



ENERGY EFFICIENCY

Energy efficiency is a strategic priority of the Energy Union, which is built on the 'energy efficiency first' principle. Energy efficiency measures are recognised as means for achieving a sustainable energy supply, cutting greenhouse gas emissions, improving security of supply, reducing import bills and promoting European competitiveness. EU legislation on energy efficiency has evolved significantly over the past 15 years. In 2023, the co-legislators increased the energy efficiency target, i.e. the target for reducing the EU's final energy consumption, to 11.7% by 2030.

LEGAL BASIS

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

ACHIEVEMENTS

A. The Energy Efficiency Directive

1. The Energy Efficiency Directive: towards 2020

The original Energy Efficiency Directive ([Directive \(2012/27/EU\)](#)), which entered into force in December 2012, required Member States to set indicative national energy-efficiency targets in order to ensure that the EU reached its headline target of reducing energy consumption by 20% by 2020. In absolute terms, the EU's energy consumption by 2020 had to be no more than 1 474 and 1 078 million tonnes of oil equivalent (Mtoe) for primary and final energy respectively. Member States were free to make these minimum requirements more stringent as they strove to save energy. The directive also introduced a binding set of measures to help Member States achieve this target and set legally binding rules for end users and energy suppliers. The Member States were required to publish their three-year national energy efficiency action plans.

2. The revised Energy Efficiency Directive: towards 2030

In November 2018, as part of the '[clean energy for all Europeans](#)' package, the Commission proposed a [revision](#) of the Energy Efficiency Directive, increasing the EU primary and final energy consumption reduction targets to 32.5% by 2030, compared with energy consumption forecasts for 2030 made in 2007. In absolute terms, the EU's energy consumption by 2030 would be no more than 1 128 and 846 Mtoe for primary and final energy respectively. The directive also required Member States to put in place measures to reduce their annual energy consumption by an average of 4.4% by 2030. In accordance with [Regulation \(EU\) 2018/1999](#), the Member States had to propose national energy targets and establish 10-year [national energy and climate](#)



[plans](#) (NECPs) for the 2021-2030 period. They must also submit progress reports every two years, which are monitored and assessed by the Commission, which can take measures at EU level to ensure their consistency with the overall EU targets. The new directive entered into force in December 2018 and was transposed by the Member States into national law by 25 June 2020.

In July 2021, as part of the '[Fit for 55](#)' package, the Commission proposed a first [revision](#) of the Energy Efficiency Directive to align its energy efficiency targets with the EU's new climate ambition and embedded in legislation the [energy efficiency first](#) principle as a pillar of the [Energy Union](#). In accordance with this principle, Member States must ensure that energy efficiency solutions, including demand-side resources and system flexibilities, are assessed in planning, policy and major investment decisions. The Commission proposed to increase the EU's binding annual energy efficiency target to at least 9% by 2030, measured against updated forecasts for 2030 made in 2020 (equivalent to energy efficiency targets for primary and final energy consumption respectively to 39% and 36% by 2030, measured against old forecasts for 2030, made in 2007). In absolute terms, the EU's energy consumption by 2030 under the proposal would be no more than 1 023 and 787 Mtoe for primary and final energy respectively by 2030.

The proposal asked Member States to set indicative national energy reduction targets, provided a formula to Member States to calculate their contributions, introduced enhanced automatic gap-filling mechanisms and doubled Member States' obligation to make new annual energy savings to 1.5% of their final energy consumption between 2024 and 2030. It also introduced exemplary requirements for public buildings, such as an annual target for reducing energy consumption of 1.7% for the public sector and a renovation target of at least 3% of the total floor area of public administration buildings. It also proposed to alleviate energy poverty by prioritising vulnerable customers and introduced audit obligations and technical competence requirements, especially for large energy consumers.

In May 2022, as part of its [REPowerEU plan](#) following the Russian aggression against Ukraine, the Commission proposed a second revision of the Energy Efficiency Directive, further increasing the binding energy efficiency target from 9% to 13%. In absolute terms, the EU's energy consumption by 2030 under the proposal would be no more than 980 and 750 Mtoe for primary and final energy respectively by 2030.

The proposal detailed short-term behavioural changes to cut gas and oil demand by 5% and encouraged Member States to start specific communication campaigns targeting households and industry and to use fiscal measures to favour energy savings, such as reduced value added tax rates on energy efficient heating systems, building insulation and appliances and products. It also set out contingency measures in case of severe supply disruption and announced guidance on prioritisation criteria for customers and the facilitation of a coordinated EU demand reduction plan. Between July and December 2022, the directive was complemented by the introduction of new demand reduction targets in the internal energy market ([2.1.9](#)), including a voluntary gas reduction target of 15% (or 45 billion cubic metres) between August 2022 and March 2023, a voluntary gross electricity reduction target of 10% between



December 2022 and March 2023 and a mandatory electricity reduction target of 5% during peak hours.

The new Energy Efficiency Directive ([Directive \(EU\) 2023/1791](#)), in force since 10 October 2023, sets the EU energy efficiency targets, i.e. the reduction of primary and final energy consumption at EU level, to 11.7% by 2030, compared with the 2030 energy consumption forecasts made in 2020. In absolute terms, the EU's energy consumption by 2030 will be no more than 992.5 and 763 Mtoe for primary and final energy respectively by 2030. Each Member State will set an indicative national energy efficiency contribution based on final energy consumption to meet the Union's binding final energy consumption target. Member States will achieve cumulative end-use energy savings by 2030 equivalent to new annual savings of at least 0.8% of final energy consumption up to 31 December 2023, 1.3% from 1 January 2024, 1.5% from 1 January 2026 and 1.9% from 1 January 2028. The directive introduced the obligation for the public sector to play an exemplary role: the EU's public bodies must reduce their combined total final energy consumption by at least 1.9% each year compared with 2021, and must renovate at least 3% of the total floor area of their heated and/or cooled buildings each year. It also established reporting obligations for data centres, dedicated one-stop shops for small and medium-sized enterprises, households and public bodies, and obligations for heating and cooling planning in municipalities with a population of more than 45 000.

B. General framework

1. Energy performance of buildings

a. The Energy Performance of Buildings Directive

The Energy Performance of Buildings Directive ([Directive 2010/31/EU](#)), amended in 2018, is meant to ensure that each Member State has a highly energy-efficient and decarbonised building stock by 2050. The Energy Performance of Buildings Directive introduces mandatory long-term renovation strategies for Member States in order to support the renovation of the national stock of both public and private buildings into a highly energy-efficient and decarbonised building stock by 2050. It also accelerates the transformation of existing buildings into 'nearly zero-energy buildings' by 2050, requiring all new buildings to be nearly zero-energy from 2021 onwards, and supports the modernisation of all buildings with smart technologies.

On 15 December 2021, the Commission proposed a revision of the Energy Performance of Buildings Directive to align it with its climate-neutral ambitions. The revision sets the vision and outlines the tools for achieving a zero-emission building stock by 2050, introduces a new definition of zero-emission buildings and refines existing definitions, such as 'nearly-zero energy building' and 'deep renovation'. It replaces [long-term renovation strategies](#) with national building renovation plans, which are more operational and subject to better monitoring, to be submitted by 30 June 2024. It increases minimum energy standards by requiring all new EU buildings to be zero-emission as of 2030 and all new public buildings as of 2027, all non-residential buildings in energy performance class G to be renovated to at least class F by 2027 and class E by 2030, and all residential buildings to reach at least class F by 2030 and class E by 2033. The revision ensures comparable national standards for energy performance



certificates by 2025, introduces voluntary renovation passports by 2024 and a smart readiness indicator by 2026 and provides financial support to alleviate energy poverty.

On 18 May 2022, after the Russian invasion of Ukraine and in line with the [REPowerEU plan](#), the Commission amended the Energy Performance of Buildings Directive by enhancing support for solar energy in buildings, including a selected phased-in compulsory installation of rooftop solar energy (solar rooftop initiative) and energy demand reduction measures.

b. The renovation wave strategy

In October 2020, the Commission published the [renovation wave](#) strategy to boost renovation, aiming to at least double renovation rates over the next 10 years and make sure that renovations lead to greater energy and resource efficiency. The renovation wave initiative builds on measures agreed on under the ‘clean energy for all Europeans’ package, notably the requirement for each Member State to publish a long-term building renovation strategy, and the building-related aspects of each Member State’s national energy and climate plans.

2. Cogeneration

In the framework of the Energy Union package, the Commission launched an [EU strategy on heating and cooling](#) in 2016 to boost the energy efficiency of buildings and improve linkages between electricity systems and district heating systems, which would increase the use of renewable energy and encourage the reuse of waste heat and cold generated by industry. Legislative provisions for this strategy were included in the ‘clean energy for all Europeans’ package.

The 2018 [revision](#) of the Energy Efficiency Directive required Member States to assess and notify the Commission of the potential for high-efficiency cogeneration and district heating and cooling on their territory and to conduct a cost-benefit analysis based on climate conditions, economic feasibility and technical suitability (with some exemptions).

The Commission’s proposed [revision](#) of the Energy Efficiency Directive in July 2021 introduced stricter planning and follow-up of comprehensive assessments, revised definitions of efficient district heating and cooling and additional criteria for specific emissions in high-efficiency cogeneration (270g CO₂/kWh). In May 2022, an amendment on the energy performance of buildings introduced obligations on Member States to promote the deployment of solar installations on buildings.

3. Energy efficiency of products

The EU introduced several measures concerning the energy efficiency of products, including ecodesign requirements for energy-related products ([Directive 2009/125/EC](#)) and setting a framework for energy labelling ([Regulation \(EU\) 2017/1369](#)). The new framework for labelling the energy efficiency of products eliminates A+, A++ or A+++ ratings and returns to a simpler A-G scale. Between 2021 and 2023, the Commission adopted several regulations on ecodesign and energy labelling with regard to ecodesign requirements for different types of products.



ROLE OF THE EUROPEAN PARLIAMENT

Parliament has continuously called for more ambitious energy efficiency targets and stricter regulations.

On 17 January 2018, Parliament adopted [first reading amendments](#) calling for a minimum 35% target on energy efficiency in the EU by 2030, higher than the 30% proposed by the Commission.

On 15 January 2020, Parliament adopted a [resolution](#) on the European Green Deal calling for the Energy Efficiency Directive and Energy Efficiency of Buildings Directive to be revised in line with the EU's increased climate ambition. On 17 September 2020, it adopted a [resolution](#) in favour of maximising the energy efficiency potential of the EU building stock, calling on the Commission to develop consistent measures to stimulate faster and deeper renovation of buildings.

On 14 September 2022, Parliament adopted an [amendment](#) raising the EU energy efficiency target proposed by the Commission as part of its REPowerEU plan to at least 13% of final energy consumption by 2030, compared to 2020 projections. This is equivalent to final and primary energy consumption limits of 740 Mtoe and 960 Mtoe respectively.

On 14 March 2023, Parliament defined its [first reading position](#) on the need for residential buildings to achieve at least energy performance class E by 2030, and D by 2033 (as opposed to F and E under the Commission's proposal) and on support measures against energy poverty. Non-residential and public buildings would have to achieve the same classes by 2027 and 2030 respectively. A limited set of exemptions would apply for special buildings (monuments, technical buildings, temporary use of buildings or churches, places of worship, etc.) and for public social housing where renovations would lead to rent increases that cannot be compensated by saving on energy bills, and targeted grants and subsidies should be made available to vulnerable households. Parliament and the Council are currently in interinstitutional negotiations.

For more information on this topic, please see the [website](#) of the Committee on Industry, Research and Energy.

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