



2022

ANNUAL
REPORT

TRADING / GUARANTEEING / EDUCATING



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ESG AT TGE

Year 2022 was another period during which the operations of the Exchange were affected by the extraordinary conditions.

Dear Sirs,

I am pleased to make available to you TGE's Annual Report for 2022. We have endeavoured to present in this Report, in a concise manner information concerning both the performance of the Polish Power Exchange (TGE) and the most significant events that have taken place relating to the activities carried out by TGE, with a particular concern of the regulatory and business environment.

Year 2022 was another period during which the operations of the Exchange were affected by the extraordinary conditions. Negative factors that have been accompanying energy market stakeholders for some time now, such as rising inflation, of which ever higher prices for energy carriers and electricity itself are an inherent part, were intensified in a hitherto unprecedented manner by the global effects of the armed conflict taking place just across Poland's border. In this context, it suffices to cite by way of example the changes in natural gas prices on European markets, which at their peak reached levels of over 300 EUR/MWh. It has been pointed out that the abovementioned adjustments in energy markets caused by the effects of the war in Ukraine can only be compared to the effects of the global oil crisis in the 1970s. A significant result of the said conflict is also the complete remodelling of the directions of supplies of energy raw materials to both Poland and the European Union as a whole, resulting in the almost complete abandonment of trade in this area with the Russian Federation.

With regard to the change in the legal background relevant to the TGE, the most significant factor was undoubtedly the abolition in the second half of the year of the so-called exchange obligation. Yet, the effects of the modification of this – so far key – rule on the functioning of the Exchange will only become fully apparent in the following years.

In a broader, European context, it is worth pointing to the attempts made as recently as 2022 to formally regulate the price ceiling for natural gas imported by European Union member states. The basing of this regulation on stock exchange indices (notably the Dutch TTF hub) points to the significant importance of energy exchanges also in times of extraordinary turbulence on global markets. Mention should also be made of specific modification in national law concerning the reduction of costs associated with the purchase of energy for the most vulnerable groups of customers and, at the same time, limiting the revenues of energy companies resulting from energy price spikes. These solutions – as introduced in the last quarter of 2022 – will also only reveal their full effects in the following years.

The only certainty in energy markets is change.

In the category of challenges facing the Exchange in particular and, in a broader sense, all its stakeholders in the coming years, one should first and foremost point out the need to constantly adapt and operate in a dynamically changing environment: economic, regulatory and political. To paraphrase a well-known saying: the only certainty in energy markets is change. The above-mentioned regulations limiting both the costs of energy purchases by consumers and the profits of energy companies, undoubtedly set a new and previously unknown (or at least unknown for a very long time) framework for the functioning of energy markets. These regulations compel TGE to adapt its market strategies and product offering in such a way as to ensure stable operation in a changing circumstances. We did not see in 2022 the finalisation of legislative work related to the rules for cross-border trading in Guarantees of Origin, which should also be treated in terms of the challenges faced by TGE, but above all this change is an obvious opportunity for the development and further integration of the Exchange with European energy markets.

For TGE, 2022 was also significant in terms of the expansion of its product offering in one of the key areas. The introduction in September of new price indices: TGeONSHOREm and TGePvm, dedicated to energy generated from renewable sources stemmed from its increasing volumes, followed by the expectations of market participants increasingly interested in acquiring the information on 'green' energy.

Another landmark event for TGE was the launch of the Core Flow-Based Day-Ahead Market Coupling in June 2022. The project, which is the result of cooperation between 16 Transmission System Operators (TSOs) and 10 Nominated Energy Market Operators (NEMOs), will contribute significantly to the efficiency and stability of the European electricity system.

December 2022 also marked the 10th anniversary of the launch of the Exchange Gas Market on TGE. It is worth noting that over the 10 years of this market's existence, since 2012, 578,050 transactions have been concluded, with a total volume of 1,231.9 TWh, with their value amounted to PLN 196,652.8 million.

We would also like to boast that TGE was awarded the title of the *Best Sustainable Commodities Exchange (Central Europe)* for the third time by the London-based magazine Capital Finance International (CFI.co). This once again honours the Exchange's efforts to modernise and democratise energy markets.

I invite you to read the Report.





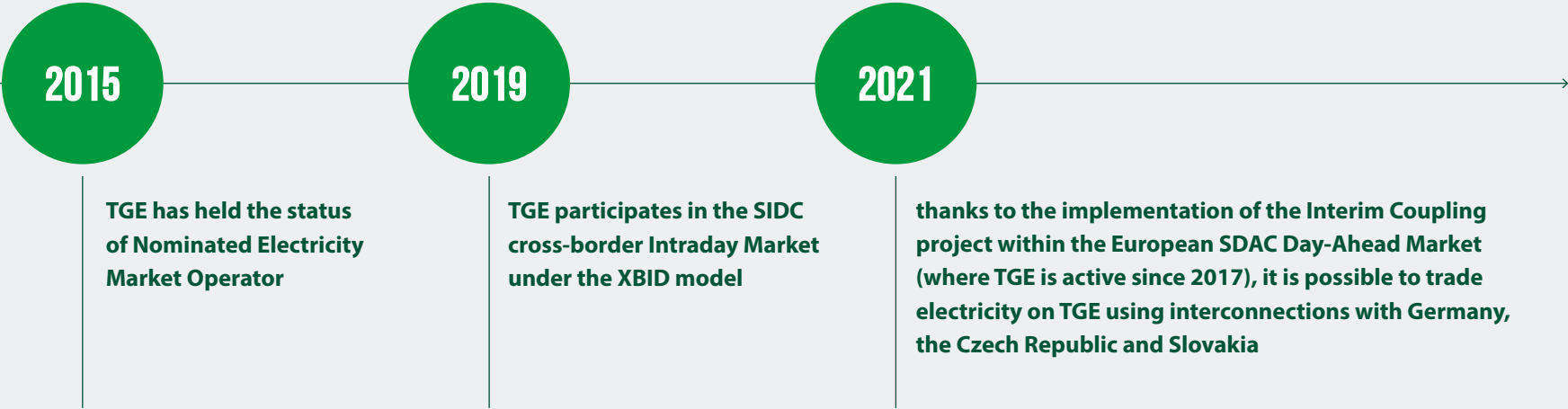
THE ROLE OF TGE ON THE DOMESTIC AND EUROPEAN MARKETS



TGE is the largest energy exchange in Central and Eastern Europe in terms of the volumes of electricity and natural gas traded on the floor. It is also the only licensed commodity exchange in Poland that is also authorised to operate a regulated market. Over 20 years of functioning as a leader in the energy market means that the Exchange sets the highest standards in terms of security, transparency, integrity and competitiveness of commodity exchange markets. TGE's position allows it to be recognised as an entity that has a critical influence on energy security both nationally and regionally.

The TGE’s commodity trading offer includes not only products strictly related to the energy markets such as electricity, natural gas, property rights and CO₂ emission allowances, but also agricultural and food commodities. In addition, in terms of ensuring the transparency and integrity of energy commodity markets, TGE meets the highest standards and requirements under the REMIT Regulation. The Exchange Information Platform (GPI) operated by TGE is an ACER-certified platform dedicated to the publication of the so-called inside information by energy market participants (IIP – *Inside Information Platform*).

The Exchange has also engaged for many years in projects and initiatives related to the integration of European energy markets.



TGE is also an active participant in national and international organisations such as:

→ **Chamber of Commerce of the Gas Industry**

→ **Europex**
European Association of Energy Exchanges

→ **APEX (Association of Power Exchanges)**
Association of Power Exchanges, a global organisation of power exchanges

→ **Polish-Lithuanian Chamber of Commerce**

Status of a key player in the energy markets in Poland and Europe is not only a source of pride and satisfaction, but also a challenge to continuously adapt to the changing legal and business environment and to persist in setting the highest standards in the organisation of the commodity regulated market.

CAPITAL GROUP

The importance of TGE is largely due to the fact that it operates as part of a capital group bringing together entities that are crucial to the proper and effective functioning of the capital and commodity markets in Poland. The TGE has been part of the Warsaw Stock Exchange Group (WSE CG) since 2012, with the Warsaw Stock Exchange being the sole owner of TGE. Revenues from markets operated by TGE and the activities of other entities in the TGE Group accounted for 35.5% of the WSE CG's revenues in 2022.

TGE is the parent company within the TGE Capital Group which provides comprehensive services to participants in commodity markets with regard to commodity trading but also clearing and settlement services. In addition to TGE S.A. itself, the structure of the TGE Capital Group includes two subsidiaries: Izba Rozliczeniowa Giełd Towarowych S.A. (IRGiT, Clearing House) and InfoEngine S.A.

**The Towarowa Giełda Energii Group as a whole therefore brings together the following entities,
active in key commodity market segments:**



TGE (exchange trading)

- Operating a trading platform for energy products (natural gas, electricity, property rights, CO₂ emission allowances) and agricultural and food products (wheat, rye, rapeseed, corn)
- Maintenance of Certificates and Guarantees of Origin Registers
- Information and educational activities



IRGiT (clearing)

- Clearing and settlement of transactions
- Risk management
- Guaranteeing transaction security



InfoEngine (support)

- Energy service operator
- Responsibility for Trade Balancing
- Advisory services for trading companies, consumers and public institutions, RES generators



MANAGEMENT BOARD

**Piotr Zawistowski**

*President
of the Management Board*

Graduate of the University of Economics and the Wrocław School of Banking.

From 2008 to 2017, he was associated with the TAURON Group, where he was the President of the Management Board of TAURON Obsługa Klienta Sp. z o.o. from May 2014 to December 2015, and from December 2015 to March 2017. Vice President of the Management Board for Customer and Commercial Affairs of TAURON Polska Energia S.A.

He took up his position as of the President of Management Board of the Polish Power Exchange in October 2017.

He has worked at the highest positions of Poland's key institutions related to the energy sector, including, as Chairman of the Governing Board of the Association of Energy Trading, as a member of the Governing Board of the Polish Electricity Committee, and as a member of the Supervisory Board of TGE.

Piotr Zawistowski has over 20 years of experience in the energy industry. He specialises in strategic planning and management and the identification of global markets. Years of experience and in-depth knowledge of the mechanisms of energy markets, not only on a national scale, is confirmed by his membership (as of January 2020) of the Board of Europex, an organisation of 27 energy exchanges and market operators from all over Europe.

**Piotr Listwoń**

*Vice-President
of the Management Board
for Operations*

Graduate of the Strategic Management Department of the School of Management (POU/Oxford Brookes University), where he also obtained an MBA.

He has been involved with the TGE Group since 2008. At the beginning of his career, he was participating in the operational start-up of the Commodity Exchange Clearing House S.A., where he worked as Director of the Clearing and Settlement Department and Director of International Cooperation Development from 2013 to 2018.

Since April 2018, he has been Vice President of the Management Board of the TGE, responsible for the operational area of the Exchange and the development of the product offering. At the same time, he became a member of the Supervisory Board of the Warsaw Stock Exchange Foundation. Since December 2020, he has also been Chairman of the Supervisory Board of InfoEngine, a company within the TGE Group.

Appointment of Mr Listwoń in January 2021 to the Board of Directors of the international Association of Power Exchanges (APEx) was confirmation of his comprehensive qualifications in the operation of regulated energy markets.

Piotr Listwoń has many years of experience in the trading and clearing of commodity futures markets, financial instruments and international transactions carried out as part of the European electricity market coupling mechanism.



2022 – KEY EVENTS AND MAJOR DATA

TGE's ambition is to create business opportunities that closely match the needs of market participants, while taking into account the dynamically changing regulatory and legal environment. 2022 was another year during which TGE adapted its offering, operating rules and standards of transparency and integrity of commodity markets to the rapidly evolving business and regulatory realities.



ELECTRICITY MARKET

TOTAL TRADING VOLUME

141.4 TWh

down y/y
-37.2%

SPOT MARKET

33.0 TWh

down y/y
-8.9%

FORWARD MARKET

108.3 TWh

down y/y
-42.7%

NATURAL GAS MARKET

TOTAL TRADING VOLUME

141.6 TWh

down y/y
-21.7%

SPOT MARKET

22.7 TWh

down y/y
-20.6%

FORWARD MARKET

118.9 TWh

down y/y
-21.9%

2022 EVENTS

FEBRUARY

Introduction of the solutions improving the attractiveness of the Agricultural Exchange Market (AEM) by facilitating the organisation of auctions while maintaining the security of trading.

APRIL

TGE organised the conference entitled "The exchange energy market as an opportunity for the development of the RES industry", under the honorary patronage of Minister Ireneusz Zyska, aimed to present the benefits associated with participation in exchange trading and to indicate the directions for the development of TGE's offer in the area of RES.

JUNE

Launching of the Flow-Based Market Coupling system in the Core region, to which TGE belongs as NEMO (Independent Electricity Market Operator). The CORE FB mechanism allows for the optimisation of the European day-ahead electricity market in 13 countries.

JULY

Adoption by the Management Board of TGE of the "Code of Good Practice for Members of the Power Exchange with regard to preventing the occurrence of market abuse and maintaining the integrity and transparency of trading". This is a recommended set of rules of conduct for all trading participants on the markets organised by TGE.

PROPERTY RIGHTS MARKET

TOTAL TRADING VOLUME OF PROPERTY RIGHTS
FOR RES-E

24.8 TWh

down y/y
-4.4%TOTAL TRADING VOLUME OF PROPERTY RIGHTS
FOR ENERGY EFFICIENCY

98.0 ktoe

down y/y
-9.3%

AGRICULTURAL EXCHANGE MARKET

TOTAL

2,450 tonnes of cereals

down y/y
-48.4%

REGISTER OF GUARANTEES OF ORIGIN

A RECORD YEAR!

TOTAL

41.9 TWh

up y/y
+38.1%

JULY

For the third consecutive year TGE has been named *Best Sustainable Commodities Exchange (Central Europe)* by Capital Finance International (CFI.co) magazine.

SEPTEMBER

The introduction on the TGE of two new monthly indices for the RES sector (TGeONSHOREm and TGePVM), based on standardised profiles of electricity production from onshore wind and photovoltaic sources in Poland.

OCTOBER

Izba Rozliczeniowa Giełd Towarowych S.A. (TGE's Clearing House) and the Balkan Gas Hub EAD (BGH) have signed a letter of intent concerning further development of the Bulgarian and regional gas market.

NOVEMBER

Implementation of the fourth phase of integration in the European Electricity Intraday Market (SIDC), enabling trading in a single market covering 25 European countries.

DECEMBER

The celebration of the 10th anniversary of the Gas Exchange Market, the centrepiece of which was a conference with experts from the national and international gas market.



LEGAL ENVIRONMENT

The effective functioning of the TGE is the result of operating within an ever-changing economic and social environment and constant technological development. A result of these circumstances is the continuously evolving legal and regulatory background. Providing market participants with a tailored offer that takes into account these circumstances requires the Exchange's ceaseless effort and commitment, allowing it to modify the current services it already offers, as well as to propose new solutions, while taking into account the high standards of transparency and competitiveness of exchange trading.

In 2022, the most significant changes in the regulatory environment concerned solutions aimed at mitigating the effects of the rapidly rising costs of living, particularly those related to the supply of energy to end users. This objective was achieved in particular by:



**ACT
OF 7 OCTOBER 2022**

on special solutions for the protection of electricity consumers in 2023 in connection with the situation on the electricity market



**ACT
OF 27 OCTOBER 2022**

on emergency measures to limit electricity price levels and support certain consumers in 2023 – this law imposes an obligation on TGE to publish so-called reference prices, which the Exchange started to implement as of 10 November 2022



**ACT
OF 15 DECEMBER 2022**

on the special protection of certain consumers of gaseous fuels in 2023 in connection with the gas market situation



While accepting the overall objective behind these specific and – hopefully – incidental legislative solutions, it must be borne in mind that they represent an unwanted interference in the already restricted freedom of operation of energy market participants – whether consumers, generators or trading companies.

NATIONAL REGULATIONS

The legal act that sets out the general rules for the operation of TGE is the **Commodity Exchange Act**. This law sets out the rules for the trading of exchange-traded commodities, regulates the operation of commodity exchanges and exchange clearing houses and establishes the duties and powers of supervision over these institutions.

ELECTRICITY AND NATURAL GAS

The **Energy Law Act** is the fundamental piece of legislation with regard to the operation of the electricity and natural gas markets on TGE. Starting in 2010, successive amendments to this law introduced an increasingly higher level of the so-called exchange obligation, i.e. an obligation for generators to sell a certain amount of electricity via a commodity exchange. By 2022, this obligation amounted in principle to whole volume of generated electricity. A similar solution was applied to natural gas, in which case the obligation ceiling was set at 55% of the high-methane natural gas put into the transmission network in a given year.

The key change in the Energy Law in 2022 was the abolition of the abovementioned exchange obligation for the sale of electricity. The rationale for such a radical change in the rules for electricity trading was the will to provide relief to end users in connection with the rapidly rising costs of energy and its carriers. However, the real effects of this amendment will only become apparent in subsequent years due to the fact that the relevant regulations did not enter into force until December 2022.

PROPERTY RIGHTS AND GUARANTEES OF ORIGIN

Three Acts – **the Renewable Energy Sources Act, the Energy Efficiency Act and the Act on the Promotion of Energy from High Efficiency Cogeneration** – set out the rules for trading on the Property Rights Market to certificates of origin for electricity and energy efficiency certificates, as well as the regimes of the Certificates of Origin Register and the Guarantees of Origin Register maintained by TGE. The mechanisms and instruments regulated in the aforementioned acts are the backbone of the support systems for renewable energy generation on the one hand and, on the other, are designed to stimulate greater awareness of more efficient energy use. Thanks to transparent transaction procedures, the Exchange provides stakeholders with the opportunity to trade safely in the Property Rights Market and guarantees of origin, contributing to the decarbonisation of the economy.

In 2022 came into force an amendment to the Renewable Energy Sources Act adopted back in previous year, significantly changing the rules for so-called prosumer's clearing, but this is not a modification that will significantly and directly affect the operation of the Property Rights Market and the Guarantees of Origin Register on TGE.

FINANCIAL INSTRUMENTS AND FORWARD

The Act on Trading in Financial Instruments sets out the regulatory framework for the TGE markets on which financial instruments (CO₂ emission allowances) are traded, and also formed the basis for the operation by TGE of the Organised Trading Facility (OTF). The OTF platform enables and organises trading of:

- forward contracts whose underlying instrument is a property right to certificates of origin for energy produced from RES, which are financial instruments,
- forward contracts whose underlying is electricity or gas for physical delivery, which are not a financial instruments and which are traded on a wholesale basis.

AGRICULTURAL AND FOOD COMMODITIES

The direct basis for the operation of the Agricultural and Food Commodity Market on TGE is **the Commodity Exchange Act**.



EU REGULATIONS

The regulatory solutions in the energy sector introduced over the years by the EU legislator have provided the foundations and cornerstones for the development of competitive energy markets in Europe and, consequently, have a fundamental impact on the functioning of energy exchanges.

Gradual liberalisation of market access for both the demand and supply side has led to a clear separation of activities related to the operation of transmission, distribution, storage, trading, regasification and liquefaction infrastructures from undertakings related to energy trading and electricity generation or natural gas extraction.

These solutions, supported by the prohibition of cross-subsidies, strict and extensive supervision and control over enterprises operating in the conditions of natural monopoly (TSO, DSO), allowed free, unfettered access to energy infrastructure to any interested entity. These developments directly translated into a sharp increase in competitiveness on energy markets, measured, for example, by the number of companies operating on them and changes of energy suppliers made by end customers. Crucial to the proper functioning of competitive energy markets is the strong position of national regulators, which also results from set of laws adopted at the EU level.

From the point of view of the operation of TGE, among the most important EU regulations would be:

- **REMIT Regulation** on transparency and integrity of energy markets,
- **CACM Regulation** conditioning the operation of the TGE as a NEMO within the single cross-border energy markets,
- **Regulation 1031/2010** laying down the terms and conditions for the auctioning of CO₂ emission allowances.

In the context of the events of 2022, the REPowerEU package presented by the European Commission in May this year is of key importance. The aim of the proposed solutions – in light of the negative global impact of the Russian invasion of Ukraine – is to make the European Union completely independent of the supply of energy resources from the Russian Federation. Elements of this initiative include accelerating the use of renewable energy sources (clean energy), diversifying the supply of fossil fuels from directions other than Russia, and making further progress in energy efficiency and conservation.

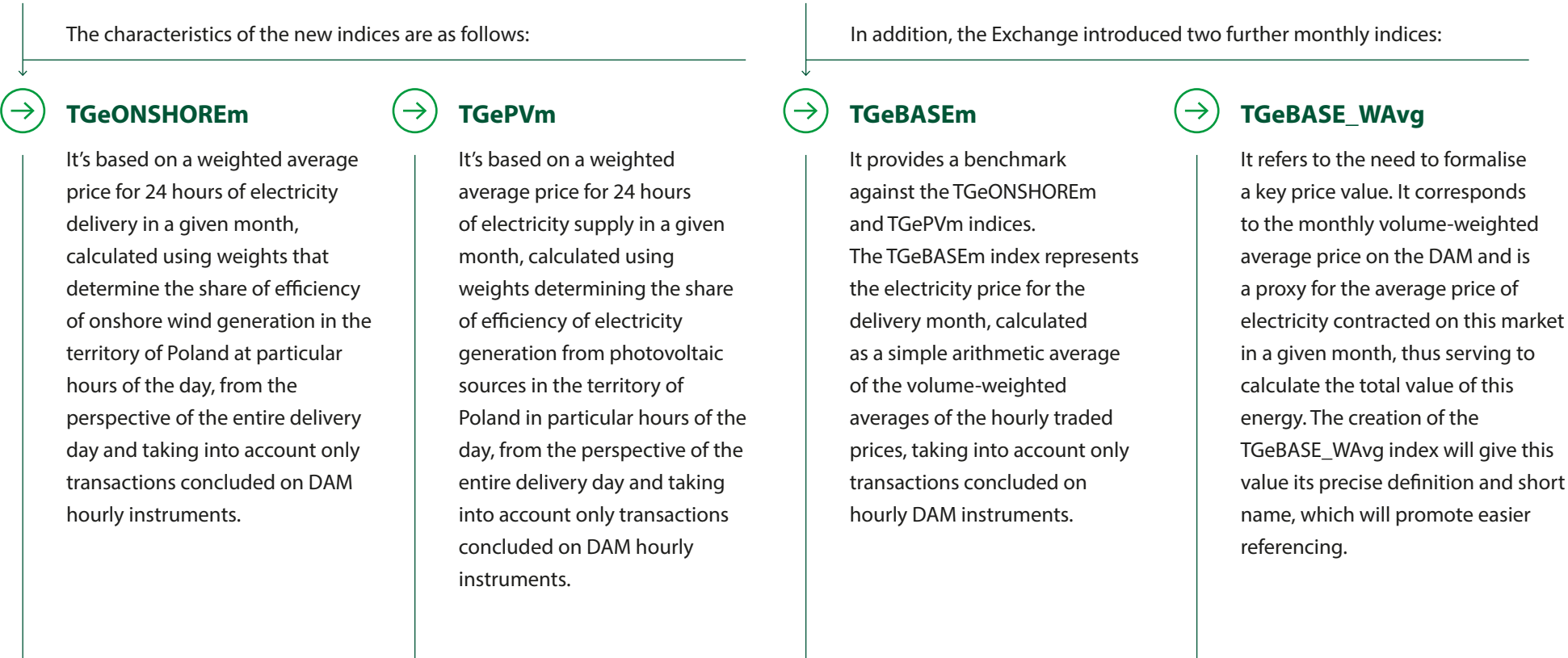


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TGE OFFER

TGE's mission is to provide commodity market stakeholders with a tailored and complete offering for the trading of energy and agricultural products within an organised platform that guarantees the highest standards of transparency and integrity. Thus, market participants can trade transparently, competitively and in a way that enables the fulfilment of their commitments to the Exchange in terms of commodity delivery and price settlement. Aiming to continually improve trading security standards, as well as keeping pace with the latest regulatory and technological standards, TGE implements mechanisms that enable market participants to analyse market trends or make business decisions regarding those segments of the energy market that will play an increasing role in the near future.

In 2022, the Exchange made available to its participants two new monthly indices reflecting the price of electricity generated from RES sources (TGeONSHOREm and TGePVM), based on standardised profiles of electricity production from onshore wind and photovoltaic sources in Poland. This initiative has been in fact an implementation of one of the recommendations contained in the Jagiellonian Institute's report entitled "Development directions of the exchange market for the RES sector". This document has pointed to a number of solutions, the implementation of which is being handled by the Team for the Development of the Exchange Offering for the RES Sector, established in 2021 and bringing together representatives of the TGE CG, financial institutions, the energy sector, as well as the public administration.



ELECTRICITY MARKET

TGE organizes and facilitates trading of electricity on the spot markets (Intraday Market and Day-Ahead Market) and on the Forward Market, within the OTF platform (Organised Trading Facility).

THE DAY-AHEAD MARKET

It has been in operation since 2000. Prices on that market are the main reference point for bilateral (OTC) contracts concluded between energy market participants in Poland. The main beneficiaries of the solutions offered by the Exchange on the DAM are entities which actively, but at the same time taking care of safety, close their portfolios of purchase/sale of electricity on a current basis in individual hours of the day. Trading takes place one day or two days before the start of the supply of electricity contracted with a given instrument.

Within DAM, hourly, block and weekend contracts (base, peak, off-peak) are offered.

There are 6 types of price indexes for the day of electricity supply:

→ TGeBase	→ TGePeak	→ TGeOffPeak	→ TGe24	→ TGe15	→ TGe9
arithmetic average of the weighted average hourly prices of a given delivery day, calculated on the basis of all hourly, block and weekend contracts	arithmetic average of the weighted average hourly prices of the peak period of a given delivery day (7.00 to 22.00), calculated on the basis of all hourly, block and weekend PEAK contracts	arithmetic average of the weighted average hourly prices of the off-peak period of a given delivery day (00.00 to 7.00 and 22.00 to 24.00), calculated on the basis of all hourly, block and weekend OFFPEAK contracts	arithmetic average of the hourly prices for a given delivery day determined in the single rate at 10.30 a.m.	arithmetic average of the hourly prices for the peak period of a given delivery day (7.00 to 22.00) determined in the single rate at 10.30 a.m.	arithmetic average of hourly prices for the off-peak period of a given delivery day (00.00 to 7.00 and 22.00 to 24.00) determined in the single rate at 10.30 a.m.

In June 2022, as part of the Core Capacity Calculation Region (Core CCR), TGE together with 16 transmission system operators and nine other NEMO's implemented the Core Flow-Based Day-Ahead Market Coupling. Thanks to this initiative, the allocation of capacity in the Core CCR region has been improved and more electricity can be transmitted across borders within the European grid, leading to a reduction in the overall costs for end consumers. It should be pointed out that the Core region comprises 13 countries – Austria, Belgium, Croatia, the Czech Republic, France, Germany, Hungary, Luxembourg, the Netherlands, Poland, Romania, Slovakia and Slovenia – with a total population of 278 million and an estimated annual electricity consumption of 1,500 TWh.

INTRADAY MARKET

Since the end of 2019, IDM has been operating on TGE as the part of the European Single Intraday Coupling Electricity Market (SIDC) under the XBID (Cross Border Intraday) model within the European Union, currently covering 25 countries (Austria, Belgium, Bulgaria, Croatia, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Italy, Latvia, Lithuania, Luxembourg, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain and Sweden). In this way, the idea of providing opportunities for cross-border electricity trade between market participants operating in different EU countries has come to fruition. In November 2022, the fourth phase of SIDC integration was implemented, bringing the European Intraday Electricity Market to Greece and Slovakia.

Launched in 2018, the XBID (*Cross Border Intraday Coupling*) model is based on a common IT system (centrally managed by Deutsche Boerse AG), with one Shared Order Book (SOB), a Capacity Management Module (CMM) and a Technical and Financial Settlement Module (SM – *Shipping Module*).

Trading on this market takes place 24 hours a day, in a continuous quotation system, including instruments with delivery on the current day (from 2 p.m.) and the next day. Transactions are concluded in euro, but settlements between the Exchange and domestic market participants (carried out by the IRGiT) are carried out in Polish currency.

FORWARD MARKET

Transactions are concluded on the Organised Trading Facility (OTF) within the Forward Market for Products with Electricity Delivery (RTPE).

VOLUMES AND PRICES ON THE ELECTRICITY MARKET IN 2022

The Polish electricity market is the largest market in terms of volumes in Central and Eastern Europe and is undoubtedly a significant market in the entire European Union. Its importance is due to extensive cross-border connections and interconnections with the neighbouring German, Czech, Slovak, Ukrainian, Lithuanian and Scandinavian electricity systems.

In 2022, the volume of gross electricity generated was 175.2 TWh, an increase of less than 1% compared to the previous year. At the same time, gross domestic electricity consumption amounted to 173.5 TWh, a decrease of approximately 0.5% compared to 2021¹.

¹ Source: PSE, w: https://www.pse.pl/dane-systemowe/funkcjonowanie-kse/raporty-roczne-z-funkcjonowania-kse-za-rok/raporty-za-rok-2022#r5_1, access: 7.08.2023.

VOLUMES

In 2022, the volume of electricity traded on all TGE markets amounted to 141.4 TWh, a decrease of 37.2% compared to 2021. Thus it accounted for approximately 89% of net domestic electricity consumption.

Electricity spot market trading levels – 33.0 TWh – overall fell by 8.9% y/y, with the Intraday Market trading volume of just under 2 TWh, which means down by 15.9% compared to 2021, and the Day-Ahead Market trading volume of 31.0 TWh representing a year-on-year decline of 8.4%.

On the other hand, turnover in the Forward Market (OTF) was 108.3 TWh, down by 42.7% in comparison with 2021.

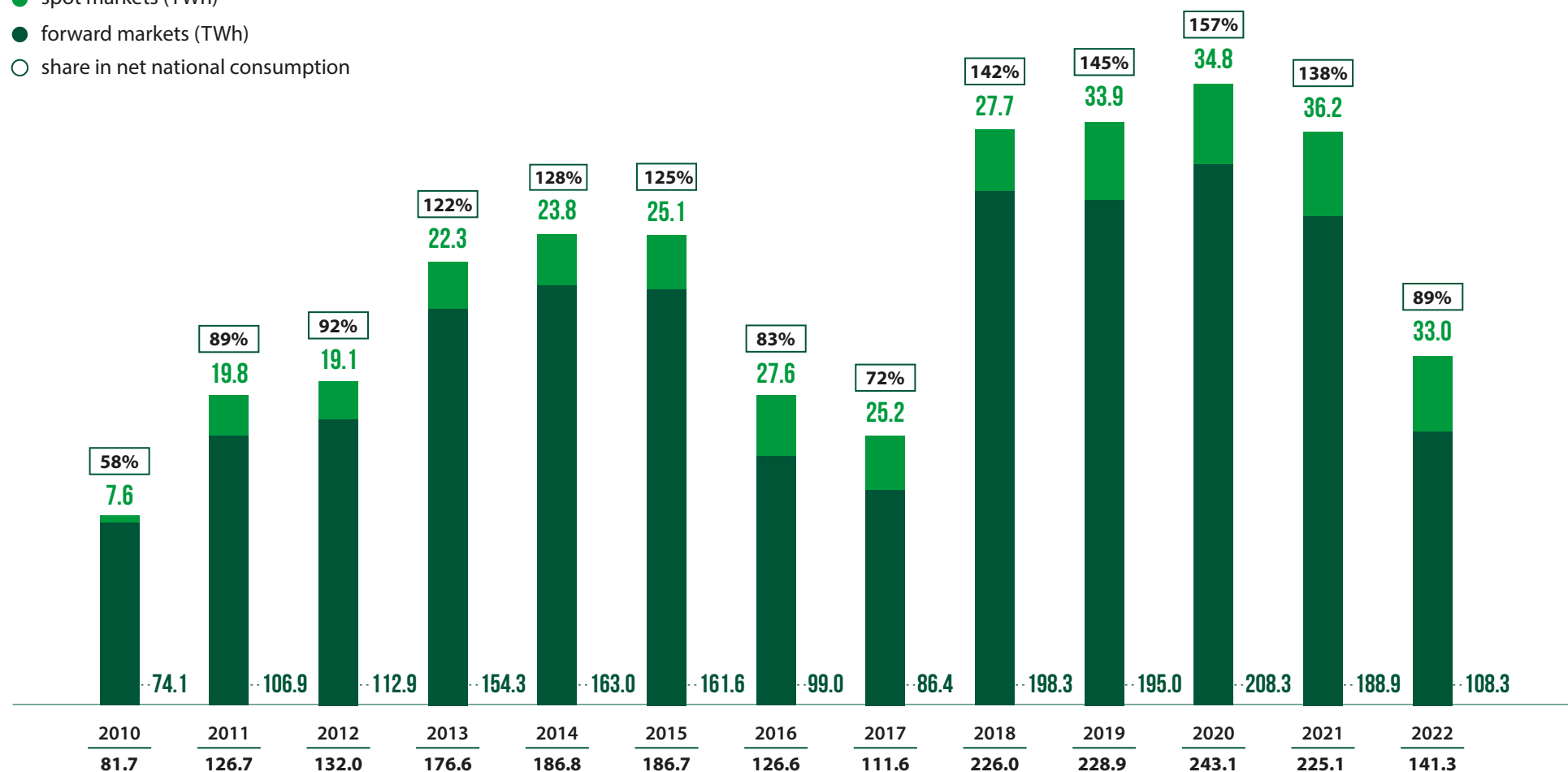
PRICES

2022 was another year in which – due to global political and economic circumstances – there were (even more) sharp increases in the average prices at which electricity was contracted in both spot and forward markets.

The weighted average BASE price on the Day-Ahead Market was at 796.17 PLN/MWh in 2022, and it was an increase of 395.00 PLN/MWh compared to 2021. Even more dramatic increases were seen on the forward market. The weighted average price of the annual contract with base load delivery in 2023 (BASE_Y-23) amounted to 1,110.04 PLN/MWh in 2022, which is an increase of as much as 725.88 PLN/MWh compared to the quotation price of the BASE_Y-22 contract in 2021.

HISTORICAL VOLUMES OF ELECTRICITY TRADED ON THE TGE MARKETS

- spot markets (TWh)
- forward markets (TWh)
- share in net national consumption





NATURAL GAS MARKET

Similar to the Electricity Market, trading on the Natural Gas Market is carried out on the spot markets (Intraday Market and Day-Ahead Market) and on the forward market, within the OTF platform (Organised Trading Facility).

THE DAY-AHEAD MARKET

It has been operating since the end of 2012, constituting the basis of the spot market and enabling the portfolio to be adjusted to the demand in the coming gas days. Trading takes place daily, in a continuous quotation system. Daily contracts quoted every day (GAS_BASE, SGT_BASE and GLW_BASE) and weekend contracts quoted on Thursdays and Fridays (GAS_WEEKEND) are available.

Market movements are represented by the following indices:



TGEgasDA

average volume-weighted price of transactions on the DAMg for GAS_BASE instrument for a given delivery day



TGEsgtDA

volume-weighted average price of transactions on DAMg for SGT_BASE instrument for a given delivery day



TGEglwDA

volume-weighted average transaction price on the DAMg for the GLW_BASE instrument for a given delivery day

INTRADAY MARKET

Launched in mid-2014. Trading is conducted on the day of delivery, in a continuous trading system, taking place daily, on hourly instruments. Price volatility is reflected by three daily indexes, analogous to those on the Gas Day Ahead Market: TGEgasID, TGEsgtID and TGEglwID.

FORWARD MARKET

Transactions are concluded on the Organised Trading Facility (OTF) within the Forward Market for Gas Delivered Products (RTPG).

VOLUMES AND PRICES ON THE NATURAL GAS MARKET IN 2022

As in the case of electricity, the domestic natural gas market is characterised by the highest consumption at regional level, which means that Poland is one of the key players in the EU natural gas market, with the prospect of its importance further increasing in the near future.

VOLUMES

Natural gas trading volumes on the TGE totalled in 2022 to 141.6 TWh, down by 21.7% in comparison the record year 2021. On the spot markets, trading volume was on the level 22.7 TWh (down by 20.6% y/y) with 18.0 TWh on the Day-Ahead Market (down by 17.5% y/y) and 4.7 TWh on the Intraday Market (down by 30.5% y/y). In the Forward Market (RTPG), participants sold and bought 118.9 TWh of natural gas which converts into a 21.9% decrease comparing to the previous year.

Relating the above volumes, the volume of natural gas traded on the Exchange in 2022 turns into a level equivalent of 73% of gross domestic consumption (193.6 TWh).

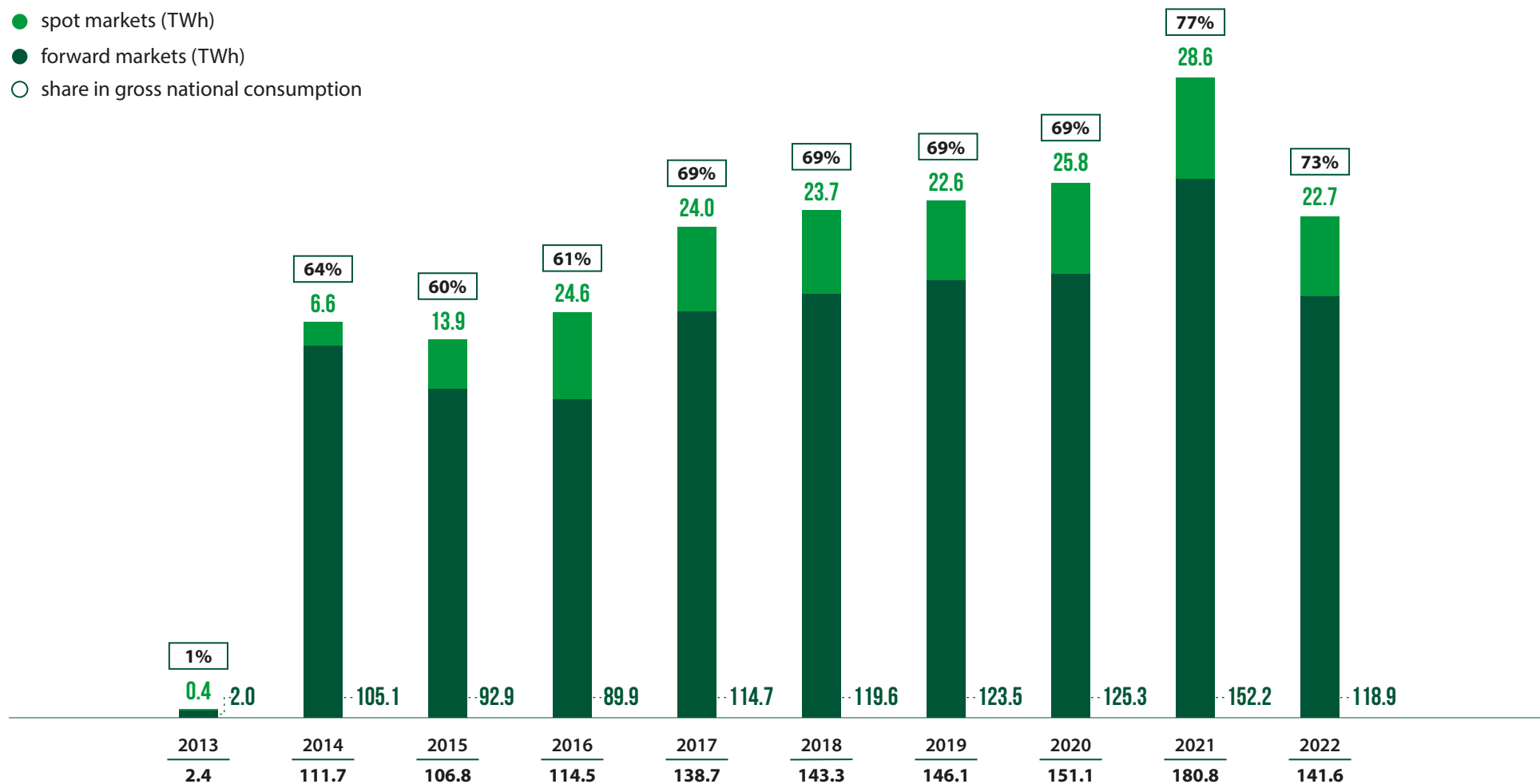
PRICES

As with electricity prices, natural gas prices on the Exchange also skyrocketed in 2022.

The weighted average price on the gas spot markets was in 2022 on the level of 547.79 PLN/MWh, an increase of 321.50 PLN/MWh in relation to 2021. On the forward market, in turn, the weighted average price of the contract with delivery in 2023 (GAS_BASE_Y-23) was 546.38 PLN/MWh, which is 370.04 PLN/MWh higher than the corresponding price quoted for the GAS_BASE_Y-22 contract in 2021.

HISTORICAL VOLUMES OF NATURAL GAS TRADED ON THE TGE MARKETS

- spot markets (TWh)
- forward markets (TWh)
- share in gross national consumption



PROPERTY RIGHTS MARKET

Property rights related to energy generation from renewable energy sources and energy efficiency are an instrument of support for entities generating energy from RES sources and implementing or financing projects aiming at more efficient use of energy.

These rights are traded on a separate market, which is an important part of the TGE offer. On the one hand, generators of energy from RES and entities implementing energy efficiency projects have a chance to profitably monetise their property rights issuing of respectable certificates and secure the settlement of transactions, while on the other hand, energy companies have the opportunity to competitively acquire these rights in order to redeem them while fulfilling their statutory obligations.

On this market, Property Rights arising from following certificates are traded.



GREEN CERTIFICATES

certificates of origin for electricity generated from renewable energy sources other than agricultural biogas plants
[/PMOZE, PMOZE_A/](#)



BLUE CERTIFICATES

certificates of origin for electricity generated from renewable energy sources in agricultural biogas plants
[/PMOZE-BIO/](#)



BROWN CERTIFICATES

certificates of origin for agricultural biogas and feeding it into the distribution network
[/PMBG/](#)



WHITE CERTIFICATES

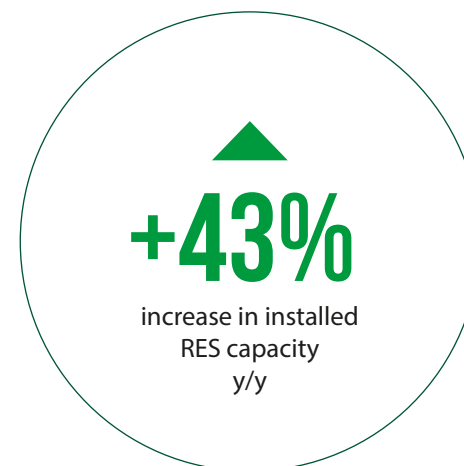
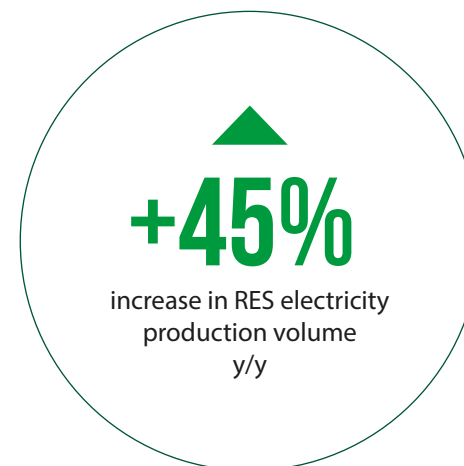
energy efficiency certificates obtained by entities that have implemented energy efficiency measures aimed at saving energy consumed
[/PMEF_F](#)
[and annual instruments/](#)



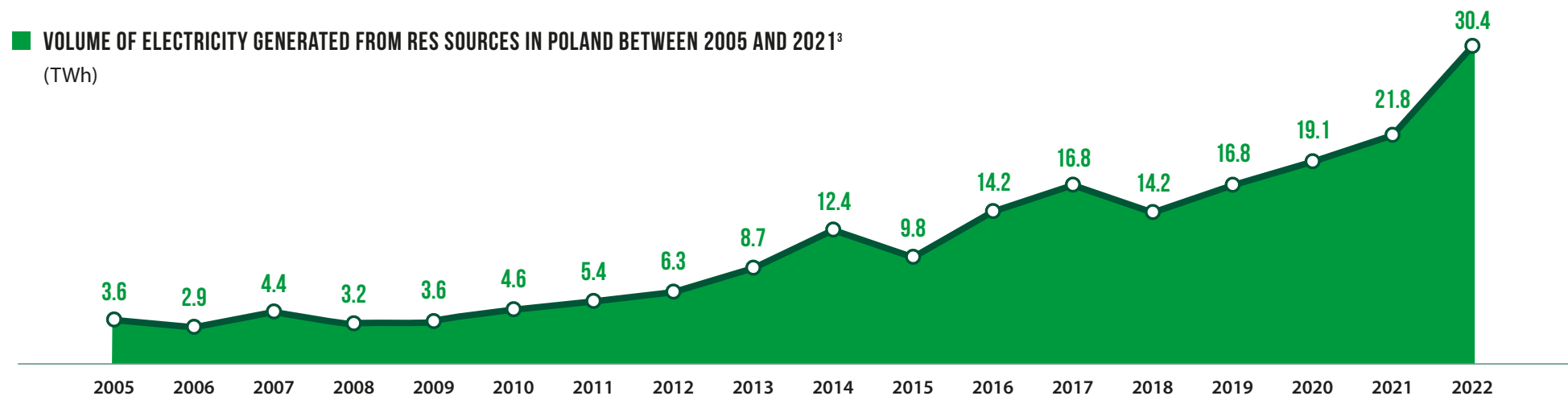
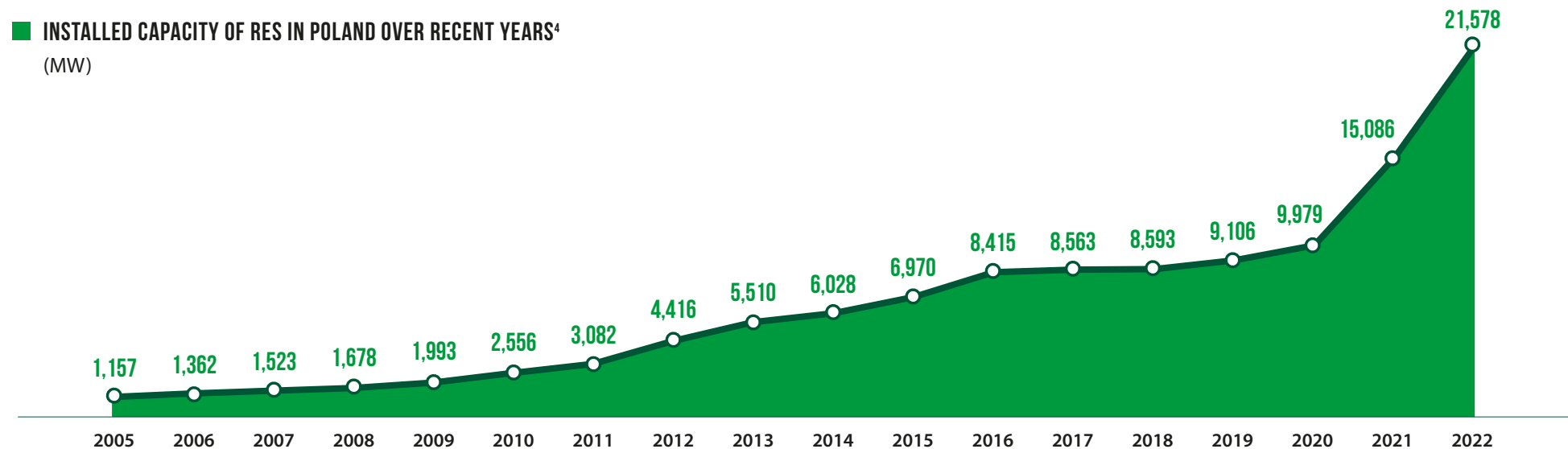
It is also possible to trade property rights on the Forward Market, within the Property Rights Forward Market (RTPM), where property rights (PMOZE_A type) can be contracted for the further future using financial instruments.

VOLUMES AND PRICES ON THE PROPERTY RIGHTS MARKET IN 2022

In 2022, electricity generation from renewable sources in Poland increased by more than 45%, while the volume of installed RES capacity increased from 15 GW in 2021 to 21.5 GW (43% rise), translating into a share of renewables in the total installed capacity of 35.7%².



² Ibidem.

³ Ibidem.⁴ Ibidem.



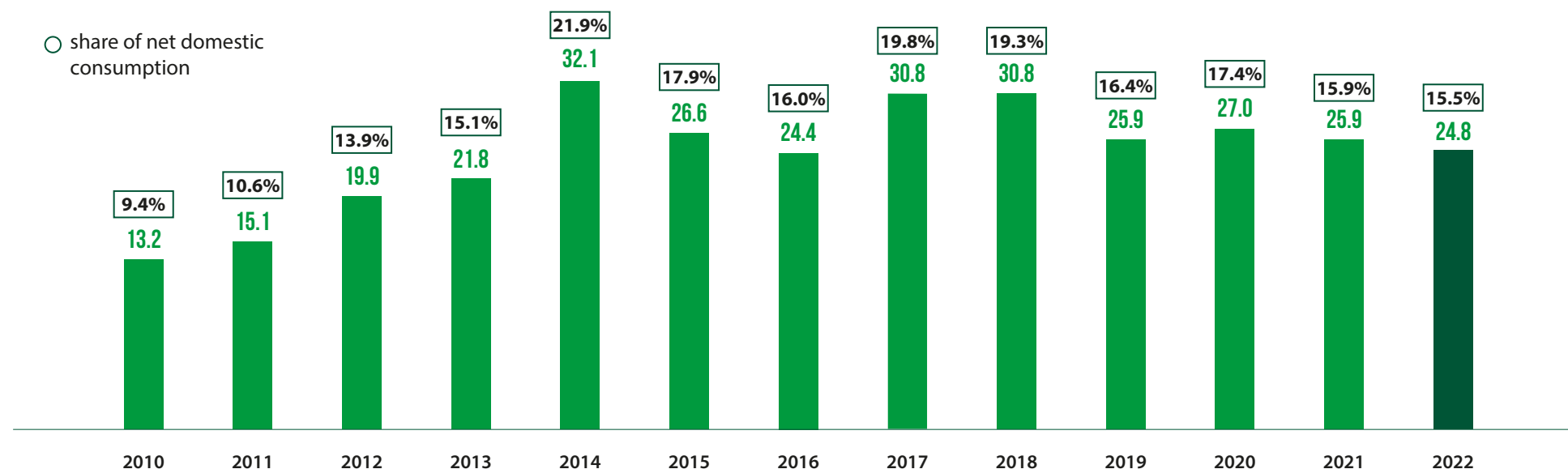
CERTIFICATES OF ORIGIN FOR ENERGY FROM RES

The total volume of trading in property rights for RES electricity in 2022 reached 24.8 TWh, which turns into a 4.4% decrease in comparison to previous year. The weighted average price at RPM sessions attained 191.80 PLN/MWh for the PMOZE_A instrument in 2022, which is 0.07 PLN/MWh in comparison to 2021.

VOLUMES OF TRADING IN PROPERTY RIGHTS RESULTING FROM CERTIFICATES OF ORIGIN FOR ELECTRICITY GENERATED FROM RES, INCLUDING AGRICULTURAL BIOGAS PLANTS (PMOZE, PMOZE_A AND PMOZE-BIO INSTRUMENTS) ON BOTH THE SPOT (PRM) AND FORWARD MARKETS IN INDIVIDUAL YEARS FROM 2010 ONWARD

(TWh)

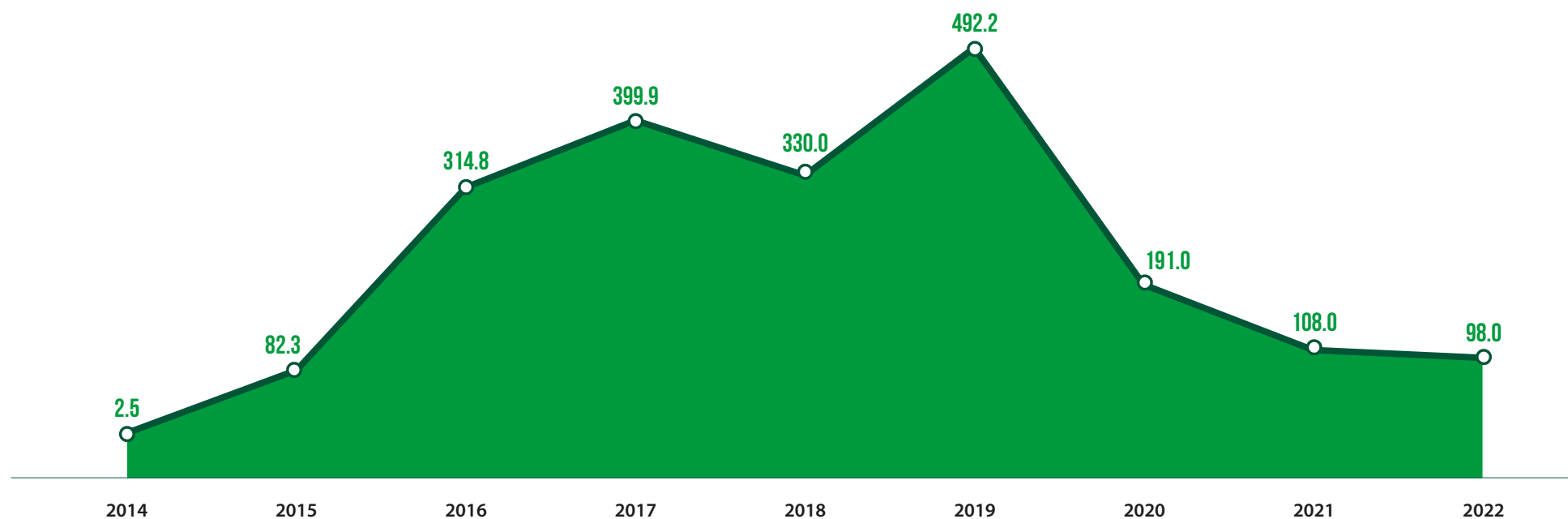
○ share of net domestic consumption



ENERGY EFFICIENCY CERTIFICATES

The trading volume of energy efficiency property rights in 2022 amounted to 98.0 ktoe, a decrease by 9.3% comparing to 2021. The volume-weighted average price of the PMEF_F instrument in 2022 sessions was 2,284.23 PLN/toe, 90.85 PLN/toe lower than the corresponding price in 2021.

■ HISTORICAL DYNAMICS OF TRADING IN PROPERTY RIGHTS RESULTING FROM ENERGY EFFICIENCY CERTIFICATES (ktoe)



GUARANTEES OF ORIGIN

The dynamic growth in the installed capacity of renewable energy sources and, consequently, in the trading volume of electricity generated from RES will directly result in an increase in the trading of guarantees of origin.

This is also fostered by the growing awareness of both suppliers and consumers of the importance for each market participant of being able to demonstrate that they support the energy transition and care for the environment in their daily business activities. Legislative and organisational work on the planned internationalisation of trading in Guarantees of Origin also continues. The finalisation of these works and the accession of the President of the ERO to the AIB (Association of Issuing Bodies), should generate further increases in the volumes of abovementioned guarantees traded in the Guarantees of Origin Register maintained by the TGE.

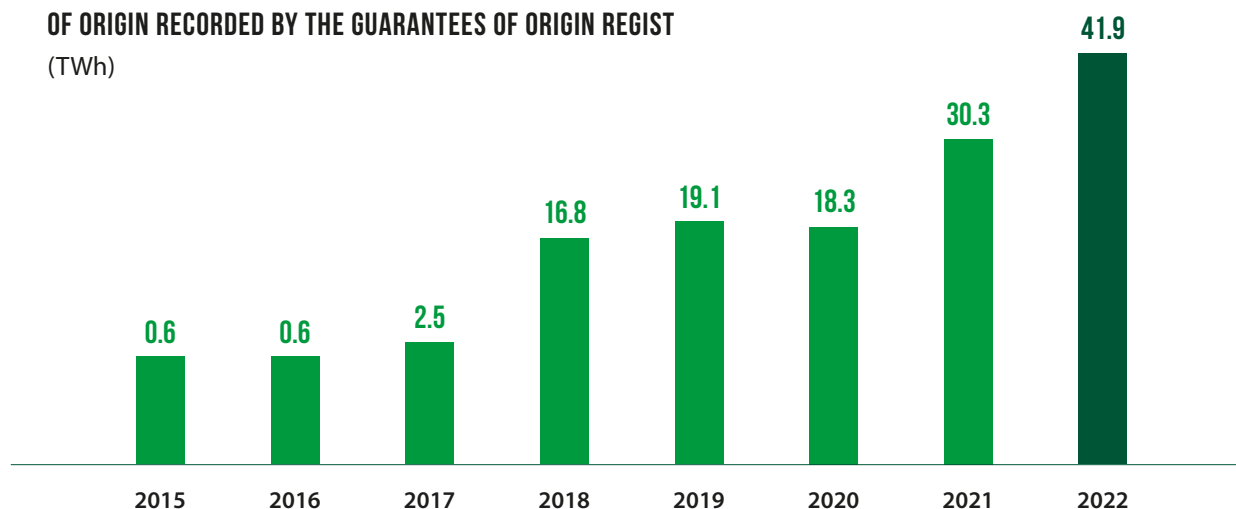


TRADING VOLUME AND PRICES OF GUARANTEES OF ORIGIN IN 2022

In 2022, volume of traded guarantees of origin for electricity generated from RES closed with the result 41.9 GWh (an increase by 38.1% in comparison to the volume in 2021), which means that the highest result in the history of TGE's Guarantees of Origin Register was achieved for the second consecutive year.

The weighted average price of the RES guarantee of origin in 2022 was 5,05 PLN/MWh, an increase of 3.48 PLN/MWh compared to 2021.

**HISTORICAL OVERVIEW OF THE TRADING VOLUME OF GUARANTEES
OF ORIGIN RECORDED BY THE GUARANTEES OF ORIGIN REGISTER
(TWh)**



AGRICULTURAL EXCHANGE MARKET

The Agricultural Exchange Market (AEM; also known as the Agricultural and Food Commodities Market: RTRS) is a practical implementation of one of the WSE CG's strategic initiatives. It was launched as part of the Food Platform project, which TGE is running jointly with the National Agricultural Support Centre (KOWR).

The AEM is in fact a separate segment of TGE's Exchange Commodity Market, which allows trading in selected, marked by type, agricultural and food commodities. In doing so, the Exchange defines the quality standards for these commodities and ensures that they are met using the Authorised Warehouse System.

The Agricultural Exchange Market is a spot market – transactions concluded therein are subject to immediate settlement with the physical delivery of the commodity. The designation by the TGE of the rules for participation in the market, the conditions for concluding transactions and the manner of their execution, ensures that market participants trade on a transparent and non-discriminatory basis.

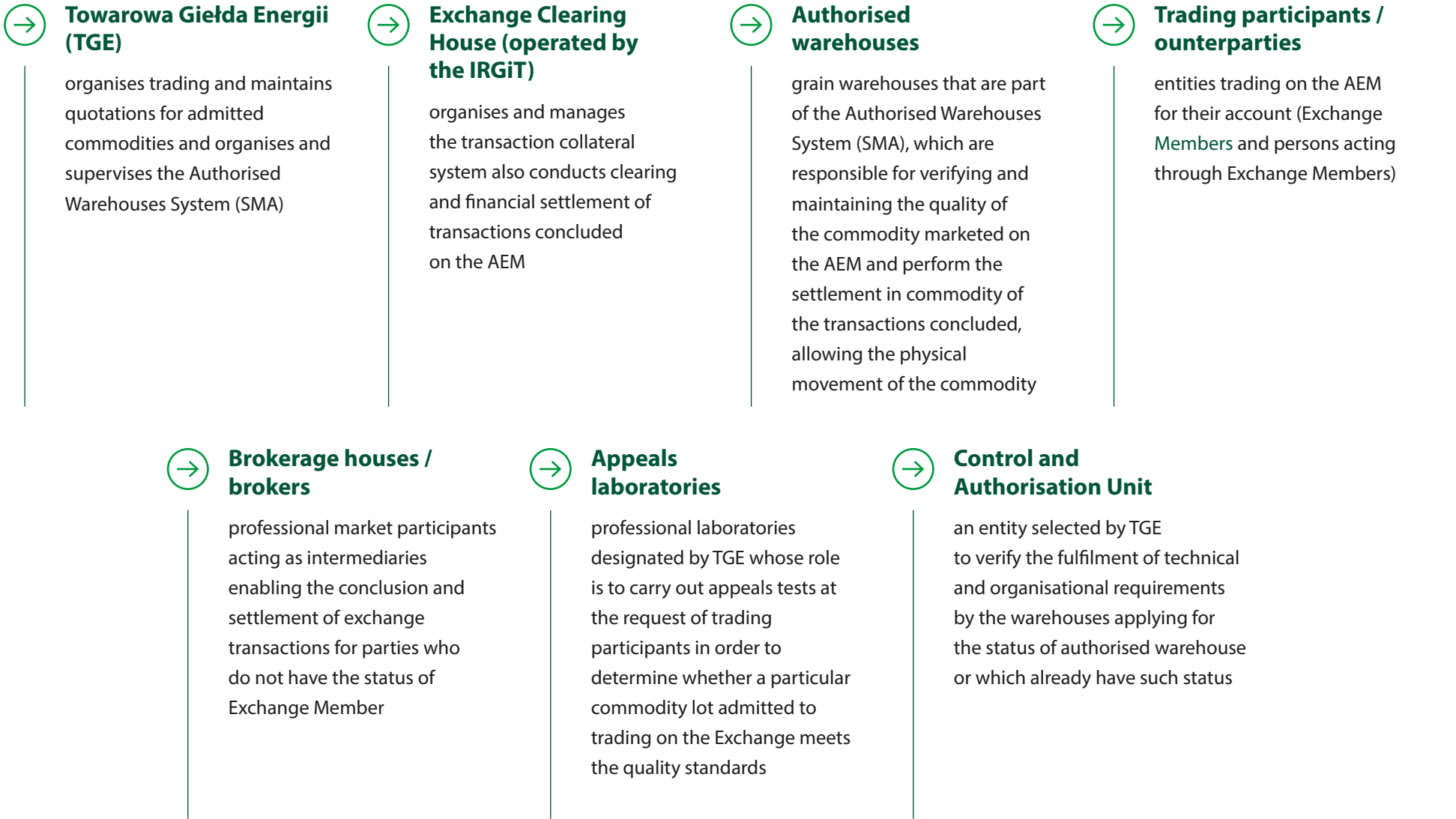
The AEM is traded in parallel systems:

- **single-price auction**, in which all exchange transactions for a particular instrument are concluded during a given session at the same price, determined by the Exchange according to a specified algorithm; single-price auction is conducted once a week for standardised contracts, the object of which is a commodity stored using the Authorised Warehouse System,
- **auctions**, consisting of the organisation, at the request of a bidder, of ad hoc auctions for the sale of goods displayed by a trader with its own Authorised Warehouse.

AEM currently offers trading in wheat, maize and rye, as well as oilseed rape.



KEY STAKEHOLDERS IN THE AGRICULTURAL EXCHANGE MARKET



SMA

The Authorised Warehouses System (SMA) is based on warehouses that meet specialised organisational and technical requirements defined by the TGE, thus ensuring a uniform handling of commodities traded on the AEM during their entry, storage and release. Participation in the SMA is voluntary, only an appropriate agreement with the Exchange is required. The latter supervises the activities of the SMA, though is not liable to the trading participants for the commodities stored in authorised warehouses, which are responsible for any claims in this respect.

PARTICIPATION IN THE AEM

Transactions on the AEM may be concluded by all entities that hold Exchange Member status or are customers of Exchange Members.

- Only entities that meet the requirements set out by the Exchange in the Exchange Commodity Market Rules may become Exchange Members. These are usually professional entities whose business is trading in financial and commodity instruments, such as brokerage houses, commodity brokerage houses or investment companies. Additionally, in order to be admitted to the AEM, it is necessary to become an Exchange Clearing House Member or to conclude an agreement with an Exchange Clearing House Member for the clearing of their transactions.
- Other entities that are unwilling or unable to become an Exchange Member have the option to trade on the AEM through an Exchange Member admitted to the AEM that provides brokerage services (brokerage house).

An important stakeholder in the AEM is also the Agricultural Market Council – a consultative and advisory body to the Management Board of TGE on matters relating to the operation of the AEM and the Authorised Warehouses System. More information on the Agricultural Market Council is provided in the next section of the Report (p. 66).

FACILITATION OF TURNOVER ON THE AEM

Reacting to current market trends and also responding to the demand of trading participants, TGE is continuously trying to carry out activities aimed at making its offer more attractive to market participants, which is also the case of AEM. In 2022, this included the following initiatives:

- facilitating the organisation of auctions by market participants while maintaining the security of trading by:
 - shortening to three days the deadline for submitting an auction application,
 - cancelling the obligation of placing the deposit by a participant in the Authorised Warehouses System,
 - shortening to one day the settlement period after the auction;
- a reduction throughout 2023 in the fees associated with trading on the RTRS: the annual fee, transaction fees and additional fees;
- setting the fixed fees associated with participation in the Authorised Warehouses System at PLN 0.00 for the whole of 2023.

TURNOVER ON THE AEM IN 2022

In 2022, the Agricultural Exchange Market traded a volume of 2,450 tonnes of cereals (of which 2,350 tonnes was grade B wheat). This presents a decrease of 48.4% comparing to 2021.

2,450
TONNES OF CEREALS

down y/y

-48.4%



INFORMATION AND REPORTING SERVICES

TGE's ambition is to present to market participants the most complete offer related to partaking in regulated exchange commodity trading. In pursuit of this objective, the company provides the possibility of using a number of instruments both in terms of information and reporting. The specificity of TGE's offer in this area is demonstrated by the use of mechanisms guaranteeing a diverse range of access to market data, thanks to which each trading participant can choose the instrument that best suits its needs.

PUBLICLY AVAILABLE MARKET DATA: GPI – EXCHANGE INFORMATION PLATFORM

Thanks to GPI, the Exchange guarantees a single, comprehensive source of information on the electricity market. The Platform enables transparent and orderly presentation of data concerning the power system in Poland and also allows wholesale market participants to fulfil the obligation to publish the so-called 'inside information', pursuant to Article 4 of the Regulation (EU) No 1227/2011 of the European Parliament and of the Council of 25 October 2011 on wholesale energy market integrity and transparency (the so-called REMIT Regulation). These information concern the availability of generation capacities and ultimately the availability of customer facilities, hence this is all data which may affect the level of prices on wholesale energy markets and the commercial decisions taken by market participants.

The Exchange Information Platform consists of three main components:

- Important transaction information,
- Electricity system data,
- TGE markets.

REAL-TIME DATA

TGE real-time market data is shared through the Warsaw Stock Exchange. The full range of information offered covers all markets active on the TGE: the electricity market, the natural gas market, the property rights market and the agricultural market (RTRS). Modern technological solutions make it possible both to make information available for further distribution and to use it in applications for automated trading, risk management, quantitative analysis, fund management or portfolio management. Data can be received either by direct connection to the WSE's information systems or through information distributors providing WSE information products.

PROCESSED DATA: AIR PLATFORM (ANALYSIS, INFORMATION, REPORTS)

The 'Analyses, Information, Reports' (AIR) platform is a unique solution to meet all business needs, which enables simplified data management, while significantly reducing the costs of obtaining market information. It is a source of comprehensive market information provided both in the form of standard and customised products that meet the specific needs of any given market participant (the 'Tailor-made Reports' service).

REPORTING SERVICES: TGE RRM

TGE also provides market participants with the opportunity to fulfil other obligations under the REMIT Regulation, in particular those related to the reporting to the Agency for the Cooperation of Energy Regulators (ACER) of data on orders and transactions concluded on wholesale energy markets. Such reporting can only be carried out by entities that obtained Registered Reporting Mechanism (RRM) status.

TGE's RRM offers the following functionalities to market participants, ensuring compliance with the obligations under Article 8 of the REMIT Regulation:

- reporting on orders and transactions concluded through organised trading facilities,
- reporting of OTC transactions,
- reporting of transmission and basic data.

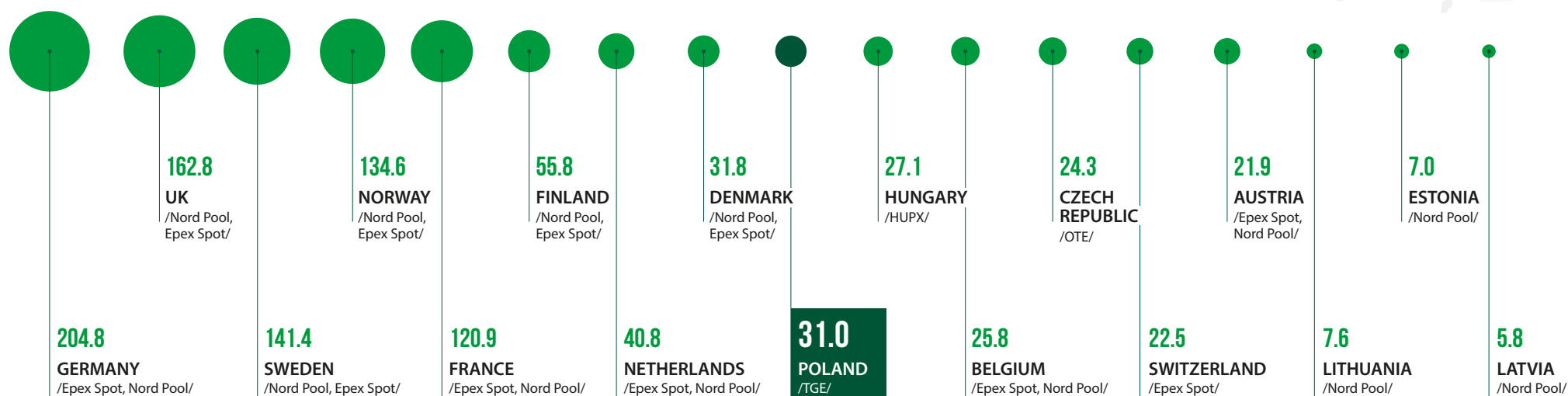


TGE COMPARED TO OTHER POWER EXCHANGES IN EUROPE

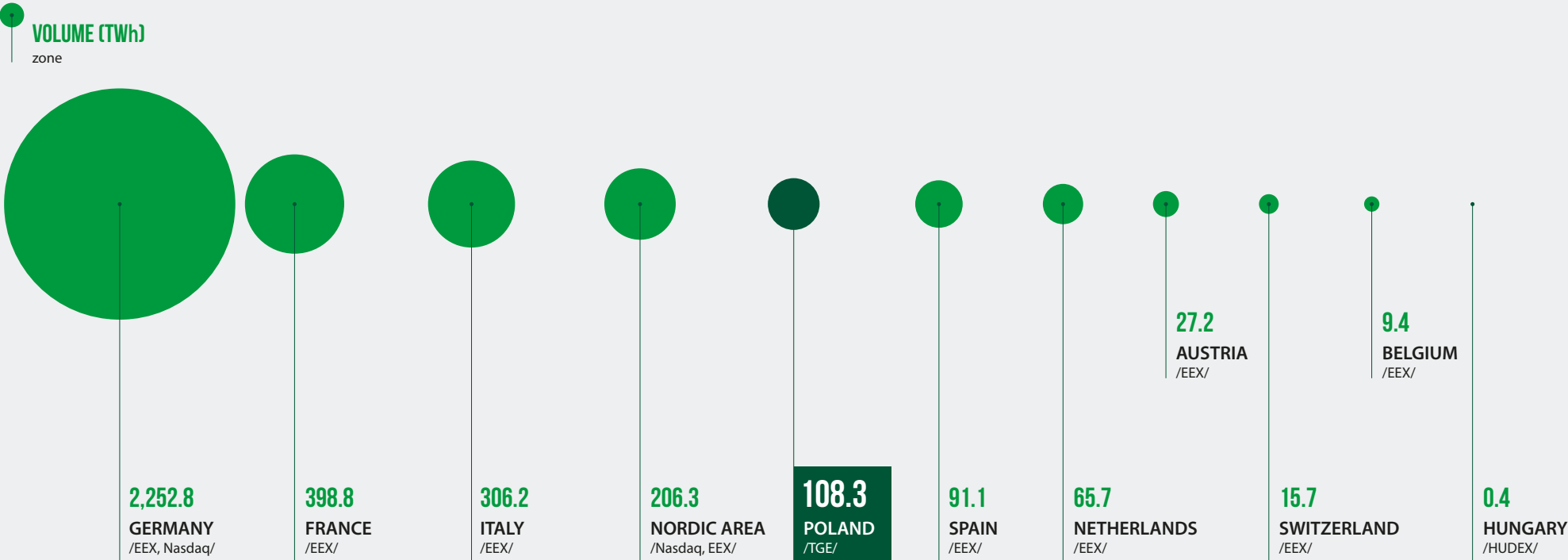
TGE is a significant organiser of regulated trading in energy commodities not only at the regional, but European level. TGE's position against the background of competitive regulated markets on Old Continent is illustrated by the following data on the volumes of electricity and natural gas traded on individual European trading floors.

DAY-AHEAD MARKETS FOR ELECTRICITY IN 2022

VOLUME (TWh)
zone

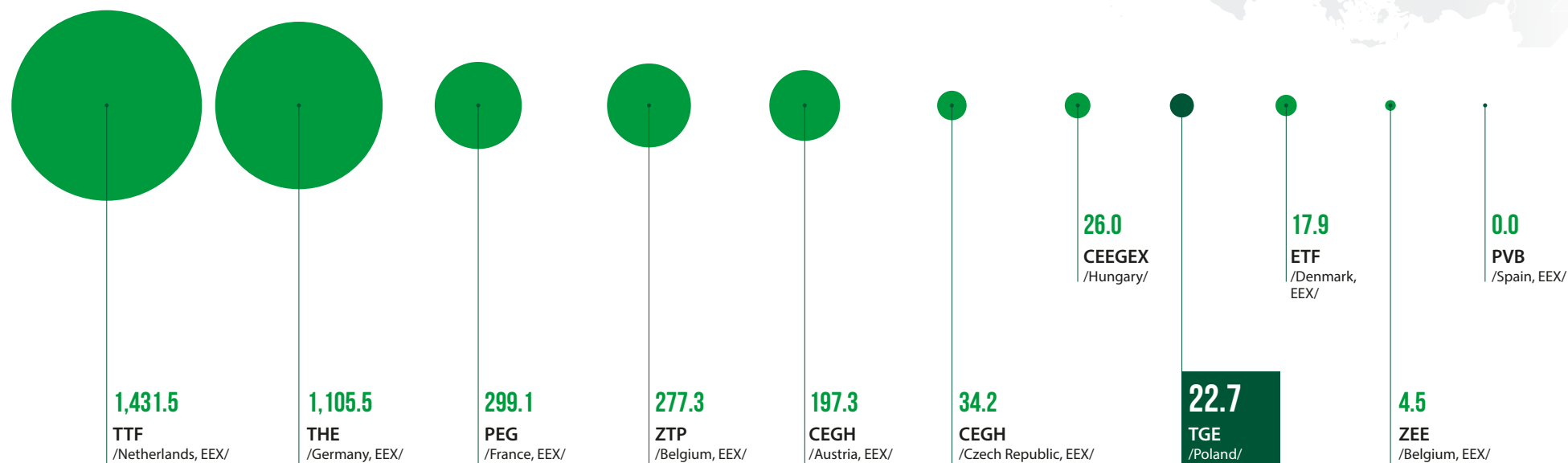
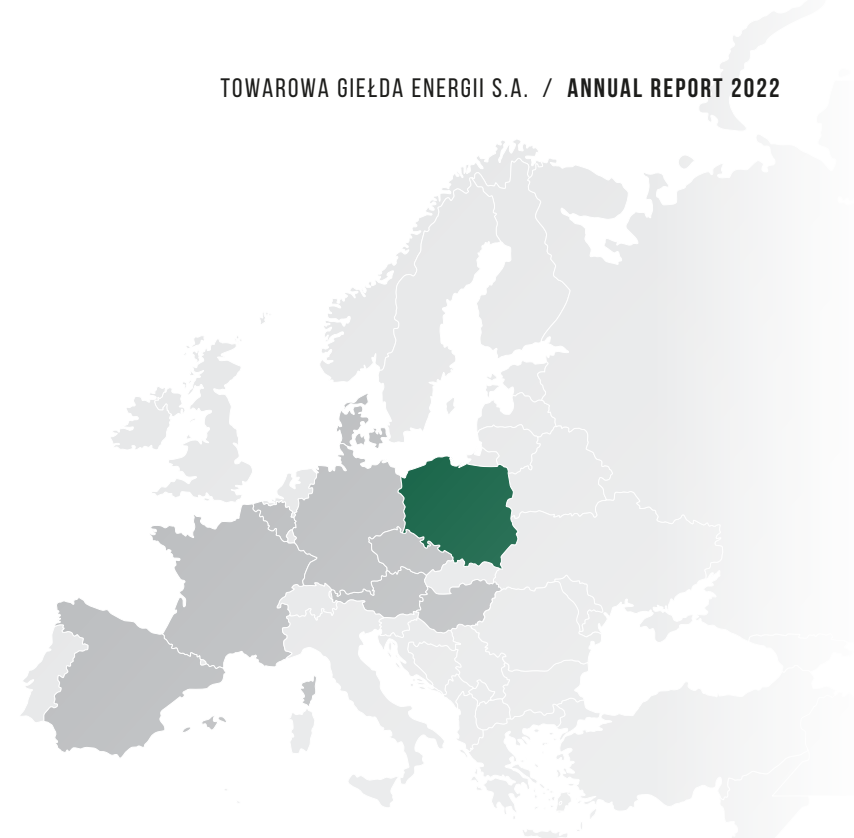


■ ELECTRICITY FORWARD MARKETS IN 2022



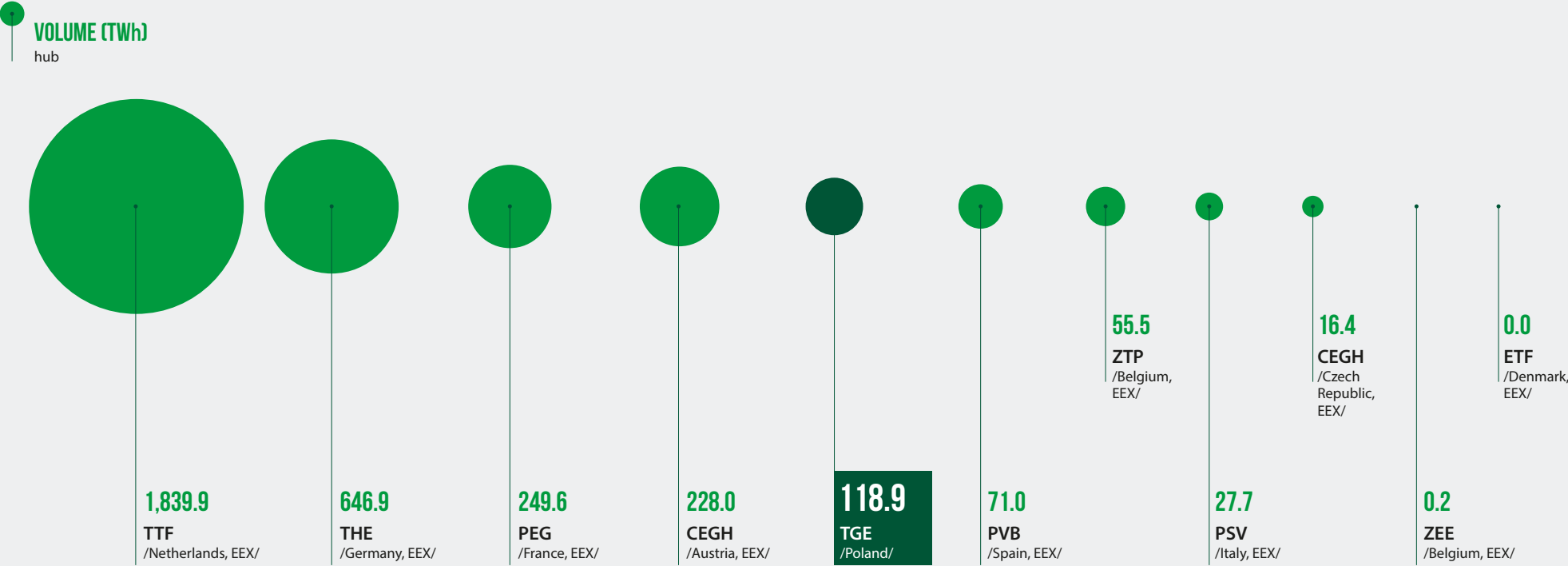
SPOT MARKETS FOR NATURAL GAS IN 2022

VOLUME (TWh)
hub



These figures indicate that, especially with regard to forward markets, TGE aspires to be one of Europe's most important organisers of trading in energy products.

NATURAL GAS FORWARD MARKETS IN 2022





COOPERATION WITH ENERGY MARKET STAKEHOLDERS

TGE's operating philosophy is based on the imperative of active cooperation with all stakeholders of the commodity markets in Poland. Thanks to this multi-level dialogue, the Exchange continually raises the standards of its services and adapts range of its products to the changing environment, taking into account the needs and expectations expressed by those who are most interested in such an offer. TGE's ambition is to pursue an effective and efficient educational policy aimed at raising awareness among commodity market participants in relation to the benefits of commodity trading using transparent and competitive exchange mechanisms.

MARKET COUNCIL

An advisory body to the Management Board of TGE. Due to its composition and tasks assigned, it is an important element of effective dialogue with energy market participants and stakeholders. The key tasks of the Market Council are managing the development of the product offer and taking initiatives aiming at optimising the available instruments. The work of the Council results in recommendations for the development of the exchange commodity market, proposing the development of draft regulations in this area and provide opinions on amendments to such regulations. The Council facilitates and channels the exchange of information between TGE and trading participants on tools improving liquidity, rules for market makers, quotation systems and their development, and the implementation of regulatory and legal changes concerning the operation of markets run by TGE.

The Market Council comprises representatives of the following bodies, institutions and entities:

- OGP Gaz-System S.A.,
- Polish Chamber of Broker Houses,
- Polish Chamber of Industrial Power Generators and Energy Consumers,
- The Chamber of the Natural Gas Industry,
- Polish Association of Commercial Heat and Power Plants,
- Association of Energy Trading,

- Polish Power Plants Association,
- Renewable Energy Association,
- Polish Wind Energy Association,
- Union of Private Employers in the Energy Sector (Lewiatan),
- EFET (European Federation of Energy Traders),
- Management Board of TGE,
- Izba Rozliczeniowa Giełd Towarowych S.A. (Clearing House).

The Market Council functions on the basis of the Rules of Procedure and the yearly work schedule, though the ad hoc meetings are also held, especially in the case of proposals to amend regulations directly related to the Exchange's activities.

During the 2022 Market Council consulted the development of the offer and the changes resulting from the intervention measures taken by the European Commission and the Polish government related to the electricity market. Discussions were also held on modifications to the balancing market, adopting recommendations for the implementation of new products, including monthly indices and the extension of the offer for the RES sector. The Council also discussed issues related to the conduct of quotations, their scheduling and price list changes in terms of exchange fees.

AGRICULTURAL MARKET COUNCIL

The Agricultural Market Council has been established in 2021. It is also a consultative and advisory body to the Management Board of TGE on matters relating to the development of the Agricultural Exchange Market, including the Authorised Warehouses System. Due to the scope of competencies, its members include representatives of the agri-food sector, representatives of the most important industry organisations related to the agriculture, scientific institutes and administrative bodies, in particular:

- Prof. Waław Dąbrowski's Institute of Agricultural and Food Biotechnology,
- Institute of Agricultural and Food Economics,
- Polish Chamber of Commerce of Grain Processors and Feed Manufacturers,
- National Federation of Cereal Producers,
- Luboszanie Producers Group,
- National Association of Rape and Protein Crop Producers,
- Polish Association of Employers of the Grain and Milling Industry,
- Polish Association of Oil Producers,
- Ministry of Agriculture and Rural Development,
- National Agricultural Support Centre,
- WSE Capital Group.

The detailed scope of the Agricultural Market Council's activities includes the development of recommendations concerning the expansion of the Exchange Agricultural Market and giving an opinion on changes concerning the improvement of liquidity, the principles of Exchange's operation, the directions of development, regulatory and legal changes concerning the Exchange Agricultural Market and the Authorised Warehouses System operated by TGE, as well as the promotion of the AEM.

DEVELOPMENT OF THE STOCK MARKET

TGE experts are working both in the national and international space, participating in working groups, industry forums and undertaking various initiatives. The common denominator of these activities is the pursuit of further development of the domestic and European energy market.

Project and working groups initiated by TGE

They are an important part of the Exchange's strategy based on the drive to continuously improve and adapt its offering to the dynamically changing regulatory and technological environment. There are currently two such teams operating at the Exchange.

- **Team for the Development of Offer for the RES Sector**

It was established as a result of cooperation between TGE and the Polish Wind Energy Association (PSEW), aiming at defining adequate solutions and recommendations for the dynamically evolving renewable energy sector. The Team's work was inaugurated in October 2021, and the direct impetus for its creation was the conclusions arising from the Jagiellonian Institute's report published in July of the same year, entitled "Directions for the development of the exchange market for the RES sector", commissioned by TGE and PSEW. The team consists of specialists from the energy sector and representatives of financial institutions, i.e. people who authentically shape solutions supporting further development of the RES industry. In the longer term, the aim of the Team's work is the definition of boundary conditions and specific instruments taking into account the effects of the transformation of energy markets towards decarbonisation and zero emissions, including legal and business aspects.

In terms of 2022, the most important outcome of the Team's work was the implementation of two new monthly indices for the RES sector (TGeONSHOREm and TGePVm), based on standardised profiles of electricity production from onshore wind and photovoltaic sources in Poland. On this occasion, TGE also organised a conference to discuss the new tools.

- **Financial Instrument Market Team (RIF)**

The Team consists of a wide range of experts from the areas of electricity and gas trading, market and portfolio risk management, broker house operations, regulation and compliance, and exchange but also clearing house settlement. The first task of the Team is to characterise – on the basis of the analyses – the benefits and barriers associated with the implementation of the new financial instruments programme. This work will result in the defining a market model as well as standardisation of instruments.

Working Groups at the Ministry of Climate and Environment

In 2022 TGE continued its activities as an aftermath of the MoU documents signed a year earlier to launch the biomethane and hydrogen market in Poland. Thus, representatives of the Exchange actively participated in the working groups operating at the Ministry of Climate and Environment: Coordinating Council for the Hydrogen Economy, Coordinating Council for the Development of Biogas and Biomethane and Group 7 on Avoided Emissions (the so-called biomethane team). The recognition of TGE employees by the ministry for their involvement in the activities of working groups for the development of the hydrogen economy, and the appreciation of the Exchange itself for its essential contribution to the work and the future role of TGE in the organisation of renewable hydrogen trading and pricing was a testimony to the significant contribution of TGE representatives to the work of these committees.

SEEGAS initiative

2022 was also marked by TGE's activities aimed at developing the European exchange market. Representatives of the company spoke at the SEEGAS initiative, set up by the Energy Community Secretariat to coordinate works and harmonise outlooks and practices with regard to the development of a common and integrated gas market in the South East European region. The initiative is open to all stakeholders working on the creation of local gas hubs, relevant pan-European stakeholders and experts from national authorities responsible for regulating the energy and financial sectors in the SEEGAS countries.



EDUCATION

Educational activities aimed at the broadly understood stakeholders of exchange trading, i.e. market participants, TGE members, media representatives and the academic community, have been an important part of the Exchange's operation since its inception, i.e. for more than 20 years. In this respect, in 2022 the company has been active in many fields.

Training and certification of brokers

In 2022 TGE conducted 6 training courses for TGE Broker candidates, ending with an exam, with a total of 77 participants. As usual, adapting to the expectations of potential participants, the trainings were organised and conducted remotely in both Polish and English. Finally, a total of 72 TGE Broker certificates were issued, entitling the participants to represent an Exchange Member or OTF Member in transactions on the Exchange Commodity Market, Organised Trading Facility and Financial Instruments Market operated by TGE.

Workshops and training for public institutions

Last year, online training courses were also organised for public institutions. During workshops conducted for the Ministry of Development and Technology (February), the National Centre for Nuclear Research (June) and the Ministry of Climate and Environment (November), representatives of TGE presented the most important aspects and issues related to the functioning and offer of the Exchange.

Conferences and webinars for stock market participants

As in previous years, TGE also carried out strictly educational activities, becoming actively involved in projects addressed to the school and academic community, such as the Academy of Energy, organised by the L.A. Paga Foundation, as well as the Go4Poland programme and the EduAkcja project (volunteer work in the form of online lessons for 905 people – students and teachers of 38 classes from 37 different schools across Poland), implemented by the WSE Foundation.

As part of its efforts to increase the knowledge of market participants in 2022, TGE has also organised two conferences aimed at the RES sector, as well as two open online webinars:

- **28 April** – conference titled "The exchange energy market as an opportunity for the development of the RES industry", addressed to stakeholders in the RES industry. The purpose of the event was to show the benefits of participating in the exchange market and to present the directions for the development of TGE's offer in the area of renewable energy sources.
- **30 June** – an online webinar named "Towarowa Giełda Energii – a market information centre", which presented TGE's offer of information services. The principles of the functioning of the AIR platform were also discussed.
- **13 September** – a conference labelled "New indices for RES. TGE develops 'green' exchange offering", for a detailed presentation of two new monthly indices – TGeONSHOREm and TGePVm – based on standardised profiles of onshore wind and photovoltaic electricity production.
- **24 November** – an online webinar entitled "Green indices – developing offerings for the RES sector" – which discussed issues related to generation profiles and index practice, its calculation model, new futures instruments on the Organised Trading Facility (OTF) and the outlook for the RES market in 2023.

"Platinum Megawatt" competition and cooperation with the media

The 8th edition of the Platinum Megawatt media competition took place in 2022. The event has been organised since 2014, and its main idea is to popularise and appreciate objective journalism, standing on a high content level and honouring the principles of ethics. The competition is also serving as a platform supporting the development of public debate and media education through the organisation of dedicated workshops.

The event was held under the joint patronage of the Minister of State Assets, the Minister of Climate and Environment and the President of the Energy Regulatory Office. Partners supporting the organisation of the Competition include TAURON Polska Energia S.A. (as Strategic Partner), Polskie Sieci Elektroenergetyczne S.A., GAZ-SYSTEM S.A., PGE Polska Grupa Energetyczna S.A., Izba Rozliczeniowa Giełd Towarowych S.A., Respect Energy S.A. and Veolia Energy Contracting Poland Sp. z o.o.

The award ceremony took place on 24 May 2022. In the second half of October, the workshop part of the event, organised in cooperation between TGE and TAURON Group, was held, entitled "Prospects for RES development based on storage systems and exchange products". The practical aspect of the seminar was a visit to a large-scale energy storage facility in Cieszanowice, which uses lithium-titanium cell technology.

TGE initiatives

Additional channels of communication between TGE and energy market stakeholders are meetings organised by company, the purpose of which is to familiarise interested parties with the newly implemented solutions as well as the principles of the Exchange itself.

- **Trading Forum**

On 5-7 September 2022, TGE organised the 14th Trading Forum. Invited guests were able to take part in the content part, which consisted of three panels: "Changes in the gas market and the role of exchanges. Development prospects", "Futures on TGE. Development of the Financial Instruments Market" and "Hedging System in Volatile Market Conditions", as well as a block of meetings where the most important operational issues covered by the TGE Update initiative were discussed. Last year's Trading Forum also featured a Summary of the Exchange Year 2021.

- **TGE Update**

Periodic conference for Exchange members to learn about relevant issues related to the stock market. In 2022, this meeting was held as a separate part of the 14th Trading Forum.

PRACTICAL PARTNERSHIP

For years, TGE has been supporting, as a partner, undertakings and events that are of fundamental importance for the exchange of experience or the creation of directions for the energy industry, such as conferences and debates in the public space.

Last year saw a continuation of this approach. TGE was a substantive partner (or its members acted as experts) of the EuroPOWER Energy Conference, the European Economic Congress, the Lower Silesian Energy Congress, the GAZTERM Conference, the Energy Fair, the Scientific Conference "Energy Security – Pillars and Development Perspectives", the AREOPAG Renewable Energy Event, and the "HEAT not LOST" Scientific and Technical Conference, Congress of Solar Energy, the Congress of the Polish Gas Industry, the Biogas Congress, the Conference "Regulated Markets – Legal, Financial and Market Competitiveness Aspects", the Polish-French Offshore Industry Days, as well as the Polish Grain Day or the "O-Polish Rape and Cereals Market" Conference. The substantive contribution of TGE representatives was also appreciated during the Energy Club meeting, the KOWR workshop on the development of agrophotovoltaics, the debate "Gas security in times of energy crisis", organised by SUPER Biznes as part of PolandGO! or the webinar "How to effectively control energy and gas costs in an enterprise?", organised by the Association of Entrepreneurs and Employers.





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ESG AT TGE

TGE is constantly striving to set the highest standards in terms of transparency and integrity of trading on commodity markets. For this reason, it is close to its ambitions, to develop and implement instruments and procedures that enable it to conduct its business activities in an efficient yet responsible manner. Such responsibility means taking into account, as part of normal business ‘everyday life’, which is determined by the natural drive for profit also other, less tangible and quantifiable, but still important objectives. The stock exchange is therefore also serious about meeting social, employee and ethical requirements, and takes into account considerations relating to a broad awareness of the impact of business on the environment.



**PRINCIPLES ABBREVIATED AS ESG
(ENVIRONMENT, SOCIAL, GOVERNANCE)
CONSTITUTE THE FUNDAMENTAL CRITERION
FOR ORGANISING BUSINESS ACTIVITY
IN THE ENTIRE WSE CAPITAL GROUP.**

The "WSE Group ESG Strategy 2025",
adopted later in 2021, is intended to implement
the abovementioned requirements.

CFI.CO'S AWARD FOR TGE

As an unquestionable tribute to TGE's efforts in the area of responsible business conduct, honouring the principles of sustainable development, **the Exchange was awarded Best Sustainable Commodities Exchange (Central Europe) for the third consecutive time** by the London-based magazine Capital Finance International (CFI.co). The justification indicates the fact that "(...) TGE's ongoing investments in technical infrastructure and energy efficiency are paying dividends in terms of increased convenience, transparency, value and energy security".

CODE OF GOOD PRACTICES AT TGE

An important event in the context of appreciating the ethical aspect of TGE's business activities was also adoption in July 2022 of the **"Code of Good Practice for Members of the Polish Power Exchange in Preventing the Occurrence of Market Abuse and Preserving the Integrity and Transparency of Trading"**. The Code constitutes a set of recommended rules of conduct, the observance of which is recommended to all trading participants on the markets organised by TGE.

One of the priorities of TGE is to guarantee equal and transparent conditions for interested parties to participate in exchange trading. Taking into account the above, and in order to ensure the integrity and transparency of the wholesale market for energy products, TGE has approached all its Members with an initiative for permanent and voluntary cooperation aimed at jointly building the trust of market participants in the exchange market. As a result of mutual agreements, 13 Exchange Members – as a part of self-regulatory mechanism developed a Code of Good Practices and voluntarily took on additional requirements related to the prevention of abuse, while recommending the application of the document by each TGE Member. On 26 July 2022, TGE's Board of Directors recognised the Code as a generally applicable custom and set of rules of conduct for all trading participants as a part of their business activities in the markets organised by the Exchange.

Promoting prevention and jointly developing ways and methods to counteract abuses by Exchange Members themselves is fully consistent with TGE's obligations under Article 15 of Regulation (EU) No 1227/2011 of the European Parliament and of the Council (REMIT Regulation).

TGE's ongoing investments in technical infrastructure and energy efficiency are paying dividends in terms of increased convenience, transparency, value and energy security.

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