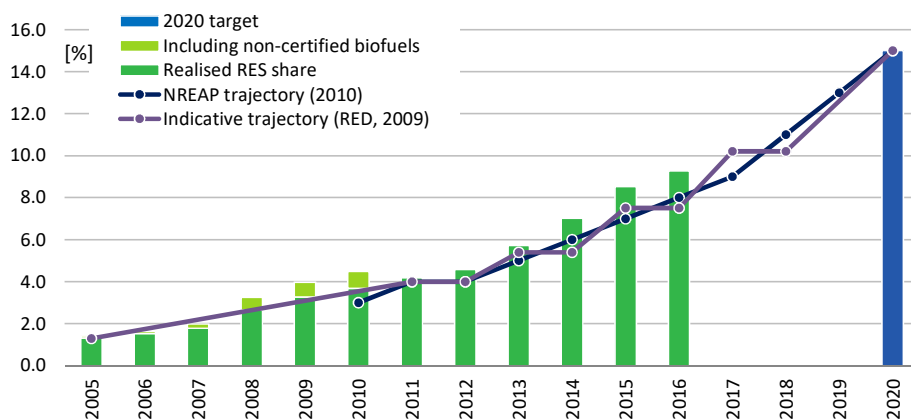


Summary

In the United Kingdom RES-E are supported through a feed-in tariff, Contracts for Difference scheme, a quota system and tax regulation mechanism. For RES-H&C a subsidy and price-based mechanisms are available for supporting RES-H installations. Furthermore, a quota system for biofuels and a grant scheme for transport is in place. A training programme for RES-E plant installers is in place, as well as a certification programme for RES-E installations. An overarching Renewable Energy Roadmap relating to RES-E has been laid down and implemented.



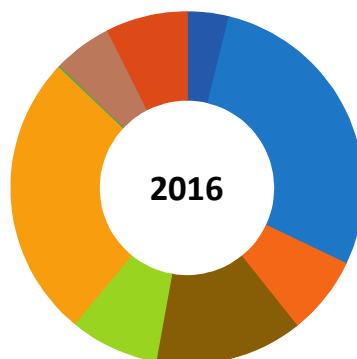
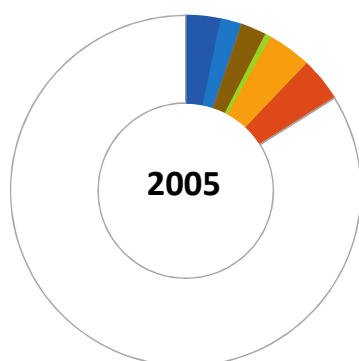
Source: EEA, Eurostat

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:	9.3%	Avoided fossil fuels:	21.2 [Mtoe]
Overall RES 2020 target:	15.0%	Avoided fuel expenses:	4.5 [billion euro]
Share RES-E in electricity:	24.6%	RES Turnover:	10580 [MEUR]
Share RES-T in transport:	4.9%	RES Employment:	107400 [jobs]
Share RES-H/C in heating:	7.0%		



- 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 2016

Source: Eurostat, 2018.

	2005	2016		
	Energy	Energy	Employment	Turnover
Hydropower	403.5 ktoe	481.4 ktoe	2200 Jobs	240 MEUR
Wind power	242.8 ktoe	3506.4 ktoe	42900 Jobs	4490 MEUR
Solar PV, CSP and water heaters	0.7 ktoe	896.0 ktoe	29200 Jobs	2820 MEUR
Solid biomass	290.1 ktoe	1685.0 ktoe	12600 Jobs	1090 MEUR
Biofuels in transport	68.8 ktoe	1016.2 ktoe	4500 Jobs	370 MEUR
Renewable heat consumed	506.2 ktoe	3236.9 ktoe		
Renewable heat derived	0.0 ktoe	17.7 ktoe		
Heat pumps	0.0 ktoe	665.8 ktoe	1800 Jobs	170 MEUR
All other renewables	492.6 ktoe	924.6 ktoe		
Gap towards 2016	10425.2 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

RES-E

The generation of electricity from renewable sources is supported through a combination of a feed-in tariff system, Contracts for Difference system, a quota system in terms of a quota obligation and a certificate system and a tax mechanism. Under the feed-in tariff, accredited producers whose plants have a capacity of less than 5 MW can sell their electricity at fixed tariff rates established by the Gas and Electricity Market Authority (Ofgem). The scheme is applicable to England, Wales and Scotland only.

Under the quota system, UK electricity suppliers of more than 5 MW of capacity are obliged under the Renewables Obligation Orders to supply a certain proportion of electricity from renewable sources ("quota") to their customers. A supplier's quota is deemed satisfied if he presents a certain number of green certificates.

Under the Contracts for Difference (CfD) scheme, a RES-E generator and a CfD Counterparty (Low Carbon Contracts Company) enter into a contract, which is based on a difference between the market price and an agreed "strike price". Currently, the scheme is applicable in England, Wales and Scotland. In Northern Ireland it is expected to be introduced in 2016. From April 2017 the CfD scheme will be the only support scheme for all new RES-E plants exceeding 5 MW. Furthermore, in Great Britain commercial and industrial users of traditional energy sources are subject to Carbon Price Floor (CPF), a tax on fossil fuels used for electricity generation. Electricity from renewable sources is exempt from this tax.

RES-H&C

In the UK, a subsidy and price-based mechanisms are available for supporting RES-H installations. The Non-domestic Renewable Heat Incentive (RHI) is the world's first Feed-in-Tariff for renewable heat, introduced in 2011 (non-domestic) and 2014 (domestic). The government announced in late 2015 that the RHI scheme would be extended to 2020/21. The budget is to increase from £430 million in 2015/16 to £1.15 billion in 2020/21.

Moreover, a certification scheme for solar thermal installations and an R&D policy are currently available. A plan for vocational training of installers is being developed.

RES-T

In the UK, a quota system for biofuels is in place since 2007. Fuel suppliers for transport are obliged to satisfy a specified quota amount of biofuels in the total supplied fuel. There is a certificate system for providing proof of compliance.

OVERVIEW OF MAIN SUPPORTING POLICIES

Table 1: Overview of support schemes to promote renewable energy in the United Kingdom

	REGULATORY POLICIES					FISCAL INCENTIVE AND PUBLIC FINANCES		
	Feed-in tariff < 5MW	Premium tariff	Quota obligation with certificates system > 5 MW	Tendering	Net-metering/ net-billing	Capital subsidy, grants	Tax regulation mechanism	Loans
RES-E								
- Offshore wind	o	o	o					
- Onshore wind	o	o	o					
- Solar	o	o	o					
- Hydro	o	o	o					
- Geothermal	o	o	o					
- Solid biomass	o	o	o					
- Biogas	o	o	o					
RES-H/C								
- Solar thermal	o							
- Geothermal	o							
- Biomass	o							
- Biogas	o							
- Large ambient heat application	o							
- Small scale installations, e.g. solar thermal collects, heat pumps, biomass boilers and pellet stoves								
- Others, i.e. aerothermal, hydrothermal								
RES-T								
- Bio gasoline			o					
- Biodiesel			o					

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

Table 2: Brief description of key policy instruments aimed at promoting RES in the United Kingdom

<i>Instrument</i>	<i>Description</i>
Feed-in tariff	Eligible renewable energy plants with a capacity of up to 5MW must generally undergo an accreditation process, which may differ according to plant size and energy source. Once this process is completed and the plant has been accredited, the electricity exported to the grid by the plant is bought by a FiT licensee, i.e. an electricity supplier, at rates fixed by the FTO 2012 and corrected yearly by the Gas and Electricity Markets Authority (Ofgem). This system only applies in Great Britain, i.e. Scotland, England and Wales. The Order is not applicable in Northern Ireland. With some exceptions, until 31 March 2017 plants between 50 kW and 5 MW are entitled to choose between the above-mentioned system and the Renewables Obligation.
Contracts for Difference (CfD)	A Contract for Difference (CfD) is a private law contract between a RES-E generator and the CfD Counterparty – Low Carbon Contracts Company (LCCC), wholly owned by the UK Government. The scheme is based on a difference between the market price and an agreed “strike price”. Where a “strike price” is higher than a market price, the CfD Counterparty must pay the RES-E generator the difference between the “strike price” and the market price. Where market price is higher than the “strike price”, RES-E generator must pay back the CfD Counterparty the difference between the market price and the “strike price”. An operator of eligible RES-E technology, willing to secure a Contract for Difference, has to take part in an allocation round. The CfD scheme is currently in place in Great Britain Northern and Ireland. With some exceptions, until 31 March 2017, RES-E generators are able to choose between Renewables Obligation (RO) and CfD schemes. Since April 2017 the CfD scheme will be the only support scheme for all new RES-E plants over 5MW.
Quota system <i>Renewables Obligation</i>	In the United Kingdom, electricity generated from renewable sources is also promoted through a quota system in terms of a quota obligation and a certificate system. The Renewables Obligation Orders impose on electricity suppliers the obligation to prove that a certain proportion of electricity supplied was generated from renewable sources. To this end, they shall present Renewables Obligation Certificates to responsible regulatory authorities - Ofgem (in charge in England, Scotland and Wales) or the Northern Ireland Authority for Utility Regulation (NIAUR). The quota system supports plants above 5 MW, although plants between 50 kW and 5 MW are also entitled to choose between the feed-in tariff system and the Renewables Obligation. The scheme will close to all new generating capacities on 31 March 2017.
Tax regulation mechanism	From April 2013, Carbon Price Floor was introduced in Great Britain. The tax applies to fossil fuels used for electricity generation. Renewable electricity is exempt from paying this tax.
Non-domestic Renewable Heat Incentive (RHI)	The RHI is the world’s first Feed-in-Tariff for renewable heat, introduced in 2011 (non-domestic) and 2014 (domestic). The government announced in late 2015 that the RHI scheme would be extended to 2020/21. The budget is to increase from £430 million in 2015/16 to £1.15 billion in 2020/21. The heat demand that can be claimed for (which is deemed) is being reduced, thus cutting the amount of RHI that can be claimed by larger properties. Solar thermal installations will no longer be eligible under the RHI from 2017 onwards.
Training programmes for Installers <i>Green Deal Skills Alliance (GDSA)</i>	Launched in January 2012, the aim of this scheme is to ensure that the UK has the right skills to implement the Green Deal - the flagship policy to improve the energy efficiency of buildings. GDSA is tasked with creating new training and accreditation opportunities for the energy assessment, advice and installation workforce.
Biofuel quota <i>Renewable Transport Fuel Obligations</i>	A quota system for biofuels is in place in the United Kingdom since 2007. Fuel suppliers for transport are obliged to satisfy a specified quota amount of biofuels in the total supplied fuel. There is a certificate system for providing proof of compliance.

For further information:

Electricity Market Reform: Contracts for Difference,
www.gov.uk/government/collections/electricity-market-reform-contracts-for-difference

EEA, 2017. [1] EEA, 2017, <http://www.eea.europa.eu/data-and-maps/daviz/actual-res-progress-indicative-trajectory-2>

Global Status Report by REN21
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>

Non-domestic Renewable Heat Incentive (RHI), www.ofgem.gov.uk/environmental-programmes/non-domestic-rhi

Renewables Obligation Scheme, www.ofgem.gov.uk/environmental-programmes/ro

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

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 depression 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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