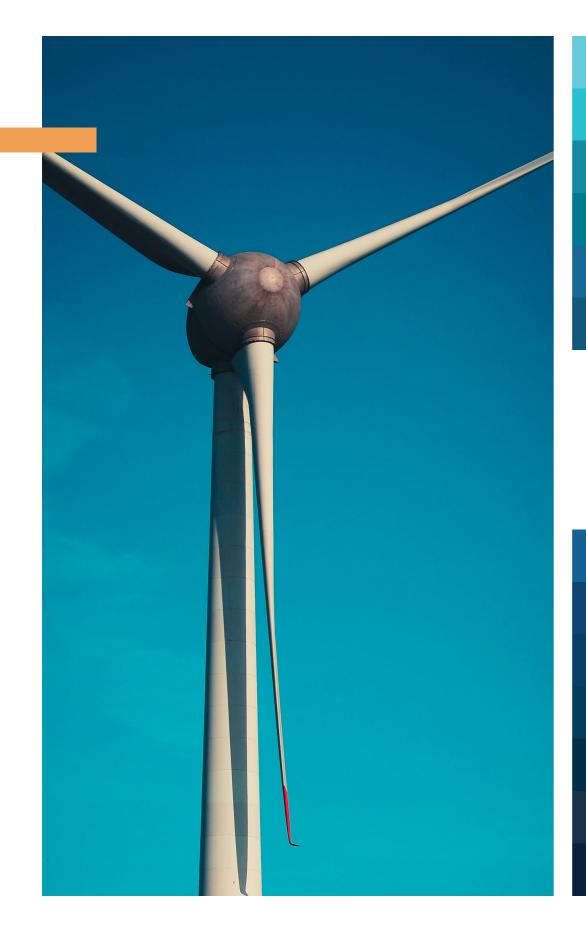




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ADDRESS BY THE MINISTER OF ENERGY OF UKRAINE, MR GERMAN GALUSHCHENKO



Dear partners, market participants, and energy society,

From the very first days of the full-scale war, Ukraine's energy sector has been a primary target of russian attacks. No power system in the world has ever faced such severe challenges. 2024 has become the most difficult year for Ukraine's energy system in the face of ongoing russian attacks. However, the resilience and professionalism of Ukrainian energy specialists continue to prove that we can adapt to even the most demanding challenges.

We remain committed to integrating Ukraine into the European energy system and working towards market coupling. In this effort, the effective operation of the JSC "Market Operator" is of paramount importance.

Thanks to the company's coordinated efforts Ukraine successfully launched its first-ever trading of Guarantees of Origin for electricity in 2024. This significant step promotes the development of renewable energy and brings us closer to European standards.

Additionally, cooperation with European market operators and transmission system operators has been significantly strengthened over the past year. This lays the preconditions for the future coupling of the Ukrainian and European electricity markets.

JSC "Market Operator" continues to set a strong example of corporate governance and places great emphasis on anti-corruption initiatives.

The company has confirmed its compliance with the international ISO 37001:2016 standard that is an important step towards increasing trust in the energy market.

I am gratitude to the "Market Operator's" team for its professionalism, resilience and invaluable work. Best of luck with your future endeavors!





Lina Masiulienė



Olena Kovalchuk



Andriy Stepanenko



Łukasz Dziekoński

ADDRESS OF THE SUPERVISORY BOARD OF THE JSC "MARKET OPERATOR"

Dear shareholders, market participants and partners!

2024 has become another challenge for Ukraine's energy sector, but either a year of important achievements and progress as well. Despite the challenge, we were moving forward confidently, focusing our efforts on corporate governance developing, managing risks and ensuring transparency of market processes.

During the year, the Supervisory Board of JSC "Market Operator" continued to implement European governance standards and strengthened the internal control system.

We can see the great potential of the company and are convinced that its future is inextricably associated with the European integration of the energy market. One of the key areas of the company's development remains participation in the coupling of the spot electricity market with the EU market, which will contribute to the electricity supply stability, the formation of transparent price signals and the expansion of opportunities for Ukrainian producers as well.

European standards compliance is a key prerequisite for Ukraine's integration into the EU energy market. This is not only an important challenge, but also a great opportunity for the further development of the Company and the industry. Our goals are ambitious, but we are confident that together - our stakeholders, team and partners - we would be able to reach even greater heights. We strive both to maintain stability as well as to lay the foundation for the future recovery and development of Ukraine.

4 | MARKET OPERATOR | 5

OPENING STATEMENT BY THE CEO OF JSC "MARKET OPERATOR"

OLEKSANDR HAVVA

Dear colleagues, partners, and market participants,

The year 2024 has become a defining one for the JSC "Market Operator" in many respects. We were operating in the face of unprecedented challenges caused by russia's military invasion of Ukraine, but significant outcomes have been achieved and that strengthened our role as a key electricity market operator. We reaffirmed our leadership in transparency this year, introduced innovative solutions to enhance electricity trading efficiency, strengthened international partnerships, and continued the digital transformation of the market.

The JSC "Market Operator" remains committed to its strategic mission— to ensure the stable and transparent functioning of the Day-Ahead and Intraday Markets. Trading volumes on the DAM and IDM increased by 22.62% in 2024, reflecting growing trust in market mechanisms.

Our development team has successfully



designed and implemented three unique software solutions:

- The Inside Information Platform,
- The Data Transfer Administrator Platform, and
- The Spot Market Monitoring System for Ukraine's Electricity Markets.

Market Operator became the first company in Ukraine to organize trading of Renewable Energy Guarantees of Origin, providing market participants with new opportunities to develop sustainable business models in line with European environmental standards. Transparency remains our top priority. We successfully passed the ISO 37001:2016 recertification audit, reaffirming our compliance with international anticorruption standards.

In addition, the Electricity Market Awareness Program, that have been launched, enabled 240 specialists to gain new knowledge while simultaneously support Armed Forces of Ukraine. Together, we contributed UAH 3 million to the Ukrainian military.

We have also launched the Local Implementation Project (LIP) in collaboration with market operators and transmission system operators from Poland, Slovakia, Hungary, Romania, and Moldova. This initiative opens new opportunities for Ukraine. The signing of the Memorandum of Understanding was a key milestone on our path to full integration into the European energy system.

Looking ahead to 2025, we expect another year of opportunities and challenges. We will continue the digital transformation of the market, expand international cooperation, and introduce new analytical and technological solutions.

JSC "Market Operator" remains committed to the principles of stability, transparency and innovations. Together, we are building Ukraine's European energy future.

Thank you for your trust and partnership!



ABOUT JSC "MARKET OPERATOR":

MANAGEMENT AND BUSINESS PROCESSES

Reliability

Innovation

Responsibility

JSC "Market Operator" plays a key role in ensuring Ukraine's energy security. We guarantee the smooth operation of the Day-Ahead Market (DAM) and the Intraday Market (IDM), providing conditions for the stable operation of businesses and the country's energy sector.

Operating 24/7, we ensure instant 100% financial settlements between electricity sellers and buyers, eliminating the possibility of debt accumulation in these market segments. The JSC "Market Operator" became the first and only enterprise in Ukraine's energy sector to process payments through escrow accounts, as well as the first one with a settlement system that operates even on weekends.

We adhere to European exchange trading standards, which promote competition and ensure fair pricing. As an active participant in the European integration processes, our Company has operated according to the standards of European market operators since its inception.

We ensure transparency in all business processes, minimizing the risks of abuse and guaranteeing equal conditions for all market participants. Trading applications are submitted exclusively using qualified electronic signature, which enhances responsibility and protects information.

Open access to trading results and analytical data allows all interested parties to obtain an objective picture of market conditions. We adhere to the principles of fair competition in public procurement, ensuring efficiency, openness, and non-discriminatory suppliers' selection.

We have built a reliable partnership system with market participants, guaranteeing timely settlements, professional 24/7 support, and a high-level service. The basis for our success is professional teamwork. We create comfortable conditions for employees' professional fulfillment, ensure social guarantees and provide opportunities for development. We act in accordance with the Collective Agreement, care to create new jobs and improve working conditions as well.

Corporate volunteering is another important component of our social responsibility. We support employees facing difficult life situations, assist the military, and promote charitable initiatives.

The health and safety of our employees is our top priority. All employees receive medical insurance, and working conditions comply with the highest occupational health and safety standards.

We actively implement environmentally responsible practices, including:

- •The use of electric vehicles
- The installation of LED lighting
- •The transition to electronic document management

We strive to remain industry leaders by implementing cutting-edge technologies and international standards. The high quality of our processes is confirmed by ISO international certifications. We are shaping the European future of Ukraine's energy sector by integrating the best global practices, adopting innovative technologies and creating conditions for the sustainable development of the electricity market.

The JSC "Market Operator" is a gender-balanced company: as of December 31, 2024, it was consisted of 49% of male and 51% of female among 137 employees.

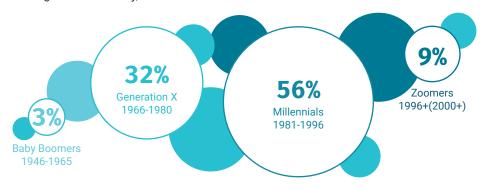


51%

49%



In terms of generation theory, our team consists of:



We adhere to a policy of equal access to employment, regardless of gender, age, nationality, or other factors. This is fixed in the company's internal documents, including:

- Recruitment Procedure
- Employee Hiring and Dismissal Procedure
- Code of Business Conduct

Our principles:

Equal pay for equal work

Work-life balance

Equal access to career growth and social security



BABY BOOMERS 1946-1964

Stability, reliability and social guarantees are important for representatives of this generation. We offer a transparent personnel policy, equal opportunities, and support for professional development

GENERATION X 1965-1980

This generation values work-life balance as well as professional independence. We implement flexible working conditions, invest in training and create opportunities for career growth

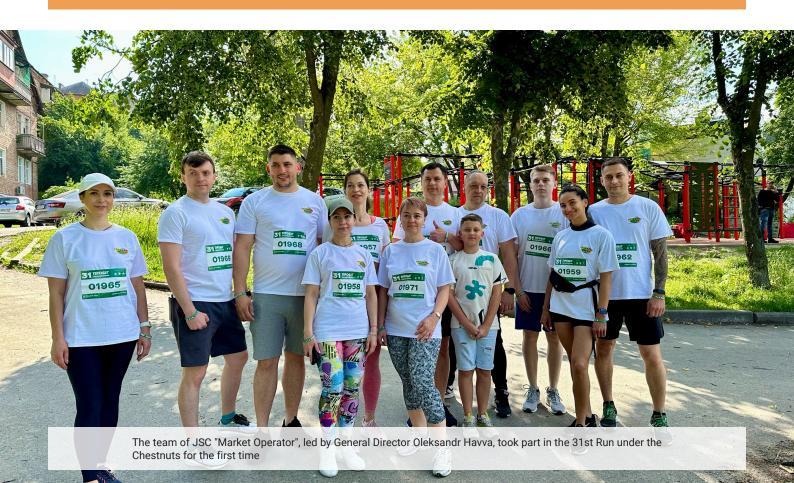
MILLENNIALS 1981-1996

This generation prefers innovation, digitalization, and rapid development. Our technology solutions, process automation, and modern IT tools meet their expectations

ZOOMERS 1997-2012

The younger generation seeks social responsibility and environmental sustainability. Our eco-mobility initiatives, electronic document management, and corporate volunteering align harmoniously with their values

We are guided by our corporate motto "There should be more kindness in our lives" and consider charity as an integral part of happiness. We believe that our unity in supporting children with heart disease has become a good example for other energy companies to follow.



PROFESSIONAL DEVELOPMENT AND TRAINING

Martial law, technological development, and legislative changes require continuous skills improvement. In 2024, 26 employees have completed or are continuing training in the following areas:

Financial Management
VMware vSphere: Troubleshooting [V8]
ACCA DipIFR
English Language
IFRS-Profi
Corporate Secretary
Data Science (Mathematics, Statistics, Python Programming)
Organization and Maintenance of Military Records

ACCORDING TO THE OUTCOMES OF THE "FAMILY-FRIENDLY COMPANIES - 2023" STUDY, THE JSC "MARKET OPERATOR" WAS RANKED AMONG THE TOP 25 UKRAINIAN COMPANIES THAT HAVE IMPLEMENTED AND CONTINUE TO DEVELOP PROGRAMS SUPPORTING EMPLOYEES' FAMILY MEMBERS

The study was conducted by the Center for Corporate Social Responsibility in collaboration with The Page media. To participate in the "Family-Friendly Companies – 2023" Index, companies were required to provide detailed descriptions of their implemented practices and standards. The survey covered topics such as social support programs for employees with families, inclusion, gender equality, and other related aspects.

The Index ranking was determined based on five key evaluation categories:

- Corporate culture
- Workplace environment and work schedule
- Social support programs for employees with families
- Safety and support programs for employees and their families during wartime
- Programs supporting employees who serves or have returned from military service, as well as their family members

KEY EVENTS OF THE YEAR

18.03

RECEIVING A POSITIVE AUDITOR'S REPORT ON THE 2023 FINANCIAL STATEMENTS

The JSC "Market Operator" has successfully completed the audit of its 2023 financial statements and received a positive opinion from BDO LLC, a company that is a member of BDO International Limited

According to the outcomes of the "Family-Friendly Companies - 2023" study, the JSC "Market Operator" was ranked among the top 25 Ukrainian companies that have implemented and continue to develop programs supporting employees' family

05.04

INCLUDING IN THE TOP 25 FAMILY-FRIENDLY COMPANIES IN UKRAINE

07.05

A PROGRAM LAUNCHING TO RAISE AWARENESS OF THE UKRAINIAN **ELECTRICITY MARKET**

As a socially responsible company, the JSC "Market Operator" developed new services aimed at assisting businesses to raise awareness of the Ukrainian electricity market and supporting the Ukrainian army as well.

Electricity market operators and transmission system operators from Ukraine, Poland, Slovakia, Hungary, Romania, and Moldova have launched the Local Implementation Project (LIP). The project's goal is to integrate Ukraine's spot electricity market into the European internal energy market.

26.12

UKRAINE MOVES TOWARD THE EU ENERGY MARKET INTEGRATION -REGIONAL LIP PROJECT HAS BEEN ESTABLISHED

THE GUARANTEED BUYER ENTERED THE RENEWABLE ENERGY GUARANTEES' AUCTION FOR THE FIRST TIME. TRADING HALF OF THE VOLUME OFFERED

By auction results, the Guaranteed Buyer sold half of its initially offered volume -15,000 of Renewable Energy Guarantees of Origin with a price of UAH 14 per one guarantee. The only company participated in the auction.

Through its Electricity Market Awareness Program, which includes the "Maximum", "Trader+", "Green+", and "Distributed Generation" packages, the JSC "Market Operator" assisted 240 energy professionals to acquire new knowledge while collectively raising UAH 3 million to support the Ukrainian Armed Forces.

16.12

THREE MILLION HRYVNIAS RAISED FOR THE ARMED FORCES OF UKRAINE - ENERGY SECTOR **REPRESENTATIVES** INVESTED IN KNOWLEDGE AND VICTORY

A MEMBERSHIP IN THE **EUROPEAN BUSINESS ASSOCIATION**

The JSC "Market Operator" joined the European Business Association (EBA) to collaborate on the Ukraine's energy system improvement. The company's application was approved by the EBA Board of Directors on June 29, 2024.

From December 2024, the JSC "Market Operator" launched a "Distributed Generation" module within its Electricity Market Awareness Program.

The first group of participants were informed on the details of gas-piston and cogeneration units' installation, their connection to the power grid, and operation in the Ukrainian electricity market as well.

The topic also covers self-generation mechanisms, operation in the electricity market, aggregators and active balancing groups work. In addition, the first module participants got information on conditions facilitation to connect to electricity, gas and heating

04.12

THE INFORMATIVE COURSE ON DISTRIBUTED GENERATION DEVELOPING HAS BEEN LAUNCHED

01.07

LAUNCH OF THE INSIDE INFORMATION AND DATA REPORTING PLATFORM

22.11

INTERNATIONAL

CERTIFICATE ISO

37001:2016 - "MARKET

OPERATOR" CONFIRMED

ITS TRANSPARENCY

LEADERSHIP

The JSC "Market Operator" successfully

passed a recertification audit conducted

by PECB Ukraine, the official representative

of MSECB, an international certification

body, accredited by the International

Organization for Standardization (ISO).

This marks the company's fourth

consecutive certification under ISO

37001:2016, confirming its compliance

with anti-corruption policies. The auditor's

report, containing positive conclusions,

was approved by MSECB MANAGEMENT

The certification audit of Anti-bribery

management system for compliance

of the JSC "Market Operator" with

the requirements of ISO 37001:2016

standard took place in 2021, followed

by surveillance audits in 2022 and 2023.

In 2024, the company reaffirmed its

transparency leadership by successfully

passing the recertification audit, which

involves a comprehensive re-detailed

assessment of all aspects of the anti-

bribery management system to confirm compliance with standards established.

SYSTEMS INC. (Laval, Canada).

PARTICIPATION IN THE SECOND ANNUAL NEMO COMMITTEE MEETING

The JSC "Market Operator" participated in the Second Annual Meeting of the European market operators within the NEMO Committee. The company was represented by its CEO, Oleksandr Havva.

The JSC "Market Operator" launched a trading platform for Guarantees of Origin for electricity generated from renewable energy sources. Ukrainian businesses had purchased 28.257 Renewable Energy Guarantees of Origin during the first auction. 12 companies participated in the trading, with the final price of UAH 13/MWh per guarantee.

10.10

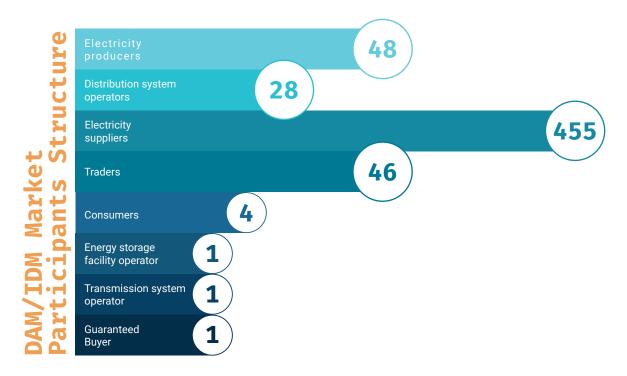
LAUNCH OF A TRADING PLATFORM FOR RENEWABLE ENERGY **GUARANTEES OF ORIGIN**

A YEAR OF DAY-AHEAD AND **INTRADAY MARKETS:**

KEY ELECTRICITY TRADING HIGHLIGHTS

CONTRACTUAL ACTIVITIES AND MARKET **PARTICIPANTS STRUCTURE**

Throughout 2024, the JSC "Market Operator" concluded 105 new Day-Ahead Market (DAM) and Intraday Market (IDM) participation agreements. As of December 31, 2024, valid agreements reached the total number of 584.

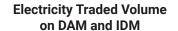


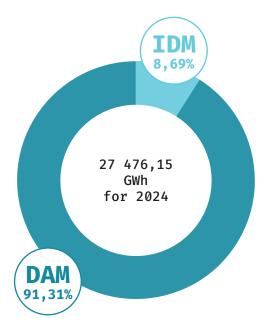
TRADING DYNAMICS ON DAM AND IDM

Despite the challenging situation in the energy sector caused by wartime disruptions, 2024 was marked by an increase in trading volumes and price indicators on the Day-Ahead Market (DAM) and Intraday Market (IDM) compared to 2023. The total trading volume increased by 22.62%.

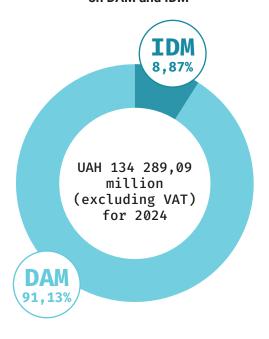
- The average daily trading volume on the DAM in 2024 reached 68,548.3 MWh, reflecting a 20.58% increase from 56,850.4 MWh in 2023.
- The average daily trading volume on the IDM increased by 43.67%, reaching 6,523.1 MWh, compared to 4,540.4 MWh in 2023.

Volume and Value of Traded Electricity on DAM and IDM





Electricity Traded Value on DAM and IDM



Key Indicators of DAM and IDM

Day-ahead market (DAM)	2024	2023	Change, %
Base index (IPS), UAH/MWh	4 522,27	3 373,52	↑+34,05%
Peak index (IPS), UAH/MWh	4 503,44	3 739,04	↑ + 20,44%
Off-peak index (IPS), UAH/MWh	4 541,03	3 007,85	↑+50,97%
Weighted average DAM price, UAH/MWh	4 878,06	3 617,60	↑ + 34,84%
Traded DAM volume, MWh	25 088 683,5	20 750 401,9	† 20 , 91%
Average DAM volume, MWh/day	68 548,3	56 850,4	↑ 20,58%
Intraday market (IDM)	2024	2023	Change, %
Weighted average IDM price, UAH/MWh	4 986,44	3 856,67	↑+29,29%
Traded IDM volume, MWh	2 387 462,8	1 657 236,6	↑ +44, 06%
Average IDM volume, MWh/day	6 523,1	4 540,4	↑+43,67%

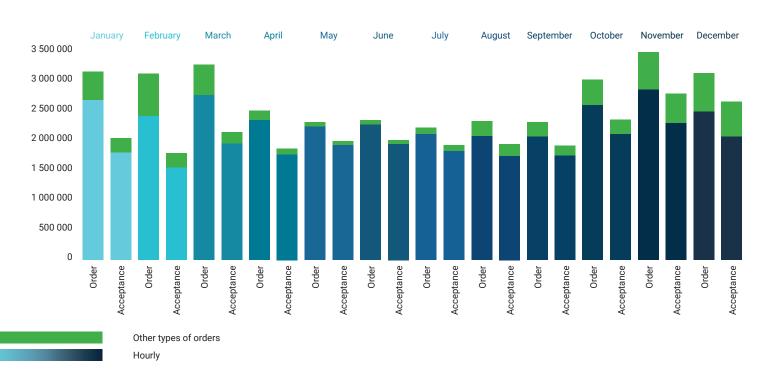
^{*}All prices are listed without VAT

Base load period: delivery of electric energy throughout the 24-hour period from 00:00 to 24:00

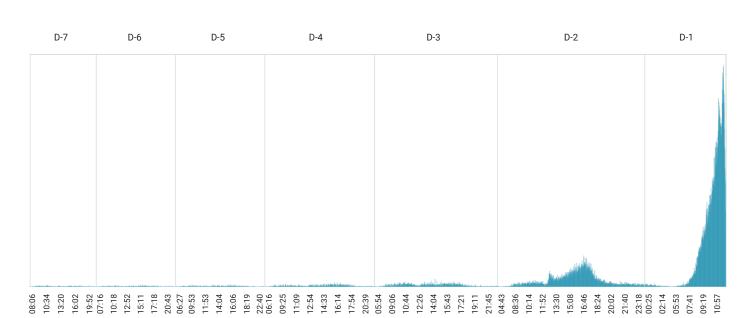
Peak load period: delivery of electric energy from 12-hour period from 08:00 to 20:00

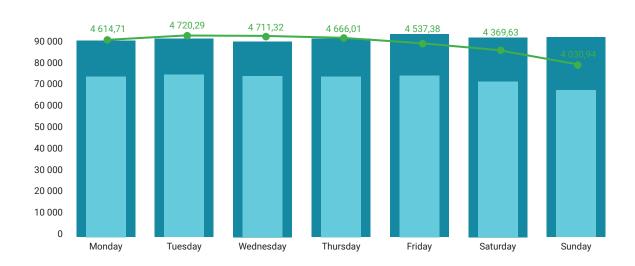
Off-peak load period: delivery of electric energy during the 12-hour period from 00:00 to 08:00 and from 20:00 to 24:00

Ordered and traded volumes by DAM order type in January - December 2024, MWh



Distribution of orders by submission time until gate closure on DAM, 2024



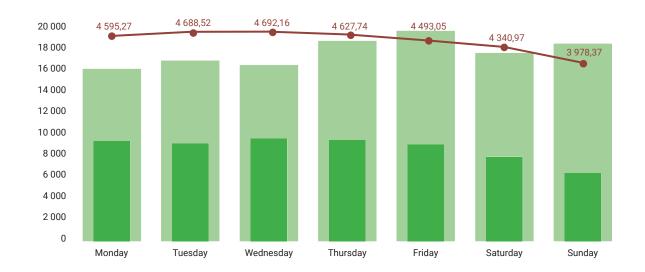


Average daily demand volumes, MWh

Average daily supply volumes, MWh

Average price, UAH/MWh

Average daily demand and supply volumes, and average prices on the DAM by days of week for 2024

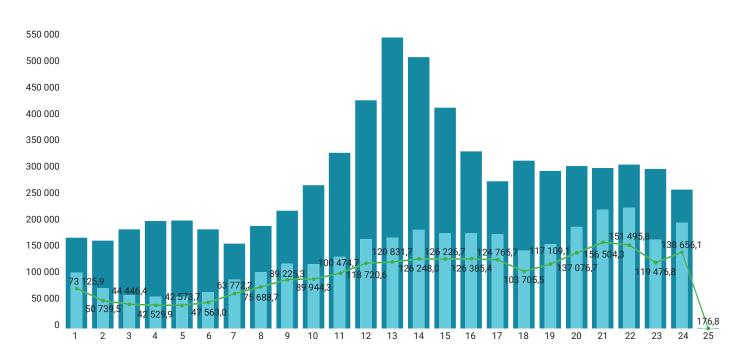


Average daily demand volumes, MWh

Average daily supply volumes, MWh

Average price, UAH/MWh

The IDM demand, supply and trading volumes by hourly manner for 2024



Trading volumes, MWh Demand, MWh Supply, MWh

*Information about the second 4th hour, which arose when the hour hand was moved at 04:00 due to the transition to "winter" time on October 27, 2024, is displayed on the chart at the 25th hour

PRICE INDICATORS

The Day-Ahead Market (DAM) experienced a significant increase in price indices in 2024.

The maximum base-load price index reached 6,669.89 UAH/MWh (excluding VAT), which is 37.97% more than in 2023. The minimum was recorded on January 1, 2024, at a level of 280.27 UAH/MWh.

The weighted average price on the DAM increased by 34.84%, reaching 4,878.06 UAH/MWh (excluding VAT). On the Intraday Market (IDM), the weighted average price increased by 29.29%, amounting to 4,986.44 UAH/MWh.

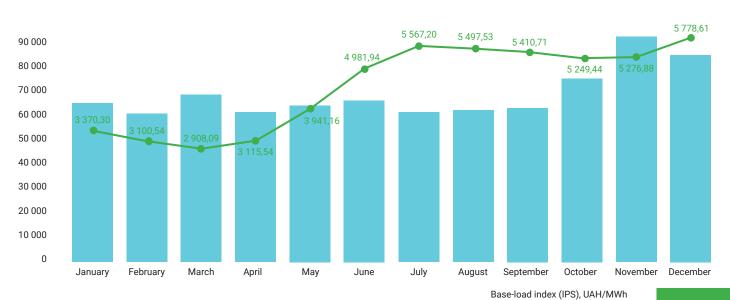
Maximum and minimum values recorded on DAM and IDM

DAM		Maximum values		Minimur	n values
Base load in	ndex, UAH/MWh	22.07.2024	6 669,89	01.01.2024	280,27
Weighted a UAH/MWh	verage electricity price,	22.07.2024	7 037,11	01.01.2024	307,28
Traded volu	me per hour, MWh	13.11.2024 19 hour	5 333,8	02.01.2024 04 hour	571,2
Traded volu	me per day, MWh	19.11.2024	100 056,0	01.01.2024	22 026,6
Traded volu	me per month, MWh	November 2024	2 754 222,8	February 2024	1 763 332,7

IDM	Maximu	m values	Minimun	າ values
Weighted average electricity price, UAH/MWh	31.08.2024	7 389,47	01.01.2024	325,45
Traded volume per hour, MWh	13.05.2024 22 hour	2 553,0	28.02.2024 01 hour	7,9
Traded volume per day, MWh	02.12.2024	22 601,2	22.09.2024	1 905,4
Traded volume per month, MWh	December 2024	307 347,9	February 2024	121 303,1

^{*}All prices are net of VAT

Average daily volumes and average prices on DAM in 2024



Weighted average trading volume on DAM, MWh

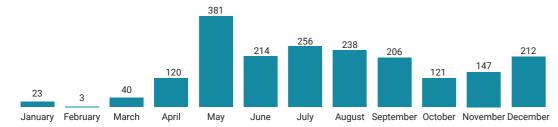




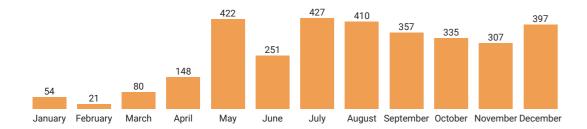
* All prices are net of VAT

Number of hours when prices, formed under DAM trading results, were in a range from 95% to 100% of maximum price caps

Prices, based on the DAM trading results, were formed at the level of maximum price caps during January - December 2024

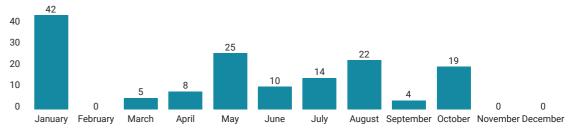


Prices, under DAM trading results, were formed at the level of >=95% of maximum price caps during January - December 2024

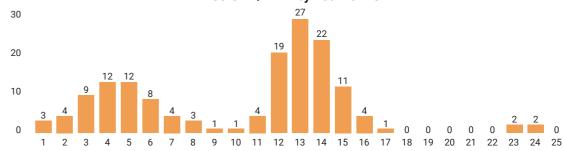


Number of hours, when the price under DAM trading results was formed at the level of 100 UAH/MWh and below

Number of hours, when the price under DAM trading results was formed at the level of 100 UAH/MWh and below during January – December 2024

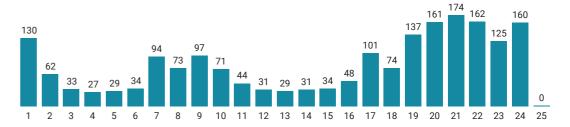


Number of hours, when the price under DAM trading results was formed at the level of 100 UAH/MWh by hour for 2024

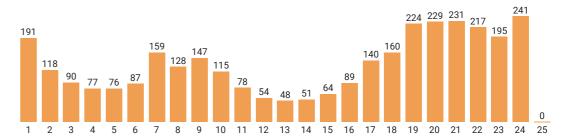


Number of hours where prices, formed under the DAM trading results, were in a range from 95% to 100% of maximum price caps

Prices, based on the DAM trading results, were formed at the level of maximum price caps by hourly manner



Prices, under DAM trading results, were formed at the level of >=95% of maximum price caps by hourly manner

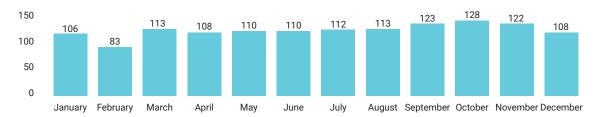


Number of participants who submitted orders for sale on DAM at a price of up to 100 UAH/MWh (inclusive) for 2024

Total number of participants who submitted orders to sell on DAM during January -December 2024

January	February	March	April	May	June	July	August	September	October	November	December	
157	159	163	148	145	144	145	146	157	168	186	171	

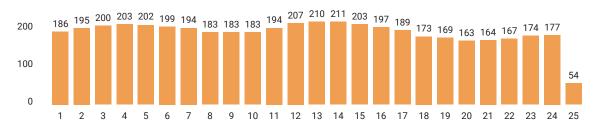
Number of participants who submitted orders to sell on DAM at a price of up to 100 UAH/MWh (inclusive) in at least one settlement period during January - December 2024



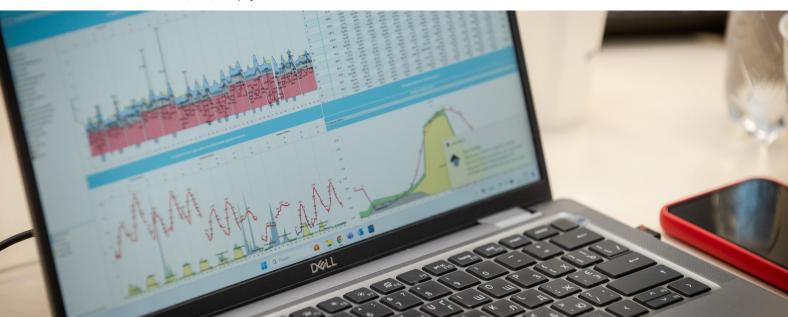
Total number of participants who submitted orders to sell on DAM by hourly manner in 2024

2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 244 247 247 247 249 250 249 257 257 257 258 258 258 258 258 259 258 259 258 257 257 256 253 248 98

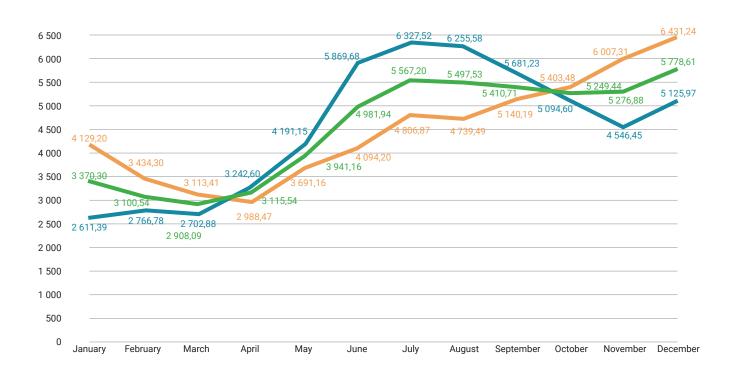
Total number of participants who submitted orders to sell on DAM at a price of up to 100 UAH/MWh (inclusive) in hourly manner in 2024



*Information about the second 4th hour, which arose when the hour hand was moved at 04:00 due to the transition to "winter" time on October 27, 2024, is displayed on the chart at the 25th hour

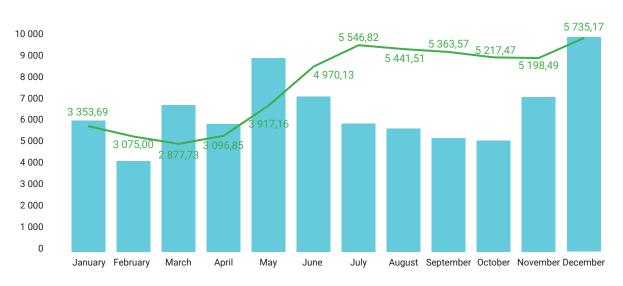


DAM price indices in 2024, UAH/MWh



Peak,index UAH/MWh Base, index UAH/MWh Offpeak, index UAH/MWh

IDM average volume and prices



Weighted average volume of trades, MWh

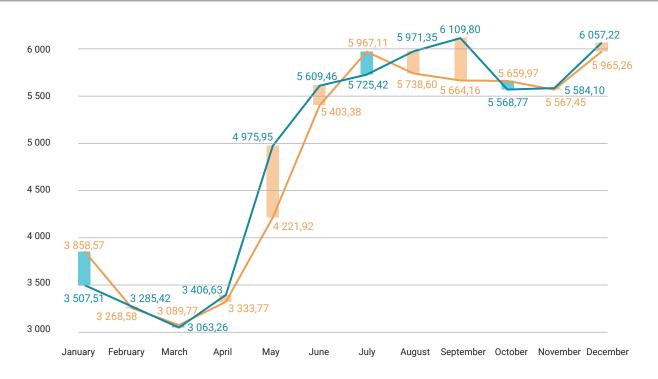
Average price

*All prices are net of VAT

Weighted average IDM prices in January - December 2024



Comparison of DAM and IDM weighted average prices for month in 2024



IDM weighted average price, UAH/MWh DAM weighted average price, UAH/MWh *All prices are net of VAT

REGULATORY RESTRICTIONS

Throughout 2024, price caps for Day-Ahead Market (DAM) and Intraday Market (IDM) participants were in effect, as established by the National Energy and Utilities Regulatory Commission of Ukraine



*The following DAM and IDM price caps were in effect until May 31, 2024:

Maximum price caps:

з 00:00-07:00 and 23:00-24:00 - 3 000,00 UAH/MWh;

з 07:00-08:00 and 11:00-17:00 - 5 600,00 UAH/MWh;

08:00-11:00 - 6900.00 UAH/MWh:

17:00-23:00 - 7 500,00 UAH/MWh;

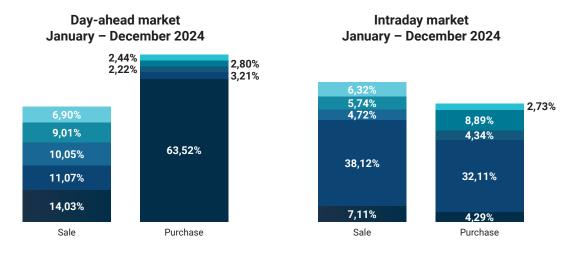
Minimum price cap: 10,00 UAH/MWh.

COMPETITIVE ENVIRONMENT

The market's competitive level was estimated by the Market Concentration Ratio (C5) and the Herfindahl-Hirschman Index (HHI). Throughout 2024, the average market concentration on DAM was 76.80% for buyers and 52.92% for sellers. These indicators on the IDM amounted to 56.60% and 65.69%, respectively.

The electricity market demonstrated its growth in trading volumes and an increase in price indicators in 2024, reflecting its stability despite external challenges. The implemented regulatory measures and competition policies contributed to ensuring market transparency and efficiency.

Share in traded volumes of five largest DAM and IDM participants

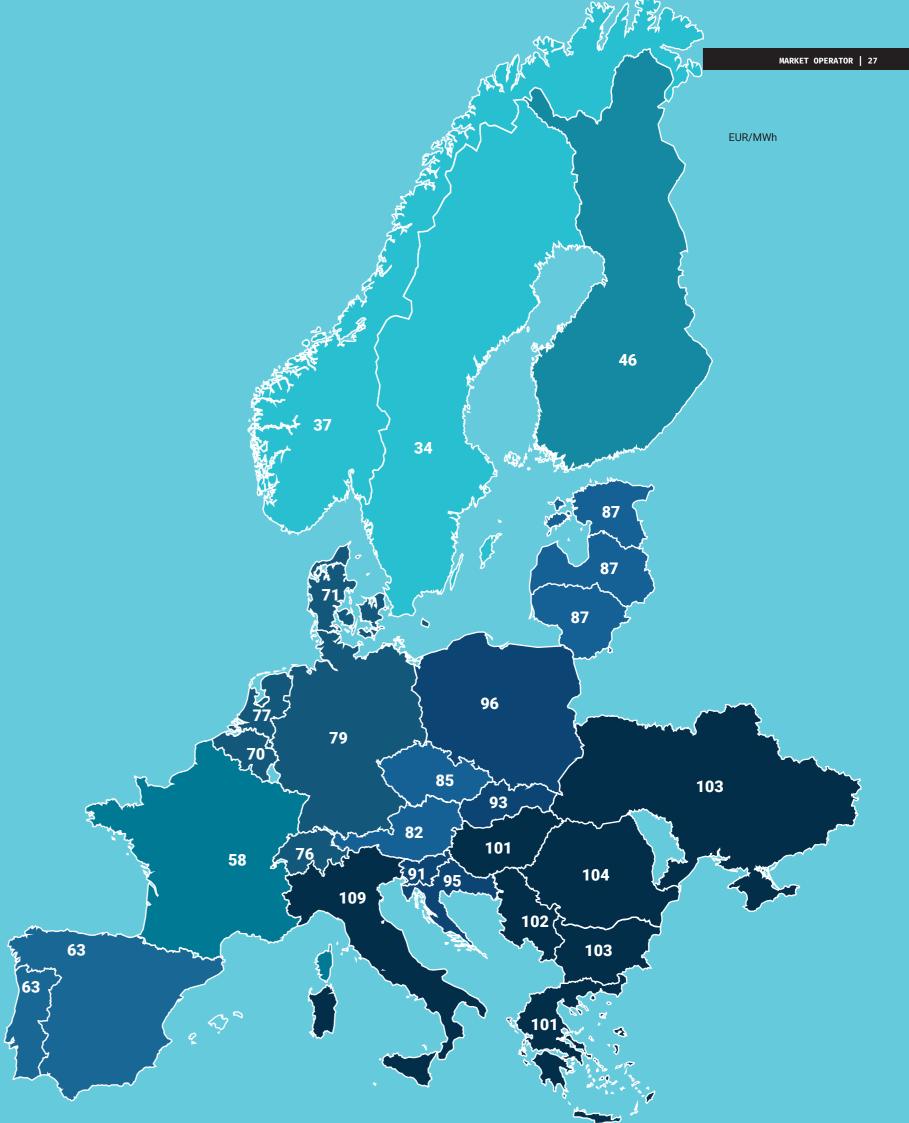


DAM PRICES

Comparison with the EU states' prices



^{*}Calculation is made under the Central European Time (CET) **All prices are net of VAT



PERFORMANCE OF THE FUNCTIONS OF DATA REPORTING ADMINISTRATOR AND INSIDE INFORMATION PLATFORM **ADMINISTRATOR**

In 2024, the Market Operator JSC started operating as a Data Reporting Administrator and an Inside Information Platform Administrator in accordance with legislative requirements. This marked a significant milestone in the development of Ukraine's energy market, aimed at enhancing transparency and the efficiency of market operations regulation.

DATA REPORTING ADMINISTRATOR

The Market Operator JSC employs modern technologies to ensure timely, uninterrupted, and secure data reporting for spot energy market participants. Data transmission is carried out in compliance with the principles of confidentiality, integrity, and authenticity.

Since July 1, 2024, the company initiated the process of signing data reporting agreements with market participants. As a result, 568 agreements were signed, and a mechanism for market trading data collection, aggregation, and its reporting to the Regulator was successfully established.

THE INSIDE INFORMATION PLATFORM **MANAGEMENT**

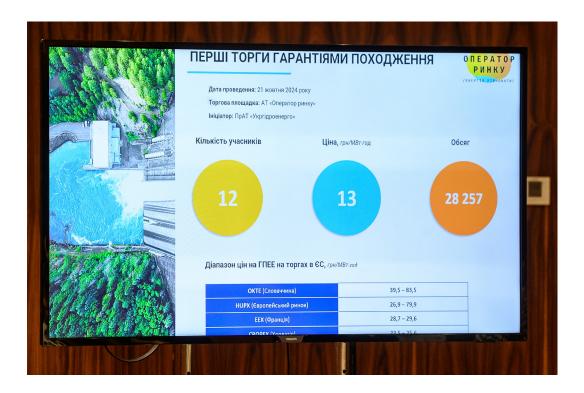
The Inside Information Platform enables market participants to disclose information subject to mandatory publication in accordance with legislative requirements.

On June 26, 2024, the Market Operator JSC initiated inside information disclosure agreements conclusion, and the full platform functionality was ensured as of July 1, 2024. Throughout the year, 389 agreements were concluded, fully meeting legislative requirements.

During the martial law period, access to inside information was restricted in accordance with a resolution of the National Energy and Utilities Regulatory Commission of Ukraine (NEURC).

THE GUARANTEES OF ORIGIN TRADING

In 2024, the Market Operator JSC ensured the full-scale platform operation for the Renewable Energy Guarantees of Origin (GO) trading.

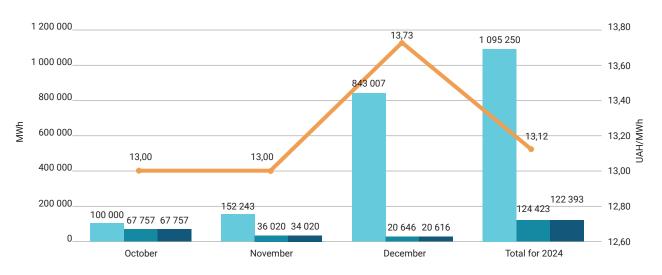


As of October 10, 2024, the trading platform for GO transactions was officially launched. The total number of participants registered on the platform was 67, 26 of which were directly engaged in trading. Throughout the year, 16 individual trading sessions were conducted.

Key Indicators of GO Trading in 2024



Demand, supply, trading volumes dynamics and prices of Guarantees of Origin for 2024



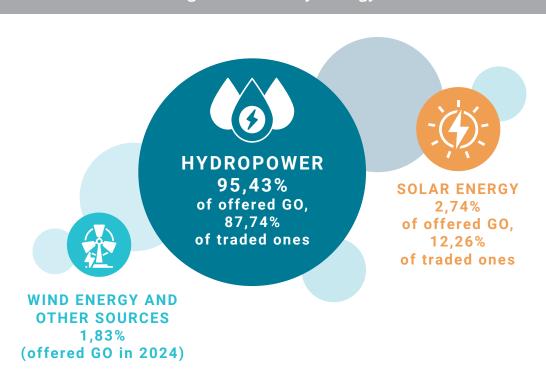
Ordered volume of Guarantees of Origin

Actual traded volume of guarantees of Origin

Ordered purchase volume of Guarantees of Origin

Weighted average traded price of Guarantees of Origin (net of VAT)

GO Trading Structure by Energy Source



STRUCTURE OF GUARANTEES OF ORIGIN THAT WERE OFFERED AND TRADED WITHIN ELECTRICITY GENERATION PERIODS WHICH GUARANTEES OF ORIGIN WERE ISSUED FOR IN 2024

Structure of offered Guarantees of Origin			Structure of traded Guarantees of Origin			
Generation Period	Volume, MWh	Share	Generation Period	Volume, MWh	Share	
August 2024	515 250	47,04%	August 2024	107 393	87,74%	
September 2024	350 000	31,96%	September 2024	15 000	12,26%	
October 2024	230 000	21,00%	October 2024	0	0,00%	
Total	1 095 250	100,00%	Total	122 393	100,00%	





PROSPECTS FOR THE DEVELOPMENT OF GUARANTEES OF ORIGIN IN UKRAINE

The Market Operator JSC is actively working on the integration of Guarantees of Origin for electricity produced from renewable sources into the Carbon Border Adjustment Mechanism (CBAM). This process is an important step towards harmonizing the Ukrainian energy market with European environmental standards and achieving the goals of the European Green Deal as well.

According to CBAM, electricity is considered in two aspects: as a commodity and as a part of indirect emissions. The incorporation of Guarantees of Origin into the system for calculating the actual emissions coefficient while importing electricity to the EU will:

- create additional financial opportunities for renewable energy producers;
- stimulate the development of renewable energy generation and attract investment in the sector;
- ensure compliance with European decarbonization requirements.

The integration of Renewable Guarantees of Origin into CBAM will allow:

- ensure the effective functioning of the decarbonization mechanism;
- enhance the ability of the Ukrainian renewable energy market;
- increase the Ukrainian electricity competitiveness on the European market.

The Market Operator JSC continues its active efforts on the way to develop an effective model for using Guarantees of Origin in international trade.

UKRAINE INTEGRATES INTO THE EU **ENERGY MARKET: REGIONAL LIP PROJECT** WAS ESTABLISHED

The Market Operator JSC continues to actively cooperate with energy market stakeholders to fulfill Ukraine's international commitments, particularly within the Treaty Establishing the Energy Community and the Energy Community Ministerial Council decisions. The primary goal is the Ukraine's electricity market coupling with the EU market.



- Zoran Gjorgjievski, CEO of MEMO
- Oleksandr Havva, CEO of JSC "Market operator"
 Miloš Mladenović, CEO of SEEPEX
- 4. Deian Draskovic, CEO of MEP
- The LIPs' value for the energy market

December 2024, the JSC "Market Operator" initiated signing a Memorandum of Understanding between market operators and transmission system operators of Ukraine, Moldova and neighboring countries of the European Union (Poland, Slovakia, Romania, Hungary) and a Local Implementation Project (hereinafter referred to as LIP) establishment for all participants interaction in the process of electricity markets integration. This initiative is of key importance for the future coupling of the electricity markets of Ukraine and the European Union as well.

The LIP Parties

- Ukraine: Market Operator JSC, Ukrenergo;
- Poland: PSE, TGE, EPEX SPOT, Nord Pool:
- Hungary: HUPX, MAVIR;
- Romania: Transelectrica, BRM, OPCOM;
- Slovakia: OKTE, SEPS;
- Moldova: Moldelectrica, OPEM.

The regional project establishment allows to start active cooperation between the LIP parties to coordinate regional cross-border issues for the effective functioning of the coupled dayahead market and the intraday market of both Ukraine and the European Union.

- . Ondrej Maca, NEMO Intraday Steering Committee Chair
- Sokol Dishnica, CEO of ALPEX
 Irakli Galdava, CEO of Georgian Energy Exchange
- Artur Lorkowski, director of Energy Con
 Anže Predovnik, CEO of ADEX and BSP

Participation in European Energy Initiatives

To ensure the successful integration of Ukraine's electricity market into the internal European single market, the JSC Market Operator, being an observer in the All NEMO Committee, actively participates in its working and expert groups, in particular, the Market Coupling Steering Committee, CACM Pentalateral Coordination Group, and Joint Expert Team - EnC.

Implementation of European Legislation

To fulfill Ukraine's obligations as an Energy Community Contracting Party, the JSC Market Operator is actively involved in the process of the European legislation transposition in the electricity sector, in particular, with regard to couple both short-term electricity markets of Ukraine and the European Union.

The JSC Market Operator together with the NPC Ukrenergo, each in its own part, in coordination with the Ministry of Energy of Ukraine, have developed a draft law on the implementation of European regulations for the integration of the day-ahead market and the intraday market of Ukraine into the EU single market.

ANTI-CORRUPTION **COMPLIANCE**

JSC "Market Operator" continues to implement the best European corporate governance practices, ensuring zero tolerance to any corruption manifestations. In 2024, Company confirmed the compliance of its management system with international anti-corruption compliance management standards obtaining the ISO 37001:2016 (Anti-Bribery Management Systems) certificate from the independent accredited certification body PECB.

The certification audit of JSC "Market Operator's" anti-corruption management system for compliance with the ISO 37001:2016 international standard was conducted in 2021. Surveillance audits took place in 2022-2023. This year, JSC "Market Operator" reaffirmed its status as a transparency leader by successfully passing a recertification audit. This process involves detailed reassessment of all aspects of the anti-corruption management system to confirm compliance with established standards.

"We are proud of being almost the only energy company that has received a positive independent auditors' evaluation for the fourth consecutive time, confirming that our anti-corruption management system meets international standards. This demonstrates the openness of the "Market Operator" and our commitment to meet the highest standards of transparency and integrity. It is also an excellent signal to our European partners in the context of the future integration of the electricity spot market," - Oleksandr Havva commented, CEO of the JSC "Market Operator."

The audit was conducted with the support of the USAID Energy Security Project (ESP) in Ukraine.



IT INFRASTRUCTURE DEVELOPMENT AND **CYBERSECURITY**

2024 became a landmark year for the JSC "Market Operator" in the field of digital transformation. Our team of highly qualified programmers developed and implemented three unique software products that significantly improved the efficiency of the electricity market work. This large-scale work demonstrates our ability to create our own IT products.

To enhance the efficiency of regulation and oversight of the wholesale energy market, the following systems were developed and put into operation:

Inside Information Platform - ensures the receipt and processing of insider information from wholesale energy market participants. It enhances transparency and minimizes the risk of market manipulation.

Data Reporting Administrator Platform -

for collecting, aggregating and transmitting information on electricity market trading operations to the National Commission for State Regulation of Energy and Utilities (NEURC). This platform allows the Regulatory authority to quickly analyze market activities, improving control and regulation.

Day-Ahead and Intraday Market Surveillance System - ia monitoring tool that helps to detect market manipulations.

Additionally, our specialists have developed a module for trading guarantees of origin based on the ETS/UA software complex. This made it possible to hold Ukraine's first-ever auction of Renewable energy guarantees of origin in October 2024.

A deep modernization of the "XMtrade/PXS" Market Operator's software complex was also carried out, including software updates and improvements to hardware infrastructure.

INCREASING INFORMATION SECURITY LEVEL

A developed IT infrastructure requires reliable data protection. Over the past year, we significantly improved cybersecurity by implementing:

A centralized privileged access control system, that enhanced the protection of critical data:

A software package to avoid data leaks, that minimizes the unauthorized access risks:

A zero-trust secure remote access system (ZTNA VPN);

The latest hardware and software cybersecurity systems (firewalls) to effectively counterexternal threats.

We will continue to develop digital solutions and enhance information security. Key focus areas include:

- Deploying a new malicious traffic detection system;
- Implementing a centralized Security Information and Event Management (SIEM) system.
- Implementing modern complexes to combat complex cyber threats (Sandbox).
- Protecting the backup server infrastructure from DoS and DDoS attacks.

INFORMATION AND CONSULTING SERVICES

INVESTING IN KNOWLEDGE AND SUPPORTING THE ARMED FORCES OF UKRAINE

The JSC "Market Operator" implemented a socially responsible project in 2024, aimed at increasing business awareness of the electricity market while providing financial support to the Armed Forces of Ukraine.

Participants of the Electricity Market Awareness Program get practical knowledge on the key market segments through the following courses: 240 energy professionals enhanced their qualifications by these programs in 2024, collectively investing UAH3 million to support the Ukrainian military. The program is implemented in partnership with SE "Guaranteed Buyer" and PJSC "Ukrhydroenergo," with all proceeds from services directed toward military assistance.

"MARKET MODEL"

fundamentals of the key market segments formed after the 2019 electricity market reforming

"TRADER+"

an advanced analysis of electricity trading mechanisms

"RENEWABLE+"

an in-depth study of renewable energy sources (RES) and their market integration

"DISTRIBUTED GENERATION"

technical and regulatory aspects of working with gas-piston and cogeneration units





"RENEWABLE+": A STEP TOWARDS ENERGY INDEPENDENCE AND INNOVATION

The transition to renewable energy sources is not just an environmental need but a key factor in sustainable business development and Ukraine's energy security.

THE "RENEWABLE+" COURSE INCLUDES:

The Renewable Energy Market - an in-depth understanding of the RES sector and its integration mechanisms

Innovative Technologies - practical aspects of energy storage batteries and their role in ensuring enterprises energy independence

Energy Storage Systems (ESS) - technical and regulatory requirements for licensing and operation

Expert Consultations - industry specialists' support for the effective implementation of RES in business

WHY IS THIS IMPORTANT?

Electricity costs reducing through clean energy sources

Increasing of business competitiveness within the EU's transition to a green economy

Strengthening the national energy system and environmental security improving



DISTRIBUTED GENERATION: KNOWLEDGE THAT STRENGTHENS UKRAINE'S ENERGY SECURITY



The development of distributed generation helps to stabilize Ukraine's energy system and enhances its resilience to energy market challenges, particularly within the wartime.

The "Distributed Generation" course was created on the basis of feedback and suggestions of participants who have completed JSC "Market Operator's" Electricity market awareness program.

KEY COURSE TOPICS:

Integration of gas-piston and cogeneration units into Ukraine's electricity market;

Practical guidance on their installation, connection, and operation.

BENEFITS OF SUCH UNITS:

Autonomy and energy independence for enterprises;

Economic efficiency- the possibility of combined heat and electricity generation;

Environmental sustainability- emissions reducing and modern technologies use.

IMPLEMENTATION FEATURES DURING WARTIME:

Facilitated documentation procedures and licensing.

No bureaucratic barriers for construction.













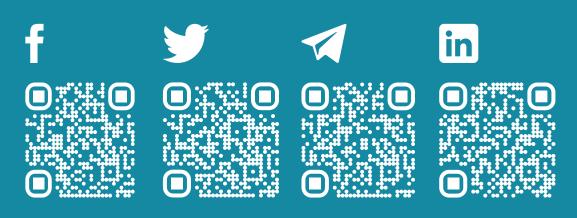














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