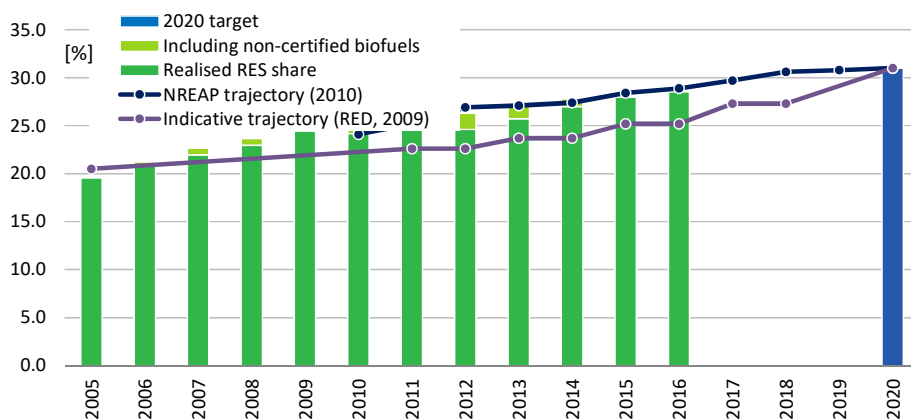


### Summary

In Portugal, electricity from renewable sources from existing plants is mainly promoted through a feed-in tariff. Support to new RES plants can currently only be remunerated through the open energy market. For RES-H there is currently no direct support mechanism or fiscal benefit in place (as of January 2017); only indirect support. In the transport sector, the main incentives are a biofuel quota system and a tax exemption to small producers of biofuels.



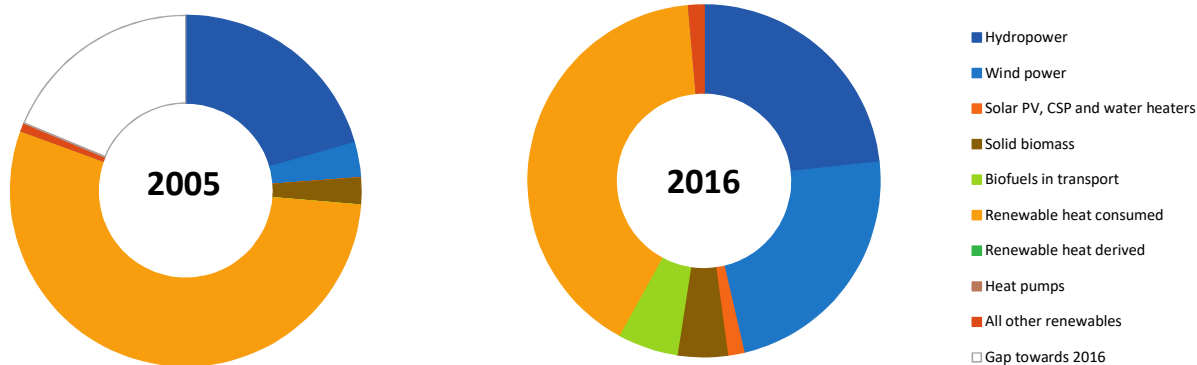
Source: EEA, Eurostat

### Abbreviations used:

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

### Data for 2016

Overall RES share:	28.5%	Avoided fossil fuels:	8.9 [Mtoe]
Overall RES 2020 target:	31.0%	Avoided fuel expenses:	2.0 [billion euro]
Share RES-E in electricity:	54.1%	RES Turnover:	1930 [MEUR]
Share RES-T in transport:	7.5%	RES Employment:	26800 [jobs]
Share RES-H/C in heating:	35.1%		



Source: Eurostat, 2018.

	2005		2016		
	Energy		Energy	Employment	Turnover
Hydropower	960.6 ktoe		1085.7 ktoe	3800 Jobs	260 MEUR
Wind power	150.6 ktoe		1075.9 ktoe	6400 Jobs	500 MEUR
Solar PV, CSP and water heaters	0.3 ktoe		70.7 ktoe	900 Jobs	50 MEUR
Solid biomass	116.1 ktoe		213.3 ktoe	6500 Jobs	580 MEUR
Biofuels in transport	0.0 ktoe		259.7 ktoe	400 Jobs	20 MEUR
Renewable heat consumed	2528.6 ktoe		1892.3 ktoe		
Renewable heat derived	0.0 ktoe		0.0 ktoe		
Heat pumps	0.0 ktoe		0.0 ktoe	7400 Jobs	440 MEUR
All other renewables	34.5 ktoe		65.4 ktoe		
Gap towards 2016	872.4 ktoe				

Source: Eurostat, EurObserv'ER, 2018.

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 most important means to promote renewable electricity is a feed-in tariff for existing installations. For new small production installations, a remuneration regime came into force in 2015. In general, all technologies used in renewable electricity generation are eligible for support. Connection to the grid is granted according to the principle of non-discrimination and priority shall be given to electricity produced from renewable energy sources.

No direct support scheme for RES in the heating sector is currently in place (as of January 2017). The Energy Efficiency Fund (FEE) provided a subsidy to investments in solar water heaters through "Efficient Buildings 2016" that opened for new applications on 8 July 2016.

There are two support schemes for the use of renewable energy sources in the transport sector: a tax exemption to small producers of biofuels and a biofuel quota for companies supplying fuels for consumption in the market.

## **OVERVIEW OF MAIN SUPPORTING POLICIES**

Policies and measures promoting the use of renewables for producing electricity:

- The feed-in tariff consists of two elements: a guaranteed payment rate and an amount calculated by a statutorily set formula.
- The new remuneration regime, which came into force in 2015, distinguishes between small production (UPP) and self-consumption units (UPAC). UPPs can have an installed capacity of up to 250 kW, whereas UPACs can have an installed capacity between 200 W and more than 1 MW. The most important changes are that UPPs are supported through a bidding scheme in which producers offer discounts to a reference tariff, while UPACs are able to have more capacity (more than 1 MW) and are also able to connect to the national grid.
- Within the scope of the National Qualification System, there is the professional course of technician of renewable energy which can be specialised on the installation of solar thermal or photovoltaic installations, wind energy plants or bioenergy plants.

Policies and measures promoting the use of renewables for producing final heating and cooling energy:

- There is the obligation to use solar thermal collectors for heating water in new buildings and buildings undergoing major interventions. Other forms of RES can be used as an alternative to solar thermal collectors, as well as for other purposes if they are more efficient or convenient.
- Many institutions offer professional training for installers of solar thermal installations.
- Where solar thermal installations are used, the performance and durability of the installation and its components must be certified by an accredited entity.

Policies and measures promoting the use of renewable energy sources in the transport sector:

- Small producers of biofuels benefit from a total exemption of the Petrol Product Tax.
- Companies supplying fuels for consumption shall incorporate a certain percentage of biofuels in the fuels they supply to the market from 2011 to 2020.

More details are provided in Table 1 and Table 2 below.

**Table 1:** Overview of support schemes to promote renewable energy in Portugal

	REGULATORY POLICIES					FISCAL INCENTIVE AND PUBLIC FINANCES			
	Feed-in tariff / Feed-in premium	Tendering	Quota obligation with Tradable Green certificates	Quota obligation without Tradable Green certificates	Net-metering/ net-billing	Capital subsidy, grants	Tax regulation mechanism		Soft Loans
<b>RES-E</b>									
- Offshore wind	x	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- Onshore wind	x	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- Solar	x	X*	<input type="checkbox"/>	<input type="checkbox"/>	x	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- Hydro	x	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- Geothermal	x	X*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- Solid biomass	X	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- Biogas	X	X*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>RES-H/C</b>									
- Solar thermal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X**	<input type="checkbox"/>	x	<input type="checkbox"/>	<input type="checkbox"/>	x
- Geothermal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- Biomass	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- Biogas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- Small scale installations, e.g. solar thermal collects, heat pumps, biomass boilers and pellet stoves	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- Others, i.e. aerothermal, hydrothermal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>RES-T</b>									
- Bio gasoline	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x	<input type="checkbox"/>	<input type="checkbox"/>	x	<input type="checkbox"/>	<input type="checkbox"/>
- Biodiesel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x	<input type="checkbox"/>	<input type="checkbox"/>	x	<input type="checkbox"/>	<input type="checkbox"/>

Sources: EurObserv'ER, GSR/REN21, RES-Legal Europe (2017)

\*Bidding model for new small production installations.

\*\* Obligation of the use of solar thermal collectors for heating water in new buildings and buildings undergoing major intervention.

**Table 2:** Brief description of key policy instruments aimed at promoting RES in Portugal

<i>Instrument</i>	<i>Description</i>
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 allocate the capacity for new RES plants
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 interventions. Other forms of RES can be used as an alternative to solar thermal collectors, as well as for other purposes if they are more efficient or convenient.
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.
Tax exemption	Small producers of biofuels benefit from a total exemption of the Petrol Product Tax.

***For further information:***

EEA 2017: Progress of renewable energy sources, European Environmental Agency (EEA), <https://www.eea.europa.eu/data-and-maps> (European Union), last accessed June 2017

EurObservER Annual Overview 2016, <https://www.eurobserv-er.org/category/all-annual-overview-barometers>

Eurostat, 2017. Energy from renewable sources. [http://ec.europa.eu/eurostat/statistics-explained/index.php/Energy\\_from\\_renewable\\_sources](http://ec.europa.eu/eurostat/statistics-explained/index.php/Energy_from_renewable_sources)

Global Status Report by REN21

[http://www.ren21.net/wp-content/uploads/2016/10/REN21\\_GSR2016\\_FullReport\\_en\\_11.pdf](http://www.ren21.net/wp-content/uploads/2016/10/REN21_GSR2016_FullReport_en_11.pdf)

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>

## 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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