



PannErgy Plc.

QUARTERLY PRODUCTION REPORT  
2023 Q3

13 October 2023

## Introduction

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

### I. Consolidated production information

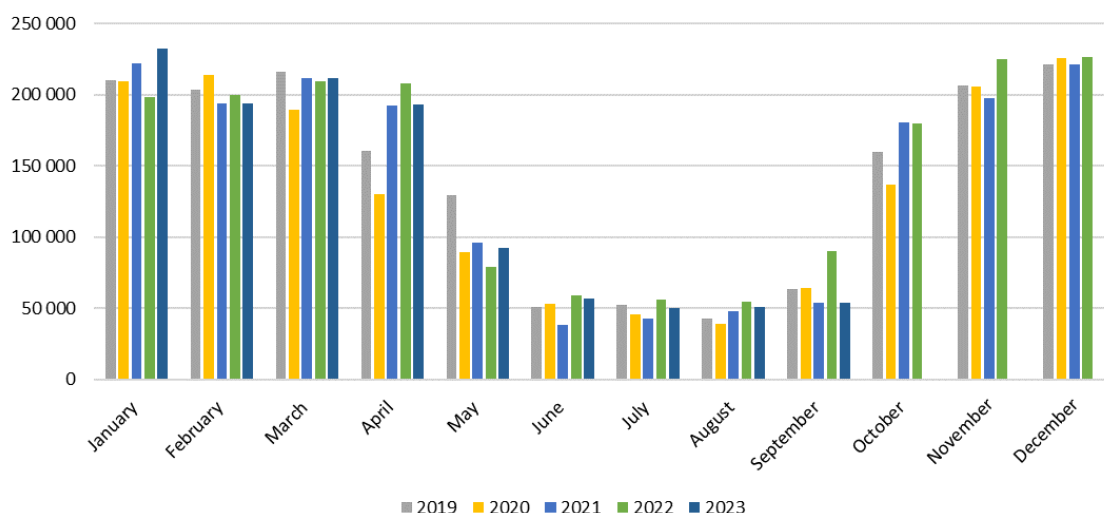


Figure 1

Consolidated quantity of heat sold (GJ)

The chart presents the aggregate volume of heat sold across all operational projects, in a monthly breakdown

	2019	2020	2021	2022	2023	2023 Plan
January	209 999	209 678	221 966	197 923	232 696	
February	203 484	213 855	194 173	199 600	193 989	
March	215 693	189 195	211 762	209 267	211 365	
<b>Q1</b>	<b>629 176</b>	<b>612 728</b>	<b>627 901</b>	<b>606 790</b>	<b>638 050</b>	<b>627 259</b>
April	160 548	130 407	192 053	207 861	192 834	
May	129 300	89 190	96 333	78 637	92 125	
June	50 780	53 394	38 595	58 955	56 645	
<b>Q2</b>	<b>340 628</b>	<b>272 991</b>	<b>326 981</b>	<b>345 453</b>	<b>341 604</b>	<b>322 084</b>
July	52 406	45 297	42 919	56 299	50 385	
August	42 415	39 205	48 023	54 838	50 659	
September	63 731	64 096	53 870	90 033	53 905	
<b>Q3</b>	<b>158 552</b>	<b>148 598</b>	<b>144 812</b>	<b>201 170</b>	<b>154 949</b>	<b>193 174</b>
October	159 888	136 460	180 427	179 453		
November	206 686	205 417	197 872	224 871		
December	221 248	225 688	221 198	226 770		
<b>Q4</b>	<b>587 822</b>	<b>567 565</b>	<b>599 497</b>	<b>631 094</b>		<b>647 180</b>
<b>Total</b>	<b>1 716 178</b>	<b>1 601 882</b>	<b>1 699 190</b>	<b>1 784 507</b>	<b>1 134 603</b>	<b>1 789 697</b>

Figure 2

Consolidated actual and target volumes of heat sold, in a table format (GJ)

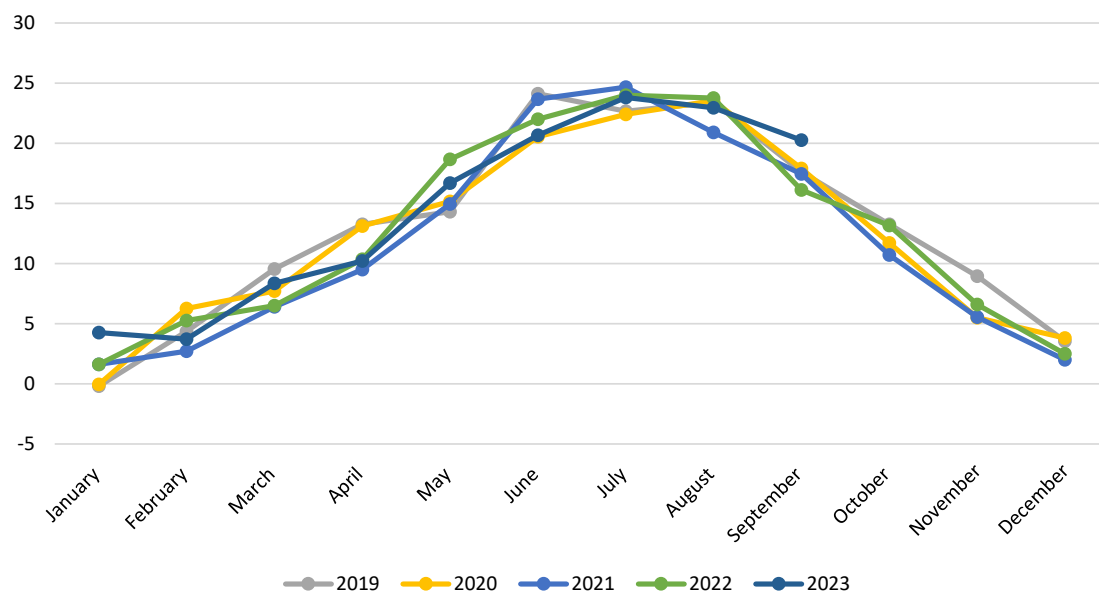


Figure 3  
Average temperatures

The weather in the period under review represented a Group-level heating potential significantly less favourable than in the corresponding period in 2022 and compared to the average of recent years.

While the heating potential in July and August was considered seasonally normal, the average temperature in September was exceptionally high, with a national average nearly 4 degrees above the average of the past three decades and the warmest September since 1901.

A comparison of the 2023 Q3 heat sales figures with the average values of the same period in historical years indicates that PannErgy achieved average heat sales in the period under review, but significantly below the record heat sales of the base period and the target for the period. PannErgy underperformed the quarterly target by approximately 19.8% and that of the base period by around 23.0%. The average performance achieved despite adverse weather conditions was primarily due to the Group's ongoing investments into increasing efficiency, operational safety and capacity expansion.

**In consideration of the information presented in this production report, PannErgy confirms the expected fulfilment of the consolidated HUF 3,950–4,150 million EBITDA target range published previously (13 January 2023) for the 2023 business year.**

## II. Major projects

### Miskolc Geothermal Project

(Miskolci Geotermia Kft., Kuala Kft.)

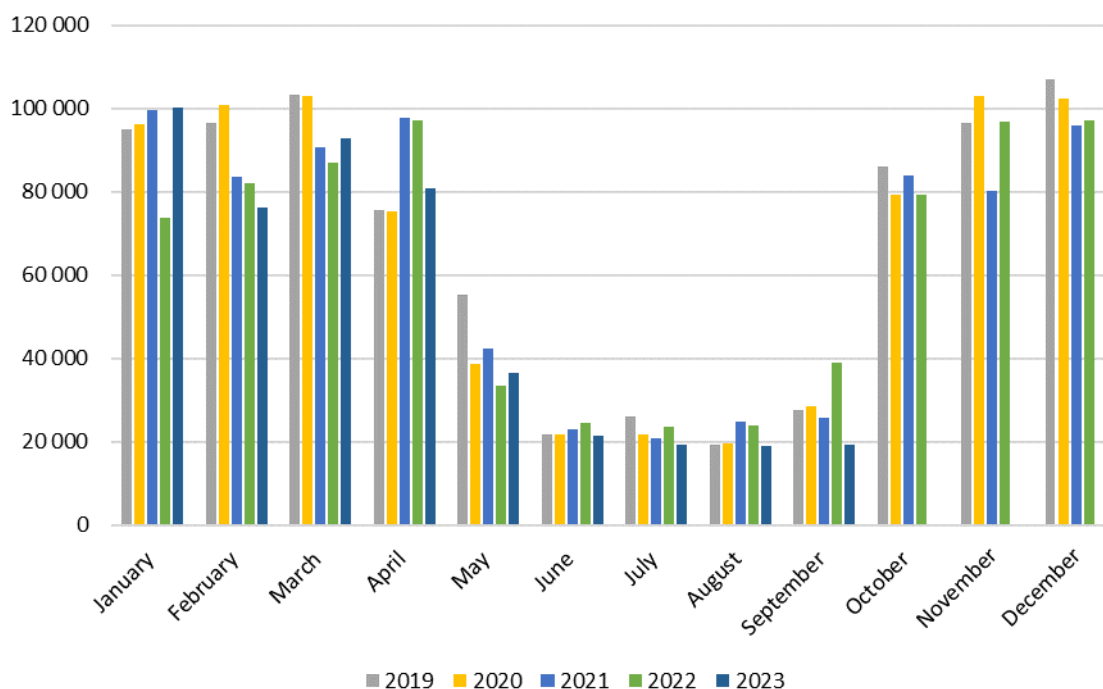


Figure 4

Volume of heat sold in Miskolc (GJ)

The Geothermal System of Miskolc sold a total of 57,505 GJ of thermal energy in 2023 Q3, which substantially falls short of the average of the corresponding period of previous years, and is 33.9% below the heat sales achieved in the same period of 2022, mainly due to the adverse weather conditions described above.

### Győr Geothermal Projects

(DD Energy Kft., Arrabona Koncessziós Kft.)

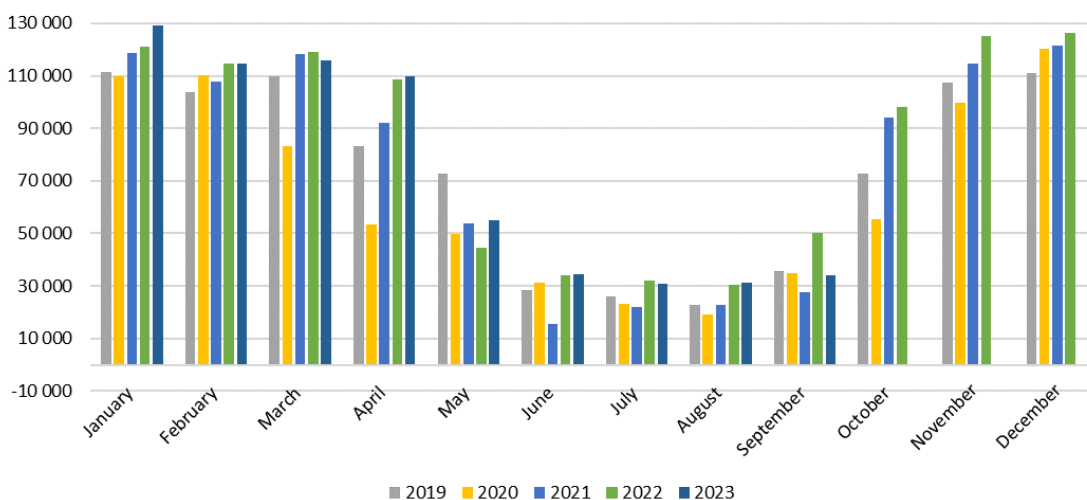


Figure 5

Volume of heat sold in Győr (GJ)

The Geothermal System of Győr sold a total of 95,915 GJ of thermal energy in 2023 Q3, which is higher than the average of the corresponding period of previous years, but is 14.9% below the record value of 2022 Q3. The primary reasons for the above-average performance, achieved despite the adverse weather conditions described above, 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.

### **III. Miscellaneous**

#### **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. This is due to the fact that 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 thermal capacities in addition to those currently used, which is expected to further reduce sensitivity to ambient temperature changes.

Radically increased hydrocarbon prices, supply uncertainties and 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*