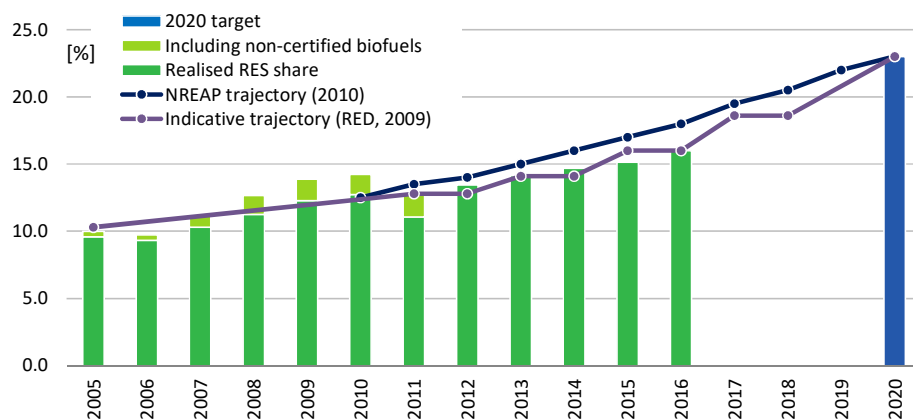


## Summary

Main support scheme: for RES-E a new support scheme based on a premium in addition to the market price is in place since 2016, whereby the generators sell their electricity directly in the market. For RES-H&C the Heat Fund support is the main tool for collective buildings. For individual housing, a tax credit is the main support scheme. The promotion of biofuels in France is mainly provided through fiscal regulation mechanisms. On the one hand, the lower competitiveness of biofuels compared to conventional fuels is improved through a partial exemption of the domestic consumption tax. On the other hand, the tax on polluting activities prescribes higher rates for companies trading fuel for consumption, in case they do not respect the national quota of biofuels to be blended within conventional fuels, which is defined for each fuel type.



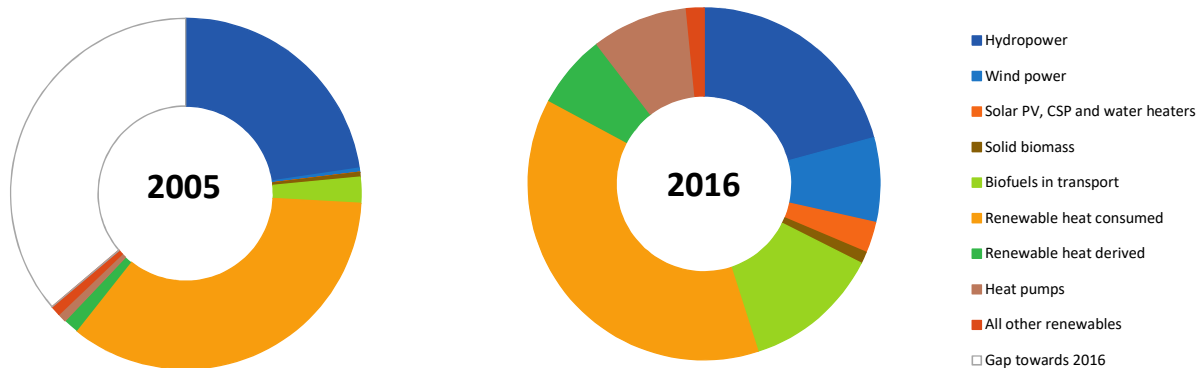
Source: EEA, Eurostat

## 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:	16.0%	Avoided fossil fuels:	34.8 [Mtoe]
Overall RES 2020 target:	23.0%	Avoided fuel expenses:	10.4 [billion euro]
Share RES-E in electricity:	19.2%	RES Turnover:	17850 [MEUR]
Share RES-T in transport:	8.9%	RES Employment:	143100 [jobs]
Share RES-H/C in heating:	21.1%		



Source: Eurostat, 2018.

	2005	2016		
	Energy	Energy	Employment	Turnover
Hydropower	5608.7 ktoe	5134.6 ktoe	10200 Jobs	1460 MEUR
Wind power	92.2 ktoe	1921.4 ktoe	18800 Jobs	2790 MEUR
Solar PV, CSP and water heaters	0.9 ktoe	701.6 ktoe	6300 Jobs	860 MEUR
Solid biomass	107.8 ktoe	263.9 ktoe	35400 Jobs	4090 MEUR
Biofuels in transport	591.2 ktoe	3115.3 ktoe	33200 Jobs	3160 MEUR
Renewable heat consumed	8602.3 ktoe	9348.6 ktoe		
Renewable heat derived	351.0 ktoe	1668.5 ktoe		
Heat pumps	200.9 ktoe	2178.1 ktoe	32800 Jobs	4630 MEUR
All other renewables	225.0 ktoe	394.1 ktoe		
Gap towards 2016	8946.0 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**

For RES electricity generation, a new support scheme has been implemented in the country since 2016. This new scheme is based on a premium in addition to the market price whereby the generators sell its electricity directly in the market. This new guideline foresees the phase-out of the mechanism of purchase obligation of electricity from renewable energies and the limitation of the duration of support to 10 years. For the smallest plants (< 500 kW) the standard feed-in tariff scheme is still available.

Moreover, another permanent concern is constant efforts to ease the administrative procedures for the implementation of projects. That's why a one-stop shop procedure with a single authorization is being tested since 2014 to validate the processing of applications for wind, biogas and hydropower projects.

### **RES H&C**

For heating and cooling purposes the Heat Fund, implemented to finance RES-H&C projects and which has been implemented in 2009 and is still the main supporting measure for RES application in collective buildings. Its budget has been increased in 2015. Another important measure is Thermal Regulation scheme (RT 2012) that began to operate at the beginning of 2013. It created restricting measures to promote energy efficiency and renewable energies in all new buildings.

For individual housing the main tool remains the tax credit measure implemented more than a decade (it started in 2005). In 2006 a 30% rate of the total cost of the RES appliance for heat purposes are refunded by the tax administration. This measure covers almost all RES individual equipment (individual wood stoves or wood boilers, solar thermal collectors and ambient heat). Moreover, lower VAT rates were implemented for RES-H&C materials and also zero rates eco-loan to improve overall energy performance of housing.

### **RES-T**

The promotion of biofuels in France is mainly provided through fiscal regulation mechanisms. On the one hand, the lower competitiveness of biofuels compared to conventional fuels is supported through a partial exemption of the domestic consumption tax. On the other hand, the tax on polluting activities foresees higher rates for companies releasing fuel for consumption, in case they do not respect the national quota of biofuels to be blended within conventional fuels, which is defined for each fuel type.

As all EU Member States, during the years 2012-2014 France was confused by the orientation changes from the European Commission on the blending targets and indirect land-use change (ILUC) impact issues.

While the production of biofuels was originally vigorously encouraged, some debates rather tend to discuss their limitation. This lack of visibility is all the more critical since investors in first generation biofuels are the same as those of advanced biofuels, and the means of production for the first generation have not yet been amortized. In other words, investors who suffered from the unstable support policy for first generation biofuels may be more reluctant to invest in advanced biofuels.

## OVERVIEW OF MAIN SUPPORTING POLICIES

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

	REGULATORY POLICIES						FISCAL INCENTIVE AND PUBLIC FINANCES		
	Premium tariff	Feed-in tariff (for < 500 kW plants)	Tendering	Quota obligation with Tradable Green certificates	Quota obligation without Tradable Green certificates	Net-metering/ net-billing	Capital subsidy, grants (Heat Fund and )	Tax regulation mechanism (Tax credit)	Loans
<b>RES-E</b>									
- Offshore wind	o		o						
- Onshore wind	o		o						
- Solar	o	o	o			o			
- Hydro	o	o	o						
- Geothermal	o		o						
- Solid biomass	o	o	o						
- Biogas	o	o	o						
<b>RES-H/C</b>									
- Solar thermal							o	o	
- Geothermal							o		
- Biomass							o	o	
- Biogas							o		
- Small scale installations, e.g. solar thermal collects, heat pumps, biomass boilers and pellet stoves								o	
- Others, i.e. aerothermal, hydrothermal								o	
<b>RES-T</b>									
- 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 France

<b>Instrument</b>	<b>Description</b>
<b>Premium tariff</b> <i>Complément de rémunération</i>	Premium tariffs are allocated through a quasi-tendering process, where energy producers compete against each other for feed-in premium support. For most of the RES technologies, FiP are reachable through calls for tenders auction published by Authority. The aim is to pilot the technologies growth as close as possible to the RES investment program define by the government in 2016. Website: <a href="http://www.ecologique-solidaire.gouv.fr/index.php/dispositifs-soutien-aux-energies-renouvelables">http://www.ecologique-solidaire.gouv.fr/index.php/dispositifs-soutien-aux-energies-renouvelables</a>
<b>RES-H building obligations</b> <i>Réglementation thermique</i>	There are no RES-H building obligations directly supporting the use of heating systems from renewable energy sources. However, RES-H can be required indirectly through the energetic performance obligations. The thermal regulation 2012 oblige new buildings to comply with minimum energetic performance requirements as defined by the label BBC-Effinergie. Since 2012, the use of renewable energies in order to reach energetic performance requirements (including the use of sanitary hot water and heating devices) is mandatory for single-family houses (Art. 16 arrêté du 26 octobre 2010). The thermal regulation 2012 applies for new buildings as follows: <ul style="list-style-type: none"> <li>• For service sector buildings and residential buildings situated within a national renovation programme area: from 28 October 2011</li> <li>• For residential buildings situated within 500 meters of a national renovation programme area: from 1 March 2013</li> <li>• For other residential buildings: from 1 January 2013</li> </ul> As far as existing buildings are concerned, buildings of the service sector and public service sector are obliged from January 2012 to improve their energetic performance by 2020 (Art L 111-10-3 Code de la construction et de l'habitation), including renewable energy plants for heating purposes.
<b>Heat Fund scheme</b> <i>Fonds chaleur</i>	The Heat Fund, managed by ADEME since 2009, is dedicated to renewable heat production in collective housing, communities and businesses. The fund can participate to a project financing up to 30% of its total amount. During the period 2009-2013, the heat Fund allocated 1.12 billion euros to support nearly 3,000 projects and a total production of 1.4 million toe. Website: <a href="http://www.ademe.fr/expertises/energies-renouvelables-enr-production-reseaux-stockage/passer-a-l'action/produire-chaleur/fonds-chaleur-bref">http://www.ademe.fr/expertises/energies-renouvelables-enr-production-reseaux-stockage/passer-a-l'action/produire-chaleur/fonds-chaleur-bref</a>
<b>Tax credit scheme</b> <i>Crédit d'impôt pour la transition énergétique</i>	A tax relief programme which gives a direct financial advantage to individual consumers that invest in energy-saving equipment and sustainable energy. Consumers may deduct 30% of the equipment costs (installation costs are excluded) over the calendar year in which the equipment was purchased. The list contains almost all the main RES-H technologies for individual houses. The measure, implemented in 2005, is the most popular scheme in France to support RES applications. In 2015, the cost of the measure only for RES technologies was evaluated around M€ 200. Website: <a href="https://www.service-public.fr/particuliers/vosdroits/F1224">https://www.service-public.fr/particuliers/vosdroits/F1224</a>
<b>Investments for the Future programme</b> <i>Programme investissement d'avenir</i>	The Investments for the Future programme is intended to support projects fostering innovation and the creation of non-relocatable jobs in sectors with strong potential for the French economy. It is a matter of strengthening France's strategic competitive advantages. The implementation of the Investments for the Future program is steered by the General Investment Commission (CGI). It is supported by several operators, including ADEME, which is responsible for innovation for energy and ecological transition. RES technologies and smart electricity grids are eligible to this programme. Website: <a href="http://www.ademe.fr/en/investments-for-the-future">http://www.ademe.fr/en/investments-for-the-future</a>
<b>Training programmes for Installers</b> <i>Référencement RGE</i>	The association Qualit'EnR was established in 2006 as an initiative of five national professional organisations in order to promote quality installations in the field of solar thermal energy, photovoltaic, biomass as well as heat pumps and geothermal probes. The association was established for private households willing to install a renewable energy plant, with the aim to ensure them a quality installation.
<b>Biofuel quota (Réduction de la taxe générale sur les activités polluantes TGAP)</b>	The act on energy transition of 2015 sets a target of 10% renewable energies in the total energy consumption of the transport sector by 2020 and of at least 15% by 2030. In order to reach these targets, the quota of biofuels to be blended within conventional fuels is defined for each fuel type. In case companies releasing fuel for consumption do not respect the biofuels quota, they are submitted to a higher rate of the tax on polluting activities (TGAP).

## ***For further information:***

Details of the French Heat Fund, <http://www.fonds-chaleur.ademe.fr>

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

Feed-in Premium French scheme, <http://www.ecologique-solidaire.gouv.fr/index.php/dispositifs-soutien-aux-energies-renouvelables>

French Energy investment program, <http://www.ecologique-solidaire.gouv.fr/sites/default/files/PPE%20int%C3%A9gralit%C3%A9.pdf>

French RES-E sectors barometer, [http://www.energies-renouvelables.org/observer/html/energie\\_renouvelable\\_france.asp](http://www.energies-renouvelables.org/observer/html/energie_renouvelable_france.asp)

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)

Official French RES data, <http://www.statistiques.developpement-durable.gouv.fr/energie-climat/s/differentes-energies-energies-renouvelables.html>

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/france>

Tax credit for energy transition, : <https://www.service-public.fr/particuliers/vosdroits/F1224>

## ***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.



This project is funded  
by the European Union under  
contract n° ENER/C2/2016-487/SI2.742173

### **Disclaimer**

This document was prepared by the EurObserv'ER consortium, which groups together Observ'ER (FR), the Energy research Centre of the Netherlands (ECN, NL), the Renewables Academy (RENAC, DE), Frankfurt School of Finance and Management (DE), Fraunhofer-ISI (DE) and Statistics Netherlands (CBS, NL). The information and views set out in this publication are those of the author(s) and do not necessarily reflect the official opinion of the Commission. The Commission does not guarantee the accuracy of the data included in this study. Neither the Commission nor any person acting on the Commission's behalf may be held responsible for the use which may be made of the information contained therein.