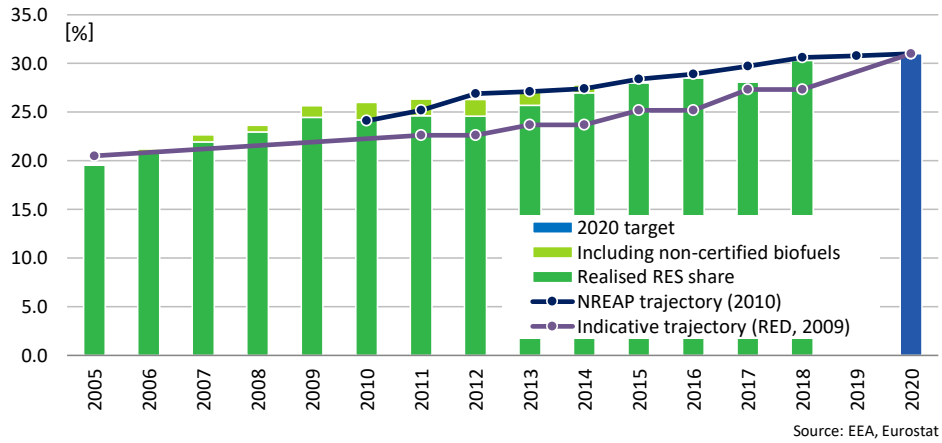
Portugal

Renewable Energy Policy Factsheet

October 2020

Summary

Electricity from renewable sources from plants commissioned before 8 November 2012 is mainly promoted through a feed-in tariff. Since then, in general new renewable power plants have to sell their electricity injected into the grid on the wholesale electricity market. They may potentially benefit from tender based guaranteed revenues. Yet so far, no such tenders have been conducted. On the other hand, a specific remuneration regime for electricity produced from small production (UPP) and self-consumption (UPAC) units, came into force in January 2015. It is based on a bidding model in which producers offer discounts to a reference tariff. Currently, no direct support mechanism or fiscal benefits are available for operators of installations producing heat from renewable sources. Two support instruments for renewable road transport fuel are a biofuel quota scheme and an exemption on a petroleum product tax to small producers of biofuels



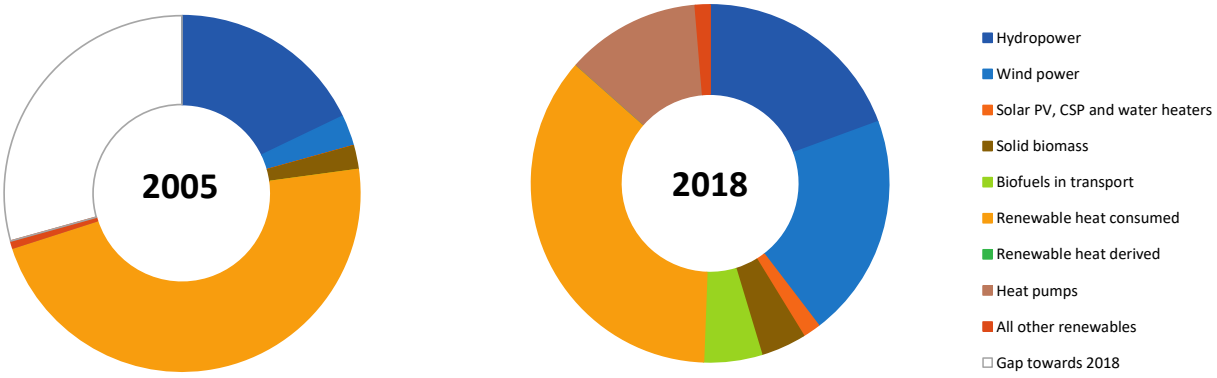
Source: EEA, Eurostat

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:	30.3%	Avoided fossil fuels:	7.9 [Mtoe]
Overall RES 2020 target:	31.0%	Avoided fuel expenses:	2.1 [billion euro]
Share RES-E in electricity:	52.2%	RES Turnover:	2550 [MEUR]
Share RES-T in transport:	9.0%	RES Employment:	35300 [jobs]
Share RES-H/C in heating:	41.2%		



Source: Eurostat, 2020.

	2005	2018		
	Energy	Energy	Employment	Turnover
Hydropower	957.9 ktoe	1039.7 ktoe	7700 Jobs	530 MEUR
Wind power	150.6 ktoe	1084.0 ktoe	2600 Jobs	280 MEUR
Solar PV, CSP and water heaters	0.3 ktoe	86.5 ktoe	2100 Jobs	130 MEUR
Solid biomass	116.1 ktoe	219.9 ktoe	7100 Jobs	610 MEUR
Biofuels in transport	0.0 ktoe	281.5 ktoe	300 Jobs	20 MEUR
Renewable heat consumed	2528.6 ktoe	1926.8 ktoe		
Renewable heat derived	0.0 ktoe	0.0 ktoe		
Heat pumps	0.0 ktoe	649.6 ktoe	13900 Jobs	880 MEUR
All other renewables	34.5 ktoe	71.2 ktoe	1600 Jobs	100 MEUR
Gap towards 2018	1571.2 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

For *renewable electricity generation* installations commissioned before 8 November 2012 the main support instrument is a scheme of administratively determined, technology-specific, feed-in tariffs. Support contract periods are technology-specific ranging from 12 to 25 years. Grid operators will pass on the (additional) cost of feed-in tariffs to final electricity consumers. Installations installed at the premises of industrial companies continue to benefit from such (non-expired) contracts.

A new support scheme was introduced in January 2015 for small renewable electricity generation installations (UPPs; capacity up to 250 kW_e) and installations dedicated to self-consumption (UPACs; capacity ranging between 200 W_e and "more than"1 MW_e). UPACs are allowed to be connected to the grid. This support scheme is based on a bidding model in which producers offer discounts to a technology-specific reference tariff which is also based on the "Z factor" reflecting the specific resource characteristics. The support contract period for the new scheme stretches out until the date that the technology-specific production cap will be reached or a technology-specific number of maximum support years, whichever is shorter. The maximum support period is e.g. the first 12, 15, 20, 25 operating years in the case of geothermal, wind power, solar PV, and biomass respectively. Beyond the support period, the plants are allowed to directly sell their production into the market. UPACs > 1 MW, which are assumed to produce for self-consumption, are not allowed to do so. UPACs with a capacity not higher than 1 MW are remunerated for electricity fed into the public grid to the tune of 90% of the electricity market price. Each support-eligible UPP and UPAC will have to enter into a supply contract with an electricity supplier. The latter will have to commit to procure the full fed-in production and to pay the remuneration due, which is to include the support remuneration due during the support contract period. For wind power and solar PV installations an support cap of 33 GWh and 34 GWh respectively obtains. Not more than 20 MW of new UPPs is allowed to be supported per year.

Certain wind power plants are eligible to opt for an alternative remuneration regime for an additional period of five or seven years after the end of the period of guaranteed remuneration. Their operators have to make an annual financial contribution to the sustainability of the national electricity system.

So far, no dedicated support scheme for *renewable heating* is currently in place. The Energy Efficiency Fund (FEE), co-funded by the EU, granted a subsidy to investments in solar water heaters in buildings in 2016, whilst another call for investment subsidy applications was open until 13 November 2018, for which among other "energy efficient" investments all renewable heating technologies in buildings were eligible

There are two support instruments for *the promotion of transport fuels from renewable energy sources*:

- a biofuels quota scheme for companies supplying transport fuels for consumption in the market. This scheme has specified annual minimum biofuel quotas for the period 2011-2020. Compliance is monitored by surrendered scheme certificates, called biofuel entitlements (TdeB's) representing 1 toe (tonne of oil equivalent). A penalty of €2000 per incompliant TdeB obtains. A request can be filed to surrender 1.5 extra TdB's in the next implementation year per incompliant TdB in the preceding implementation year.
- an tax exemption for small producers of biofuels (PPDs) from the Petrol Product Tax (ISP) with a cap of 40,000 tonnes per year

- Electric vehicles are supported by:
  - Purchase subsidies of €2500for a battery electric vehicle (BEV), of €1250 for a plug-in hybrid electric vehicle (PHEVs)
  - Reduction/exemption of registration tax and annual ownership tax
  - For companies VAT is deductible (for purchase costs < 62,500€+VAT for BEVs or < €50,000 +VAT for PHEVs)
  - BEV company cars are not taxed as part of corporate income tax
  - Local incentives include free parking in Lisbon and several other cities; a local Lisbon utility grants 1 year discount on electricity price for BEV buyers.

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 Portugal – regarding the targets for year 2030 for the share of renewable energy and gross final energy consumption only[1] – is shown below.

Table 1: Overview of Portugal'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 (%)	30.3	31.0	47.0	Above 42% (result of RES formula)
Final energy consumption (Mtoe)	16.9	17.4	17.7	Very Low

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

Based on the formula contained in Annex II of the Governance Regulation, Portugal's renewables share would have to reach the level of 42% in 2030 (European Commission, 2019) against the historical rate of 30.3% in 2018 (eurostat, 2020a). The European Commission (2019) observes that the proposed RES share by 2030 of **47%** is significantly above the share of 42 % in 2030 that results from the formula in Annex II of the Regulation. In contrast, the Commission deems the ambition level of the proposed **17.7 Mtoe** as Portugal's proposed contribution to the EU 2030 target for final energy consumption to be very low, considering the level of efforts required at the EU level to collectively reach the Union's 2030 efficiency target. In 2018 Portugal's gross final energy consumption amounted to **16.9 Mtoe**.

Portugal's final National Energy and Climate Plan (NECP) retains the ambitious target for the renewables share by year 2030, presented in its draft NECP, i.e. **47%** of gross final energy consumption (Government of Portugal, 2020). Policy outlines presented in the final NECP to reach this target in broad include:

"In relation to the *Electricity sector*, there will be strong emphasis on electrifying the consumption associated with decarbonising production by reinforcing the use of renewable energies, with particular focus on solar and onshore/offshore wind technologies, while promoting distributed production and storage, reinforcing and optimising

[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.

transport and distribution networks and promoting pilot projects (concentrated photovoltaic, stimulated geothermal and wave power)…Portugal also has enormous potential to use endogenous resources to produce electricity and thus, to ensure compliance with the goals, the objective for the electricity sector includes reinforcing exploration of this potential.

In relation to the *Heating and Cooling sector*, the role of fuel consumption in this sector is expected to reduce as energy efficiency measures and the electrification of consumption is reinforced. In this regard, it will be possible to increase the percentage of renewable energy through the greater use of biomass and renewable gases.

With respect to the *Transport sector*, there will be an emphasis on sustainable mobility and the decarbonisation of energy consumption, the promotion and reinforcement of public transport, emphasising complementarity and modal coordination, a strong push for electric mobility, the promotion of more energy efficiency measures, which have a greater impact, and the promotion of advanced biofuels and hydrogen. "

As for Portugal's contribution to the EU energy efficiency target for year 2030, in its final NECP Portugal sets an indicative interval target for gross final energy consumption of **14.4 – 14.9 Mtoe**. This is significantly more ambitious than the proposed year 2030 level of 17.7 Mtoe proposed in Portugal's draft NECP.

OVERVIEW OF MAIN SUPPORTING POLICIES

An overview of main supporting policies is provided in 2 and 3 below.

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

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

1) Operators of small scale and self-consumption renewable power installations (UPPs and UPACs) have to obtain guaranteed revenue benefits by competitive bidding in which they have to offer a discount to technology-specific reference tariffs. So far, no tenders have been conducted in which also other renewable power installations than UPPs or OPACs can participate.

Sources: RES Legal, EurObserv'ER

Table 3: Brief description of key policy instruments aimed at promoting renewables in Portugal

Instrument	*Description*
Feed-in-tariffs	Applicable to electricity from renewable sources generated in existing plants. In general, all technologies used in renewable electricity generation are eligible for support.
Remuneration system	Since 2015 applicable to new small RES power plants is based on a bidding model in which producers offer discounts to a reference tariff.
Tenders	Public tenders are to allocate support to all support-eligible renewable power installations. The regulations concerned remain to be implemented.
Obligation to use solar thermal collectors	There is the obligation to use solar thermal collectors for heating water in new buildings and buildings undergoing major refurbishments. Other forms of RES can be used as an alternative to solar thermal collectors, as well as for other purposes if they meet set efficiency criteria.
Biofuels quota scheme	Companies supplying fuels for consumption shall incorporate a certain percentage of biofuels in the fuels they supply to the market from 2011 to 2020 to be proved with TdB certificates.
Tax exemption	Small producers of biofuels benefit from a total exemption of the Petrol Product Tax.

For further information:

European Alternative Fuels Observatory, https://www.eafo.eu/countries/portugal/1749/incentives

European Commission, 2019. Assessment of the draft National Energy and Climate Plan of Portugal. SWD(2019) 272. Brussels, 18 June
https://ec.europa.eu/energy/sites/ener/files/documents/pt_swd_en.pdf

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

European Union, 2018. Regulation (EU) 2018/1999 on the Governance of the European Union and Climate Action, OJEU L328/1, Brussels, 21 December
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 Portugal, 2020. Portugal: National Energy and Climate Plan 2021-2030 (NECP 2030). Lisbon, December
https://ec.europa.eu/energy/sites/ener/files/documents/pt_final_necp_main_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

RES Legal database, http://www.res-legal.eu/search-by-country/portugal
https://ec.europa.eu/commission/sites/beta-political/files/energy-union-factsheet-portugal_en.pdf
(European Commission/ DG ENER, Energy Union Factsheet Portugal, November 2017) REN21, 2020.

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

EURactiv, 2020. Lisbon. Energy auction world record. 20 August
https://www.euractiv.com/section/politics/short_news/lisbon-energy-auction-world-record/

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 degression", 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.

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