

| State | | Poland | |
|---------------------------------|---|---|---|
| General information | Status EU membership | Member State since 1 May 2004 ¹ Participant of Energy Community since 6 October 2011 ² | |
| | Population | 37,950,802 (2020) ³ | |
| | Land area (km²) | 306,170 km ² (2020) ⁴ | |
| | Urban population (%) | 60 % (2020) ⁵ | |
| | GDP (current US\$ billion) | 679,444 (2021) ⁶ | |
| Socio-economic situation | GDP per capita (EURO) | 13,750 (2021) ⁷ | |
| | Annual net earnings (Single person without children earning 100% of average earning (EURO)) | 5,504.27 (2021) ⁸ | |
| | Median hourly earnings (EURO) | Males: 5.17 (2018) Females: 4.72 (2018) ⁹ | |
| | World Bank economic classification (2021) | High - income economy ¹⁰ | |
| | Unemployment (% of total labor force) | 3.4% (2021) ¹¹ | |
| | Current energy sources | Oil – 1,28 PJ, Biofuels and Waste – 0,49 PJ, Gas – 0,76 PJ, Coal – 1,89 PJ (2021) ¹² Electricity Generation in 2020 constituted the following ¹³ : <ul style="list-style-type: none"> ○ Non-renewable (mostly fossil fuels): 129 816 GWh (82%) ○ Renewable: 28 260 GWh (18%), out of which <ul style="list-style-type: none"> ○ Hydro and marine 2 118 GWh ○ Solar 1 958 GWh (1%) ○ Wind 15 800 GWh (10%) ○ Bioenergy 8 384 GWh (5%) | |
| | Climate protection targets | <ul style="list-style-type: none"> - Poland's energy policy up to 2040, approved in February 2021, sets a target of at least a 23% RES share by 2030. - In electricity generation, the 2030 RES share should reach at least 32% while the share of coal should not exceed 56 %. - Offshore wind capacity should reach 5.9 gigawatts (GW) in 2030, and PV - 7GW. - The heating sector should reach a RES share of 28 %, and the transport sector 14%, with a strong contribution from electromobility. Nevertheless, in its NECP assessment, the Commission finds Poland's 2030 RES target to be unambitious¹⁴. | |
| Renewable energy targets | 21-23% of RES share in gross final energy consumption by 2030 (total consumption in electricity, heating and cooling as well as for transport purposes) | | |
| Energy situation in general | Renewable energy potential | Type of renewable energy source | Real economic potential - final energy |
| | | | Utilization of economic potential in 2020 (real market potential) |
| | | [TJ] | [TJ] [%] |

| | | | |
|------------------------------|-----------------|-----------------|-------------|
| Biomass: | 600167.8 | 533117.5 | 88.8 |
| <i>solid dry waste</i> | 165930.8 | 149337.7 | 90.0 |
| <i>biogas (liquid waste)</i> | 123066.3 | 72609.1 | 59.0 |
| <i>wood (forests)</i> | 24451.8 | 24451.8 | 100.0 |
| <i>Energy crops</i> | 286718.9 | 286718.9 | 100.0 |
| Wind energy | 444647.6 | 119913.3 | 27.0 |
| Solar energy: | 83312.2 | 19422.2 | 23.3 |
| <i>thermal</i> | 83152.9 | 19262.9 | 23.2 |
| <i>photovoltaic</i> | 159.3 | 159.3 | 100.0 |
| Hydropower | 17.9744 | 11.144,2 | 62.0 |

2020, IEO¹⁵

Renewable energy support regime

- Until mid-2016 green certificate program
- Since 2016 and still today “the main incentive for renewable energy use in Poland are tenders” (auctions); these are a “technology-neutral tool for promotion of RES”¹⁶
- Owners of small biogas and hydro plants are eligible for a Feed-in tariff (up to 500 kW) or a FIP (0.5-1 MW).¹⁷
- As of April 2022¹⁸, a support system based on the net-billing system is in place for RES micro-installations: surplus energy produced by the prosumer is sold at the market price¹⁹. From the accumulated surplus, the prosumer can cover the cost of electricity, the unused middles are partially forfeited after a year and partially (20%) can be paid out.
- With the change of the electricity prosumption support system to net-billing, the definition of a collective prosumer (a group of end users/prosumers limited to one multi-apartment building) and the definition of a virtual prosumer (the installation does not have to be connected to an energy consumption site) were introduced into law. The latter will take effect in July 2024.
- Since 2019, new legal provisions dedicated to energy cooperatives enable using the discount scheme previously intended only for prosumers, however, the ratio of the energy fed into the grid and the energy that can be collected later for the energy cooperative is slightly less favourable (1 to 0.6).²⁰
- Energy cooperatives obtained several other privileges under the new regulations: Electricity collected by an energy cooperative as part of the settlement with the obligated seller is not subject to charges for the distribution service; The amount of energy generated and directly consumed by the members of the cooperative does not include the RES fee, the cogeneration fee and the capacity fee; The obligations to redeem certain energy certificates of origin do not apply; The energy received as part of the discount will not be subject to excise tax if the total capacity of the RES installation does not exceed 1 MW.²¹
- “Producers of electricity from renewable sources are exempt from the tax on the sale and consumption of electricity.”²²
- In 2023, energy prices for residential customers up to certain consumption limits (2,000 kWh / 2,600 kWh / 3,000 kWh) were frozen at the level of tariffs for trading companies from January 2022. For energy consumption above these volumes, the energy

seller will not be able to charge a price higher than PLN 0.693/kWh. Distribution charge rates for household customers have also been frozen to the aforementioned consumption limits²³.

Relevant laws, policies, and plans

- National Energy and Climate Plan for the years 2021 – 2030
- Renewable Energy Sources Act (of 20 February 2015) (revised in 2016, 2017, and 2019)²⁴

Regulatory framework for citizen energy

- Renewable Energy Sources Act (RES Law)
 - Includes energy clusters, energy cooperatives, support for prosumers and a range of rules and conditions for conducting activity in the field of electricity generation, agricultural biogas, heat and bioliquids; defines terms such as: renewable energy prosumer, micro installation, small installation, energy cluster and energy cooperative.
 - Defines '**energy clusters**' as civic-law agreements with diverse parties including natural persons, legal persons, scientific units, research institutes and local-government units.²⁵
 - "The concept of energy clusters was introduced for the first time in 2016 with the definition of energy clusters in the Amendment to the RES Act."²⁶
 - An **energy cooperative** is a form of assembly available for people who want to produce energy from renewables. According to the RES Act's definition, an energy
-

cooperative is an administrative unit whose legal personality is stipulated in the Cooperative Law.²⁷

- An energy cooperative may be:
 - o “in the territory of a rural or urban-rural municipality or in no more than three such municipalities directly adjacent to each other”
 - o based on “the generation of electricity or biogas, or heat in RES systems”, “the balancing of the demand for the auxiliaries of the energy cooperative and its members”
- “The difference between energy cooperatives and energy clusters is that cooperatives have a legal entity. This impacts how agreements are made – energy cooperatives may sign them on their own, whereas a cluster can sign them only through its coordinator.”²⁸
- A new net-billing mechanism for renewable energy prosumers was introduced in April 2022.
 - Two new definitions of presumption were implemented into the law:
 - o virtual presumption (“dedicated for installations that are not physically connected with the owners (energy consumers). A similar model as introduced in Lithuania. In this model prosumer will be using a part of privileges that regular prosumers have (e.g. net-metering scheme)”)
 - o collective presumption (dedicated for multi-family buildings)²⁹
- The May 2021 draft UC74³⁰ amendments to the RES Act propose to introduce the following definitions derived from European legislation:
 - contract with dynamic price (allows to respond to market signals) and active customer;
 - definition of energy aggregator and aggregator;
 - direct line;
 - definition of flexibility services;
 - definition of citizen energy community;

However, these changes have not been implemented into law.
- The February 2022 draft UC99³¹ amendments to the RES Act propose to introduce the following definitions derived from European legislation:
 - partnership trading of energy from renewable sources (P2P)
 - proposed support system for energy clusters

These changes have not been implemented into law.
- **Establishing CECs in the cities is not allowed**³² - this makes housing cooperatives relevant in developing citizen energy projects
- **National Fund for Environmental Protection and Water Management** provides grants in the “Prosument Programme”³³

Evaluation of the legal framework

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- The RED II requirements are not fully implemented yet, but the ministries are working on changing the regulations.
 - There is a lack of regulations that would enable any business models for community energy, which would ensure competitiveness in the energy market.³⁴
 - The energy cooperatives model is not very popular, because cooperatives do not generate profit.³⁵
 - The current Polish energy regulation makes self-consumption in multi-apartment buildings possible, but Cultural socio-economic barriers remain. “Cultural barriers refer to the distrust felt by Polish citizens towards cooperative and collective models of social organisation. This is since cooperatives are negatively associated with state socialism”³⁶

*An updated assessment is available at the REScoop Transposition Tracker³⁷

Citizen energy projects **The Pszczelna Solar Housing Community** is the first community in Szczecin, Poland, to install a PV system.³⁸

- the municipality of Szczecin created a local funding scheme under a national grant program to support “prosumption” in multi-apartment buildings.
- “the solar PV installation provides electricity for the common parts of the building (staircase lights, elevators, parking space lights, etc.). Surpluses from the solar PV system are sold to the network operator.”³⁹
- The key actors were two ambitious and progressive project managers who had close contact with the housing community residents. Another important actor was an energy advisor from the National Fund for Environmental Protection and Water Management in Szczecin. He provided the two project managers with information and advice, specifically regarding the legal, financial, and organisational aspects of the “Prosumment Grant Programme”⁴⁰.
- The managers dealt with obstacles by organising several information sessions to address citizens’ worries and knowledge gaps regarding the solar project. In addition, they **capitalised on the enthusiasm and environmental awareness of the younger apartment owners who were interested in reducing their carbon footprint.**

- Zgorzelecki Energy Cluster

- Żywiecki Klaster Energii

Housing Cooperative Wrocław South (HCWS) - one of the largest housing cooperatives in Wrocław.

HCWS operates on the basis of Polish Housing Cooperatives Act. The history of HCWS dates back to 1946 when the Wrocław Housing Cooperative was established as the main housing cooperative in the city. After 1989, the Wrocław Housing Cooperative was divided into five smaller housing co-ops, including the HCWS which manages 102 buildings and almost 11,000 apartments with approximately 30,000 homeowners. The HCWS runs the Wrocław Solar Power Plant (WSPP) project, which is the largest rooftop photovoltaic system in Poland. The solar power plant was developed using the co-creation strategy that engages the inhabitants. The PV farm since 2017 is in operational phase. A total of 2,771 solar panels were installed on rooftops of 35 buildings. The plant generates almost 0.75 MW of electricity, and its solar panels cover an area of 0.5 hectares of roofs. The production of electricity saves 614 tons of CO₂ emissions per year.^{41 42 43}

Research and capacity building activities Research project **Development of distributed energy in energy clusters (KlastER)**, 2019-2021

- Ministry of State Assets (formerly the Ministry of Energy), as part of the MENAG scientific consortium together with the AGH University of Science and Technology and the National Centre for Nuclear Research)
- main goal is to develop a “Strategy for the development of energy clusters in Poland”
- develop viable business models for community energy

COME RES: Community Energy for the uptake of RES in the electricity sector. Connecting long-term visions with short term actions (Horizon 2020 programme project)⁴⁴

- Time: September 2020 – February 2023
- 16 partners from nine countries
- 27th of January 2021 online National Desk kick-off event („Conditions for development of community energy in Poland”); 85 participants⁴⁵
- Lead partner: Free University Belin (Germany)

RENALDO⁴⁶ - Rural Development through Renewable Energy Sources EUKI funding (LÄNDLICHE ENTWICKLUNG DURCH ERNEUERBARE ENERGIEN⁴⁷)

10/2020-01/2023

Target groups: Cities, towns and municipalities, Governments, Regional governments

Implementing organisation: Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

Donors: EU funding – SRSP and EUKI-co-financing)

Partners: 100 Percent Renewable Foundation, ACTIVUS Foundation, KPODR - Kujawsko-Pomorski Ośrodek Doradztwa Rolniczego

- As a first step, the project **develops a handbook on setting up and operating energy cooperatives** and will be tested in two **pilot communities** in the provinces *Podlaskie* and *Kuyavian-Pomeranian*
- A second step aims at further refining the intervention and **implementing additional energy cooperatives in four other communities in Podlaskie and Kuyavian-Pomeranian**. In parallel, RENALDO supports the selected communities in the **development of business plans** ensuring the profitability of an energy cooperatives.
- Third, a **session with the relevant stakeholders** serves to analyse the lessons learned from setting-up energy cooperatives. The findings support adjustments of the regulatory and institutional setting and good practices disseminated to other Polish regions.
- Finally, several events ensure the **dissemination of the project results** to political decision-makers from other Polish regions and interested communities.

EC² - Energy Citizenship and Energy Communities

for a Clean-Energy Transition (Horizon 2020)⁴⁸
(ZSI Centre for Social Innovation Vienna and other partners)
(05/2021-04/2024)

| | |
|-------------|--|
| | <ul style="list-style-type: none"> - Aims to gather empirical evidence on how the framework and the set-up of energy communities foster or hinder energy citizenship and under which circumstances energy communities and energy citizens benefit most from each other. - In-depth study Poland (amongst others) |
| | <p>SCORE (Supporting Consumer Ownership in Renewable Energies)⁴⁹</p> <ul style="list-style-type: none"> - funding from the <u>European Union's Horizon 2020 research and innovation programme (784960)</u> - coordinated by the <u>European University Viadrina Frankfurt (Oder)</u> and backed by the <u>SCORE consortium</u> – e.g. Federacja Konsumentów (PL), City of Litoměřice - The aim of SCORE is to facilitate co-ownership of RE for consumers first in three pilot regions in Italy, Czech Republic, and Poland - and later also in various other follower cities across Europe. SCORE hereby particularly highlights the potential this democratic participation model holds for the inclusion of women and low-income households.⁵⁰ |
| | <p>Lightness⁵¹</p> <ul style="list-style-type: none"> - The Lightness project aims to empower citizens to generate, share and sell renewable energy and thereby contribute to making the European energy sector more sustainable and democratic. - pilot project in Poland: 2 apartment blocks in Warsaw, installation of solar power⁵² |
| NGOs | <p>Federacja Konsumentów⁵³</p> <ul style="list-style-type: none"> - a nationwide consumer organisation in Poland established in 1981. Its core activity is free advocacy and legal assistance (more than 65,000 advice per year) provided by over 30 regional branches. The FK promotes regulations and market tools that guarantee the safety and satisfaction of consumers.⁵⁴ - Partner in the SCORE project <hr/> <p><u>Association of Municipalities Friendly to Renewable Energy</u></p> <p>Polish Green Network (Polska Zielona Siec)</p> <ul style="list-style-type: none"> - an association of leading regional environmental NGOs in Poland. The network carries out awareness raising campaigns and policy work aimed at promoting sustainable development. - Main areas of activity include: monitoring the use of public funds, influencing trade and corporate practice through consumer choices, support for sustainable development and civil society of the Global South and Eastern Europe, campaigns related to climate change. - consists of regional centres in major Polish cities. These coordinate projects and campaigns and establish contacts with national and international authorities. There are currently eight such centres in Warsaw, Lodz, Szczecin, Torun, Bialystok, Poznan, Lublin, and Wroclaw."^{55 56} - Supported translation of the handbook "Community Energy: A practical guide to reclaiming power" from Friends of the Earth, Rescoop.eu and Energy Cities⁵⁷ <hr/> <ul style="list-style-type: none"> - Polish Smog Alarms - Polish Ecological Club |

| | <ul style="list-style-type: none"> - GlobEnergia - Energie Cites - ClientEarth - Business Association Leviatan <p>Many local and small organizations</p> | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|----------------------|----------------|----------------------|----------|-------------------|--------|------|----------|--------|-------|------|-------------|----------------------|-------|------|-------------|---------------|-------|------|----------------|---------------|-------|------|-----------|
| Governmental bodies | <p>Ministry of Climate and Environment</p> <ul style="list-style-type: none"> - responsible for establishing an enabling framework for RES community energy on the national level - involved in research project (cf. above) <hr/> <p>Ministry of Development, Labour, and Technology</p> <ul style="list-style-type: none"> - working on a proposal for a framework for collective prosumers (cf. above) - Director of the Low-Emission Economy Department <hr/> <p>Energy Regulatory Office (ERO)</p> <hr/> <p>National Centre for Nuclear Research/Interdisciplinary Division for Energy Analysis PhD Karol Wawrzyniak</p> | | | | | | | | | | | | | | | | | | | | | | | | |
| Local governments | <p>Warmian-Masurian Voivodeshi - target region in COME RES project</p> <hr/> <p>Zalewo, municipal office</p> <hr/> <p>Spółdzielnia Mieszkaniowa Wrocław-Południe</p> <hr/> <p>Gmina Prusice</p> <hr/> <p>Słupsk</p> <ul style="list-style-type: none"> - Follower city in the SCORE project^{58 59} - Bioenergy cluster <hr/> <p>Energy advisors in every voivodeship in Poland within Regional Funds for Environmental Protection and Water Management</p> <hr/> <ul style="list-style-type: none"> - Apartments in Wrocław (part of Lightness project) | | | | | | | | | | | | | | | | | | | | | | | | |
| Distribution Network Operators | <p>There are four state-owned, vertically integrated energy companies, acting as distribution network operators.</p> <ul style="list-style-type: none"> - Tauron Capital Group is the market leader in terms of the number of customers and the volume of distributed electricity, with 35 per cent of the market share. - The largest retailer is the PGE Group with 33 per cent of the market share (Tauron Polska keeps 25 per cent. share and takes second place). - The other two groups, Enea and Energa (PKN Orlen) hold 15 per cent each. | | | | | | | | | | | | | | | | | | | | | | | | |
| Private actors | <p>Five the biggest PV projects in Poland (as of end of 2022)</p> <table border="1"> <thead> <tr> <th>Actor</th> <th>Capacity</th> <th>Year of commencement</th> <th>Location</th> </tr> </thead> <tbody> <tr> <td>Stigma Sp. z o.o.</td> <td>204 MW</td> <td>2022</td> <td>Zwartowo</td> </tr> <tr> <td>ZE PAK</td> <td>70 MW</td> <td>2021</td> <td>gm. Brudzew</td> </tr> <tr> <td>Altemus Energy Group</td> <td>65 MW</td> <td>2021</td> <td>gm. Witnica</td> </tr> <tr> <td>Better Energy</td> <td>30 MW</td> <td>2022</td> <td>Żydowo/Polanów</td> </tr> <tr> <td>Better Energy</td> <td>30 MW</td> <td>2021</td> <td>Postomino</td> </tr> </tbody> </table> <p>Source: Official information on the results of the RES auction⁶⁰</p> | Actor | Capacity | Year of commencement | Location | Stigma Sp. z o.o. | 204 MW | 2022 | Zwartowo | ZE PAK | 70 MW | 2021 | gm. Brudzew | Altemus Energy Group | 65 MW | 2021 | gm. Witnica | Better Energy | 30 MW | 2022 | Żydowo/Polanów | Better Energy | 30 MW | 2021 | Postomino |
| Actor | Capacity | Year of commencement | Location | | | | | | | | | | | | | | | | | | | | | | |
| Stigma Sp. z o.o. | 204 MW | 2022 | Zwartowo | | | | | | | | | | | | | | | | | | | | | | |
| ZE PAK | 70 MW | 2021 | gm. Brudzew | | | | | | | | | | | | | | | | | | | | | | |
| Altemus Energy Group | 65 MW | 2021 | gm. Witnica | | | | | | | | | | | | | | | | | | | | | | |
| Better Energy | 30 MW | 2022 | Żydowo/Polanów | | | | | | | | | | | | | | | | | | | | | | |
| Better Energy | 30 MW | 2021 | Postomino | | | | | | | | | | | | | | | | | | | | | | |
| International/supra-national actors | <ul style="list-style-type: none"> - European Commission - GIZ GmbH - IRENA - EBRD/World Bank | | | | | | | | | | | | | | | | | | | | | | | | |
| Academia | Warsaw University of Life Sciences | | | | | | | | | | | | | | | | | | | | | | | | |

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|---------------|---|
| | Silesia University |
| | Institute of Rural and Agricultural Development, Polish Academy of Sciences |
| | Collegium of Economic Analysis, Warsaw School of Economics |
| | Faculty of Electrical Engineering, Czestochowa University of Technology |
| | Wroclaw University of Business and Economics |
| | Partner in the EC ² project ⁶¹ |
| | AGH University of Science and Technology in Krakow |
| Others | Polish PV Association |
| | Polish Wind Energy Association |
| | The Polish Chamber of Biomass |
| | Polish National Energy Conservation Agency (KAPE) |
| | - Organized event on National Desk kick-off (COME RES project) |
| | Polish National Desk |
| | - Created under COME RES project |
| | The National Chamber of Energy Clusters |

Summarizing evaluation

Fields of Action

Supporting the development stage of Energy communities by setting up center for excellence

- It is highly unlikely that a large amount of energy communities will form without external support under current support schemes. The current support for development of Energy Cooperatives is limited, communities need experts and lawyers that will guide them through the whole process.
- The assistance needs to contain legal help, technical solutions support and community-building.
- Supporting energy communities (cooperatives, collective prosumers, energy clusters) within the framework of planned and launched support programs (Grant OZE, Energy for agriculture, KPO).

Piloting energy community projects

- Identification 1-3 community projects, supporting implementation by providing technical assistance (information, templates, co-organizing and taking part in meetings)

Publication of documents, guides, and good practices

Energy citizen Observatory

- Observation of proposed prosumer legislative changes. The Ministry of Development has announced the introduction of a new definition - the tenant prosumer. As part of the amendment to the windmill law, the Ministry of Climate and Environment announced the introduction of a virtual prosumer mechanism (as a requirement for the construction of new wind installations).

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- ¹ https://european-union.europa.eu/principles-countries-history/country-profiles/poland_en
- ² https://en.wikipedia.org/wiki/Energy_Community
- ³ <https://data.worldbank.org/indicator/SP.POP.TOTL?locations=PL&view=chart>
- ⁴ <https://data.worldbank.org/indicator/AG.LND.TOTL.K2?locations=PL&view=chart>
- ⁵ <https://data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS?locations=PL&view=chart>
- ⁶ <https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?locations=PL&view=chart>
- ⁷ https://ec.europa.eu/eurostat/databrowser/view/sdg_08_10/default/table
- ⁸ https://ec.europa.eu/eurostat/databrowser/view/EARN_SES_PUB2S__custom_1820603/default/table?lang=en
- ⁹ https://ec.europa.eu/eurostat/databrowser/view/EARN_SES_PUB2S__custom_1820603/default/table?lang=en
- ¹⁰ <https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups>
- ¹¹ <https://data.worldbank.org/indicator/SL.UEM.TOTL.ZS?locations=PL>
- ¹² <https://www.iea.org/countries/poland>. Quoted information includes energy transportation use.
- ¹³ https://www.irena.org/-/media/Files/IRENA/Agency/Statistics/Statistical_Profiles/Europe/Poland_Europe_RE_SP.pdf
- ¹⁴ [https://www.europarl.europa.eu/RegData/etudes/BRIE/2021/698766/EPRS_BRI\(2021\)698766_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2021/698766/EPRS_BRI(2021)698766_EN.pdf)
- ¹⁵ *Możliwości wykorzystania odnawialnych źródeł energii w Polsce do roku 2020*, IEO
- ¹⁶ At the beginning of the scheme's operation there were some ideas to introduce energy clusters in the system. However, no auctions for energy clusters or energy cooperatives have been performed so far. COME RES 953040 - D2.1: Assessment Report on Technical, Legal, Institutional and Policy Conditions
- ¹⁷ COME RES 953040 - D2.1: Assessment Report on Technical, Legal, Institutional and Policy Conditions
- ¹⁸ Until April 2022 most prosumers operated under a net-metering system that was based on the following assumptions: Owners of micro-installations (with capacity up to 50 kW) are allowed to exchange the surplus of energy produced under favourable conditions for gaps in energy production. The ratio is 1 to 0.8 for capacity up to 10 kW and 1 to 0.7 in the case of micro-installations between 10 and 50 kW. Support under the discount/net-metering formula is provided for prosumers for a period of 15 years, but no longer than until June 30, 2039. Source: COME RES 953040 - D2.1: Assessment Report on Technical, Legal, Institutional and Policy Conditions.
- ¹⁹ Until July 2024 published monthly, thereafter prices will be hourly
- ²⁰ COME RES 953040 - D2.1: Assessment Report on Technical, Legal, Institutional and Policy Conditions
- ²¹ Ibid.
- ²² Ibid.
- ²³ <https://www.ure.gov.pl/pl/urzed/informacje-ogolne/aktualnosci/10718,ile-zaplacimy-za-energie-elektryczna-od-stycznia-2023-roku.html>
- ²⁴ <http://isap.sejm.gov.pl/isap.nsf/DocDetails.xsp?id=wdu20160000925>
- ²⁵ The agreement concerns energy from renewables or other sources, within a distribution network with voltage below 110 kV. The cluster functions as a civil law agreement meaning it is not a legal entity and cannot conduct a business activity. The cluster nevertheless shows concern for local values, sustainability of the region and engagement of residents and municipalities. It can take the shape of a local energy community or micro-network that balances demand and supply at the local level, together with both private and public actors." COME RES 953040 - D2.1: Assessment Report on Technical, Legal, Institutional and Policy Conditions.
- ²⁶ COME RES 953040 - D2.1: Assessment Report on Technical, Legal, Institutional and Policy Conditions
- ²⁷ The entity generates electricity, biogas or heat from renewables and balances the demand for electricity, biogas or heat only for the benefit of the coop and its members. The maximum number of the coop's participants is 1,000, it can operate within a rural commune or a rural and urban commune. Its goal is to ensure energy security for its members who work with each other in the spirit of solidarity. Coops are founded on democratic principles, which means there is no hierarchy, all members are equal, and all decisions are voted on." Ibid.
- ²⁸ As participants of legal transactions, they can, on their own behalf, perform duties and acquire rights. This is in contrast to clusters, which constitute an agreement signed by independent entities represented by a coordinator. COME RES 953040 - D2.1: Assessment Report on Technical, Legal, Institutional and Policy Conditions.
- ²⁹ Art. 2 USTAWY z dnia 20 lutego 2015 r. o odnawialnych źródłach energii
- ³⁰ <https://legislacja.rcl.gov.pl/projekt/12347450/katalog/12792164#12792164>
- ³¹ <https://legislacja.gov.pl/projekt/12357005/katalog/12858155#12858155>
- ³² Ryszawska, Bożena; Rozwadowska, Magdalena; Ulatowska, Roksana; Pierzchała, Marcin; Szymański, Piotr (2021): The Power of Co-Creation in the Energy Transition—DART Model in Citizen Energy Communities Projects. In: *Energies* 14 (17), S. 5266. DOI: 10.3390/en14175266.
- ³³ Ruggiero et al. 2021. Context and agency in urban community energy initiatives: An analysis of six case studies from the Baltic Sea Region. *Energy Policy* 148, 111956
- ³⁴ COME RES 2021. REPORT ON THE POLISH NATIONAL DESK KICK-OFF MEETING
- ³⁵ COME RES 953040 - D2.1: Assessment Report on Technical, Legal, Institutional and Policy Conditions.
- ³⁶ Ruggiero et al. 2021. Context and agency in urban community energy initiatives: An analysis of six case studies from the Baltic Sea Region. *Energy Policy* 148, 111956
- ³⁷ <https://www.rescoop.eu/policy/poland-rec-cec-definitions>
- ³⁸ Ruggiero et al. 2021. Context and agency in urban community energy initiatives: An analysis of six case studies from the Baltic Sea Region. *Energy Policy* 148, 111956

³⁹ Ibid.

⁴⁰ **Energy poverty**, which typically influences the decision of Polish citizens to not switch fuel sources. For this reason, the project managers utilized the “Prosumpt Grant Programme”, knowing that financing would not originate from the citizens themselves.” Ibid.

⁴¹ <https://www.zsi.at/de/object/partner/5892>

⁴² <https://wroclaw-poludnie.pl/idealne-miejsce>

⁴³ <http://nasze-poludnie.pl/nasza-zielen/juz-kilka-wroclawskich-spoldzielni-produkuje-prad-ze-slonca/>

⁴⁴ <https://come-res.eu/>

⁴⁵ COME RES 2021. REPORT ON THE POLISH NATIONAL DESK KICK-OFF MEETING

⁴⁶ <https://www.euki.de/euki-projects/srsp/>

⁴⁷ <https://www.euki.de/wp-content/uploads/2021/07/EUKI-Broschuere-2021-DE.pdf>

⁴⁸ www.ec2project.eu

⁴⁹ <https://www.score-h2020.eu/>

⁵⁰ <https://www.score-h2020.eu/about-us/about-score/>

⁵¹ <https://www.lightness-project.eu/>

⁵² <https://www.lightness-project.eu/pilot-sites/social-housing-in-wroclaw-poland/>

⁵³ <http://www.federacja-konsumentow.org.pl/>

⁵⁴ <https://www.score-h2020.eu/about-us/score-consortium/>

⁵⁵ <https://bankwatch.org/office/pgn>

⁵⁶ <http://zielonasiec.pl/>

⁵⁷ <https://www.rescoop.eu/toolbox/community-energy-a-practical-guide-to-reclaiming-power-polish-edition>

⁵⁸ <https://www.youtube.com/watch?v=fstvB5ShppY&t=6285s>

⁵⁹ https://www.score-h2020.eu/fileadmin/score/documents/AW-Slupska_WB_-_EN_24_III_2021.pdf

⁶⁰ <https://www.ure.gov.pl/pl/oze/aukcje-oze/ogloszenia-i-wyniki-auk>

⁶¹ <https://ec2project.eu/news/meet-our-partners-iii>