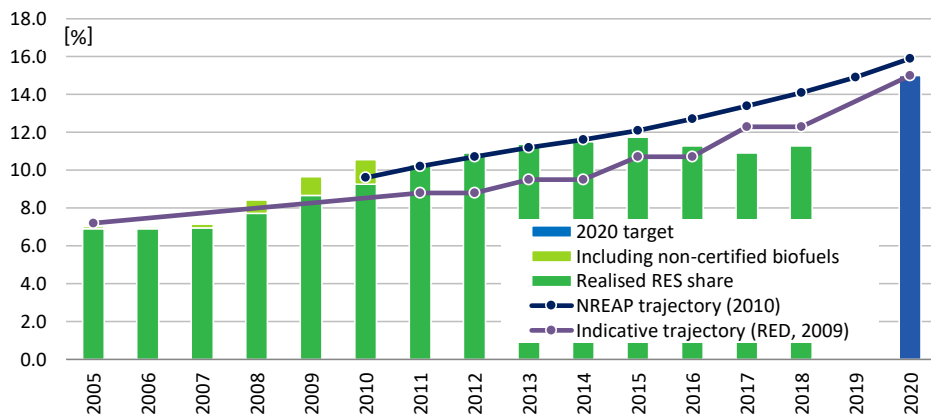


Summary

To date, the main support scheme for the promotion of renewable electricity is encompassed by tender based feed-in tariffs or floating feed-in premiums. The main support scheme until mid-2016, a green certificates based renewable quota scheme, will be completely phased out by the end of 2021 at the earliest. Furthermore, renewable electricity and heat is fostered by a slate of fiscal instruments including tax exemptions, subsidies and concessional loans. Heat generated from renewable energy sources is also stimulated by a priority purchase obligation. Renewable transport fuels are promoted by way of a biofuels quota scheme.



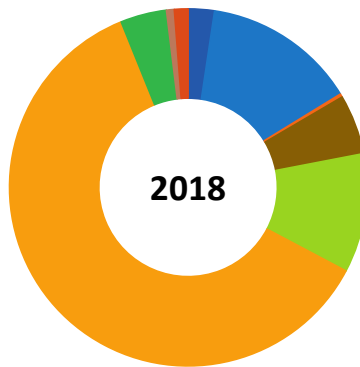
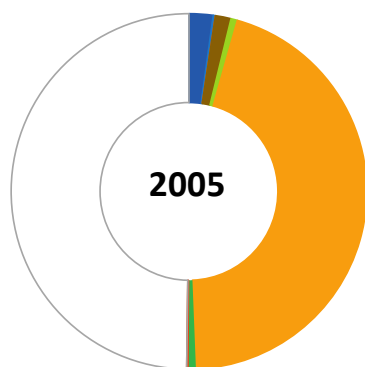
Source: EEA, Eurostat

Abbreviations used:

RES: renewable energy sources
 RES-E: renewable electricity
 RES-H/C: renewable heating/cooling
 RES-T: renewable transport fuels

Data for 2018

Overall RES share:	11.3%	Avoided fossil fuels:	11.8 [Mtoe]
Overall RES 2020 target:	15.0%	Avoided fuel expenses:	2.5 [billion euro]
Share RES-E in electricity:	13.0%	RES Turnover:	3800 [MEUR]
Share RES-T in transport:	5.6%	RES Employment:	85800 [jobs]
Share RES-H/C in heating:	14.8%		



- Hydropower
- Wind power
- Solar PV, CSP and water heaters
- Solid biomass
- Biofuels in transport
- Renewable heat consumed
- Renewable heat derived
- Heat pumps
- All other renewables
- Gap towards 2018

Source: Eurostat, 2020.

	2005		2018		
	Energy		Energy	Employment	Turnover
Hydropower	184.3 ktOE		200.8 ktOE	1000 Jobs	80 MEUR
Wind power	17.5 ktOE		1174.2 ktOE	3000 Jobs	280 MEUR
Solar PV, CSP and water heaters	0.0 ktOE		25.8 ktOE	5300 Jobs	390 MEUR
Solid biomass	120.4 ktOE		458.6 ktOE	29600 Jobs	1210 MEUR
Biofuels in transport	49.7 ktOE		912.4 ktOE	41200 Jobs	1480 MEUR
Renewable heat consumed	3806.8 ktOE		5173.8 ktOE		
Renewable heat derived	60.8 ktOE		353.5 ktOE		
Heat pumps	0.0 ktOE		59.7 ktOE	2600 Jobs	200 MEUR
All other renewables	9.6 ktOE		104.3 ktOE	3100 Jobs	160 MEUR
Gap towards 2018	4214.1 ktOE				

Source: Eurostat, EurObserv'ER, 2020.

Hydropower jobs & turnover only covers 'small hydropower'. PV=Photovoltaics, CSP=Concentrated Solar Power. Biofuels in transport only covers compliant fuels (employment and turnover additionally cover the non-compliant biofuels). Derived heat includes heat produced in main activity producer plants and heat sold produced in autoproducer plants. Its counterpart is the final heat consumption in the final consumption sectors (such as households).



CURRENT RENEWABLE ENERGY POLICY

The main support scheme for *electricity from renewable sources* is a tender based scheme for feed-in tariff or feed-in premium support contingent on the technology concerned. The support eligible installations commissioned before 1 July 2016 are allowed to opt for this tender scheme or to remain in the certificates based renewable electricity quota scheme. Other support schemes are a feed-in tariff and a feed-in premium scheme, both without tenders, for biogas and small hydro installations, an excise tax exemption instrument as well as loan and subsidy schemes from the National Fund for Environmental Protection and Water Management.

To date, the following *renewable electricity support instruments* are in place:

- **A tender based scheme of guaranteed feed-in tariffs (FiT) or floating feed-in premiums (FiP)** with allocation to beneficiaries on pay-as-bid basis. Operators of installations commissioned before July 2016 are allowed to opt for this scheme or to continue participating in the Polish renewable quota scheme, the main support scheme up to mid-2016. Operators of renewable power installations that started operations after June 2016 are not allowed to benefit from the alternative renewable quota scheme. A feed-in tariff is available for sold electricity from biogas and hydro power installations under 500 kW. The tariff amounts to 90% of a pre-set reference price set for a given type of installation. Feed-in tariffs will be adjusted annually for inflation based on the consumer price index. A floating feed-in premium is available for electricity fed into the grid from biogas and hydropower installations above 500 kW and below 1 MW. The support contract period is 15 years, but does not extend beyond year 2035.
- **Technology-specific tenders based for guaranteed feed-in tariffs** for 5 technology categories with separate tenders for installations up to 1MW and those more than 1 MW on a pay-as-bid basis. Installations below 500 kW have a guarantee of purchase of their electricity by obliged retailers. The support contract period is 15 years, but does not extend beyond year 2035.
- **A green certificates based renewable electricity quota scheme.** This scheme benefits those eligible operators of renewable power generation installations commissioned before mid-2016, which opted to hang on to this scheme in lieu of transitioning to the auction based FiT/FiP scheme. In principle, this scheme is technology-neutral and it is open to all support-eligible renewable electricity technologies (with certain limitations for hydropower and biomass). So far, annual quota have been specified until year 2021. Certain actors on, or delivering to, the demand side of the electricity market, including retail electricity suppliers and companies with high electricity demand are subjected to a renewable electricity quota obligation. They need to procure a certain pre-set quota (percentage share) of their annual electricity deliveries (or electricity consumption in the case of obligated companies) from renewable energy sources. For every MWh produced by an eligible renewable power generator, the latter is issued a green certificate. Obligated actors by the renewable quota scheme have to buy and cancel (i.e. surrender to the designated certificate system operator) a sufficient quantity of green certificates to comply with their annual renewable electricity quota obligation.

- **A net metering scheme for prosumers with an installation up to 50 kW.** For installations up to 10 kW 1 kWh exported to the grid is allowed to be netted with 0.8 kWh absorbed from the grid, whilst for installation with a capacity ranging from 10 kW to 50 kW this ratio is 1 : 0.7 . Eligible are installations based on wind power, solar PV, biogas (not from agricultural origin), and biomass.
- **Sales tax exception for RES-E generators.** On electricity sales to final electricity consumers a certain excise tax is imposed. Electricity from renewable sources is exempted from this tax.
- **Soft loans and investment subsidies** from the National Fund for Environmental Protection and Water Management to support RES-E project development in general and investment in micro RES-E installations in residential buildings. Eligible for loans at 1% interest rate are installations based on wind power (40 kW_e- 2 MW_e), solar PV (40 kW_e- 1 MW_e), hydro power (40 kW_e- 5 MW_e), biogas (40 kW_e- 2 MW_e) and biomass (40 kW_e- 5 MW_e). Eligible for investment subsidies are installations up to 40 kW_e based on wind power, solar PV, biogas and biomass.

For the promotion of *renewable heat* the following instruments are used:

- **Subsidy schemes.** One scheme is run by the state development bank (Bank Gospodarstwa Krajowego), granting subsidies to managers and owners of buildings (all renewable heating technologies eligible). Another two schemes are for small-scale heating installations (≤ 300 kW_t; aerothermic heat pumps, biogas and biomass only) run respectively by the National Fund for Environmental Protection and Water Management with local public agencies as targeted beneficiaries and by banks targeted at one-family and multi-family houses.
- **Soft loan schemes** run by the National Fund for Environmental Protection and Water Management to support investments in renewable heat installations. This authority grants low interest loans to support the purchase and installation of renewable heating installations by enterprises in general as well as utilities providing collective heating services and to enterprises through a second soft loan window.
- **Priority purchase obligation.** Integrated heat utilities and heat trading entities are obliged to priority purchase of heat generated from renewable energy sources provided it is offered at a price no higher than the average price of heat from other sources supplying the network, increased by the average annual price index of consumer goods and services. In general, all technologies but geothermal energy are eligible for support.
- *Renewable transport fuels* are promoted by a **biofuels quota scheme**, applicable to both biofuels and bio-based hydrogen. The producers, importers and suppliers of fuels are obliged to meet an annual quota of biofuels in the total amount of liquid fuels produced/supplied/imported. The obligation levels are determined every three years for a period of 6 years by the Council of Ministers. Poland is a significant manufacturing country of e-buses for public transportation. In September 2019 198 e-buses were operated in Polish cities for public transportation. Battery electric vehicles and plug-in hybrids are exempt for purchasing tax until the beginning of 2021.

So far, the assessment by the European Commission of draft National Energy and Climate Plans of the Member States is available. The Commission’s assessment of the draft integrated National Energy and Climate Plan of Poland – regarding the targets for year 2030 for the share of renewable energy and gross final energy consumption only¹ – is shown in Table 1 below.

Table 1: Overview of Poland’s actual performance (2018), targets (2020), proposed contributions (2030) under the Governance Regulation, Regulation (EU) 2018/1999 and contribution ambition assessment by the European Commission, regarding the share of renewables and the level of gross final energy consumption

National targets and contributions	2018	2020	2030	Assessment of 2030 ambition level
Share of energy from renewable sources in gross final consumption of energy (%)	11.3	15.0	21.0	Below 25% (result of RES formula)
Final energy consumption (Mtoe)	71.9	76.6	62.2	Modest

Note: First final energy consumption figure pertains to year 1997 (European Commission, 2019).

Source: European Commission, (2019); Eurostat (2020a)

Based on the formula contained in Annex II of the Governance Regulation, Poland’s renewables share would have to reach the level of 25% in 2030 (European Commission, 2019) against the historical rate of 11.3% in 2018 (eurostat, 2020a). The European Commission (2019) observes that the proposed RES share by 2030 **21%** is “significantly” below the share of 25 % in 2030 that results from the formula in Annex II of the Regulation. The Commission deems the ambition level of the proposed **62.2 Mtoe final energy consumption level**, as derived from Poland’s proposed primary energy consumption level in 2030 to show a seemingly modest ambition level, considering the level of efforts required at the EU level to collectively reach the Union’s 2030 efficiency target.

Poland’s final National Energy and Climate Plan (NECP) raises the target for the renewables share by year 2030 to **21-23 %** - as compared to 21% proposed in its draft NECP – “*if additional EU funds are granted, including those addressed to a just transition*”. A 23% target share is still 2% below the rate resulting from the formula in Annex II of the Governance Regulation. Existing and additional policies Poland sets out to implement to achieve the 21-23 % target include (Government of Poland, 2019):

- Renewable energy sources in the electricity sector are supported with the use, inter alia, of an auction system... The auction system mechanisms make it possible to stimulate the development of areas with potential for the development of renewable energy sources based on economic, environmental and climate conditions, taking into account and having regard to energy security, technical criteria and the needs of local communities...

¹ Gross final energy consumption negatively affects the share of renewables: given a certain level of final consumption from renewable sources, the more total final energy consumption can be reduced, the higher share of renewables can be achieved.

- **Priority access to the network...**[A]fter 1 January 2020, installations with a capacity below 400 kW (and from 1 January 2026 below 200 kW) will continue to have priority access, as required by Regulation 2019/943 of 5 June 2019 on the internal market for electricity
- **Auctions** ...The choice of areas to be supported depends on preferences as to the stimulation of the development of RES areas, based on economic, environmental and climatic conditions and having regard to energy security; feed-in tariff system and feed-in premium system – they are targeted on sources with a relatively low capacity and applied to utilise energy which is not consumed by small producers
- **Grants, repayable aid:** a mechanism depending on local needs, mainly distributed in regions
- **Guarantees of origin:** documents confirming to the final customer that a certain amount of electricity supplied to the grid has been generated from renewable energy sources...
- **Aid mechanisms targeted on special technologies:** a solution designated for sources for which there is no competition in the market, since they are a new technology (e.g. offshore wind energy generation), but their implementation is important for the country for various reasons.

As for Poland's contribution to the EU energy efficiency target for year 2030, in its final National Energy and Climate Plan (NECP) Poland sets a target level for primary energy consumption of 91.3 Mtoe in 2030, i.e. 23% less than the corresponding PRIMES 2007 forecast (Government of Poland, 2019). This is the same ambition level as shown in Poland's draft national Energy and Climate Plan (NECP). The final NECP states that: "The projected final energy consumption until 2030 will be **around 67 Mtoe**, and therefore the measures provided for in the National Plan will lead to a reduction of final energy consumption by around 18.4 Mtoe compared to the PRIMES 2007 forecasts." This projected final energy consumption level is higher and thus indicating a lower energy efficiency ambition than the 62.2 Mtoe level foreseen in the Polish draft NECP.

OVERVIEW OF MAIN SUPPORTING POLICIES

The main RES support measures applied in Poland are epitomized in Tables 2 and 3 below. See the previous section and the notes to Table 2 for more details.

Table 2: Overview of support schemes to promote renewable energy in Poland

	NON-FISCAL SUPPORT SCHEMES						FISCAL AND OTHER STATE FUNDED INCENTIVES		
	Feed-in tariffs 1)	Feed-in premium 1)	Tenders 1)	Quota obligation with Tradable Green certificates	Quota obligation without Tradable Green certificates	Net-metering/ net-billing	Investment subsidies 2)	Tax credits mechanism 1 3)	Soft loans 4)
RES-E									
- Offshore wind	x	x	x	x			x	x	x
- Onshore wind	x	x	x	x		x	x	x	x
- Solar	x	x	x	x		x	x	x	x
- Hydro	x	x	x	x			x	x	x
- Geothermal	x	x	x	x			x	x	x
- Solid biomass	x	x	x	x		x	x	x	x
- Biogas	x	x	x	x		x	x	x	x
RES-H/C									
- Solar thermal							x		x
- Geothermal							x		x
- Biomass							x		x
- Biogas							x		x
- Small scale installations, e.g. solar thermal collects, heat pumps, biomass boilers and pellet stoves							x		x
- Others, i.e. aerothermal, hydrothermal							x		x
RES-T									
- Bio gasoline					x				
- Biodiesel					x				

1) With certain limitations all technologies are eligible to participation in tenders for feed-in tariffs and feed-in premiums. Applications for administratively determined feed-in tariffs (installations within the capacity range up to 500 kW_e) or feed-in premiums (installations within the capacity range 500-1000 kW_e) can be applied for biogas and biomass and (feed-in premium applications only) for hydro power installations.

2) Granted by the State Development Bank to enterprises (all renewable heating technologies) and by the National Fund for Environmental Protection and Water Management to prosumers for small-scale renewable heating systems (up to 300 kW_t; biogas, biomass and aérothermic heat pumps only)

3) Exemption from an excise tax on electricity sales to final consumers

4) Granted by the National Fund for Environmental Protection and Water Management for both renewable electricity and renewable heat support

Sources: RES Legal, EurObserv'ER, GSR/REN21

Table 3: Overview of main instruments used at present in Poland

Instrument	Description
Feed-in tariffs or premiums	Guaranteed electricity price or premium on top of the revenues from electricity sold, during the support contract period. The level is determined (pay-as-bid) by way of tenders. Open to operators of pre-existing RES-E installations (before 1 July 2016, when this scheme entered into force) opting for this scheme and to operators of new RES-E installations
Renewable quota scheme, certificates-based	Obligation upon electricity suppliers to surrender on the settlement day of the current year a number of certificates corresponding to a pre-set minimum share of their annual sales volume last year. Open to operators of pre-existing RES-E installations (that started production before 1 July 2016), opting to remain a beneficiary of this "old" scheme, that will be gradually phased out completely.
Investment subsidies	Available for successful applicants among project developers of RES-E and renewable heat production projects
Tax credits	RES-E producers are exempt from sales tax.
Net metering	Prosumers with micro RES-E installations can sell electricity supplied to the grid up to a certain maximum at pre-specified, favourable terms.
Soft loans	Granted by the National Fund for Environmental Protection and Water Management

For further information:

CEER, 2017. Status Review of Renewable Support Schemes in Europe.

http://www.ceer.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/CEER_PAPERS/Electricity/2017/C16-SDE-56-03%20Status%20Review%20RES%20Support%20Schemes.pdf

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EEA, 2019. Progress towards renewable energy source targets at member State and EU-28 levels. Copenhagen, 19 December https://www.eea.europa.eu/data-and-maps/daviz/actual-res-progress-indicative-trajectory-9#tab-chart_3

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<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32018R1999&from=EN>

Eurostat, 2020a. Renewable energy statistics; Share of renewable energy almost doubled between 2004 and 2018. Luxembourg, January
https://ec.europa.eu/eurostat/statistics-explained/index.php/Renewable_energy_statistics

Eurostat, 2020b. Energy consumption in 2018. Primary and final energy consumption still 5% and 3% away from 2020 targets. Luxembourg, 4 February
<https://ec.europa.eu/eurostat/documents/2995521/10341545/8-04022020-BP-EN.pdf/39dcc365-bdaa-e6f6-046d-1b4d241392ad>

Government of Poland, 2019. The National Energy and Climate Plan 2021-2030; Objectives and targets, and policies and measures. Warschau, December
https://ec.europa.eu/energy/sites/ener/files/documents/pl_final_necp_part_1_3_en.pdf
https://ec.europa.eu/energy/sites/ener/files/documents/pl_final_necp_summary_en.pdf

International Energy Agency (IEA) database on policies and measures
<https://www.iea.org/policies?topic=Renewable%20Energy>

Member State Progress Report, available at the Renewable Energy pages of the European Commission,
<http://ec.europa.eu/energy/en/topics/renewable-energy>

REN21, 2020. Global Status Report 2020. Paris, 16 June
https://www.ren21.net/wp-content/uploads/2019/05/gsr_2020_full_report_en.pdf

RES Legal database, <http://www.res-legal.eu/search-by-country/poland/>

https://ec.europa.eu/commission/sites/beta-political/files/energy-union-factsheet-poland_en.pdf
(European Commission/ DG ENER, Energy Union Factsheet Latvia, November 2017)

What is meant by ...?

Auctions for granting renewable energy support	An auction is a process of granting production or investment support to renewable energy projects based on the lowest bids by eligible project developers.
Feed-in tariff (FiT)	A support scheme which provides for a technology-specific remuneration per unit of renewable energy payable to eligible renewable energy producers. A proper, periodic review of FiT rates is often undertaken with the aim to prevent both too high FiTs so as to minimise regulatory rents, i.e. supra-normal returns and too low FiTs to preclude below-target market uptake because of FiT levels that are perceived by market participants to be less attractive. In addition, feed-in tariffs often include "tariff depression", a mechanism according to which the price (or tariff) ratchets down over time.
Feed-in premium (FiP)	A scheme which provides for a support level per unit of renewable energy to eligible renewable energy producers, typically for a period of 10-20 years, at a pre-set fixed or floating rate. The premium is typically adjusted periodically to exactly offset change in the average energy wholesale market price, based on a pre-specified benchmark market price. A floating FiP may move freely or may only be allowed to move within a pre-set interval.
Grants	Grants are non-repayable funds disbursed by one party (grant makers), often a government department, corporation, foundation or trust, to a recipient, often (but not always) a non-profit entity, educational institution, business or an individual. (Source: Wikipedia.org)
Green public procurement	In Green public procurement contracting authorities take environmental issues into account when tendering for goods or services. The goal is to reduce the impact of the procurement on human health and the environment. (Source: Wikipedia.org)
Renewable quota scheme (RQS)	A RQS mandates certain market actors (typically retail suppliers or large energy end-users) to respect a pre-set minimum share or amount of their total energy procurements from renewable sources of energy. Typically a tradable green certificate (TGC) scheme is operated to enable the obligated parties to prove their compliance with the prevailing renewable quota target by means of TGCs.
Sliding feed-in-tariff	A FiT scheme which pre-sets technology-specific declining feed-in tariffs for certain prospective vintages in line with the technology-specific learning curve, as projected by the National Regulatory Agency (NRA). Often a degression rate is used indicating the %/annum decrease in the rate level.
Soft loans	Loans at concessional (below market-based) terms, for example at sub-market-conform interest rates, made available in several Member States to stimulate certain renewable energy technologies.
Tax credits	These are amounts a tax paying entity is allowed to deduct when declaring payable taxes, for example company tax or income tax, to the tax authorities, for example the producer tax credits (PTCs) used in the United States to stimulate among others wind energy deployment.

Disclaimer

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