European Parliament

Revised Energy Efficiency Directive

The revised Energy Efficiency Directive (EED) sets a more ambitious binding annual target for reducing energy use at EU level. Energy-saving measures will contribute to reaching the EU target of a net 55 % reduction in greenhouse gas (GHG) emissions by 2030, as a stepping stone towards reaching climate neutrality by 2050.

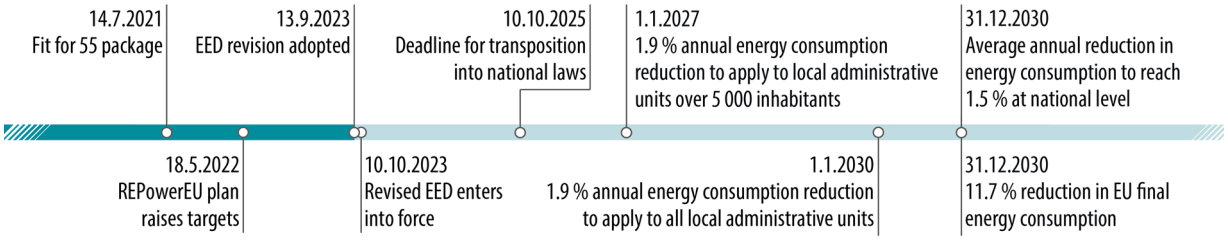
Background

The targets from the EED proposal were further increased by the REPowerEU text. The final EED revision sets a binding EU target for the reduction of final energy consumption (total energy consumed by end users) at 11.7 % by 2030. The same target is indicative for primary energy consumption (which includes energy used to produce energy). Thus, by 2030, EU energy consumption must not exceed 992.5 million tonnes of oil equivalent (Mtoe) for primary energy and 763 Mtoe for final energy. According to a report by the Coalition for Energy Savings, this would lead to a reduction in GHG emissions of around 10 %. The targets for primary energy and final energy consumption refer to the EU level, with Member States setting indicative national contributions. For these, a combination of objective criteria is used to reflect national circumstances such as energy intensity, gross domestic product per capita and energy-saving potential.

Objectives and targets

EU Member States' annual energy savings must reach **1.5 % on average by 2030**. They will begin with a 1.3 % reduction in the period by the end of 2025, followed by a 1.5 % reduction by the end of 2027, and move towards a 1.9 % reduction by the end of 2030. To achieve this, Member States' calculations may include energy savings realised under the current and revised Energy Performance of Buildings Directive and measures resulting from the EU emissions trading system, EU ETS (for buildings and transport). In the implementation, the public sector is set to lead by example and reduce its final energy consumption by 1.9 % each year, with the possibility of excluding public transport and the armed forces. This obligation does not cover, until 31 December 2026, the energy consumption of public bodies in local administrative units with fewer than 50 000 inhabitants and, until 31 December 2029, with fewer than 5 000 inhabitants. At least 3 % of the total floor area of buildings owned by public bodies is to be renovated each year and transformed into at least nearly zero-energy buildings or zero-emission buildings. Member States may choose buildings for renovation based on cost-effectiveness and technical feasibility, and exempt social housing from the obligation to renovate. Less stringent requirements may apply for instance to buildings with special architectural or historical merit; owned by the armed forces, or used as places of worship. Implementation will also focus on consumers, through the establishment of one-stop shops providing technical and financial advice and consumer protection via out-of-court mechanisms for the settlement of disputes. In addition, a share of countries' energy savings should be achieved among vulnerable customers and those affected by energy poverty. Each country can define the criteria to determine these targets, allowing flexibility for solutions based on country-specific circumstances. As to the industrial sector, the revised EED expands the scope of energy audit obligations to all those companies, including small and medium-sized enterprises, consuming energy above a certain threshold.

Revised Energy Efficiency Directive (EED): Implementation timeline



Source: EPRS; graphic by Lucille Killmayer, 2023.

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Implementation on the ground

The International Energy Agency estimates that the energy crisis in 2022 (higher energy costs, supply disruptions and fear of shortages) provided the impetus for strengthening efficiency measures across sectors, both at consumer and government levels. Implementation of energy efficiency measures started with earlier versions of the EED and with the Governance Regulation. Under these laws, EU Member States are required to draw up integrated national energy and climate plans (NECPs) and national energy efficiency action plans, where they outline planned energy efficiency measures and ways to meet the targets. Typical actions include long-term renovation strategies for the building stock, use of smart meters and energy audits. The revised EED entered into force on 10 October 2023. Member States have two years to transpose the provisions into national law.

Below is a selection of examples of energy-efficiency measures that have already been, or are being, implemented in selected EU Member States.

Improvement of energy efficiency of buildings in Słupsk, Poland

The city of Słupsk (Poland) set a plan to improve the energy efficiency of 50 public buildings, ranging from schools and nurseries, to community centres and sports halls, to libraries, theatres, fire stations and office buildings. The project consisted of improving insulation, cutting emissions, switching to renewable energy (solar panels, solar collectors and heat pumps), and reducing heating and water costs. Four types of insulation were envisaged: internal; external; underground and above-ground. The project included replacement of window and door frames, upgrade of central heating and water heating installations, and installation of mechanical ventilation with heat recovery. Additionally, energy-saving LED technology systems replaced existing lighting. The project covered a total area of 81 000 m^2 and aimed to reduce heat energy requirements by 57 %.

Energy efficient lighting in Locana, Italy

As part of the municipality's energy saving and energy efficiency policy, Locana (Italy) replaced the lighting fixtures in municipal buildings (offices and schools) and installed energy-saving LED lights. In addition, the municipality replaced streetlights in order to reduce electricity consumption.

City of Oulu (Finland) quality control for new constructions and renovations

The city of Oulu (Finland) started proactive quality control in construction, both for new buildings and renovations. For new buildings, quality control consists of supporting house builders with advanced construction guidance, quality training and quality assessment systems. Quality control is included in the price of the building permit. For renovations, tenants receive assistance in reducing energy bills, to make homes more energy efficient and increase their value. Project measures include 'quality cards' (sets of detailed instructions), a dedicated website and 'quality control evenings' (for both individual houses and larger projects), which take place annually in spring and autumn. The authorities organise training for construction industry professionals and technicians dealing with repairs. The impact of measures is monitored regularly. It has been shown that residential buildings built in Oulu in 2019 saved 4.4 gigawatt hours (GWh) of energy per year compared with similar buildings built according to the minimum energy efficiency level.

Roll-out of micro combined heat and power plants in Sweden

The regional authorities in Skåne (Sweden) started a demonstration project on micro combined heat and power (micro-CHP) plants, a highly efficient cogeneration technology that generates heat and electricity simultaneously from the same energy source. The project aimed to disseminate the knowledge, experience and lessons learned from three different small-scale pilot plants to authorities, industry organisations and companies. Thanks to this project, 16 small-scale CHP plants have been built all over Sweden, based on the Organic Rankine cycle technology, i.e. a closed thermodynamic cycle used for power production that allows low-grade heat to be recovered effectively.

For more insights on the legislative process leading up to the adoption of the new legislation, see our 'EU Legislation in progress' briefing or consult the Legislative Train Schedule.