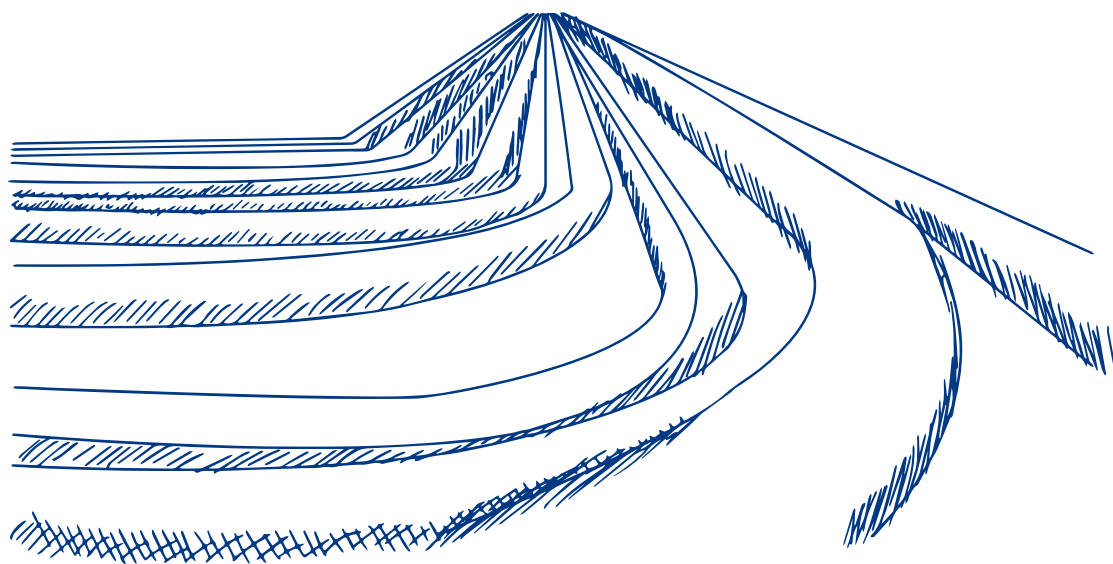


# Ukraine

## Annual Implementation Report

1 November 2021





# Ukraine

## Summary Implementation

Summary Indicators	Transposition Assessment	Implementation Status	Descriptions
 Electricity		 51%	Implementation in the electricity sector of Ukraine is moderately advanced.
 Gas		 83%	Implementation in the gas sector of Ukraine is almost completed.
 Oil		 20%	Implementation in the oil sector of Ukraine is yet to begin.
 Renewable Energy		 56%	Implementation in the renewable energy sector of Ukraine is moderately advanced.
 Energy Efficiency		 75%	Implementation in the energy efficiency sector of Ukraine is well advanced.
 Environment		 64%	Implementation in the environment sector of Ukraine is well advanced.
 Climate		 66%	Implementation in the climate sector of Ukraine is well advanced.
 Infrastructure		 12%	Implementation in the infrastructure sector of Ukraine is yet to begin.
 Statistics		 91%	Implementation in the statistics sector of Ukraine is almost completed.
 Cybersecurity		 60%	Implementation in the cybersecurity sector of Ukraine is moderately advanced.

Overall number of cases: **4**

ECS-8/14 State aid

ECS-4/18 Infrastructure

ECS-4/21 Electricity

Procedure  
by Article **91**

Procedure  
by Article **92**

ECS-1/185  
Energy efficiency



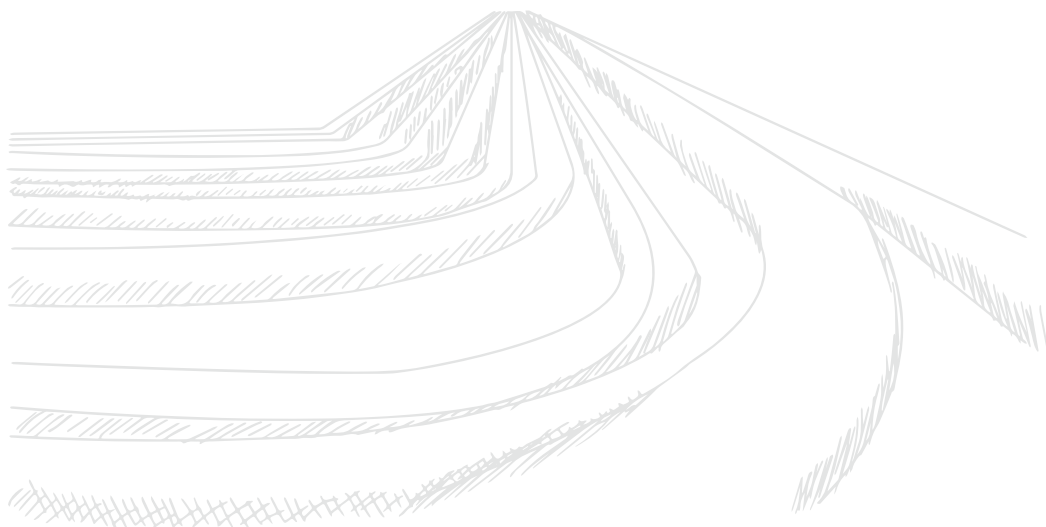
# Ukraine

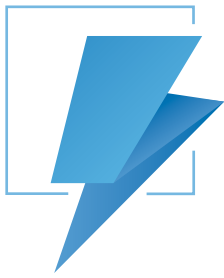
## State of Energy Sector Reforms

The authorities of Ukraine continue to intervene frequently in the regulatory framework for the electricity and gas sector. Despite setbacks, overall the governance for both sectors is improving. This is evidenced by improvements to the public service obligations in electricity, and their abolition in gas. A gas exchange is functional. The independence and viability of

transmissions system operators deserves attention, including the ongoing certification procedure for Ukrenergo. The renewable energy sector still suffers from instability and certain design flaws. Ukraine has also made progress in the adoption of the energy efficiency law, which will unleash the country's great savings potential.

Ukraine is the Contracting Party of the Energy Community with the largest energy market. Despite producing significant volumes of natural gas, the country is still dependent on gas (and oil) imports and is a major transit route for Russian gas exports towards Europe. The electricity mix comprises coal, natural gas, nuclear, large hydropower, wind and solar. The so-called Burshtyn island, a zone not connected to the main part of the Ukrainian electricity network, but to the ENTSO-E system exchanges electricity with its Western neighbours. The country's transmission system operator is engaged with ENTSO-E for the synchronization of the main grid with the one of continental Europe, which is planned for 2023. The organised day-ahead and intraday electricity market is operational. The gas market is becoming more liquid. The renewable energy sector has been rising fast in the last years due to increasing investment.





# Ukraine Electricity

## Electricity Implementation

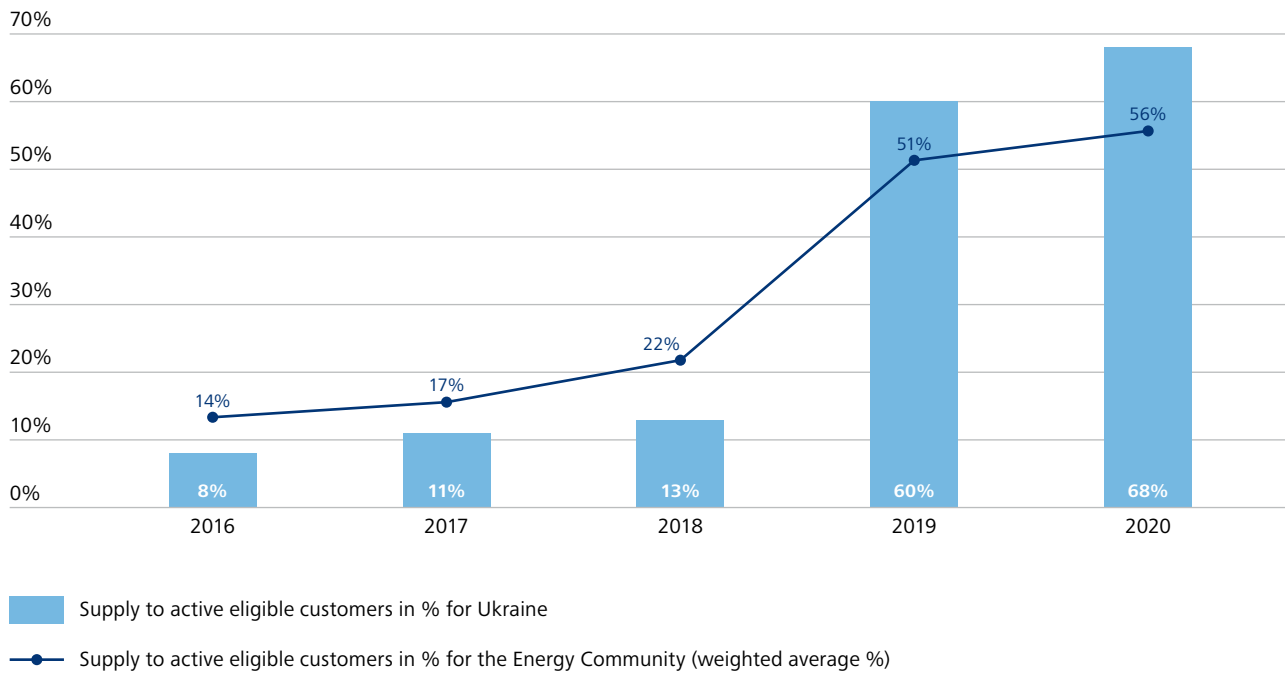
Electricity Indicators	Transposition Assessment	Implementation Status	Descriptions
Unbundling			The transmission system operator is not certified yet. Distribution system operators are legally and functionally unbundled in compliance with the acquis.
Access to the system			Network tariffs are public and applied also to generators. Implementation of the Transparency Regulation has started. The Connection Network Codes are not yet transposed by a formal government or regulatory act, but the necessary requirements are implemented through grid codes.
Wholesale market			Bilateral, day-ahead, intraday, balancing and ancillary services markets are operational, but subject to many regulatory interventions. Non-compliant public service obligations and regulated prices of state-owned generation companies are impeding competition. Losses are procured by the transmission system operator on the market, but distribution system operators are obliged to buy a significant amount of their losses from state-owned Energoatom in contravention of the acquis. REMIT has not been transposed.
Retail market			All customers in the retail market are free to choose their supplier. Universal service suppliers are obliged to supply electricity to households under regulated tariffs, which are not cost-reflective. The scope of customers entitled to universal service at tariffs applied to households was extended by amendments to primary legislation.
Regional integration			Cross-border capacity is allocated via unilateral auctions, i.e. not coordinated with neighbouring transmission system operators. Arrangements for the settlement of unintended deviations were agreed between the transmission system operators of Ukraine and Moldova, but their implementation is delayed. The Electricity Market Law was amended to allow for joint auctions, which are currently being prepared on Burstyn Island and with Moldova.

Despite the many changes in the electricity sector, there were no overall improvements during the reporting period. The electricity market remains subject to frequent interventions which undermine market developments. These include restrictive price caps, which are subject to regular reviews by NEURC, often through amendments to the Covid-19 Regulation without public consultation, restrictions on certain market players for trading on the day-ahead market, special bilateral auctions for individual consumers, slow progress in phasing out excessive public service obligations and regulated prices for households which are kept

significantly below cost. Accumulated debts on the balancing market remain high.

On 1 October 2021, the national regulatory authority NEURC issued a preliminary decision on the certification of UkrenergO under the independent system operator model. The compliance programme of the owner, which is the Ministry of Energy, was approved on 17 September 2021. The compliance programme of the transmission system operator was approved on 6 August 2021.

## Retail Market Opening



Source: Ministry of Energy, compiled by the Energy Community Secretariat

Distribution system operators are unbundled from supply activities in a compliant manner. Compliance programmes and compliance officers are in place and regular reporting is ensured. Consequently, the Secretariat closed the related infringement case.

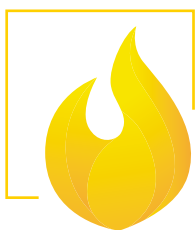
Since 1 January 2021, a new approach for setting tariffs is applied (under the so-called RAB regulation) for the majority of distribution system operators. The applied tariff methodology is not compliant due to lack of the transparency and cost reflectivity.

The requirements of the Connection Network Codes are implemented through the transmission grid code.

Amendments to primary legislation required for the transposition of REMIT are still pending. The Secretariat opened a case against Ukraine for the non-transposition of the REMIT Regulation.

Consumers are free to choose their suppliers, but households (and some other categories of customers) lack incentives to switch their supplier, being supplied at low prices under the public service obligation scheme. During the reporting period, prices for households were increased. However, with the latest amendments to the public service obligation act, prices were decreased again for households, and a block tariff, i.e. a different price for consumption up to 250 kWh per month, was (re-) introduced. A Government act defining vulnerability criteria is still missing.

Coordinated auctions for cross-border capacity allocation do not exist and the rules for cross-border capacity allocation are not compliant. In April 2021, the Electricity Market Law was amended to eliminate legal uncertainties preventing joint auctions with neighbouring transmission system operators and allowing access to cross-border capacity to non-resident companies.



# Ukraine

## Gas

### Gas Implementation

Gas Indicators	Transposition Assessment	Implementation Status	Descriptions
Unbundling			The transmission system operator is unbundled under the ISO model. The Government recently transferred control of the transmission system operator and asset ownership to the Ministry of Energy. The transmission system operator was tasked to make good for a liquidity shortage of the national gas incumbent, Naftogaz. The storage system operator and the distribution system operators are unbundled in legal, information and accounting terms.
Access to the system			Third party access to transmission, storage and distribution systems exist. Tariff cost reflectivity should be improved. The gas Network Codes have been implemented in relation to capacity allocation and interoperability. Congestion management and transparency, as required by Regulation (EC) 715/2009, are still not fully implemented.
Wholesale market			By release of households and district heating companies from the public service in 2020 and 2021, all gas quantities consumed in Ukraine are freely available on the market at deregulated prices and trading procedures. A virtual trading point is in operation, and trade takes place on the existing exchange, albeit with limited functionalities. The non-implementation of the REMIT Regulation affects the overall implementation status.
Retail market			The public service obligation has been cancelled completely, i.e. prices for all final customers have been deregulated. All customers are formally eligible. Secondary acts, aimed to enable supplier switching and customer protection, have been continuously upgraded.
Interconnectivity			The transmission system is well interconnected on all neighbouring countries' borders. The majority of interconnection points are covered by interconnection agreements aligned with the Network Code on Interoperability and Data Exchange. Security of supply preparedness is improving continuously, following Regulation (EU) 2017/1938.

During the reporting period, Ukraine made a big step forward by deregulating prices, increasing customer protection and implementing the gas Network Codes. However, accumulated debts for imbalances and the task to finance Naftogaz' liquidity gaps threaten the financial stability of the transmission system operator.

The transmission system operator has signed interconnection

agreements with all neighbouring EU transmission system operators and Moldova. The existing agreement with Transgaz does not cover all interconnection points at the Romanian – Ukrainian border and negotiations continued over the entire reporting period. The transmission system operator progressed well in the implementation of the Capacity Allocation Mechanism Network Code, offering capacity at two regional capacity platforms, Regional Booking Platform and Great Solution for Auctioning,

## Retail Market Opening



Source: National Electricity Regulatory Commission (NEURC), compiled by the Energy Community Secretariat

utilising the virtual interconnection points at the borders with Hungary and Poland.

Gas consumption in 2020 amounted to 30,9 Bcm, while the import flow to Ukraine was 15,8 Bcm in 2020. The import comes solely through its western borders, 65% of it from interconnection points with Slovakia. Domestic production is at the level of 20,2 Bcm, whereas Naftogaz has a share of 76% and the rest is produced by independent companies. The short haul service, under a favourable tax regime and storage tariffs, has proven to be a winning combination for the utilisation of Ukraine's vast underground storage capacities by European traders.

Ukraine has continued to work towards a fully functional daily balancing system and gas exchange. The law enabling the transmission system operator to purchase gas for balancing purposes at the gas exchange was adopted. Interim measures, as permitted by the Balancing Network Code, are still in place; i.e. application of neutrality charges has been postponed for one

more year. The main obstacles to defining the charges remained the same: accumulated debts for imbalances and the lack of proper reference prices. Payment discipline for imbalances, together with a solution for accumulated debts, is still missing.

After lifting the regulated prices under the public service obligation for households in summer 2020, supply prices for district heating companies were deregulated as well as of June 2021. By consequence, all gas consumed in Ukraine is deregulated. Comprehensive reform of the district heating sector remains a challenge for the upcoming period.

The regulator continued to amend secondary legislation aimed at strengthening consumer protection – including amendments to provisions on the supplier of last resort, mandatory annual supply contracts at fixed prices for households and simplification of the switching procedure. All those regulatory and market tools have proven their value and efficiency when the gas prices became fully deregulated and PSO regime was abandoned.

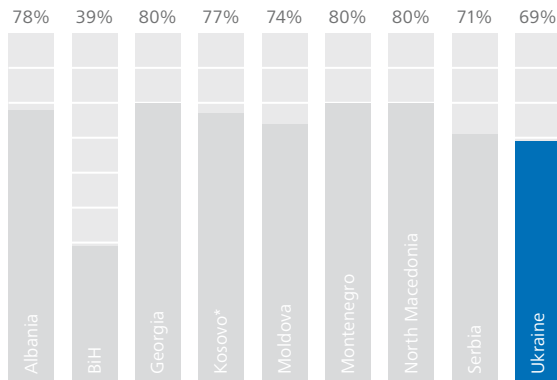


# Ukraine

## National Authorities



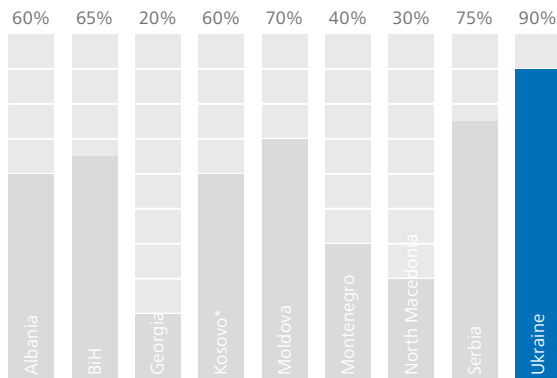
### Regulatory Authority



The National Energy and Utilities Regulatory Commission of Ukraine (NEURC) is set up as a 'central executive body' established by the Cabinet of Ministers. This is a breach of the requirement of the acquis for independent operation of the regulator from other public bodies. This model was introduced as a temporary solution after the constitutional court's ruling that the regulator's independent status is unconstitutional but has developed into a permanent state of play that can only be restored by amending the constitution. The early adoption of the Network Codes is proof of NEURC's commitment to align the regulatory framework with the acquis. The transposition of REMIT still requires legislative changes. The recent practice of NEURC to publish documents scheduled for decision ahead of a Board meeting with delay or publish them incomplete raises concerns about transparency and violates the Law on NEURC. Latest decisions should be published in a consolidated version more continuously.



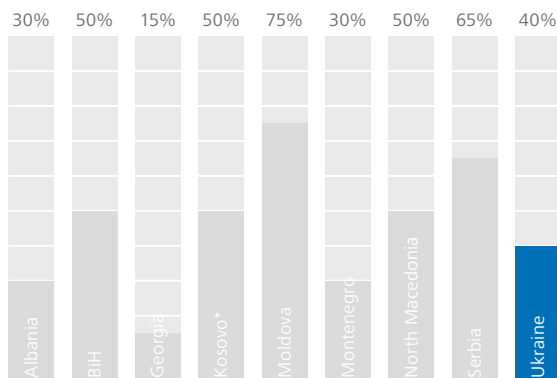
### Competition Authority



The Antimonopoly Committee of Ukraine (AMCU) is one of the most active and rigorous enforcers of competition law in the Energy Community. In the reporting period, it rendered a decision regarding the abuse of dominance by DTEK on Burshtyn island in the form of capacity hoarding and pricing abuse and imposed a fine on three undertakings. AMCU actively cooperated with the Secretariat regarding the assessment of this case.



### State Aid Authority



The Antimonopoly Committee of Ukraine has started to review and monitor potential State aid measures, in particular in the coal and electricity sectors. Yet again, no decision has been taken in the energy sectors since the entry into force of the Law on State Aid for Business Entities. The lack of an active enforcement system of the State aid acquis is the subject of a pending case.





# Ukraine Oil

## Oil Implementation

Oil Indicators	Transposition Assessment	Implementation Status	Descriptions
Stockholding obligation		<div style="border: 1px solid blue; border-radius: 10px; width: 100%; height: 15px; margin-bottom: 2px;"></div> <div style="border: 1px solid blue; border-radius: 10px; width: 0%; height: 15px;"></div> 0%	Ukraine has no legal framework in place for the establishment of emergency oil stocks under the Directive. A draft law on minimum stocks of crude oil and petroleum products exists. A final decision on a specific model for emergency oil stockholding is yet to be made.
Emergency procedures		<div style="border: 1px solid blue; border-radius: 10px; width: 100%; height: 15px; margin-bottom: 2px;"></div> <div style="border: 1px solid blue; border-radius: 10px; width: 0%; height: 15px;"></div> 0%	A draft legal act on an Oil and Petroleum Products Market Crisis Plan is prepared but not adopted. There are no emergency procedures in place in compliance with Directive 2009/119/EC.
Fuel specifications of petrol, diesel and gas oil for non-road mobile machinery (NRMM)		<div style="border: 1px solid blue; border-radius: 10px; width: 100%; height: 15px; margin-bottom: 2px; background-color: #007bff;"></div> <div style="border: 1px solid blue; border-radius: 10px; width: 80%; height: 15px; background-color: #007bff;"></div> 80%	According to the 2013 Technical Regulation on requirements for motor petrol and diesel, the Euro 5 standard (10 ppm sulphur in petrol and diesel) is obligatory for fuels marketed in Ukraine since the beginning of 2018. The environmental specifications of petrol and diesel are in conformity with European standards. Gas oil used in non-road mobile machinery is not specified in the Regulation.
Monitoring compliance and reporting including the lay down the rules on penalties		<div style="border: 1px solid blue; border-radius: 10px; width: 100%; height: 15px; margin-bottom: 2px; background-color: #007bff;"></div> <div style="border: 1px solid blue; border-radius: 10px; width: 60%; height: 15px; background-color: #007bff;"></div> 60%	A draft programme on annual monitoring for petroleum products is prepared as foreseen by the 2013 Regulation. It is expected to be adopted by the end of 2021. The level of penalties for non-compliance with fuel quality standards is regulated by the Law on the State Market Supervision and Control of Non-food Products.

Ukraine has currently no legal framework on emergency oil stocks and there was no progress in the reporting period. The Ministry of Energy's experts are reviewing a draft law on minimum stocks of crude oil and petroleum products. Its speedy adoption would be a very significant step forward, making it possible for Ukraine to substantially progress towards the transposition of secondary legislation (including the Action Plan) and start the implementation of the Oil Stocks Directive. Ukraine is behind in this regard and it will be very difficult to fulfill the oil

stocks implementation deadline by 1 January 2023.

There was no progress in the reporting period. The 2013 Technical Regulation, which establishes requirements for fuels sold on the territory of Ukraine, should be amended in order to stipulate the environmental specifications of the gas oil used in non-road mobile machinery (NRMM). Sulphur content of gas oil used in NRMM should be up to 10 mg/kg.



# Ukraine

## Renewable Energy

### Renewable Energy Implementation

Renewable Energy Indicators	Transposition Assessment	Implementation Status	Descriptions
National Renewable Energy Action Plan			In 2019, Ukraine's share of energy from renewable sources reached only 8,1%, well below the indicative trajectory of 10,1%. The indicative trajectory for the electricity sector was almost reached, while contributions of renewable energy in heating and cooling and transport remain lower than planned.
Quality of support schemes			From 2020, only wind projects with installed capacity up to 5 MW and other technologies up to 1 MW are granted administratively set feed-in tariffs (FiTs). Auctions envisaged by legislative amendments adopted in December 2019 are yet to be implemented. A new draft law introducing a contract for difference mechanism was published for public consultation in August 2021.
Grid integration			Guaranteed access to the transmission and distribution network for electricity produced from renewable energy sources is provided.
Administrative procedures and guarantees of origin			Administrative procedure guidelines as well as a portal that provides online administrative services exist; nevertheless, the entire procedure remains lengthy. There is no single administrative body. An electronic system for issuing, transfer and cancellation of guarantees of origin is not in place.
Renewable energy in transport			The draft Law on Amendments to the Law on the Mandatory Use of Liquid Biofuels (Biocomponents) in Transport passed first reading in the Parliament in September 2021, and the Law on Alternative Fuels was amended in October 2021, introducing the framework to foster biomethane production. The share of renewables in the transport sector was at the level of 3,1%.

During the reporting period, there was only little progress in the implementation of the renewables acquis.

In August 2021, the Ministry of Energy and Coal Industry published the draft Law on Amendments to Certain Laws of Ukraine on Stimulating the Production of Electricity from Alternative Energy Sources on a Market Basis for public consultation. The draft Law introduces a contract for difference mechanism for auctions and provides producers under the current FiT regime the possibility to voluntarily leave the balancing group of the Guaranteed Buyer and receive FiT compensation under the contract for difference mechanism.

Ukraine's renewable energy sector remains troubled by the continuing lack of liquidity of the Guaranteed Buyer to settle existing

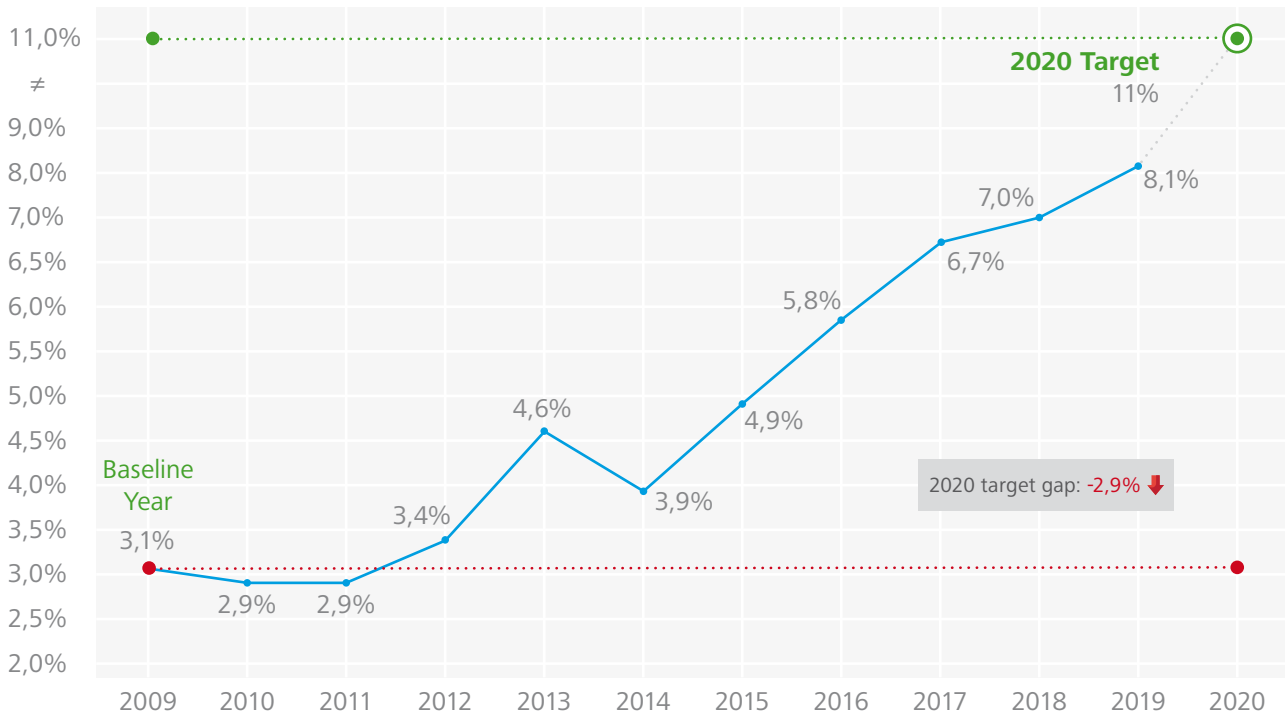
arrears and ongoing payment obligations to renewable investors under the existing FiT scheme. The memorandum signed between the Government and renewables investors in June 2020, negotiated under the auspices of the Secretariat's Dispute Resolution and Negotiation Center, foresees reform of the FiT regime including debt payment. Although the Verkhovna Rada adopted a corresponding law on the restructuring of FiTs in July 2020, debt to producers under the FiT scheme has been paid only partially.

In order to promote self-consumption of electricity from renewable sources, the Law on the Promotion of the Use of Energy from Renewable Sources enabled households to install up to 30 kW of wind and solar capacities for own consumption. The surplus of energy not consumed can be in-fed into the distribution grid and purchased by the universal service providers at the green

tariff. By mid of 2021, more than 32.000 (835 MW) households applied this mechanism.

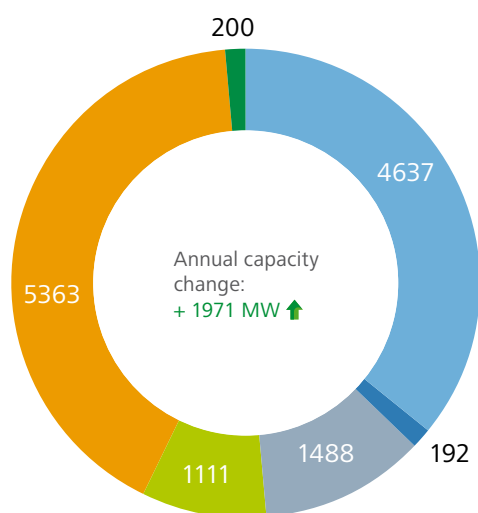
The utmost priority for Ukraine remains the implementation of a functional market-based support scheme. Moreover, an electronic system for guarantees of origin should be established without further delay.

### Shares of Energy from Renewable Sources



Source: Progress Reports on promotion and use of energy from renewable energy sources, State Agency on Energy Efficiency and Energy Saving of Ukraine according to the Energy Balance 2018

### Total Capacities of Renewable Energy 2020 (MW)



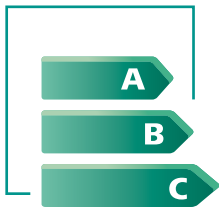
In spite of all shortcomings in the support scheme mechanism, the country increased significantly its renewable energy capacities. In 2020, almost 2 GW of renewables were added. The most significant growth was in solar PV capacities, which reached 5.363 MW, followed by wind (1.111 MW) and small hydro (192 MW).

Total capacities (MW):

12990

- Large hydropower
- Small hydropower <10 MW
- Pumped storage
- Wind
- Solar
- Biogas

Source: State Agency on Energy Efficiency and Energy Saving of Ukraine (SAEE)



# Ukraine

## Energy Efficiency

### Energy Efficiency Implementation

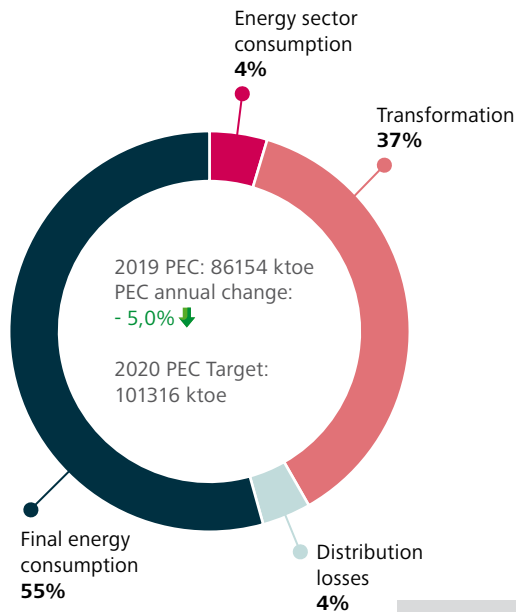
Energy Efficiency Indicators	Transposition Assessment	Implementation Status	Descriptions
Energy efficiency targets and policy measures			The NEEAP until 2030 is still pending adoption by the Government. The Energy Efficiency Law, which is to include the specific targets, has not been adopted. The fifth Annual Progress Report was submitted to the Secretariat in August 2021.
Energy efficiency in buildings			Ukraine has updated five by-laws to implement the Energy Performance of Buildings Directive and align them with the Energy Efficiency Directive. At the end of 2020, the Ministry for Communities and Territories Development approved two by-laws establishing minimal requirements for energy efficiency of buildings. With these, the full package of by-laws is adopted.
Energy efficiency financing			The Energy Efficiency Fund has a budget of UAH 2,7 billion and EUR 100 million from international donors. To date, it has received 692 applications for grants for apartment building renovations. Energy service company projects for building renovations are progressing well.
Energy efficient products - labelling			All energy labelling regulations related to the Labelling Directive were adopted, including the one on space heaters adopted in 2020. Five new regulations completing the implementation of Regulation (EU) 2017/1369 on labelling were also adopted. The country has transposed Directive (EU) 2009/125/EC on eco-design and 23 product regulations on a voluntary basis.
Efficiency in heating and cooling			Ukraine has a relatively developed district heating infrastructure, with over 1.600 district heating companies supplying centralized heat and hot water. 60% is generated in heat-only boilers and 40% in CHP plants. Gas and coal account for around 90% of the total energy mix in this sector. The new Law on cogeneration, including obligations regarding efficiency in heating, is in the second reading in Parliament. Ukraine has not yet prepared the assessment of its high-efficiency cogeneration and efficient district heating potential required by the Energy Efficiency Directive.

In 2020, the Ministerial Council established an infringement by Ukraine for lack of transposition of the Energy Efficiency Directive. The breach has not been rectified yet. The Energy

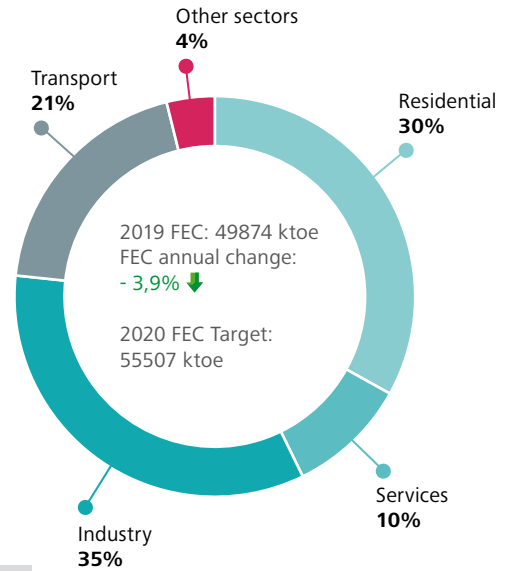
Efficiency Law is in the final adoption stage in the Parliament. The adoption of a law compliant with Directive 2012/27/EU remains the utmost priority for Ukraine.

## 2019 Energy Efficiency Indicators and Trends

### Primary Energy Consumption (PEC)



### Final Energy Consumption (FEC)



Energy intensity,  
2019 value and trends:  
0,87 ktoe/mil EUR, -7,6% ↓

Source: EUROSTAT 2021 data and Contracting Party's Reports

## Energy Efficient Products – Overview of Implementation of Labelling Regulation

FRAMEWORK REGULATION*											
Household dishwashers	●										
Fridges and freezers*		●									
Household washing machines			●								
Televisions				●							
Air conditioners and fans*					●						
Household tumble driers						●					
Electrical lamps and luminaires							●				
Solid fuel boilers*								●			
Space heaters*									●		
Water heaters & storage tanks										●	
Domestic ovens and range hoods											●

● Adopted and implemented    ● Compliance or implementation issues detected    ● No progress with adoption/implementation

\* The new labelling package adopted by the Ministerial Council in November 2018 was assessed, as the transposition deadline expired in January 2020.

Source: multiple sources of data (EECG reports, NEEAPs etc.), compiled by the Energy Community Secretariat



# Ukraine Environment

## Environment Implementation

Environment Indicators	Transposition Assessment	Implementation Status	Descriptions
Environmental impact assessment (EIA) and strategic environmental assessment (SEA)			The Environmental Impact Assessment Law must be improved to fully comply with the Directive. Further efforts are needed to secure early and effective opportunities for the public and for the relevant authorities to participate in EIAs and SEAs. The draft NECP should be made subject to SEA with public and expert consultations.
Sulphur in fuels			Ukraine has transposed the provisions of the Directive into national law, including the provisions on marine fuels.
Large combustions plants and industrial emissions			Ukraine revised its NERP and plant inventory in 2019, and drafted amendments to the measures envisaged by the plan in 2021. The NERP ceilings were not changed. While compliance with the 2020 NERP ceilings was achieved, further efforts are necessary to ensure compliance with the decreasing ceilings.
Nature protection			The draft Law on Territories of the Emerald Network should be revised to integrate comments by the Committee on Anti-Corruption Policy. Conflicts between nature protection goals and energy development projects should be assessed in light of international nature protection obligations of Ukraine.
Environmental liability		n/a	Ukraine transposed the core elements of the Directive. The concept of imminent threat and preventive measures, as well as details on compensation measures, are still missing.

Draft amendments to the Law on Environmental Impact Assessment (EIA) are currently being prepared. Further improvements of provisions related to the national EIA expert commission and its role should be made to fully transpose Article 5(3) of Directive 2014/52/EU. The composition of the EIA commission should include experts from various fields and in particular a biodiversity expert. Ukraine should also reconsider the option to establish a system for licencing/certification of EIA experts. Consultation with relevant authorities concerning the EIA reports should be improved as well as efforts to engage the public in early and effective consultations.

Strategic environmental assessments (SEAs) must be carried out during the preparation of the plans and programmes to integrate environmental considerations therein. The SEA process for the NECP should be initiated. Identifying the relevant authorities and the public concerned, as stipulated in Article 6 of the SEA Directive, including relevant non-governmental organisations, is a precondition for successful and effective consultations.

As regards legislation on the sulphur content of liquid fuels, Ukraine completed the transposition of the 1,00% sulphur threshold for heavy fuel oil and the 0,10% threshold for gas oil. The Directive's provisions on marine fuels are also transposed. Efforts should be focused on implementation, especially systematic compliance monitoring of the products concerned.

With regard to large combustion plants, the key priority for Ukraine remains the implementation of the National Emission Reduction Plan (NERP). Amendments to the NERP were prepared, without a change to the annual emission ceilings stipulated therein. Ukraine complied with its reporting obligations in March 2021 by submitting its emissions data to the European Environment Agency for the reporting year 2020. The emission ceilings for all three pollutants were met and a significant decrease in all three pollutants was recorded. The main reason for this is the low amount of operating hours of the plant fleet due to Covid-19.

Nineteen large combustion plants are operating under the opt-out regime since 1 January 2018, meaning that they can use a

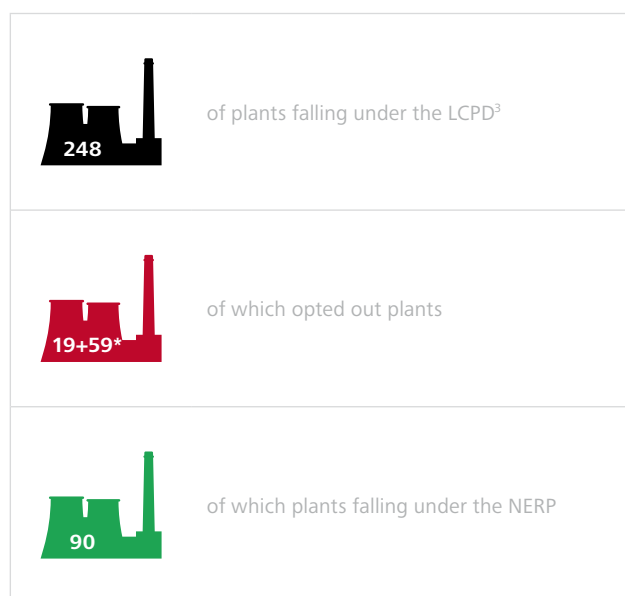
maximum of 20.000 operational hours until 31 December 2023. According to the Secretariat's estimates, several units of the Burshtynska plant are likely to reach the limit earlier than expected if the operational hours are not reduced significantly. In case this happens, the Secretariat will take enforcement action. Furthermore, 59 plants fall under the scope of Decision 2015/07/MC-EnC of the Ministerial Council, meaning that those plants may remain in operation for a maximum of 40.000 hours until 31 December 2023 at the latest. The operating hours of the plants concerned are reported together with emissions data.

The draft Law on the Territories of the Emerald Network was put on hold by the Committee on Anti-Corruption Policy for failing

to meet the requirements of anti-corruption legislation. The provisional ban on activities in the absence of reasonable grounds for determining their negative impact on the territory of the Emerald Network in the draft Law is to be welcomed. Dialogue with local communities and civil society has to be ensured when conflicts between planned energy projects and nature protection goals emerge in particular for wind projects and hydrocarbons extraction.

The Environmental Liability Directive is partially transposed by the Law on Environment (civil liability), the Code of Ukraine on Administrative Offenses (administrative liability) and the Criminal Code of Ukraine (criminal liability).

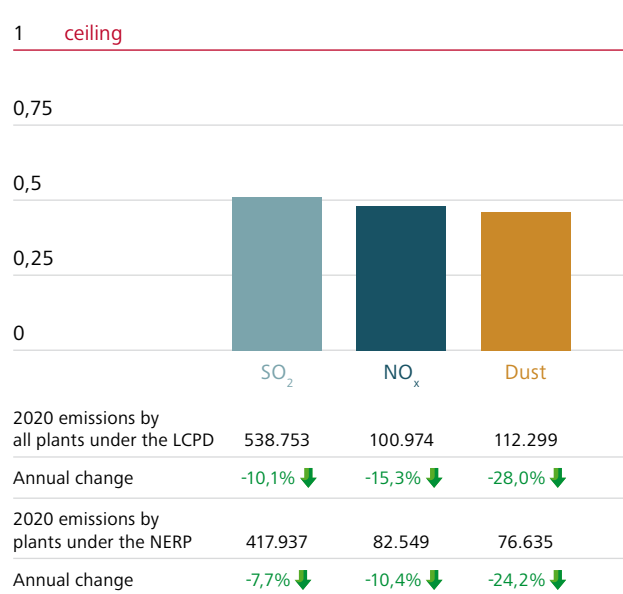
### Installations under the Large Combustion Plants Directive



\*Under Decision 2015/07/MC-EnC, certain plants in Ukraine are entitled to use 40.000 hours for opted out plants. 59 plants fall into that category.

Source: compiled by the Energy Community Secretariat

### 2020 emissions versus NERP ceilings



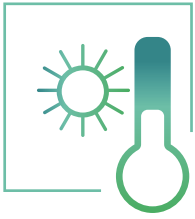
### Amount of operational hours used from opt-out period<sup>4</sup>

Average of plants under Decision 2013/05/MC-EnC <sup>5</sup>	Expected expiry of opt-out period:*	December 2023
	Remaining hours	13.466
	Operating hours consumed in 2018 - 2020	6.534
Average of plants under Decision 2015/07/MC-EnC <sup>6</sup>	Expected expiry of opt-out period	December 2023
	Remaining hours	33.079
	Operating hours consumed in 2018 - 2020	6.921





\*Calculations for the expected expiry of the opt-out period are based on 2018 - 2020 average load factor.

Source: compiled by the Energy Community Secretariat

- Ukraine revised its NERP and plant inventory in 2019, updated the number of plants based on the common stack approach and included all district heating installations, which modified the total number of plants. The NERP ceilings were not changed. For 80 plants, no derogations apply.
- Due to the large number of plants under the opt-out regime in Ukraine, an average for both opt-out regimes is being provided. The expected expiry of the opt-out is also provided based on this average. It varies on a plant-by-plant basis.
- Under the regime of Decision 2013/05/MC-EnC, opted-out plants can remain in operation for a total of 20.000 operational hours until 31 December 2023.
- Under the regime of Decision 2015/07/MC-EnC, which amended Decision 2013/05/MC-EnC to reflect the special situation of Ukraine, certain opted-out plants can remain in operation for a total of 40.000 operational hours until 31 December 2023. The list of plants was adopted by Decision 2016/19/MC-EnC.



## Ukraine Climate

Climate Indicators	Transposition Assessment	Implementation Status	Descriptions
National greenhouse gas emissions monitoring and reporting systems			The Law on the Principles of Monitoring, Reporting and Verification (MRV) of GHG emissions, together with secondary legislation have been adopted. However, the system is still not fully operational as the launch of the MRV electronic registry (data management system) is missing.
National Energy and Climate Plans (NECPs)			Ukraine's draft NECP is still being discussed internally. It is planned to be revised after the NDC2 adoption. There are no details on the timeline for the finalization of the draft NECP.

Ukraine's revised NDC2 under the Paris Agreement was submitted to the UNFCCC Secretariat in July 2021. It includes an economy-wide net domestic reduction of 65% in GHG emissions by 2030 compared to 1990. Due already on 1 January 2018, the country's seventh National Communication and the joint second and third Biennial Report have still not been submitted. Ukraine's plans to submit, jointly, the seventh and eighth National Communication as well as the second, third and fourth Biennial Report by the end of 2022.

The Monitoring, Reporting and Verification of GHG Emissions Law, which transposes provisions of Directive 2003/87/EC related to the creation of a monitoring, reporting and verification (MRV) system, took effect in January 2021. Secondary legislation on the list of activities subject to MRV of GHG emissions, adopted in September 2020, correspond to the relevant provisions of Directive 2003/87/EC. Thus, the basic rules for the functioning of a registry system for GHGs and installations are in place. Nonetheless, the system is not fully operational as the relevant software is being developed with donors' support. The launch

of the MRV electronic registry (data management system) is pending. While establishing an MRV is a first step towards a future ETS, Ukraine has also a carbon tax in place, although with a very low rate (ca EUR 0,33 /tCO<sub>2</sub>) which covers a range of stationary sources of emissions, including industry and the power sector.

By a decree of 23 March 2021, the Ministry of Environmental Protection and Natural Resources was tasked to update its Low Carbon Development Strategy until 2050 and turn it into a framework law on the principles of low emission development until 2050.

The draft NECP is currently being discussed within the Ministry of Energy. Related modelling work will be revised after the adoption of Ukraine's updated NDC. Preparatory work for conducting a strategic environmental assessment of the NECP is currently undertaken. The planned date for NECP finalization and adoption is unknown.





# Ukraine Infrastructure

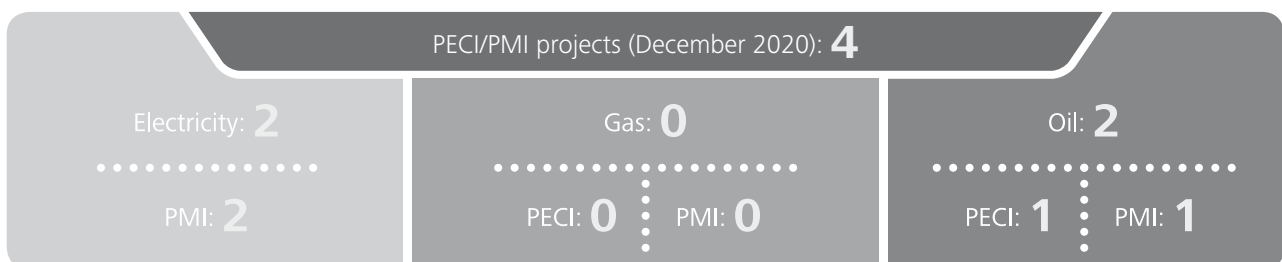
## Infrastructure Implementation

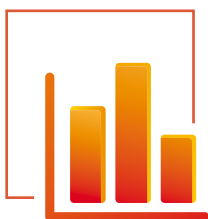
Infrastructure Indicators	Transposition Assessment	Implementation Status	Descriptions
National competent authority		<div style="width: 30%;"><div style="width: 30%;"></div></div> 30%	Ukraine's transposition of Regulation (EU) 347/2013 and designation of the national competent authority is still pending. The draft Law on Projects of National Interest in the Energy Sector is expected to be submitted to the Parliament still in 2021.
Manual of procedures		<div style="width: 0%;"><div style="width: 0%;"></div></div> 0%	The manual of procedures, as defined by Regulation (EU) 347/2013, is yet to be drafted.
National regulatory authority involvement		<div style="width: 0%;"><div style="width: 0%;"></div></div> 0%	The Secretariat supported the regulatory authority in drafting the methodology and criteria to evaluate investments in electricity and gas infrastructure projects and the higher risks incurred by them. Yet, the Ukrainian national regulatory agency has not published the methodology and criteria as required by the Regulation.

The Ministry of Energy of Ukraine has been preparing the draft Law on Projects of National Interest in the Energy Sector, which aims to transpose Regulation (EU) 347/2013. The Law is expected to be submitted for adoption by the Government and subsequently by the Parliament in autumn 2021. According to the draft Law, the Ministry of Energy of Ukraine will act as the national competent authority. The Interdepartmental Commission will be obliged to consider and approve plans for project realization in close cooperation with the national competent authority. All supporting acts like the manual of procedures and methodology and criteria to evaluate investments should be developed within six months of the Law's entry into force.

Until the new Law is adopted, the country remains in breach of the Ministerial Council's Decision of 29 November 2018 on Ukraine's failure to transpose Regulation (EU) 347/2013.

Ukraine, as a Contracting Party with a relatively high number of Energy Community infrastructure projects, stands to benefit at large from the implementation of the Regulation. This is especially relevant regarding the strategic infrastructure projects related to the synchronization of Ukraine with the Continental European power system. Other projects such as the rehabilitation of the overhead power lines 400 kV to Slovakia and Romania (PMI 2020), as well as oil pipeline projects (Brody – Adamowo and Southern Druzhba pipelines, PECEI and PMI 2020) might be positively influenced by the adoption of the Law.





# Ukraine Statistics

## Statistics Implementation

Statistics Indicators	Transposition Assessment	Implementation Status	Descriptions
Annual statistics			The five annual questionnaires for 2019 and the questionnaire on final energy consumption of households were submitted.
Monthly statistics			Monthly coal, electricity and natural gas data are compiled and transmitted to EUROSTAT. Monthly oil data and short term natural gas data are not transmitted.
Price statistics			Price statistics for electricity and natural gas are transmitted, except for disaggregated data on electricity prices charged to households.

Implementation of the acquis on price statistics has improved with reporting on the disaggregated price of electricity charged to industrial end-users, but Ukraine is yet to fully implement all obligations pursuant to the statistics acquis.

The State Statistical Service of Ukraine (SSSU) is the central statistical institution responsible for production of energy statistics.

Annual questionnaires for 2019 were transmitted timely to EUROSTAT and published in the respective databases. Preliminary annual data for 2020 were also transmitted timely and published. The breakdown of energy consumption of households per final use is compiled and transmitted to EUROSTAT as required by the acquis. The quality report on annual statistics is transmitted to EUROSTAT in accordance with Regulation (EC) 1099/2008.

SSSU compiles monthly energy statistics and ensures their timely dissemination. Monthly coal, natural gas and electricity data are transmitted to EUROSTAT. Monthly oil statistics pursuant to Annex D (JODI data) are also compiled and transmitted. SSSU

collects information on oil stocks, but it is not publicly available. Monthly oil data compliant with Annex C of Regulation (EC) 1099/2008 are still not transmitted to EUROSTAT due to concerns over the confidentiality of oil stocks data.

Average gas and electricity prices charged to industrial customers and households, disaggregated per taxation level, are compiled and transmitted to EUROSTAT. Disaggregated prices of natural gas per price component are also compiled and published. As regards disaggregated electricity prices, price components of electricity charged to industrial end-users in 2020 are compiled and transmitted to EUROSTAT, whereas price components of electricity prices charged to households are not reported yet.

Recalling that most monthly data are already published on the SSSU website, it is expected that all remaining monthly questionnaires will be transmitted to EUROSTAT, including oil stocks pursuant to the obligations from the acquis on oil. The breakdown of electricity prices charged for households into price components and their annual reporting also have to be implemented without delay.



# Ukraine Cybersecurity

## Cybersecurity Implementation

Cybersecurity indicators	Transposition Assessment	Implementation Status	Descriptions
Institutions and legislation			The cybersecurity framework is fragmented and the cybersecurity acquis is transposed mostly through governmental acts. A cybersecurity strategy for 2021 - 2025 is in place and a draft cybersecurity law is pending adoption. Criteria for treatment of critical infrastructure are in place and include the energy sector. CERT-UA is established and competent for energy.
Requirements for operators and energy regulatory authority			Detailed methodologies for identification of critical infrastructure based on risk assessment are adopted by the Government but energy-specific criteria are not defined. Operators' obligations for cybersecurity, resilience, response to threats and reporting of incidents are applicable through governmental acts. The energy regulator NEURC is not empowered for cybersecurity.

The Cybersecurity Strategy of Ukraine 2021 - 2025 aims at increasing resilience, higher professional capacity, secure digital services and improving models of cooperation. The Ministry of Energy is working on the development of a cybersecurity strategy for the energy sector.

The Law on the Basic Principles of Cybersecurity partially transposes Directive 2016/1148 (NIS Directive), and sets the concept of critical infrastructures (CI) and the principles for imposing obligations on operators, public private partnership and international cooperation. Directive 2008/114/EC is transposed through governmental acts – the General Requirements for Cybersecurity of CI and the Regulation on CI, providing designation procedures and an identification methodology. The energy CI list includes infrastructures for all fundamental activities in electricity, gas, oil and nuclear technology. A draft Law on Critical Infrastructure is pending adoption. It defines conditions for CI protection, mandatory insurance, public private partnership and establishment of a National Commission for Critical Infrastructures.

The State Service for Special Communications and Information Protection (SSSCIP) is the responsible authority for technical information security of information and communication infrastructures, including the energy sector. The Government Regulation on Critical Information Infrastructure (CII) defines a designation structure managed by SSSCIP where CII is designated for each CI object. The CII must be verified as critical for the

sustainable operation of CI and sensitive to information security incidents, in the absence of an alternative facility. The lists of specific CI objects and CII facilities are not disclosed.

SSSCIP hosts the national CERT (CERT-UA). The CERT operates as the main contact point for cyberattacks, maintains a register of incidents, shares information with other agencies in Ukraine and abroad, provides direct assistance to stakeholders, publishes recommendations, organizes training sessions and participates in joint cyber defence events. Its competences and responsibility extend over the energy sector.

A government regulation obliges the operators of critical infrastructure to define their information security risk management policy, designate information security officers and develop security plans. The Government has also adopted a Resolution on the establishment of a system for identifying vulnerabilities and reacting to cyber incidents and cyberattacks on the state-owned CI objects, with a possibility for private companies operating CI objects to apply it voluntarily. The system engages CERT-UA for centralised collection of information and development of systems identifying and reacting to cyberattacks at the level of CI operators.

The energy regulatory authority NEURC does not have any competences, powers or obligations in the domain of cybersecurity.