



PannErgy Plc.

QUARTERLY PRODUCTION REPORT
2022 Q3

14 October 2022

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

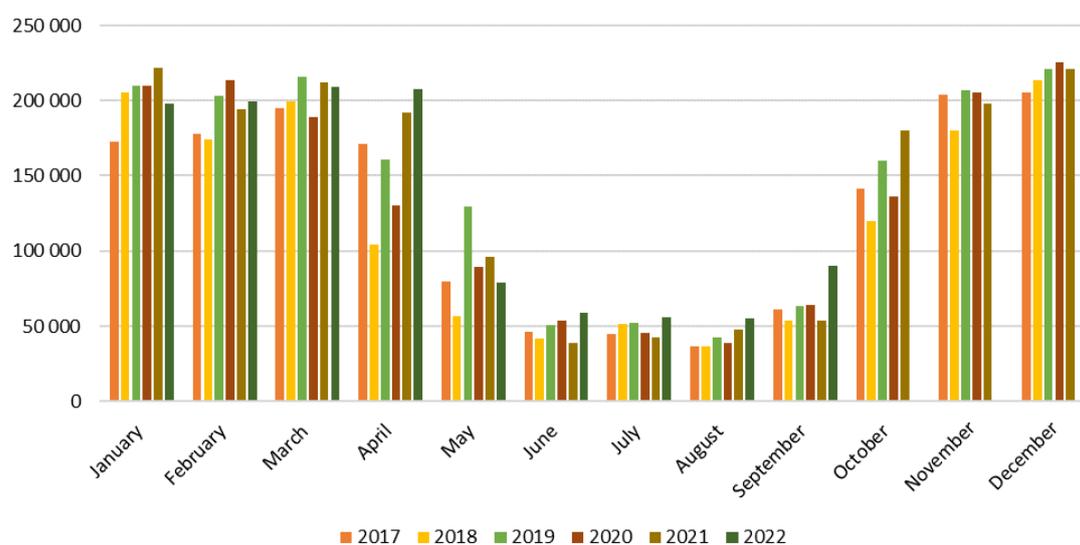


Figure 1

Consolidated volume of heat sold (GJ)

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

	2017	2018	2019	2020	2021	2022	2022 PLAN
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
Q1	544 925	578 589	629 176	612 728	627 901	606 790	646 020
April	171 294	104 033	160 548	130 407	192 053	207 861	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	58 955	53 910
Q2	296 930	202 432	340 628	272 991	326 981	345 453	315 549
July	44 865	51 247	52 406	45 297	42 919	56 299	48 332
August	36 709	36 794	42 415	39 205	48 023	54 838	50 272
September	61 502	53 650	63 731	64 096	53 870	90 033	65 049
Q3	143 076	141 691	158 552	148 598	144 812	201 170	163 654
October	141 270	119 652	159 888	136 460	180 427		
November	204 045	180 263	206 686	205 417	197 872		
December	205 251	213 267	221 248	225 688	221 198		
Q4	550 566	513 182	587 822	567 565	599 497	0	626 790
Total	1 535 497	1 435 894	1 716 178	1 601 882	1 699 190	1 153 413	1 752 012

Figure 2

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

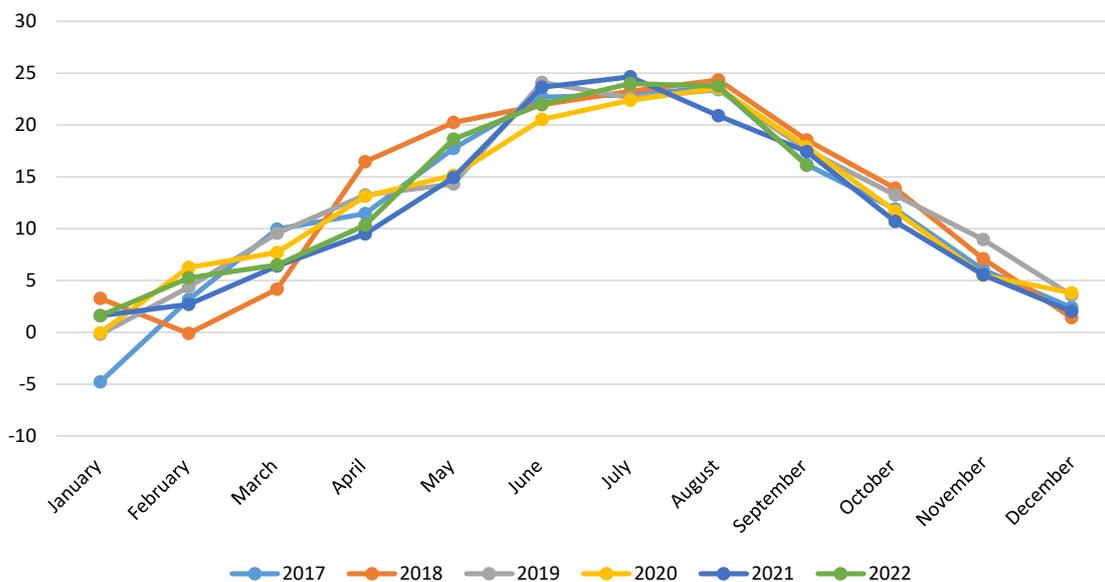


Figure 3
Average temperatures in 2017–2021

The weather in the period under review represented a Group-level heating potential more favourable than the corresponding period in 2021 and the average of recent years, due to cooler than average September temperatures.

A comparison of the 2022 Q3 heat sales figures with the average values of the same period in historical years indicates that PannErgy accomplished record heat sales in the period under review, exceeding the base period value by 38.9%. PannErgy also exceeded the quarterly target by approximately 22.9%. This outstanding performance was primarily due to favourable weather conditions and 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 3,250–3,350 million EBITDA target range published previously (30 March 2022) for the 2022 business year.

PannErgy will update the fulfilment of its EBITDA plan for 2022 and its public EBITDA target for 2023 in its quarterly production report for 2022 Q4.

II. Main projects

Miskolc Geothermal Project

(Miskolci Geotermia Kft., Kuala Kft.)

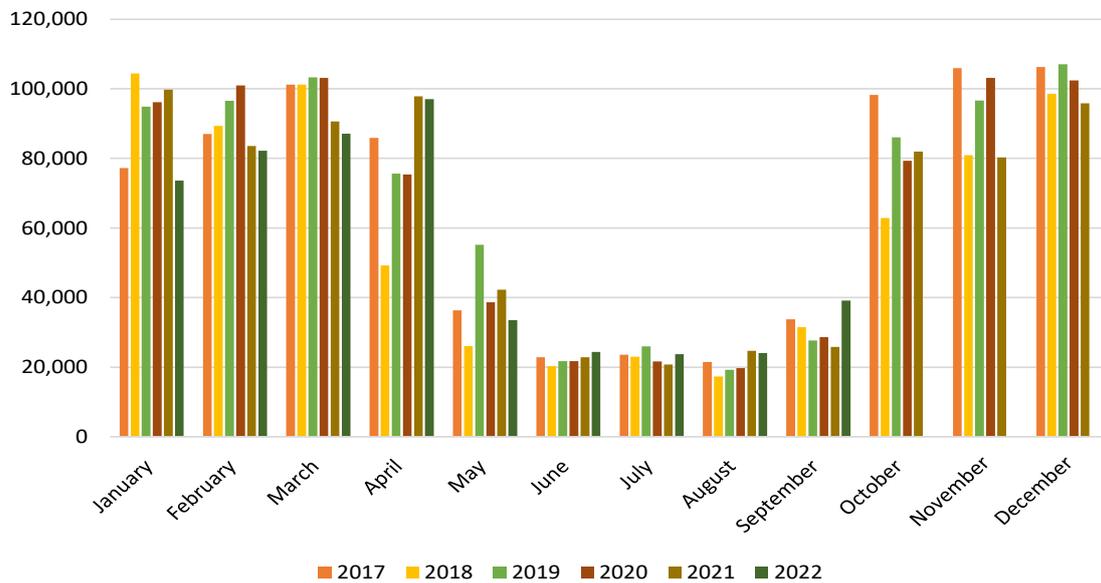


Figure 4
Volume of heat sold in Miskolc (GJ)

The Geothermal System of Miskolc sold a total of 86,925 GJ of thermal energy in 2022 Q3, which substantially exceeds the average of the corresponding period of previous years, and is 22.0% higher than the heat sales achieved in the same period of 2021, mainly due to more favourable weather conditions relative to the base and efficient operation.

Győr Geothermal Projects

(DD Energy Kft., Arrabona Koncessziós Kft.)

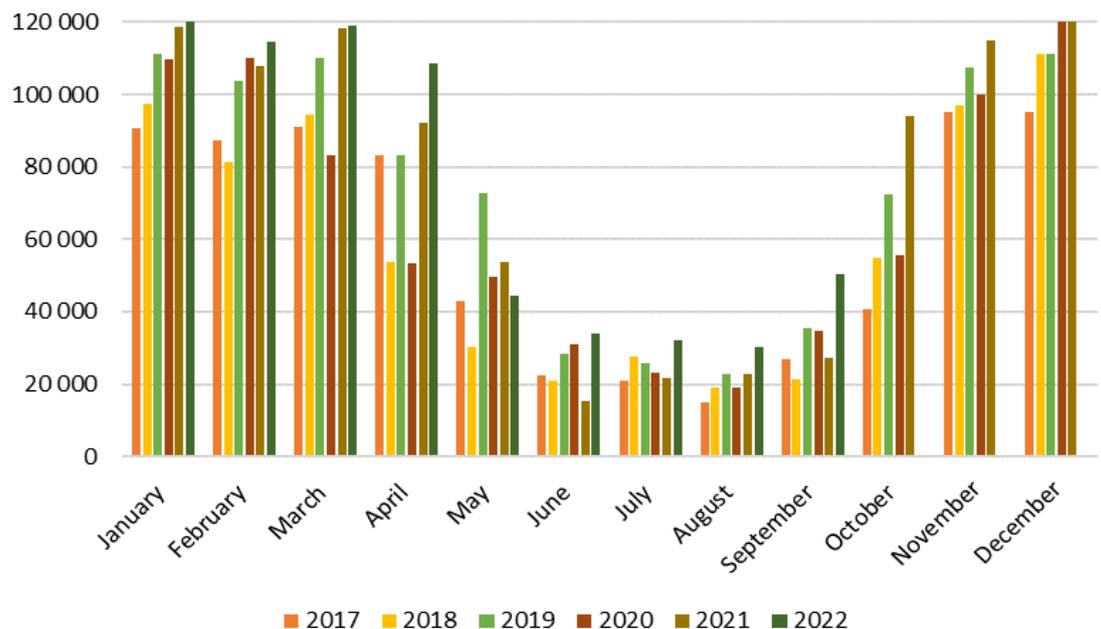


Figure 5
Volume of heat sold in Győr (GJ)

The Geothermal System of Győr sold a historic seasonal record volume of 112,734 GJ of thermal energy in 2022 Q3, representing a rise of 55.8% year-on-year. The primary reasons for the increase were the investment activity in recent periods, favourable weather conditions, 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.)

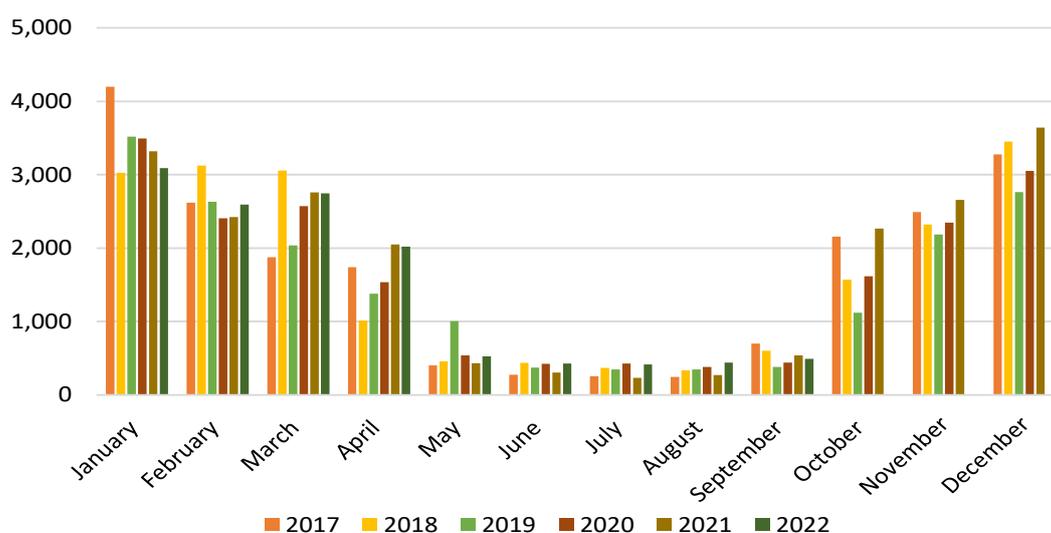


Figure 6

Volume of heat sold in Szentlőrinc (GJ)

In Szentlőrinc, the volume of heat sold in the period under review (1,347 GJ) was 29.3% 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

Change in PannErgy's regulated district heating producer tariffs

In Decree No. 20/2022. (IX. 30.) TIM of the Minister for Innovation and Technology, published in Volume 159 of 2022 of the Hungarian Official Journal (Magyar Közlöny), the Minister announced the regulated district heat production tariffs (heat supply tariffs) effective as from 1 October 2022 also applicable to subsidiaries subject to PannErgy's district heating price regulation, which tariffs PannErgy has also presented in the form of extraordinary information at its official places of disclosure. PannErgy has drawn public attention to the fact that, unlike previous practice, the announced heat supply tariffs are not determined for a full year, but only for a quarter, namely for 2022 Q4, therefore, their subsequent revision is expected.

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.

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