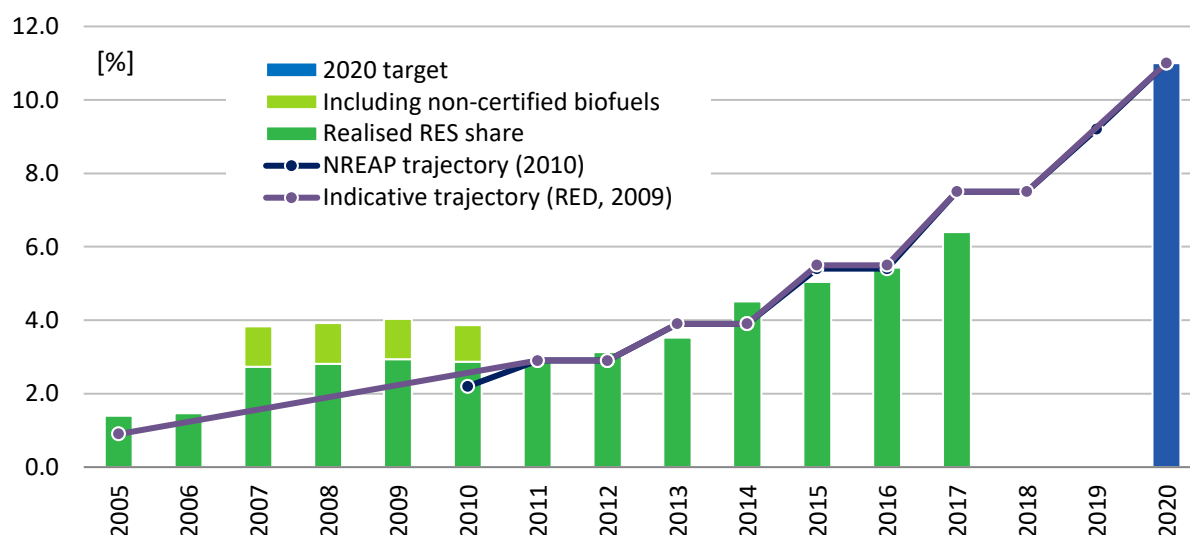


### Summary

Main support instruments for incentivising electricity from renewable energy sources are feed-in tariffs and feed-in premiums. Since 2018, new PV installations having a capacity in excess of 500 kW have to submit a successful tender bid to become eligible to a feed-in premium. Subsidy instruments are in force to promote renewable electricity and renewable heat. Renewable transport fuels are promoted by way of a biofuels blending quota scheme.



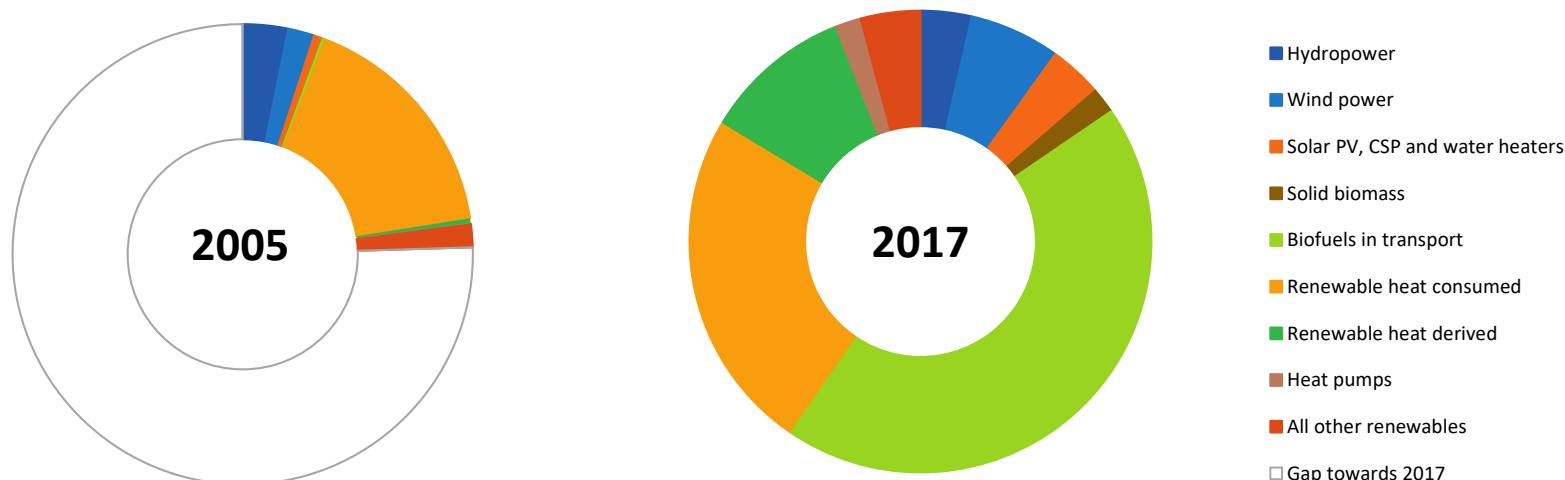
Source: EEA, Eurostat

### Abbreviations used:

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

### Data for 2017

Overall RES share:	6.4%	Avoided fossil fuels:	0.3 [Mtoe]
Overall RES 2020 target:	11.0%	Avoided fuel expenses:	0.1 [billion euro]
Share RES-E in electricity:	8.1%	RES Turnover:	180 [MEUR]
Share RES-T in transport:	6.4%	RES Employment:	1400 [jobs]
Share RES-H/C in heating:	8.1%		



Source: Eurostat, 2019.

	2005		2017		
	Energy		Energy	Employment	Turnover
Hydropower	7.9 ktoe		8.9 ktoe	500 Jobs	70 MEUR
Wind power	4.6 ktoe		15.9 ktoe	100 Jobs	20 MEUR
Solar PV, CSP and water heaters	1.5 ktoe		9.3 ktoe	200 Jobs	20 MEUR
Solid biomass	0.0 ktoe		4.5 ktoe	100 Jobs	20 MEUR
Biofuels in transport	0.5 ktoe		110.3 ktoe	<100 Jobs	<10 MEUR
Renewable heat consumed	41.5 ktoe		60.0 ktoe		
Renewable heat derived	0.9 ktoe		26.0 ktoe		
Heat pumps	0.1 ktoe		4.5 ktoe	<100 Jobs	<10 MEUR
All other renewables	4.0 ktoe		10.4 ktoe		
Gap towards 2017	188.5 ktoe				

Source: Eurostat, EurObserv'ER, 2019.

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***

Main schemes for promoting *electricity from renewable energy sources* except geothermal are a feed-in tariff scheme and a floating feed-in premium scheme. Both schemes apply technology-specific rates. In general, beneficiaries can benefit from either one of these schemes for a 15-year period from the first day onward the installation concerned feeds electricity into the public grid. The feed-in premiums equal a direct marketing bonus plus the difference between a (technology-specific) reference premium and the monthly average benchmark electricity price. In the case of onshore wind and PV the monthly averages are time-weighted differently to account for distinct production profiles. Since 2018, new PV installations having a capacity in excess of 500 kW have to submit a successful tender bid to become eligible to a feed-in premium. Furthermore, installations generating electricity from renewables are supported through investment subsidies. For companies investing in renewable generation, all renewable generation technologies are eligible for an investment subsidy. For other operators including households and municipalities only a PV installation is eligible for an investment subsidy.

Four subsidy instruments are applied to foster *renewable heating and cooling*:

1. Investment subsidies for aerothermal and geothermal heat pumps as well as renewable energy plants generating heat from solar thermal energy or various types of biomass.
2. Companies investing in renewable energy plants are eligible for investment grants, with the exception of aerothermal and hydrothermal energy
3. Subsidies for companies investing in renewable energies for the production of heat or for the combined production of heat and power (CHP)
4. The Law of 31 May 1999 has introduced the creation of a fund to support Luxembourg municipalities in their investments for environmental protection, including installations producing renewable heat.

*Renewable transport fuels* are supported by a biofuels blending quota scheme. Oil and gas companies importing or producing automotive petrol, gas and diesel for consumption by vehicle operators are obliged to fulfil a defined quota of biofuels per year. In addition, subsidy and tax mechanisms are provided for the purchase of battery electric vehicles (BEVs) and fuel cell electric vehicles (FCEVs) by a package of measures, including:

- Return of tax of €5000 on the purchase of a BEV or a FCEV
- Reduction on CO<sub>2</sub>-based ownership tax
- The deductibility from corporate income of expenses related to the use of company cars will be calculated on the basis of CO<sub>2</sub> emissions. This measure will encourage to buy vehicles with zero or low emissions as a company.

## OVERVIEW OF MAIN SUPPORTING POLICIES

The main RES support measures applied in Luxembourg are epitomized in Tables 1 and 2 below. See the previous section for more details.

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

	NON-FISCAL SUPPORT SCHEMES						FISCAL AND OTHER STATE FUNDED INCENTIVES			
	Feed-in tariffs	Feed-in premium	Tenders	Quota obligation with Tradable Green certificates	Quota obligation without Tradable Green certificates	Net-metering/ net-billing	Investment subsidies	Tax credits mechanism I	Tax credits mechanism II	Soft loans
<b>RES-E</b>										
- Offshore wind										
- Onshore wind	x	x					x			
- Solar	x	x	x				x			
- Hydro	x	x					x			
- Geothermal							x			
- Solid biomass	x	x					x			
- Biogas	x	x					x			
<b>RES-H/C</b>										
- 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			
<b>RES-T</b>										
- Bio gasoline					x					
- Biodiesel					x					

Sources: RES Legal, EurObserv'ER

Table 2: Overview of instruments used at present in Luxembourg

<b>Instrument</b>	<b>Description</b>
Feed-in tariffs or premiums	A guaranteed sale of electricity at a pre-set technology-specific preferential price or a technology-specific floating premium on top of the market electricity price, during the support contract period of generally 15 years. New PV installations $\geq$ 500 kW have to submit successful tender bids to become eligible for floating feed-in premiums.
Investment subsidies	Projects investing in installations for the generation of electricity from renewables (with the exception of geothermal installations) are eligible for an investment subsidy. Renewable heating and cooling projects are eligible for one or more of four different investment subsidy options.
Biofuels quota scheme	Importers/suppliers of transport fuels are subject to a renewable quota scheme for biofuels. Compliance based on sample testing rather than certificates-based.

### ***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](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)

EEA, 2017 <http://www.eea.europa.eu/data-and-maps/daviz/actual-res-progress-indicative-trajectory-2>

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)

REN21, Global Status Report 2017 [http://www.ren21.net/wp-content/uploads/2017/06/170607\\_GSR\\_2017\\_Full\\_Report.pdf](http://www.ren21.net/wp-content/uploads/2017/06/170607_GSR_2017_Full_Report.pdf)

IEA/IRENA Joint Policies and Measures database

<https://www.iea.org/policiesandmeasures/renewableenergy/?country=Luxembourg>

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/luxembourg/>

[https://ec.europa.eu/commission/sites/beta-political/files/energy-union-factsheet-luxembourg\\_en.pdf](https://ec.europa.eu/commission/sites/beta-political/files/energy-union-factsheet-luxembourg_en.pdf)

(European Commission/ DG ENER, Energy Union Factsheet Luxembourg, November 2017)

European Alternative Fuels Observatory, <http://www.eafo.eu/content/luxembourg> ;

<http://www.eafo.eu/eu>

## 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 degeneration", 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 degeneration 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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