

2022

PannErgy Plc.

Sustainability Management and
Environmental, Social and Governance
(ESG) Performance Summary and
Report

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Preface

PannErgy Plc. uses clean and renewable energy solutions to build the future, giving every generation the opportunity to create value by applying the principles of environmental protection and sustainability. The Company has set itself the goal of becoming a market leader in the Central and Eastern European region through the use of geothermal energy, which provides significant economical and ecological value for now and in the future.

In addition to PannErgy Plc.'s green energy activities and its regional leadership role in deep geothermal heat production, the Company is also committed to protecting the environment, and is a prominent advocate of combating climate change.

In addition to the data contained in the audited and consolidated financial statements prepared by the Company's management in accordance with the International Financial Reporting Standards (IFRSs) for the period ending on 31 December 2022 and submitted for the General Meeting's approval, this Sustainability Management and Environmental, Social and Governance (ESG) Performance Summary and Report (hereinafter: Sustainability Report or ESG Report) also presents the environmental and social impacts of the PannErgy Group's operations during the relevant time period, as well as the Company's strategy and actions with regards to sustainability and environmental protection.

The PannErgy Group believes that is extremely important to determine the influence and impact its activities have on the environment and on society as a whole.

As a renewable energy producer and a major contributor to carbon footprint reductions, the Company sees ESG as a significant opportunity for establishing a framework to identify non-financial aspects that may have a material impact on the performance of an investment, including the assessment and presentation of new non-financial risks.

The purpose of this Sustainability Report is to enable investors and other market participants to familiarise themselves with these details, and to that end the Company provides deeper and more detailed disclosures with respect to sustainability, focusing on climate change, climate risk, and sustainable development.





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Key indicators for 2022 based on the Company's impact on sustainability, environmental protection, energy safety and society

Environment



PANNERGY is Hungary's leading geothermal energy producing company



1,785 TJ

Consolidated green energy heat generation in the reporting period



~80,000 t

CO₂ equivalent GHG emission savings in 2022



78%

Emissions savings rate in green energy generation

Energy safety



~60,000

Households supplied by geothermal heating generated by the Company



More than 50%

Share in Hungary's geothermal heat production (2022)

Society / Corporate



14

employees (31/12/2022), of which women represent 50%



6

Subsidised foundation initiatives

Projects



1. Introduction of the Company

The core element of the strategy of the PannErgy Group, the region's dominant company utilising geothermal heat, is to play a key role in countering climate change by its environmentally friendly services of high operational reliability, and to enable major reductions in energy related expenditures by implementing environment preserving capital projects. PannErgy Plc. uses clean and renewable energy solutions to build the future, giving every generation the opportunity to create value by applying the principles of environmental protection and sustainability. The Company has set itself the goal of becoming a market leader in the Central and Eastern European region through the use of geothermal energy, which provides significant economical and ecological value for now and in the future.

1.1. Key indicators of the reporting period

Consolidated heat sales in the reporting year	1,785 TJ
Installed primer operational capacity in MW	~ 125 MW
Consolidated value of assets	HUF 27,331 million
Consolidated revenue	HUF 7,145 million
Consolidated EBITDA	HUF 3,612 million
Number of employees within the Group on 31 December 2022	14 persons
Ongoing projects	4 projects
Geothermal production wells	6 wells
Reinjection wells	6 wells
Main geothermal heat centres	4 heat centers
Length of transmission pipelines (approx.)	44 km
Number of households supplied (approx.)	60.000 households
Number of industrial customers supplied directly	6 partners

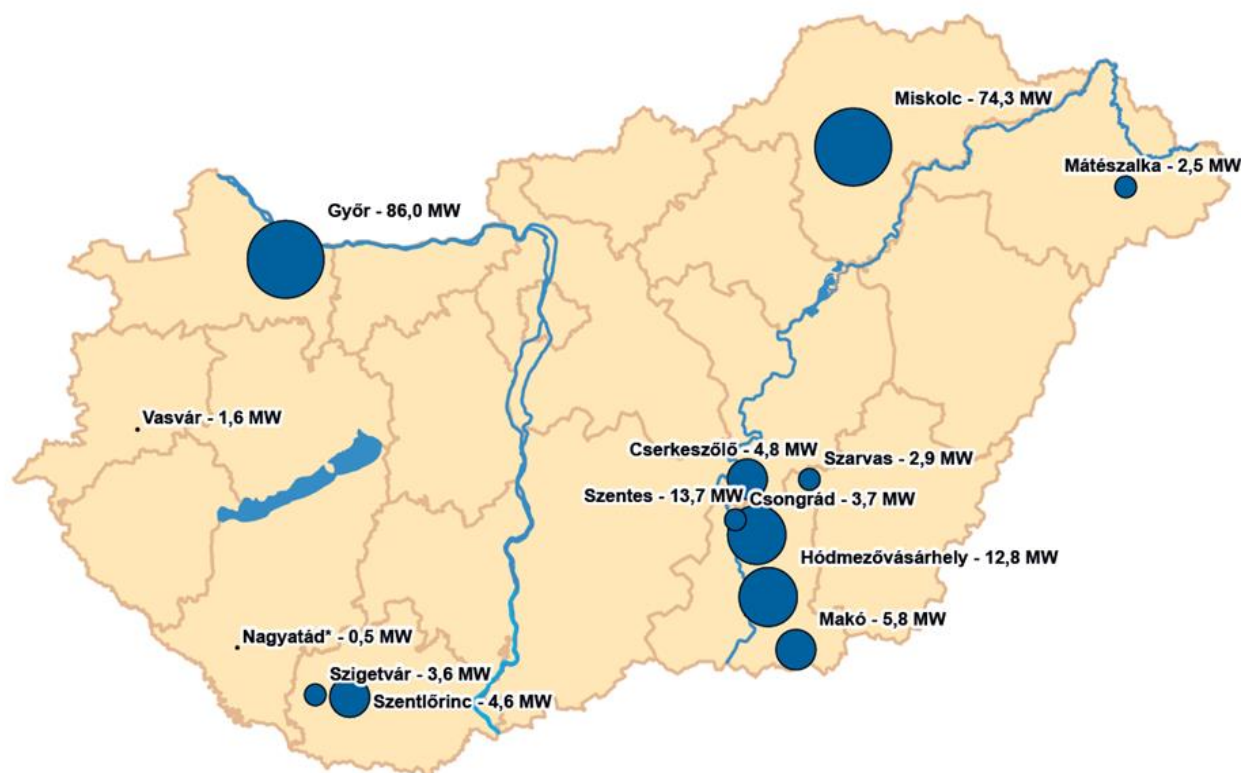
Of the 60,000 households supplied by renewable energy, 33,000 homes are located in Miskolc, 26,000 in Győr and 1,000 in Szentlőrinc. In addition, during the input of renewable energy into local district heating supply, approximately 500 other, typically institutional, public utility and industrial users benefit from the indirect and direct advantages of geothermal energy consumption in Miskolc and 1,000 in Győr.



1.2. Geothermal performance of PannErgy projects, capacities

Available heating capacity of Hungarian geothermal heat producers by settlement
(Calculated using a different calculation methodology than PannErgy)

(source: DATA OF THE HUNGARIAN DISTRICT HEATING SECTOR 2021 – a joint publication by the Hungarian Energy and Public Utility Regulatory Authority [HEA] and the Association of Hungarian District Heating Enterprises [AHDHE])



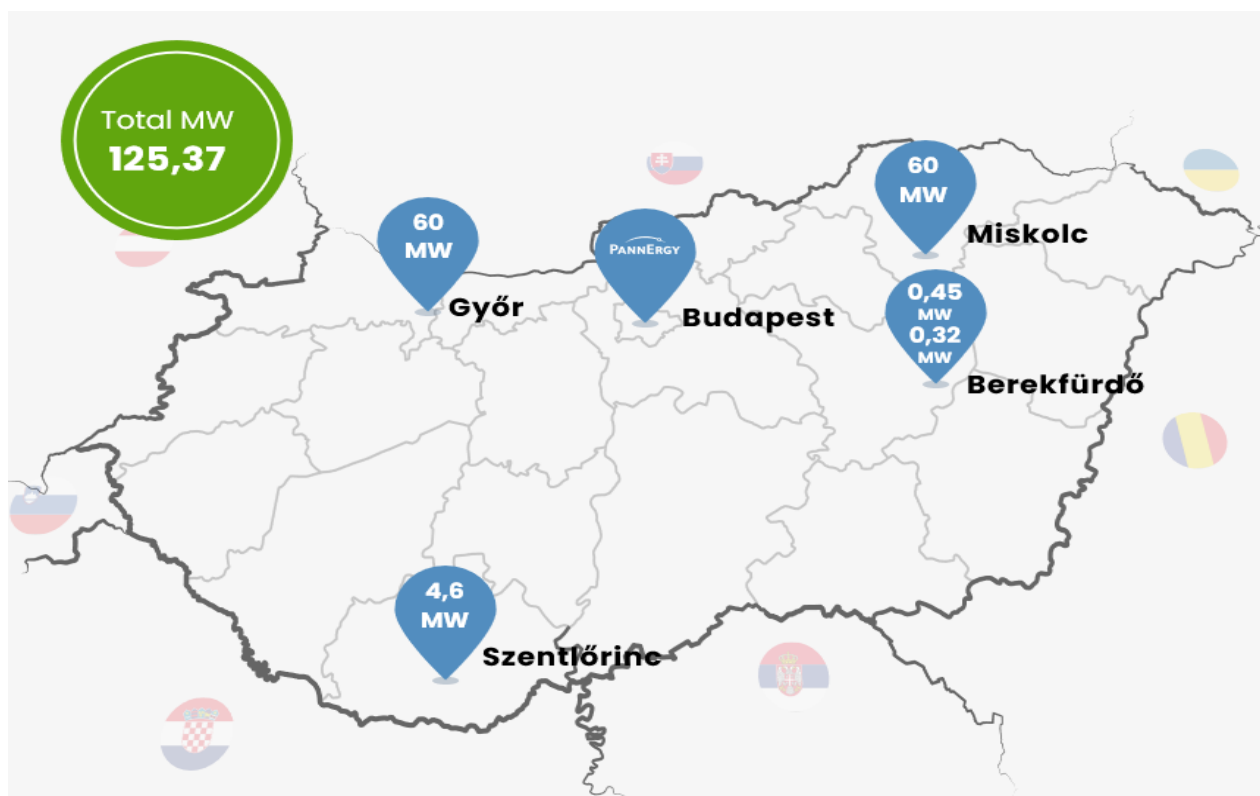
Based on the above, the total aggregate district heating capacity of Hungarian geothermal heat producers amounted to 216.8 MW in 2021.

Of this, the maximum heating capacity associated with the Company's geothermal project locations (Győr, Miskolc, Szentlőrinc) amounted to 164.9 MW; in other words, PannErgy projects accounted for 76% of Hungary's maximum geothermal performance. According to the Company's calculations, this ratio declined below 60% somewhat in 2022 due to the *ad interim* commissioning of other geothermal projects.

At the same time, however, the installed capacity of commissioned heat exchangers scaled to the system that is available in practice differs from the maximum available heating capacity.



At the Company's projects, the installed primer operational thermal capacity, the annual heat volume supplied by the system, and discharge temperature and total well capacity figures in the reporting period are as follows:



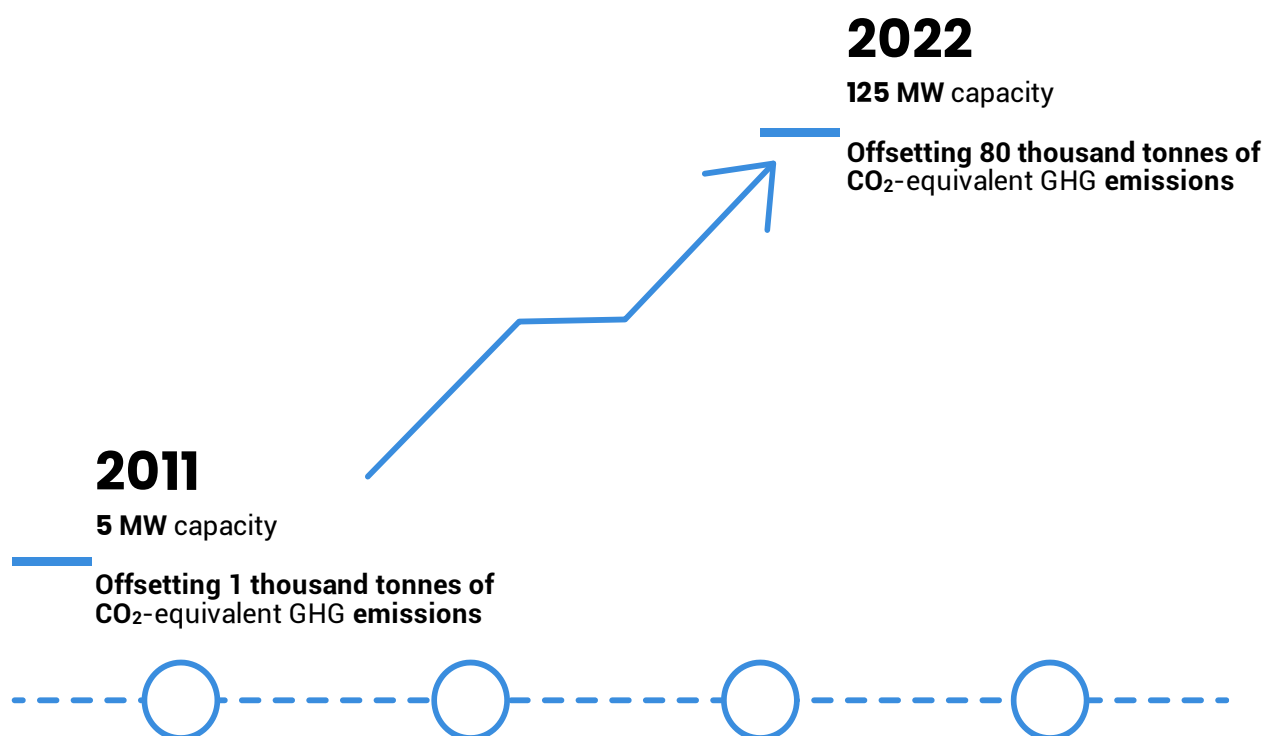
At the first implemented geothermal project of the Company – i.e. the Szentlőrinc system commissioned from January 2011 –, the installed primer operational capacity of 4.6 MW allows for the sale of 19,000–24,000 GJ primary heat.

As a result of the project of Berekfüdő Energia Kft., the methane associated gas of the thermal wells located in Berekfüdő has been used by PannErgy Group for the production of electricity and thermal energy since 2011, and the resulting energy is subsequently sold. 0.45 MW of thermal energy and 0.32 MW of electric power generation capacity is available from the methane extracted from the geothermal source.

In the reporting period, the installed primer operational capacity amounted to 60 MW at both the Győr and the Miskolc Geothermal Projects and with this, and a total well capacity of 1,070–1,150 m³/h at each project, the annual primer heat volume supplied by the system is 900,000 – 1,025,000 GJ in Győr and 700.000–850,000 GJ in Miskolc.

Based on the above, the installed primer operational capacity of PannErgy Group exceeds 125 MW, which makes the Group the most significant geothermal heat producer in Hungary.

The Company has gone a long way since the implementation of its first geothermal project. In Szentlőrinc the foundation stone was laid on 8 July 2010, and as a result of the implemented project, since January 2011 heating has been supplied to all homes of the city of Szentlőrinc from geothermal energy without any environmental pollution whatsoever, fully replacing the former natural gas-based district heating. A little more than 10 years after the completion of the Szentlőrinc Geothermal System (with an installed primer operational capacity of 4.6 MW), the Company has multiplied its Hungarian geothermal capacity and it is committed to further increases.



1.3. Main milestones in the Company's history

Year	Event
1922	PannErgy's legal predecessor is established.
1991	On 31 May 1991, the company – still a plastics company at the time – becomes a joint-stock company
1994	Among the first issuers to list shares on the Budapest Stock Exchange
2007	In November 2007, the Company changed its name to PannErgy and announced its new strategy already under the new name. The production and utilisation of energy from geothermal sources are at the heart of the new strategy.
2010	Acquisition of sole (100%) ownership of Berekfürdő Energia Termelő és Szolgáltató Kft. This acquisition enabled PannErgy to expand its alternative energy portfolio with a power plant fuelled with methane obtained from thermal water – which would otherwise be significantly damaging to the environment –, as well as the associated technological expertise.
2011	Boring of a geothermal well in Szentlőrinc in 2009–2010, and construction of a surface system. Commercial geothermic heat generation and the sale of energy go live on 1 January 2011 in Szentlőrinc. The project fully replaced Szentlőrinc's district heating system, which was previously based on crude oil, then on natural gas.
2013	In May 2013, production commenced at Central Europe's largest geothermal power plant, in the form of an investment project implemented by PannErgy. Geotermia Zrt.'s Miskolc project supplying the Avas district of Miskolc won the international GeoPower Market's "Best Heating Project 2013" award.
2014	PannErgy had also implemented the second phase of the Geothermal Project of Miskolc by September 2014. The system – implemented by Kuala Kft. – then began to supply thermal energy in the town of Miskolc to the Downtown and the University heating districts as well.
2014	In addition to the district heating system of Miskolc, its primary heat consumer, the capacity of the Miskolc Geothermal System allowed the company to supply further consumers with environmentally friendly geothermal energy. This is how heating supply was established towards the Company's first industrial customer partner, Joyson (formerly Takata) Safety Systems Hungary Kft.
2014	PannErgy launched its second largest investment project – the Győr Geothermal Project – in the Kisalföld region in early 2014, by deepening four geothermal wells (two production and two reinjection wells) in the villages of Bőny and Pér.
2015	November 2015 saw the inauguration of Győr–Moson–Sopron County's most significant and important energy investment – and not only among geothermal projects –, the Győr Geothermal Project. This project allowed PannErgy to significantly offset fossil fuel emissions by selling heat to Győr–Szol Zrt. and Audi.
2016	In 2016, the Company successfully completed its first major development investment programme for existing geothermal systems; as a result, its existing competences expanded significantly. Thanks to this development, the system became more resilient to the chemical and physical challenges of the well system in Győr; owing to the capacity upgrade, the maximum thermal water yield capacity of the Győr Geothermal System increased to 960 m ³ /h.



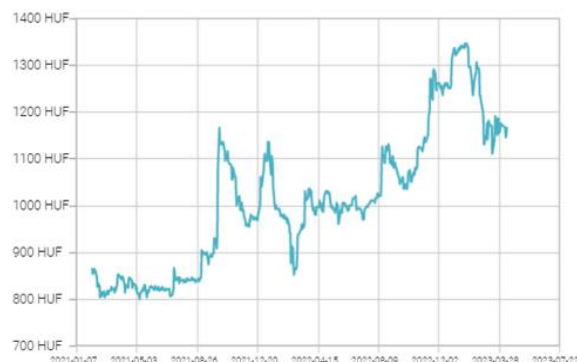
Year	Event
2017	PannErgy concluded a concession contract in February 2017 with the Hungarian State for the exploration, extraction and utilisation of geothermal energy in the region of Győr, for a period of 35 years. The Company examined the specificities of the geothermal resources over 2,500 metres below the surface, in the zone specified by the concession rights acquired under the concession contract. In order to increase its thermal capacity further, the Company decided to drill a new geothermal well.
2018	The third production well in Bónyi, BON-PE-03, was bored under the concession won the year before. PannErgy begins to use the additional quantity of heat supplied by its increased capacity for selling additional green energy to its existing customers.
2019	On 28 June 2019, the Company acquired sole (100%) ownership in Well Research Kft., owner of the reinjection well (ID: KIS-PE-01B) at Kistokaj connected to the Geothermal System of Miskolc.
2020	Reliable heat generation during the pandemic, ensuring the achievement of the reporting year's planned EBITDA figures, in addition to further investments in capacity expansion and efficiency improvements.
2021	The capacity expansion and efficiency improvement investment programme continued. By 2022 it will enable the company to reach a consolidated annual EBITDA level of HUF 3,250 – 3,350 million. PannErgy's consolidated greenhouse gas emissions savings rate was 81% in 2021; it saved approximately 4/5 units compared to fossil fuel emissions.
2022	The consolidated annual EBITDA level of the Company was over HUF 3,600 million. The planned projects of PannErgy – the third production well of the Miskolc expansion and the Budapest surrounding project – were awarded grants. Total annual heat sold in Győr in 2022 exceeded 1 million GJ (1,004,165 GJ) for the first time in PannErgy's history. In Győr, the geothermal energy became the primary energy source in the city's district heating system.



1.4. Main Company information, ownership background (GRI Disclosure 2-1 Organisational details)

The **legal name of the Company** as registered in the Company Register is **PannErgy Public Limited Company**. Its concise name is PannErgy Nyrt. The date of its Articles of Association is 14 May 1991, its company registration number is 01-10-041618, and its tax number is 10558377-2-43. As regards **legal form**, it is a **public limited company**.

Its shares are traded on the Budapest Stock Exchange in the Premium category; in other words, PannErgy shares are classified as shares traded on stock exchanges operating in EEA Member States.



The Company's ownership structure as at 31 December 2022:

Shareholders	Total share capital = Introduced series					
	01/01/2021			31/12/2022		
	% ¹	% ²	number of shares	% ¹	% ²	number of shares
Domestic institutions	29.19	37.49	6,146,577	30.86	38.67	6,171,682
Foreign institutions	8.05	10.34	1,695,255	8.43	10.56	1,685,668
Domestic private individuals	30.38	39.01	6,395,910	30.25	37.92	6,051,532
Foreign private individuals	0.32	0.41	66,672	0.30	0.38	60,153
Employees, senior officers	1.94	2.49	409,505	1.55	1.94	309,505
Own holding	22.13	0.00	4,658,644	20.21	0.00	4,041,700
Owners that are part of the general government system	7.96	10.22	1,675,745	8.38	10.50	1,675,745
International Development Institution	-	-	-	-	-	-
Other	0.03	0.04	6,347	0.02	0.03	4,015
Total	100.00	100.00	21,054,655	100.00	100.00	20,000,000

¹ Percentage of ownership

² Voting right enabling participation in decision making at the Issuer's General Meeting

List of **shareholders with shareholdings over 5%** at the end of the period:

Name	Number of shares	Shareholding (%)	Voting rights (%)
Benji Invest Ltd./FCI Kompozit Ltd.	3,186,010	15.93	19.96
MVM Energetika cPlc.	1,675,745	8.38	10.50
Soltút Ltd./Kálmán Rencsár	1,814,241	9.07	11.37



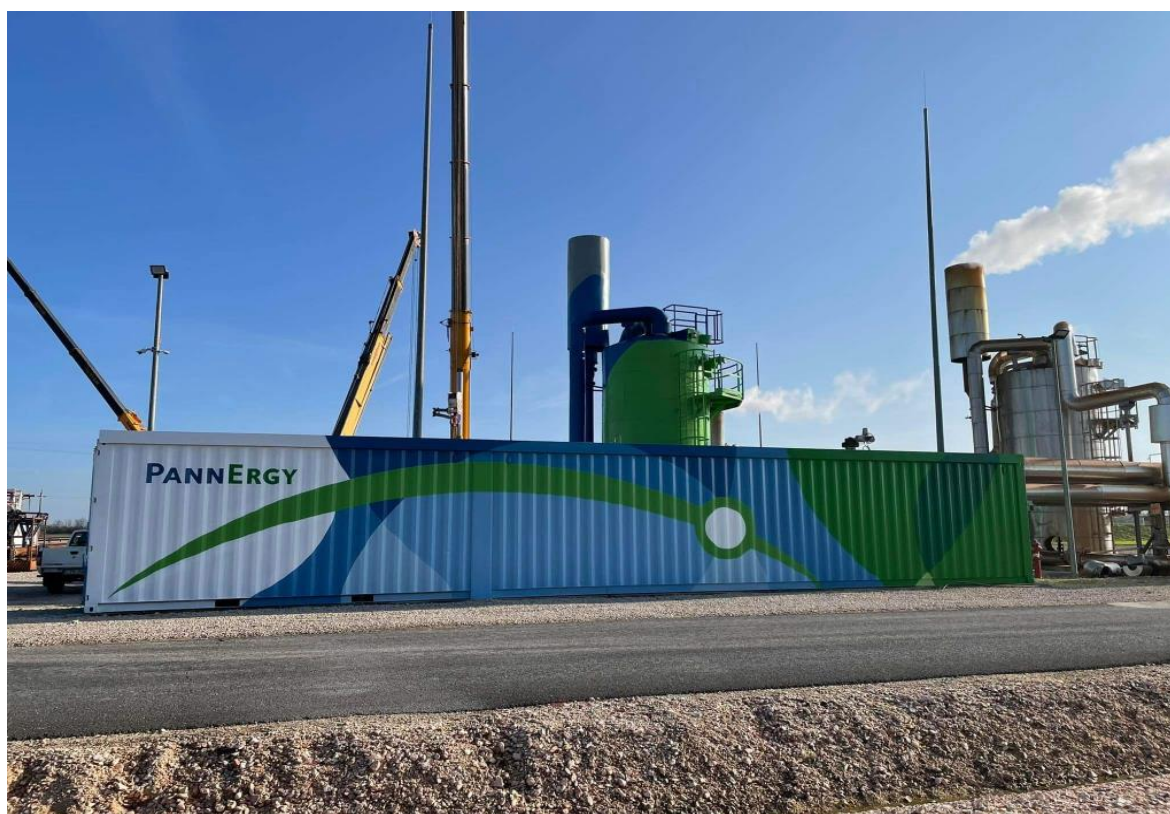
The Company has its registered office in Hungary at H-1117 Budapest, Budafoki út 56. The Company's business operations are limited to Hungary. It has no business interests and maintains no business units in any other country.

The Group's core activities involve the extraction, sale and utilisation for energy generation of one of Europe's most significant thermal water resources and, in particular, renewable geothermal energy.

Projects in Hungary are concentrated in 4 locations: the areas around Győr, Miskolc, Szentlőrinc and Berekfürdő ([Projects | PannErgy](#)), and in addition – in relation to geothermal energy production, which is outside the Company's core activity –, the Company also owns real estates in Debrecen.

1.5. PannErgy subsidiaries included in the Sustainability Report (GRI Disclosure 2-2 Entities included in the organisation's sustainability reporting)

The projects included in PannErgy Plc.'s Sustainability Report and the Companies belonging to the Group (parent company, subsidiaries) are the same as the projects and subsidiaries included in the Company's audited and published consolidated financial statements; **there is no difference between the units included in the audited, official financial reports and those included in the Sustainability Report. These projects are the following: Miskolc Geothermal Project, Győr Geothermal**



Project, Szentlőrinc Geothermal Project, Berekfürdő Geothermal Project, Debrecen asset management.

PannErgy holding company's parent company is PannErgy Plc., which manages the Group's activities through its wholly owned subsidiary and professional holding management company, PannErgy Geothermal Power Plants Ltd.

Entities included in the Company's scope of consolidation that are included both in the consolidated financial statements and in the ESG report:

PannErgy Plc.			
PannErgy Geotermikus Erőművek cPlc. (PannErgy Plc. 100% ownership)	Arrabona Koncessziós Ltd. (PannErgy Geotermikus Erőművek cPlc. 100% ownership)	Berekfürdő Energia Ltd. (PannErgy Geotermikus Erőművek cPlc. 100% ownership)	DD Energy Ltd. (PannErgy Geotermikus Erőművek cPlc. 100% ownership)
	DoverDrill Mélyfúró Ltd. (PannErgy Geotermikus Erőművek cPlc. 100% ownership)	Geo2Business Ltd. (PannErgy Plc. 100% ownership)	Kuala Ltd. (PannErgy Geotermikus Erőművek cPlc. 100% ownership)
	Miskolci Geotermia Ltd. (PannErgy Geotermikus Erőművek cPlc. 100% ownership)	Szentlőrinci Geotermia Ltd. (PannErgy Geotermikus Erőművek cPlc. 100% ownership)	

Data are presented in a consolidated manner both in the Company's financial statements and sustainability reports; in other words, **the effects of events and transactions between the entities are offset against each other at PannErgy level both in terms of assets and P&L.**

The Company had no minority interests either on the reporting date of the sustainability report or in the base period; consequently, there were no adjustments to information for minority interests.

There were no mergers, fusions, demergers or disposal of entities or parts of entities at PannErgy Plc. in the reporting period **that may impact, in any way, the information presented in this Sustainability Report,** individual GRI disclosures or the determination of material topics under GRI 3.



In the reporting period the following corporate transactions took place at the Company:

On 25 January 2022, as part of a restructuring resulting from a change in its legal form, Szentlőrinci Geotermia Zrt. was terminated. Its general legal successor was Szentlőrinci Geotermia Kft., registered with the Court of Registration on 26 January 2022. The same change in legal form and the same transformation from a private limited company (Zrt.) to a limited liability company (Kft.) took place at Miskolci Geotermia Kft., which operates as the general legal successor of Miskolci Geotermia Zrt. (terminated on 31 December 2021) from 1 January 2022. These transactions concerning the legal form of the entities had no impact whatsoever either on the Company's audited, consolidated financial statements of 31 December 2022 or on the ESG report.

On 3 November 2022 PannErgy Plc. informed capital market participants of the foundation of a new subsidiary, Geo2Business Kft., with a financial contribution of HUF 3 million. The head office of the Company is at H-1117 Budapest, Budafoki út 56. Thanks to the change in the energy market environment and hence, the improving return opportunities, PannErgy wishes to place bigger emphasis on directly connecting new customers not subject to regulatory pricing to the geothermal systems of PannErgy. It established the new subsidiary primarily for serving these new, smaller customers than district heating suppliers and multinational companies; the organisation of the subsidiary enables it to provide high quality services tailored to the specificities of the requirements of this user segment. The foundation of the new subsidiary did not exert a material impact either on the Company's audited, consolidated financial statements of 31 December 2022 or on the ESG report.



2. The Company's material topics relevant to sustainability (GRI 3: Material Topics 2021)

Pursuant to the provisions of the GRI 3 Material Topics Standard, the Company is required to identify all topics and issues included in the ESG report that are considered material or significant.

2.1. Process to determine material topics (GRI Disclosure 3-1 Process to determine material topics)

As a renewable energy producer, by definition, PannErgy contributes to the protection of the environment by having a clear positive impact verifiable by metrics. This direct positive impact on the environment and sustainability also has an indirect positive impact on society. The objective of the Company's management is to increase its green heat production by improving the efficiency and capacity of its core activity, renewable energy production, and as a result, to achieve its consolidated revenue and EBITDA targets and the implementation of direct environmental goals. The achievement of any of these two objectives implies an increase in shareholder value.

In order to identify the topics that are considered material in terms of ESG, the Company:

- reviewed its activity and business relations in the context of sustainability;
- defined the business strategy of PannErgy Group and the ESG strategy of the Group;
- identified stakeholders in order to determine the direct and indirect impact of PannErgy Group's activity on each stakeholder;
- carried out an assessment of actual and potential impacts identifying both positive and negative impacts. As a negative impact, the Company's operation is associated with electricity and other types of energy consumption (water, gas), but the adverse impact of such consumption is negligible when compared to the Company's activity reducing carbon-dioxide emissions. **In 2022, the Company offset (saved) approximately 80 thousand tonnes of CO₂-equivalent GHG emissions. The Company is proud to have offset more than 500,000 tonnes of carbon-dioxide emissions through its green heat production since the implementation of its geothermal strategy;**
- prioritised the identified actual and potential impacts appropriately. It properly considered the significance of the ability of green heat production to offset greenhouse gas emissions – as an actual positive impact – both in terms of magnitude and likelihood;



- gave priority to addressing the impacts that are most significant for the purposes of the ESG report, primarily in accordance with the requirements set in the GRI Standards. This ensured that the Company did not overlook any topics in the identification process that are likely to be material;
- listed and described in its GRI Content Index any topics included in the abovementioned Sector Standards that are not material or relevant for the Company.

In the process of identifying material topics, the Company strived for completeness. In this context, it defined as the most significant material topic the GHG emissions savings achieved by its renewable energy production activity. As identification units, the Company selected the sites of the geothermal projects in Miskolc, Győr, Szentlőrinc and Berekfürdő, as well as the Budapest site of the holding management activity. The Company assessed the actual and potential negative and positive impacts of its activity on the economy, environment and people at these sites.

The identification of material topics is based on the process descriptions of technical projects, regulatory documents, ISO process descriptions and third-party expert documents on the Company's operations. In line with the requirements of GRI Standards, special attention was given to reported topics that, by virtue of their materiality, drive the Company's consolidated sustainability performance.

In relation to the ESG report, the Company identified the following stakeholders whose views have informed the process of determining material topics:

- Regulatory authorities and supervisory bodies concerned with geothermal heat production as renewable energy production, such as the Hungarian Energy and Public Utility Regulatory Authority (MEKH), the Mining Supervision, the Mining and Geological Survey of Hungary (the last two together as Supervision Authority of Regulated Activities) and water rights management and environmental protection authorities, disaster management authorities;
- Shareholders of PannErgy shares listed in the Premium category on the Budapest Stock Exchange;
- Supplier partners contributing to geothermal projects with their special expertise and experience, participating in the investment projects (design and installation) of PannErgy Group and in operating already operational projects (maintenance, operations, facility maintenance);
- Heat-receiving municipal and other industrial partners;
- The population of the towns where geothermal projects are located, as local communities;
- NGOs, elite and succession sports associations located in the towns of geothermal projects.



The definition of material topics included in the ESG report is approved by the Company's Management Board, together with the adoption of the ESG report.

2.2. List of material topics (GRI Disclosure 3-2 List of material topics)

In its Sustainability Management and Environmental, Social and Corporate Governance (ESG) Performance Summary and Report for 2022, the Company defined the following material topics in order of priority for the presentation of the Company's consolidated sustainability performance:

- PannErgy Group's greenhouse gas (GHG) emissions savings balance
- Energy production, water extraction
- Impact of climate change on PannErgy's heat markets

As a green energy producer, the Company has significant carbon-dioxide neutralising, emission-trigger effects: it saves tens of thousands of tonnes CO₂-equivalent greenhouse gas emissions annually. This fact, which is particularly positive for the environment and sustainability, fundamentally influences the selection and prioritisation of material topics in the ESG report. Accordingly, the Company considers the above topics – and their presentation in the ESG report – of special significance and at the same time, it also strives to describe in detail, in accordance with the GRI Standards, its activity in the context of social performance and corporate governance.

PannErgy Group's ESG report for the financial year of 2021 – as the previous period – was the Group's first disclosure of this kind. Comparison against the material topics of the previous reporting period and the changes thus identified do not constitute relevant information in this Sustainability Report for 2022, as the Company defined the same material topics for the previous year.

2.3. Management of material topics (GRI Disclosure 3-3 Management of material topics)

The Company identified the following material topics in order of priority for the presentation of its consolidated sustainability performance:

- **GHG balance of PannErgy Group**
- **Energy production, water withdrawal**
- **Impact of climate change on PannErgy's heat markets**

In accordance with Disclosure 3-3 Management of material topics of the GRI 3 Material Topics Standard, the Company is required to describe the actual and potential negative and positive impacts of its activity on the economy, environment and people. Moreover, the Company is required to describe its actions taken to manage the topic and related impacts, including actions to prevent or mitigate



potential negative or positive impacts, and to provide other information on the goals, progress toward the goals and information provided to stakeholders.



In the Company's opinion, the following GRI Topics Standards are required to present material topics in adequate quality and detail:

GHG balance of PannErgy Group: GRI 302: Energy 2016, Disclosure 302-2 Energy consumption outside of the organization, Disclosure 302-3 Energy intensity, Disclosure 302-4 Reduction of energy consumption, Disclosure 302-5 Reductions in energy requirements of products and services. **GRI 305: Emissions 2016**, Disclosure 305-4 GHG emissions intensity, Disclosure 305-5 Reduction of GHG emissions, Disclosure 305-6 Emissions of ozone-depleting substances (ODS), Disclosure 305-7 Nitrogen oxides (NOx), sulfur oxides (SOx) and other significant air emissions.

Energy production, water withdrawal: GRI 303: Water and Effluents 2018, Disclosure 303-1 Interactions with water as a shared resource, Disclosure 303-2 Management of water discharge-related impacts, Disclosure 303-3 Water withdrawal, Disclosure 303-4 Water discharge, Disclosure 303-5 Water consumption.

Impact of climate change on PannErgy's heat markets GRI 302: Energy 2016, Disclosure 302-1 Energy consumption within the organization, Disclosure 302-4 Reduction of energy consumption, Disclosure 302-5 Reductions in energy requirements of products and services. **GRI 305: Emissions 2016**, Disclosure 305-1 Direct (Scope 1) GHG emissions, Disclosure 305-2 Energy indirect (Scope 2) GHG emissions, Disclosure 305-3 Other indirect (Scope 3) GHG Emissions. **GRI 306: Waste 2020**, Disclosure 306-1 Waste Generation and significant waste-related impacts, Disclosure 306-2 Management of significant waste-related impacts, Disclosure 306-3 Waste generated, Disclosure 306-4 Waste diverted from disposal, Disclosure 306-5 Waste directed to disposal



ECONOMIC OPERATION AND GOVERNANCE OF THE COMPANY

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4

heat production projects



18

average statistical headcount



HUF 6,439 million

consolidated sales revenue



~ 80,000

tonnes emissions neutralisation



HUF 26,883 million

consolidated asset value



0

environmental or other offence

3. The Company's ESG strategy, critical areas

3.1. The Company's sustainable development strategy (GRI Disclosure 2-22 Statement on sustainable development strategy)

These days, environmental protection and sustainability are becoming increasingly important. Regulators and market players are beginning to fully recognise the vital importance of these areas, and their role in shaping the future.

It is evident that PannErgy was well ahead of its time in understanding the importance of this segment, almost 15 years in advance. In 2007, when formulating its new corporate strategy to shareholders, the Company's management opted to focus on renewable energy production as a core activity, while scaling back plastics manufacture, which was more harmful to the environment.

The PannErgy Group is still committed to implementing its long-term strategy focusing on the utilisation of renewable energy sources. The focus of the strategy is to become the region's dominant company in the utilisation of geothermal energy, to maintain this position and to provide highly reliable environmentally friendly services that are free of geopolitical risks to the Hungarian population, as well as to the industrial and institutional market in Hungary, while continuing to create shareholder value.

The Company is fully committed to the utilisation of one of the most active thermal water sources in Europe for the production of energy. Since geothermal heat can be utilised by households and industrial consumers in the long-term, the environmentally sound investment projects implemented by PannErgy could enable significant reductions in expenditures relating to energy and greenhouse gas emission quotas. The increase in the demand for energy is unstoppable in the long term – in spite of temporary set-backs from time to time –; however, both the domestic and the global resources are limited. Professional, effective and efficient geothermal energy production is not only a form of utilisation of a hitherto hardly used immense source of energy but also one of the most environmentally friendly and cleanest form of energy generation. The European Union has not only come to welcome such forms of energy generation, but it is now guiding Member States, including Hungary, by way of a strictly regulated program and clear-cut objectives.

That said, it is important to note that the production of renewable energy from deep geothermal wells is not an easy task, with numerous professional challenges hindering the implementation of projects and their safe and efficient operation. PannErgy enjoys a strong competitive advantage in this specialised field, with decades of experience and a proven track record of success in financial, operational and environmental projects.



3.2. The business conduct of PannErgy Group in the context of sustainability (GRI Disclosure 2-23 Policy commitments)

PannErgy's strategies on responsible business conduct in the context of sustainability:

3.2.1. Environmental impact assessment

PannErgy is committed to the utilisation of one of the most active thermal water sources of Europe for the production of energy.

Through the Company's environmentally sound investment projects, geothermal heat can be utilised by households and industrial consumers in the long-term, allowing for significant reductions in energy expenditures. In addition, by replacing fossil fuels imported from abroad, PannErgy's investments will significantly contribute to the reduction of geopolitical uncertainty and strengthen Hungary's energy independence. In order to protect surface and subsurface waters while also ensuring the long-term sustainability of the geothermal system, PannErgy considers it essential to reinject the entire amount of geothermal fluids into the same geological layer where it was extracted from.

By exploiting new geothermal energy opportunities and increasing the efficiency of existing capacities, PannErgy is looking towards the future and improving the quality of life for future generations, creating value together with its shareholders, heat-receiving partners and customers.

The Company supports environmental events, and is committed to raising awareness among the younger generations. It organises a number of events to educate the public about geothermal power as a source of renewable energy.

The Company attaches particular importance to compliance with environmental legislation and preventing any violations of environmental statutes or regulations.

3.2.2. Addressing social issues

PannErgy's renewable energy generation activities have a number of significant social aspects that need to be addressed.

The Company focuses on providing reliable, continuous, and high-quality transmission of the thermal energy generated by the Company's environmentally friendly geothermal investments to its residential and industrial customers. In addition to focusing on the satisfaction of direct and indirect heat consumers, the Company also creates value for society by ensuring that the pricing of the thermal energy it generates remains professionally controlled, or is based on predictable rates.

As a combined effect of the legislative framework, regulatory oversight and predictable pricing, direct and indirect customers are able to enjoy moderate and predictable energy prices in the long term. Customers have access to renewable



energy at rates that are potentially independent of international energy prices. The Company seeks to improve the quality of life of those living in the areas near its projects in a number of ways.

3.2.3. Sustainability-oriented corporate governance

PannErgy Plc. is an entity listed on the Budapest Stock Exchange, included in the BUX index basket, and is a premium share issuer.

As a public limited company, the Company's executive decision-making process is highly transparent, and its corporate governance is driven by considerations of business-driven shareholder value creation and sustainability. **The core activity itself is the production of renewable energy**, meaning that, directly or indirectly, all decisions made by the Company's management have an impact on the environment.

The Company's management is committed to providing investors with transparent and readily comparable information regarding not only financial data, but also sustainability and green environmental objectives.

3.2.4. Policy commitments

Through the generation of renewable energy, the Company exerts a positive sustainability impact on numerous stakeholders (buyers, through district heating customers the population, suppliers and shareholders). In the case of PannErgy Group it can be stated that since its **core activity is the production of renewable energy, the entire existence and operation of the Company implies, by definition, responsible business conduct from the point of view of sustainability**. Accordingly, **all long-term heat supply contracts** under which the Company makes a commitment to produce and sell to district heating and other industry partners (see Chapter 2.6.) geothermal heating in accordance with the contractual terms and conditions **constitute policy commitments** in terms of sustainability. These implemented geothermal projects are linked to non-refundable (state or EU) subsidies, the terms of use of which are set out in the incentive agreements concluded between the donor and the project companies of PannErgy Group. These **incentive agreements also include policy commitments concerning the given subsidiaries of the PannErgy Group**.

The above policy commitments do not refer to prevailing intergovernmental instruments; they include conduct in compliance with the principle of due diligence and provisions on the application of the principle of prudence; however, they do not prescribe rules on the respect for human rights as such provisions are irrelevant to the operation of the Company.

The abovementioned long-term heat supply contracts and application schemes under incentive agreements, as policy commitments, are not publicly available; yet



the Company does not provide a link or a reference to these contracts as they contain trade secrets.

The above contracts and the policy commitments contained therein were approved and signed off after the approval and acceptance of the Company's highest governance body, the Management Board.

The commitments contained in long-term heat supply contracts and application schemes under incentive agreements are applicable to the organisation's relevant employees and executive officers on a mandatory basis, and are publicly available internally within PannErgy Group. The managing director of the PannErgy subsidiary concerned immediately informs all employees involved in the performance of the commitments in writing of any changes in the contracts.

3.3. Critical events in the reporting period concerning sustainability (GRI Disclosure 2-16 Communication of critical concerns)

In the reporting period, PannErgy Group did not identify any event or matter that may give rise to critical sustainability concerns negatively influencing the achievement of the Company's sustainability targets or adversely impacting the stakeholders.

Any event giving rise to critical concerns regarding the Company's operation – in consideration of sustainability aspects as well – is identified and reported in accordance with the provisions of the Code of Ethics and the policy on ethical procedures, as well as the policy on the prevention of abuse and fraud applicable to the Company and its subsidiaries.

In connection with the operation of PannErgy Group, these regulations address in detail ethical and other issues concerning the stakeholders listed below, as well as the related organisational obligations, requirements and individual behavioural norms:

- Employees (Prohibition of negative discrimination; Harassment; Conflict of interest);
- Shareholders (Insider trading; Transparency of financial information and financial/accounting reports; Corporate property; Information on intellectual property; Digital information);
- Buyers, suppliers, business partners, competitors (Conflict of interests);
- Health, property and environmental protection, occupational safety;
- Political and governmental engagement;
- Protection of confidential information and privacy, unethical employment.



The Company operates a Council of Ethics, the principal mission of which is to ensure the ethical, sustainable operation of PannErgy Group and to coordinate the relevant management system at all entities of PannErgy Group.

The work of the three-member Council of Ethics is governed and coordinated by the Chief Executive Officer of PannErgy Plc.

Any stakeholder can address questions, notifications or complaints to the Council of Ethics in relation to any event adversely affecting sustainability through the public communication channels of the Company. Notifications received over the phone or communicated in person are recorded in writing. The Council of Ethics investigates the issue or the notification, consults with experts as required and responds within 15 days of receipt.

The Company continuously monitors the efficiency of complaints management mechanisms and other remediation processes. The stakeholders did not report any concerns in the reporting period.

3.4. Sustainability know-how (GRI Disclosure 2-17 Collective knowledge of the highest governance body)

As a renewable energy producer and a major contributor to carbon footprint reductions, the Company sees ESG as a significant opportunity for establishing a framework to identify non-financial aspects that may have a material impact on the performance of an investment, including the assessment and presentation of new non-financial risks.

As regards the core activity of PannErgy Group, i.e. geothermal energy generation, the Group currently carries out renewable energy production in Miskolc, Győr, Szentlőrinc and Berekfürdő and their environs. In terms of capacity and performance, the Miskolc and Győr Geothermal Projects are the two largest operating geothermal projects of Hungary, which make a significant contribution to the climate protection efforts and goals of the country. PannErgy Group has been engaged in the production of renewable energy for more than 15 years; more than 10 years have passed since the commissioning of its first project. The Management Board, as the Company's highest governance body, is committed to expanding further and collectivising the expertise and insight accumulated during these years about renewable energy and thus sustainability, including the impacts of geothermal energy production on the economy, environment and people. It intends to achieve this through the implementation of new projects so that the geothermal energy – as green energy – extracted by the Company is made available in as many municipalities as possible across Hungary, increasing the number of stakeholders.



The Company took steps to further this goal by way of two new projects in the reporting period:

Through its member, Kuala Kft., PannErgy Plc. submitted its application No. GEOTERM-2021.2-2021-00002 in response to the tender notice entitled 'Grants for the activities of geothermal-based heat production projects' announced under the Climate and Nature Protection Action Plan, and it was awarded a grant of **HUF 994 million** by the donor – the Ministry for Innovation and Technology – **in November 2022. The grant is related to the boring of the third geothermal production well of the Miskolc Geothermal Project.** The project is expected to increase the usable capacity of the system by up to 15%–20% and the growing number of production wells will improve its operational continuity significantly, whereby the spare capacity untypical of geothermal power plants will become available. After the geothermal system of Győr, this may become PannErgy's second system with spare capacity, providing the means to restart heat production in the event of a failure by way of a few hours' of reswitching instead of a well-pump replacement that may take 7 to 12 days. The completion of the project is expected during the commencement of the 2023/2024 district heating season.

In addition, the Ministry for Innovation and Technology, as donor, **awarded a grant of HUF 1,623 million** to application No. GEOTERM-2021.3-2022-00001 submitted by PannErgy Geotermikus Erőművek Zrt. in response to the tender notice entitled 'Grants for the activities of geothermal-based heat production projects' announced under the Climate and Nature Protection Action Plan. **The grant is related to the boring of a geothermal production well to be implemented near Budapest.** After a successful implementation, the project may become part of a complex geothermal heat supply system and participate in supplying the heating and hot water needs of potential heat-receiving partners in and around Budapest (district heating providers, industrial facilities, etc.). Boring the well is the first step of creating a possible geothermal system. A thorough analysis of the relevant data is required before the additional elements of the project may be designed. Drilling works may begin in 2024 provided that the seismic measurements preceding the drilling reconfirm the conclusions of months of preparatory efforts expended so far.

Until the publication of this Sustainability Report, the Incentive Agreements relevant to the above grants had not been concluded and the conditions for drawing down the grants were not in place yet. At present, professional and administrative preparations are in progress preceding contract conclusion for the projects.

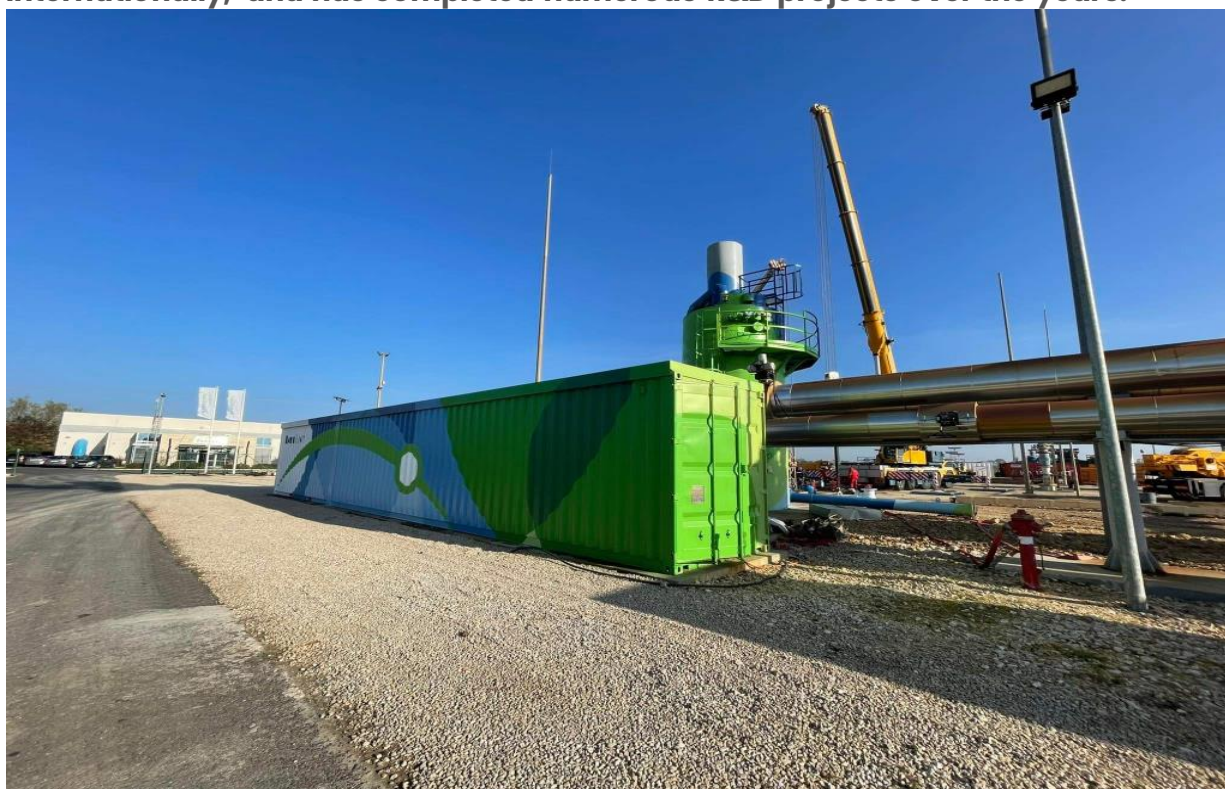


3.5. Measuring sustainability performance (GRI Disclosure 2-18 Evaluation of the performance of the highest governance body)

PannErgy Plc. believes that the global economy, and more specifically the energy industry, has reached a historic turning point. The importance of decarbonisation is now widely recognised, with market participants increasingly committed to promoting transparency and global cooperation, and trying to adapt their activities to better address these concerns. That said, the focus on ESG issues and related activities by various market participants is often exhausted in superficial solutions that do not have any real impact on environmental protection or sustainability and achieve nothing more than indicating the market participants' concern about ESG-related issues.

PannErgy, however, is fully prepared to greatly reduce carbon-dioxide emissions. Its core business of renewable energy production is inextricably linked to sustainability and environmental goals, and it has been making significant efforts to reduce emissions of carbon-dioxide and other greenhouse gases for nearly two decades now.

Due to its focus on renewable energy production, the Company's entire activity is based on sustainability, with an efficient, small team, and no ecological footprint. PannErgy's sustainability strategy begins with innovation. It has long championed geothermal energy as an environmentally friendly source of power in Hungary and internationally, and has completed numerous R&D projects over the years.



As a company operating in the renewable energy industry, PannErgy aims to apply the benefits of sustainability to efficiency gains through cost- and energy-efficient operations, and to achieve competitive advantage, with the stated objective of maintaining forward-looking, stable and sustainable business operations.

Our unique know-how and strategy involves cost- and energy-efficient, top-quality industry operations, sustainability goals paired with specific, dedicated measures, as well as the long-term trust of our customers and partners. This is what constitutes the Company's roadmap to becoming a leader among the top companies of a "green and sustainable economy".

Even if environmentally harmful emissions were to cease immediately, the consequences of past environmental impacts would persist for decades, or even centuries. It is partly for this reason that, notwithstanding the 2050 carbon neutrality deadline set by the UN and the Republic of Hungary, the Company is committed to combating the effects of global warming in the present. Accordingly, PannErgy's entire operation has been carbon neutral for almost a decade, and in fact the Company has achieved significant net negative emissions, going beyond carbon neutrality.

In the future, in addition to the financial targets (with consolidated thermal energy sold and EBITDA as key performance indicators), the Company will also monitor the achievement of the key targets set out in its sustainability and environmental strategy.

The Company defined the following two ESG indicators to measure its sustainability performance:

- **Consolidated GHG emissions savings rate as a direct consequence of the production of green energy**, which expresses, in relation to the Company's renewable energy production, the **savings rate achieved from an environmental perspective** relevant to fossil fuel GHG emissions;
- **Consolidated estimated volume of GHG emissions savings linked directly to the production of green energy, arising indirectly among residential and industrial consumers.**

The Company's management considers climate risk factors in its technical decisions. In other words, its operations involve sustainable operational strategies.

As one of its key aims, the strategy includes additional investment activities aimed at upgrading projects already in operation, which will reduce the Company's electricity consumption and increase the efficiency of its green energy use.



The Company will also fully take the aforementioned sustainability considerations into account during the course of future projects for drilling new geothermal wells. In addition to its new geothermal projects and investments for increasing the capacity and efficiency of existing projects, it will also consider the use and deployment of other renewable energy sources (solar, wind) to power its operations.

In addition to its annual financial report, PannErgy’s sustainability report aims to provide investors and capital market participants with additional information about the way climate risks affect the Company and its environment, including its business strategy for managing those risks, as well as the considerations and assumptions used for the estimates.

The consolidated financial statements have previously included certain information on the Company’s environmental and sustainability-related activities in the past, but mostly as a secondary consideration. The globally accepted and legally mandated accounting frameworks used for the consolidated financial statements do not include any specific accounting standard for addressing climate risks and their associated financial impacts. However, there are a number of sustainability and environmental factors that the Company has already described in its previous financial statements.

In order to prepare this ESG report, the Company has developed its eco-controlling system, which complements its existing operational and strategic planning and measurement framework with sustainability factors, targets for reducing the ecological footprint of the Company’s operations and green KPIs.

PannErgy designated István Jaksa CEO to oversee the management of PannErgy’s impacts on the economy, environment and people.

In 2022 the Company set up an ESG Committee ([4.9. ESG Committee \(GRI Disclosure 2-13 Delegation of responsibility for managing impacts\)](#)). This Committee will report to the highest governance body, the Management Board, with regard to issues and topics relevant to ESG, as well as the impacts of management and the organisation on the economy, environment and people. The Management Board will consider this input in reviewing ESG-related issues and approving the Company’s ESG reports, including the Company’s material topics.



4. Disclosures on the Company's governance (GRI Disclosure 2-9 Governance structure and composition)

Compliance with applicable legislation, the provisions of the Magyar Nemzeti Bank and the requirements set out in the policies of the Budapest Stock Exchange (BSE) is treated as a high priority at PannErgy. The structure and operating conditions of the Company are set out in the Articles of Association adopted by the General Meeting.

PannErgy Group's approach to sustainability affects all levels of the Company, including members of the Management Board and all employees. The Company's small but highly competent management team is committed to the expansion of renewable energy projects, relying on so many flexible and risk-mitigating outsourced resources.

Information on the responsible corporate governance of PannErgy Plc.:

4.1. The General Meeting, as the Company's supreme body

The supreme body of the Company is the General Meeting, which is composed of all shareholders.

The share capital of the Company consists of 20,000,000 dematerialised registered ordinary shares with a nominal value of HUF 20 (twenty forints) each, representing equal membership rights attached, forming a single series of shares. At the General Meeting of the Company, each shareholder shall have one vote per ordinary share.

On behalf of the Company's Management Board, the entity authorised by the applicable law to keep the record of shareholders (currently KELER Zrt. – KELER Central Depository Ltd.) keeps a record of shareholders and shareholders' proxies.

Shareholder's rights may be exercised vis-à-vis the Company by any person whose name is registered in the record of shareholders. Shareholders' proxies may exercise shareholder's rights vis-à-vis the Company after they have been registered in the record of shareholders as a shareholder's proxy.

The rules of procedure related to shareholder verification requested in connection with the closing of the record of shareholders prior to the General Meeting are set out in the regulations of KELER Central Depository Ltd. as amended from time to time.

An annual General Meeting must be held once a year, respecting the statutory time-limit. The agenda of the annual General Meeting shall by all means include the following:

- the report by the Management Board on the Company's business activities in the previous financial year;
- adopting the Company reports according to the EU-IFRS and a proposal by the Management Board on the distribution of profit and the calculation of dividends;

- determining the remuneration due to members of the Management Board and the auditor;
- adopting the responsible corporate governance report to be submitted to the Budapest Stock Exchange;
- adopting a decision on the evaluation of the work carried out by the members of the Management Board in the previous financial year and on granting the discharge they are entitled to.

An extraordinary General Meeting may be convened by the Management Board when it is considered appropriate for the operation of the Company. An extraordinary General Meeting shall be convened by the Management Board if the previous General Meeting so decided and if it has been requested from the Management Board by the auditor or shareholders representing at least 5% of all votes, the latter specifying the reasons for and the purposes of convening the General Meeting.

The invitation to the General Meeting shall be published by the Management Board in the manner specified for publishing the Company's notices in the Company's Articles of Association, at least 30 days prior to the date of the proposed General Meeting.

Any invitations to and any notices regarding the General Meeting shall specify at least the Company's official name and registered office, the venue, date and time of the General Meeting, the agenda of the General Meeting, the conditions prescribed in the Company's Articles of Association of exercising voting rights and the rights to request information and to add items to the agenda of the General Meeting, and the venue and date of the General Meeting scheduled to be held repeatedly due to a lack of quorum. Regarding issues not listed in the agenda published, the General Meeting shall not adopt a decision unless all shareholders are present and they unanimously consent to the decision.

Shareholders representing at least one percent (1%) of all votes may request the Management Board to add an issue to the agenda of the General Meeting, specifying the reasons for such request, and may put forward a proposed resolution in connection with the items on the agenda.

Shareholders representing at least one percent of all votes may exercise such right within 8 days of the publication of the notice on convening the General Meeting. The Management Board shall add the proposal to the agenda of the General Meeting and publish such addition within 8 days in the same manner as the publication of the notice on the General Meeting.

The Company shall publish important data of the report under the Accounting Act and the Management Board report, a summary of proposals related to the items on the General Meeting's agenda and the proposals for resolutions, summaries of the number of shares and voting rights as at the time the General Meeting is convened



and the statement on remuneration at least 21 days before the date of the General Meeting.

The General Meeting shall form a quorum if shareholders representing more than fifty percent of all voting shares are present, in person or through proxy. Such power of attorney shall be issued in the form of a public document or a private document of full probative power and submitted at the place and time specified in the invitation to the General Meeting but at any rate not later than the registration before the General Meeting. Where a shareholder so prefers, the Company shall send him a power of attorney form to the postal or e-mail address specified by the shareholder.

The power of attorney shall remain valid for a single General Meeting or for a fixed term of up to 12 months. The power of attorney shall also be valid for the continuation of a suspended General Meeting and a General Meeting that has been repeatedly convened due to a lack of quorum.

Members of the Management Board, the manager, senior executives of the Company and the Company's auditor shall not act as proxies.

In the event the General Meeting still fails to form a quorum 30 minutes after the starting time of the General Meeting, the repeated General Meeting shall be convened, with the same agenda, for a time within 15 days of the date of the original General Meeting, with the proviso that the repeated General Meeting shall be convened for a day at least 10 days later than the day on which it is convened. A General Meeting repeated due to a lack of quorum shall form a quorum with regard to the issues on the agenda of the original General Meeting regardless of the number of persons attending.

At the General Meeting, a person may exercise his or her rights of membership if such person has been registered in the Company's Record of Shareholders on the basis of the shareholder verification initiated in connection with the closing of the record of shareholders prior to the General Meeting.

The date of shareholder verification shall be the 5th stock exchange business day prior to the General Meeting unless KELER has specified a different date in its regulations as amended from time to time. Any sale of shares that takes place following the date of shareholder verification prior to the General Meeting shall be without prejudice to membership rights that may be exercised at the General Meeting in question.

On the basis of the records in the record of shareholders, the Management Board shall enable shareholders or shareholder proxies to properly exercise their voting rights by each share at the venue of the General Meeting after they have identified themselves and signed the attendance list.



Shareholders shall not exercise their voting rights unless they have paid up to the Company their contributions that have become due and payable.

Voting at the General Meeting shall be held primarily by voting papers and the manual counting of votes. In that case, the General Meeting shall elect a returning board at the proposal of the Chair of the General Meeting. The returning board shall have 3 (three) members. The returning board shall submit a written report on the result of the vote; the Chair of the General Meeting shall set forth the result and attach the report to the minutes of the General Meeting.

The presiding chair of the General Meeting shall be the Chair of the Management Board. If the Chair of the Management Board is prevented, the presiding chair of the General Meeting shall be elected by the General Meeting by simple majority on the Management Board's proposal, out of the persons present.

The Chair of the General Meeting shall open the General Meeting, determine if it forms a quorum, appoint the recorder, guide the discussion, give leave to speak and cut off speakers, order a break, draft the proposals for resolutions, order the vote and set forth its result, announce the resolutions of the General Meeting, arrange for the drafting of the minutes of the General Meeting and the attendance list and adjourn the General Meeting.

Minutes of the General Meeting shall be kept as provided for by the Civil Code.

4.2. The Management Board, as the highest governance body

In lieu of a Board of Directors and a Supervisory Board, PannErgy Plc. has a Management Board in order to enable a consistent system of governance. As the highest governance body, the Management Board carries out the statutory functions of both the Board of Directors and the Supervisory Board in a consolidated and efficient manner. As part of its duties, the Management Board defines the Company's strategic policies, makes its most vital decisions, and supervises its operation.

The Management Board shall establish its own rules of procedure in accordance with the Articles of Association. The rules of procedure shall contain a detailed description of its duties and the procedures falling within its competence. The Management Board shall prepare a report to the General Meeting on the Company's management, financial position and business policy at least once a year. The Management Board directly governs the Company, and is responsible for carrying out financial duties as well as implementing its resolutions and decisions. The employer's rights over the Company's direct employees are exercised by the Chief Executive Officer.

At the end of the reporting period, the Management Board consisted of the following members:

- Dénes Gyimóthy, chairman – independent



- Gábor Briglovics – independent
- Katalin Gyimóthy, member – independent
- Attila Juhász member – independent
- Kálmán Rencsár – independent

The person responsible for the managing director’s functions of PannErgy Plc (István Jaksa) is not a member of the Management Board.

As chairman of the highest governance body, the chairman of the Management Board does not fill an executive officer position and does not exercise direct employer rights in the organisation; consequently, there is no conflict of interest in this regard.

In 2022, the Management Board met on 7 occasions, with an average participation rate of 69%, and brought written resolutions on 3 occasions (a total of 3 resolutions) without a meeting, mostly in consideration of the pandemic.

Sustainability is a permanent strategic subject at the meetings of the Management Board. The strategy includes monitoring potential problems that do or may have an impact on the Company’s long-term sustainability. When discussing future investment opportunities or the operation of existing projects at Board meetings, the Management Board always considers the sustainability and ESG implications of the decisions, giving preference to solutions with positive impacts.

Within the Management Board, the person in charge of the implementation of sustainability aspects is the chairman of the Company’s Management Board. He is responsible for reporting to the Management Board on the implementation of the sustainability strategy and sustainability issues on a quarterly basis, as needed.

This strategy covers the geothermal projects already in operation (Miskolc, Győr, Szentlőrinc and Berekfürdő) as well as all new projects planned in the short, medium and long term.

Based on the above, we can conclude that all material topics that may pose a risk to the Company have been discussed for consideration by the Management Board. Communication about the risks was adequate; the Company identified the following risks:

- any event or transaction that had a significant negative or positive impact on the consolidated EBITDA or consolidated heat sale plans of the reporting year and subsequent years;
- any event significantly affecting the sustainability strategy of the Company (e.g. pandemic situation, war situation).



4.3. Audit Committee

In order to ensure that the functions of the Management Board are carried out and sound decisions are made, the Company's General Meeting has elected a three-member Audit Committee from the independent members of the Management Board.

The Audit Committee's duties include commenting on the consolidated financial statements and reports prepared in accordance with the IFRS, assessing the functioning of the financial reporting system, making proposals on the appointment and remuneration of the auditor, preparing the auditor's contract and carrying out the tasks related to the cooperation with the auditor. Moreover, the Audit Committee regularly monitors whether the classification of transactions between the Company and related parties was appropriate in terms of the identification, public disclosure and regular handling of significant related transactions.

The Audit Committee lays down the rules governing its operation and decision-making. Members of the Audit Committee in the reporting period were the following:

- Attila Juhász, Chair
- Balázs Bokorovics
- Gábor Briglovics

In 2022, the Audit Committee met on 5 occasions, at a participation rate of 100%.

The chairman of the Audit Committee does not hold a managing director position authorised to act independently on behalf of the Company at PannErgy Group and as such, he is independent. Of the members of the Audit Committee, Attila Juhász and Gábor Briglovics are members of the Management Board, while Balázs Bokorovics is advisor to the chairman.

4.4. Other committees

The Company does not have a nominations committee or a remuneration committee. These functions are fulfilled by the members of the Management Board as appropriate.

The Company operates with a small number of staff and with a narrow scope of activities, therefore establishing various committees and management bodies offers doubtful benefits.



4.5. Members of the Management Board

Dénes Gyimóthy – Chairman of PannErgy Plc.’s Management Board

He graduated from Bánki Donát Technical College in 1996. He was a senior consultant at KPMG Hungary between 1996 and 2000, then portfolio manager of Central and Eastern European equity investments at Budapest Fund Management Ltd. until 2004. Between 2006 and 2007, he was on the Board of Directors of Synergon Nyrt. He was CFO of PannErgy Plc. from 2004 to 2007, then the acting CEO and CFO until 2013. He was Chairman of the Pannunion Nyrt Board of Directors from 2010 to 2011. He was the acting CEO of PannErgy Plc from 2015 to 2022. Nowadays he is the chairman of PannErgy Plc.’s Management Board.

Katalin Gyimóthy – Member of PannErgy Plc.’s Management Board

She graduated from the Faculty of Financial Management at IBS. She spent more than 10 years in senior advisory positions with leading international consulting firms, primarily in corporate finance and mergers and acquisitions. She has significant management experience, having held – and currently holding – management positions in multiple national and regional SMEs.

Gábor Briglovics – Member of PannErgy Plc.’s Management Board

Graduated as an economist at the Faculty of Economics of Janus Pannonius University in 1992. He has been working in the energy industry since 1994, mainly in the fields of commerce and management of electricity supply and energy production. Sales Director at ALPIQ Csepel Kft. and Executive Director from 2008. He joined the Management Board for the first time in 2007, and has been member of the Management Board, once again, since 2020.

Attila Juhász – Member of PannErgy Plc.’s Management Board

From 1995, he held senior positions in several Hungarian companies, and from 2004, he was Managing Director and Head of Investments at Benji Invest Kft. Between 2006 and 2007, he was on the Board of Directors of Synergon Informatika Nyrt., and he has been the Managing Director of FCI Kompozit Szigetelő Kft. since 2007. He has been a member of the Board of Directors of PannErgy Plc. (formerly Pannonplast Plc.) and later on its Management Board since 2005.

Kálmán Rencsár – Member of PannErgy Plc.’s Management Board

He is the founding owner of Soltút Kft., one of Hungary’s significant road construction companies, with 210 employees and a balance sheet total exceeding HUF 26 billion. He has served as the company’s Managing Director since 1991. Over the past years, he has been in charge of major investment projects related to the development and expansion of infrastructure in the field of road construction (motorways and other road networks), as well as the construction of several sports and leisure facilities.



4.6. Selection of the members of the Management Board (GRI Disclosure 2-10 Nomination and selection of the highest governance body)

At the end of the reporting period, the Management Board consisted of five natural person members – four men and one woman –, elected by the General Meeting for an indefinite term of office. Members of the Management Board are introduced in detail in Chapter 2.9.5.

Upon the selection of members of the Management Board, independence, diversity and professional competencies were also considered. Accordingly, the Company's Management Board is suitably diversified in terms of gender, age and professional qualifications. This ensures the appropriate consideration of the views of all stakeholders (shareholders, suppliers, etc.) from an ESG perspective.

The Chair of the Management Board is elected by the Board members from among their number. The Chief Executive Officer is also elected by the Board members, in a similar fashion.

The Management Board adopts decisions with a simple majority. It has a quorum if the majority of its current members are present. In the event of a tie, the Chairman of the Management Board shall have the casting vote.

4.7. Additional positions of the chairman of the Management Board (GRI Disclosure 2-11 Chair of the highest governance body)

As chairman of the Company's highest governance body, the Management Board, Dénes Gyimóthy does not hold a CEO (senior executive) position at PannErgy Plc. Since he does not hold a managing director position at the Group's subsidiaries either, independence is properly guaranteed.

4.8. Role of the Management Board in ESG (GRI Disclosure 2-12 Role of the highest governance body in overseeing the management of impacts)

As the Company's highest governance body, the Management Board is responsible for developing, approving and updating the organisation's purpose, values, mission statements, strategies, policies and goals related to sustainable development. In this reporting period, as well, by carrying out its core activity – geothermal heat generation – the purpose of the Company was to provide sustainable solutions which offer the opportunity to alleviate energy needs over the long term, showing a way out of hydrocarbon-based energy dependence. In view of the existing demand and our efforts to maintain ecological balance, it can be stated



that PannErgy Group will take advantage of the opportunities provided by innovation and technology, and continue its operations as a greener energy provider.

As afforded by the opportunities provided by public General Meetings and the preceding propositions, the Company's Management Board **cooperates with stakeholders who are invited to provide feedback on the Company's sustainability-related processes.** In the case of such feedback and proposals, the Company collaborates with the proposing stakeholders, and **considers the results of the consultations in formulating and continuously fine-tuning its sustainability strategy.**

4.9. ESG Committee (GRI Disclosure 2-13 Delegation of responsibility for managing impacts)

The responsibility for managing the impacts of PannErgy Group as an organisation on the economy, environment and people was partially delegated by the Company's Management Board to a sustainability or ESG Committee, which was set up in the reporting period for 'sustainability reporting'.

The purpose of the ESG Committee is to support the Company's Management Board in the review and approval processes of the sustainability report, with special scrutiny on the completeness and integrity of the report.

The ESG Committee consists of 3 persons: 2 employees and the Company's CEO. It reports to the Management Board on a quarterly basis.

4.10. Approval of sustainability disclosures (GRI Disclosure 2-14 Role of the highest governance body in sustainability reporting)

As the highest governance body, the Company's Management Board is responsible for reviewing and approving the information reported in the published sustainability report, including the organisation's material topics.

As part of the approval process, the Company's CEO sends the sustainability report to the Management Board in the form of a proposition. The Board, in turn, discusses the details of the sustainability report, with special regard to the following topics:

- Consistency with the IFRS consolidated financial statements;
- GRI 3 selection of material topics;
- PannErgy Group's performance in emissions savings.

In the reporting period, a 'sustainability reporting', i.e. ESG Committee was set up to support the Company's Management Board in the review and approval processes of



the sustainability report, with special scrutiny on the completeness and integrity of the report.

The sustainability report is published after approval by the Management Board.

4.11. Prevention of conflicts of interest (GRI Disclosure 2-15 Conflicts of interest)

In line with applicable legislative requirements, the Company has internal rules of procedure in place to regulate material transactions with related parties. The processes of this procedure ensure the prevention of conflicts of interest and, should such conflicts of interest be detected, they would be properly disclosed in order to prevent related parties from securing advantages due to their position and to appropriately safeguard the interests of PannErgy Plc. and non-related party shareholders, including minority shareholders.

In compliance with the rules of procedure and under the supervision of the Audit Committee, in 2022 the Company reviewed related-party transactions, including transactions between the Company or the subsidiaries of the Company with companies controlled or owned by Board members or falling within the sphere of interest of Board members – as supplier or subcontractor partners – (cross-board membership). **The review did not reveal any material transactions with suppliers or other interested parties where a conflict of interest arose with regard to the persons participating in the governance of the Company or its shareholders.**

Pursuant to the rules applicable to companies admitted to trading on the stock exchange, the Company is required to report material related-party transactions. In the lack of such transactions, in 2022 there were no such reports concerning related parties, their relationships, the details of their transactions and outstanding balances.

4.12. Responsible business commitments (GRI Disclosure 2-24 Embedding policy commitments)

The commitments included in the long-term heat supply contracts and the incentive agreements referred to in Chapter 2.23. are integrated by the Company into its operational activity and business relationships,

including the allocation of responsibilities to implement the commitments across different levels within the organisation.

Policy commitments are mandatorily applicable to supplier, contractor and consulting contractual partners as well; the relevant terms and conditions are stipulated by PannErgy Group upon the conclusion of contracts and during the performances constituting the subject matter of the contracts.



As required by the complexity of the conditions governing the performance of the commitments, **the Company organises ad hoc trainings to facilitate the successful performance of the commitments.**

4.13. Elimination of sustainability risks (GRI Disclosure 2-25 Processes to remediate negative impacts)

In the reporting period PannErgy Group did not identify any negative impacts on sustainability that were caused – or contributed to – by the Company. Consequently, the Company has no public commitments regarding the remediation of such negative impacts.

4.13.1. Impacts on asset lifetime

The Company's management has evaluated the impact of climate change, and believes that climate-related risks will not significantly impact on the useful lifetime or residual value of existing assets. No indications of impairment have been identified.

The reason assets are not subject to impairment is because the development of environmentally friendly technologies will not require the Company to replace its production equipment earlier than expected, all products of the Company qualify as "green products", and the Company will not need to phase out any products in either the near or the distant future.

4.13.2. Impacts on operating permits and licenses

The Company does not expect negative impacts on any permits in connection with the regulatory enforcement of environmental and sustainability factors, and the Company always pays attention to the related legislation and aligns its operation with it. Any new environmental tax burdens that may be introduced in the future are unlikely to affect the Company.

The Company's stronger future focus on environmental protection and sustainability and its transition to lower carbon emissions will not adversely affect the Company's operations, its economic, market, technological or legal environment, or its future projected cash flow.

The Company expects that the greater role of environmental protection and sustainability in the future may lead to the introduction of legislation imposing greater environmental and remediation obligations, when compared to existing legislation. However, as before, the Company has not identified any information or indication that would suggest it will incur significant additional recultivation (remediation) or other environmental costs in the future at its operational sites. The consolidated financial



statements issued in the same reporting period as the ESG report do not include any associated provisions.

4.13.3. Impacts of sustainability on financing

The environmental requirements related to climate change and sustainability will not adversely affect the Company's current and short- to medium-term planned financing or its structure and will in fact provide opportunities for the Company. The Company continues to monitor the legislative and market environment for sustainability-linked, i.e. green bonds, as a potential financing option for environmentally friendly or sustainability-oriented projects. Green bonds are debt instruments that are linked to issuers' corporate social responsibility (CSR) financing, in addition to meeting certain environmental, social or governance (ESG) targets. In addition to green bonds, financial institutions can also provide borrowers with "green" financing, as part of their lending activities. For such loans, the compliance of the financed client or project with certain sustainability criteria is an advantage, or even a prerequisite.

4.13.4. The going concern principle and related disclosures

While almost every company is affected by climate change, the extent of exposure and the impact of risks may vary, depending on the operating sector or geographical location. Certain sectors, such as those emitting high levels of greenhouse gases or those dependent on fossil fuels, are more exposed to climate-related risks, which may well compromise the going concern principle in the future. However, companies in all sectors need to consider the potential consequences of climate-related risks when assessing going concern issues. For some, these risks may immediately induce detailed and company-specific disclosures. For others, the impact may not be as immediate, but they will still need to monitor rapidly changing circumstances. For PannErgy, this is not an issue, as its core business is renewable energy production that meets environmental objectives while looking to a sustainable future.

4.14. Sustainability problems, mechanisms for raising concerns (GRI Disclosure 2-26 Mechanisms for seeking advice and raising concerns)

The supreme body of the Company is the General Meeting, which is composed of all shareholders. Annual General Meetings are to be held once a year within the time limit prescribed by law; in addition, an extraordinary General Meeting shall be convened by the Management Board if the previous General Meeting so decided and if it has been requested from the Management Board by the auditor or shareholders representing at least 5% of all votes, the latter specifying the reasons for and the purposes of convening the General Meeting. **Accordingly, the annual and extraordinary General Meetings provide an opportunity for shareholders to publicly raise concerns about the organisation's business conduct.**



Even beyond the General Meeting, the Company's employees, executives, shareholders and other stakeholders are given an opportunity to seek advice on implementing the organisation's policies and practices for responsible business conduct. This opportunity is ensured by the processes detailed in two policies (*Policy on the prevention of abuse and fraud applicable to PannErgy Plc. and its subsidiaries; Code of Ethics and Policy on ethical procedures applicable to PannErgy Plc. and its subsidiaries*).

Any negative event or concern arising in relation to the Company's operation – in consideration of sustainability aspects as well – is identified and resolved in accordance with the provisions of the Code of Ethics and Policy on ethical procedures, as well as the Policy on the prevention of abuse and fraud applicable to the Company and its subsidiaries.

In connection with the operation of PannErgy Group, these regulations address in detail ethical and other issues concerning the stakeholders listed below, as well as the related organisational obligations, requirements and individual behavioural norms:

- Employees (Prohibition of negative discrimination; Harassment; Conflict of interest);
- Shareholders (Insider trading; Transparency of financial information and financial/accounting reports; Corporate property; Information on intellectual property; Digital information);
- Buyers, suppliers, business partners, competitors (Conflict of interests);
- Health, property and environmental protection, occupational safety;
- Political and governmental engagement;
- Protection of confidential information and privacy, unethical employment.

The Company operates a Council of Ethics, the principal mission of which is to ensure the ethical, sustainable operation of PannErgy Group and to coordinate the relevant management system at all entities of PannErgy Group.

The work of the three-member Council of Ethics is governed and coordinated by the Chief Executive Officer of PannErgy Plc.

Any stakeholder can address questions, notifications or complaints to the Council of Ethics in relation to any event adversely affecting sustainability through the public communication channels of the Company. Notifications received over the phone or communicated in person are recorded in writing. The Council of Ethics investigates the issue or the notification, consults with experts as required and responds within 15 days of receipt.



The Company continuously monitors the efficiency of complaints management mechanisms and other remediation processes. The stakeholders did not report any concerns in the reporting period.

Supervised by the chairman of the Management Board, primary responsibility for the prevention of abuse, fraud, bribery and malpractices at the Company is vested in the Company's management. The investigation and registration of abuse, fraud and bribery and communication with the authorities are performed by the Council of Ethics, supervised by the Company's CEO. In the case of complaints reported, the Council of Ethics coordinates all investigations and decides, as appropriate, on the engagement of third parties and experts.

Any executive officer, senior officer, shareholder, employee or person contracted to the Company who discovers or reasonably assumes an activity of suspected abuse, fraud, bribery or malpractice is entitled and required to report his concerns to the Council of Ethics, describing the suspicious circumstances and specifically highlighting and stressing potential evidence. Safeguarding the anonymity of stakeholders raising the concern or complaint is of special importance and the responsibility of the Council of Ethics, supervised by the CEO of the Company.

4.15. Legal compliance (GRI Disclosure 2-27 Compliance with laws and regulations)

As a company listed on the Budapest Stock Exchange, PannErgy operates with a high level of transparency and regulatory compliance.

4.15.1. Administrative supervision of district heat production

Project companies engaged in geothermal heat production have district heat production licences issued by the Hungarian Energy and Public Utility Regulatory Authority (hereinafter referred to as "HEA"), and operate under HEA's supervision. HEA is also responsible for setting the heat sale price for supplying customers, as the official heating rate, individually for each licensed project company for a one-year duration following 1 October of every year, typically for heating residential and public institutions. HEA is also entitled to make interim price changes as needed. As per the relevant legislation, HEA applies a cap on profitability (pre-tax profit) to ensure that no additional social burden is imposed as a result of the profit motive.

4.15.2. Administrative licensing procedures

For geothermal projects, the environmental, water and mining authorities carry out pre- and post-licensing procedures.



Regulatory control and authorisation procedures carried out by the authorities:

Type of regulatory procedure	2021	2022
Number of on-site inspections (environmental, water, labour, fire)	3	3
Training (fire safety, ISO, etc.)	3	3
Regulatory permits (environmental)	-	2
Regulatory permits (environmental)	3	3

With regards to PannErgy’s presence in public and on the stock exchange, the Budapest Stock Exchange and the Hungarian National Bank act as primary supervisory bodies to regulate the Company, including the quality of disclosures required by law, as well as insider trading regulations.

No material events arose at the Company during the reporting period that would have resulted in the Company’s non-compliance with applicable laws and regulations and accordingly, no fines or financial sanctions were imposed in this regard. Similarly, no fines or financial sanctions were imposed in relation to previous reporting periods either.

Based on the above, the provision of further details on non-compliance with laws and the presentation of significant instances are not relevant in this Sustainability Report.

4.15.3. Independent third-party auditor

In accordance with the Articles of Association, the Company’s independent auditor is elected by the General Meeting for a term of 1 year.

The Company’s auditor in the reporting period was BLUE RIDGE AUDIT HUNGARY Kft. (address: H-1026 Budapest, Sodrás str 5. 2.floor 1.door., tax number: 13076858-2-41, company registration number: 01-09-717568, Chamber registration number: MKVK 004410); the audit report was signed by Gábor Merkel (Chamber registration number: MKVK 007363, address: H-1138 Budapest, Jakab József str. 21. 2.floor 7.door).

The auditor is proposed by the Audit Committee; the proposal is put forward by the presiding officer of the General Meeting that elects the auditor. In the event the candidate of the Audit Committee does not get elected by the General Meeting as the Company’s auditor, the Audit Committee shall nominate another person.

The auditor is responsible for auditing the Company’s books, submitting a report to the General Meeting on the audit of the reports of the Company under the Accounting Act and the proposal by the Management Board on the distribution of profit and the calculation of dividends, and exercising other rights and carrying out other duties under the law.



Apart from auditing and the related statutory obligations, the auditor carried out no activities for the Company during the 2022 financial year.

4.15.4. The Company's disclosure policy

With respect to its disclosure policy, the Company acts in accordance with the applicable legislation and stock exchange rules. The Company shall publish its notices on its own website, the website of the Budapest Stock Exchange and on a website specified by the MNB. The publication of notices on the Company's website (www.pannergy.com) shall replace all other disclosure obligations unless otherwise provided by the law and other applicable regulations.

4.15.5. Insider trading policy

With respect to insider trading, the Company acts in accordance with the applicable legislation and stock exchange rules. It has an Insider Trading Policy regulating the relevant activities, and holds records on the permanent and ad hoc insiders.

4.16. Geothermal heat generation as core activity (GRI Disclosure 2-6 Activities, value chain and other business relationships)

4.16.1. Elements of renewable energy production as an income generating value chain

PannErgy Plc. is a public limited company listed on the Budapest Stock Exchange; it is included in the BUX basket, and a premium share issuer. Its core activities involve the extraction, sale and utilisation for energy generation of one of Europe's most significant thermal water resources and, in particular, renewable geothermal energy. **In connection with its operations in the geothermal energy sector, the Company performs productive operations in the field of renewable or green energy in Miskolc, Győr, Szentlőrinc and Berekfürdő (in Hungary only).** In the framework of selling the thermal energy produced, the Company cultivates long-term contractual relationships with its partners. Sales to local district heating companies are made at the official heating rates set annually by the Hungarian Energy and Public Utility Regulatory Authority for a one-year period starting on 1 October each year. It is also possible to resort to interim price-setting, as happened in the reporting period due to the drastic energy market volatility observed in the reporting period.

Sales to industrial customers served directly are made at individually determined free-market value.

On 31 December 2022, PannErgy Group had 14 employees, while the annual average statistical headcount for 2022 is 22. **Our limited number of employees are primarily responsible for the operational control and organisation (including outsourcing), and financing of the Group's heat generation activity and for the performance of related back-office activities. Maintenance and operational activities at the sites of the geothermal projects are carried out by external partners under long-term service contracts.**



The Company's revenue is generated from the production of renewable geothermal energy and from the sale of the generated green energy to its heat-receiving partners (through district heating companies for residential and industrial customers, and directly to industrial customers). The foundations of this arrangement are put in place by the Group's corporate governance organisation and employees, with support provided by external partners through maintenance and operational activities. These are the main elements of the Company's income generating value chain.

4.16.2. Customers, buyers

The Company's activities are concentrated, providing geothermal heat sales to a small number of customers. These concentrated activities allow for a long-term strategic partnership with all clients, taking the ESG concerns of both parties into accounts.

The Company sells the heat it generates directly to its industrial customers and indirectly to its district heating partners, the latter primarily to service residential energy demands.

The Company's customers:

Location	Partner
Miskolc	MIHŐ Miskolci Hőszolgáltató Kft., Joyson Safety Systems Hungary Kft., GS-Yuasa Magyarország Kft., as well as a number of smaller industrial consumers (typically manufacturing and trading companies) in Kistokaj
Győr	GYŐR-SZOL Győri Közszolgáltató és Vagyongazdálkodó Zrt., AUDI HUNGARIA Zrt., as well as a number of industrial consumers (typically logistics companies) in the environs of Győr
Szentlőrinc	Szentlőrinci Közüzemi Nonprofit Kft.
Berekfürdő	Public utility and industrial consumers in the village of Berekfürdő

PannErgy strives to operate with a high level of efficiency and operational safety, while providing the highest quality of service to meet the financial and environmental needs of its customers. One of the Company's key strengths in dealing with its customers is its small staff that includes highly experienced managers and employees, who can respond immediately and provide flexible solutions to any customer issue or request. This rapid response is not hampered by the inevitable issues of communication and division of labour that are common in larger organisations.

During the reference year and the previous year, the Company has, to the best of its knowledge, not breached any material contractual obligations to its customers, and has not incurred any associated liabilities.

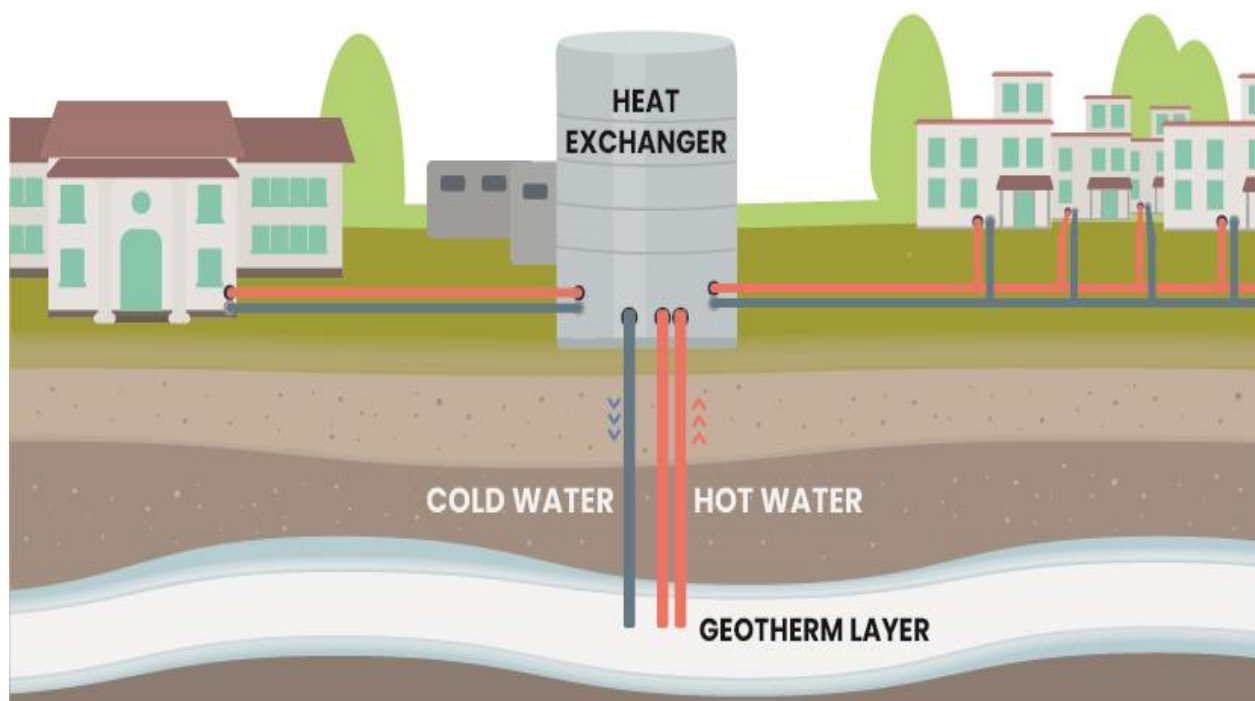


4.16.3. Description of the geothermal heat production systems of PannErgy

Generally speaking, the **utilisation system of geothermal energy** consists of the following distinct and locally separable components:

- extraction wells, including pump, filter, degasser, water treatment unit;
- Thermal water pipeline between the extraction wells and the heating centre;
- Heating centre;
- Reinjection pipe system;
- Reinjection wells;
- Secondary pipelines, pumps and heat exchangers.

A traditional geothermal heating system typically includes at least two hydraulic circuits. Firstly, a geothermal loop, which is an insulated heat transmission line servicing the main heat centre by connecting the production wells to the reinjection wells. Secondly, a secondary loop, which consists of a pair of insulated transmission lines connecting the thermal heat exchanger station to the heat transfer stations located at the partners' sites, spanning a distance of up to 10–15 kilometres.



The geothermal power plants are owned by the Company. The plants in Miskolc, Győr and Szentlőrinc produce thermal energy, while the Berekfürdő system produces thermal energy and electric power. The Company pursues its activities in these **four heat markets. All power plants operated by the Company use renewable and related energy sources.**

Location	Nature	Installed primer operational performance over the reference period	Continuous average peak capacity
Miskolc	Geothermal power plant	60 MW	1,080 m ³ /h
Győr	Geothermal power plant	60 MW	1,110 m ³ /h
Szentlőrinc	Geothermal power plant	4.6 MW	90 m ³ /h
Berekfürdő	Geothermal-based gas power plant	0.77 MW ¹	

¹ 0.45 MW of thermal energy and 0.32 MW of electric power generation capacity is available from the methane extracted from the geothermal source.

4.16.4. Implementing geothermal projects

The Company initiates as contractor in the implementation of geothermal projects, through its specialised subsidiaries and subcontractors, which have extensive experience in project implementation. PannErgy remains in charge of managing the entire project implementation process.

A particularly high geological and technological risk is a specific feature of all geothermal projects. Members of the PannErgy Group mitigate this risk by way of gathering, integrating and processing the widest possible range of geological and other technical/professional and scientific information and by involving and intervention the proper experts and subcontractors.

Due to the incalculable availability of the geothermal energy resources and the limited capacity of the equipment in the unconventional operational environment, the production of geothermal energy entails unforeseeable risks. To mitigate this risk, the Company prepares each of its geothermal projects with great care for detail, after all reasonably accessible data and information that may affect implementation has been collected and evaluated.

Since the Company has the necessary know-how for mitigating these risks, it is also able to provide energy contractor services to external partners, on a limited and ad



hoc basis, if there is free capacity. These are primarily consultancy and professional services related to the implementation of geothermal projects or the drilling of thermal wells.

4.16.5. Other activities

In addition to the Company's core business, which is renewable energy production, it is also involved in the development of real estate for investment purposes, including industrial facilities and related office space. In the last few years, it sold all of its industrial properties in District XXI of Budapest, and therefore currently the Company only owns such properties in Debrecen.

These properties are not related to the generation and sale of geothermal heat, which is the main business activity of the PannErgy Group. In the medium term, the Company intends to sell the facilities formerly used for plastic manufacturing. Until this is achieved, these properties will be mainly used for rental purposes.

PannErgy understands that good supplier/contractor relationships are of paramount importance, both in the establishment of geothermal projects and in the operation of commissioned projects. They are essential for the Company to be able to provide uninterrupted, high-quality service to its customers.

Consequently, the Company attaches special significance to the organisation's supplier chain.

4.16.6. Suppliers, subcontractors

In the course of its operations, PannErgy strives to build long-term relationships with its suppliers based on mutual cooperation and satisfaction, and to ensure that its suppliers continue to operate in a legally and commercially sound and reliable manner.

Due to the special nature of geothermal heat generation, the scope of potential suppliers is essentially limited. Therefore, it is important to have a stable supplier chain. There are special purchases and services which need to comply with several industry criteria and practical requirements.

As a result, the Company retains a stable base of suppliers and subcontractors, with none of the Company's top 10 suppliers having first done business with the Company during the period under review.

The top 10 suppliers and subcontracting partners accounted for 88% of the total supplier turnover in the reporting period and 72% in the previous year.



Major suppliers who do business with PannErgy for the first time are subject to a business partner evaluation.



PannErgy also takes into account its sustainability values and ESG considerations when selecting suppliers and subcontractors, and thus places great emphasis on selecting local small and medium-sized enterprises as suppliers and subcontractors, whenever the nature of the required service or procurement permits, giving preference to companies that are local to the area of rural projects and have a positive impact on local communities. In the reference period, 97% of our suppliers were based in Hungary, which was roughly the same ratio as in the previous period.

In the long term, the Company plans to supplement its scoring and evaluation system for supplier selection tender processes relevant to its operational and investment activities with ESG rating criteria for the potential suppliers. This means that it will give preference to suppliers and subcontractors whose activities are more centred on ESG.

4.16.7. Changes in the value chain and in business relationships

Apart from its heat-receiving partners and the partners constituting its supplier chain, the Company has **no other relevant business relationships**.

There were no significant changes in the Company's scope of activities, sector, supplier chain and other relevant business relationships compared to the previous reporting period.



HUMAN RESOURCES, SOCIAL PRESENCE

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Zero

Work-related accident



50-50%

Ratio of women to men among employees



HUF 3 million

Donations to those in need



HUF 20 million

Sports Sponsorship to sports and health organisations



1.138 hours

Training to employees

5. Human resources, social presence

5.1. Employees (GRI Disclosure 2-7 Employees)

PannErgy has 4 geothermal heat generation sites in Hungary (Miskolc, Győr, Szentlőrinc and Berekfürdő), and at the end of the reporting period operated its head office in Budapest with 14 employees, as opposed to its staff number of 18 persons as at 31 December 2021. The low number of employees relative to the Group's consolidated financial figures (balance sheet total and revenue) is due to the fact that the Company has largely automated and outsourced the operation of its geothermal systems during the advanced implementation process. The control systems allow for transparency in system functions, greatly simplifying operations.

In 2022 the Company's annual average statistical headcount was 22 persons, which shows a 1-person decline compared to the 23 persons registered in 2021. The difference between the average statistical headcount and the number of employees at the end of the reporting period is attributable to part-time employment across group members and the increased headcount during the year. **Both in the base period and in 2022 the Company engaged only full-time employees; therefore, the details provided below do not include data on temporary employees.**

The number of employees detailed below broken down by various criteria reflect actual figures at the end of the reporting period rather than the average statistical headcount.

1 January 2022 – 31 December 2022 Employees by gender				
Female	Male	Other	Not disclosed	Total
Number of employees at the end of the period				
7	7	-	-	14
Number of permanent employees at the end of the period				
7	7	-	-	14
Number of temporary employees at the end of the period				
-	-	-	-	-
Number of non-guaranteed hours employees at the end of the period				
-	-	-	-	-
Number of full-time employees at the end of the period				
6	6	-	-	12
Number of part-time employees at the end of the period				
1	1	-	-	2



1 January 2021 – 31 December 2021 Employees by gender				
Female	Male	Other	Not disclosed	Total
Number of employees at the end of the period				
8	10	-	-	18
Number of permanent employees at the end of the period				
8	10	-	-	18
Number of temporary employees at the end of the period				
-	-	-	-	-
Number of non-guaranteed hours employees at the end of the period				
-	-	-	-	-
Number of full-time employees at the end of the period				
6	9	-	-	15
Number of part-time employees at the end of the period				
2	1	-	-	3

1 January 2022 – 31 December 2022 Employees by region				
Győr	Miskolc	Budapest	Other	Total
Number of employees at the end of the period				
-	8	6	-	14
Number of permanent employees at the end of the period				
-	8	6	-	14
Number of temporary employees at the end of the period				
-	-	-	-	-
Number of non-guaranteed hours employees at the end of the period				
-	-	-	-	-
Number of full-time employees at the end of the period				
-	7	5	-	12
Number of part-time employees at the end of the period				
-	1	1	-	2

1 January 2021 – 31 December 2021 Employees by region				
Győr	Miskolc	Budapest	Other	Total
Number of employees at the end of the period				
1	8	9	-	18
Number of permanent employees at the end of the period				
1	8	9	-	18
Number of temporary employees at the end of the period				
-	-	-	-	-
Number of non-guaranteed hours employees at the end of the period				
-	-	-	-	-
Number of full-time employees at the end of the period				
1	6	8	-	15
Number of part-time employees at the end of the period				
-	2	1	-	3



1 January 2022 – 31 December 2022 Employees by degree of qualification				
Tertiary	Secondary	Vocational	Other	Total
Number of employees at the end of the period				
8	6	-	-	14
Number of permanent employees at the end of the period				
8	6	-	-	14
Number of temporary employees at the end of the period				
-	-	-	-	-
Number of non-guaranteed hours employees at the end of the period				
-	-	-	-	-
Number of full-time employees at the end of the period				
6	6	-	-	12
Number of part-time employees at the end of the period				
2	-	-	-	2

1 January 2021 – 31 December 2021 Employees by degree of qualification				
Tertiary	Secondary	Vocational	Other	Total
Number of employees at the end of the period				
11	6	1	-	18
Number of permanent employees at the end of the period				
11	6	1	-	18
Number of temporary employees at the end of the period				
-	-	-	-	-
Number of non-guaranteed hours employees at the end of the period				
-	-	-	-	-
Number of full-time employees at the end of the period				
8	6	1	-	15
Number of part-time employees at the end of the period				
3	-	-	-	3

1 January 2022 – 31 December 2022 Employees broken down by blue-collar/white-collar position			
Blue-collar	White-collar	Other	Total
Number of employees at the end of the period			
-	14	-	14
Number of permanent employees at the end of the period			
-	14	-	14
Number of temporary employees at the end of the period			
-	-	-	-
Number of non-guaranteed hours employees at the end of the period			
-	-	-	-
Number of full-time employees at the end of the period			
-	12	-	-
Number of part-time employees at the end of the period			
-	2	-	-



1 January 2021 – 31 December 2021 Employees broken down by blue-collar/white-collar position			
Blue-collar	White-collar	Other	Total
Number of employees at the end of the period			
1	17	-	18
Number of permanent employees at the end of the period			
1	17	-	18
Number of temporary employees at the end of the period			
-	-	-	-
Number of non-guaranteed hours employees at the end of the period			
-	-	-	-
Number of full-time employees at the end of the period			
1	14	-	15
Number of part-time employees at the end of the period			
-	3	-	3

Employees by age	2022	2021
0–30 years	2	3
31–50 years	7	10
From 51 years	5	5
Total	14	18

Regarding the age of the workforce, the vast majority of employees are between 30 and 50 years old.

In terms of the composition of employees, it is clear that the Company supports gender balance. A balanced gender ratio was achieved in both the reference and the base period, despite the historically imbalanced gender ratio typical of the energy industry.

The Company engages its employees primarily in white-collar positions. The maintenance and other operational activities of geothermal projects that partly require physical labour are carried out by external partners.

In line with the structure of the holding company, the vast majority of the Company's employees are part-time workers employed in several PannErgy-affiliated companies; taken together, however, they are full-time employees.

The Company has no non-guaranteed hours employees. Employees are engaged under full-time or part-time contracts.

All employees have open-ended work contracts, since fixed-term contracts are not typical of the Company's human resources policy.

The Company does not employ temporary staff. The operation and maintenance of geothermal projects is outsourced to external partners, and is continuously supervised by Company employees. The Company subcontracts the implementation of



investment projects (e.g. well drilling), with PannErgy employees providing professional supervision in these cases as well.

In compiling the employee data shown above, the Company relied on data from payroll records as at the end of the reporting period; i.e. it did not present average data for the reporting period.

Fluctuations in the number of employees:

During the reporting period 4 persons left the Company (1 female and 3 male), and there were no new hires. Relative to the previous year – 6 persons joining (2 female and 4 male) and 4 leaving (1 female and 3 male) – the fluctuation appears less intensive.

Except for one case, employee resignations were based on mutual consent, motivated by a change in residence or career. The Company filled the resulting vacant positions by way of reorganisation.

5.2. Workers engaged under service contracts or in another legal relationship (GRI Disclosure 2-8 Workers who are not employees)

The Company engaged three persons who are not employees but whose work is controlled by PannErgy and the details of their work performance is controlled by the Company.

Two of them **carry out maintenance tasks** at the Berekfürdő project, and one person carries out **site representative tasks** at PannErgy Plc.'s Debrecen site. **These three persons work under a service contract, which means that they are not employees.** Rather than working full-time, they perform tasks for PannErgy in a part-time arrangement based on the tasks detailed by the Company. Moreover, it can be said generally that the Company engages external partners for the performance of maintenance and operational tasks in other cases as well.

In compiling the employee data shown above, the Company relied on data from payroll records as at the end of the reporting period; i.e. it did not present average data for the reporting period.

5.3. Remuneration report (GRI Disclosure 2-19 Remuneration policies)

The Company discloses a separate remuneration report for 2022 as a proposal to the General Meeting. Key data of this report are detailed in this Chapter.



In the 2022 financial year, the following members of PannErgy Plc.'s Management Board acted as the Company's directors:

Name	Position	Date of taking office	Mandated until
Balázs Bokorovics	Member, Chairman	31/08/2007	11/12/2022
Dénes Gyimóthy	Member, Vice-Chairman	31/08/2007	12/12/2022
	Acting Chief Executive Officer	05/05/2015	
	Member, Chairman	12/12/2022	
Gábor Briglovics	Member	16.04.2021	indefinite term
Katalin Gyimóthy	Member	28/04/2016	indefinite term
Lilla Martonfalvay	Member	28/04/2016	11/12/2022
Attila Juhász	Member	31/08/2007	indefinite term
Kálmán Rencsár	Member	30/04/2020	indefinite term

Remuneration of the Company's directors in the 2022 financial year:

Name	Remuneration amount (thousand HUF)	Fixed part (%)	Variable part (%)
Balázs Bokorovics	2,219	100.00 %	0.00 %
Dénes Gyimóthy	1,887	100.00 %	0.00 %
Gábor Briglovics	1,860	100.00 %	0.00 %
Katalin Gyimóthy	1,860	100.00 %	0.00 %
Lilla Martonfalvay	1,764	100.00 %	0.00 %
Attila Juhász	1,860	100.00 %	0.00 %
Kálmán Rencsár	1,860	100.00 %	0.00 %

The actual remuneration fully complies with the requirements set out in the Remuneration Policy. **Members of the Management Board receive fixed pay; they did not receive variable pay in the reporting period.**

Members of the Management Board did not receive payments in the reporting period under the following legal titles: entry bonuses, workforce hiring incentives, severance payments, clawbacks, retirement benefits.

Remuneration amounts are set by the General Meeting. Directors are entitled to use the assets (e.g. vehicles, mobile phones, IT equipment, etc.) owned by the Company as necessary for discharging their roles and aligned with the type of duties carried out by the Directors, for purposes. The Directors receive no other remuneration at the affiliated undertakings of the Company.



While no performance criteria have been laid down in connection with the remuneration on the basis of the principles described above, it should be noted that the Company has achieved its EBITDA target for the financial year 2022, and this value is the primary measure of financial performance at the Company.

During the past five years, the yearly changes in Group-level remuneration and the development of the Company's performance and the average Group-level remuneration of Company employees other than directors during such period are shown in the tables below, expressed in FTE in a manner enabling comparison:

Financial year	Consolidated EBITDA under the IFRS (thousand HUF)	Change in EBITDA consolidated under the IFRS from the previous financial year (%)	Change in the average annual per capita income of Directors from the previous financial year (%)	Change in the average annual per capita income of employees other than Directors from the previous financial year (%)
2015	1,614			
2016	1,715	6.28 %	-19.49 %	2.19 %
2017	2,241	30.65 %	-8.54 %	1.95 %
2018	2,231	-0.45 %	0.20 %	-0.35 %
2019	2,666	19.48 %	0.00 %	-5.75 %
2020	2,735	2.60 %	0.49 %	28.29 %
2021	2,878	5.23 %	-0.36 %	18.93 %
2022	3,612	25.50 %	-0.11 %	22.80 %

Years	Remuneration of directors			Remuneration of employees other than directors		
	Average headcount (number of persons)	Total annual income (thousand HUF)	Average annual per capita income (thousand HUF)	Average headcount (number of persons)	Total annual income (thousand HUF)	Average annual per capita income (thousand HUF)
2015 ¹	6.55	17,115	2,614	37.84	162,664	4,299
2016	7.36	15,478	2,104	23.72	104,200	4,393
2017	7.52	14,480	1,925	15.25	68,300	4,479
2018 ¹	7.00	13,500	1,929	13.61	60,742	4,463
2019	7.00	13,500	1,929	15.41	64,821	4,206
2020	6.61	12,820	1,938	15.85	85,535	5,396
2021	6.71	12,958	1,931	16.19	103,908	6,418
2022	6.90	13,310	1,959	22.05	127,281	7,881

¹ It includes the wages of permanent employees only; temporary, project-based wages have been eliminated

In the past 5 financial years, the Company's annual EBITDA increased by 61.2%, the average per capita annual income of directors increased by 0.2%, whereas the average per capita annual income of employees other than directors rose by 76%.



For the financial year 2022, no shares or share options have been offered to the Company's directors.

For the financial year 2022, no variable remuneration has been determined for directors; therefore, the possibility of clawbacks does not arise.

Remunerations in the reporting year were fully in line with the provisions of the Remuneration Policy, without derogation.

The Remuneration Policy of PannErgy Plc. relates to the directors' performance and targets in managing the Company's impacts on the economy, environment and people as follows:

The Remuneration Policy provides that the characteristics of the remuneration of the Company's directors should reflect the Company's evolution and its risk profile. While in the previous energy transformation period certain members of the Management Board (former Board of Directors) joined an executive stock option scheme besides the fixed remuneration of the members, the shareholders decided that only a fixed remuneration shall apply for the current organic operation period.

According to the guidelines set out in the Remuneration Policy, the Company's strategic objectives are achieved mainly through the operational management, the Company's professional staff and permanent partners. Accordingly, the Company has developed a contractual relationship with its employees and strategic partners that uses fixed and performance-based incentives, thereby facilitating the Company's business strategy, long-term interests and sustainability.

5.4. Remuneration principles (GRI Disclosure 2-20 Process to determine remuneration)

PannErgy Plc.'s remuneration principles pertaining to the Management Board as the highest governance body and the process of determining remuneration are included in the Remuneration Policy.

A new law entered into force on 17 July 2019 that facilitates the encouragement of long-term shareholder engagement over short-term risk-taking and improves transparency between public companies limited by shares and investors. In accordance with the act transposing the European Union's Shareholder Rights Directive II (SRD II), the remuneration of senior management of listed companies becomes public in Hungary, too.

Pursuant to the stipulations of Act LXVII of 2019 on the Encouragement of Long-term Shareholder Engagement and Amendments of Certain Regulations for the Purposes of Legal Harmonisation, PannErgy Plc. has drawn up a detailed Remuneration Policy.



As is the case with all public companies limited by shares, the consultative vote on the Remuneration Policy falls within the exclusive competence of the General Meeting, i.e. the shareholders. This ensures that shareholders have an actual say in the development of the remuneration policy, because payments to the management may only be made in accordance with the remuneration policy submitted to the General Meeting for a consultative vote. In the event of major changes or at least every four years, the Remuneration Policy shall be put on the agenda of the General Meeting. The Company defines its Remuneration Policy for directors, and for these purposes, any member of PannErgy Plc.'s Management Board is considered to be a director. No supervisory board operates at the Company, and the post of deputy CEO is not occupied, either.

Since the remuneration principles are determined by the General Meeting as per the above – i.e. rather than based on an internal process –, the process of determining remuneration is not overseen by an independent remuneration committee or by an independent Management Board member, and the Company does not have a remuneration committee in place.

Stakeholders' views regarding remuneration are taken into consideration as the remuneration principles are approved at a public General Meeting, whereby, with the submission of proposals to the General Meeting, the consideration of external views is guaranteed.

The Company does not take recourse to the services of an external remuneration consultant to determine the remuneration of members of the Management Board; consequently, there is no need to disclose information on the independence of such consultants.

On 30 April 2020, pursuant to Section 3:268 (2) of the Civil Code and acting within the competence of the General Meeting as authorised by Section 9 (2) of Government Decree No. 102/2020. (IV. 10.) on special provisions regarding partnerships and joint-stock companies during the state of emergency, the Management Board unanimously approved and decided on the publication of its Remuneration Policy. The Remuneration Policy is available on the Company's website under the following link: [PannErgyNyrt_javadalmazasi-politika_20200417_0430_AGM_en.pdf](#)

5.5. Compensation ratio (GRI Disclosure 2-21 Annual total compensation ratio)

In accordance with the provisions of GRI Disclosure 2-21 Annual total compensation ratio, the Company reports the ratio expressing the annual total compensation for PannErgy Group's highest-paid individual to the median annual total compensation for all employees (excluding the highest-paid individual).



In 2022 this ratio was 16% compared to 13% in 2021. The change in the annual total compensation ratio is 16%.

In determining the above ratio, the staff cost data presented in the Consolidated Financial Statements pertaining to the remuneration of all employees (Note 9: Headcount and wage costs) was adjusted: the personnel costs associated with non-employees (contractor's fees and other payments) were excluded.

5.6. Membership associations (GRI Disclosure 2-28 Membership associations)

The Company does not participate in a significant role in any industry association or other membership association, or national or international advocacy organisation.

As regards other memberships, it should be noted that PannErgy Plc. is a premium share issuer listed on the Budapest Stock Exchange and included in the BUX basket. It is also a member of the Budapest Chamber of Commerce and Industry.

5.7. Stakeholder engagement (GRI Disclosure 2-29 Approach to stakeholder engagement)

PannErgy defines stakeholders as groups of individuals having an interest in or an influence on the achievement of the Company's objectives. These are the following:

- Regulatory authorities and supervisory bodies ([4.15.1. Administrative supervision of district heat production](#); [4.15.2. Administrative licensing procedures](#))
- Shareholders ([1.4. Main Company information, ownership background \(GRI Disclosure 2-1 Organisational details\)](#); [4.1. The General Meeting, as the Company's supreme body](#))
- Suppliers, subcontractors ([4.16.6. Suppliers, subcontractors](#))
- Customers, ([4.16.2. Customers, buyers](#))
- Local communities
- CSR groups (NGOs, elite and public sports associations)

PannErgy believes that the views of these organisations on sustainability are important. Through cooperation with these groups, the Company strives to raise awareness of renewable energy, environmental protection and sustainability as prominently as possible.

The Company seeks to ensure efficient communication with external and internal stakeholders and to enhance its corporate culture. **It treats its shareholders and employees as special stakeholders in continuous and efficient communication and cooperation.**



5.7.1. Impact Investing Strategy

PannErgy follows the strategy of “Impact Investing”, which entails investing in projects offering ESG, social and environmental benefits. As such, it applies the following three factors in the course of its operations:

Intentionality: PannErgy Group has a clear objective and offers business solutions to societal problems (environmental protection), presenting its objective transparently in its business strategy.

Profitability: PannErgy Group must operate in a commercially profitable way, creating value for its investors while having a positive impact on the environment.

Scaleability: PannErgy Group is clearly committed to financial sustainability, managing growth, new activities and projects in such a way as to remain true to its renewable energy business model.

5.7.2. Internal communication

The Company's management attaches great importance to regular, effective communication between the Company's management and its employees. **This is aimed at the improvement of the general satisfaction and motivation of staff members which, indirectly, contributes to the more effective operation of the Company and sustainable development.** With that in mind, the Company **regularly sends out corporate newsletters to all employees**, notifying them of any useful, new information (e.g. staff changes, new employees, people leaving, public disclosures, etc.). **Corporate forums are held at regular intervals**, allowing for professional and personal dialogue between the Company's management and its employees. In addition, members of management have a continuous presence at all sites across the Company's operations, with **all employees having the opportunity to contact the Company's management concerning any matter, ensuring efficient cooperation.**

The Company's management considers it of the utmost importance that all of its employees, regardless of their job title, familiarise themselves with all areas of operation, the details of geothermal heat generation and various system elements. As part of this commitment, employees are expected to visit all project sites of PannErgy Group on a regular basis.

5.7.3. Corporate culture

PannErgy corporate culture includes the pursuit of operational excellence and safety. The key values of its corporate culture include more than a decade of commitment to the environment, a culture of continuous improvement, and a passion for success.

The Company's corporate culture and its people represent its two most important resources, as well as its key competitive advantages in its efforts to become or remain the leading geothermal energy company in the Carpathian Basin.

The Company's corporate culture focuses on its employees and strategic partners when setting and achieving big goals, striving for continuous improvement, and



implementing the transparent and quantifiable processes supporting these objectives.

5.7.4. External communication

In accordance with legal provisions and beyond, the Company posts, *inter alia*, regular and extraordinary notices on its website at <http://www.pannergy.com>.

The publications and public information released by PannErgy Plc. may make it considerably easier for all stakeholders affected by sustainability (primarily shareholders and investors) to understand and assess the Company's operations and economic position; therefore, these regular and extraordinary notices are important supplements to the information disclosed in this sustainability report.

The Company's management believes that an investment in PannErgy also achieves social and environmental benefits: in addition to generating financial returns based on share price appreciation or dividend payments, it also provides a positive social or environmental impact for shareholders by giving them a stake in a renewable-energy, carbon-neutral and emissions-saving company.

Information on the Company's shareholders are detailed in Chapter [1.4 Main company information, ownership background \(GRI Disclosure 2-1 Organisational details\)](#).

5.7.5. Safe working conditions, the protection of health

As in 2021, the safety of employees was given special priority at PannErgy in 2022 as well. As every single employee contributes, directly or indirectly, to the efficiency and operational safety of geothermal projects, and as the Company holds itself responsible not only for its duties as an employer, but also for its employees' personal quality of life, employee health and safety was a key priority during the reporting period considering that 2022 was still affected by the pandemic.

The Company continuously monitored the current pandemic situation in the reporting period, as well as the related legislative environment. Accordingly, it has dynamically modified its rules on working from home throughout the year, in order to accommodate its employees' individual requests and reasonable needs.

In addition to options for working from home, the Company provided free testing to employees on an ongoing basis, with quick tests available both in Budapest and at rural sites. In the reporting period the Company also bore the cost of PCR tests, which remain the most effective option for detecting suspicious cases. In addition to continuous testing facilities, basic medicines and medical equipment (pulse oximeters, blood pressure monitors, etc.) are available at all Company sites.

The Company places a high priority on the safety of its employees and customers, and on the operational security of the heat supply provided to customers. A commitment



to safety is a fundamental part of our corporate culture, reflecting our focus on consistent and precise operations. Our corporate safety strategy is based on the principle that the prevention of all potential harm is the only acceptable goal. Similar to the base period, the Company is proud to say that it had no accidents or injuries throughout 2022.

5.7.6. Education, training

The Company believes in continuous development, and thus pays special attention to the training and professional development of its staff. Training courses are provided in accordance with the Training Plan. The scope of training was broader than in the previous year. In 2022, 400 hours of group training were provided, compared to 212 hours in the previous year. In the last quarter of the reporting period, the Company redesigned its Training Plan and re-launched most of its training courses, including language courses, energy industry-related training, financial and accounting courses, and investor relations training. In addition to these training courses, the Company supports the participation of staff in online professional webinars and conferences. All new employees are required to complete an occupational and fire safety training course, and must familiarize themselves with all applicable regulations.

5.7.7. Policies supporting operations

During the reference and the base period, the Company introduced new regulations or updated older ones to support operations in the following areas:

- Regulations on insider trading;
- Regulations on handling and archiving documents;
- Information access policies and regulations on the disclosure of classified information;
- Regulations on the handling of invoices, the ordering of vouchers and contract rules;
- Regulations on the use of motor vehicles;
- HR regulations (organisational protocol, rules on advance pay and home office rules);
- Fire and occupational safety regulations.

5.7.8. Local communities, Corporate Social Responsibility (CSR)

PannErgy is committed to Corporate Social Responsibility (CSR), with a particular focus on environmental, economic and social sustainability. PannErgy Group is constantly looking for CSR programs that can bring tangible social benefits to the residents or environment of a given region or town, primarily in the locations of its geothermal projects. The Company supports local communities in the following ways.



Healthy lifestyle, sports

At the local level, PannErgy sponsors successful sports clubs with excellent reputations that are capable of attracting large crowds, thus indirectly improving quality of life for the residents of the region or town in question.

For years, the two most significant such partnerships have been with Győri ETO KC, one of the top international women's handball teams, and MVLC Miskolc Water Polo Club, one of the rural mainstays of Hungarian water polo, considered to be among the elite even at the international level.



These associations have a significant youth base, thus the Company's support can have a significant impact on sport and healthy living among young people.

Support to disadvantaged regions

PannErgy Group is also committed to supporting the most disadvantaged groups. To this end, it has for many years supported various charities working with sick children, or children growing up in the care of child protection services.

The Company supports various environmental events to raise awareness of global warming and environmental protection (Climate Energy Cooperation Project KFI course, World Water Day events)



Raising awareness on environmental protection and sustainability

PannErgy Plc. provides opportunities for any interested school or educational institution to take part in professional study trips and career orientation plant visits. It works to organise these environmental education events, sometimes even providing free travel. Several (7) such events took place during the period under review.

The Company considers these events to be particularly vital for promoting renewable energy sources (including geothermal energy) and the importance of environmental protection.

The aforementioned collaborations clearly demonstrate that PannErgy Group focuses not only on its own business operations, but also wishes to take into account the interests of society, which is why it continues to consider its impact on the environment and local residents during the course of its operations, and voluntarily takes steps to improve the quality of life of the local communities around PannErgy Group.

5.8. Collective bargaining agreements (GRI Disclosure 2-30 Collective bargaining agreements)

The Company has no employees covered by collective bargaining agreements and it has no collective bargaining agreement in effect; the presentation of its details and validity, therefore, is irrelevant for the purposes of this ESG report.

The **Company concluded employment contracts with all of its employees on an individual basis**, but it ensures the same working conditions to all of them. Further conditions of employment are defined individually upon contract conclusion between the Company and the employee.



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6.18. Waste diverted from disposal (GRI 306-4)	78
6.19. Waste directed to disposal (GRI 306-5)	78



1,785 TJ

consolidated heat sales



~80,000 t

CO₂ equivalent GHG emissions savings



78%

greenhouse gas emissions savings



~100%

of the extracted thermal water is reinjected to ensure sustainability

6. Environmental protection / Consolidated sustainability performance

6.1. PannErgy Group's greenhouse gas (GHG) emissions savings balance

Since PannErgy's core business is renewable geothermal energy production with minimal emissions, the Company's business is based on emission savings instead of emissions.

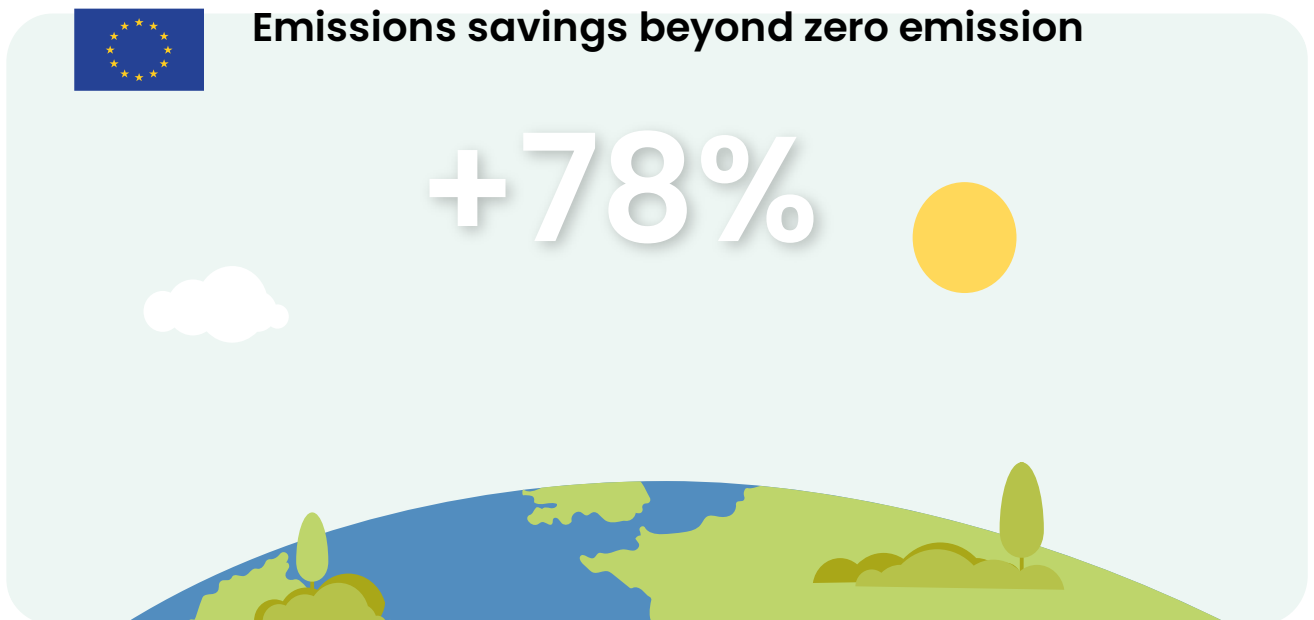
The Company has defined the total annual emissions savings and the savings rate as key indicators for its overall strategic environmental objectives.

- Total annual emissions savings is the amount of carbon dioxide equivalent emissions (in tonnes) saved by the Company during the relevant business period from its direct and indirect heat-transfer partners, as a result of its core green energy production activity.
- The emissions savings rate is the ratio between the greenhouse gas emissions of the energy used in the production and sale of the geothermal energy produced and theoretical greenhouse gas emissions calculated for a hypothetical production using an alternative fossil fuel source typical of the region.



Emissions savings beyond zero emission

+78%



Sustainability indicators 2022:

**approximately 80 000 tonnes of CO₂ equivalent
GHG emissions savings**

78% greenhouse gas emissions savings



KPI

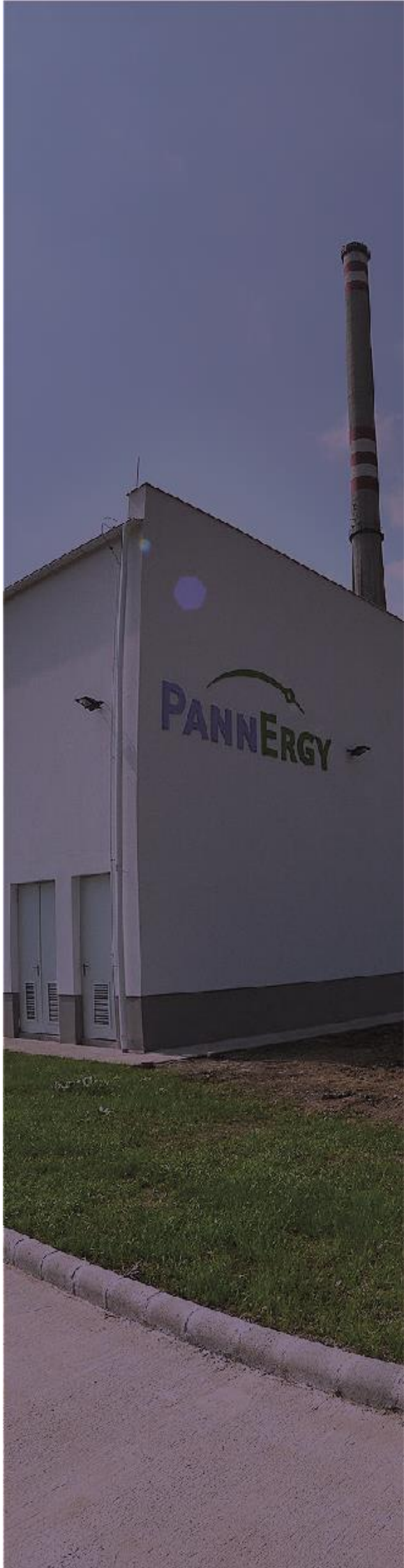
PannErgy's consolidated greenhouse gas emissions savings rate was 78% in 2022 compared to the 81% reported in the base period, which means that in the reporting period it continued to save approximately 4/5 units compared to fossil fuel emissions.

The decline reflects the fact that, in addition to its greenhouse gas emissions saving activity, the Company completely neutralised the indirect CO₂ impact of the power needs of geothermal heat generation by purchasing a Guarantee of Origin (Scope 2) in the base period, and no such guarantees were purchased during the reporting period.

Based on the greenhouse gas emissions related to energy production, the Company emitted only 22%, that is, less than one-quarter, of the GHG environmental burden of the natural gas-based power generation of 90% efficiency considered for the purpose of offsetting emissions in the reporting period.

In 2022, the Company offset (saved) approximately 80 thousand tonnes of CO₂-equivalent GHG emissions. For the calculation of the emissions savings rate, in order to define the emissions of the Group, the Company considered the CO₂ impact of the electricity needs of geothermal heat generation (Scope 2) and the emissions related to administrative central operation and project-level site operation (Scope 1). As regards savings, the Company considered the emissions of the power plant in Berekfürdő – which produces electricity and heat by burning methane gas captured from geothermal fluids – as a carbon-neutral activity due to its small size and the very positive GHG impact of converting methane to carbon dioxide.





6.2. Data on energy consumption and emission

1,785 TJ =

495,833 MWh

Consolidated heat sales (2022)



2,236 MWh

Consolidated energy sales (2022)



23,856 MWh

Consolidated energy consumption (2022)



0,0493 kWh/kWh

Energy intensity
Geothermal heat generation (2022)



6.3. Energy consumption within the organisation (GRI 302-1)

Energy consumption within the organisation	Energy consumption	Unit of measurement
a. Total heating consumption from non-renewable sources	27,558,815	kWh
Electricity	21,351,131	kWh
Natural gas	176	GJ
LPG (ad hoc) ¹	407	GJ
Thermal water associated gas	21,337	GJ
Fuel	118,689	kWh
b. Total heating consumption from renewable sources	2,504,881	kWh
Electricity	2,504,881	kWh
c. Total		
Electricity consumption	23,856,012	kWh
Heating consumption	583	GJ
Cooling consumption	n/a	
Steam consumption	-	
d. Total		
Electricity sold	2,236,280	kWh
Heating sold	1,784,506	GJ
Cooling sold	-	GJ
Steam sold	-	GJ
e. Total energy consumption within the organisation	- 1,684,327	GJ

¹Consumption of LPG only in case of breakdown of the geothermal system

The aggregation of total energy consumption within the organisation is based on the invoices received from service providers, while in the case of energy produced, the calculation is based on certified electricity meters.

The caloric values required for the conversion of fuels were defined based on 2006 IPCC values ([Source](#))

6.4. Energy consumption outside of the organisation (GRI 302-2)

Energy consumption outside of the organisation	Energy consumption	Unit of measurement
a. Total energy consumption outside of the organisation	1,382,181	kWh

A significant portion of energy consumption outside of the organisation reflects on-site work performance, traffic between sites and upstream freight transport. The latter is the most significant item, which cannot be estimated with absolute certainty, including in the absence of accurate information from third parties. Therefore, this



chapter takes into account the transportation of the most significant assets, equipment and materials.

Energy consumption was aggregated on the basis of fuel receipts on the one hand, and travel distance and weight data provided by transport companies on the other hand. Source of the energy requirement of various transportation modes: [ipcc_wg3_ar5_annex-iii.pdf](#). The base is the content of the attached IPCC document (Technology-specific Cost and Performance Parameters) on CO₂ emissions by the Company. The average CO₂ emission factors included in this were taken into account as average values per category of transportation modes and were converted based on the officially defined multiplier and the length of the travel distance (km) and the weight data of the shipment (tonnes).

For the related energy consumption for sea, air and train transportation modes based on the source referred to above, while for road transport the average value corresponding to the "new heavy duty, long-haul trucks, diesel" category (28 litres/100 km), the density, specific heat and the net energy consumption of the transport was determined based on the length of the travel distance.

6.5. Energy intensity (GRI 302-3)

Energy intensity	Energy intensity	Unit of measurement
a. Energy intensity ratio for the organisation		
Heat generation by traditional geothermal power plants	0.0485	kWh/kWh
Electricity production of methane utilisation small power plants	2.0776	kWh/kWh

Energy intensity should be divided into two parts in our Group: heat generation and electricity production (with combined heat generation). Therefore, we provided two figures, but the denominator is energy, i.e. kWh, in both cases.

In the case of the heat generation activity, the intensity ratio includes the electricity used, natural gas used (for heating), and fuel consumed by vehicles. The intensity ratio is also presented for electricity production. The higher value of the ratio reflects the fact that the methane released from thermal wells during the activity is converted to electricity directly.

At the Berekfürdő project's electricity production, in the event of a related expansion of the heat market, the total efficiency of the system would improve to up to 80%, so the theoretical energy intensity could reach to a value of around 0.8000.

6.6. Interactions with water as a shared resource

The water consumption of PannErgy Group is essentially limited to two areas: the consumption of drinking water (primarily for social purposes) and the utilisation of



thermal waters used in the geothermal systems as part of renewable energy production.

The extraction and utilisation of geothermal energy entails the moving of large volumes of water; nevertheless, the **net water consumption of PannErgy Group can be considered negligible. In order to ensure the sustainability of our geothermal systems, the extracted thermal water is fully reinjected; consequently, the thermal water balance is practically zero.** Since production and reinjection affects the same aquifer, even projected for **separate geological hydrologic units, the balance of thermal water consumption is zero.**

The activity of PannErgy Group is currently limited to Hungary; consequently, its water-related activity is basically regulated by Hungarian and EU legislation. These provisions regulate quantitative and qualitative issues and the frequency of monitoring, as well. **It is the objective of PannErgy Group to comply with these provisions over and beyond the minimum requirements, and to organise the operation of geothermal systems in a forward-looking fashion along the lines of stricter requirements.** It strives to extract and reinject only the minimally required thermal water at all project sites, and as a result, not only does it intervene – to a small degree – in water balance, but it is also **capable of optimising the electricity volume required for the total operating cycle of the thermal water.**

The extraction of thermal water entails the largest movement of water in PannErgy Group’s activities. Since this water extraction is performed in locations that are not exposed to high water stress, there are no irreversible interventions into aquifers during closed-system production – heat utilisation – and reinjection; the pressure level and the water volume can be considered constant.

As early as the planning phase, an Environmental Impact Assessment Documentation is prepared for the activities. As an organic part of this, we set up a hydrogeological model, which can be used to estimate the long-term (25, 50 and 100-year) impact of the activity.

In the case of the hydraulically more sensitive aquifer – the Bükk karst –, the potential impacts of water production/reinjection are assessed and monitored by way of a continuous monitoring system. To that end, during the operation of the Miskolc Geothermal System, PannErgy Group maintains a close cooperation with the University of Miskolc while also considering the interests of the local water service provider whose wells extract drinking water from the same aquifer.

In addition to thermal water, business operations also require the use of technical water, which primarily entails decalcified water circulating in secondary systems,



purchased from third parties. Since this water circulates in a closed system, its volume is nearly constant in the default position; however, during various scheduled maintenance activities and unscheduled failures the water leaked due to partial draining needs to be replaced. In this area, as well, PannErgy Group strives to minimise water consumption by appropriately and scheduled, regular preventative maintenance. The third area is water consumption for drinking and social purposes. It is fully purchased from third parties and its volume is immensely smaller than that of the previous two categories.

Objectives for water consumption:

Although the consumption of thermal water is near zero due to reinjection, the Company still seeks to achieve optimal operation by minimising ad hoc makeup water leaks, seepages and draining in order to move the smallest amount of water possible. In the light of environmental regulations and groundwater protection, water management is strictly limited to the necessary extent, and only environmentally friendly solvents are used. The Company constantly monitors international trends, and seeks even greener solutions.

6.7. Management of water discharge-related impacts (GRI 303-1, GRI 303-2)

The production and utilisation of geothermal energy does not entail the discharge of technical water. Only municipal wastewater is generated at the sites and in the offices, which is transferred to a duly licensed organisation. The water is transported from the sites, and emptied into the sewage system in the offices.

The reinjection of cooled off thermal water is considered to be the “largest water discharge”; however, since the production-utilisation-reinjection cycle takes place in a closed system, the process has no effect whatsoever on water quality and quantity at certain plants, and even at other locations the change in water quality is negligible. Certain projects require degasification (the Geothermal Systems in Győr and Szentlőrinc) where the gas content of water is obviously reduced. Where chemical water management is also applied (the Győr Geothermal System), the inhibitor put in the water results in minimal component ratio modification, the degree of which is not considerable. As a result of lengthy tests and thorough planning, the formulas used for water treatment were selected to guarantee the least amount of harm to the environment (e.g. they degrade over time). With that in mind, we only apply inhibitors which are suitable to treat drinking water as well.

In every case, water is reinjected to the same geological layer as the layer from which the thermal water was extracted; therefore, we avoid the harmful mixing of various underground water types.



6.8. Water withdrawal (GRI 303-3)

Water withdrawal (Disclosure 303-3)	All areas (MLiter)	Areas with water stress (MLiter)
<i>Water withdrawal by source</i>		
Surface water (total)	-	-
Freshwater ($\leq 1,000$ mg/L Total Dissolved Solids)	-	-
Other water ($> 1,000$ mg/L Total Dissolved Solids)	-	-
Groundwater (total)	13,318.67	-
Freshwater ($\leq 1,000$ mg/L Total Dissolved Solids)	6,200.83	-
Other water ($> 1,000$ mg/L Total Dissolved Solids)	7,117.84	-
Seawater (total)	-	-
Freshwater ($\leq 1,000$ mg/L Total Dissolved Solids)	-	-
Other water ($> 1,000$ mg/L Total Dissolved Solids)	-	-
Produced water (total)	-	-
Freshwater ($\leq 1,000$ mg/L Total Dissolved Solids)	-	-
Other water ($> 1,000$ mg/L Total Dissolved Solids)	-	-
Third-party water (total)	1.79	-
Freshwater ($\leq 1,000$ mg/L Total Dissolved Solids)	1.79	-
Other water ($> 1,000$ mg/L Total Dissolved Solids)	-	-
<i>Total third-party water withdrawal broken down by withdrawal sources</i>		
Surface water	-	-
Groundwater	-	-
Seawater	-	-
Produced water	-	-
Total water withdrawal:	13,320.46	-

6.9. Water discharge (GRI 303-4)

Water discharge (Disclosure 303-4)	All areas (MLiter)	Areas with water stress (MLiter)
<i>Water discharge by destination</i>		
Surface water	-	-
Groundwater	13,317.93	-
Seawater	-	-
Third-party water (total)	0.62	-
Third-party water sent for use to other organisations	-	-
Total water discharge	13,318.55	
<i>Total water discharge in a breakdown by freshwater and other water</i>		
Freshwater ($\leq 1,000$ mg/L Total Dissolved Solids)	6,200.71	-
Other water ($> 1,000$ mg/L Total Dissolved Solids)	7,117.84	-
<i>Water discharge by level of treatment (optional)</i>		
No treatment	13,318.55	-



6.10. Water consumption (GRI 303-5)

Water discharge (Disclosure 303-4)	All areas (MLiter)	Areas with water stress (MLiter)
Total water consumption	1.91	-
Change in water storage if water storage has been identified as having a significant water-related impact	not applicable	not applicable

6.11. Greenhouse gas (GHG) emissions, GHG emissions intensity (GRI 305-1, GRI 305-2, GRI 305-3, GRI 305-4)

GHG emissions and intensities		Total GHG emission (T/year)	Total GHG emissions by types of emissions (T/year)	Energy sold (MWh)	GHG emissions intensity ratio (T/MWh)	GHG emissions intensity ratio (T/GJ)
Direct (Scope 1) GHG emissions	Heat generation	16,956	18,350	495,077	0.0343	0.0095
	Electricity production	1,382		2,856	0.4841	0.1345
	Fuel consumption of vehicles	12		-	-	-
Energy indirect (Scope 2) GHG emissions	Electricity purchased	6,179	6,179	-	0.0124	0.0034
Other indirect (Scope 3) GHG emissions	Upstream transportation	32	34	-	0.0001	0.0000
	On-site, third-party fuel consumption	2		-	-	-
Total		24,563	24,563	497,933	0.0493	0.0137

6.12. Reduction of GHG emissions (GRI 302-4, GRI 302-5, GRI 305-5)

In the case of PannErgy Group, the core activity is renewable geothermal energy production, which entails minimal emission; therefore, instead of emissions the Company measures emissions savings.

Accordingly, for the Company the reduction of GHG emissions means savings in emissions, and the Company strives to increase these savings. For the two key



sustainability and environmental indicators – i.e. total annual emissions savings and the savings rate –, **the Company set the following targets for one calendar year:**

- Consolidated emissions savings rate: 80%
- Consolidated total annual emissions savings: Offsetting 80 thousand tonnes of CO₂-equivalent GHG emissions

The Company intends to achieve the above targets by increasing geothermal heat generation on the one hand, and, on the other hand, by reducing the electricity needs of geothermal heat generation. To that end, it launches efficiency-improving developments.

6.13. Emissions of ozone-depleting substances (ODS) (GRI 305-6)

The disclosure of such information is not applicable in the case of the Company, as no such substances are generated by its geothermal heating generation and other activities.

6.14. Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions (GRI 305-7)

The disclosure of such information is not applicable in the case of the Company, as no such substances are generated by its geothermal heating generation and other activities, or their quantity is so negligible that it does not require disclosure based on the standard.

6.15. Waste generation and significant waste-related impacts (GRI 306-1)

PannErgy Group's normal operations generate a negligible amount of waste that cannot be recovered in any way, and must therefore be sent to a local landfill. The Company occasionally generates scrap metal and electronic waste, which is then sold by the Company. For the most part, operations generate municipal waste, the quantity of which is presented, along with the potentially generated other hazardous and non-hazardous waste, in Chapter 6.17, Disclosure 306-3.

6.16. Management of significant waste-related impacts (GRI 306-2)

Essentially, geothermal energy production does not entail the generation of a significant amount of waste, as the product produced and sold is thermal energy itself. The largest amount of waste generated during operations is municipal waste, which is collected, as far as possible, selectively, facilitating the recycling of the waste. The municipal waste generated is passed to the local municipal service provider at all sites.



Other hazardous and non-hazardous waste is passed to a validly licenced company authorised for collection. In every case, the partner is required to present all appropriate licences for the waste management activity before contract conclusion. The quantity and transfer of the waste generated to the authorised organisation is recorded in the operation log at site level. The quantity of municipal waste is recorded monthly by the person designated for this purpose.

6.17. Waste generated (GRI 306-3)

Total weight of waste generated at the Company in the reporting period in tonnes, broken down by composition.

Waste generated	Weight (tonnes)
Municipal waste	5.73
Other waste	0.28
Hazardous waste	0.07
Total	6.08

The quantity of waste generated is aggregated and recorded in a monthly breakdown by the designated person at all sites.

6.18. Waste diverted from disposal (GRI 306-4)

All waste generated is passed to the waste management organisation in all cases; the Group does not divert any waste.

6.19. Waste directed to disposal (GRI 306-5)

All waste generated is passed to the waste management organisation in all cases, and the waste management organisation decides on any further disposal operation of the waste (incineration, landfilling, other disposal). Therefore, the quantity of waste directed to disposal is identical with the quantity of the waste generated.



7. Information on the ESG report and the GRI Standards

7.1. Reporting period, frequency and contact point (GRI Disclosure 2-3 Reporting period, frequency and contact point)

The reporting period for the Sustainability Report at PannErgy Plc. starts on 1 January and ends on 31 December, which is identical with the period used for its consolidated financial statements in the reporting period. **All information and data refer to the 2022 financial year (from 1 January 2022 to 31 December 2022)**, unless otherwise indicated.

As regards frequency, the sustainability report is compiled annually. For the first time, PannErgy drew up its sustainability/ESG report as at 31 December 2021, and thereafter the report is compiled and published on an annual basis. **The date of publication of the sustainability report for 2022 is 28 April 2023**, the date on which the report is made public on the Company's website (www.pannergy.com) and on the website of the Budapest Stock Exchange (www.bet.hu).

Inquiries about the ESG report and the information contained in the report should be addressed to:

Dénes Gyimóthy ° Phone: +36 1 323 2383;

E-mail: pannergy@pannergy.com ° Fax: +36 1 323 2373.

For the publication of the information and data contained in the ESG report, the Company applied the GRI Standards (GRI 1, GRI 2, GRI 3, and the appropriate GRI Topic Standards relevant to the Company) as guidelines.

The development of the GRI Sector Standard applicable to the core activity of the Company (renewable energy production) is still in progress; therefore, the Company was unable to apply relevant sector standards at this time. In preparing the report, the relevant GRI disclosures were indicated in every chapter.

7.2. Restatements of information made from previous reporting periods (GRI Disclosure 2-4 Restatements of information)

The Company drew up its separate sustainability report for 2021 for the first time; previously it had disclosed information on environmental protection and emissions in its consolidated annual financial statements, its consolidated semi-annual reports and its quarterly production reports. Restating or altering the information pertaining to previous periods and included in the sustainability report of the previous year and in the aforementioned other public reports related to sustainability topics is not necessary as **there were no such alterations or restatements. In the lack of any**



modifications pertaining to the previous period, there is no need to explain in detail the reasons for restatements and the effects of alterations and modifications.

7.3. Audit of the sustainability report (GRI Disclosure 2-5 External assurance)

For the publication of the information and data contained in the ESG report, the Company applied the GRI Standards (GRI 1, GRI 2, GRI 3, and the appropriate GRI Topic Standards relevant to the Company) as guidelines.

The development of the GRI Sector Standard applicable to the core activity of the Company (renewable energy production) is still in progress; therefore, the Company was unable to apply relevant sector standards at this time. In preparing the report, the relevant GRI disclosures were indicated in every chapter.

The GRI Standards applied are summarised in the Content Index table, with hyperlinks to reports and other publicly available information at www.pannergy.com provided in the Content Index for each standard.

The ESG report has not been certified by any external party not duly authorised to do so. In the absence of a relevant legislative requirement, the Company did not engage an external auditor for the preparation of the report. Consequently, the Company does not disclose any external ESG assurance report or links or references thereto.

In the absence of an external ESG assurance report, the Company was unable to provide information on the areas covered by the external ESG assurance, the assurance standards used, the level of assurance obtained, and the limitations of the external assurance process.

In the absence of an external ESG auditor as per the legislation applicable to the Company, the Company's highest governance body – the Management Board of PannErgy Plc. – and the executive officers were not involved in the selection process of an external ESG auditor; consequently, the disclosure of information on the relationship between the organisation and the external assurance provider is not necessary.

Based on the information included in the Company's ESG development schedule, **the Company will produce ESG reports certified by such an external assurance provider from 2025.** The principle of gradual development and the applicable legal requirements were taken into consideration in the above development schedule.



The Company has set the following schedule for the content and format of ESG reports (non-binding):

ESG category	2022	2023	2024	2025
Type of disclosure (stand-alone or integrated)	stand-alone	stand-alone	stand-alone	integrated
Frequency of disclosure (annual, quarterly)	annual	annual	annual	annual
Report format (simple or standardised)	simple	simple	standardised	standardised
Third party certification (yes or no)	no	no	no	yes
Objectives (yes; no; is there any monitoring)	no	no	yes	yes
ESG category (level) during the year (the classification based on the existing elements)	entry level	entry level	mid-level	mid-level
Development targets for leveling up by the end of the year (e.g. standard use, certification, etc.)		final selection of standard	preparation for certification	moving to integrated reporting
Actions planned by the end of the year (e.g.: defining the baseline, assessing reporting processes and capacity, improving data collection methodology, conducting materiality assessment, etc.)	assessing reporting processes and capacity, improving data collection methodology, creating initial draft report	improving the previous report and the reporting process for approaching mid-level	improving the previous report and the reporting process for achieving mid-level	stabilized mid-level report certification

Even though the Company’s sustainability report for 2022 was not audited and qualified by an external expert – and ESG auditor –, **the Company requested on a voluntary basis the official organisation of the GRI Standards, i.e. GRI Services, to review the sustainability report in terms of completeness of content and formal compliance. In the framework of its Content Index – Advanced Service, GRI Services reviewed the ESG report of PannErgy Plc. to ascertain whether the GRI Content Index was presented clearly, unambiguously and in compliance with the GRI Standards. In addition, it also ascertained whether the references to all GRI disclosures were correct and referred properly to the relevant chapters and parts of the ESG report.** The Content Index – Advanced Service was performed by GRI Services on the English version of the report.



7.4. GRI CONTENT INDEX



For the Content Index – Advanced Service, GRI Services reviewed that the GRI content index is clearly presented, in a manner consistent with the Standards, and that the references for all disclosures are included correctly and aligned with the appropriate sections in the body of the report.

The service was performed on the English version of the report.

Statement of use	PannErgy Plc. has reported in accordance with the GRI Standards for the period 01/01/2022 – 31/12/2022.
GRI 1 – applied standards	GRI 1: Foundation 2021
Applicable GRI sector standard ¹	-

¹ The Renewable Energy Sector Standard is currently being developed by GSSB (Global Sustainability Standard Board).

GRI STANDARD	DISCLOSURE	LOCATION	OMISSION			GRI SECTOR STANDARD REF.
			REQUIREMENTS OMITTED	REASON	EXPLANATION	
GRI 2 – GENERAL DISCLOSURES 2021						
GRI 2 (2.1-2.5) The organization and its reporting practices	2-1 Organizational details	1.4 (page 12)				
	2-2 Entities included in the organization's sustainability reporting	1.5 (page 13)				
	2-3 Reporting period, frequency and contact point	7.1 (page 79)				
	2-4 Restatements of information	7.2 (page 79)				
	2-5 External assurance	7.3 (page 80)				
GRI 2 (2.6-2.8) Activities and workers	2-6 Activities, value chain and other business relationships	4.16 (page 45)				
	2-7 Employees	5.1 (page 52)				
	2-8 Workers who are not employees	5.2 (page 56)				
GRI 2 (2.9-2.12) Governance	2-9 Governance structure and composition	4. (page 30)				
	2-10 Nomination and selection of the highest governance body	4.6 (page 37)				
	2-11 Chair of the highest governance body	4.7 (page 37)				
	2-12 Role of the highest governance body in overseeing the management of impacts	4.8 (page 37)				

GRI STANDARD	DISCLOSURE	LOCATION	OMISSION			GRI SECTOR STANDARD REF.
			REQUIREMENTS OMITTED	REASON	EXPLANATION	
GRI 2 – GENERAL DISCLOSURES 2021						
GRI 2 (2.13–2.21) Governance	2-13 Delegation of responsibility for managing impacts	4.9 (page 38)				
	2-14 Role of the highest governance body in sustainability reporting	4.10 (page 38)				
	2-15 Conflicts of interest	4.11 (page 39)				
	2-16 Communication of critical concerns	3.3 (page 24)				
	2-17 Collective knowledge of the highest governance body	3.4 (page 25)				
	2-18 Evaluation of the performance of the highest governance body	3.5 (page 27)				
	2-19 Remuneration policies	5.3 (page 56)				
	2-20 Process to determine remuneration	5.4 (page 59)				
	2-21 Annual total compensation ratio	5.5 (page 60)				
GRI 2 – GENERAL DISCLOSURES 2021						
GRI 2 (2.22–2.28) Strategy, policies and practices	2-22 Statement on sustainable development strategy	3.1 (page 21)				
	2-23 Policy commitments	3.2 (page 22)				
	2-24 Embedding policy commitments	4.12 (page 39)				
	2-25 Processes to remediate negative impacts	4.13 (page 40)				
	2-26 Mechanism for seeking advice and raising concerns	4.14 (page 41)				
	2-27 Compliance with laws and regulations	4.15 (page 43)				
	2-28 Membership associations	5.6 (page 61)				
GRI 2 (2.29–2.30) Stakeholder engagement	2-29 Approach to stakeholder engagement	5.7 (page 61)				
	2-30 Collective bargaining agreements	5.8 (page 66)	There is no collective bargaining agreement.			



GRI STANDARD	DISCLOSURE	LOCATION	OMISSION			GRI SECTOR STANDARD REF.
			REQUIREMENTS OMITTED	REASON	EXPLANATION	
GRI 3: MATERIAL TOPICS 2021	3-1 Process to determine material topics	2.1 (page 16)				
	3-2 List of material topics	2.2 (page 18)				
GHG Balance of the PannErgy Group						
GRI 3: Material Topics 2021	3-3 Management of material topics	2.3 (page 18)				
GRI 302: Energy 2016	302-2 Energy consumption outside of the organization	6.4 (page 71)				
	302-3 Energy intensity	6.5 (page 72)				
	302-4 Reduction of energy consumption	6.12 (page 77)				
	302-5 Reductions in energy requirements of products and services	6.12 (page 77)				
GRI 305: Emissions 2016	305-4 GHG emissions intensity	6.11 (page 76)				
	305-5 Reduction of GHG emissions	6.12 (page 77)				
	305-6 Emissions of ozone-depleting substances (ODS)	6.13 (page 77)				
	305-7 Nitrogen oxides (NOx), sulfur oxides (SOx) and other significant air emissions	6.14 (page 77)				
Energy production, water withdrawal						
GRI 3: Material Topics 2021	3-3 Management of material topics	2.3 (page 18)				
GRI 303: Water and Effluents 2018	303-1 Interactions with water as a shared resource	6.7 (page 74)				
	303-2 Management of water discharge-related impacts	6.7 (page 74)				
	303-3 Water withdrawal	6.8 (page 75)				
	303-4 Water discharge	6.9 (page 75)				
	303-5 Water consumption	6.10 (page 76)				



GRI STANDARD	DISCLOSURE	LOCATION	OMISSION			GRI SECTOR STANDARD REF.
			REQUIREMENTS OMITTED	REASON	EXPLANATION	
Impact of climate change on PannErgy's heat markets						
GRI 3: Material Topics 2021	3-3 Management of material topics	2.3 (page 18)				
GRI 302: Energy 2016	302-1 Energy consumption within the organization	6.3 (page 71)				
	302-4 Reduction of energy consumption	6.12 (page 77)				
	302-5 Reductions in energy requirements of products and services	6.12 (page 77)				
GRI 305: Emissions 2016	305-1 Direct (Scope 1) GHG emissions	6.11 (page 76)				
	305-2 Energy indirect (Scope 2) GHG emissions	6.11 (page 76)				
	305-3 Other indirect (Scope 3) GHG emissions	6.11 (page 76)				
GRI 306: Waste 2020	306-1 Waste generation and significant waste-related impacts	6.15 (page 77)				
	306-2 Management of significant waste-related impacts	6.16 (page 78)				
	306-3 Waste generated	6.17 (page 78)				
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	306-5 Waste directed to disposal	6.19 (page 78)				

