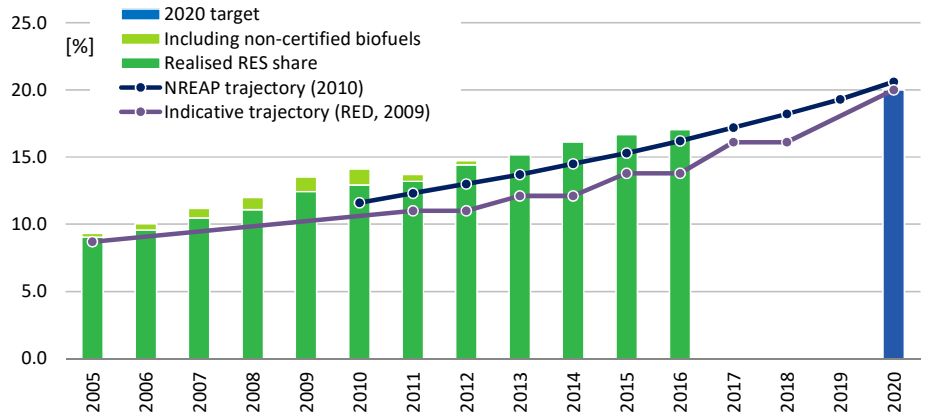
European Union

Renewable Energy Policy Factsheet

June 2018

Summary

The European Union aims to achieve a 20% share (with legally binding national targets) of its final energy consumption from RES by 2020, and at least a 27% share (not broken down into nationally binding targets) by 2030. Key instruments at EU level to promote RES include directives, such as the 2009 Renewable Energy Directive. The EU Emission Trading Scheme (ETS) is also intended to support RES. The European Commission has also adopted state aid guidelines to ensure that support schemes to promote RES at national level are compatible with EU competition law and internal market rules. Further instruments are research, development and innovation funding programmes, such as Horizon2020, the Innovation Fund, and the NER300 programme. RES are also supported through regional development funds as well as through grants and loans for RES projects and related infrastructure from the European Investment Bank (EIB) and the European Fund for Strategic Investments (EFSI). A recast directive on the promotion of RES in the period 2020-2030 is to be



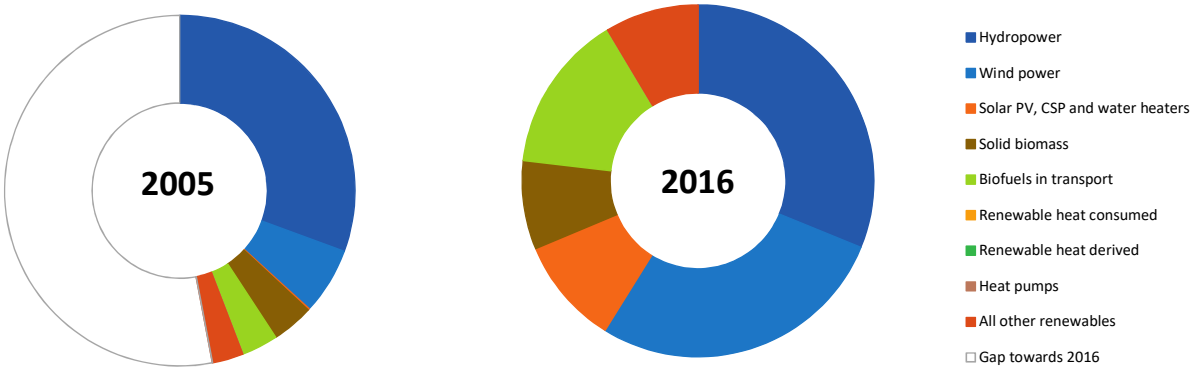
Source: EEA, Eurostat

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:	17.0%	Avoided fossil fuels:	322.2 [Mtoe]
Overall RES 2020 target:	20.0%	Avoided fuel expenses:	83.0 [billion euro]
Share RES-E in electricity:	29.6%	RES Turnover:	149250 [MEUR]
Share RES-T in transport:	7.1%	RES Employment:	1427400 [jobs]
Share RES-H/C in heating:	19.1%		



Source: Eurostat, 2018.

	2005	2016		
	Energy	Energy	Employment	Turnover
Hydropower	29589.3 ktoe	30100.3 ktoe	75900 Jobs	8620 MEUR
Wind power	5938.8 ktoe	26761.6 ktoe	309000 Jobs	39250 MEUR
Solar PV, CSP and water heaters	125.6 ktoe	9527.0 ktoe	124900 Jobs	14110 MEUR
Solid biomass	3749.2 ktoe	7862.7 ktoe	352500 Jobs	31940 MEUR
Biofuels in transport	3255.4 ktoe	14063.2 ktoe	205100 Jobs	13110 MEUR
Renewable heat consumed	0.0 ktoe	0.1 ktoe		
Renewable heat derived	0.0 ktoe	0.0 ktoe		
Heat pumps	0.0 ktoe	0.0 ktoe	249400 Jobs	30200 MEUR
All other renewables	2756.5 ktoe	8289.3 ktoe	110600 Jobs	12020 MEUR
Gap towards 2016	51189.3 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).

The EU renewables policy in a few words

The European Union aims to achieve a 20% share (with legally binding national targets) of its final energy consumption from RES by 2020, and at least a 27% share (not broken down into nationally binding targets) by 2030. Key instruments at EU level to promote RES include directives, such as the 2009 Renewable Energy Directive. The EU Emission Trading Scheme (ETS) is also intended to support RES. The European Commission has also adopted state aid guidelines to ensure that support schemes to promote RES at national level are compatible with EU competition law and internal market rules. Further instruments are research, development and innovation funding programmes, such as Horizon2020, the Innovation Fund, and the NER300 programme. RES are also supported through regional development funds as well as through grants and loans for RES projects and related infrastructure from the European Investment Bank (EIB) and the European Fund for Strategic Investments (EFSI). A recast directive on the promotion of RES in the period 2020-2030 has been approved by the EU institutions on 14 July 2018 to be adopted along with governance rules to ensure that the EU-wide RES target for 2030 of 32% is met.

SUMMARY

A transition towards a low carbon energy system is a key priority for the European Union (EU). A prerequisite for this transition is the development of a larger share of renewable energy sources (RES) in the energy system. The European Union aims to achieve a 20% share of its final energy consumption from RES by 2020, and a 32% share by 2030. Whereas the current 2020 framework sets an EU 20% target for energy consumption which relies on legally binding national targets until 2020, the 32% target by 2030 is an EU-wide binding target and will not be broken down into nationally binding targets.

Key instruments at EU level to promote RES include directives, such as the 2009 Renewable Energy Directive. The EU Emission Trading Scheme (ETS) aiming at direct GHG emissions reduction by installations falling under this Directive, is poised to indirectly support RES as well. The European Commission has also adopted state aid guidelines to ensure that support schemes to promote RES at national level are compatible with EU competition law and internal market rules. Further instruments at EU level include funding programmes, such as Horizon2020, the Innovation Fund, and the NER300 programme. These provide funds for research & development and for innovation in RES as well as commercialisation of RES projects. RES are also supported through regional development funds as well as through grants and loans for RES projects and related infrastructure from the European Investment Bank (EIB) and the European Fund for Strategic Investments (EFSI).

A recast directive on the promotion of RES in the period 2020-2030 is to be adopted along with governance rules to ensure that the EU-wide RES target for 2030 is met.

RENEWABLE ENERGY POLICY FRAMEWORK

The European Union has a number of different policy documents and instruments aimed at promoting RES.

Policy documents

The "Clean Energy for All" Communication[1], proposed by the European Commission for adoption in November 2016 is the most recent energy and climate policy package concerning the Energy Union, the promotion of RES. The Communication reflects on what needs to be done to achieve the target of at least 27% for the share of renewable energy consumed in the EU in 2030 set by the European Council. Meanwhile, a recast Renewable Energy Directive has been politically agreed upon by the European institutions on 14 July 2018, specifying an EU-level RES target for year 2030 of 32%, including a review clause for a possible upward revision by 2023.[2]

In 2015, the European Commission outlined a new Strategic Energy Technology (SET) Plan, which includes renewable energy as one of the main priority areas for research and innovation.[3]

Directives

[1] https://ec.europa.eu/energy/en/topics/energy-strategy-and-energy-union/clean-energy-all-europeans
[2] http://europa.eu/rapid/press-release_STATEMENT-18-4155_en.htm

[3] https://ec.europa.eu/energy/en/topics/technology-and-innovation/strategic-energy-technology-plan

To date, the prime directive aimed at promoting RES is the 2009 Renewable Energy Directive[4], which sets a binding target of a 20% share of energy from renewable energy source of total final energy consumption to be achieved in 2020. This target is broken down into national binding targets at Member State level. A recast Renewable Energy Directive for the timeframe 2021-2030 was politically agreed upon by the European Commission on 14 July 2018.[5] Following this political agreement, the text of the Directive will have to be formally approved by the European Parliament and the Council. Once endorsed by both co-legislators in the coming months, the updated Renewable energy Directive will be published in the Official Journal of the Union and will enter into force 20 days after publication. Member States will have to transpose the new elements of the Directive into national law 18 months after its entry into force. A series of additional directives which contribute to the promotion of RES and related infrastructure, such as the 2009 Fuel Quality Directive, which promotes the use of biofuels in road transport and non-road machinery. Additionally, new rules came into force in 2015 which amend the current legislation on biofuels – specifically the Renewable Energy Directive and the Fuel Quality Directive - to reduce the risk of indirect land use change and to prepare the transition towards advanced biofuels. This refers to the 2015 Directive to reduce the indirect land use change for biofuels and bioliquids.

State aid guidelines

The Commission adopted new guidelines on state aid for environmental protection and energy in June 2014. The guidelines aim to avoid market distortions resulting from support for RES and to promote a gradual transition towards market-based support for renewable energies. The guidelines gradually introduce competitive bidding processes for public support for RES and promote a transition from feed-in-tariffs to feed-in- premiums. In addition, certain energy-intensive industries can be partially exempted from surcharges financing RES support, in order to safeguard their competitiveness. The guidelines apply for the 2014–2020 period. New guidelines are expected for the period 2020 and beyond.

National Action Plans and Biennial progress reports

The 2009 Renewable Energy Directive requires Member States to put in place appropriate measures to reach their national binding RES targets for 2020, and that these are presented in National Renewable Energy Action Plans (NREAPs).[6] Among others, the plans cover individual renewable energy targets for the electricity, heating and cooling, and transport sectors the planned mix of different renewables technologies policy measures to achieve national targets including cooperation between local, regional, and national authorities. Every two years, the Member States are required to report on their progress towards the EU's 2020 renewable energy goals. Based on the national reports and on other available data, the European Commission produces an EU-wide report which gives an overview of renewable energy policy developments in EU countries.

OVERVIEW OF MAIN SUPPORTING INSTRUMENTS AT EU LEVEL

In accordance with Article 194 of the Treaty of the Functioning of the European Union (TFEU), the support for RES takes place mostly at the level of the Member States. Support at EU level includes funding for research and innovation as well as enhancements to the electricity grid to support the integration of RES. The framework programme for research and innovation, Horizon 2020, supports research and development in photovoltaics, concentrated solar power, wind energy, ocean energy, hydropower, geothermal energy, renewable heating and cooling, energy storage, biofuels and

[4] https://ec.europa.eu/energy/en/topics/renewable-energy/renewable-energy-directive
[5] http://data.consilium.europa.eu/doc/document/ST-10308-2018-INIT/en/pdf

[6] https://ec.europa.eu/energy/en/topics/renewable-energy/national-action-plans

alternative fuels. The NER 300 programme, funded from the sale of emission allowances from the New Entrants Reserve of the EU ETS, provides funding for innovative renewable energy projects. In the context of the post-2020 ETS reform, a new Innovation Fund will be created to fund renewable energy and other low-carbon projects as well as industrial innovation in this sector.

In addition to the above-mentioned funding programmes, grants and loans are provided by the EIB and the EFSI, for the expansion of renewable energy and related energy infrastructures. RES are also supported through regional development funds, such as the European Structural and Investment Funds (ESIF), and the Cohesion Fund, provide important contributions to investments in the renewable energy sector.

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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Disclaimer

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