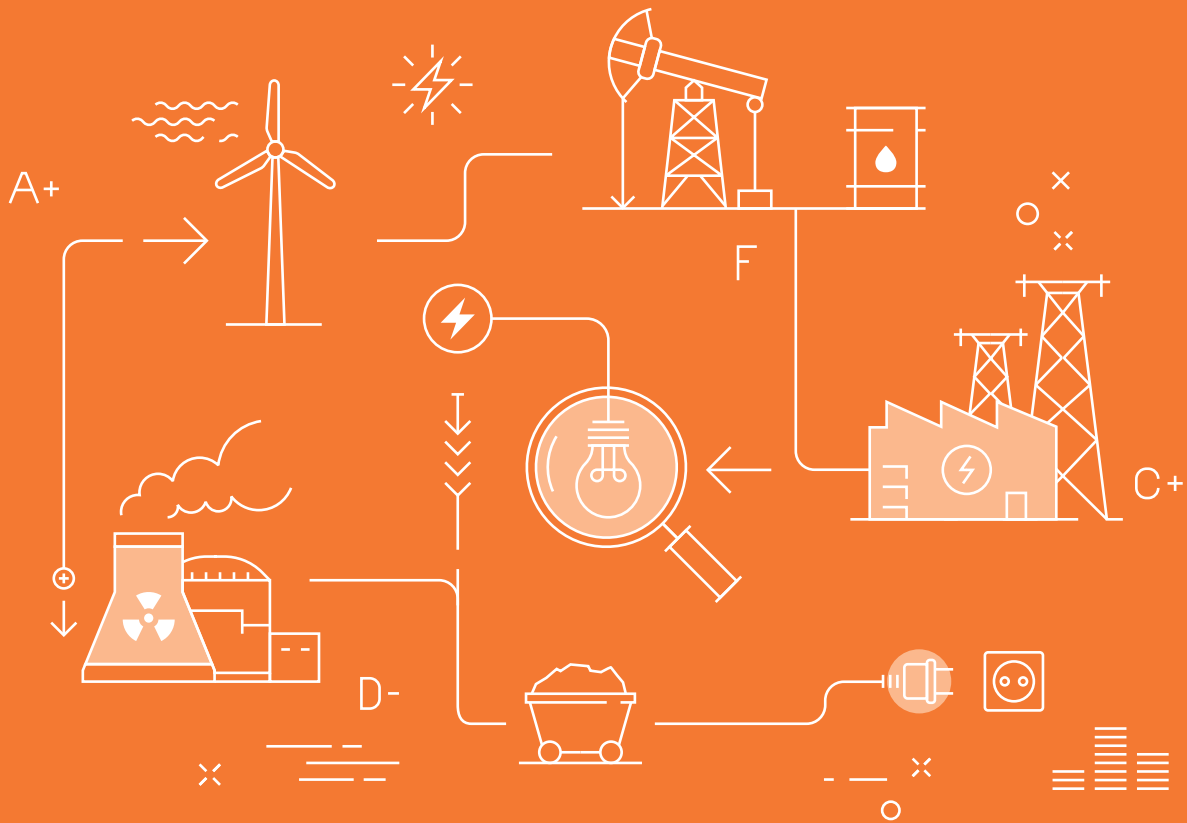




USAID
FROM THE AMERICAN PEOPLE



ENERGY TRANSPARENCY INDEX

2019



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SUMMARY

The Energy Transparency Index is developed to assess the actual status of information availability in the sector and to diagnose gaps.

The Index main beneficiaries are the consumers, as their awareness improves the possibility of protecting their rights and helps rationalize economic behavior in the market. A strong interest in the Index exists among companies and potential investors who seek open, competitive environment, reduction of risks to their business, and a better relationship with the government and communities. The Index will be useful for public institutions responsible for information disclosure, helping them improve their transparency and regulations concerning such disclosures. Foreign partners will be able to better understand the energy policy and markets of Ukraine.

The Index includes 233 indicators grouped into 8 categories and is based on specific regulatory requirements and best global practices concerning information disclosure. The assessment was based on the analysis of data from open sources, focusing on the energy sector performance along the value chain, i.e. from production to consumption.

According to the assessment made in 2019, Ukraine's final score is 48 out of 100 possible, which indicates insufficient transparency of the energy sector. At the same time, the transparency in all categories has increased by 3 to 14 points, and the Index score increased by 5 points comparing to 2018 score. This progress demonstrates that further efforts should be made to promote reforms and improve transparency of the energy sector.

Information gaps (so called «black boxes») and deficiencies in information disclosure discovered by the assessment are the basis for specific recommendations to public authorities, mentioned at the end of every Index section. Special attention should be devoted to changes in the natural gas and electricity markets. Liberalization of these markets

must ensure greater transparency of transmission and distribution system operators and players in wholesale and retail. Corporate (in particular, non-financial) reporting, information regarding fiscal payments and quasi-fiscal transactions, and actions of public authorities when making and enforcing the energy policy also need improvement.

Transparency analysis by categories is divided into sectoral and cross-sectoral parts. Sectoral part presents assessment of 5 categories – balances, natural monopolies, supply, reliability and security, and consumption made by 5 energy markets (natural gas, electricity, coal, oil and liquid fuels, heat). Cross-sectoral part presents assessment of 3 categories – reporting, policy, and public authorities as related to the whole energy sector. The last part of the Index reveals methodological approach to measuring and assessing energy sector transparency.

Detailed information about the findings of this study, and in particular, the assessment table with scores and comments, can be found in a separate spreadsheet published with the Index on DiXi Group website (<http://dixigroup.org/eng>).

The Index team has also prepared a detailed catalogue of links to primary sources of information for every indicator, available upon request (e-mail your request to author@dixigroup.org).

2019 ENERGY TRANSPARENCY INDEX FOR UKRAINE

SUMMARY SCORE

48 **D**

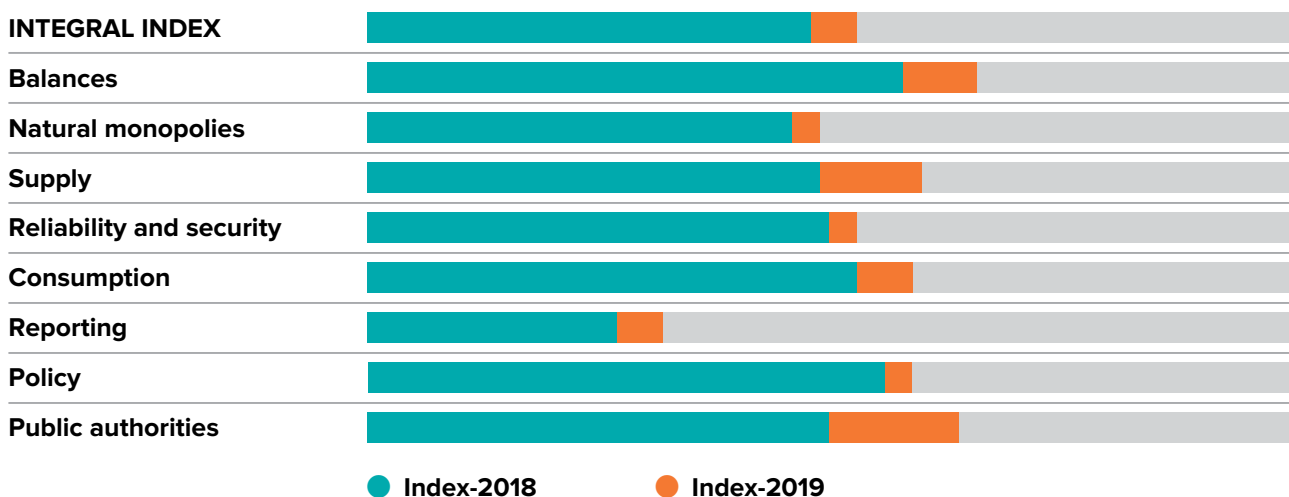
insufficient transparency

+5 compared to 2018 Index

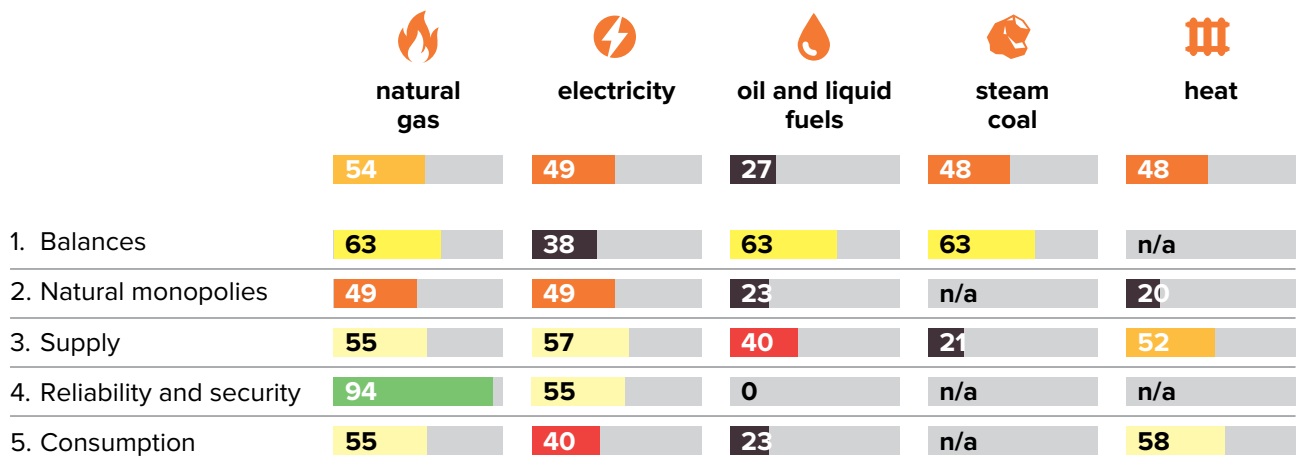
Assessment by category:

Category	Score	vs 2018 Index	Rating	Characteristic
1. Balances	58	+8	C-	average transparency
2. Natural monopolies	46	+3	D	insufficient transparency
3. Supply	49	+11	D	insufficient transparency
4. Reliability and security	50	+3	D+	insufficient transparency
5. Consumption	53	+6	D+	insufficient transparency
6. Reporting	27	+5	F	unacceptable transparency
7. Policy	56	+3	C-	average transparency
8. Public authorities	50	+14	D+	insufficient transparency
Integral index	48	+5	D	insufficient transparency

Progress in transparency of Ukraine's energy sector



Assessment by sector:



Sector	Natural gas	Electricity	Oil and liquid fuels	Steam coal	Heat	Cross-sectoral
Number of indicators	58	58	22	6	14	75

INTRODUCTION

Energy Transparency Index, on the one hand, is a **final product** providing integrated assessment of the information disclosure of the country's energy sector and its components, and on the other hand, a **universal tool** enabling detailed analysis with breakdown into categories, criteria and certain markets, as well as tracking changes – both in time and in comparison with other countries.

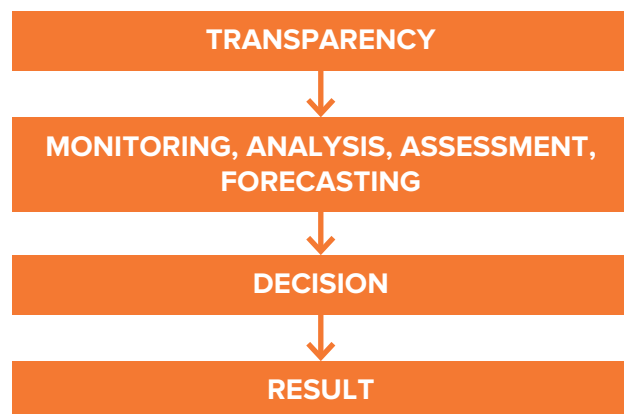
The Index provides a quantitative assessment and characterizes the ability of consumers, public authorities, energy companies, foreign institutional partners, potential investors, media and experts to obtain the necessary information regarding the energy sector performance along the value chain, i.e. from production to consumption.

Purpose of the Index

The purpose of developing and publishing the Index is to promote higher transparency of the energy sector, which shall include indispensable and sufficient conditions for stakeholders to regularly receive comprehensible, complete, up-to-date, usable information they need to make evidence-based decisions.

The Index is intended to reduce informational asymmetry in the energy sector in order to reduce chances for unfair competition, discriminatory behavior and corruption, and promote proper operation of markets and the energy sector in general.

The information gaps (so called «black boxes») identified in the process of the Index development provided the basis for practical recommendations to public authorities, aimed to increase transparency of the energy sector as one of the key preconditions for its sustainable, reliable and safe performance and development.



Target audience

The Index main beneficiaries are the **consumers**, as better awareness would allow them to act more rationally while minimizing expenses and increasing benefits. Consumers will have better opportunities to protect their interests using the mechanisms of monitoring and public control over activity of energy companies and authorities. Empowering consumers by better awareness of processes taking place in the energy sector would help achieve global sustainable development goals.

For **companies in the energy sector**, higher transparency promotes efficient and innovative activity, open competition, and better relations with investors, the government and communities. New and potential participants of energy markets, banks and other financial institutions will receive better instruments for risk assessment, making decisions on investment or market entry, and development of a corporate policy with reduced risks. At the same

time, less risky business conditions would improve investment climate and attract additional resources.

Public authorities will receive practical recommendations concerning information disclosure. Assessing the transparency will encourage the opening of “black boxes” which distort competition and breeds corruption.

Foreign institutional partners will have better opportunities to understand the energy policy of Ukraine, the effectiveness of its implementation, Ukraine's compliance with its obligations under the Association Agreement with the EU, the Treaty establishing the Energy Community, the Paris Agreement, and other international treaties.

DETAILED INDEX ANALYSIS BY CATEGORY

SECTORAL PART

1. BALANCES

58 C-, average transparency

+8 compared to 2018 Index

The “Balances” category defines the transparency of annual and monthly energy statistics, and includes nine indicators grouped into two subcategories:

- annual balance statistics (5 indicators);
- monthly balance statistics (4 indicators).

Assessment of the Energy Transparency Index for the “Balances” category is based on determining the extent to which the State Statistics Service, as the government agency responsible for statistics, is compliant with requirements of **Regulation (EC) No 1099/2008 on energy statistics** set out in the Law “On Public Statistics”.

Distribution of scores by subcategories:

Subcategory	Score	Rating	Characteristic
Annual balance statistics	75	B	good transparency
Monthly balance statistics	38	F	unacceptable transparency

A comparison with the last year’s ratings revealed the increasing transparency for the category in general (from 50 to 58 points), which could be explained by the consistent efforts aimed to harmonize official statistics in Ukraine with the EU best practices.

However, the State Statistics Service is unable to ensure compliance with the requirements of Regulation (EC) No 1099/2008 concerning deadlines for publication of annual balance statistics. The key reason for insufficient transparency of the “Monthly balance statistics” subcategory is the lack of legal grounds and the necessary resources to collect information regarding the volume and structure of

production (extraction), use (consumption), exports, imports, international bunkering, change of stocks (by type) of almost all types of energy resources. First of all, there is a lack of monthly statistical data regarding electricity and of structured information regarding steam coal.

Even though other government agencies (the Ministry of Energy and Environmental Protection) and companies (Ukrenergo) publish some statistical data, the availability and accessibility of this data did not affect the total score, as Regulation (EC) No 1099/2008 places the relevant obligations on the government statistics agency.

Recommendations:

- ▶ the State Statistics Service shall ensure compilation of monthly product balances of energy resources (natural gas, steam coal, oil and liquid fuels, electricity and heat) in accordance with the Annex C to Regulation (EC) No 1099/2008 on energy statistics;
- ▶ the State Statistics Service shall comply with the deadlines for publication of annual energy products balance stated in the Annex B to Regulation (EC) No 1099/2008 on energy statistics.

2. NATURAL MONOPOLIES

46 insufficient transparency

The “Natural Monopolies” category defines the transparency of transmission and distribution system operators, mainly in electricity and natural gas markets.

Given the clearly defined requirements of data publication which national public authorities, transmission and distribution system operators must comply with, this category of the Index includes the largest number of indicators (77) grouped into four subcategories:

- activity of transmission and distribution system operators (50 indicators);
- independence of transmission and distribution system operators (7 indicators);
- development of transmission and distribution systems (9 indicators);
- tariffs setting (11 indicators).

Assessment of the Energy Transparency Index for the “Natural monopolies” category is based on determining the extent to which public authorities, transmission and distribution system operators are compliant with the requirements of:

+3 compared to 2018 Index

- **Directives 2009/72/EC** and **2009/73/EC** concerning common rules for the internal markets in electricity and natural gas;
- **Regulations (EC) No 714/2009** and **715/2009** on conditions for access to the network for cross-border exchanges in electricity and natural gas;
- Commission **Regulation (EU) No 543/2013** on submission and publication of data in electricity markets;
- Commission **Regulation (EU) No 312/2014** establishing a Network Code on Gas Balancing of Transmission Networks;
- **best practices of the EU, United States and Canada** concerning reporting of natural monopolies.

Requirements of the mentioned documents are transposed in the Natural Gas Market Law, the Electricity Market Law, networks codes (for transmission, storage and distribution systems in gas and electricity), and in resolutions of the independent regulatory authority (NEURC) regulating operations of natural monopolies.

Distribution of scores by subcategories:

Subcategory	Score	Rating	Characteristic
Activity of transmission and distribution system operators	51	D+	insufficient transparency
Independence of transmission and distribution system operators	14	F	unacceptable transparency
Development of transmission and distribution systems	14	F	unacceptable transparency
Tariffs setting	70	B-	good transparency

A comparison with the 2018 Index revealed a significant increase of transparency for the “Activity of transmission and distribution system operators” (from 40 to 51 points) and “Tariffs setting” (from 59 to 70 points) subcategories, which could be explained by the launch from July 1, 2019, of the new electricity market model and the implementation in 2019 of European legislative requirements on balancing in the gas transmission system.

The incomplete certification of Ukrenergo, insufficiently clear separation of functions of transmission and distribution system operators, and the unfinished unbundling process (i.e. creating an independent and qualified gas transmission system operator certified according to European rules) resulted in low scores for the “Independence of transmission and distribution system operators” (14 points) and “Development of

transmission and distribution systems” (14 points) subcategories. However, a significant decrease of the assessment for the “Development of transmission and distribution systems” subcategory compared to the figure of last year (from 51 to 14 points) was caused by not only these factors but also changes in the assessment methodology, which reduced the number of indicators in this subcategory from 22 to 9.

Our findings indicate that the openness of public authorities and market operators is defined by the degree of readiness of the respective regulatory framework. E.g., while the natural gas sector was more open than the electricity sector last year, the transparency in these sectors has leveled out (49 points each) after new rules of the electricity market harmonized with European ones came into effect on July 1, 2019. As for the oil and liquid fuels and heat

sectors, they remain “black boxes” of this category (14 points each) due the fact that the government focuses much less attention to developing transmission and distribution systems.

There is a lack of data regarding the use of oil and petroleum product pipelines, and development plans for oil and liquid fuels transmission and storage systems, and the reports on implementation of these plans do not exist. Only some heat supply system operators publish investment programs and reports on implementation of these programs (20 points). Electricity distribution system operators are even less transparent (10 points), as the websites of most companies from our sample do not have compliance programs disclosed.

Due to the enactment of new rules for connection to networks and the launch of balancing systems, transparency of Ukraine’s Integrated Power System and gas transmission system operators has increased (43 points for Ukrenergo and 50 for Ukrtransgaz).

However, their inability to comply with requirements of the following documents remains a serious concern:

- for Ukrenergo: Regulation (EC) No 714/2009 in terms of safety, operational and planning standards; accessibility and use of the system; Commission Regulation (EU) No 543/2013 in terms of congestion management and capacity reserves (in particular, forecasted);
- for gas TSO: Regulation (EC) No 715/2009 in terms of information on demand and supply (ex-ante and ex-post) and system balancing; Commission Regulation (EU) 2017/459 in terms of transmission capacity auctions.

However, compliance with these and other transparency requirements is impossible without the availability of appropriate regulatory framework (in particular, certification of transmission and distribution system operators) and without creating independent operators of oil and gas storage facilities, approving and implementing system development plans, etc.

Recommendations:

- ▶ the NEURC shall adopt substantiated resolutions on certification of electricity transmission system operator, gas transmission and storage operators, and the government agencies authorized by the Cabinet of Ministers – decisions on certification of storage operators to ensure operational readiness of emergency and special reserves of oil and liquid fuels;
- ▶ Ukrenergo shall ensure compliance with Commission Regulation (EU) No 543/2013 on publication of data in electricity markets;
- ▶ Gas TSO shall ensure publication of data concerning demand (ex-ante and ex-post), supply and results of the auctions for transmission capacity, as well as system balancing information as required by Regulation (EC) No 715/2009 and Commission Regulation (EU) 2017/459;
- ▶ the NEURC and system operators shall ensure compliance with the requirements of timely and regular publication of compliance programs, development plans for transmission and distribution systems and storage facilities, and reports on implementation of these plans;
- ▶ the NEURC shall encourage system operators to publish reports in machine-readable formats and create online instruments for Assessment of tariffs for available services.

3. SUPPLY

49 D, insufficient transparency

The “Supply” category defines the transparency of rules and competition in the markets of natural gas, electricity, steam coal, oil and liquid fuels, and heat, as well as of pricing in these markets. This category includes 34 indicators grouped into three subcategories:

- market barriers (11 indicators);
- market concentration and competition level (5 indicators);
- prices and pricing (18 indicators).

+11 compared to 2018 Index

Assessment of the Energy Transparency Index for the “Supply” category is based on determining the extent to which public authorities and businesses operating in energy markets are compliant with the requirements of:

- **Directives 2009/72/EC** and **2009/73/EC** concerning common rules for the internal markets in electricity and natural gas;
- **Regulation (EU) No 1227/2011** on wholesale energy market integrity and transparency (REMIT);

- **Regulation (EU) 2016/1952** on European statistics on natural gas and electricity prices;
- **best practices of the ACER and the CEER** concerning monitoring and analysis of energy markets.

Requirements of these documents are transposed in the Law on National Energy and Utilities Regulatory Commission, the Law on Government Regulation of Production and Marketing of Ethyl, Brandy and Fruit Alcohol, Alcoholic Beverages, Tobacco Products and Fuels, and the decisions of public authorities aimed to create competitive conditions and ensure transparency of pricing in energy markets.

Distribution of scores by subcategories:

Subcategory	Score	Rating	Characteristic
Market barriers	53	D+	insufficient transparency
Market concentration and competition level	31	F	unacceptable transparency
Prices and pricing	52	D+	insufficient transparency

A comparison with the 2018 Index scores revealed the continued insufficient transparency for the “Prices and pricing” and unacceptable transparency for the “Market concentration and competition level” subcategory, mainly due to the absence of mature markets of steam coal and heat in Ukraine.

The increase of the Energy Transparency Index for the “Supply” category in general (from 38 to 49 points) was driven by the removal of a number of barriers after the entry into force of new rules in the electricity market harmonized with European ones. In particular, Market Operator began publishing, in a convenient format, hourly electricity purchase and sale prices in organized (day-ahead and intraday) markets for two trading zones (Integrated Power System of Ukraine and Burshtyn Energy Island), and Ukrenergo provided access to the balancing market results.

However, information regarding the level of competition, wholesale and retail prices in other commodity markets is usually unavailable. Some indicators could be found only in annual reports of the national regulatory authority (NEURC) or in recommendations of the Antimonopoly Committee (AMCU) issued on the basis of investigations into violations of competition law in energy markets. The State Statistics Service publishes average weighted prices of natural gas and electricity on a semiannual basis, disaggregated by consumption bands, but without revealing the structure of prices (in particular, specific taxes).

Therefore, the “Supply” category still has a number of “black boxes” due to the absence of:

- proper quality monitoring of the markets for bilateral contracts on purchase and sale of natural gas and electricity;
- liquid exchange and retail segments of the steam coal and heat markets;
- national registries of participants of gas, steam coal and heat markets;
- information regarding mark-ups in the retail segments of energy markets;
- reports on average weighted annual gas and electricity prices for households and non-household consumers (disaggregated by consumption bands) and their structure.

This and other data could become accessible only upon formation of full-fledged steam coal and heat markets and completion of electricity, gas and petroleum products markets – with the government to continue playing the role of fostering competition, preventing abuse of market power, and ensuring proper protection of consumer rights.

Recommendations:

- ▶ the Ministry of Energy and Environmental Protection shall create regulatory conditions for formation of a competitive steam coal market by facilitating, in particular: implementation of the bilateral contracts market and of liquid exchange and retail segments of the coal market with differentiation of the latter by consumption segments; harmonization with the best global practices of coal market pricing mechanism for different consumption segments; formation of forecasted balances of steam coal;
- ▶ the Ministry of Regional Development and the NEURC shall create regulatory conditions for formation of a competitive heat market by facilitating, in particular: introduction of auctions for procurement of heat from independent producers; splitting the financial accounting of heat production and transmission costs and separate indication of these costs in prices and tariffs; possibility to procure heat from independent producers; guarantees of free third party access to centralized heating systems;
- ▶ the NEURC shall create national registries of wholesale gas, steam coal and heat market participants as required by Regulation (EU) No 1227/2011 on wholesale energy market integrity and transparency (REMIT);
- ▶ the NEURC and the AMCU shall ensure regular publication of the structural indicators of competition in wholesale and retail segments of energy markets, and the reports on price monitoring in these segments – in particular, to compare commercial offers from suppliers and enable consumers' eligibility to switch supplier;
- ▶ the NEURC, the AMCU and the State Statistics Service shall provide more comprehensive information (also in machine-readable formats) regarding the level of competition and wholesale and retail prices in energy markets.

4. RELIABILITY AND SECURITY**50 D+, insufficient transparency**

The “Reliability and Security” category defines the transparency of energy stocks (reserves), the existence of rules and regulations on reliability and security, and the frequency and completeness of reports on compliance with these rules and regulations. This category includes 15 indicators grouped into three subcategories:

- stocks and reserves (6 indicators);
- security of supply rules (6 indicators);
- reports on reliability and security (3 indicators).

Assessment of the Energy Transparency Index for the “Reliability and Security” category is based on determining the extent to which public authorities and businesses operating in energy markets are compliant with the requirements of:

- **Directives 2009/72/EC and 2009/73/EC** concerning common rules for the internal markets in electricity and natural gas;

+3 compared to 2018 Index

- **Directive 2009/119/EC and Annex XXVI to the Ukraine-EU Association Agreement** imposing an obligation to maintain minimum stocks of crude oil and/or petroleum products;
- **Regulation (EC) No 1099/2008** on energy statistics;
- **EU best practices** of guaranteeing security of gas and electricity supply.

Requirements of these documents are transposed in the Natural Gas Market Law, the Electricity Market Law, the Transmission System Code, and decisions of public authorities aimed to guarantee Ukraine's energy security.

Distribution of scores by subcategories:

Subcategory	Score	Rating	Characteristic
Stocks and reserves	48	D	insufficient transparency
Security of supply rules	50	D+	insufficient transparency
Reports on reliability and security	54	D+	insufficient transparency

A comparison with the 2018 Index scores revealed the increasing transparency for the “Reliability and security reports” subcategory (from 31 to 54 points), which could be explained by the Ministry of Energy and Environmental Protection continued practice of publishing reports on monitoring security of natural gas supply as required by Article 5 of the Natural Gas Market Law. The transparency for this subcategory could have been even higher, if the national regulatory authority (NEURC) had approved, regularly and in due time, draft generation adequacy reports of Ukrenergo, and if the Ministry of Energy and Environmental Protection reported on the results of monitoring security of electricity supply.

At the same time, after approval of the Transmission System Code which obliges (per Article 7) Ukrenergo to develop a Power System Protection Plan, the score for the “Security rules” subcategory has decreased (from 66 to 50 points).

Same as year ago, obligations set out in the following documents remain “black boxes” for the “Reliability and Security” category:

- Directive 2009/119/EC in terms of creating and maintaining minimum stocks of crude oil and/or petroleum products;
- Annex XXVI to the Ukraine-EU Association Agreement in terms of developing action plan for the use of emergency and special reserves in the event of a major disruption of oil supply, and annual reporting on measures taken to ensure physical accessibility of these reserves.

Given this, transparency for the “Reliability and security” category could be significantly improved only if oil reserves are created as required by Directive 2009/119/EC.

Recommendations:

- ▶ the Cabinet of Ministers shall unblock the adoption of the draft law on minimum stocks of crude oil and petroleum products which was endorsed by all parties concerned, ensure development and adoption of regulatory acts required for implementation of this law as required by Directive 2009/119/EC, as well as actual implementation in the deadlines set by the updated Annex XXVII to the Ukraine-EU Association Agreement;
- ▶ the NEURC shall approve, regularly and in due time, draft generation adequacy reports of Ukrenergo;
- ▶ the Ministry of Energy and Environmental Protection shall regularly update the National Action Plan and the Security of Gas Supply Rules;
- ▶ the Ministry of Energy and Environmental Protection shall provide information regarding stocks and reserves, as well as comprehensive security of supply reports in machine-readable formats.

5. CONSUMPTION**53 D+, insufficient transparency**

The “Consumption” category defines the transparency of standards and metering; information for consumers about prices and tariffs, subsidies and other benefits, and energy saving programs. This category includes 29 indicators grouped into three subcategories:

+6 compared to 2018 Index

- penetration of metering (6 indicators);
- service standards (3 indicators);
- information for consumers (20 indicators).

Assessment of the Energy Transparency Index for the “Consumption” category is based on determining the extent to which public authorities and businesses operating in energy markets are compliant with requirements of:

- **Directives 2009/72/EC** and **2009/73/EC** concerning common rules for the internal markets in electricity and natural gas;
- **Directive 2012/27/EU** on energy efficiency;
- **best practices of the CEER** concerning quality of energy supply and the EU best practices of empowering consumers.

Requirements of these documents are transposed in the Law on Access to Information in Electricity, Natural Gas, Heat, Centralized Hot Water and Drinking Water Supply and Wastewater Removal Sectors, the Natural Gas Market Law, the Law on Commercial Metering of Natural Gas, the Law on Commercial Metering of Heat and Water Supply, the Electricity Market Law, the Commercial Electricity Metering Code, and decisions of public authorities aimed to guarantee the rights of energy consumers.

Distribution of scores by subcategories:

Subcategory	Score	Rating	Characteristic
Penetration of metering	25	F	unacceptable transparency
Service standards	83	B+	good transparency
Information for consumers	57	C-	average transparency

A comparison with the 2018 Index scores revealed the increasing transparency for the “Consumption” category in general, due to updated customer service standards and broader information provided to the public about benefits and subsidies and about the system of awarding them (from 47 to 53 points).

The availability of metering devices for households has the lowest level of transparency for the “Consumption” category. As the year before, this level is unacceptable (25 points) – primary, due to the lack of information about individual heat metering and implementation of intellectual metering systems (smart meters) in electricity and gas markets.

The reason is insufficient harmonization of Ukrainian legislation with the European one. The absence in Ukrainian legislation of the provisions set in Directives 2009/72/EC, 2009/73/EC and 2012/27/EU and in the EU best practices of empowering consumers has resulted in the existence of numerous “black boxes”, in particular:

- implementation of smart metering systems;
- provision of consumers with individual heat and natural gas metering;
- availability of centralized services (information systems) of the regulatory agency for price comparison.

Because of unclear responsibility, information which consumers need is published with missed deadlines, in the aggregated form (as in the NEURC annual reports), incomplete or in a not convenient format.

Recommendations:

- ▶ the Verkhovna Rada of Ukraine shall harmonize the Law on Access to Information in Electricity, Natural Gas, Heat, Centralized Hot Water and Drinking Water Supply and Wastewater Removal Sectors, the Law on Commercial Metering of Natural Gas, the Law on Commercial Metering of Heat and Water Supply with the EU best practices of empowering consumers;
- ▶ the Cabinet of Ministers shall designate, with the NEURC participation, public authorities responsible for publication of data establishing the transparency of standards and metering; information for consumers about prices and tariffs, subsidies and other benefits;

- ▶ the Ministry of Regional Development and the NEURC shall ensure implementation of the requirements of Directive 2012/27/EU in terms of collection and publication of data on individual heat metering (distribution systems) and intellectual energy metering;
- ▶ the Ministry of Regional Development and the NEURC shall organize collection and processing of information on provision of end consumers with individual metering devices;
- ▶ the NEURC shall create centralized services (information systems) for comparison of price offers from suppliers of energy products and services.

CROSS-SECTORAL PART

6. REPORTING

27 F, unacceptable transparency

The “Reporting” category defines the transparency of regular financial, nonfinancial, management and fiscal reporting, and of information regarding corporate governance and final beneficiaries of energy companies. This category includes 30 indicators grouped into three subcategories:

- financial and management reporting (16 indicators);
- fiscal reporting (4 indicators);
- beneficiaries and corporate governance (10 indicators).

Assessment of the Energy Transparency Index for the “Reporting” category is based on determining the extent to which businesses operating in energy markets are compliant with the provisions and procedures of:

- **Directive 2013/34/EU** on the annual financial statements, consolidated financial statements and related reports of certain types of undertakings, in particular, as regards publication of regular financial, nonfinancial and management reports and reports on payments to government;
- **Directive 2004/109/EC** on the harmonization of transparency requirements in relation to information about issuers whose securities are admitted to trading on a regulated market;

+5 compared to 2018 Index

- **best global practices** set out in the Global Reporting Initiative (GRI), the International Financial Reporting Standards (IFRS), the Principles of Corporate Governance of the Organization for Economic Cooperation and Development (OECD), and the guidelines of the Financial Conduct Authority of the United Kingdom (FCA) concerning information disclosure, transparency and corporate governance standards;
- **the Extractive Industries Transparency Initiative (EITI) Standard.**

Requirements of these are transposed in the Law on Accounting and Financial Reporting in Ukraine, the Ensuring Transparency in Extractive Industries Law, the Law amending certain legislative acts of Ukraine concerning extractive industries transparency, documents of the National Securities and Stock Market Commission, and other decisions of public authorities aimed to ensure transparency of reporting and information regarding corporate governance and final beneficiaries.

Distribution of scores by subcategories:

Subcategory	Score	Rating	Characteristic
Financial and management reporting	28	F	unacceptable transparency
Fiscal reporting	26	F	unacceptable transparency
Beneficiaries and corporate governance	26	F	unacceptable transparency

Transparency for the “Reporting” category is unacceptable (27 points).

It can be explained by the absence of significant improvement in the disclosure of information regarding annual corporate reports and policies concerning nonfinancial matters, primarily by the businesses which are not joint-stock companies and to which the requirements to issuers whose securities are admitted to trading on regulated capital markets do not apply. However, private joint-stock companies usually do not go beyond formal reporting as well, publishing low-quality information and failing to meet the applicable deadlines.

Despite the existence of clear regulatory requirements, there is no progress in disclosing information regarding quasi-fiscal transactions and payments to government, in particular by extractive companies. The indicators characterizing compliance with requirements of the Extractive Industries Transparency Initiative (EITI) received a lower score.

Ukraine has not even prepared the national EITI Report for 2017, which may even result in revision of its EITI status.

A certain improvement in transparency for the “Reporting” category compared to the 2018 Index score (from 20 to 27 points) could be explained by the beginning of implementation of some requirements of Directive 2013/34/EU concerning development and publication of management reports by large companies. It supplements the regular reporting procedure by a detailed description of the corporate business model, strategy and risks, results, transactions with securities, environmental impact policies, relations with personnel, local communities and other stakeholders, compliance and anticorruption efforts, human rights protection and other aspects. In Ukraine, these reports were pioneered by public energy corporations and companies with foreign capital which implement these standards at the parent company level.

Recommendations:

- ▶ the Cabinet of Ministers shall organize implementation of the requirements of Directive 2013/34/EU concerning publication of management reports, detailed policies, risks and nonfinancial indicators, and disclosure of information regarding quasi-fiscal transactions;
- ▶ the Ministry of Economy and the National Securities and Stock Market Commission shall implement the best global practices of publishing annual reports and disclosing information on corporate governance and final beneficiaries by issuers whose securities are admitted to trading on regulated markets;
- ▶ the Ministry of Energy and Environmental Protection shall ensure the approval of procedures and reporting forms for extractive companies as regards reports on payments to government, and for public authorities and state-owned companies – as regards reports on payments received;
- ▶ the Ministry of Energy and Environmental Protection shall organize regular publication of national reports under the Extractive Industries Transparency Initiative (EITI), and speed up the development and launch of an electronic reporting system compliant with the EITI Standard;
- ▶ the National Securities and Stock Market Commission shall update the format for reporting information to the Agency for Development of the Ukrainian Stock Market Infrastructure.

7. POLICY

56 C-, average transparency

The “Policy” category defines the transparency of implementing strategic and program documents of the energy policy and sustainable development; the policy on energy efficiency, environmental protection, combating climate change, renewable energy development, etc. This category includes 22 indicators grouped into four subcategories:

+3 compared to 2018 Index

- monitoring and reporting (3 indicators);
- energy efficiency (8 indicators);
- environmental protection and combating climate change (8 indicators);
- renewable energy sources (3 indicators).

Assessment of the Energy Transparency Index for the “Policy” category is based on determining the extent to which public authorities responsible for forming and implementing policies in the energy sector are compliant with the requirements of:

- **Directive 2012/27/EU** on energy efficiency and **Directive 2010/30/EU** on the labeling of energy-related products;
- **Directive 2010/75/EU** on industrial emissions and **Directive 2001/80/EC** on the limitation of emissions of certain pollutants into the air from large combustion plants;
- **Directives 2001/42/EC** and **2011/92/EU** on assessment of the effects of certain public and private projects on the environment;

- **Directive 2009/28/EC** on the promotion of the use of energy from renewable sources;
- **international treaties** on climate change.

Requirements of these documents are transposed in the Environmental Impact Assessment Law, the Strategic Environmental Assessment Law, the Law on Protection of Ambient Air, the Decree of the President on the Sustainable Development Goals of Ukraine by 2030, the Energy Strategy of Ukraine by 2035, and other decisions of public authorities aimed to ensure transparency of the energy and environmental policy.

Distribution of scores by subcategories:

Subcategory	Score	Rating	Characteristic
Monitoring and reporting	63	C	average transparency
Energy efficiency	47	D	insufficient transparency
Environmental protection and combating climate change	59	C-	average transparency
Renewable energy sources	67	C+	average transparency

A comparison with the 2018 Index scores revealed a slight increase in transparency for the “Policy” category (from 53 to 56 points), which could be explained by creation of the Unified Registry of Environmental Impact Assessment, proper functioning of the centralized database of sustainable energy action plans (SEAPs), and preparation of several documents pursuant to Ukraine’s international commitments concerning environmental protection and combating climate change.

In the “Monitoring and reporting” subcategory, the indicator “Monitoring the implementation of objectives under the Sustainable Development Goal 7” received the lowest score due to the absence of a 2018 report on achievement of Sustainable Development Goals and the lack of analytical information in the National Report “Sustainable Development Goals: Ukraine”.

The decline in transparency for the “Energy efficiency” subcategory (from 53 to 47 points) could be explained by the failure to meet the deadlines for updating the National Energy Efficiency Action Plan and the national energy efficiency target, and by the absence of up-to-date reports on the progress in implementing these documents. The energy efficiency obligation schemes not provided by the Ukrainian legislation have not been implemented, and no information on penetration of energy labeling and fulfillment of energy efficiency obligations set by Article 7 of Directive 2012/27/EU has been published.

Information regarding strategic environmental assessment is not structured and inconvenient to use. The absence of a National Cadaster of Anthropogenic Emissions and of the data regarding emissions reduction from large combustion plants remain “black boxes”.

Recommendations:

- ▶ the Verkhovna Rada of Ukraine shall harmonize the national legislation with Directive 2012/27/EU on energy efficiency, in particular, adopt the new framework Energy Efficiency Law;
- ▶ the Ministry of Energy and Environmental Protection, the Ministry of Economy and the State Agency for Energy Efficiency and Energy Saving shall ensure timely publication, in full scope and in the official language, of reports on implementation of forecast and program documents and of reports on fulfillment of Ukraine’s international commitments;

- ▶ the Ministry of Energy and Environmental Protection and the State Agency for Energy Efficiency and Energy Saving shall ensure updating the national action plans on energy efficiency and renewable energy for the period until 2030;
- ▶ the Ministry of Energy and Environmental Protection shall publish data concerning strategic environmental assessment in structured form and machine-readable formats;
- ▶ the Cabinet of Ministers shall ensure reporting on Ukraine's progress in achieving the Sustainable Development Goal 7 and in reducing emissions from large combustion plants;
- ▶ the Ministry of Energy and Environmental Protection shall create and publish the National Cadaster of Anthropogenic Emissions.

8. PUBLIC AUTHORITIES

50 **D+, insufficient transparency**

+14 compared to 2018 Index

The “Public authorities” category defines the transparency of spending budget funds; developing, adopting and implementing decisions of public authorities; forming management bodies and the environment for publication of information in the open data format. This category includes 17 indicators grouped into two subcategories:

- public spending (8 indicators);
- transparency of public administration (9 indicators).

Assessment of the Energy Transparency Index for the “Public authorities” category is based on determining the extent to which public authorities responsible for forming and implementing the government policy in the energy sector are compliant with requirements of:

- **the Treaty establishing the Energy Community;**
- **the EU- Ukraine Association Agreement;**
- **Commission Regulation (EU) No 651/2014** declaring certain categories of aid;

- **best global practices**, in particular, the Fiscal Transparency Code of the International Monetary Fund, recommendations of the Organization for Economic Cooperation and Development (OECD) Council concerning regulatory policy and governance, the OECD principles and guidelines on public administration and employment in the public sector, the European Commission Better Regulation/Law Making guidelines, the Lima Declaration of Guidelines on Auditing Precepts, and principles of the International Open Data Charter.

Requirements of these documents are transposed in the Budget Code and other bylaws regulating the spending of public funds and transparency of public administration.

Distribution of scores by subcategories:

Subcategory	Score	Rating	Characteristic
Public spending	52	D+	insufficient transparency
Transparency of public administration	48	D	insufficient transparency

Unfortunately, the significant improvement of assessment for the “Public authorities” category compare to the 2018 Index score (from 36 to 50 points) could be explained not as much by the progress in information disclosure on budget expenditures, quasi-fiscal transactions and results of a competitive selection of candidates for positions in civil service, but rather by reallocation of some indicators to “Policy” and “Reporting” categories due to changes in the assessment methodology.

Low usability of data, which is usually published in a not machine-readable format (the average score for this criterion is 13), and insufficiently comprehensive data in registries of state aid, which is usually available in the aggregated form only (average score 15) remain ongoing problems in the “Public authorities” category.

“Black boxes” of this category include:

- publication of reports on independent financial audit of the implementation of budget programs;
- comprehensive and timely publication of the results of discussing draft regulatory acts;
- proper impact assessment of adopted regulatory acts and publication of informative reports on assessment results;
- sources of information recording the process of selecting candidates for the positions in civil service (video streams, open minutes of meetings, transcripts).

Recommendations:

- ▶ the State Audit Service shall ensure publication of reports on financial audit of the implementation of budget programs;
- ▶ the National Agency for Civil Service (NACS), the Ministry of Energy and Environmental Protection, the NEURC and the AMCU shall publish information about the contests for selection of candidates for the positions in civil service and justification of the selection decisions;
- ▶ the Ministry of Energy and Environmental Protection and the AMCU shall ensure publication of the results of discussing draft regulatory acts;
- ▶ the Ministry of Energy and Environmental Protection, the NEURC and the AMCU shall ensure regular impact assessment of adopted regulatory acts and publication of informative reports on assessment results;
- ▶ the AMCU shall update the registry of recipients of state aid, itemized down to the level of business entities;
- ▶ the Ministry of Finance shall create a registry of quasi-fiscal transactions, itemized down to the level of business entities.

METHODOLOGY

The **methodology** of the *Energy Transparency Index* development is based on the statistical method of multidimensional weighted average, used to assess complex objects, processes and phenomena.

The Index dimensions include specific transparency indicators, their sets (sectors and categories) and transparency aspects (criteria).

An **indicator** is a specific way of measuring transparency of a certain object (e.g. energy company, public authority), process (e.g. pricing, regulation, trade, etc.), or phenomenon (e.g. market, competition, etc.). A set of indicators forms the lowest level of the Index decomposition.

Qualitative indicators define the existence of transparency, and *quantitative indicators* characterize changes in at least one of its features. For example:

- “*Minimal requirements to the quality of service provided to natural gas consumers*” is a qualitative indicator, as it states the fact of approval and publication of the relevant regulation;

- “*Penetration of commercial heat metering units in buildings*” is a quantitative indicator, as it envisages increase over time.

This study analyzed **233** indicators, with indispensable and sufficient transparency features (volume and format of information, frequency of updating, etc.) are defined in Ukrainian and/or international law and/or best global practices of information disclosure.

For the purpose of this study a **sector** represents a set of indicators characterizing transparency of a particular commodity market.

This study focuses on five sectors (commodity markets): *natural gas; steam coal; oil and liquid fuels; electricity; heat*.

If an indicator concerns several sectors (commodity markets), it was assessed for each of these sectors, being considered cross-sectoral. For example, *payments to government reports* shall be submitted by businesses operating in all sectors.

Sector	Natural gas	Steam coal	Oil and liquid fuels	Electricity	Heat	Cross-sectoral
Number of indicators	58	6	22	58	14	75

Category is a set of indicators characterizing elements of external and internal environment. The grouping of indicators into categories allows various stakeholders to obtain information regarding transparency in various parts of the value chain.

By analyzing the rules and practices of information disclosure and feedback from experts who consulted us when developing the Index, we came up with eight categories:

- “*Balances*”: defines the transparency of annual and monthly energy statistics;
- “*Natural monopolies*”: defines the transparency of performance of transmission and distribution system operators;
- “*Supply*”: defines the transparency of rules and competition in commodity markets; commercial offers; prices and pricing;
- “*Reliability and security*”: defines the transparency of stocks (reserves); rules and reports on reliability and security;
- “*Consumption*”: defines the transparency of standards and metering; information for consumers about prices and tariffs, subsidies and other benefits, and energy saving programs;

- “*Reporting*”: defines the transparency of financial statements and auditor reports; management reports; disclosure of non-financial information and information regarding non-core activity; payments to government; information regarding corporate governance and final beneficiaries;

- “*Policy*”: defines the transparency of implementing strategic and program documents of the energy policy and aimed at ensuring sustainable development; the policy on energy efficiency, environmental protection, combating climate change, renewable energy development, etc.;

- “*Public authorities*”: defines the transparency of public spending; developing, adopting and implementing policy decisions of public authorities; forming management bodies and the environment for information disclosure in open data format.

For the convenience of assessment and analysis, indicators in each category were grouped into *subcategories and groups*.

Transparency criterion is an aspect of assessing transparency of an object, process or phenomenon.

Every indicator could be assessed based on nine transparency criteria:

- **“Availability”**: existence of information in open sources;
- **“Objectivity”**: independence of available information from the method of obtaining it;
- **“Credibility”**: absence of incidental or deliberate distortion of disclosed information;
- **“Accuracy”**: a degree of information being close to the actual state of an object, process or phenomenon;
- **“Accessibility”**: a measure of free access to information;
- **“Relevance”**: availability of information for the most recent reporting period;
- **“Frequency”**: a degree of compliance with the applicable requirements regarding the frequency

of updating information;

- **“Usability”**: convenience and simplicity of using disclosed information;
- **“Completeness”**: availability, within the required timeframe, of exhaustive information required to be disclosed in accordance with Ukrainian and/or international law and/or best global practices of information disclosure.

Assessment of indicators based on **“Objectivity”**, **“Credibility”** and **“Accuracy”** criteria can be done by experts, if a client provides information with restricted access.

Since the purpose of this study was to calculate the Energy Transparency Index based on information from open sources (corporate websites, open data, institutional repositories), every indicator was assessed based on **“Availability”**, **“Accessibility”**, **“Relevance”**, **“Frequency”**, **“Usability”** and **“Completeness”** criteria only.

Transparency criterion	Value
Availability (C_{av})	0 – information unavailable 1 – information available
Accessibility (C_{ac})	0 – access to available information requires payment of a fee or prior request 0.5 – access to available information requires authorization (after providing user’s personal data) 1 – information in free access
Relevance (C_{rl})	0 – information for the most recent reporting period unavailable 1 – information for the most recent reporting period available
Frequency (C_{fr})	0 – information not updated and not available for past periods 0.5 – information updated but not available for certain periods 1 – information updated according to applicable requirements and available for past periods
Usability (C_{us})	0 – information available in a not machine-readable format (jpg, jpeg, png, pcx, tiff, pdf with scanned sections, etc.) 0.5 – available information can be copied or processed (numerical: docx, pdf, html, xlsx (unstructured data)) 1 – information available in a machine-readable format (numerical: xlsx (structured data), csv, xml, json; textual: docx, pdf with non-scanned content)
Completeness (C_{in})	0 – any information required to be disclosed is unavailable within the required period 0.5 – information required to be disclosed is partially available within the required period 1 – all information required to be disclosed is available within the required period

The aggregate score of every transparency indicator was calculated under the following formula:

$$T_i = C_{av} \cdot (C_{ac} + C_{rl} + C_{fr} + C_{us}) \cdot C_{in}$$

with C_{av} , C_{ac} , C_{rl} , C_{fr} , C_{us} , C_{in} – are scores based on the availability, accessibility, relevance, frequency, usability and completeness criteria, respectively.

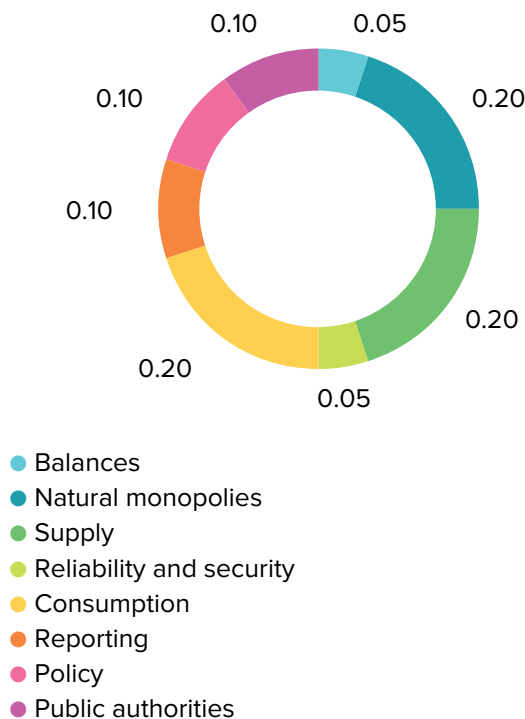
If information could not be obtained other than for a fee or upon prior request ($C_{ac} = 0$), this information was considered unavailable ($C_{av} = 0$).

For the purpose of all qualitative indicators, $C_{in} = C_{rl} = C_{fr} = 1$ if the information was available ($C_{av} = 1$) and accessible ($C_{ac} = 1$).

Considering the large size of the transparency indicators, they were considered of equal weight. Therefore, the arithmetic mean values of the respective sets were used to develop sub-indexes for certain categories and sectors.

AGGREGATION OF SCORES

To calculate the integral transparency score, an expert rating method was used to determine weight coefficients of the Index categories:



INTERPRETATION OF SCORES

All indexes were converted to a 100-point scale as 25Ti, rounded off and given the following interpretation:

Score	Rating	Characteristic
95...100	A+	absolute transparency
90...94	A	excellent transparency
85...89	A-	
80...84	B+	
75...79	B	good transparency
70...74	B-	
65...69	C+	average transparency
60...64	C	
55...59	C-	
50...54	D+	insufficient transparency
45...49	D	
40...44	D-	
0...39	F	unacceptable transparency

LIMITATIONS

The Index **cannot be used** to assess transparency of:

- the energy sector in real time, since its formation is associated with the processing of large amounts of information for the reporting period (as a rule, the one preceding the period, during which the assessment is carried out);
- all participants of commodity markets and/or public authorities, and therefore, assessments of certain indicators in the “Natural monopolies”, “Consumption”, “Reporting” and “Public authorities” categories were built on the basis of a representative sample;
- certain fields of the energy sector with commodity markets still in the process of formation (steam coal, heat) and, therefore, the indexes calculated for these sections serve for reference purpose only.

SAMPLES

“Natural monopolies” category:

- transmission system operators (TSOs): legal entities responsible for operation, dispatch control, maintenance and development of these systems, and for ensuring their long-term capability to meet reasonable demand for transmission of electricity, natural gas, oil and diesel fuel;
- distribution system operators (DSOs): legal entities operating in the five largest Ukrainian cities and responsible for safe, reliable and efficient operation, maintenance and development of distribution systems, and for ensuring long-term capability of electricity, natural gas and heat distribution systems.

“Consumption” category:

- for natural gas: providers of natural gas supply services under the Regulation on Public Service Obligations (PSO) in the five largest Ukrainian cities;
- for electricity: providers of universal service supply in the five largest Ukrainian cities;
- for oil products: operators of petroleum product retail sales – legal entities operating the five largest chains in terms of sales turnover in 2018.

“Reporting” category:

- “Financial (incl. consolidated) statements (annual, quarterly)”, “Non-financial and management reports”, “Tax payments”, “General requirements to disclosing information about beneficiaries and corporate governance” groups: 20 energy companies ranked in 2018 among Top 100 taxpayers of the Large Taxpayers Office of the State Fiscal Service of Ukraine, and classified as public interest entities under paragraph 21, Article 1 of the Law “On Accounting and Financial Reporting in Ukraine”;
- “Special reports of extractive companies” group: 12 largest companies with the largest production of natural gas, oil and gas condensate, and steam coal in 2018;
- “Requirements to companies listed on exchange” group: 14 largest energy companies selected from the main sample of joint-stock companies with securities listed on regulated markets.

“Public authorities” category:

- “Budget expenditures”, “Decision making and implementation”, “Managerial body formation transparency” groups: the Ministry of Energy and Environmental Protection of Ukraine, the National Energy and Utilities Regulatory Commission, the Antimonopoly Committee of Ukraine;
- “State aid” group: indicators were assessed on the basis of information from the Antimonopoly Committee of Ukraine; for “Quasi-fiscal transactions” group: on the basis of information from the Ministry of Finance of Ukraine;
- “Open data environment” group: indicators were assessed without using transparency criteria but on the basis of Ukraine’s rankings in the Global Open Data Index and the Open Data Barometer.



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