Generating Electricity from Renewable Sources in CEE & SEE

Energy Industry Group

Poland

Wolf Theiss

Country General Information

Capital: Warsaw

Location: Situated in Central Europe, Poland's territory extends across several geographical regions, between latitudes 49° and 55° N, and longitudes 14° and 25° E. Poland is bordered to the north by the Baltic Sea, to the northeast by Russia and Lithuania, and to the east by Belarus and Ukraine. To the south the border follows the watershed of the Beskid (Beskidy), Carpathian (Karpaty), and Sudeten (Sudety) mountains, which separate Poland from Slovakia and the Czech Republic, while to the west the Neisse (Nysa Łużycka) and Oder (Odra) rivers define the border with Germany.

Surface: 312,696 km²

Population: 37,677,000

Climate: continental, with four (4) distinct seasons.

Resources: Poland has substantial agricultural and mineral resources. It has the world's fifth (5th) largest proven reserves of hard and brown coal, in addition to deposits of copper, sulphur, zinc, lead, silver, magnesium, and rock salt. There is natural gas and also potentially useful deposits of chalk, kaolin, clays, and potash.

Electricity Grid: The Polish transmission grid, as at the end of 2023 has over 303 400 kV and 220 kV lines, with a length of 15,964 km, as well as several 400kV DC submarine cables connecting the Polish and Swedish power systems.

Electricity Transmission, Distribution and Supply: Within the territory of the Republic of Poland there is one (1) electricity transmission system operator – Polskie Sieci Elektroenergetyczne S.A. (PSE S.A.); with sole ownership by the State Treasury of Poland. There are five (5) major electricity distribution system operators: Stoen Operator sp. z o.o., ENERGA-Operator S.A., ENEA Operator Sp. z o.o., TAURON Dystrybucja S.A. and PGE Dystrybucja S.A.

Official Language(s): Polish

EU Member: since 1 May 2004.

NATO Member: since 12 March 1999.

United Nations Member: since 24 October 1945.

Currency: Polish złoty (PLN). Poland does not use the euro as its currency. However, under the terms of the Treaty of Accession with the European Union, all new Member States "shall participate in the Economic and Monetary Union from the date of accession as a Member State with a derogation", which means that Poland is obligated to eventually replace its currency, the złoty, with the Euro.

Schengen: Poland is a member of the Schengen area.

Political System, Administrative Organisation and Economy: Poland is a multi-party democratic republic with a two (2) chamber parliament. The Head of State is the President, elected by a majority of votes for a five (5) year term. The upper parliamentary chamber is the Senate, with one hundred (100) senators; whereas the lower chamber is the Sejm, which has four hundred and sixty (460) seats. Parliament is chosen by a majority of the electorate for a four (4) year term. The state's internal and foreign policy is decided by the government, i.e. the Council of Ministers, whose activities are directed by the President of the Council of Ministers, i.e. the Prime Minister. The executive officer for government administration and the government's representative in the voivodships is the voivode. In addition to a central level administration Poland is divided into 3 local administrations: 2477 gminas (municipalities), 380 powiats (districts) and 16 voivodships (regions).

1. Defined Terms

10H rule	The minimum distance between a wind turbine and a residential housing which is 10 times the tip height of a turbine (in practice it equals approx. 2 km);
Building Permit	Administrative deed issued by the head of the powiat (district) where the RES-Electricity facility will be built;
CfD	A contract for difference – a state aid instrument in the form of a legal guarantee of the negative balance between the prices of electricity the investor earns on the market and the guaranteed price of electricity granted by the President of the ERO for a defined period;
Licence	Administrative deed issued by the President of the ERO, authorising the generation of electricity;
OSW Act	The Act on Promotion the Generation of Electricity in Offshore Wind Farms of December 17, 2020 (as amended);
President of the ERO	The President of the Energy Regulatory Office – the regulatory authority for the energy market in Poland;
RES Act	The Renewable Energy Sources Act of February 20, 2015 (as amended);
RES Electricity	Electricity obtained from renewable sources such as wind, solar, aerothermal, geothermal, hydrothermal, hydraulic, biomass and biogas;
RES Facility	An electricity generation facility using renewable sources such as wind, solar, aerothermal, geothermal, hydrothermal, hydraulic, biomass and/or biogas;
RES Support Scheme	State-aid scheme approved by the European Commission based either on (i) green certificates ("GCs") or (ii) CfD auctions (the "Auction Scheme").

2. Market Landscape

In 2023, Poland produced almost 166 TWh of electricity, of which 44 TWh came from RES Facilities (half supplied by onshore wind farms). The share of electricity generation through coal in Poland in 2023 fell to 63%, the share of electricity generation through renewables rose to 27% and the share of generation through gas reached 10%. While the share of gas remains at this level, we have already seen that coal and renewables have shown the fastest changes ever in 2020. Extremely high levels of electricity prices in 2022 and 2023, combined with an upcoming phase out of coal fired electricity plants has turned Poland into one of the biggest RES Facilities construction sites in Europe. The statutory electricity price control measures applied in 2023 on electricity generation were lifted on January 1, 2024. The rapid growth of solar projects has caused the Polish market to experience its first ever case of negative electricity prices in 2023.

With an unusually high share of lignite and hard coal in the Polish energy mix (when compared to other EU members states) the new government of Poland, which took over on December 13, 2023, must significantly revive and update its national energy policy. It must set new targets for the full decarbonisation of the entire economy by 2040, as recently proposed by the European Commission. The parties forming the new government, campaigned on the promise of defining a new energy policy document by the end of 2024, and the rapid growth of nuclear and RES Electricity generation, along with a controlled phase out of coal and lignite.

Experts emphasise that the development of the hydrogen market will continue, with the problem of balancing supply and demand. The relatively few programmes or subsidies aimed directly at hydrogen consumers will be key to the increased use of this new fuel and thus meeting regulatory targets. In addition, Poland's burgeoning ESG policy is only just beginning to function effectively, which is in line with the expectations of foreign investors who require this, in order to engage in Polish energy projects.

It is estimated that the Polish energy sector requires PLN 1.3 - 1.7 trillion of investment by 2030. Within this amount, experts include: (i) spending on investments in the development of new energy sources, (including a massive offshore wind program); (ii) development of both large-scale nuclear electricity generation facilities and SMRs; (iii) investment in upgrades and extensions of electricity and gas transmission and distribution networks; (iv) energy storage; and (v) green hydrogen investments.

3. The Market Status

3.1 The Legal Framework for the RES Support Scheme

The first Polish RES Support Scheme was introduced into the Energy Law in 2005. This scheme was based on green certificates ("GCs"). RES Facilities commissioned before 31 July 2016 could benefit from this RES Support Scheme based on GCs. However, GCs are being slowly phased out in Poland. GCs can only be issued for fifteen (15) years from the date of commissioning of the RES Facility for commercial operation.

In 2015, a new RES Support Scheme was introduced based on the CfDs. This scheme guarantees that for each MWh delivered to the grid, the price earned on the electricity market by the RES Facility is topped up to the level of the price guaranteed in the CfD. CfDs are awarded through competitive auctions organised yearly by the President of the ERO. The bidder determines the price for the period of up to 15 years for the needed duration of the CfD and the planned annual electricity production output. Auction winners are selected based on the lowest price until the electricity auction volume for a particular year is exhausted.

Small projects with a capacity between 0.5-1MW are awarded to regular electricity purchase agreements with authorised power trading companies in separate auctions. Both CfDs and PPAs can last for a maximum period of 15 years. Auctions are scheduled yearly until 2027. Every year, the government defines the number of MWh of electricity to be auctioned in a particular year and the maximum price for each RES technology that can be offered in the auction bids. To participate in the auction, planned RES Facilities must be preapproved and submit collateral. In order to receive a preapproval, the RES Facility must achieve the ready-to-build stage (i.e. obtain a final Building Permit) and have secured a grid connection. The auction certificate is valid for twelve (12) months.

The auction winner must commence RES Electricity generation within the deadline defined in his auction bid, that must not be longer that the deadline defined in the RES Act for a particular technology counted from the auction date, (i.e.: (i) 24 months for solar, (ii) 33 months for onshore wind).

The authority responsible for settlements and negative balance payments is a fully state-owned agent - Zarządca Rozliczeń SA. Settlements of the balance take place monthly based on the filed negative balance support payment request. Zarządca Rozliczeń is obligated to pay out the amount of the negative balance within thirty (30) days from the date of submission of the negative balance payment request. If the value of the RES-Electricity that was sold based on the market price is higher than its value based on the auction bid price, no payment is made, and the balance is credited the following month. If, at the end of the entire settlement period, the balance is still positive, the amount of the positive balance shall be paid by the RES Electricity producer to Zarządca Rozliczeń. The bid price is adjusted yearly for inflation.

The meeting of the bid obligation to produce the declared volume of RES Electricity is verified by the President of the ERO every three (3) years (for projects commissioned after 2021). The auction winner is under the obligation to deliver to the grid and sell at least 85% of the RES Electricity volume declared in the auction bid for 3 consecutive years. Failure to meet the minimum volume delivery obligation is subject to a financial penalty levied and collected by the President of the ERO on the value of the missing RES Electricity.

Almost 88 TWh of RES Electricity with a total value of approximately PLN 40.8 billion was allocated for sale in the 2023 auctions, However, the auctions resulted in a total of less than 6 TWh (6.8 per cent) of RES Electricity contracted with a value of approximately PLN 2 billion (4.8 per cent). Of the winning bids (200), more than 98 per cent were photovoltaic installations (197), with the remainder being wind installations (3). In 2023, all auctions were dedicated to new installations. In November 2023 alone, of the seven auctions held, only 2 were successful.

The auction for photovoltaic and wind installations of 1 MW or less attracted the most interest. It was joined by 80 generators submitting 163 bids - all bids came from entrepreneurs investing in photovoltaic installations. More than PLN 3.8 billion was earmarked for the purchase of 11.25 TWh of energy.

As a result of the settlement of the above auction, 11% of the energy volume (approximately 1.2 TWh) was sold under 133 bids submitted by 56 generators, with a total value of over PLN 413 million, which is less than 11% of the total value of the energy to be sold. The total capacity of PV installations shall be around 123 MW.

The reference price was PLN 414/MWh and the minimum price at which energy was sold was PLN 284.95/MWh. The maximum price at which energy was sold was 355 PLN/MWh. No wind power generators joined the auction. There was an insufficient number of bids in auctions dedicated to hydroelectric power plants, agricultural biogas plants and installations using biomass and non-agricultural biogas.

Due to the lack of the required number of bids, the auctions for installations using only biomass for electricity generation (including biomass combustion installations, multi-fuel installations, thermal waste conversion hybrid systems) or exclusively non-agricultural biogas (including exclusively landfill biogas or exclusively sewage treatment plant biogas), for new agricultural biogas plants with a capacity greater than 1 MW, as well as for installations using bioliquids, geothermal energy and hydropower, ended with no winners announced, as the RES Act requires a submission of at least three valid bids.

4. The RES Support Scheme – Recent Changes

the September 2023 amendment to the RES Act introduced changes concerning, among other things, energy clusters, i cable pooling and new regulations for direct lines, as well as solutions for offshore wind, biomethane, operational support for RES and hybrid installations. As of August 2024, end customers may benefit from dynamic prices of electricity (i.e. the prices that can change on an hourly basis, which should encourage consumption of electricity when the offered prices are at their lowest.

The amendment introduced a definition of biomethane, a register of biogas producers and removed support for biogas in the form of certificates of origin. It also established operational support for biomethane and added to the catalogue of gaseous fuels. It has also regulated energy carriers such as renewable hydrogen or cooling.

The definition of an energy cluster, which must include at least one local authority, has been amended and the scope of its activities has been extended to include energy storage. Clusters will be able to operate in one county, five neighbouring municipalities within a service area of a single distribution grid operator. The regulations also introduced a register of clusters. By the end of 2026, at least 30%

of the energy produced and fed into the grid by the parties to the cluster agreement must come from RES, and the total capacity of the installations put into operation in the energy cluster must not exceed 150 MW. During the year, it must be possible to cover no less than 40% of the total annual demand of the parties to the energy cluster.

Support has been introduced for energy clusters in the form of discounts to distribution charges, charges related to support schemes for RES, high-efficiency cogeneration and energy efficiency, which is expected to accelerate their development. Provisions have also been included to streamline the activities of energy cooperatives, which operate based on registration through a register kept by the Director General of the National Centre for Agricultural Support.

The support system dedicated to biomethane generators uses a market price subsidy model, modelled on the feed in tariff system providing additional payments to the market price received, up to the guaranteed level of the electricity price. Obtaining support requires a certificate from the President of the ERO. The period of support in this system is 20 years from the first day of sale of biomethane covered by the support scheme, but no later than 30 June 2048.

The guarantees of origin catalogue has been extended to include those issued for biomethane, heat or cooling, renewable hydrogen, biogas and agricultural biogas. The President of the ERO is now able to join the Association of Issuing Bodies (AIB), an association of entities issuing guarantees of origin, which is expected to increase the attractiveness of these investments in Poland.

5. Solar Projects

At the end of 2023, the total capacity of photovoltaic RES Facilities exceeded the 17GW threshold, adding more than 4 GW compared to 2022 and accounting for 60% of operating renewable RES Facilities.

The 2023 amendment to the Construction Law increased the capacity of photovoltaic installations that are not required to obtain a Building Permit from 50 to 150 kW. In addition, as part of the National Reconstruction Plan and the ‘My Electricity’ programme (more on this later in the Guide), significant funds are planned for green investments in Poland in the coming years.

However, the development of solar projects may slow down significantly mostly due of lack of available interconnection capacity. This is anticipated despite recent changes to the way in which household PV micro-installations are billed - from so-called net-metering to the less favourable net-billing. Interest among homeowners to install their own rooftop PV RES facilities remains significant.

6. Onshore Wind Projects

The Wind Farm Investment Act of 2016 introduced the rule that a wind farm may not be located in the vicinity of a residential building that is within a distance equal to 10 times the height of the wind turbine, including the rotor – thus earning the name the "10H Act". The 10H Act left only 2% of Polish territory available for wind farm development , which has effectively meant a total ban on the development of new onshore wind farms. Some wind farms were grandfathered in due to being able to receive a permit for use within 5 years of the date of the 10H Act coming into force or having won auctions involving CfDs for onshore wind farms.

At the beginning of 2023, work was undertaken on an amendment to the 10H Act to liberalise the 10H rule. The amendment was passed in the summer of 2023 that kept the 10H rule in principle, however, the amendment granted local authorities the right to agree on locations of wind farms at a distance of not less than 700 metres under certain conditions. The changes will allow for an additional 4 GW of new onshore wind energy capacity. However, the relatively long period when the 10H rule was fully in force has effectively frozen the development of onshore wind projects. It should take at least two to three years before new wind power projects will commence construction, and only if grid operators allow for the interconnection of these new capacities. The new government announced its priority to change the 700m distance to 500m, which was strongly advocated by the wind power community. The introduction of a distance of 500m would allow for an additional 4GW of onshore wind projects to be developed.

Despite all these recent difficulties, the installed capacity of onshore wind power plants in Poland is 9,107 MW, which ranks Poland third in the European Union in this respect.

7. Offshore Wind Projects

Poland introduced the separate RES Support Scheme for offshore wind farms under the offshore wind (OSW) Act. The development of OSW projects is allowed only in the Polish special economic zone (**"SEZ"**) of the Baltic Sea. Under the OSW Act, offshore wind farms (**"OSW Farms"**) which were the most advanced in their development (**"Phase I Projects"**) were entitled to apply for CfDs no later than March 31, 2021. OSW Farm CfDs are awarded for up 25 years. The investor declares the level of a maximum price of electricity denominated in PLN/MWh. The maximum amount of electricity to be covered by the CfD is equal to 100,000MWh per each MW of capacity of the OSW Farm. The price must not be higher than the maximum price defined by the Minister of Climate and Environment, pursuant to the criteria defined in the OSW Act that was set on March 30, 2021 at the level of 319.60PLN/MWh (the **"Maximum Price"**). OSW Farms with a final environmental decision apply to the European Commission via the President of the ERO for an individual approval of the state aid granted under the OSW Act. In the next step, the President of the ERO issues an amendment to the decision granting a CfD, this time defining the individual strike price of electricity in the CfD (hereinafter the **"Strike Price"**). Most of the Phase I Projects have received their individual Strike Price decisions and are about to begin construction.

Amendments made at the end of 2022 introduced changes into the OSW Act, which came into force on January 1, 2024. Now the Strike Price will be adjusted for inflation from 2022 using the 2021 CPI inflation rate and followed by adjustments for each following consecutive year of the CfD. To accommodate EUR inflation, the amendment introduced the right of the investor to request the percentage of the Strike Price to be denominated in EUR. This request must be filed with the Zarządca Rozliczeń no later than 30 days before the date of filing of the first request for payment of the negative balance. This EUR denominated part of the Strike Price is first adjusted based on the CPI inflation rate in PLN. Later, the adjusted PLN Strike Price is converted into EUR using the EUR/PLN exchange rate applicable in 2021, when the Maximum Price was defined. In the next step, the EUR denominated Strike Price is converted from EUR to PLN again, but this time using the EUR/PLN average exchange rate applicable a month before the date of the request for payment of the negative balance. The investor is entitled to change the percentage of the Strike Price denominated in EUR once more.

CfDs for any other OSW Farms will be allocated via separate offshore wind auctions with the assigned capacity of projects and the Maximum Price. Following the 2023 amendment to the OSW Act, the first OSW Farm CfD auction will take place in 2025 for 4GW, followed by 4 GW in 2027, 2 GW in 2029, 2 GW in 2031 and 2 GW in 2032 (if there was some capacity not allocated in the earlier auctions). The bidders are preapproved by the President of the ERO if they hold a seabed permit, at least preliminary interconnection conditions and/or an interconnection agreement with the transmission system operator, along with an environmental decision and having placed a bid deposit. The bids are selected basing on the lowest price.

In 2023, the Polish government completed a process of allocation of a set of seabed permits to OSW Farms for an additional 10 sites of the Polish SEZ in a competitive process. All permits were awarded to 2 state-controlled companies (5 to PGE for 3.9GW and 5 to Orlen for 5.9GW). PGE holds one more 0.9GW permit awarded earlier, and privately owned Polenergia holds a 1.56GW permit as well. Some of the Phase II permits were challenged in courts by competing investors, so it is still not clear if Orlen and PGE will remain seabed permit holders, as these cases have not yet been finally decided.

8. Corporate Power Purchase Agreements (PPAs)

The legal regulation of PPAs is one of the most important developments on the Polish market in 2023, and experts predict it will flourish in the near future.

The number of PPAs continues to grow on the Polish market. Last year, more than 20 large corporate PPAs were signed, and experts predict an increase in interest in this type of corporate PPAs in the coming years.

According to calculations, the 10 largest corporate PPAs last year contracted energy from wind and solar installations of almost 800 MW. In terms of installation capacity, the largest PPA deal announced last year was for the 137 MW Silesia 2 wind farm. Contracts for approximately 186 GWh and 400 GWh of energy per year were also signed.

PPAs are concluded mainly due to financial (stable, predictable price) and legislative factors. The rules for concluding PPAs have been legally regulated in Poland following the implementation in 2023 of part of the EU RED II directive on renewable energy sources. The possibility of the direct sale of energy by the producer to the consumer was regulated, as well as the elements necessary to conclude a contract.

Poland recorded among the highest average PPA prices last year at 110 €/MWh.

9. Energy Storage

The Ministry of Climate and Environment and the National Fund for Environmental Protection and Water Management are implementing the 'My Current 5.0' scheme, which aims to promote sustainable energy sources, including photovoltaics and energy storage.

The scheme has a budget of PLN 950 million and a maximum grant of PLN 16,000 for the purchase and installation of an energy storage facility with a capacity of at least 2 kWh. In 2024, investors will be able to receive a subsidy of up to 50% of the eligible costs related to purchasing and installing energy storage. The subsidy is available to three groups of investors who meet the relevant criteria set out in the scheme.

10. Hydrogen

In Poland, the Polish Hydrogen Strategy was adopted in 2021 with the aim to have it implemented by 2040. It envisages the creation of at least 32 hydrogen stations and 100-250 hydrogen-powered buses by 2025, as well as achieving a low-emission hydrogen plant capacity of 5 MW.

In implementing this plan, the first publicly accessible hydrogen station in the country was opened in Warsaw in September 2023 as part of an initiative supported by the National Fund for Environmental Protection and Water Management. The first hydrogen station is private - used to power a fleet of Hyundai Nexo cars imported from Germany. In Poland, only one hydrogen car model of the Toyota Mirai brand is available for purchase. At the end of August 2023, there were 203 hydrogen-powered vehicles in Poland, 10 of which were buses.

By June 2024, more hydrogen stations are planned to be launched in other locations in Poland, including Gdansk, Gdynia, Katowice, Wroclaw, Tychy, Walbrzych, among others. The cost of construction is estimated at PLN 54.7 million (20 million of which is to be financed by the National Fund for Environmental Protection and Water Management). Orlen wants to build as many as 57 H2 stations across the country, plus 28 stations in the Czech Republic and 26 in Slovakia over the next seven years.

In addition, the construction of zero-emission railway infrastructure is also planned over the next few years. It is meant to partially replace diesel trains and locomotives with zero-emission variants by 2030.

11. Support Scheme for Cogeneration

On 14 December 2018, Poland adopted a scheme to support high-efficiency cogeneration. The scheme will support combined heat and power (**"CHP"**) installations connected to district heating networks in Poland. On 15 April 2019, the European Commission approved this scheme under EU State Aid rules. The aim of the Polish cogeneration scheme is to contribute to energy efficiency and lower the levels of CO_2 emissions, in line with the EU environmental objectives and the EU climate change goals.

The scheme, with an annual budget of EUR 500 million, will run until 31 December 2028. The support may be granted to new and refurbished high-efficiency CHP installations, as well as to existing gas-fired highly efficient CHP installations. It will also be open to generators in other Member States.

The high-efficiency CHP installations benefitting from the scheme will receive support through a premium on top of the market price (cogeneration premium). The level of the cogeneration premium will be set either in a competitive bidding process or (in exceptional and clearly defined cases), determined administratively at a level covering the difference between the generation costs and the market price of electricity. The cogeneration premium will be granted until the full depreciation of the installations it supports, for a maximum period of fifteen (15) years.

In 2022, auctions for the cogeneration premium for the sale of electricity from high-efficiency CHP installations were conducted in each quarter (in March, June, September and December). Each investor may submit more than one bid at each auction (provided that they are for different cogeneration units). The auction is won by those participants who bid for the lowest cogeneration premium (i.e. the subsidy for electricity sold from high-efficiency cogeneration) and whose bids in total do not exceed 100% of the value or quantity of the electricity specified in the auction announcement and 80 percent of the quantity of electricity covered by all submitted bids. In 2022, the maximum amount of electricity from high-efficiency cogeneration that could be sold under the cogeneration premium was 18 TWh.

For the purpose of conducting the auction, reference values are fixed. These values set the maximum amount of the cogeneration premium, in PLN per MWh, that an auction participant may bid for electricity produced from high-efficiency cogeneration that is injected into the grid and sold.

12. Biocomponents / Biofuels

In 2023, the possibility of using a reduction factor of 0.82 was introduced for another year, generating a significant increase in the use of domestic biocomponent production capacity. As a result, the demand for local raw materials for biocomponent production supplied by domestic agricultural producers has stabilised.

In addition, the mandatory blending for diesel was lowered to 5.2%, the limit on the possibility of using liquid bio-components in the implementation of the NIT was raised to 0.9% and the limit on the use of bio-components produced from certain raw materials was raised to 0.5%.

However, the Polish government is working to amend the Act on bio-components and liquid biofuels and the Act on the system of monitoring and controlling fuel quality, introducing regulation of the domestic biofuel sector regarding the obligation to use bio-components added to transport fuels. As a result of these anticipated amendments, a new type of petrol with an increased proportion of biocomponents is to be introduced in 2024.

13. Expected changes in 2024

13.1 Changes to 10H Rule

Pursuant to the declaration of the government, the change of a minimum distance exception of the 10H rule from 700m to 500m is expected.

13.2 New changes regarding Biogas and Biomethane

As indicated in the National Energy and Climate Plan 2021-2030, the energy potential of the agricultural biogas sector alone is estimated to be more than 7.8 bcm per year.

As the current legal regulations do not correspond to the actual needs in the field of the operation of biomethane and biogas facilities, amendments to the RES Act indicate both the possibility of feeding energy into gas networks and transporting it by means of transport other than gas networks, or using it to refuel motor vehicles in a direct manner (i.e. without having to transport the biomethane from the place of its production), as well as clarifying the definition of agricultural biogas itself.

A definition of biomethane has also been introduced into the law, the guarantee of origin system has been extended to biomethane, the range of permissible differences between the average combustion heat value of gaseous fuels for a given day and the combustion heat value of gaseous fuels determined at any point in a given area has been increased from 3 per cent to 4 per cent in the case of injecting biomethane into gas networks, and a support system has been introduced for biomethane installations with an installed capacity of no more than 1 MW.

In addition, it is anticipated that civic energy communities will be created. These will be authorised to operate in the following areas: generation, distribution, sale, trading, aggregation, storage of energy, implementation of energy efficiency improvement projects, provision of other energy services (including flexibility services) or production, consumption, storage or the sale of biogas, agricultural biogas, biomass and biomass of agricultural origin.

14. Changes to the Energy Law and the RES Act

The new government in Poland has also announced a significant reform of the Energy Law and the RES Act, in order to clarify and simplify existing provisions and allow for a full implantation of REpowerEU. Those provisions of law governing green hydrogen market development and Carbon dioxide capture and transmission will be considered. It is likely that nuclear projects may receive support in the form of CfDs. A special governmental committee will be formed to elaborate the draft amendments.

15. Energy for Rural Areas

Rural Energy is a subsidy scheme for increasing the use of RES in rural areas. Support in the form of loans or grants will be aimed at individual farmers, agricultural energy cooperatives and energy cooperatives made up of businesses. The call will last until 29 February 2024 or until the funds are exhausted. Under the first call, the pool of available funds is PLN 1 billion.

Funding from the Energy for Villages scheme can be obtained for:

- photovoltaic and wind power plants of more than 50 kW and no more than 1 MW;
- hydroelectric power plants and agricultural biogas plants with a capacity of more than 10 kW and no more than 1 MW;
- energy storage facilities provided they are integrated with the generation source being developed as part of the investment.

Energy cooperatives or its members can receive funding for the following investments:

- photovoltaic, wind, hydroelectric and biogas power plants of more than 10 kW, not exceeding 10 MW;
- energy storage facilities on condition that they are integrated with the generating source implemented as part of the investment.

The maximum amount of subsidy for the scheme is PLN 20 million. Support in the form of a grant is not available for the construction of photovoltaic installations or wind projects, but only for biogas plants and hydroelectric power plants. The maximum share of the cost of the energy source that the subsidy can amount to is 45%. Exceptions are available for micro and small enterprises, which can receive a subsidy of up to 65% of eligible costs, and medium-sized enterprises for which the threshold for a non-refundable subsidy is set at 55%.

The maximum amount of a repayable loan is PLN 25 million. The loan period is up to 15 years and a 12-month grace period is possible.

15.1 Nuclear Power Plants

Poland has no operating nuclear power plants. However, it is working to develop both large-scale nuclear power plants as well as small modular reactors (SMRs). The commissioning of the first unit of the first nuclear power plant in Poland is planned to take place by 2033, however delays are likely to occur. Five new nuclear units are planned to be commissioned at intervals of 2-3 years. Without the commissioning of these new energy sources, there will be further shortfalls in meeting the increasing demand for power during this period. According to Polish government estimates, nuclear units with a total capacity of 6-9 GW should be operational in Poland by 2040.

By the end of 2023, various developers announced plans to build a total of 79 SMRs at 25 locations in Poland by 2038, including sites near Ostrołęka, Włocławek, Stawów Monowskie near Oświęcim, Dąbrowa Górnicza, Nowa Huta, the Tarnobrzeg - Stalowa Wola Special Economic Zone and Warsaw. Poland has a chance to become one of the first countries to host operating SMR.

The state-owned company Polskie Elektrownie Jądrowe signed an Engineering Service Contract with the Westinghouse-Bechtel consortium at the end of September 2023 for the design of a power plant with three AP1000 reactors on the Baltic Sea coast. The cost of this contract is estimated to be around PLN 1.5 billion and most of the work will take place in 2024. The construction project is expected to be ready by early 2025 and the main EPC contract is expected to be signed by the end of 2025. However, the lack of an official scheme defining the way the power from this nuclear plant will be sold, and how to finance such a large scale undertaking, is still to be decided.

The next nuclear power plant is planned in Pątnow in the municipality of Konin. It is expected to start operating in 2035 and will be based on Korean technology equipped with at least two ARP1400 reactors with a total capacity of 2,800 MW, which is expected to supply around 22 TWh of energy annually, i.e. 12% of Poland's current electricity demand.

16. Other Changes

The Polish government plans to allocate more than €5bn from the National Recovery Plan to energy companies for the development of RES, energy efficiency and energy storage projects. 4.8 billion euro will go to offshore wind energy. Disbursement from the funds can be expected to start in April 2024.

The funds will therefore cover the expenses of the final recipients of the support, including the green transformation. They will also allow for the launch of further investments in these and similar areas, such as the purchase of trams, green urban transformation projects or energy efficiency improvements in companies.

Approximately EUR 9 billion is to be allocated for the green urban transformation, EUR 300 million for energy efficiency and RES in enterprises, approximately EUR 35 million for energy storage (pumped storage power station) and an offshore wind support fund of approximately EUR 4.8 billion.

Ultimately, of the more than €22.5 billion in REPowerEU loans, €21.8 billion will be placed in financial instruments for offshore wind and the energy system, with the possibility of more projects after 2026.

Authors:

Igor Muszyński
Partner
E igor.muszynski@wolftheiss.com
T +48 22 378 8966

Daria Goliszewska
Associate
E daria.goliszewska@wolftheiss.com
T +48 22 378 9022

Wolf Theiss ul. Marszałkowska 107, 00-110 Warsaw, Poland
T +48 22 378 8900 **E** warszawa@wolftheiss.com