



Brussels, 14.10.2020  
C(2020) 6930 final

**COMMISSION DELEGATED REGULATION (EU) .../...**

**of 14.10.2020**

**supplementing Directive (EU) 2010/31/EU of the European Parliament and of the Council by establishing an optional common European Union scheme for rating the smart readiness of buildings**

(Text with EEA relevance)

## **EXPLANATORY MEMORANDUM**

### **1. CONTEXT OF THE DELEGATED ACT**

The Communication on the European Green Deal<sup>1</sup> stresses the role that the renovation of buildings can play in achieving climate neutrality by 2050. It introduces a new ‘renovation wave’ initiative to boost the energy performance of buildings in the EU. The renovation wave will be a flagship EU initiative in the buildings sector – key for the clean energy transition and the fight against climate change and its impacts. It will give an additional impetus to the implementation of the EU policy framework for the energy performance of buildings.

The Energy Performance of Buildings Directive<sup>2</sup> (‘EPBD’) is the EU’s main legal instrument to promote optimal energy performance of buildings<sup>3</sup>. It seeks to improve the energy performance of residential and non-residential buildings within the EU, taking into account the outdoor climate and local weather conditions, as well as indoor climate requirements and cost-effectiveness.

As part of the Clean Energy package<sup>4</sup>, the EPBD was amended in 2018 for three main reasons:

- (1) to encourage the renovation of existing building stocks by establishing long term building renovation strategies, including the mobilisation of financing and creating a clear vision for a decarbonised building stock by 2050;
- (2) to modernise the Directive, encouraging the use of information and communication technologies (ICT) and other smart technologies to ensure that buildings operate efficiently; and
- (3) to streamline provisions where they have not delivered the expected results.

Modernising the EPBD to further promote smart building technologies (point 2 above) entails, in particular, introducing a smart readiness indicator (‘SRI’) for buildings.

The SRI will allow users to rate the smart readiness of buildings, i.e. the capability of buildings (or building units) to adapt their operation to the needs of the occupant, to optimise energy efficiency and overall in-use performance<sup>5</sup>, and to adapt to signals from the grid (energy flexibility). The SRI will raise awareness amongst building owners and occupants of the value of building automation and electronic monitoring of technical building systems. It will also give them confidence that the new and improved functions can generate costs and energy savings.

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<sup>1</sup> [https://ec.europa.eu/info/publications/communication-european-green-deal\\_en](https://ec.europa.eu/info/publications/communication-european-green-deal_en)

<sup>2</sup> Directive 2010/31/EU of the European Parliament and of the Council of 19 May 2010 on the energy performance of buildings - OJ L 153, 18.6.2010, p. 13–35

<sup>3</sup> In this document, all occurrences of ‘energy performance’ are to be understood within the meaning of Article 2 of the EPBD.

<sup>4</sup> [https://ec.europa.eu/energy/topics/energy-strategy/clean-energy-all-europeans\\_en](https://ec.europa.eu/energy/topics/energy-strategy/clean-energy-all-europeans_en)

<sup>5</sup> ‘overall in-use performance’ refers to the aspects of buildings performance that the SRI can contribute to, in line with Article 8(10) and Annex IA of the EPBD, and that include inter alia: energy performance (within the meaning of the EPBD), adaptation in response to the needs of the occupants (e.g. in relation to indoor climate conditions), and energy flexibility. In accordance with the scope of the EPBD, The SRI is an instrument that focuses on the performance of buildings in the use phase - meaning that other aspects that are relevant to overall life-cycle performance of buildings, such as material efficiency, are not in the scope of the SRI.

The SRI is designed to support the digitalisation and modernisation of buildings. It is consistent with, and supplements, other policy instruments and initiatives aimed at boosting energy performance of buildings, in particular the renovation wave initiative.

Under the EPBD (Article 8(10) and 8(11), and Annex IA), the SRI will be established as an ‘optional common Union scheme’ (i.e. using the scheme to rate the smart readiness of buildings will be optional for Member States). It will comprise a delegated act that establishes the scheme and sets out the SRI definition and calculation methodology, and an implementing act that sets out detailed technical modalities for implementing the scheme.

This delegated Regulation is the first of these two SRI acts, establishing the SRI, its definition and calculation methodology, under Article 8(10) of the EPBD.

## 2. CONSULTATIONS PRIOR TO THE ADOPTION OF THE ACT

The decision to modernise the EPBD to better consider ICT and smart technologies and, in particular, to introduce a smart readiness indicator, has been subject to a thorough consultation process. This was a vital step in preparing the proposal to amend the EPBD<sup>6</sup>. The impact assessment accompanying the proposal<sup>7</sup> showed that the measures proposed to modernise the Directive would lead to significant impacts, in particular on energy savings.

To help prepare the SRI acts, extensive dedicated stakeholder consultations were held<sup>8</sup>. For example, the first technical study on the SRI, which ran from March 2017 to August 2018, included three stakeholder plenary meetings<sup>9</sup> and systematic stakeholder consultation on the study’s technical reports. The second technical study, launched in December 2018, involved two additional stakeholder plenary meetings, three dedicated stakeholder working groups to issue recommendations to the study’s consortium and to the Commission, and written consultations on the study’s technical reports. This nearly three-year extensive consultation process was supplemented by an online consultation<sup>10</sup> that gathered detailed feedback from more than 90 respondents on key aspects of the proposed SRI legal framework.

Member States were also consulted on the SRI legal acts. An ad-hoc group of experts (the Expert Group on the EPBD) gave feedback on this delegated Regulation, and the Energy Performance of Buildings Committee was consulted on the accompanying implementing Regulation.

In accordance with better regulation<sup>11</sup>, a feedback period ran from 18 June 2020 to 16 July 2020 to gather additional inputs from citizens and stakeholders. Feedback received included 21 inputs from companies/business associations (among which 17 SMEs), two from EU citizens and one from a public authority (respectively 88 %, 8 % and 4 % of the feedbacks).

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<sup>6</sup> See explanatory memorandum in the Proposal for a Directive of the European Parliament and of the Council amending Directive 2010/31/EU on the energy performance of buildings, COM(2016) 765 final.

<sup>7</sup> Commission Staff Working Document Impact Assessment accompanying the Proposal for a Directive of the European Parliament and of the Council amending Directive 2010/31/EU on the energy performance of buildings, SWD(2016) 414 final.

<sup>8</sup> These consultations relied on a broad stakeholder community (around 600 registered stakeholders) representing all sectors of interest: construction industry, facility management, technical building system suppliers, architects, engineers, ICT companies, academics, NGOs, Member States’ agencies and administrations.

<sup>9</sup> Each stakeholder meetings involved 80-120 participants, with more attending via web streaming.

<sup>10</sup> [https://ec.europa.eu/energy/consultations/consultation-establishment-smart-readiness-indicator-buildings\\_en?redir=1](https://ec.europa.eu/energy/consultations/consultation-establishment-smart-readiness-indicator-buildings_en?redir=1)

<sup>11</sup> [https://ec.europa.eu/info/law/law-making-process/planning-and-proposing-law/better-regulation-why-and-how\\_en](https://ec.europa.eu/info/law/law-making-process/planning-and-proposing-law/better-regulation-why-and-how_en)

The respondents were from Belgium (13), France (3), Italy (3), Austria (1), Czech Republic (1), Denmark (1), Germany (1), and Spain (1).

The feedback received is broadly supportive to the establishment of the SRI. The comments express certain general concerns more directly related to the legal basis in the Energy Performance of Buildings Directive (EPBD), e.g. on the optionality of the scheme, some suggesting that the SRI should be made mandatory, or on the flexibility that Member States have, pointing to the need for a consistent implementation of the scheme across the EU and for transparency on the possible adaptations that Member States will put in place.

Some comments suggest reinforcing some aspects of the SRI, in particular interoperability, or point to possible targeted updates in the methodological framework. Several comments suggest strengthening the contents of the SRI certificates, in particular with regard to recommendations that can be included in those certificates. Other comments point to desirable future evolutions of the SRI framework.

A number of these comments relate to the obligations upon the Commission for developing the SRI, and are noted in view of future reviews of the EPBD. Other comments will be brought to the attention of Member State when they consider implementing the scheme, and will be taken into account when monitoring the implementation of the SRI at national or regional level.

In line with Article 42(1) of Regulation (EU) 2018/1725, the European Commission consulted the European Data Protection Supervisor (EDPS) on this delegated Regulation and on the related implementing Act that details the technical modalities for implementing the SRI scheme. The feedback of the EDPS recalled the need to ensure a high level of protection of personal data in the context of smart buildings and homes and welcomed provisions of the SRI Acts that highlight this aspect (e.g. references to cybersecurity and data protection risks and provisions on the inclusion of information about cybersecurity and data protection in the smart readiness indicator).

### **3. LEGAL ELEMENTS OF THE DELEGATED ACT**

Under Article 8(10) of the EPBD, this delegated Regulation will establish the smart readiness indicator scheme, the SRI definition and the methodology to calculate the SRI. It includes 11 articles. They cover subject matter and scope, definitions of terms, the definition of the SRI, the methodology for calculating the SRI (which is detailed in the annexes to this Regulation), the approach for rating smart readiness, additional details on the optional nature of the scheme, and the contents of the SRI. They also set out requirements for experts in charge of assessment of smart readiness and for independent control systems.

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THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Directive 2010/31/EU of the European Parliament and the Council of 19 May 2010 on the energy performance of buildings<sup>12</sup>, and in particular Article 8(10) thereof,

Whereas:

- (1) Directive 2010/31/EU of the European Parliament and of the Council is the main legislation, together with Directive 2009/125/EC of the European Parliament and of the Council establishing a framework for the setting of ecodesign requirements for energy-related products<sup>13</sup> and Regulation (EU) 2017/1369 of the European Parliament and of the Council of 4 July 2017 setting a framework for energy labelling<sup>14</sup>, addressing energy efficiency in buildings in the context of the 2030 energy efficiency targets. Directive 2010/31/EU has two complementary objectives, namely to accelerate the renovation of existing buildings by 2050 and to support the modernisation of all buildings by using smart technologies, such as those that make use of artificial intelligence and cloud-based services, and having a clearer link to clean mobility.
- (2) In order to support a consistent and transparent rating of the smart readiness of buildings in the Union, a common definition of the smart readiness indicator and a common methodology for calculating it should be established.
- (3) In order to ensure the acceptability, usability and consistency of the smart readiness indicator scheme, the Commission has developed, in collaboration with a wide range of stakeholders and in liaison with Member States, a methodology for rating smart readiness of buildings in accordance with Article 8(10) of Directive 2010/31/EU and its Annex IA.
- (4) That methodology for rating the smart readiness of buildings ensures a degree of consistency and comparability in rating of the smart readiness of buildings across the EU, while leaving enough flexibility to adapt the calculation to specific conditions.
- (5) Adequate control mechanisms on the implementation of the smart readiness indicator scheme should be established.

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<sup>12</sup> OJ L 153, 18.6.2010, p. 13–35

<sup>13</sup> OJ L 285, 31.10.2009, p. 10–35

<sup>14</sup> OJ L 198, 28.7.2017, p. 1–23

- (6) Where relevant, self-assessment of smart readiness by the owner, by the facility manager or any other stakeholder linked to the building, supported by open guidance and tools, should be possible.
- (7) In order to avoid the duplication of efforts and costs between the smart readiness indicator scheme and existing mandatory schemes, the methodology for rating the smart readiness of buildings should allow Member States, if they wish, to connect, or integrate, the smart readiness indicator scheme with national energy performance certification schemes and other schemes established under Directive 2010/31/EU.
- (8) The smart readiness indicator should be designed to reflect the smart readiness of buildings and their systems and should be used to complement - not to replace - tools that assess other aspects of buildings, for instance energy performance or sustainability.
- (9) The smart readiness indicator should not be an indicator for the energy performance of buildings. Building owners should be informed that the smart readiness as reflected in the smart readiness indicator and the energy performance of buildings as expressed by energy performance certificates are different issues, which therefore have to be addressed by different types of measures, though smart readiness should help enhance energy performance.
- (10) The benefits for consumers, building users and owners will be maximized when available instruments for rating buildings are used in combination, ensuring that the consumers, building users and owners can gain a comprehensive understanding of their buildings and of how they can improve overall performance.
- (11) The smart readiness indicator should be available for both existing buildings and new building projects. Digital models of buildings, including building information models or digital twins, should be allowed to be used to facilitate the calculation of smart readiness scores.
- (12) The smart readiness indicator calculation framework should be allowed to be used for all types of buildings and building units covered by Directive 2010/31/EU.
- (13) The smart readiness indicator should allow to highlight the additional benefits from advanced smart technologies for building owners and users, for instance in terms of energy savings and preparedness to climate change, or in terms of more inclusiveness and accessibility, comfort and well-being.
- (14) The assessment of the smart readiness of buildings and building units as part of the smart readiness indicator scheme for the purpose of issuing a smart readiness indicator certificate should be carried out by qualified or accredited experts.
- (15) Where Member States consider it appropriate, experts accredited for the energy performance certification of buildings, or for the inspection of heating, air-conditioning and combined heating or air-conditioning and ventilation systems under Directive 2010/31/EU, or for performing energy audits under Directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency<sup>15</sup>, should be allowed to be considered competent also to assess the smart readiness of buildings or building units.
- (16) Increased digitisation and connectivity in buildings increases cybersecurity and data protection risks and makes buildings and their systems more vulnerable to cyber

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<sup>15</sup> OJ L 315, 14.11.2012, p. 1–56

threats and misuse of personal data. The European Data Protection Supervisor was consulted pursuant to Article 42(1) of Regulation (EU) 2018/1725. The smart readiness indicator should help to inform building owners and users of those risks.

HAS ADOPTED THIS REGULATION:

#### *Article 1*

### **Subject matter and scope**

This Regulation establishes an optional common Union scheme for rating the smart readiness of buildings that is to say the definition of the smart readiness indicator and a common methodology by which it is to be calculated. The methodology consists of calculating smart readiness scores of buildings or building units and deriving smart readiness rating of buildings or building units.

#### *Article 2*

### **Definitions**

For the purposes of this Regulation, the following definitions apply:

- (1) ‘smart readiness indicator’ means an indicator that informs on the rating of smart readiness of a building or building unit in line with Article 8(10) of Directive 2010/31/EU;
- (2) ‘smart readiness indicator scheme’ means a system of certification of smart readiness of buildings;
- (3) ‘economic operator’ means a natural or legal person who owns a building located on the territory of a Member State, or a natural or legal person who owns or occupies a building unit located on the territory of a Member State, and who requests a smart readiness indicator certificate for that building or building unit;
- (4) ‘smart readiness rating’ means the rating of the building or building unit in accordance with the methodology set out in this Regulation;
- (5) ‘smart readiness score’ means the score obtained by a building or building unit as part of the process for rating smart readiness;
- (6) ‘system’ means a system that can be found in a building and that is relevant to the scope of smart readiness rating as set out in Directive 2010/31/EU, including but not limited to technical building systems as defined in Article 2 of Directive 2010/31/EU;
- (7) ‘smart readiness key functionality’ means one of the three key functionalities referred to in point 2 of Annex IA of Directive 2010/31/EU;
- (8) ‘impact criterion’ means a key impact that smart-ready services are designed to achieve, as set out in this Regulation;
- (9) ‘technical domain’ means a collection of smart-ready services which, together, realise an integrated and consistent part of the services expected from the building or building unit such as heating;
- (10) ‘connectivity’ means the ability of systems to exchange data with each other and the ability of the building or building unit to exchange data, with the grid and related entities, such as an aggregator, or other buildings;

- (11) ‘interoperability’ is the ability of a system to interact for a common purpose, based on commonly agreed standards, by exchanging information and data;
- (12) ‘cybersecurity’ means the activities necessary to protect network and information systems, as well as the users of such systems, and other individuals affected by cyber threat;
- (13) ‘smart-ready technology’ means a technological enabler, such as building automation, for one or more smart-ready services;
- (14) ‘smart-ready service’ means a function or an aggregation of functions provided by one or more technical components or systems. A smart-ready service makes use of smart-ready technologies and orchestrates them into higher-level functions;
- (15) ‘smart readiness indicator certificate’ means a certificate recognised by a Member State or by a legal person designated by a Member State, which indicates the smart readiness of a building or building unit, calculated according to the methodology set out in this Regulation;
- (16) ‘functionality level’ means the level of smart readiness of a smart-ready service;
- (17) ‘weighting factor’ means a parameter that is used in the calculation of the smart readiness indicator to express the importance of a given technical domain or impact criterion in that calculation;
- (18) ‘ventilation’ means a process by which fresh air flow rates are managed to maintain and improve indoor air quality according to applicable requirements;
- (19) ‘energy balance’ means an approach by which certain weighting factors may be adapted based on the climate zone of the building.

### *Article 3*

#### **Smart readiness indicator**

1. The smart readiness indicator shall allow for rating and communicating the smart readiness of buildings and building units to economic operators and other stakeholders, in particular planners and building operators.
2. The smart readiness indicator shall allow for the assessment of the capabilities of a building or building unit to adapt its operation to the needs of the occupant and of the grid and to improve its energy efficiency and overall in-use performance. The smart readiness indicator shall cover features for increased energy savings, benchmarking and flexibility, and enhanced functionalities and capabilities provided by more interconnected and intelligent devices.
3. The smart readiness indicator shall include the smart readiness rating of a building or building unit and a set of smart readiness scores that reflect the smart readiness of buildings, building units and systems along predefined key functionalities, impact criteria and technical domains.
4. The smart readiness indicator shall include, where possible, additional information on inclusiveness and connectivity of the building, on interoperability and cybersecurity of systems, and on data protection.

#### *Article 4*

### **Methodology for calculating the smart readiness indicator**

1. The methodology for calculating the smart readiness indicator shall be based on the assessment of smart-ready services present or planned at design stage in a building or building unit, and of smart-ready services that are considered relevant for that building or building unit.
2. The calculation of the smart readiness scores shall be based on a common Union methodological framework set out in Annexes I to VI.
3. The standard calculation methodology set out in Annexes I to VI may be adapted in accordance with Annex VII, in particular by making a link to energy performance calculations in the scope of energy performance certification.
4. The methodology for calculating the smart readiness indicator shall be used in accordance with the conditions set out in this Regulation, in particular regarding the qualification of experts.

#### *Article 5*

### **Smart readiness rating**

The smart readiness rating of a building or building unit shall be based on the smart readiness scores calculated for the building or building unit in accordance with Annex VIII.

#### *Article 6*

### **Optionality of the scheme**

1. The smart readiness indicator scheme shall be an optional common Union scheme.
2. Member States may decide if they implement the smart readiness indicator on their national territory, or parts thereof. They may also choose to implement the scheme only to certain categories of buildings.
3. Member States that implement the smart readiness indicator scheme may choose to apply it on a voluntary or mandatory basis for buildings or building units located on their territory.
4. Member States that decide to implement the smart readiness indicator scheme on their national territory, or parts thereof, shall notify the Commission prior to implementing the scheme.
5. Member States may decide to modify, adapt, or terminate the implementation of the scheme at any time without providing any justification to that end. They shall notify the Commission of any such decision.

#### *Article 7*

### **Smart readiness indicator certificate**

1. The smart readiness indicator of a building or building unit shall be communicated to economic operators and other interested parties in a certificate.
2. The smart readiness indicator certificate shall include the information specified in Annex IX.

## *Article 8*

### **Smart readiness indicator experts**

1. Member States that decide to implement the smart readiness indicator shall ensure that the assessment of the smart readiness of buildings or building units with a view to issuing a smart readiness certificate is carried out by experts that are qualified or accredited. The experts may operate as self-employed or be employed by public bodies or private enterprises.
2. Member States that decide to implement the smart readiness indicator scheme shall lay down requirements on the qualification or accreditation of smart readiness indicator experts and ensure that those requirements include competence criteria, including in the ICT field.

## *Article 9*

### **Control system of the smart readiness indicator scheme**

1. Member States that decide to implement the smart readiness indicator scheme shall establish an independent control system for smart readiness indicator certificates. Where relevant, those Member States may rely on the independent control systems that are already in place, such as those for energy performance certification schemes.
2. The independent control system shall ensure the validity of the smart readiness indicator certificates issued on the Member State's territory.

## *Article 10*

### **Review**

The Commission, after consultation of the experts referred to in Article 23 of Directive 2010/31/EU, may review, as appropriate, this Regulation by 1 January 2026 and, if necessary, make proposals.

## *Article 11*

### **Entry into force**

This Regulation shall enter into force on the twentieth day following its publication in *the Official Journal of the European Union*.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 14.10.2020

*For the Commission*  
*The President*  
*Ursula VON DER LEYEN*