

EQUITY NOTE: PANNERGY NYRT.

Recommendation: BUY (unchanged)

Target price (12M): HUF 1,670 (unchanged)

23 November 2022

Highlights

Equity Analyst:
Ákos Szemán

Phone:
+36 1 486 6277

Email:
akos.szeman@otpbank.hu

PannErgy has recently announced that it was awarded two grants related to planned investment projects by the Ministry for Technology and Industry: HUF 994.4 million for the boring of the third geothermal production well of the Miskolc Geothermal Project and HUF 1,623 million for the boring of a geothermal production well near Budapest, which could form part of a complex geothermal heat supply system. We assume that the new Miskolc well could initially provide ~70 TJ / year added heat sale potential (approx. +9% to Miskolc production) based on previous management indication, which would be first fully realized in 2024 given expected project completion is at some point next year before the start of the 2023/2024 district heating season. We estimate that this would contribute ~HUF 120 million to EBITDA annually (+3.4% compared to our 2023 EBITDA estimate). However, we note that the project would increase Miskolc system capacity by 15-20% (+120-160 TJ / year), which means that the initial 70 TJ added heat sale could be ramped up over time significantly, but this will ultimately depend on the company's ability to find willing buyers. For now, we do not incorporate this into our valuation model given we await further information regarding project specifics such as capex requirements. In addition, we view the Budapest project news as very encouraging, which could present a new high growth opportunity for the company but at this point there are a lot of uncertainties regarding project costs, feasibility, and scope. Overall, we reiterate our BUY recommendation with the same target price (HUF 1,670).

Recent news:

PannErgy has recently announced that it was awarded grants for planned investment projects by the Ministry for Technology and Industry (the Grant Awardee):

- 1) The company was awarded HUF 994.4 million for an application submitted by Kuala Ltd., a wholly owned subsidiary. The grant is related to the boring of the third geothermal production well of the Miskolc Geothermal Project. The investment project will increase the utilisable capacity of the system by up to 15-20%. This will significantly improve the continuity of operation and offer reserve capacity, which would provide a restart of heat production within a few hours in the event of a failure, instead of the 7-12 days required to replace the well pump. The project is due to be completed before the start of the 2023/2024 district heating season.
- 2) Additionally, the company was also awarded HUF 1,623 million for an application submitted by PannErgy Geothermal Power Plants cPlc., a wholly owned subsidiary. The grant relates to the boring of a geothermal production well near Budapest,

which could form part of a complex geothermal heat supply system. The boring of the well is the first step in the establishment of the potential system, **drilling could start in 2024**, if the seismic measurements taken prior to drilling confirm the conclusions of previous preparatory work.

The company emphasized that the applicable grant agreements have not yet been concluded and conditions for the drawdown of the grants have not yet been fulfilled, and the bank financing for the Budapest project is currently not secured. This poses some uncertainty about the ability to obtain the grants and success of the projects.

Notes regarding the awards:

- 1) In the annual report published on March 22 management guided an EBITDA target range of HUF 3.35-3.45bn for 2023, which was conditional on the deepening and commissioning of the third production well of the Miskolc project (EBITDA target of HUF 3.3-3.4bn in the event of a failure to deepen the well). We note, however, that the 2023 target was published before the March 30 announcement regarding the agreement with Győr-Szol Plc., which prioritizes geothermal energy supply. The company will update its EBITDA target for 2023 in its quarterly production report for 2022 Q4 according to the 2022 Q3 production report. Our current EBITDA estimate is HUF 3.49bn for 2023, which reflects both higher expected heat sales volumes and administrative prices, but it does not incorporate the impact of the potential third Miskolc well. The implementation of the well will provide several benefits: A) this can result in added annual heat sale potential, which would increase annual heat sales volumes in Miskolc and B) it offers reserve capacity, which significantly reduces possible production outages in case of any issues. We note that the Miskolc Geothermal Plant experienced issues back in November 2021 (~9 days) and in January 2022 (temporary technical intervention needs and operational specificities).
- 2) According to previous communication (Proposals for AGM published on 26th March 2021) the new producing well in Miskolc would result added annual heat sale potential of about 70 TJ (~9% of current annual Miskolc production). Given management did not indicate a different figure since that publication we assume this as a starting point regarding added annual heat sales initially, which could be ramped up over time (calculating with the 15-20% capacity increase this would be up to 120-160TJ extra heat sales / year potentially). **We estimate that the 70TJ additional heat sale would contribute approximately HUF 120 million to EBITDA annually, which would be first fully realized in 2024 given the well is due to be completed before the start of the 2023/2024 district heating season.** Over time, the EBITDA contribution could increase further given there is room for additional heat sale as mentioned. **For now, we do not incorporate this into our valuation model given we await further information regarding project specifics (for example capex requirements) and there is also less uncertainty as we get closer to expected completion.**
- 3) **We view the Budapest project news as very encouraging**, and it is in-line with previous government communication that Hungary aims to significantly reduce its energy dependence by 2050 using non-fossil sources, where geothermal energy could

play an important role. Considering the uncertainties related to the project costs, feasibility, and scope we do not incorporate it either in the valuation model, but **we note the high growth potential that this new opportunity could present for the company.** It is also worth pointing out that the nature of the grant is that it covers some of the costs related to drilling activities even if they are ultimately unsuccessful. This is a very attractive feature considering the risky nature of greenfield projects.

Finally, we would also point out on a related note that PannErgy recently (3rd November) announced that it intends to place greater emphasis on the direct connection of new customers not subject to official price regulation to the company's geothermal systems. To serve these new customers, which are smaller than district heating service providers and multinational companies, PannErgy intends to establish a new member company. The name of the new subsidiary will be Geo2Business Kft. This new business unit can also provide further revenue opportunities in due course.

Risks surrounding PannErgy's economic activity

1. **Price risk:** The administered price is set at a level that takes into account the cost of doing business and providing a fair profit. However, the administered price setting has inherent risks related to the administrative authority.
Moreover, at the moment PannErgy provides heat at a lower cost than its peers (natural gas). However, if natural gas prices fall significantly, then consumers who do not have mandatory purchase agreement with PannErgy could switch to other sources of heat.
2. **Environmental risks:** Extreme weather conditions during the heating season could harm the company's profit target. If the winter season is too short or too cold – due to global warming or other extreme weather conditions – the costs are higher, as the output from the drilling wells drops.
3. **Operational risks:** Maintenance costs increased significantly at the Győr Project in 2016 due to scaling issues concerning the tubing and pumps, and this has reduced production. Although the problem was dealt with, we identify it as a source of risk in the future as well. This could be a risk to our depreciation forecast as well.
4. **Improving energy efficiency risk:** It is not necessarily a PannErgy-specific risk, but in the long term, the building of passive houses and the coming investment – which increases the energy efficiency of houses and flats – could decrease demand for heat.
5. **Pandemic risks:** Based on our current knowledge, covid-19 has no material effect on the company. However, the covid crisis and its economic effects may change rapidly and unpredictably in the future. This may pose some unforeseen risks for PannErgy as well.

Notes:

[The initiation report, which contains the assumptions of the models used, is available here.](#)

[The valuation methodology used in this present equity research note to determine our price targets and recommendations is available here. \(Also available in Hungarian\)](#)

This investment recommendation has not used proprietary models.

The risk warning, which includes the adequate explanations of the length of time of the investment to which the recommendation relates as well as a sensitivity analysis of the assumptions, is indicated in the part of this recommendation where the length of time and the risks of the investment are presented.

Any information relating to the date and time for the price mentioned in this recommendation is revealed in the part of the recommendation where the given price is indicated.

OTP Bank Plc's recommendations and price targets history for PannErgy in the past twelve months:

Date	Recommendations	Target Price	Publication
06/09/2021	BUY	HUF 1,387	Equity note
06/10/2021	BUY	HUF 1,450	Equity note
18/10/2021	BUY	HUF 1,450	Equity note
17/01/2022	BUY	HUF 1,450	Equity note
18/02/2022	BUY	HUF 1,450	Equity note
26/03/2022	BUY	HUF 1,420	Equity note
19/04/2022	BUY	HUF 1,420	Equity note
19/07/2022	BUY	HUF 1,420	Equity note
02/09/2022	BUY	HUF 1,420	Equity note
06/10/2022	BUY	HUF 1,670	Equity note
15/10/2022	BUY	HUF 1,670	Equity note

Period	Recommendations	Percent of recommendation
2021Q4	BUY	100%
	HOLD	0%
	SELL	0%
2022Q1	BUY	100%
	HOLD	0%
	SELL	0%
2022Q2	BUY	100%
	HOLD	0%
	SELL	0%
2022Q3	BUY	100%
	HOLD	0%
	SELL	0%
2022Q4	BUY	100%
	HOLD	0%
	SELL	0%

[The list of all recommendations made in the past 12 months is available here.](#)

Disclaimer 1

This research/commentary was prepared by the assignment of Budapest Stock Exchange Ltd. (registered seat: 1013 Budapest, Krisztina körút 55.; company registration number: 01-10-044764, hereinafter: BSE) under the agreement which was concluded by and between BSE and OTP Bank Plc (registered seat: 1051 Budapest, Nádor u. 16., company registration number: Cg. 01-10-041585, hereinafter: Investment Service Provider). This research/commentary was made with the joint, equally proportional financing of the BSE and the company that is the subject of this research/commentary.

The Investment Service Provider's policies and procedures ensure the independence of this research/commentary, and the Investment Service Provider has undertaken not to accept any instructions or additional remuneration from the company involved in the research/commentary.

BSE shall not be liable for the content of this research/commentary, especially for the accuracy and completeness of the information therein and for the forecasts and conclusions; the Service Provider shall be solely liable for these. The Service Provider is entitled to all copyrights regarding this research/commentary however BSE is entitled to use and advertise/spread it but BSE shall not modify its content.

This research/commentary shall not be qualified as investment advice specified in Point 9 Section 4 (2) of Act No. CXXXVIII of 2007 on Investment Firms and Commodity Dealers and on the Regulations Governing their Activities. Furthermore, this document shall not be qualified as an offer or call to tenders for the purchase, sale or hold of the financial instrument(s) concerned by the research/commentary. This research/commentary cannot be deemed as an incentive to enter into contract or covenant.

Disclaimer 2

1. Pursuant to the Commission-delegated regulation 2017/565/EU of the European Parliament, the content of this document shall be considered as an investment research, which recommends or suggests an investment strategy, explicitly or implicitly concerning one or more financial instruments or the issuers of financial instruments, including any opinion as to the present or future value or price of such instruments. The statements in this investment research contain objective or independent explanation. Furthermore, pursuant to Directive 2014/65/EU of the European Parliament and of the Council, this document shall be considered as investment recommendation. This document does not take into account investors' individual interests, circumstances, or objectives; therefore, in the absence of personal recommendation, it shall not be considered as an investment advice.
OTP Bank intends to make this document available to its clients or to the public, or to make it accessible to other persons in a way that allows this document to be disseminated to the public.
2. Information herein reflects the market situation at the time of writing. It provides only momentary information and may change as market conditions and circumstances develop. Additional information may be available on request. Where a figure relates to a period on or before the date of communication, the figure relates to the past and indicates a historic data. Past performance is not a reliable indicator of future results and shall be not treated as such. OTP Bank makes no representation or warranty, express or implied, is made regarding future performance of any financial instrument mentioned in this communication. OTP Bank shall have no liability for the information contained in this for any loss or damage whether direct, indirect, financial, economic, or consequential, whether or not caused by the negligent act or omission of OTP Bank, provided that such limitation of liability shall not apply to any liability which cannot be excluded or limited under the applicable law.
3. The issuer of this report does not claim that the information presented herein is perfectly accurate or complete. However it is based on sources available to the public and widely believed to be reliable. Also the opinions and estimates presented herein reflect a professional subjective judgment at the original date of publication and are therefore subject to change thereafter without notice. Furthermore there can be no guarantees that any market developments will unfold as forecasted. Opinions and estimates constitute our judgment and are subject to change without notice.
4. The issuer(s) of the product(s) mentioned in this document do not hold more than 5% of OTP Bank's registered capital. OTP Bank is a market maker of the financial instrument that is discussed in this document. Neither was

OTP Bank a lead-manager (organizer) or joint lead manager (organizer) of any public placement of the issuer's financial instruments (e.g. securities) in the previous 12 months. Regarding investment services defined in Sections A and B of Annex 1 of Directive 2014/65/EU, OTP Bank is not a party of the agreement with the issuer. OTP Bank maintains a conflict of interest policy and it keeps such records, and it has requirements that regulate the transmission of bank secrets and securities secrets, which requirements shall be considered as the effective internal organizational and management solutions as well as information barriers to prevent or manage conflicts of interest. The remuneration of the person(s) participating in preparing the recommendation is not directly related to the transactions carried out as part of the investment services specified in Sections A and B of Annex 1 of Directive 2014/65/EU, or to transactions carried out by them or by other legal entities of the same group or to trading fees that they or another legal person of the same group receive. OTP Bank does not hold net long or short positions that exceed 0.5% threshold of the issuer's total registered capital.

5. OTP Bank has developed appropriate internal procedures for (i) the personal transactions and tradings of financial analysts and other relevant persons, (ii) the physical separation of the financial analysts involved in the production of investment research and other relevant persons; moreover, information barriers have been implemented, (iii) for accepting and managing incentives and remuneration.
6. This communication does not contain a comprehensive analysis of the described issues; it is only for information purposes. No part, chapter, or the entirety of this information shall be considered as investment advice, not even if any part of this document contains a description of a certain financial instrument in terms of its possible price or yield development, and the related investment options. This information shall not be considered as legal, tax or accounting advice.
7. This information reflects the market situation at the time when the document was prepared. You may request more information from OTP Bank. This document was prepared based on publicly accessible information made available to OTP Bank from one or more sources. This document was prepared using data, facts and information from the following essential sources: Bloomberg, Reuters, Hungarian Central Statistical Office, Eurostat, Magyar Nemzeti Bank (Hungary's central bank), and European Central Bank (ECB). Although the information in this document has been prepared in good faith from sources that OTP Bank believes to be reliable, we do not represent or warrant its accuracy or completeness. This document represents the opinion and estimations of analysts at OTP Research, based on publicly available data. You may receive different recommendation from the staff of OTP Bank, in particular if you are provided investment advice based on an investment advice agreement. The content of this document is based on the opinion of OTP Research's analyst at the time when the document was prepared, and they may be subject to change at any time in the future without further notice.
8. Please be informed that, irrespective of the statements of this investment research, OTP Bank is entitled to deal or trade as market maker, acting in good faith and in accordance with the usual way of market-making, with the financial instruments distributed by the issuer(s) specified in this document, as well as to provide other investment activities or ancillary (investment) services, and/or other financial or ancillary financial services to the issuer and other persons.
9. This document shall not be a basis for any further analysis in relation to the financial instruments contained therein. Any reference in this document to the future distribution of a financial instrument shall be construed as indicative, preliminary and informative, and any analysis of such financial instrument is exclusively based on publicly available information listed in the respective prospectus or announcement. The content of this document shall not imply that OTP Bank acts as an agent, a fiduciary, or an advisor to, or on behalf of, any prospective purchaser of the financial instruments discussed herein.
10. For certain persons, access to the products and/or services discussed in this document may not be granted, or it may be limited. The act of preparing this document by OTP Bank, its uploading to the website, its publication may under no circumstances be considered as OTP Bank's intention to make available product and/or service information in the prospectus to persons whom any country or state prohibits from having or obtaining the given product and/or service, including the promotion and the advertisement thereof. This communication and any of the financial instruments and information contained herein are not intended for the use of private investors in the UK and US. OTP Bank is not allowed to provide direct investment services to US investors. Any individual

decision or investment made based on this publication is made solely at the risk of the client and OTP Bank shall not be held responsible for the success of the investment decisions or for attaining the Client's target.

11. This publication contains generic presentation of information and knowledge, thus it does not take into account the individual clients' unique and special interests, financial condition, or their ability and willingness to take risks. Therefore please contact our staff or contact your banking consultant for advice before you make an investment decision. The assessment and the consideration of the individual circumstances is provided by the suitability and compliance tests that assess clients' financial knowledge, experience, risk-taking abilities, as well as the examination of the target market.
12. Before making an informed decision to invest and to use the services, please carefully read through all documents, including the documentation, prospectus, regulations, terms and conditions, announcements and key information documents for that product/service, and carefully consider the subject, the risk, the fees and costs of your investment, the possibility of any loss, and seek information about the tax regulations regarding the product and the investment. The prices of financial instruments and securities are changing, outright sales are realized at then current market prices, which may involve losses. The information and opinions in this document do not substitute or take the place of the issuance documentation for the given financial assets (e.g. prospectus, fund management rules), or their brochures or announcements.
13. You assume total responsibility and risk for any specific decision or investment; OTP Bank shall not be held responsible for the effectiveness of investment decisions or for reaching your purpose, nor for the individual investment decision made based on this document or any part thereof, or for their consequences. Investments in financial instruments carry a certain degree of risk, which may affect the effectiveness of the investment decision, and investors may not receive the whole amount they had expected the investment to yield in their investment targets; they may not preserve even the invested amount, therefore the invested capital might even decrease, be wholly lost, or even lead to additional payment obligation.
14. Trading with leveraged products (such as foreign exchange contracts, or shares and indices that have underlying products) carries a considerable amount of risk, and these products are not suitable for all investors. Trading with leveraged products carries the risk of losing all capital, and it may incur losses that exceed the amount invested.
15. **The figures and information described herein refer to the past, and past performance is not a reliable indicator of future yields, changes, or performance.** The changes on money and capital markets, the fluctuation of prices, the development of investments and their yields are influenced by the combined effect of multiple factors; one important factor of them is the change in investors' expectations. **The development of prices, the future yield of financial assets, indices or indicators, the examination of their changes, trends, and future performance is based on estimations and forecasts, which forecasts do not allow reliable conclusions to be drawn about the future moves of prices, real future yields, changes, or performance.** For each product and service, please assess their tax accounting implications, and other tax consequences, taking into account that they cannot be precisely assessed without knowing the effective tax regulations of the client's individual circumstances; and these legislative provisions as well as the circumstances may change over time.
16. OTP Bank reserves the right to modify this document in the future, without prior notice. The planned frequency of updates to the recommendation is quarterly. The initiation report preceding this research was published on 18 December 2017.
17. OTP Bank (business registration number: 01-10-041-585; registered seat: Nádor utca 16., Budapest H-1051, Hungary; authorised by Magyar Nemzeti Bank (former supervisory authority: Hungarian Financial Supervisory Authority, 'PSZÁF'). Supervisory authority: Magyar Nemzeti Bank (National Bank of Hungary – H-1054 Budapest, Szabadság tér 9); financial customer services: H-1013 Budapest, Krisztina krt. 39. The terms and conditions of this equity research and disclaimer shall be governed by and construed in accordance with Hungarian law.
18. Please note that the Internet is not a secure environment and OTP Bank does not accept any liability for any loss caused by the result of using this report in a form altered or delayed by the wilful or accidental interception, corruption or virus infection.

19. OTP Bank, in compliance with the applicable law, assumes no responsibility, obligation, warranty or guarantee whatsoever for any direct or indirect damage (including losses arising from investments), or for the costs or expenses, detrimental legal consequences or other sanctions (including punitive and consequential damage) sustained by any natural or legal person as a result of the purchase or sale of financial instruments or engaging investment services described herein, even if OTP Bank was warned of the possibility of such occurrences.
20. If you received this document from OTP Bank Plc, then it was sent to you with your previous consent. You may withdraw this permission by sending an e-mail to research@otpbank.hu or writing a letter addressed to 'Research Center', Hungary H-1051, Budapest, Nádor utca 21. Please refer to your name and e-mail address in both cases.
21. The personal data in this investment research are processed by OTP Bank. The legal basis for processing the data is the legitimate interest of OTP Bank. The detailed information about the processing of personal data and the related rights of data subjects is available [here](#).

This document was prepared by:

Ákos Szemán
Equity Analyst
OTP Research

This document was finalized at 2:21:53 PM on 23 November 2022