



PannErgy Plc.

QUARTERLY PRODUCTION REPORT  
2022 Q2

15 July 2022

## Introduction

PannErgy Plc. publishes a production report on a quarterly basis, presenting green energy production and utilisation. In the report, the Company presents the green heat sales figures of its key geothermal energy production systems in the reporting period, and additional useful information.

### I. Information about the consolidated production

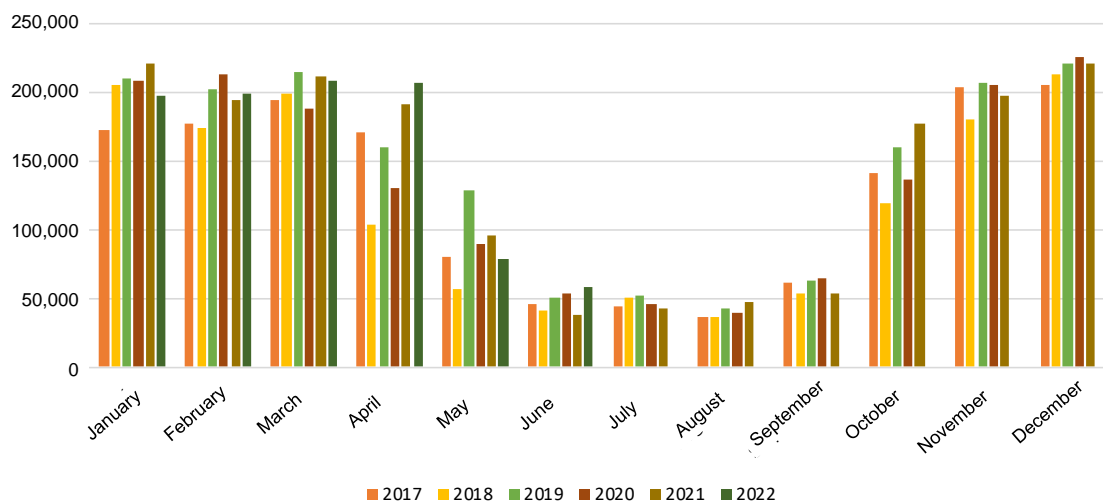


Figure 1

Consolidated volume of heat sold (GJ)

The chart presents the aggregate volume of heat sold by the Miskolc, Győr, Szentlőrinc and Berekfürdő projects, in a monthly breakdown.

	2017	2018	2019	2020	2021	2022	2022 TARGET
January	172,758	205,199	209,999	209,678	221,966	197,923	226,924
February	177,533	174,300	203,484	213,855	194,173	199,600	198,411
March	194,634	199,090	215,693	189,195	211,762	209,267	220,684
<b>Q1</b>	<b>544,925</b>	<b>578,589</b>	<b>629,176</b>	<b>612,728</b>	<b>627,901</b>	<b>606,790</b>	<b>646,020</b>
April	171,294	104,033	160,548	130,407	192,053	207,260	173,906
May	79,700	56,758	129,300	89,190	96,333	78,637	87,733
June	45,936	41,641	50,780	53,394	38,595	58,952	53,910
<b>Q2</b>	<b>296,930</b>	<b>202,432</b>	<b>340,628</b>	<b>272,991</b>	<b>326,981</b>	<b>344,849</b>	<b>315,549</b>
July	44,865	51,247	52,406	45,297	42,919		
August	36,709	36,794	42,415	39,205	48,023		
September	61,502	53,650	63,731	64,096	53,870		
<b>Q3</b>	<b>143,076</b>	<b>141,691</b>	<b>158,552</b>	<b>148,598</b>	<b>144,812</b>	<b>0</b>	<b>163,654</b>
October	141,270	119,652	159,888	136,460	178,385		
November	204,045	180,263	206,686	205,417	197,872		
December	205,251	213,267	221,248	225,688	221,198		
<b>Q4</b>	<b>550,566</b>	<b>513,182</b>	<b>587,822</b>	<b>567,565</b>	<b>597,455</b>	<b>0</b>	<b>626,790</b>
<b>ANNUAL TOTAL</b>	<b>1,535,497</b>	<b>1,435,894</b>	<b>1,716,178</b>	<b>1,601,882</b>	<b>1,697,148</b>	<b>951,639</b>	<b>1,752,012</b>

Figure 2

Table of consolidated volume of heat sold (GJ) and relevant target data

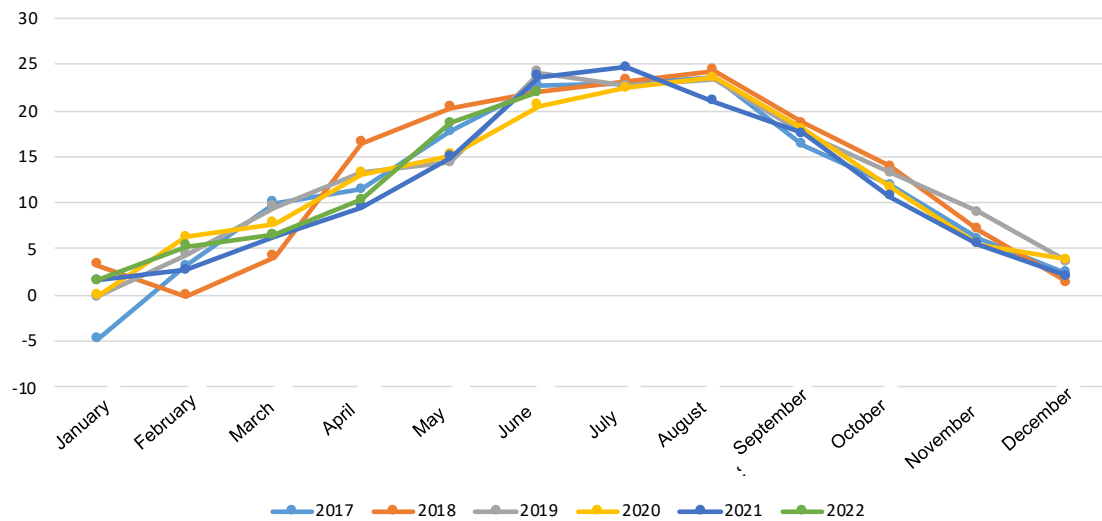


Figure 3  
Average temperatures in 2017–2021

The weather in the period under review represented a Group-level heating potential comparable to the corresponding period in 2021 and to the average of recent years. Over this period, April showed above-average heating demand, while May showed less favourable demand.

A comparison of the 2022 Q2 heat sales figures with the average values of the same period in historical years indicates that the Company accomplished record heat sales in the period under review, exceeding the base period value by 5.5%. The Company also exceeded the quarterly target by approximately 9.3%. This outstanding performance was primarily due to the Company's ongoing investments into increasing efficiency, operational safety and capacity expansion.

**In consideration of the information presented in this production report, the Company confirms the expected fulfilment of the consolidated HUF 3,250–3,350 million EBITDA target range published previously (30 March 2022) for the 2022 business year.**

**II. Main projects**

**Miskolc Geothermal Project**

*(Miskolci Geotermia Kft., Kuala Kft.)*

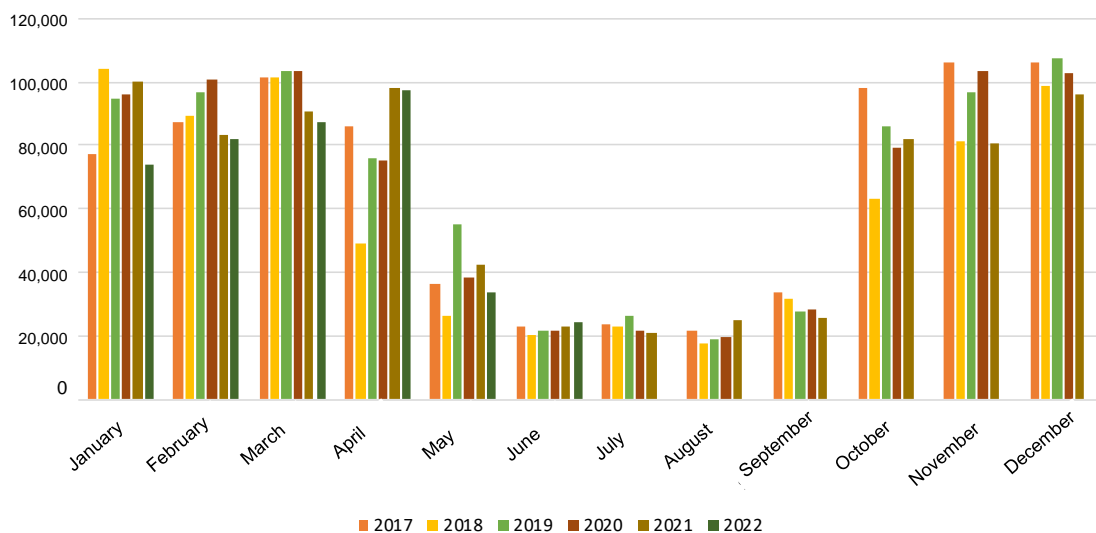


Figure 4  
Volume of heat sold in Miskolc (GJ)

The Geothermal System of Miskolc sold a total of 154,988 GJ of thermal energy in 2022 Q2, which exceeds the average of the corresponding period of previous years, but is still 4.9% short of the heat sales achieved in the same period of 2021, mainly due to the less favourable weather conditions in May relative to the base.

**Győr Geothermal Projects**

*(DD Energy Kft., Arrabona Koncessziós Kft.)*

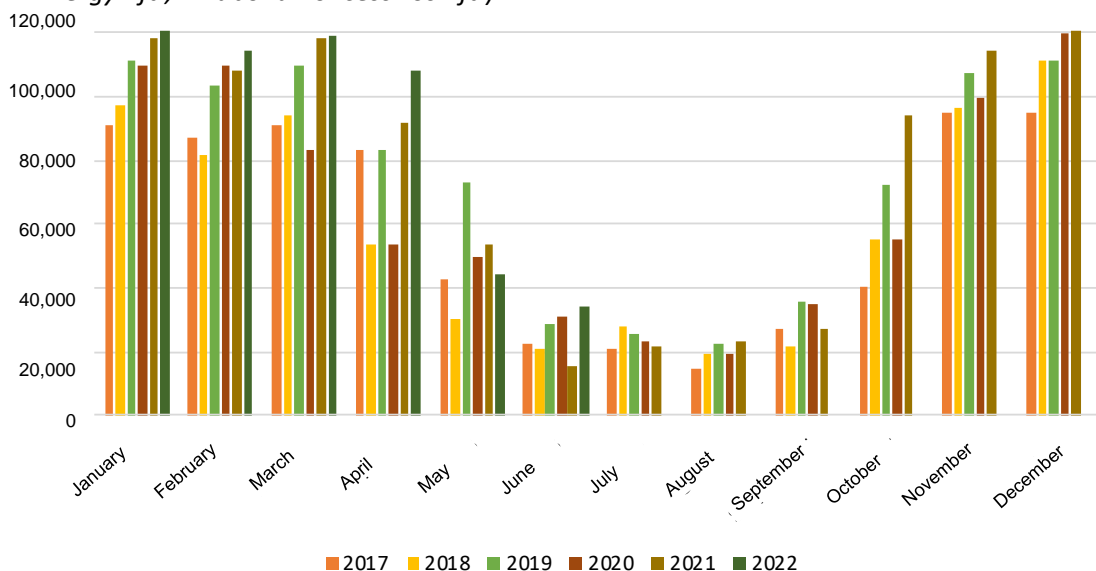


Figure 5  
Volume of heat sold in Győr (GJ)

The Geothermal System of Győr sold a historic record volume of 186,540 GJ of thermal energy in 2022 Q2, representing a rise of 15.8% year-on-year. The primary reasons for the increase were the investment activity in recent periods, as well as the Company's previously disclosed commercial agreement with GYŐR-SZOL Zrt. that ensures priority to geothermal energy.

### Geothermal Facility of Szentlőrinc

*(Szentlőrinci Geotermia Kft.)*

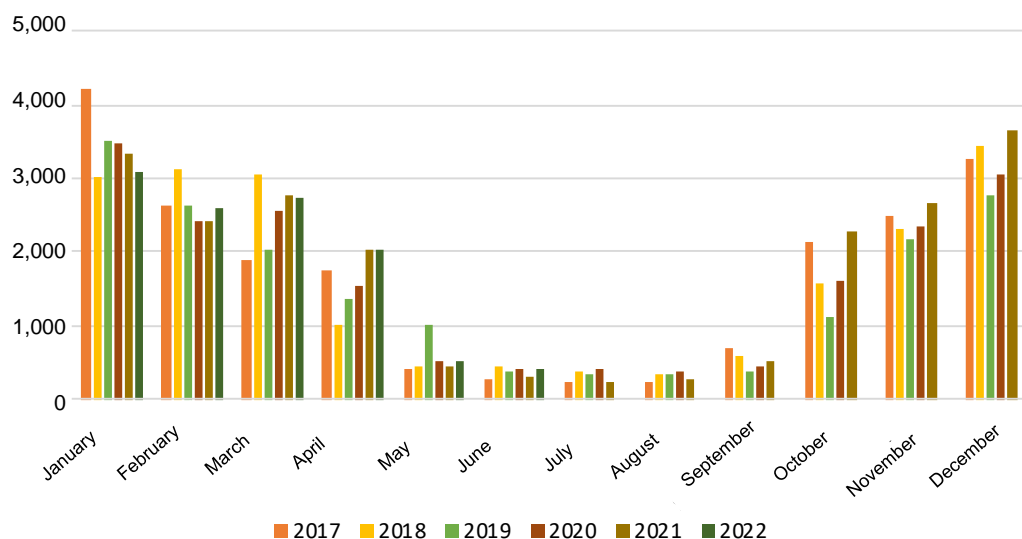


Figure 6

Volume of heat sold in Szentlőrinc (GJ)

In Szentlőrinc, the volume of heat sold in the period under review (2,969 GJ) was 6.6% higher than in the base period. The Geothermal Facility of Szentlőrinc serves the entire heat demand of the local district heating system on its own. Therefore, the weather sensitivity of the geothermal heat input may be significantly higher than that of district heating systems based on complex heat sources.

### III. Miscellaneous

#### PannErgy for the prevention of climate change

In line with global efforts, Hungary intends to take resolute action against climate change. The key energy sector action plan for these efforts is the new National Energy Strategy (NES) published in January 2020, which supersedes a similar strategy published in 2011. The NES presents the future of the Hungarian energy sector for the period until 2030 and, at the same time, it provides an outlook for the following decade. The NES takes into account the requirement of the European Union stating that the economies of EU Member States must become climate-neutral by 2050.

The NES is committed to decarbonisation, providing ample leeway for the further proliferation of green and other, emission-free energy production solutions. NES objectives related to the geothermal energy production represented by PannErgy:

- reducing Hungary's gas consumption and thus its reliance on energy imports;
- giving preference to district heating systems;

- reducing the original, 70% share of natural gas to below 50% in district heating systems (which means a substitution of about 8,500 TJ/year of production value);
- increasing the utilisation of geothermal sources and urban waste in district heating systems, as well as the implementation of the Green District Heating Programme.

As a comprehensive, quantified target, by 2030, the share of renewable energy sources in gross final energy consumption should be increased to at least 21% (compared to 13.3% in 2017), whereby greenhouse gas emissions will decline by around 40% compared to the level recorded in 1990.

#### Impact of climate change and the European energy crisis on PannErgy's heat markets

One of the tangible effects of climate change in Hungary manifests itself in the form of frequent volatile and extreme changes in weather conditions, including ambient temperatures, and a rise in the average temperature of winter months from the historically cold, steadily sub-zero range to markedly above the freezing point. These changes are not expected to have an adverse impact on the output of geothermal heat generation. In fact, taking the average over a horizon of several years, the perspectives of input into district heating systems seem favourable. The reason is that the daily geothermal heat sales can be maximised even when outside temperatures are above freezing point during the heating season. At the same time, the potential decrease in demand for heat during the transitional seasons may be offset or even surpassed by the growth in the potential of the increasingly mild winter periods.

The demand for energy in the large district heating systems supplied by the PannErgy Group is far greater than the amount of geothermal energy that can be fed into those systems. Accordingly, any changes in demand for heat in those heating systems stemming from climate change have no perceivable effect on PannErgy Group, and the Company does not expect any trend-like negative effects in the future either.

The primary goal of PannErgy is to utilise its substantial uncommitted available thermal capacities in addition to the capacities being currently utilised, which is expected to further reduce sensitivity to ambient temperature changes.

Radically increased hydrocarbon prices, supply uncertainties as well as significant carbon dioxide emission quota costs have further increased the competitiveness of geothermal energy, making its relevance undisputable.

The most important areas for potentially utilising free thermal capacities include:

- implementation of energy efficiency and optimisation projects with existing customers;
- cold energy projects for the utilisation of the so-called 'summer' heat;
- connection of new customers indirectly through district heating systems or directly to the geothermal systems on the primary or the secondary (return) sides; and
- technical, energy and R&D projects aimed at the improvement of heat production efficiency.

In addition to combating climate change, PannErgy also makes a significant contribution to reducing Hungary's and Europe's fossil fuel dependency, which is even more exacerbated by the ongoing armed conflicts.

**PannErgy Plc.**

*This announcement is published in Hungarian and English languages. In case of any contradiction between these two versions, the Hungarian version shall prevail.*