO_2 emissions and in supporting the energy transition of Romania.

Assumptions:

- **Generation of solar energy:** 1,401.6 hours of operation at full load per year, per MW of PV capacity is assumed.
- **Generation of wind power:** 2,277.6 hours of operation at full load per year, per MW of wind capacity is assumed.
- **Efficiency of electrolyzer:** 80% in 2030.
- **Availability of electrolyzer:** 95% (8,322 hours/year).
- **Avoided CO_2 emissions:** it is assumed that 1 tonne of hydrogen avoids 3 tonnes of CO_2 (based on natural gas replacement).
- **Time frame:** gradual increase in PV capacity and electrolyzers implementation to align with green hydrogen objectives (especially in 2036).
- **Scaling the electrolyzer:** capacity of electrolyzer is scaled proportional to the PV capacity, aiming the optimum hydrogen production and the storage capacity.

Estimated Production of Green Hydrogen depending on the Estimated RES Capacity

The table presents green hydrogen production potential based on installed RES capacities while the actual hydrogen production is sized according to the 20% hydrogen objective of Iernut Power Plant.

Year	2030	2036	2050
RES capacity [MW] (PV + Wind)	180	312	1,180
Total energy production [GWh/year]	248.90	417.80	2,091.88
Electrolyzer capacity [MW]	28.8	142.01	190.43
H_2 production [tonnes/year]	-	25,930.63	25,930.63
Total avoided CO_2 emissions [tonnes]*	-	-	1,166,878.47
Total RES [EUR million]	142	242	1,516
Cost of electrolyzer system and auxiliary equipment [EUR million]	-	220	220
Total general [EUR million]	142	462	1,736

Source: KPMG analysis based on IEA (2024), Global Hydrogen Review 2024, IEA, Paris https://www.iea.org/reports/global-hydrogen-review-2024, License: CC BY 4.0;

*Compared to natural gas.

Extension of Hydrogen Projects

Investment Costs:

- **PV (photovoltaic) investment cost:** ~EUR 0.76 million per MW
- **Wind power investment cost:** ~EUR 2 million per MW
- **Cost of electrolyzer system and peripherals:** ~EUR 1.7 million per MW

CAPEX assumptions on electrolyzer infrastructure (according to *European Hydrogen Observatory*):

- **Cost of stack** includes expenses with equipment, engineering, procurement and installation of stack.
- **Cost of balance of plant** covers the equipment, engineering, procurement and installation of rectifier, transformer directly connected to the rectifier, gas/liquid separation, water/lye feeding and gas purification.
- **Costs of other utilities** include equipment, engineering, procurement and installation of high voltage transformers, water treatment equipment, cooling, control systems and other auxiliary services.
- **CAPEX elements** also include land and grid fees, insurances, permitting, feasibility studies, reserve funds and EPC management.

Technologies used:

- PV technology: advanced monocrystalline solar panels with a 22% efficiency, ensuring high energy production and durability.
- Electrolyzers: Alkaline Electrolysis (AEL) and Proton Exchange Membrane (PEM) technologies are used, depending on hydrogen demand and operating conditions. PEM is preferred for higher efficiency and dynamic operation.
- Hydrogen storage: through compression and storage in high pressure tanks or underground saline cavities for large-scale applications.

For modelling, instead of year 2040, year 2036 was considered as starting point for investments as, pursuant to local regulations, **CCGT and CHP plants in Romania will have the obligation to mix hydrogen with the primary fuel beginning with this year.**

Extension of Hydrogen Projects

For ROMGAZ, strategic alignment to funding programs and ensuring sources of renewable energy at lower costs with own production capacity from renewable sources could be crucial to ensure profitability on long term.

Current information on levelised cost of hydrogen (LCOH) in Europe:

- In 2024, the cost is estimated between EUR 3.70 and EUR 5.50 per kg of H_2, depending on the electricity price and the type of eletrolyzer used.
- A decrease is estimated by 2030, to a range between EUR 1.80 – EUR 2.50 per kg of H_2, determined by the reduction in the cost of renewable energy and by the efficiency improvement of electrolyzers.

Compared LCOH of hydrogen production methods

Type of hydrogen	Current cost (EUR /kg)	Estimated cost for 2030 (EUR /kg)	Key factors
Green H_2	EUR 3.7 - EUR 5.5	EUR 1.8 - EUR 2.5	Cost of renewable energy, efficiency of electrolyzer
Blue H_2 (CCS + Natural Gas)*	EUR 1.8 - EUR 2.5	EUR 1.5 - EUR 2.0	Price of natural gas, efficiency of carbon capture

Source: Analiza KPMG bazată pe Levelized Production Cost of Green & Blue Hydrogen: Market Trends & Outlook & Techno-economic analysis of green hydrogen generation from combined wind and photovoltaic systems based on hourly temporal correlation

*Hidrogenul albastru a fost adăugat ca termen de comparație și nu este recomandat ca tehnologie de decarbonizare pentru ROMGAZ, deoarece nu va îndeplini cerințele RFNBO și necesită CCS pentru a funcționa. CCS va fi utilizat în plus ca o componentă cheie a procesului de decarbonizare, dar nu va fi direct legat de producția de hidrogen.

Extension of Hydrogen Projects

Investment Required for Production of Green Hydrogen

The estimated total cost for the construction of hydrogen production capacities (excluding photovoltaic panels and wind turbines), by 2050, is approximately EUR 220 million for ROMGAZ (at the current value of money).

Investments Required for Production of Green Hydrogen in 2030, 2040 and 2050

CAPEX	Unit	2030 - 2050
Cost of electrolysis system and peripherals	EUR mln	220

Source: KPMG estimations based on publicly available information.

Extension of Hydrogen Projects

Conclusions for ROMGAZ:

- The objective regarding the development of own renewable energy capacity to ensure a lower cost of electricity used for green production should be on company agenda.
- Investments in hydrogen production facilities to ensure a reliable source of supply for industrial applications and natural gas mixture are necessary.
- By 2036, ROMGAZ must ensure availability of hydrogen for the natural gas mixture to support power generation at Iernut power plant and to meet its obligations under PNIESC.
- Extension of hydrogen production capacity by 2050, will be influenced by future investments in RES and by the market demand for decarbonization. An increased RES capacity beyond 2036 requires H_2 production which could be later used for electricity generation (and RFNBO); this could become necessary in the context of changing PNIESC targets.

Extension of Hydrogen Projects

Implementation Program up to 2036

	Stage	Timeline	Key activities
1	**Feasibility study and planning**	2025-2027	Assess resources: assessment of local renewable energy resources (for example, wind, solar) for the electrolysis process. Selection of technology: Choosing the adequate electrolysis technology (PEM, Alkaline). Selection of location: identification of optimum location, taking into consideration proximity to resources and infrastructure. Economic analysis: estimation of capital and operating expenses.
2	**Ensuring approvals and financing**	2027-2029	Compliance with regulations: obtaining environmental and construction permits. Obtaining financing: ensuring financing through governmental grants, private investments or public-private partnerships.
3	**Design and procurement**	2029-2031	Design: drawing up detailed projects integrating renewabale energy sources with Iernut power plant. Procurement of equipment: Procurement of electrolyzers, compressors, storage tanks and other essential equipment.
4	**Construction and putting into operation**	2031-2034	Construction: Construction of facility in accordance with the timeline and the budget. Integration: Connecting the hydrogen production facility with the renewable energy sources and Iernut plant. Testing and putting into operation: conducting rigorous testing to ensure operational efficiency and safety.
5	**Growth and optimisation**	2034-2036	Operational growth: gradual increase of production capacities to reach the target of at least 28,364 tonnes per year by 2036. Continuous improvement: Implementation of optimization strategies for energy efficiency and to reduce costs.

CCS Technology

- Carbon capture and storage (CCS) represents a cornerstone of ROMGAZ decarbonization strategy, offering a significant reduction of emissions both from direct sources (Scope 1) and from indirect sources (Scope 3).
- Through CO_2 capture from Iernut Plant and its injection in depleted reservoirs, ROMGAZ can significantly reduce its total carbon footprint.
- Net – Zero scenarios propose to include CCS as an additional measure given that not all fuel used in Iernut Plant will be hydrogen.
- EU Net-Zero Industry Act will require major oil and gas producers, including ROMGAZ, to ensure a significant CO_2 storage capacity. ROMGAZ obligation is established at 4.12 million tonnes per year (Mtpa) of injection capacity starting with 2030.
- Additional requirements by 2050. An additional storage capacity of 1.28 Mtpa is required by 2050 to fully cover ROMGAZ emissions under Scope 3 from transmission and combustion of gas by clients as well as its own residual emissions or those of suppliers. Thus, the total CO_2 storage capacity required to ROMGAZ in a net zero scenario is 5.4 Mtpa.

CCS Technology

Main factors determining investments in CCS:

- **Level of impact:** CCS offers a significant decarbonization potential for ROMGAZ own operations, as well as for final users of natural gas approaching most of the climate impact of the company.
- **Conformity with EU Regulation on Net-Zero Industry: pursuant to it, major oil and gas producers are required to develop** CO_2, storage capacities ensuring alignment to regulatory requirements.
- **Infrastructure synergies:** ROMGAZ can capitalize on depleted gas reservoirs for CO_2 storage, using existing wells, pipes and knowledge of the underground gained in decades of natural gas production.
- **Commercial opportunities:** besides capturing its own emissions, ROMGAZ can supply CCS services for other industrial emitters generating additional sources of income and supporting the Romanian industry in reaching its climate objectives.

Tehnologia CCS

CCS Goals

- 4.12 Mtpa total CO_2 storage capacity – development of several large storage sites, completely operational by 2030, using depleted reservoirs for safe and permanent injection of carbon. An additional capacity of 1.28 Mtpa by 2050 would be required to meet the net zero objective in 2050.
- CO_2 capture and compression facility of 0.64 Mtpa at Iernut Plant: implementation of post-combustion capture technology, combined with efficient compression facilities that would manage 0.608 million tonnes of CO_2 per year at the start of operations before using hydrogen and biomethane.
- Dedicated transportation infrastructure between Iernut Plant and CO_2 storage site: construction or modernization of the pipeline systems and logistic infrastructure for transportation of the CO_2 captured from the plant to the storage facilities.
- The 0.608 Mtpa represent the CO_2 quantity captured with 95% efficiency out of the 0.64 Mtpa total emitted by Iernut Plant.

Summary of CCS in the ”Net-Zero” Scenario

Year	2030	2040	2050
NZIA CO_2 storage capacity [Mtpa]	4.12	4.12	4.12
NZIA CAPEX regarding CO_2 storage [M EUR]	412	-	-
Capacity of carbon capture and compression facilities at Iernut Plant [Mtpa]	0.64	0.64	0.64
CAPEX regarding capacity of carbon capture and compression facilities at Iernut Plant [M EUR]	239 (224 capture + 15 transportation)	-	-

CCS Technology

CCS Investments

The main CCS investments will consist of three components:

- Carbon capture and compression facilities at Iernut Plant
- CO_2 storage site in accordance with NZIA requirements
- CO_2 transportation network from Iernut Plant to the storage site

Source: https://www.romgaz.ro/explorare

Note: Distances are approximated by using Google Maps from ROMGAZ exploitation sites (CCSR potential sites) and potential client sites.

CCS Technology

Carbon Capture and Compression Facilities for Iernut Plant

- CO_2 capture costs are largely determined by the CO_2 concentration in discharge gas. High CO_2 concentrations in combustion gas result in lower capture costs as fewer energy is needed to capture the same quantity of CO_2. Iernut Plant, based on gas fueled combined cycle units, would most probably use a post-combustion capture method (based on amine solvents or advanced solvents). This approach is the most appropriate for the relatively low CO_2 concentration in combustion gas resulted from combustion of natural gas.
- Modernization of the existing facility may require changes in pipes, thermal integration lines and addition of absorption columns. Major pipelines, structural consolidation and changes in the site layout can moderately increase CAPEX because of space constraints and because maintaining operation continuity is an essential priority.
- Following CO_2 capture based on solvents, a multiple stages compressor will press the captured CO_2 at approximately 80–120 bars for transportation through pipes. CO_2 dehydration and cooling systems prior to final compression prevent corrosion and ensure compliance with pipeline specifications. Depending on the scale, the compression and pumping infrastructure may represent 10–20% of the CAPEX of the capture facility.
- CO_2 compression involves high consumption of electricity which could require modernization of the transformation station, transformers and switching equipment or even dedicated power lines for feeding the capture unit and compressors. Some parts of the steam circuit of the CCGT plant can be used to regenerate solvents, reducing the need for external steam generation. Obtaining an efficient thermal integration can significantly reduce operational costs of the capture system but the initial engineering complexity can be high. Large-scale absorption columns require solid foundations and additional buildings could be necessary to regenerate or store amine solvents together with safety systems for handling chemicals.

CCS Technology

CO_2 Storage Site in Compliance with NZIA

- Net-Zero Industry Act sets a collective objective at EU level of 50 $MtCO_2$ annual storage capacity by 2030, allocated between the main oil and gas producers.
- The targeted on-shore storage site would be part of a larger national and regional plan, offering an injection capacity of 4.12 $MtCO_2$/year, partially allocated for the volumes captured at Iernut and the remaining capacity would be available for other industrial emitters. An additional capacity of 1.42 Mtpa (in addition to the 4.12 Mtpa provided by NZIA) would be necessary to achieve Net-Zero, for Scope 1, 2 and 3 emissions.
- On-shore geological formations may include saline aquifers or depleted hydrocarbon reservoirs. Depleted reservoirs offer extensive geological data but require verification of well integrity and, possibly, recompletions.
- Injection wells require corrosion-resistant tubing and advanced cementing techniques to manage CO_2 in dense phase during the life of the project. Hence, design of the injection well must be adapted to the depth and conditions of the new reservoir environment. The monitoring, measuring and verification systems (MMV) should be implemented and usually include seismic networks, pressure gauges and possibly surface flow detection for regulatory compliance. High-capacity injection may require additional compressors near wellheads especially if reservoir pressure increases over time.
- On-shore pipeline for CO_2 transportation from Iernut Plant.
- Transportation from Iernut Plant to the storage site is based on a CO_2 on-shore pipeline, either recently constructed or reconfigured from the existing infrastructure. Costs vary depending on the route length, land topography and pipe diameter.

CCS Technology

Required Investments – Indicative Cost Ranges

Capture unit: depending on the final scale and the chosen technology, capturing approximately 0.608 $MtCO_2$/year from Iernut Plant can lead to a CAPEX of EUR 224 million (with an average of approximately EUR 350 million per 1 Mtpa of CO_2 capture capacity), including design, absorption/stripping, compression and integration works.

OPEX: ongoing costs include replacement of solvent, the energy required to compress and recover amine wastes.

Well integrated projects record OPEX of approximately 60–80% per tonne of captured CO_2.

Total storage: Development of on-shore storage facilities capable of safely injecting and storing 1 Mtpa of CO_2 would require CAPEX investments that vary significantly, from EUR 27 million (using depleted gas fields near Iernut) up to EUR 103 million (for a mixed on-shore/off-shore facility), with an average of approximately EUR 65 million for each 1 Mtpa storage capacity.

The investment required to create a storage capacity of 4.12 Mtpa is estimated between EUR 111 million and EUR 424 million, with an average investment amount of EUR 268 million. As there are no available feasibility studies in this stage of the project which would allow more accurate estimations for possible sites and site conditions, a conservative value of EUR 0.1 billion/$MtCO_2$/year was assumed for calculations.

Dedicated pipeline: construction of a dedicated on-shore pipeline for CO_2 transportation from Iernut Power Plant to the storage site could reach a cost of EUR 15 million (assuming a distance of 20 km).

By designing a storage hub so that it manages both the 0.608 $MtCO_2$/year from Iernut Plant and other industrial sources in a common capacity model, ROMGAZ costs per tonne could be reduced through economies of scale, making better compliance with NZIA targets and more attractive yields for investors possible.

While a storage capacity of 4.12 $MtCO_2$/year represents a compliance obligation, ROMGAZ does not undertake to continue to invest if the project does not demonstrate technical and economic reliability, if it is not supported by adequate financial guarantees and if it is not based on a serious case study that justifies the investment.

The need for carbon storage of Iernut Plant will decrease with the injection of hydrogen and biomethane in the mix.

CAPEX for CCS

In "Net-Zero" scenario, ROMGAZ CCS strategy is based on the reference scenario, with a NZIA storage capacity of 4.12 $MtCO_2$/year that will be used to store Iernut Plant emissions and the remaining capacity will be available for third parties.

CAPEX considerations:

- Storage capacity requirements : NZIA injection capacity of 4.12 $MtCO_2$/year is used to cover the combined emissions of Iernut Plant and Scope 3 in this scenario.
- Considerations on transportation: capital costs for transportation through pipelines amount to approximately EUR 15 million (for a distance of 20 km).

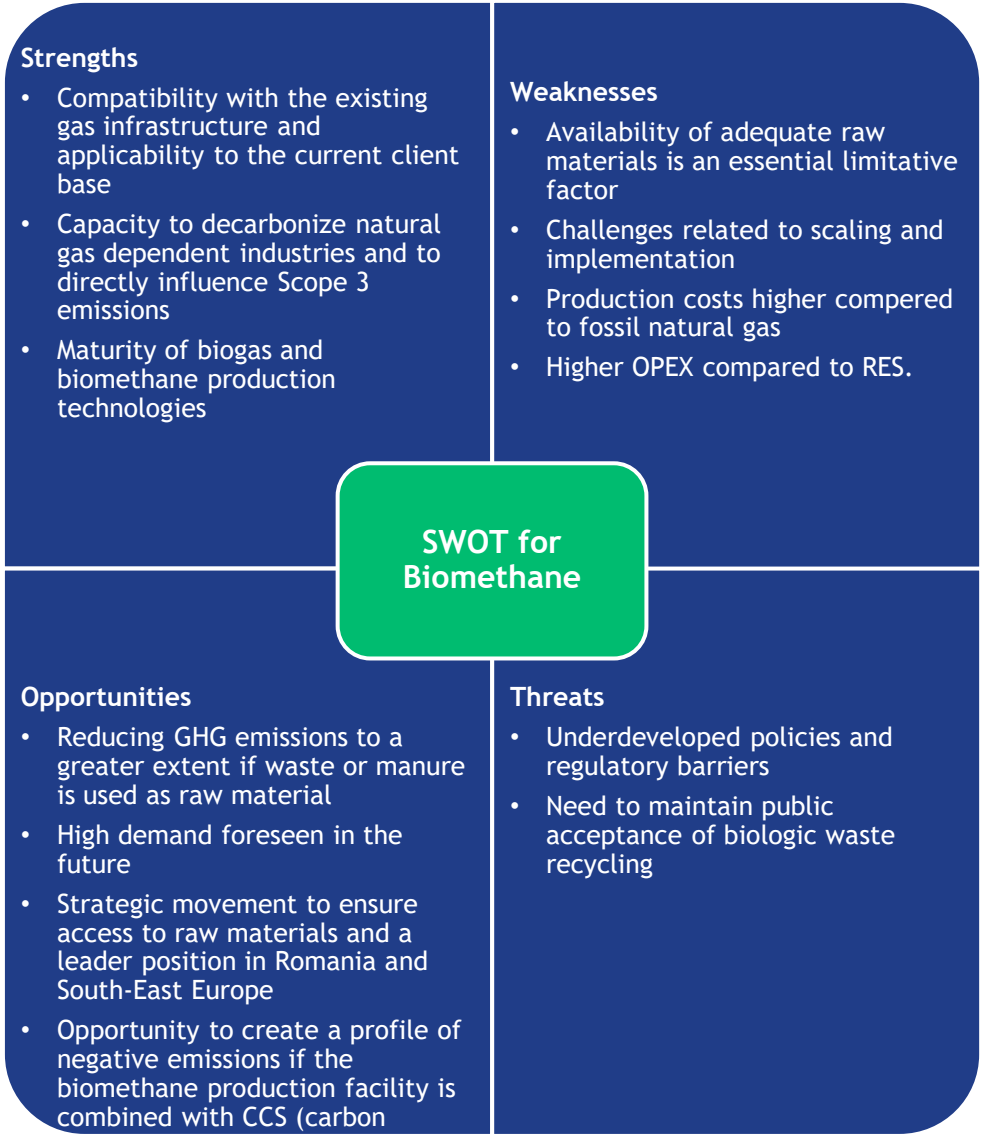
Summary of CAPEX for CCS Strategy in "Net-Zero" Scenario

Category	Capacity ($MtCO_2$/year)	CAPEX (EUR million)	Cost of transportation pipeline (EUR million)
CO_2 storage (NZIA)	4.12	412	
Iernut Power Plant capture+compression	0.64	224	15 (for Iernut Power Plant)

Biomethane

Investments in biomethane facilities could be considered in line with ROMGAZ strategic objectives due to:

- The compatibility with existing midstream and downstream activities
- The fact that, from all investments in renewable energy, biomethane is the closest ecologic substitute for natural gas and therefore the most compatible with the current product offer of ROMGAZ .
- Unlike hydrogen, biomethane injection in the gas infrastructure does not imply major changes or additional capital expenditure. Once produced and connected to the network, biomethane can circulate through ROMGAZ existing infrastructure – gas pipelines and storage facilities – can be sold to current clients through the existing trading methods and used in the CCGT plant of the company.



Biomethane

Decarbonisation Opportunity for ROMGAZ Clients

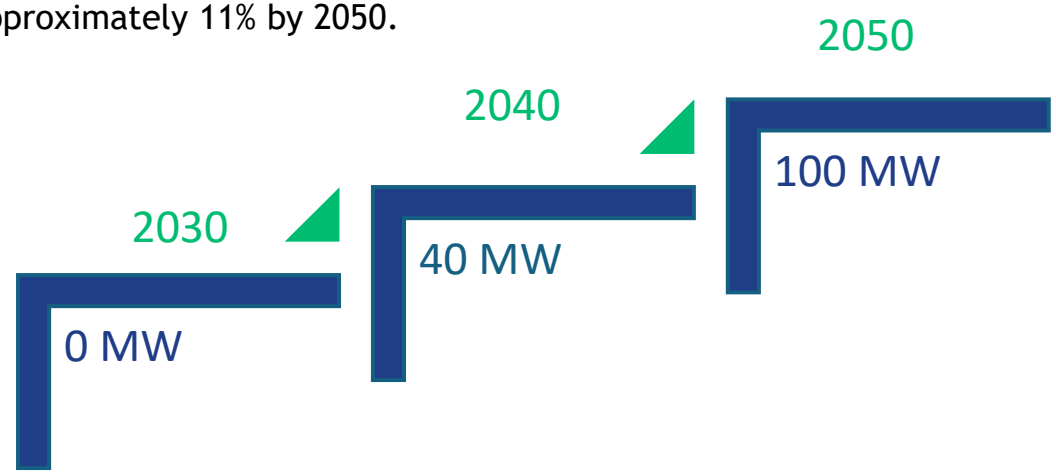
- Biomethane, as an ecologic substitute for natural gas, can be an ideal replacement, its role already being recognized by EU both for decarbonizing hard to electrify industries and for strengthening energy security. Biomethane produced by ROMGAZ could be supplied to existing clients either as a replacement for natural gas or as a mix, supporting the transition to net zero emissions and contributing to the reduction of Scope 3 emissions of the company.
- Romania is among the first 10 countries in Europe with the biggest potential for biogas market due to the availability of raw materials. However, the renewable gas market is among the least developed creating new growth opportunities for local players such as ROMGAZ.
- Demand for biomethane already exists and it is estimated to grow fast if EU maintains its current implementation rate of climate policies. To reach EU objective of 35 billion m^3 of biomethane production by 2030, it is necessary to significantly accelerate the implementation of policies across Europe.
- Biomethane can be easily transported across boarders within EU due to a well-developed gas network.

Biomethane Objectives

ROMGAZ intends to make a strategic decision to enter the biomethane market after 2030, once the financial constraints related to the implementation of Neptun Deep project will be mitigated, supporting new investments through positive cash flows. The company could establish an objective of 100 MW installed capacity of biomethane by 2050, with an interim objective of 40 MW by the end of 2040.

These objectives were set based on the following premises:

- ROMGAZ ambitions: the company acknowledges the complementary role of renewable gas in its current operations and regards it as an opportunity to align the business model to the requirements of the green economy. Company representatives also acknowledge the challenges of extending investments in biomethane and agreed on a moderate rate of development for this sector.
- Current market state: currently, Romania does not benefit from legislative support and incentives to accelerate development of renewable gas market. Nevertheless, PNIESC provides a 14-fold increase in biomethane production between 2022 and 2030. Because of these market conditions and financial constraints, ROMGAZ plans to start investments in biomethane facilities after 2030, with gradual additions of 5–6 MW installed capacity per year.
- A biomethane facility in Europe produces, in average, 43 GWh of gas annually, which means that the annual addition of approximately 31.5 GWh by ROMGAZ is in line with these average European capacities.
- This rate seems reasonable, especially if the increase will be mainly organic and not accelerated through mergers and acquisitions considering the relatively low number of existing biogas facilities on the Romanian market.
- Competitive advantage: ROMGAZ has the potential to become a key investor on the biogas market, as it activates in Romania – a country with high potential – and has extensive experience and a significant complementary portfolio in the field of natural gas. Currently, since there is no significant competition on the local market, it is estimated that ROMGAZ can target a market share of approximately 11% by 2050.



Biomethane Investments and Financing Options

- The estimated total cost of building a 100 MW biomethane facility by 2050 is EUR 250 million (in current values).
- The summary and schedule of CAPEX required for ROMGAZ investments in biomethane are shown below:

CAPEX Required for ROMGAZ investments in biomethane

CAPEX		2025-2030	2030-2040	2040-2050	Total
Biomethane production facilities	EUR million	0	115	135	250
Biomethane installed capacity	MW	0	40	60	100

Additional Decarbonisation Measures

Upstream Electrification

- Electrification of natural gas production becomes a significant decarbonization strategy in the oil and gas sector. By replacing gas combustion to power critical operations with electrical systems, ROMGAZ may significantly reduce the direct consumption of fossil fuels, thus reducing GHG emissions.
- This approach is extremely relevant in upstream processes, such as gas compression, heating, dehydration and auxiliary operations, where conventional use of gas, not only generates emissions but has a high energy cost.
- Electrical equipment generally have a higher efficiency as compared to those fuelled by gas. For example, applying an efficiency factor of 1.5, electrical systems may have the same efficiency by reducing energy consumption by 33%.
- With respect to production, transition to electrification may reduce the energy requirement per produced natural gas unit, supporting both economic and environmental objectives.
- Upstream electrification implies detailed evaluations of energy demand in various production activities. Usually, key components include:
  - Compressors, roughly 70% of the total upstream energy demand;
  - Heaters, with an estimated contribution of 20%;
  - Dehydration units – 7%;
  - Auxiliary systems – 3%.
- Modern electrical systems can be calibrated to ensure high availability (95% assumed), designed for continuous operation with over 8,300 operating hours annually.
- Based on ROMGAZ data on upstream gas consumption in 2023 (0.71 TWh), the installed capacity required to replace conventional fuel consumption was estimated at approximately 57 MWh.
- Electrification implies a capital expenditure of EUR 3.67 million per 1 MWh, based on modernisation of a compressor station with electric engine.
- The total capital demand rises to EUR 83.67 million for 22.8 MWh, representing 40% of the total 57 MWh capacity. It is worth mentioning that these costs do not include capital expenses required for power supply in isolated locations, which might be a significant investment.

Additional Measures

Methane Emissions Management

- Methane emissions management is an essential component of ROMGAZ decarbonization strategy, aligned with the company's commitment to sustainability and in line with European regulations on methane, as well as with OGMP 2.0. reporting standard.
- To address this challenge, the company developed a comprehensive program to reduce methane emissions, focused on controlled flaring, venting and fugitive emissions, through advanced leak detection technologies, infrastructure modernisation and process optimisation.
- In line with the Annual Implementation Plan OGMP 2.0, ROMGAZ set a methane emissions intensity target of 0.19% until 2028 (compared to 0.21% in 2023).
- Until 2028, ROMGAZ intends to reduce methane intensity to 0.19% through initiatives such as:
    - Implementation of methane monitoring technologies at asset level;
    - Extension of the Leak Detection and Repair program (LDAR) at all gas fields;
    - Digitization of emission monitoring systems and predictive maintenance;
    - Optimisation of gas compression, processing and maintenance operations.
- To support these efforts, ROMGAZ allocated a unique investment of EUR 36 million and an annual budget of EUR 6 million for continuous monitoring, LDAR implementation and methane emissions reduction programs.
- Continuation of this strategy would allow an annual reduction of approximately 2% of methane intensity that would lead to a total reduction of 70% of methane emissions from own operations by 2050. Estimated total expenses by 2050 are EUR 198 million, including the initial investment and the annual operational budget.

Additional Measures

Nature Based Solutions

- By 2050, ROMGAZ will have approximately 1,419,788 tonnes of CO_2 residual emissions which need to be approached to reach climate neutrality.
- To compensate these emissions, Nature Based Solutions (NBS) will play an essential role in compensating carbon emissions.
- NBS capitalizes on natural ecosystems to capture and store atmospheric carbon, at the same time offering additional benefits such as conservation of biodiversity, improvement of water management and increasing climate resilience.
- ROMGAZ will purchase high quality and verifiable NBS carbon credits on the market or will develop its own compensation projects depending on the availability of cost efficient and scalable options.
- All compensation projects must comply with high integrity standards and be independently verified to ensure credibility, permanence and additionality in carbon sequestration process. ROMGAZ will prioritize sequestration projects based on scientific evidence.
- NBS strategy will be developed on a diversified portfolio of forestation and reforestation projects (A/R), carbon sequestration in soil, restauration of wet areas and peatlands, as well as sustainable land use initiatives.
- ROMGAZ can cooperate with government forestry agencies, private land owners and conservation organizations to extend forestation efforts and to integrate climate resilient tree species. Sequestration of carbon in soil will be promoted through environmentally friendly agriculture, agroforestry and sustainable agricultural practices that increase organic carbon stocks in soil.
- The average market price for carbon compensation units based on nature is approximately EUR 8.48 per tonne of CO_2. If ROMGAZ would compensate the 1,419,788 tonnes of CO_2 residual emissions, the total cost would be approximately EUR 12.06 million. A more conservative approach would be compensation of Scope 3 emissions, categories 9 and 11 (1.205 million tonnes of CO_2e – emissions related to the use of natural gas by final consumers) by additional storage capacity and then using carbon compensations only to cover those 0.215 million tonnes of CO_2e from other Scopes and categories. The cost of such option would be approximately EUR 1.85 million to which EUR 120 million are added associated with the extension of CCS capacity.

Capital Investment (CAPEX) in "Net-Zero" Scenario

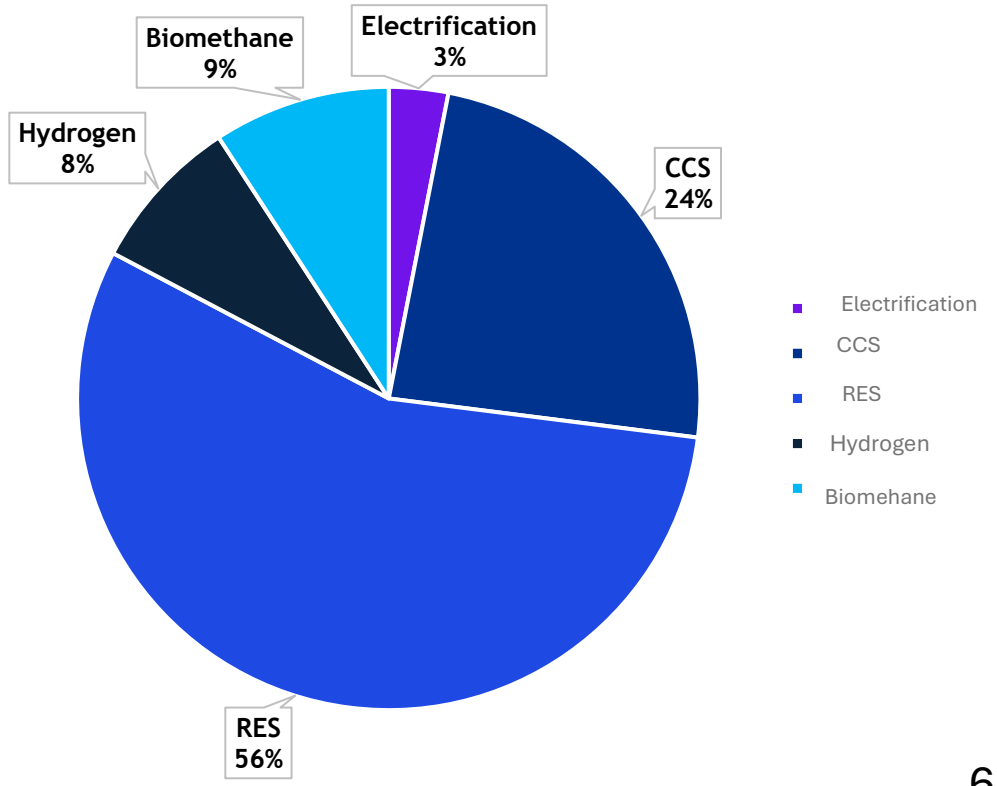
Capital investment (CAPEX) in Net-Zero scenario		
Technology/Solution	**Category**	**CAPEX (EUR bln)**
CCS	Injection capacity (4.12 Mt/year according to NZIA)	0.412
	Combined cycle Iernut power plant	0.239 (0.224+0.015)
	CCS Total	0.651
RES	PV	0.516
	Wind turbines	1.000
	RES Total	1.516
Biomethane	Biomethane production	0.250
Hydrogen	Electrolyzers (with peripheral equipment)	0.220
Electrification of upstream operations		0.084
Methane management		0.036
Compensation of carbon emissions		0.002
Total		2.758

Source: KPMG Analysis

Capital Investment (CAPEX) in "Net-Zero" Scenario

- ROMGAZ might allocate more than half of its decarbonization investments (55.7%) to RES, making renewable energy the foundation of its Net-Zero strategy. CCS represents 23.9%, reflecting the efforts to reduce emissions from production of energy from natural gas.
- Although CCS investments represent approximately a quarter of all investments, they have a roughly 60% contribution to GHG emission reduction. Hydrogen investments represent 8.1%, supporting energy solutions with reduced future carbon emissions, while biomethane represents 9.2%.
- This investment structure focuses on expanding renewable energy, integrating at the same time CCS, hydrogen and biomethane for decarbonization of operations.

Weight of investments in cutting edge technologies in ROMGAZ decarbonization actions

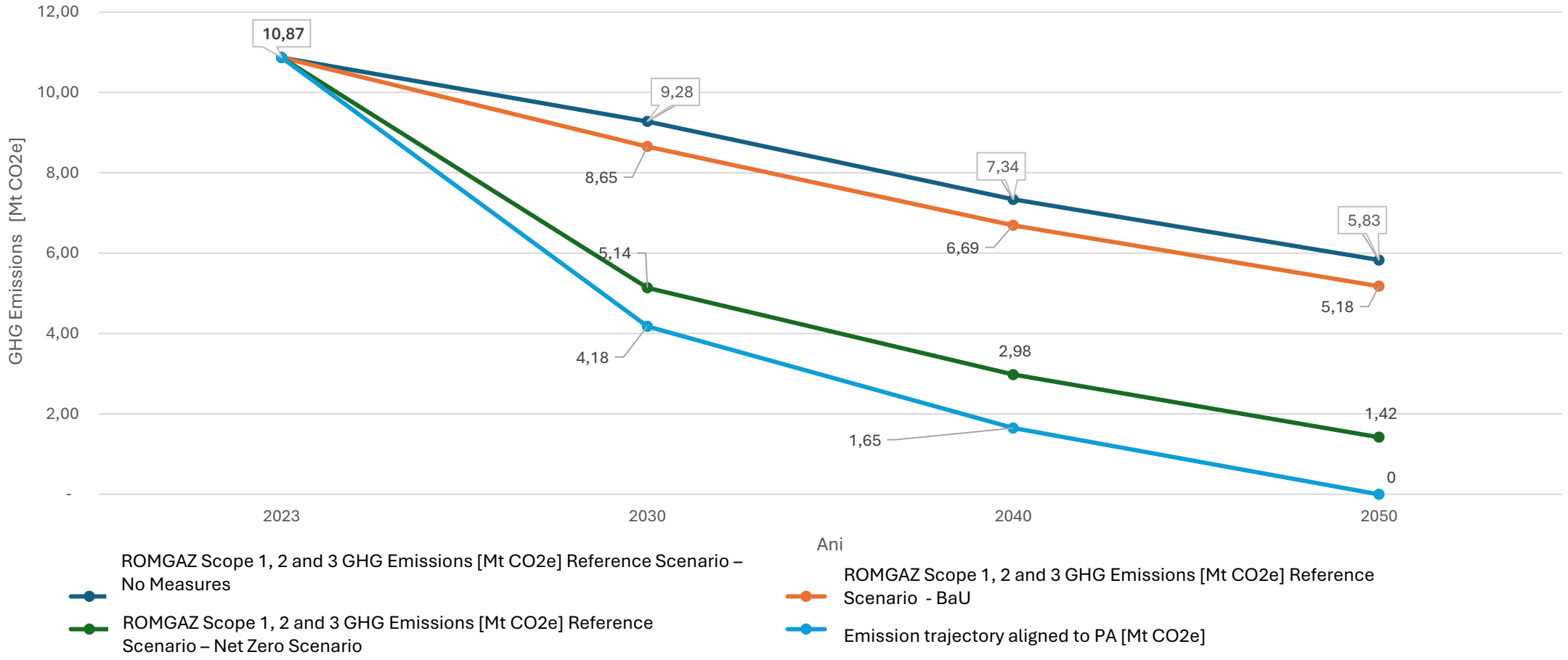


Carbon Footprint Projections – "NET-ZERO" Scenario

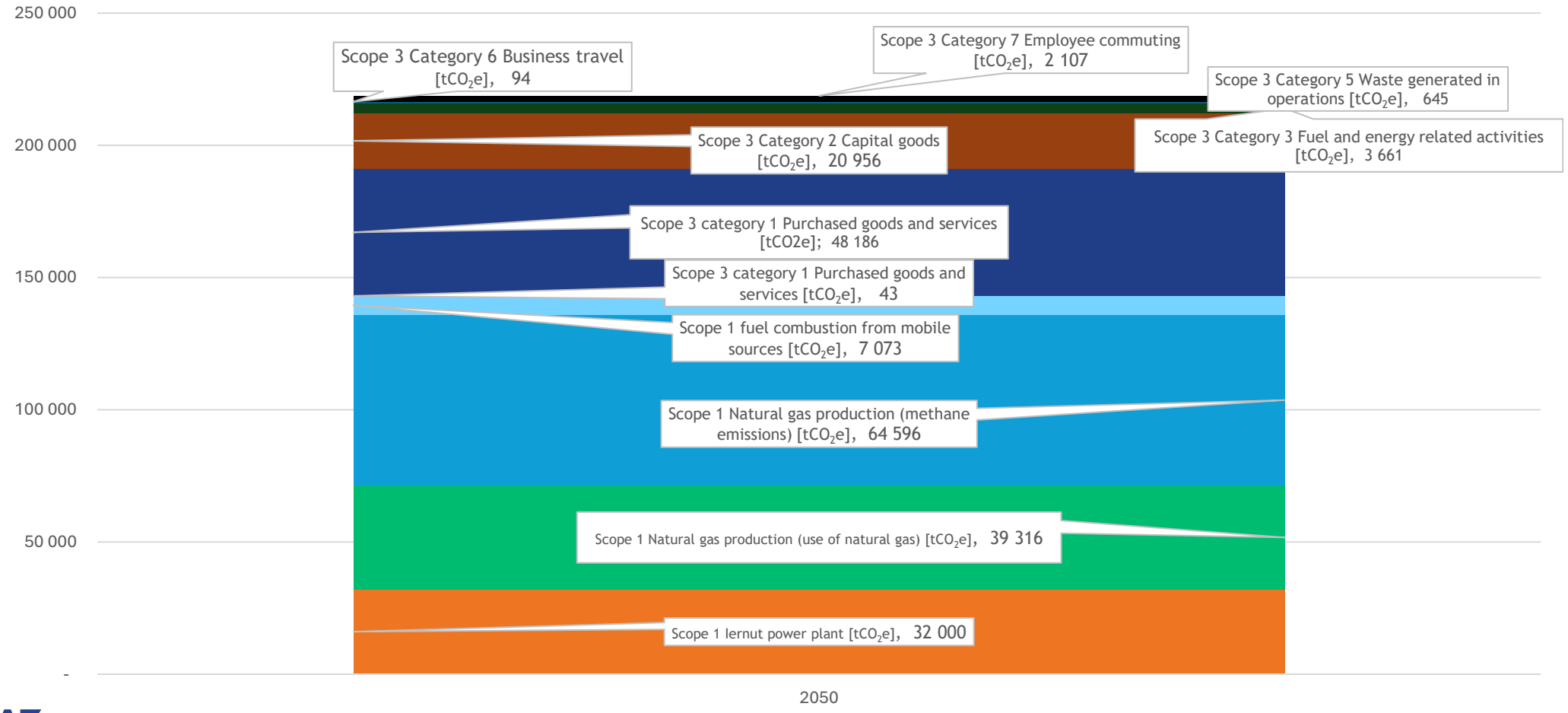
GHG Protocol	GHG emissions category \ year	2023	2030	2040	2050
Scope 1	Iernut power plant [tCO_2e]	551.064	32.000	23.727	20.929
Scope 1	Natural gas production (natural gas use) [tCO_2e]	129.804	108.723	50.643	39.316
Scope 1	Natural gas production (methane emissions) [tCO_2e]	207.574	153.369	99.534	64.596
Scope 1	Fuel combustion from mobile sources [tCO_2e]	14.011	11.736	9.111	7.073
Scope 1	Fugitive emissions [tCO_2e]	84	71	55	43
Scope 1	Total [tCO_2e]	902.538	305.898	183.069	131.957
Scope 2	Electricity consumption [tCO_2e]	9.725	8.145	6.324	4.909
Scope 3 category 1	Purchased goods and services [tCO_2e]	95.455	79.952	62.069	48.186
Scope 3 category 2	Capital goods [tCO_2e]	41.512	34.770	26.993	20.956
Scope 3 category 3	Fuel and energy related activities [tCO_2e]	7.252	6.074	4.716	3.661
Scope 3 category 4	Upstream transportation and distribution [tCO_2e]	-	-	-	-
Scope 3 category 5	Waste generated in operations [tCO_2e]	1.277	1.070	830	645
Scope 3 category 6	Business travel [tCO_2e]	186	156	121	94
Scope 3 category 7	Employee commuting [tCO_2e]	4.173	3.496	2.714	2.107
Scope 3 category 8	Upstream leased assets [tCO_2e]	-	-	-	-
Scope 3 category 9 (gross value)	Downstream transportation and distribution [tCO_2e]	45.299	37.942	17.561	2.287
Scope 3 category 9 (gross value)	Downstream transportation and distribution, including use of remaining CO_2 storage, according to NZIA [tCO2e]	45.299	0	0	0
Scope 3 category 10	Processing of sold products [tCO_2e]	-	-	-	-
Scope 3 category 11 (gross value)	Use of sold products [tCO_2e]	9.760.832	8.175.591	6.346.953	4.927.328
Scope 3 category 11 (gross value)	Use of sold products, including use of remaining CO_2 storage, according to NZIA [tCO_2e]	9.760.832	4.663.591	2.677.760	1.203.729
Scope 3 category 12	End of life treatment of sold products [tCO_2e]	-	-	-	-
Scope 3 category 13	Downstream leased assets [tCO_2e]	-	-	-	-
Scope 3 category 14	Franchises [tCO_2e]	-	-	-	-
Scope 3 category 15	Investments [tCO_2e]	-	-	-	-
Scope 3 (gross value)	Total [tCO_2e]	9.955.987	8.339.051	6.461.958	5.005.263
Scope 3 (gross value) including use of remaining CO_2 storage capacity compliant with NZIA, to cover emissions from categories 9 and 11	Total [tCO_2e]	9.955.987	4.827.051	2.792.764	1.282.922
Scope 1, 2 and 3 (gross value)	Total [tCO_2e]	10.868.250	8.644.949	6.653.301	5.148.290
Scope 1, 2 and 3, including use of remaining CO_2 storage capacity compliant with NZIA, to cover (net) emissions from categories 9 and 11	Total [tCO_2e]	10.868.250	5.141.094	2.982.157	1.419.788

[1] Scope 2 emissions could be reduced to zero by compensating emissions generated by electricity consumption with Guarantees of Origin from renewable energy production (RES)

GHG Emissions Trajectory in line with Paris Agreement vs. ROMGAZ Emissions Scenarios



Residual GHG Emissions Estimated for 2050



Low Carbon Emissions Targets and Pathway towards reaching the Targets

To transform the vision into measurable progress, ROMGAZ Net Zero pathway sets specific objectives, aligned with the National Integrated Program for Energy and Climate Change (PNIESC) of Romania and with the European Net-Zero Industry Act (NZIA):

- **Reduce Scope 1 emissions:**
  - Eliminate routine flaring and venting and fully implement LDAR program for main facilities;
  - Modernise upstream operations by means of electrification, improve processes and implement digital monitoring systems.
- **Launch CCS solutions by 2030:**
  - Modernise Iernut Power Plant with a facility for carbon capture and compression (CCC);
  - Develop a geological CO_2 storage capacity of 4.12 Mtpa;
  - Collaborate with industrial clients to store third party emissions using Romgaz CCS infrastructure.
- **Develop renewable energy capacities** (PV and wind) to reach at least 1,180 MW until 2050:
  - 180 MW photovoltaic energy until 2030 (already in progress);
  - Gradually add on-shore/off-shore wind power and photovoltaic production capacities, reaching 500 MW until 2040 and 1,180 MW until 2050.
- **Integrate green hydrogen production:**
  - Commissioning an electrolyzer capacity of **130 MW** until 2036;
  - Supply green hydrogen to Iernut Power Plant as of 2036, a natural gas mixture to comply with future requirements on use of hydrogen;
  - Optional, supply excess green hydrogen quantities to the market.
- **Reduce Scope 3 emissions:**
  - Encourage downstream clients to adopt low carbon emission solutions (for example, green gas, biomethane);
  - Promote co-investments for carbon capture and for end use applications based on hydrogen.

Through a systematic implementation of these measures, ROMGAZ may close the gap from the 1.5°C objective, gradually reducing the carbon footprint from 10.87 million tonnes CO_2e in 2023 to almost zero operational emissions (Scope 1+2) until 2050.

Investment Plan 2025-2050 in EUR mln (1/2)

Year	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Electrification	-	-	-	-	-	(3.3)	(8.6)	(8.6)	(8.6)	(8.6)	(8.6)	(8.6)	(8.6)
CCS	-	(169.1)	(172.8)	(176.4)	(180.1)	-	-	-	-	-	-	-	-
Solar energy PV	-	(11.9)	(36.0)	(36.0)	(36.0)	(30.0)	(17.6)	(17.6)	(17.6)	(17.6)	(17.6)	(17.6)	(17.6)
Wind energy	-	-	-	-	-	-	-	-	-	-	-	-	-
Hydrogen	-	-	-	-	-	-	-	(57.5)	(58.0)	(59.5)	(61.0)	-	-
Biomethane	-	-	-	-	-	-	(4.4)	(9.1)	(14.0)	(14.0)	(14.0)	(14.0)	(14.0)
Total initial investment costs	-	(181.1)	(208.8)	(212.5)	(216.1)	(33.2)	(30.6)	(92.8)	(98.2)	(99.7)	(101.2)	(40.2)	(40.2)
Replacement costs	-	-	-	-	-	-	-	-	-	-	-	-	-
Residual value	-	-	-	-	-	-	-	-	-	-	-	-	-
Total investment required	-	(181.1)	(208.8)	(212.5)	(216.1)	(33.2)	(30.6)	(92.8)	(98.2)	(99.7)	(101.2)	(40.2)	(40.2)

Investment Plan 2025-2050 in EUR mln (2/2)

Year	2038	2039	2040	2041	2042	2043	2044	2045	2046	2048	2049	2050	Total
Electrification	(8.6)	(8.6)	(5.7)	-	-	-	-	-	-	-	-	-	**(86)**
CCS	-	-	-	-	-	-	-	-	-	-	-	-	**(698)**
Solar energy PV	(17.6)	(17.6)	(19.2)	(22.4)	(22.4)	(22.4)	(22.4)	(22.4)	(22.4)	(22.4)	(22.4)	(15.0)	**(545)**
Wind energy	(34.9)	(105.6)	(98.6)	(84.5)	(84.5)	(84.5)	(84.5)	(84.5)	(84.5)	(84.5)	(84.5)	(56.5)	**(1.056)**
Hydrogen	-	-	-	-	-	-	-	-	-	-	-	-	**(236)**
Biomethane	(14.0)	(14.9)	(15.8)	(16.8)	(16.8)	(16.8)	(16.8)	(16.8)	(16.8)	(16.8)	(11.5)	(5.8)	**(280)**
Total initial investment expenses	(75.1)	(146.7)	(139.4)	(123.7)	(123.7)	(123.7)	(123.7)	(123.7)	(123.7)	(123.7)	(118.4)	(77.4)	**(2.901)**
Replacement costs	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Residual value	-	-	-	-	-	-	-	-	-	-	-	1.572,0	**1.572**
Total investment required	(75.1)	(146.7)	(139.4)	(123.7)	(123.7)	(123.7)	(123.7)	(123.7)	(123.7)	(123.7)	(118.4)	1.494,6	**(1.329)**

Operating Income and Expenses (2025-2050, in EUR mln)

Year	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Electrification	-	-	-	-	-	-	-	-	-	-	-	-	-
CCS	-	-	-	-	-	197.1	197.1	197.1	197.3	197.6	197.8	204.9	205.1
Solar energy PV	-	-	4.5	8.6	13.1	17.0	18.9	20.4	22.2	23.4	24.5	26.3	28.0
Wind energy	-	-	-	-	-	-	-	-	-	-	-	-	-
Hydrogen	-	-	-	-	-	-	-	-	-	-	-	112.7	112.7
Biomethane	-	-	-	-	-	-	-	-	2.1	4.1	6.2	8.3	10.3
Total income	-	-	4.5	8.6	13.1	214.1	216.0	217.5	221.6	225.1	228.5	352.2	356.2
Electrification	-	-	-	-	-	-	(1.0)	(2.0)	(2.9)	(3.6)	(4.3)	(5.1)	(5.7)
CCS	-	-	-	-	-	(141.8)	(141.8)	(141.8)	(141.7)	(141.6)	(141.4)	(137.7)	(137.5)
Solar energy PV	-	-	(0.6)	(1.3)	(1.9)	(2.5)	(2.8)	(3.1)	(3.3)	(3.6)	(3.9)	(4.2)	(4.4)
Wind energy	-	-	-	-	-	-	-	-	-	-	-	-	-
Hydrogen	-	-	-	-	-	-	-	-	-	-	-	(100.0)	(99.3)
Biomethane	-	-	-	-	-	-	-	-	(0.6)	(1.3)	(1.9)	(2.5)	(3.2)
Total expenses	-	-	(0.6)	(1.3)	(1.9)	(144.3)	(145.7)	(146.9)	(148.6)	(150.1)	(151.5)	(249.4)	(250.2)
Net income	-	-	3.9	7.3	11.3	69.7	70.4	70.6	73.0	75.0	77.0	102.8	106.0

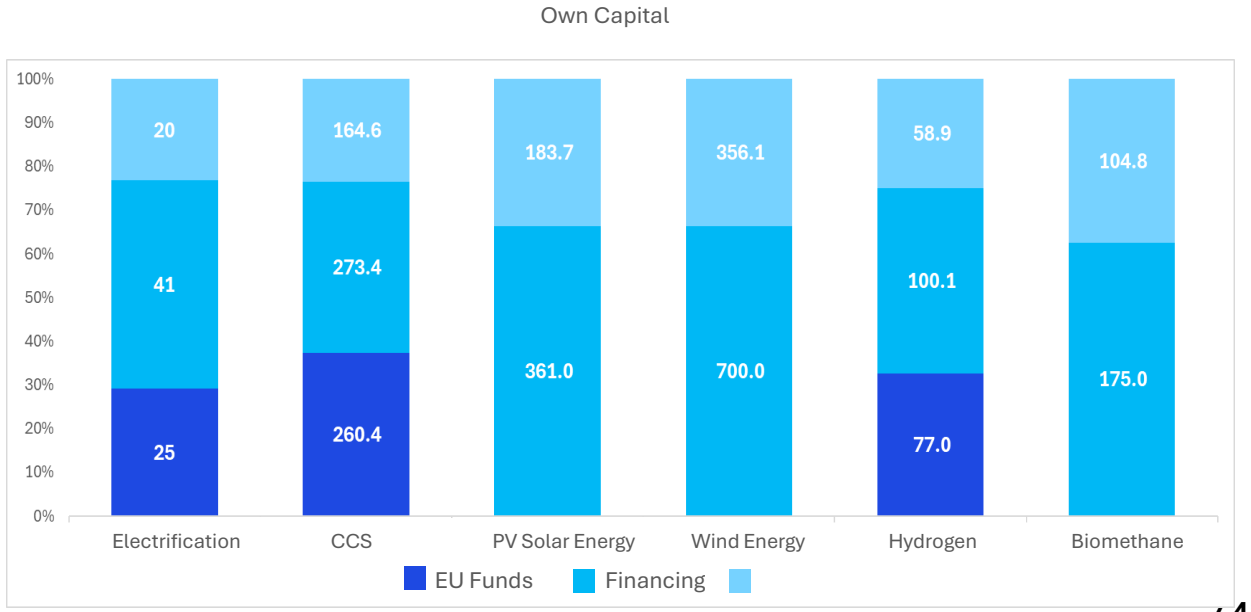
Operating Income and Expenditure (2025-2050, in EUR mln)

Year	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Total
Electrification	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CCS	205.4	205.6	205.9	206.2	206.5	206.8	207.1	207.4	207.7	208.0	208.3	208.6	208.9	**4,286.4**
Solar energy PV	29.6	30.5	31.2	33.2	35.2	37.3	39.4	41.2	43.2	45.2	45.8	47.6	49.4	**715.8**
Wind energy	-	10.0	19.4	27.1	34.8	42.6	50.5	58.1	65.8	73.6	79.1	86.4	94.0	**641.4**
Hydrogen	112.7	112.7	112.7	112.7	112.7	112.7	112.7	112.7	112.7	112.7	112.7	112.7	112.7	**1,690.9**
Biomethane	12.4	14.5	16.6	19.0	21.5	24.0	26.5	28.9	31.4	33.9	36.4	38.8	41.3	**376.1**
Total income	360.2	373.2	385.8	398.2	410.8	423.3	436.2	448.3	460.8	473.3	482.4	494.1	506.3	**7,710.5**
Electrification	(6.4)	(6.8)	(7.2)	(7.0)	(6.8)	(6.7)	(6.5)	(6.3)	(6.2)	(6.0)	(5.7)	(5.6)	(5.4)	**(107.3)**
CCS	(137.4)	(137.3)	(137.1)	(137.0)	(136.8)	(136.6)	(136.5)	(136.3)	(136.2)	(136.0)	(135.8)	(135.7)	(135.5)	**(2,899.7)**
Solar energy PV	(4.7)	(5.0)	(5.2)	(5.6)	(5.9)	(6.3)	(6.6)	(6.9)	(7.3)	(7.6)	(7.9)	(8.2)	(8.6)	**(117.4)**
Wind energy	-	(1.7)	(3.4)	(4.8)	(6.1)	(7.5)	(8.9)	(10.2)	(11.6)	(13.0)	(14.4)	(15.7)	(17.1)	**(114.5)**
Hydrogen	(98.9)	(95.9)	(93.1)	(92.0)	(91.0)	(90.1)	(89.4)	(88.2)	(87.3)	(86.4)	(83.4)	(82.3)	(81.5)	**(1,358.9)**
Biomethane	(3.8)	(4.4)	(5.1)	(5.8)	(6.6)	(7.3)	(8.1)	(8.8)	(9.6)	(10.3)	(11.1)	(11.9)	(12.6)	**(114.9)**
Total expenses	(251.2)	(251.1)	(251.2)	(252.1)	(253.3)	(254.5)	(256,0)	(256.9)	(258.1)	(259.4)	(258.4)	(259.4)	(260.7)	**(4,712.6)**
Net income	109.0	122.2	134.7	146.1	157.5	168.9	180.2	191.5	202.7	213.9	224.0	234.7	245.6	**2,997.9**

Possible Financing Sources to Support Investments

- Three main sources of financing were considered for the implementation of projects in the decarbonization strategy: equity, loan financing, and state aid. The financing structure differs depending on the project, with some being eligible for European funds, while others rely on private financing through loans and equity.
- Main financing sources include EU funding, namely European grant for cofinancing the project and national public contributions, which may consist in complementary financing by national governments or local authorities, as well as in additional grants or equity subsidies. It is estimated that EU funds for CCS, hydrogen and electrification projects from initial capital expenditures shall be 40%, 35% and 30% depending on individual profitability level and on the importance of such projects in the climate policy agenda of the EU. The remaining financing requirement for such projects shall be covered from 70% loans and 30% own capital.

- Wind, photovoltaic, biomethane and electrification energy projects are supposedly to be financed 70% from loans and 30% from own capital, due to the high certainty on future income and expenses. It is assumed that no additional EU funds will be allocated for solar and wind projects, as these have become profitable enough to attract private investments.
- Total financing is aligned with the total investment cost in the project, ensuring that all financial resources are covered, without the need to inject additional capital, as own funds from current activities are sufficient to cover investment requirements.



Summary of main KPI in “Net-Zero” Scenario

KPI for ”Net-Zero” Scenario					
Technology/Solution	Description	Unit	2030	2040	2050
CCS	CO_2 storage capacity	Mt CO_2	4.12	4.12	4.12
RES	Installed photovoltaic capacity	MW	180	400	680
	Wind turbine installed capacity	MW	0	100	500
Biomethane	Installed biomethane capacity	MW	0	40	100
Hydrogen	Green hydrogen production capacity	tonnes	0	25,930.63	25,930.63
Electrification upstream	Weight of electrification	%	0	40	40
Methane management	Methane emissions reduction weight (related to reference level in 2023)	%	26	52	69
Carbon compensation	Carbon compensation purchased and cancelled	tCO_2	0	0	218,675

04

DOUBLE MATERIALITY ASSESSMENT

Legal Framework

- Corporate Sustainability Reporting Directive (CSRD), entered into force on January 5, 2023.
- CSRD is an important initiative in the European Union's strategy to ensure sustainable development and responsible business practices across its member states.
- CSRD introduces European Sustainable Reporting Standards (ESRS) that guide the sustainability reporting starting from 2024.
- The objective of the Directive is to facilitate a consistent, comparable, and reliable approach towards reporting sustainability/non-financial information.
- By introducing more stringent obligations, the Directive aims to ensure that companies in scope will provide a comprehensive picture of their ESG performance, including details of their sustainability risks, impacts, and opportunities.
- Through the first set of ESRS, CSRD introduces the concept of double significance or double materiality, where the companies select from approximately 1200 disclosure data points and ESG indicators, only the information which is most relevant for them and their stakeholders.

Double Materiality Assessment

In the analysis process carried out in 2024, ROMGAZ complied with the fundamental principles of Double Materiality Assessment as included in CSRD/ESRS, i.e. it assessed:

- The materiality of positive and negative impacts, current or potential, in the short, medium, and long term that ROMGAZ has or may have on the environment and society;
- Financial materiality, to determine how sustainability matters may influence the company's financial performance in the short, medium, and long term.

Considering that the double materiality assessment process is a complex one, ROMGAZ set up a project team.

The project team consisted of representatives from departments with responsibilities in sustainability reporting and from functional departments (Quality Environment, OHS, Communication, Methane Emissions Management, Human Resources, etc.).

Double Materiality Assessment

Double materiality assessment was performed in several stages:

Identify potential material topics

Following the analysis of internal documents, of studies and of a compared analysis regarding the industry, ROMGAZ Group team identified an extended list of relevant ESG topics (environment, social and governance), with potential importance for stakeholders and which might have a significant impact on the company's activity.

Consult stakeholders

ROMGAZ Group team identified stakeholders, during an internal workshop, by referring to the business model and commercial relationships, as well as considering the potential impact of the company's activities and products on them. Stakeholders were then consulted and their feedback incorporated into the double materiality assessment process.

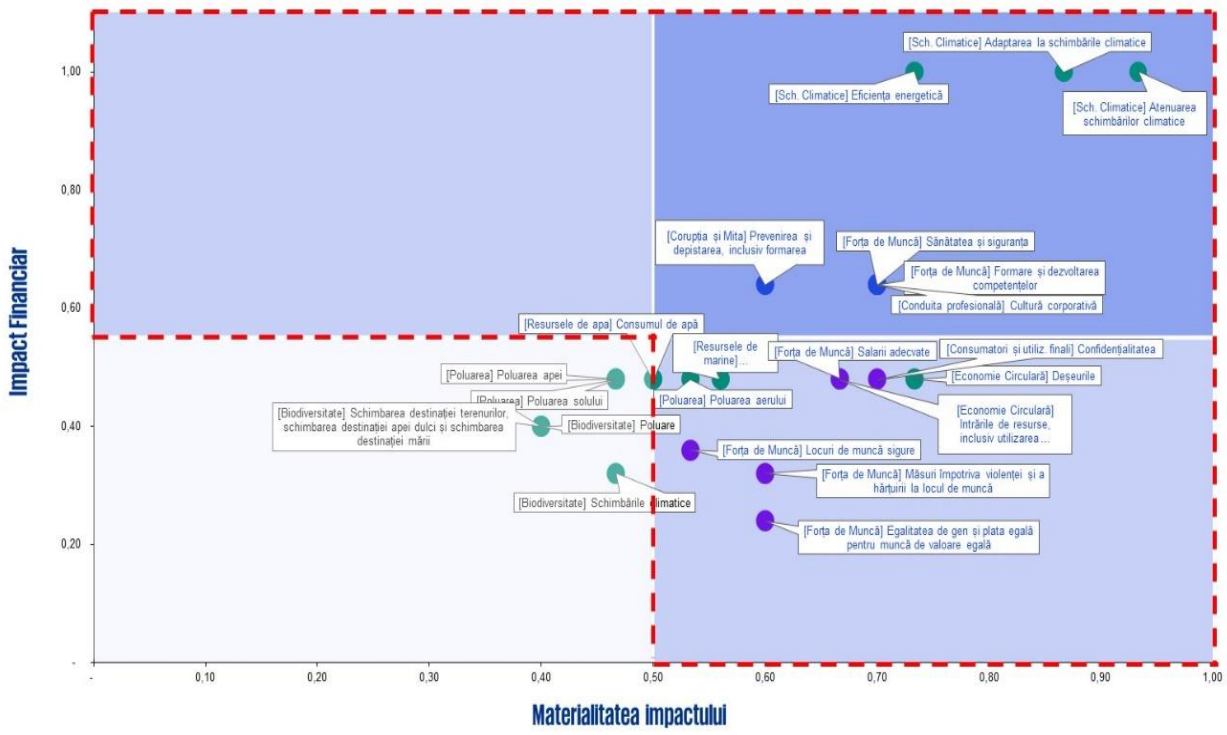
Impact, risks and opportunities analysis

Based on the list of material topics identified in the previous step, the project team began the process of analyzing impacts, risks, and opportunities (IRO). The process included internal workshops, analysis of literature, and internal specialized materials. ROMGAZ Group analyzed and located these impacts, both in its own operations and in its relationship with suppliers and partners.

Double materiality matrix

The IRO analysis resulted in a double materiality matrix (see next slide), where the vertical axis (Oy) reflects financial materiality and the horizontal axis (Ox) indicates the materiality of the impact for each topic analysed. Topics that scored high on at least one of the two dimensions were considered material and were included in the 2024 sustainability report.

Double Materiality Assessment



Double Materiality Matrix

Material topics identified for 2024:

Environment:

- E1 Climate Change – Adapt to climate change;
- E1 Climate Change – Mitigate climate change;
- E1 Climate Change – Energy efficiency;
- E2 Pollution – Air pollution;
- E3 Water and Marine Resources – Water sampling;
- E3 Water and Marine Resources – Water discharge;
- E5 Circular Economy – Resource inflow, including resource use;
- E5 Circular Economy - Waste;

Social:

- S1 Own Workforce – Secure employment;
- S1 Own Workforce – Adequate wages;
- S1 Own Workforce – Health and safety;
- S1 Own Workforce – Gender equality and equal pay for work of equal value;
- S1 Own Workforce – Training and skills development;
- S1 Own Workforce – Measures against violence and harassment in the workplace;
- S4 Consumers and End-Users - Confidentiality;

Governance:

- G1 Business Conduct – Corporate culture;
- G1 Business Conduct – Corruption and bribery – Prevention and detection including training.