Decree of the Ministry of the Environment on the energy efficiency requirements of certain technical building systems

1. Key proposals and objectives

The decree of the Ministry of the Environment would establish minimum energy efficiency requirements for certain technical systems in buildings. The decree would repeal the currently valid corresponding decree (Decree of the Ministry of the Environment on the energy efficiency requirements of certain technical building systems 718/2020).

The decree would be issued pursuant to section 37(4) of the Construction Act (751/2023) and would specify in more detail the requirement in section 37(1) of the Construction Act that the construction products and building services systems used in a building, as well as their control and measurement systems, must be such that energy consumption and power demand remain low when the building and its systems are used for their intended purpose, and that energy consumption can be monitored.

The decree would implement the requirements of Directive (EU) 2024/1275 of the European Parliament and of the Council on the energy performance of buildings (recast), particularly regarding self-regulating devices, building automation and control systems, on-site renewable energy production systems, and energy storage. The directive lays down requirements concerning the application of minimum energy performance requirements when technical building systems are installed, replaced, or upgraded. Article 13 of the Directive addresses technical building systems.

The aim of the decree is to promote the energy-efficient operation of technical building systems while ensuring indoor environmental quality and reducing the environmental impact caused by buildings.

The decree would set minimum energy performance requirements for certain technical building systems in buildings. The requirements would apply to building automation and control systems, on-site renewable energy production, energy storage, and self-regulating devices. The requirements would apply to the construction of new buildings, renovation and alteration work, and changes in the use of buildings.

The decree is intended to enter into force on [xx Month] 2026.

2. Background and preparatory work

The decree is based on Directive (EU) 2024/1275 of the European Parliament and of the Council on the energy performance of buildings (recast), hereinafter referred to as the Energy Performance of Buildings Directive or the revised Energy Performance of Buildings Directive. The Directive on the Energy Performance of Buildings entered into force on 28 May 2024, and it must be implemented in the Member States by 28 May 2026.

The revision of the Energy Performance of Buildings Directive is part of the EU’s Fit for 55 package, which aims to reduce EU emissions by at least 55 percent by 2030 and to achieve climate neutrality by 2050. The role of buildings in achieving these goals is significant, as buildings account for 40 percent of total energy consumption and generate 36 percent of energy-related greenhouse gas emissions.

The revised Energy Performance of Buildings Directive requires Member States to take a number of measures aimed at reducing greenhouse gas emissions and final energy consumption in buildings by 2030 and achieving climate neutrality in buildings by 2050. The key instruments of the revised Energy Performance of Buildings Directive are minimum energy performance requirements for buildings and the preparation of a national renovation plan. In addition, the directive requires Member States to implement legislation related to building automation and control systems, technical systems, solar energy installations, electric vehicle charging points, and bicycle parking spaces. Furthermore, the directive requires changes to building energy performance certificates.

The previous Energy Performance of Buildings Directive and the amendments thereto have been implemented in Finland by several legislative acts, including the Act on the Energy Certificate of Buildings (50/2013), the Act on the Energy Certificate Information System of Buildings (147/2015), the Act on equipping buildings with electric vehicle charging points and charging point capabilities and automation and control systems (733/2020) and the Construction Act (751/2023). There are also national regulations on the Directive in a number of lower-level legislative acts.

The Government Programme of Prime Minister Petteri Orpo states the following regarding the energy performance of buildings: “Energy consumption in construction will be reduced, and the energy performance of buildings improved in a cost-effective manner. Efforts will be made to ensure that the provisions of the EU Energy Performance of Buildings Directive allow for the broadest possible national flexibility. In implementing the EU Energy Performance of Buildings Directive, residents and property owners should not be subjected to unreasonable obligations. If new obligations are introduced, it will be ensured that all households have the ability to meet the requirements arising from the regulation.”

The proposal has been prepared as official work by the Ministry of the Environment. As background for the preparation, the Ministry of the Environment commissioned a study titled “Updating total energy requirements for certain technical systems”, which was carried out by Eurofins Expert Services Oy in autumn 2024. The study is available in the Government’s project portal under project ID YM004:00/2025.

In August 2024, the Ministry of the Environment established a monitoring group to support and monitor the national implementation of the Energy Performance of Buildings Directive (VN/14781/2024). The monitoring group discusses and comments on draft legislation under preparation and supports its preparation. The monitoring group will make suggestions on how to keep regulation, administrative burdens and bureaucracy to a minimum, despite the new and increased requirements in the Directive. It is also the task of the monitoring group to increase cooperation in the field of real estate and construction and to ensure information exchange and interaction with the persons involved in the preparation of official acts. The monitoring group is divided into three different preparatory groups, which are preparing in more detail the legislative amendments required by the Energy Performance of Buildings Directive. The draft provisions included in this proposal were reviewed by both the preparatory group and the monitoring group in autumn 2024, early 2025, and early 2026.

3. Requirements of the Energy Performance of Buildings Directive concerning technical systems

Article 13 of the Energy Performance of Buildings Directive lays down provisions on technical building systems. According to paragraph 1, in order to optimize the energy use of technical building systems,

Member States must establish system requirements for technical building systems installed in existing or new buildings that use energy-saving technologies. These requirements shall cover overall energy performance, proper installation, appropriate dimensioning, adjustment and control, and, where relevant, hydronic balancing. When setting these requirements, Member States must take into account design conditions as well as typical or average operating conditions.

Furthermore, according to the same paragraph, system requirements must be set for new systems as well as for the replacement and upgrading of existing technical building systems, and they must be applied insofar as this is technically, economically, and functionally feasible.

The same paragraph also allows Member States to set requirements related to greenhouse gas emissions of heat generators, the type of fuel used, or the minimum share of renewable energy used for heating at the building level, provided that such requirements do not create unjustified market barriers. In addition, Member States must ensure that the requirements they set for technical building systems achieve at least the latest cost-optimal levels.

According to Article 13(2), Member States may set specific system requirements for technical building systems in order to promote the actual installation and use of low-temperature heating systems in new or majorly renovated buildings. According to paragraph 3, Member States must require that, where technically and economically feasible, new buildings are equipped with self-regulating devices that allow the temperature to be controlled separately in each room or, where justified, in a designated heated or cooled zone of the building, and, where appropriate, with hydronic balancing. Such self-regulating devices and, where appropriate, hydronic balancing must also be installed in existing buildings when heat generators or cooling units are replaced, where this is technically and economically feasible. According to paragraph 4, Member States must set requirements to ensure the implementation of adequate indoor environmental quality standards in order to maintain a healthy indoor climate.

The Article also provides that Member States must require zero-emission non-residential buildings to be equipped with monitoring and control devices for indoor air quality. For existing non-residential buildings, the installation of such devices must be required where technically and economically feasible, when the building undergoes major renovation. Member States may also require the installation of such devices in residential buildings. (Paragraph 5)

According to paragraph 6, Member States must ensure that, when a technical building system is installed, the overall energy performance of the modified part and, where appropriate, of the entire modified system is assessed. The results must be documented and provided to the building owner so that they remain available and can be used to verify compliance with the minimum requirements laid down under paragraph 1 and for the issuance of an energy performance certificate. Member States must take the necessary measures to ensure that the energy performance of technical building systems is optimized when they are retrofitted or replaced.

Member States must also promote energy storage of renewable energy in buildings, and they may introduce new incentives and financing measures to encourage the transition from fossil fuel-based heating and cooling systems to non-fossil-based alternatives.

Member States must also seek to replace individual fossil fuel boilers in existing buildings in order to comply with national plans for the phase-out of fossil fuel boilers (paragraph 7). The Commission shall provide guidance on what is to be considered a fossil fuel boiler (paragraph 8).

4. Current situation and its assessment

According to section 37 of the Construction Act (751/2023), building products and technical building systems used in buildings, as well as their control and measurement systems, shall be such that the energy consumption and power demand when the building and its systems are used in accordance with their intended use are negligible and that energy consumption can be monitored. Under section 37(4), point 1 of the Building Act, more detailed provisions may be issued by decree of the Ministry of the Environment concerning the construction of new buildings, the repair and alteration of buildings, and changes in the use of buildings. These provisions may address minimum energy performance requirements for buildings, building components, and technical systems, as well as the methods used to calculate these in a building. On the basis of this authorization, the Ministry of the Environment has issued a decree on the energy efficiency requirements of certain technical building systems (718/2020).

According to section 1 of the decree, it applies to the construction of new buildings, the repair and alteration of buildings, and changes in the use of buildings, where the building consists of a roofed structure with walls and energy is used to maintain the indoor climate. According to subsection 2 of the same section, the decree lays down energy efficiency requirements concerning self-regulating devices, building automation and control systems, and on-site electricity generation systems. The decree also provides for definitions used in the decree (section 2), self-regulating devices (section 3), energy efficiency requirements for building automation and control systems and on-site electricity generation systems (section 4), overall energy performance of systems (section 5), proper system dimensioning (section 6), correct system installation (section 7), proper commissioning of systems (section 8), proper system control (section 9), electrical equipment and installations (section 10), and the inspection and documentation of overall energy performance (section 11).

The requirements of the current decree on the energy efficiency of technical systems have been applied since 2021. Most of the requirements of the recast directive have already been taken into account in that decree, and they have also become part of standard construction practice.

In current construction practice, it is typical, beyond the requirements of the previous decree, to also implement hydronic balancing of water-based systems and to treat energy storage systems as subject to requirements. The current level of construction already corresponds well to the proposed requirements.

Principal impacts

The most significant changes in the new decree would be the requirements for hydronic balancing and the extension of requirements to on-site renewable energy production and energy storage. These changes are expected to have a minor impact, as they are typically already implemented in standard construction practices. The extension of the requirements to forms of energy other than electricity production and to energy storage anticipates future trends in the diversification of building energy systems.

To be completed

Feedback

The draft decree was open for consultation from [start date] to [end date].

5. Provision-specific explanatory notes

Section 1 Scope. The scope of section 1 of the decree would be clarified to specify that it also covers on-site renewable energy production and energy storage. No other changes would be made to the provision compared with the current decree.

Section 2 Definitions. Section 2 would set out definitions. Compared with the current decree, new definitions would include on-site renewable energy production, energy storage, and cooling units. In addition, the definitions of technical building systems and self-regulating devices would be clarified.

According to paragraph 1, “technical building systems” means the technical equipment of a building or part of a building used for space heating and cooling, ventilation, domestic hot water production, fixed lighting, building automation and control, on-site renewable energy production, energy storage, or a combination of these, including systems using energy from renewable sources.

“On-site renewable energy production” refers to a system installed in the building or on the land where the building is located, designed to produce and store renewable energy, and connected to the building and its energy installations.

Energy storage refers to a system installed in the building or on the land where the building is located, designed to store energy for later use and to compensate for temporal differences between energy production and consumption. Energy means both electricity and heat. For shared building systems, the land area may also include the surrounding area.

The definition of “self-regulating devices” would be expanded to include devices that regulate cooling capacity.

Section 3 Installation of self-regulating devices in new buildings

Compared with the current decree, subsection 2 of the section would become its own section. Subsection 1 would be amended to include an obligation to balance hydronic networks when self-regulating devices are installed in a water-based system. Subsection 3 would be renumbered as subsection 2, and any reference to the former subsection 2 would be removed as unnecessary. When applying the provision, it should be taken into account that, for example, walk-in closets and similar spaces may be considered part of a room.

Section 4 Installation of self-regulating devices when a building’s heat generator, heating distribution unit, or cooling unit is replaced

Subsection 2 of the current section 3 would become its own section. The provision would continue to define situations related to the replacement or addition of a building’s heat generator or heating distribution unit. The scope of the section would be expanded to also cover cooling and the balancing of hydronic networks. In

subsection 2, the section would stipulate, similarly to section 3, that it applies only when the installation of self-regulating devices is technically and economically feasible. This corresponds to section 3, subsection 3 in the current decree.

Section 5 Energy efficiency requirements for building automation and control systems, on-site renewable energy production systems, and energy storage systems

The title of the section would be amended to include references to renewable energy production systems and energy storage systems. The section would be renumbered from section 4 to section 5 compared with the current decree. Subsection 1 would be amended to include a requirement for hydronic balancing where appropriate, as well as to specify the design conditions and typical or average operating conditions that must be taken into account when fulfilling the requirements.

Section 6 Overall energy efficiency of the automation and control system

The section would be renumbered from section 5 to section 6 compared with the current decree. The title would be changed from “Overall energy efficiency of the system” to “Overall energy efficiency of the automation and control system.” The section would be split into two parts. Subsection 2 would be moved to become the new section 6. The remaining text would largely correspond to section 5 of the current decree. A technical/legal clarification would be made in the wording of the provision. The wording would be amended so that the previous phrasing “must be ensured” is replaced by “shall be ensured.”

Section 7 Overall energy efficiency of on-site renewable energy production systems and energy storage systems

The section would principally correspond to section 5(2) of the Decree in force. The previous requirement to design an on-site electricity generation system would be amended to apply to on-site renewable energy production systems and energy storage systems.

Compared with the previous decree, the targeting would be clarified to specifically refer to on-site renewable energy production systems and energy storage systems.

Section 8 Proper dimensioning of the automation and control system

The section would mainly correspond to section 6 of the Decree in force. The title of the section would be clarified, and the section would be split into two by moving subsection 2 into its own separate section. The numbering of the section would be adjusted accordingly. The requirement for design and dimensioning would be clarified so that design measures must also take into account the design conditions as well as typical or average operating conditions.

Section 9 Proper dimensioning of on-site renewable energy production systems and energy storage systems

The section would correspond to section 6(2) of the Decree in force. Unlike the current decree, the provision would specify that the design and dimensioning obligations of specialized designers would apply to on-site renewable energy production systems and energy storage systems. Specialized designers would also be required to take into account the temporal mismatch between energy production and demand, as well as potential energy cost savings.

Section 10 Installation of the automation and control system

The section would be renumbered from section 7 to section 10. The title of the section would also be changed. The title in the current decree is “Proper installation of the system.” The amendment would clarify which system is being installed. No changes would be made to the content of the section.

Section 11 Installation of on-site renewable energy production systems and energy storage systems

This section would regulate the installation of on-site renewable energy production systems and energy storage systems. The section is new compared with the current decree. According to the section, the person responsible during the construction phase must ensure that on-site renewable energy production and energy storage systems are installed in buildings or structures in accordance with the plans. Installation must be carried out so that the systems operate as energy efficiently as possible and do not cause harm to the functionality of the structures, the building, or its users. Harm is understood broadly to include various types of hazards, such as safety, fire safety, gas, and noise hazards. However, this list is not exhaustive; other types of harm must also be considered and avoided.

The section is necessary because renewable energy production and energy storage systems have become increasingly common in the construction sector. Ensuring the energy-efficient operation of these systems and minimizing potential harm is particularly important from the perspective of the end-users of buildings.

Section 12 Requirements for the commissioning of the automation and control system

The section would correspond to section 8 of the Decree in force. The numbering would be adjusted, and the title would be changed to “Requirements for the commissioning of the automation and control system.” No other amendments would be made to this section.

Section 13 Requirements for the commissioning of on-site renewable energy production systems and energy storage systems

The section is new compared with the current decree. It sets out the responsibility of the person in charge during the construction phase to ensure that the operation, compliance with plans, and electrical safety of on-site renewable energy production and energy storage systems are checked, and that, where necessary, the hydronic network is balanced before commissioning the systems. The section also regulates the preparation of an inspection report, which must be attached to the construction inspection documents, and the obligation to make an entry in the summary section of the inspection documents confirming compliance with the plans.

This section ensures, through high-quality commissioning, the proper functioning, safety, and reliability of production and storage systems that significantly affect the energy efficiency of the building.

Section 14 Requirements for the control of the automation and control system

Compared with the current decree, the title of the section would be amended, and the section would be split into two. The proposed section 14 would correspond to subsection 1 of section 9 in the current decree.

Section 15 Requirements for the control of on-site renewable energy production systems and energy storage systems

The section would principally correspond to section 9(2) of the Decree in force. The wording of the provision would be amended so that references to local electricity generation systems are replaced with on-site renewable energy production systems and energy storage systems.

The responsibility of the specialized designer to ensure the method of displaying the amount of generated electricity would be changed to apply only to renewable energy. However, the specialized designer may still ensure that the automation and control system includes a method for displaying the total amount of electricity generated.

Section 16 Electrical devices and appliances

The section would correspond to section 10 of the Decree in force. No amendments would be made to this section.

Section 17 Inspection and documentation of overall system energy efficiency

The section would mainly correspond to section 11 of the Decree in force. The provision would be amended so that it only requires documenting measures related to on-site renewable energy production systems or energy storage systems, such as installation, replacement, or upgrading. The current decree requires the person responsible to document measures related to local electricity generation systems.

Entry into force

The decree is proposed to enter into force on [day] [month] 2026. The decree would repeal the current Ministry of the Environment decree on energy efficiency requirements for certain technical systems. Upon entry into force, a transitional arrangement would be provided. Ongoing projects would continue to follow the repealed decree until the project is completed, unless otherwise required by the Building Act, other legislation, or the Energy Performance of Buildings Directive.