ENERGY EFFICIENCY

Reducing energy consumption and waste is of growing importance to the EU. Energy efficiency measures are recognised as a means of not only achieving a sustainable energy supply, cutting greenhouse gas emissions, improving security of supply and reducing import bills, but also of promoting European competitiveness. EU legislation on energy efficiency has evolved significantly over the past 15 years. In 2018, EU leaders set a 32.5% target for reducing EU annual energy consumption by 2030. In March 2023, they agreed on EU primary and final energy consumption reduction targets of 38% and 40.5% respectively by 2030. Energy efficiency is therefore a strategic priority of the Energy Union, which is built on the ‘energy efficiency first’ principle. The future policy framework for the 2030 and post-2030 period is under discussion.

LEGAL BASIS

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

ACHIEVEMENTS

A. The Energy Efficiency Directive


The Energy Efficiency 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 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

The energy efficiency first principle, which aims to ensure a secure, sustainable, competitive and affordable energy supply in the EU, is one of the key principles of the Energy Union.

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 the 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 million tonnes of oil equivalent 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 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. The Commission proposed to increase the EU’s binding annual energy efficiency reduction target to at least 9% by 2030, measured against updated baseline projections made in 2020, or equivalently, to increase the energy efficiency reduction targets for primary and final energy consumption respectively to 39% and 36% by 2030, measured against the original baseline projections 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 million tonnes of oil equivalent 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 reduction target from 9% to 13% or equivalently, to increase the energy efficiency reduction targets for primary and final energy consumption respectively to at least 41% and 39% by 2030, measured against the original baseline projections made in 2007. In absolute terms, the EU’s energy consumption by 2030 under the proposal would be no more than 980 and 750 million tonnes of oil equivalent for primary and final energy respectively by 2030.

The proposal also 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% 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.

In March 2023, Parliament and the Council informally agreed to set an EU energy efficiency target of 11.7% for 2030, compared with the 2030 energy consumption forecasts made in 2020. This translates into a binding upper limit to the EU’s final energy consumption of 763 million tonnes of oil equivalent and indicative national targets of 993 million tonnes of oil equivalent for primary consumption. Annual energy savings obligations for Member States are set to 1.49% of their final energy consumption on average, from 2024 to 2030, up from the current level of 0.8%, and will gradually reach 1.9% by the end of 2030.

The energy policy framework for the 2030 and post-2030 period is currently under discussion.

B. General framework

1. Energy performance of buildings


Directive (EU) 2010/31 (the Energy Performance of Buildings Directive), 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 55% EU greenhouse gas emissions reduction target and its goal of being climate-neutral by 2050. 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, 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 a new strategy to boost renovation called ‘A Renovation Wave for Europe – greening our buildings, creating jobs, improving lives’, which aims 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 on 16 February 2016. The strategy included plans to boost the energy efficiency of buildings, improve linkages between electricity systems and district heating systems, which would greatly 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.
On 23 February 2021, the Commission adopted an amendment to the 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. In 2012, Parliament played a key role in the negotiation of the Energy Efficiency Directive and ensured that the requirements for national building renovation strategies and mandatory energy audits for large companies were kept in the final compromise agreed with the Council.

On 23 June 2016, Parliament adopted a resolution on the implementation report on the Energy Efficiency Directive concluding that the existing directive had been poorly implemented and called on the Member States to implement it rapidly and fully. In November 2016, the Commission presented a new proposal to amend the Energy Efficiency Directive.

On 13 September 2016, Parliament adopted a resolution on an EU strategy on heating and cooling, calling on the Commission to focus action on energy efficiency measures in buildings, especially in energy-poor households.

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. The vote in Parliament plenary also backed the energy efficiency obligations set out in Article 7, which would require EU countries to make annual energy savings of 1.5%.

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, and for their implementation to be reinforced through binding national targets, paying special attention to vulnerable citizens while also taking into account the need for economic predictability for the sectors concerned.

On 17 September 2020, Parliament 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 on the revision of the Energy Efficiency Directive, slightly raising the EU energy efficiency reduction 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 energy reduction targets for final and primary energy consumption of at least 40% and 42.5% by 2030 respectively, compared to 2007 projections, or final and primary energy consumption limits of 740 million tonnes of oil equivalent and 960 million tonnes of oil equivalent respectively.

On 10 March 2023, Parliament and the Council reached a provisional agreement on an overall EU energy efficiency target of 11.7% for 2030, compared to 2020 baseline projections, (which corresponds to a reduction of 38% and 40.5% for final and primary
energy consumption respectively, when compared to the 2007 projections for 2030), and on annual energy savings obligations of 1.49% of final energy consumption on average, from 2024 to 2030, reaching 1.9% by the end of 2030.

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.

For more information on this topic, please see the website of the Committee on Industry, Research and Energy.

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