RENEWABLE ENERGY

Renewable sources of energy (wind power, solar power, hydroelectric power, ocean energy, geothermal energy, biomass and biofuels) are alternatives to fossil fuels that contribute to reducing greenhouse gas emissions, diversifying energy supply and reducing dependence on unreliable and volatile fossil fuel markets, in particular oil and gas. EU legislation on the promotion of renewables has evolved significantly in the past 15 years. In 2009, EU leaders set a target of a 20% share of EU energy consumption coming from renewable energy sources by 2020. In 2018, the target of a 32% share of EU energy consumption coming from renewable energy sources by 2030 was agreed. In July 2021, in view of the new EU climate ambitions, the revision of the target to 40% by 2030 was proposed to the co-legislators. The future policy framework for the post-2030 period is under discussion.

LEGAL BASIS AND OBJECTIVES

Article 194 of the Treaty on the Functioning of the European Union.

ACHIEVEMENTS

A. Renewable Energy Directive


The original Renewable Energy Directive, adopted by codecision on 23 April 2009 (Directive 2009/28/EC, repealing Directives 2001/77/EC and 2003/30/EC), established that a mandatory 20% share of EU energy consumption must come from renewable energy sources by 2020. In addition, all Member States were required to obtain 10% of their transport fuels from renewables. The directive also mapped out various mechanisms that Member States could apply in order to reach their targets, such as support schemes, guarantees of origin, joint projects, and cooperation between Member States and third countries, as well as sustainability criteria for biofuels.

Until 2020, the directive confirmed existing national renewable energy targets for each country, taking into account the starting point and overall potential for renewables (from renewables shares of 10% in Malta to 49% in Sweden). Each EU country set out how it planned to meet its individual target and the general roadmap for its renewable energy policy in a national renewable energy action plan. Progress towards the national targets was measured every two years when EU countries published national renewable energy progress reports.

In July 2021, as part of the delivering the European Green Deal package, the Commission proposed an amendment to the Renewable Energy Directive to align its renewable energy targets with its new climate ambition. The Commission proposes increasing the binding target of renewable sources in the EU’s energy mix to 40% by 2030 and promotes the uptake of renewable fuels, such as hydrogen in industry and transport, with additional targets. The energy policy framework for the post-2030 period is currently under discussion.

In December 2018, the revised Renewable Energy Directive (Directive (EU) 2018/2001) entered into force, as part of the clean energy for all Europeans package, aimed at keeping the EU a global leader in renewables and, more broadly, helping the EU to meet its emissions reduction commitments under the Paris Agreement. This revised directive has been in force since December 2018 and had to become national law in EU countries by June 2021, taking effect from 1 July 2021 onwards. The directive establishes a new binding renewable energy target for the EU for 2030 of at least 32% of final energy consumption, with a clause for a possible upwards revision by 2023 and an increased 14% target for the share of renewable fuels in transport by 2030.

In the absence of revised national targets, the national renewables targets for 2020 should constitute the minimum contribution of each Member State for 2030. EU countries will propose their national energy target and establish 10-year national energy and climate plans during Horizon 2030, followed by progress reports every two years. These plans will be assessed by the Commission, which could take measures at EU level to ensure that they are consistent with the overall EU targets.

B. The European Green Deal

On 11 December 2019, the Commission outlined its communication on the European Green Deal (COM(2019)0640). This green pact sets out a detailed vision to make Europe a climate-neutral continent by 2050 by supplying clean, affordable and secure energy.

1. Delivering on the European Green Deal

On 14 July 2021, the Commission published a new legislative package on energy entitled ‘Fit for 55: delivering the EU’s 2030 Climate Target on the way to climate neutrality’ (COM(2021)0550). In the new revision of the Renewable Energy Directive (COM(2021)0557), it proposes raising the binding target for the share of renewables in the EU energy mix to 40% by 2030 and new targets at national levels, such as:

— A new benchmark of 49% renewables use by 2030 for buildings;
— A new benchmark of a 1.1 percentage point annual increase in renewables use for industry;
— A binding 1.1 percentage point annual increase for the Member States in the use of renewables for heating and cooling;
— An indicative 2.1 percentage point annual increase in the use of renewables and waste heat and cold for district heating and cooling.
In the effort to decarbonise and diversify the transport sector, it establishes:

— A target of a 13% reduction in the greenhouse gas intensity of transport fuels by 2030, covering all transport modes;

— A 2.2% share of advanced biofuels and biogas by 2030, with an intermediary target of 0.5% by 2025 (single counted);

— A 2.6% target for renewable fuels from non-biological origin and a 50% share of renewables in hydrogen consumption in industry, including non-energy uses, by 2030.

The future policy framework for the post-2030 period is under discussion.

2. Clean energy for all Europeans


— Further deploying renewables in the electricity sector;

— Mainstreaming renewables in the heating and cooling sector (an indicative annual increase of 1.3% for renewables in heating and cooling has been introduced);

— Decarbonising and diversifying the transport sector by introducing:

  — A 14% share of renewables in the total energy consumption of the transport sector by 2030;

  — A 3.5% share of advanced biofuels and biogas by 2030, with an intermediary target of 1% by 2025 (double-counted);

  — A 7% cap on the share of first-generation biofuels in road and rail transport, and plans to phase out the use of palm oil and other food-crop biofuels that increase CO$_2$ emissions by 2030, through a certification scheme;

— Strengthening the EU sustainability criteria for bioenergy;

— Making sure the EU-level binding target is achieved on time and in a cost-effective way.

3. Renewable energy financing mechanism

The Commission has established an EU financing mechanism (Regulation 2020/1294) based on Article 33 of the Governance Regulation ((EU) 2018/1999) in the clean energy for all Europeans package. This has been in force since September 2020 and the Commission is still in the implementation process.

The main objective of this mechanism is to help countries achieve their individual and collective renewable energy targets. The financing mechanism links countries that contribute to the financing of projects (contributing countries) with countries that agree to have new projects built on their territories (host countries). The Commission sets out the implementation framework and means of funding for the mechanism, establishing
that Member States, EU funds, or private sector contributions may finance actions under the mechanism.

The energy generated through this financing mechanism will count towards the renewable energy targets of all participating countries and feed into the European Green Deal ambition of achieving carbon neutrality by 2050.

C. Future steps

1. Trans-European Network for Energy

In December 2020, the Commission adopted a proposal to revise these rules (COM(2020)0824), seeking to connect regions currently isolated from European energy markets. The aim of the revision is to promote a significant increase in renewable energy in the European energy system in line with the overarching European Green Deal objective of achieving climate neutrality by 2050.

In July 2020, the European Parliament adopted a resolution on the revision of the guidelines for the Trans-European Network for Energy (TEN-E), designed to update them and bring them in line with the EU climate policy. The original Decision No 1254/96/EC has been revised several times, and Regulation (EU) No 347/2013 established the current guidelines for the trans-European energy infrastructure.

2. Revision of the Energy Taxation Directive

In July 2021, the Commission published a proposal (COM(2021)0563) on the revision of the Energy Taxation Directive (Directive 2003/96), proposing to align the taxation of energy products with EU energy and climate policies, promoting clean technologies and removing outdated exemptions and reduced rates that currently encourage the use of fossil fuels.

D. Resource-specific issues

1. Biomass and biofuels

The Renewable Energy Directive (Directive (EU) 2018/2001), which is currently in force, includes a target of 3.5% by 2030 and an intermediary target of 1% by 2025 for advanced biofuels and biogas in the transport sector. While the existing 7% cap on first-generation biofuels is maintained in road and rail transport, an EU-level obligation for fuel suppliers to provide a certain share (6.8%) of low-emission and renewable fuels and an extension of the scope of the EU sustainability criteria for bioenergy (to cover biomass and biogas for heating and cooling and electricity generation) is introduced.

In July 2021, the Commission published a Renewable Energy Directive proposal with a target of a 2.2% share of advanced biofuels and biogas by 2030 and an intermediary target of 0.5% by 2025.

2. Hydrogen

In July 2020, the Commission adopted the European strategy for energy system integration (COM(2020)0299) and a new strategy on hydrogen in Europe (COM(2020)0301) to explore how producing and using renewable hydrogen can help decarbonise the EU economy. The hydrogen strategy introduces three targets: at least 6 GW of renewable hydrogen electrolysers in the EU and up to 1 million tonnes of renewable hydrogen produced by 2024; at least 40 GW of renewable hydrogen.
electrolysers and up to 10 million tonnes of renewable hydrogen produced in the EU by 2030; and the deployment of renewable hydrogen at a large scale from 2030 onwards.

3. Offshore wind

On 19 November 2020, the Commission published a dedicated EU strategy on offshore renewable energy entitled ‘An EU Strategy to harness the potential of offshore renewable energy for a climate neutral future’ (COM(2020)0741), which assesses the potential contribution of offshore renewables and goes beyond a narrow definition of the factors of energy production. This strategy aims to increase the EU’s production of electricity from offshore renewable energy sources from 12 GW in 2020 to over 60 GW by 2030 and 300 GW by 2050. In addition, it envisages a legislative revision of the Trans-European Network for Energy to make it more applicable to cross-border offshore infrastructure.

4. Ocean Energy

In January 2014, the Commission published a communication entitled ‘Blue Energy: Action needed to deliver on the potential of ocean energy in European seas and oceans by 2020 and beyond’ (COM(2014)0008). This communication sets out an action plan to support the development of ocean energy, including that generated by waves, tidal power, thermal energy conversion and salinity gradient power.

ROLE OF THE EUROPEAN PARLIAMENT

Parliament has consistently advocated the use of renewables and highlighted the importance of setting mandatory targets for 2020[1] and, more recently, for 2030.

In February 2014, it adopted a resolution[2] criticising the proposals made by the Commission for the 2030 climate and energy framework as short-sighted and unambitious. It called for a binding 30% share of renewables in energy consumption at EU level, to be implemented through individual nationally binding targets, and for an extension of transport fuel targets after 2020.

In June 2016, Parliament adopted a resolution[3] on the renewable energy progress report, calling on the Commission to present a more ambitious climate and energy package for 2030 that should increase the EU target for renewables to at least 30%, to be implemented by means of individual national targets. The targets already agreed for 2020 had to be taken as the minimum baseline when revising the Renewable Energy Directive.

In January 2018, in view of the 2018 revision of the Renewable Energy Directive, Parliament supported a binding target for the Union of at least 35% renewable energy in 2030[4] and reinforced self-consumption as a right. After negotiations with the Council, the Union’s binding target was decreased to at least 32%.


In January 2020, Parliament adopted a resolution[5] on the European Green Deal in which it issued a series of recommendations, including providing clean, affordable and secure energy. In this spirit, it called for a revision of the Renewable Energy Directive and for the setting of binding national targets for each Member State, and recommended that the 'energy first principle' be implemented in all sectors and policies.

In May 2021, Parliament adopted two resolutions[6] on a European strategy for energy system integration (COM(2020)0299) and a European Strategy for Hydrogen (COM(2020)0301), which support advocated decarbonisation and the use of renewables in the production of electricity and hydrogen. It also called on the Commission to assign a guarantee of origin to renewable hydrogen and to frame the discussion in the context of the revision of the Renewable Energy Directive, as well as the revision of State aid guidelines to promote the development of renewables.

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