

	State	Ukraine
General information	Status EU membership	Signed EU accession Agreement in June 2014; Party to the Energy Community since 1 February 2011 ¹
	Population	36,666,975 (2023) ² 43,792,855 (2021) ³
	Land area (km²)	579,400 km ² (2020) ⁴
	Urban population (%)	70 (2021) ⁵
	GDP (current US\$ billion)	200.09 (2021) ⁶
Socio-economic situation	GDP per capita (EURO)	4,130 (2022) ⁷
	Monthly net earnings (USD)	521 (2022) ⁸
	Average Monthly Salary (EURO)	455,1 (2022) ⁹
	Average hourly earnings (UAH/EUR)	103,95 UAH (2021) ¹¹ / 2.57 EUR (rate 02.16.2023)
	Average Monthly wage by sex (UAH/EUR)	Men 16912 UAH (2021) ¹² / 417,37 EUR (rate 02.16.2023)
	*Gender pay gap in Ukraine stands at 18,6% compared to 13% in the European Union (2023)¹⁰	Women 13802 UAH (2021) ¹³ / 340,62 EUR (rate 02.16.2023)
	World Bank economic classification (2021)	Lower-middle income economy ¹⁴
Energy situation in general	Unemployment (% of total labor force)	9.8 (2021) ¹⁵
	Current energy sources	<p>Produces significant volumes of natural gas, but still dependent on gas (and oil) imports and is a major transit route for Russian gas exports towards Europe.</p> <p>Following the Russian invasion of Ukraine, emergency synchronization of the power systems of Ukraine and Moldova with Continental Europe took place on 16 March 2022¹⁶.</p> <p>Primary fuel mix of Ukraine in 2020 (57,121 ktoe) consisted of¹⁷:</p> <ul style="list-style-type: none"> • 35,69% Nuclear • 28,19% Natural Gas • 22.56% Solid fossil fuels • 7.86% Renewables (excluding hydro) • 4.4% Oil and petroleum products • 1.2% Hydro <p>Electricity Generation in 2020 consisted of 89% (132,654 GWh) non-renewables and 11 % (17,136 GWh) renewables, including¹⁸:</p> <ul style="list-style-type: none"> • Hydro and Marine 5 729 GWh (4%) • Solar 7 141 GWh (5%) • Wind 3511 GWh (2%) • Bioenergy 755 GWh (1%)

Climate protection targets	<p>Ratified the Paris Agreement in September 2016¹⁹</p> <p>Submitted its updated NDC to the UNFCCC in July 2021, Ukraine, including the target of a 65% reduction below 1990 levels by 2030 including land use, land-use change and forestry (LULUCF)²⁰.</p> <p>Climate Action Tracker (CAT) suspended updates on the progress by Ukraine due to the Russian invasion of Ukraine²¹</p> <p>The previous CAT rating of Ukraine's target was "Highly insufficient" indicating inconsistency of Ukraine's climate policies and commitments with the Paris Agreement's 1.5°C temperature limit²²</p>
Renewable energy targets	<p>In 2020, the share of renewable energy in Ukraine reached only 9,19%, below the target of 11%.²³</p> <p>In 2021, Ukraine set a goal of reaching a share of 25 percent of renewables in its total energy mix by 2035.²⁴</p>
Renewable energy potential	<p>In 2017 IRENA estimated cost-competitive wind potential Ukraine of up to 119.2 GW, including further potential for wind (up to 200 GW) and solar PV (up to 70 GW), which could be provided for by with more stable frameworks 2030.²⁵</p> <p>Renewable capacity in 2021 comprised 14305 MW²⁶, including:</p> <ul style="list-style-type: none"> • Solar: 5,363 MW • Large hydropower: 4,444 MW • Pumped Storage: 1,488 MW • Wind:1,111 MW • Small Hydropower: 192 MW • Biomass: 200 MW • Biogas: 124 MW <p>"Most areas of high potential for wind and solar generation are in occupied or contested regions of Ukraine"²⁷.</p>
Renewable energy support regime	<p>"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)".²⁸</p> <p>A new draft law introducing a contract for difference mechanism was published for public consultation in August 2021.²⁹</p> <p>"In July 2022, the Parliament adopted amendments where renewable producers were allowed to sell electricity directly at the day-ahead, intraday, bilateral and balancing markets".³⁰</p> <p>"Guaranteed access to the transmission and distribution networks for electricity produced from renewable energy sources is provided".³¹</p>

Relevant laws, policies, and plans

- Since the Russian invasion of Ukraine in 02.2022 martial law is applied, potentially affecting energy-related legislation.³²
- The *National Energy and Utilities Regulatory Commission of Ukraine (NEURC)* is set up as a 'central executive body' established by the Cabinet of Ministers³³.
- On 5 August 2022, the Ministry of Energy published the updated version of the draft **law on Projects of National Interest in Energy**, which transposes Regulation (EU) 347/2013, for public consultation³⁴.
- **Energy Efficiency Law** was adopted in October 2021, including specific targets and policy measures facilitating compliance with the Energy Efficiency Directive³⁵.
- "The draft **climate law** is being developed with external support... expected to transpose the climate related elements of the Governance Regulation.
- The draft NECP should be revised in light of the mounting rebuilding efforts to put Ukraine on a path of low-carbon development"³⁶.
- 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.
- In March 2021 the "**National Economic Strategy until 2030**" was approved, outlining how climate neutrality is to be achieved by 2060³⁷.
- **Draft Law No. 9011-d** on Amendments to Certain Laws of Ukraine Regarding the Restoration and Green Transformation of the Energy System of Ukraine introduces amendments to several laws governing guarantees of origin, self-consumption and support schemes for electricity from renewable sources, most importantly, **Law on Alternative Energy Sources and the Law on the Electricity Energy Market**. It partially transposes the Renewable Energy Directive (REDII) and other elements of the Clean Energy Package, but does not ensure full transposition³⁸.

Regulatory framework for citizen energy

- Recent amendments to the Law on Alternative Energy Sources have introduced the term "energy cooperative" into Ukrainian law³⁹.
 - o Article 9-3. Incentives for electricity producers from alternative energy sources who have acquired the right to support as a result of the auction⁴⁰
- The Law on Amendments to Certain Laws of Ukraine on Stimulating the Production of Electricity from Alternative Energy Sources on a Market Basis, introduces a contract for difference mechanism for auctions, was published for consultation in August 2021, but was not adopted as of 2022⁴¹.
- "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".⁴²
- "Guaranteed access to the transmission and distribution network for electricity produced from renewable energy sources is provided".⁴³
- As of 2020, a legal framework and financial instruments for community-based renewables projects were lacking⁴⁴
- In 2020, the Ministry of Energy and Environmental Protection of Ukraine presented a draft **concept of Green Energy Transition of Ukraine until 2050**, developed in line with global energy tendencies with focus on climate change⁴⁵, including provisions recognising the importance of energy cooperatives.
- 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 consumption⁴⁶.

Legal and political framework for citizen energy

- “The draft Law of Ukraine "On Amendments to Certain Laws of Ukraine Regarding the Restoration and Green Transformation of the Energy System of Ukraine" partially transposes provisions from the Electricity Directive, in particular with regard to active customers, energy communities and aggregation, etc”⁴⁷
- “From 2020, only wind projects with installed capacity of up to 5 MW and other technologies of up to 1 MW are granted administratively set feed-in tariffs (FiTs).”⁴⁸
- “In July 2022, the Parliament adopted amendments where renewable producers were allowed to sell electricity directly at the day-ahead, intraday, bilateral and balancing markets.”⁴⁹

Energy Cooperatives Booklet (2019) describes the potential Legal basis⁵⁰

- Energy cooperatives can be established on the basis of the Law of Ukraine (Law on Cooperation, Law on Consumer Cooperation or Law on Limited and Additional Liability Companies. The choice of model depends on the planned activities and members⁵¹.
- The participation of local self-government bodies in cooperatives is regulated by the current legislation of Ukraine, in particular, the Civil Code of Ukraine and the Commercial Code of Ukraine.
- The Civil Code of Ukraine stipulates that cooperatives may, in addition to their main activity, engage in entrepreneurial activity...However, the mechanism of profit distribution is not defined by law.

Evaluation of the legal framework

- “Today, the only obstacle to the creation of energy cooperatives is low awareness and lack of trust between people.” (NGO Ecoclub, 2019)⁵²
- “Ukrainian legislation has a number of problems that create restrictions on the development of energy cooperatives, but today the opportunities for the application of the cooperative model in the energy sector are impressive”⁵³.

The overall performance of the Energy Sector implementation of Ukraine is provided by the Energy Community⁵⁴.

Existing citizen energy projects and/or research initiatives
Citizen energy projects

Municipal energy cooperative “Sunny City” is the first cooperative in Ukraine⁵⁵, founded in 2018, at the joint initiative of Slavutych City Council and NGO “Greencubator”.

- This project brought together the resources of the city, local community, and members of the cooperative on a crowdfunding basis to create a solar power plant located on the roofs of three municipal buildings on a lease.
- The Slavutych city residents could join the cooperative community. The main activity of the cooperative “Sunny City” is the construction and operation of solar power plants and selling electricity at a “green” tariff⁵⁶.
- The members of the cooperative are private individuals and the Regional Development Agency of Slavutych. Legal form of a cooperative: consumer society⁵⁷.
- The network of the city of Slavutych is part of the UES (United Energy System of Ukraine)

An Energy Cooperative was founded in 2018 in Berezdivska OTG (Khmelnysky Region). The founders were: private individuals, NGO "Ecoclub" and KP "Berezdiv". Legal form of a cooperative: limited liability company.

- The cooperative will produce fuel briquettes from straw bought from local farmers. Prior to the establishment of the cooperative, negotiations were held with local farms and an agreement was reached on the purchase of straw residues that had previously remained in the fields. The farmers are members of the cooperative.
- In the first stage, the briquettes will be used to heat one of the schools of the united territorial community.
- Participants of the Berezdovsky Energy Cooperative can be individuals and legal entities who are willing to contribute to the authorized capital of the company in the amount equivalent to at least 500 €, or securities, real estate or other property worth at least 15 000,00 UAH.
- All members of the cooperative, regardless of contribution, have only one vote in accordance with the statute. In this case, they will receive a profit depending on the share of the contribution.

Research and capacity building activities

A brochure on energy cooperatives was created as part of the project “Turning Local Resource Potential into the 100% RES Process” with the financial support of the Representative Office of the Foundation Heinrich Böll in Ukraine⁵⁸

Initiative "Promoting Energy Sustainability at the Local Level by Implementing Community Energy Initiatives" aims to help Ukrainian communities to develop cooperative tools and become more energy sustainable by sharing the best international and Ukrainian experience of energy cooperatives and involving industry experts to help launch energy cooperatives in Ukraine⁵⁹.

- Supported by **the USAID Energy Security Project (PEB)** and implemented by **Greencubator** together with **Lviv Business School (LvBS) of the Ukrainian Catholic University** in partnership with **Open Maidan University (VUM) and Veteran Hub**
- Target groups: community leaders, entrepreneurs, and the public sector.

The initiative team is working to transfer and disseminate this knowledge to Ukrainian communities using the following tools:

- **School of Energy Cooperation:** The training is open to participants from all over the country, lasts 2 months, and aims to provide practical knowledge on the establishment of energy cooperatives⁶⁰
- **Energy Accelerator of Communities:** a 4-month mentoring program for teams that have decided to create their own energy cooperatives. During the Accelerator, experienced specialists in the field of cooperation, energy and finance help teams to go from the previous business plan to the beginning of attracting investment.

Publication on experience of Energy Communities in Austria and Germany (2016)⁶¹, produced by the Office of Financial and Economic Analysis in the Verkhovna Rada of Ukraine Legal Department

Relevant actors and stakeholders

NGOs

Greencubator (Slavutych, cooperative “Sunny City”)⁶²

Ecoclub (page and brochure re energy communities)⁶³

Center for Environmental Initiatives “Ecoaction”

The Ministry of Energy and Coal Industry

Governmental bodies	National Energy and Utilities Regulatory Commission of Ukraine (NEURC)
	National Commission for Energy Regulation
	National Commission for Regulation of Economic Competition
	The State Agency for Energy Efficiency and Energy Saving of Ukraine (SAEE)
	Energoatom; Centerenergo - state-owned power generation companies
	Ukrenergo, national transmission system operator
Local governments	Slavutych City Council (cooperative "Sunny City") ⁶⁴
	Regional Development Agency of Slavutych
Private actors	https://solartown.com.ua/people/ https://www.var.energy/about
International/supra-national actors	USAID Energy Security Project (PEB)
	Heinrich-Böll-Stiftung
	UNDP
Academia	Lviv Business School (LvBS) of the Ukrainian Catholic University Open Maidan University (VUM) ⁶⁵
Others	Ukrainian Association of Renewable Energy

Summarizing evaluation

Fields of Action

Evaluation by the Energy Community⁶⁶, as of 07.2023, states: Even during the Russian war, Ukraine managed to advance acquis implementation in several areas including electricity, energy efficiency, environment and renewables. The biggest breakthrough was the synchronization of the electricity network of Ukraine with the Continental European power system, partially made possible by the country's progress in electricity acquis implementation before the start of the war.

Recommendations from the Energy Community⁶⁷ re Renewable Energy include:

- "Ukraine should keep its efforts to stay on the path of electricity market reform and prevent back-sliding from what was achieved before the invasion"
- "The utmost priority for Ukraine remains the implementation of a functional market-based support scheme and financial stabilization of the guaranteed buyer..."
- The Government should provide support to help producers restoring damaged electricity equipment...
- Ukraine should as soon as possible designate an issuing body for guarantees of origin, sign a direct agreement with the service provider and start using the national electronic registry developed during the regional project."

In addition, there is a need to build awareness about- and trust among the population in energy cooperatives.

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¹ <https://www.energy-community.org/implementation/report/Ukraine.html>

² <https://worldpopulationreview.com/countries/ukraine-population>

³ <https://data.worldbank.org/indicator/SP.POP.TOTL?locations=UA&view=chart>

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- ⁴ <https://data.worldbank.org/indicator/AG.LND.TOTL.K2?locations=UA&view=chart>
- ⁵ <https://data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS?locations=UA&view=chart>
- ⁶ <https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?locations=UA&view=chart>
- ⁷ https://webgate.ec.europa.eu/isdb_results/factsheets/country/overview_ukraine_en.pdf
- ⁸ <https://www.ceicdata.com/en/indicator/ukraine/monthly-earnings>
- ⁹ <https://index.minfin.com.ua/labour/salary/average/eur/>
- ¹⁰ https://www.ilo.org/budapest/whats-new/WCMS_885044/lang--en/index.htm
- ¹¹ <https://ukrstat.gov.ua/>
- ¹² Ibid.
- ¹³ Ibid.
- ¹⁴ <https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups>
- ¹⁵ <https://data.worldbank.org/indicator/SL.UEM.TOTL.ZS?locations=UA>
- ¹⁶ <https://www.energy-community.org/implementation/report/Ukraine.html>
- ¹⁷ Ibid.
- ¹⁸ https://www.irena.org/-/media/Files/IRENA/Agency/Statistics/Statistical_Profiles/Europe/Ukraine_Europe_RE_SP.pdf
- ¹⁹ http://www.wecf.org/wp-content/uploads/2018/06/EnergyCoops_LongOnline.pdf
- ²⁰ <https://climateactiontracker.org/countries/ukraine/2021-12-13/>
- ²¹ <https://climateactiontracker.org/countries/ukraine/>
- ²² <https://climateactiontracker.org/countries/ukraine/2021-12-13/>
- ²³ <https://www.energy-community.org/implementation/report/Ukraine.html>
- ²⁴ <https://www.csis.org/analysis/opportunities-and-challenges-renewable-energy-generation-ukraine>
- ²⁵ https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2017/IRENA_Cost-competitive_power_potential_SEE_2017.pdf?la=en&hash=DE44F51BDDFB43D4CB8D880B5AB71713447BA043
- ²⁶ <https://www.energy-community.org/implementation/report/Ukraine.html>
- ²⁷ <https://www.csis.org/analysis/opportunities-and-challenges-renewable-energy-generation-ukraine>
- ²⁸ <https://www.energy-community.org/implementation/report/Ukraine.html>
- ²⁹ Ibid.
- ³⁰ Ibid.
- ³¹ Ibid.
- ³² Ibid.
- ³³ file:///Users/BOKU/Downloads/NEURC_Preliminary_decision_certification_102021.pdf
- ³⁴ <https://www.energy-community.org/implementation/report/Ukraine.html>
- ³⁵ <https://www.rada.gov.ua/en/news/News/215361.html>
- ³⁶ <https://www.energy-community.org/implementation/report/Ukraine.html>
- ³⁷ <https://climateactiontracker.org/countries/ukraine/2021-12-13/targets/>
- ³⁸ <https://www.energy-community.org/news/Energy-Community-News/2023/06/05.html>
- ³⁹ <https://zakon.rada.gov.ua/laws/show/555-15#n262>
- According to the Law, an energy cooperative is a legal entity established in accordance with the Law of Ukraine "On Cooperation" or the Law of Ukraine "On Consumer Cooperation" to carry out economic activities for the production, procurement or transportation of fuel and energy resources and other services to meet the needs of its members or local community, as well as for profit, in accordance with the law. The same law established the right to receive a "green" tariff for energy cooperatives.
- ⁴⁰ <https://zakon.rada.gov.ua/laws/show/555-15#n262>
- ⁴¹ <https://www.energy-community.org/implementation/report/Ukraine.html>
- ⁴² Ibid.
- ⁴³ Ibid.
- ⁴⁴ <https://www.boell.de/en/2020/01/22/ukraine-renewables-must-not-be-business-few-only>
- ⁴⁵ <http://uwea.com.ua/en/news/entry/ukraina-planiruet-osuschestvit-zelenyj-energeticheskij-perehod-k-2050-godu/>
- ⁴⁶ https://www.energy-community.org/dam/jcr:142f1812-0d0c-4fa2-9699-dbb70a8ed6a6/MC2017_Annex18j.pdf
- ⁴⁷ Energy Community. UKRAINE ENERGY MARKET OBSERVATORY 08/2023.
- ⁴⁸ <https://www.energy-community.org/implementation/report/Ukraine.html>
- ⁴⁹ Ibid.
- ⁵⁰ <https://ecoclubrivne.org/en/energy-cooperatives-energy-independence-for-communities/> (Ukrainian; p.10)
- ⁵¹ The Law of Ukraine "On Cooperation" defines a cooperative as a legal entity formed by individuals and / or legal entities that have voluntarily joined on the basis of membership to conduct joint economic and other activities to meet their economic, social and other needs on the basis of self-government, and distinguishes three types of cooperatives: production, service and consumer.
- ⁵² <https://ecoclubrivne.org/en/energy-cooperatives-energy-independence-for-communities/>
- ⁵³ <http://www.biowatt.com.ua/trends/energetichni-kooperativi-ta-mozhливosti-yih-poshirennya-v-ukrayini/>
- ⁵⁴ <https://www.energy-community.org/implementation/report/Ukraine.html>
- ⁵⁵ <https://uaenergycoop.com/> (UA)
- ⁵⁶ http://www.slg-coe.org.ua/slavutych_practice/?lang=en
- ⁵⁷ <https://solartown.com.ua/> ; <https://www.facebook.com/sun.city.slavutych/>
- ⁵⁸ <https://uamap.org.ua/en/energy-cooperatives-energy-independence-for-communities>
- ⁵⁹ <https://energycooperative.org.ua/about/>

⁶⁰ <https://energycooperative.org.ua/products/soec/>

⁶¹ https://feao.org.ua/wp-content/uploads/2017/02/FEAO_Energy_cooperatives.pdf

⁶² http://www.slg-coe.org.ua/slavutych_practice/?lang=en, <https://greencubator.info/>

⁶³ <https://ecoclubrivne.org/en/energy-cooperatives-energy-independence-for-communities/>

⁶⁴ http://www.slg-coe.org.ua/slavutych_practice/?lang=en

⁶⁵ <https://vumonline.ua/courses/>

⁶⁶ <https://www.energy-community.org/implementation/report/Ukraine.html>

⁶⁷ Ibid.