



EASE Reply to the European Commission Public Consultation on the Establishment of a Smart Readiness Indicator for Buildings

August 2019



Introduction

Article 8(10) and 8(11) of Directive 2010/31/EU¹ as amended by Directive (EU) 2018/844² (the Energy Performance of Buildings Directive or ‘EPBD’) include provisions for the establishment of an optional scheme for rating the smart readiness of buildings. The Smart Readiness Indicator (‘SRI’) will be used to measure the capacity of buildings to use information and communication technologies and electronic systems to adapt the operation of buildings to the needs of the occupants and the grid and to improve the energy efficiency and overall performance of buildings. The SRI should raise awareness amongst building owners and occupants of the value behind building automation and electronic monitoring of technical building systems and should give confidence to occupants about the benefits related to those functionalities.

The SRI is developed by the European Commission in consultation with Member States and stakeholders and with the support of technical studies. The SRI is a new EU instrument that will be established by EU legal acts, which will clarify the definition and the calculation methodology of the SRI and, modalities for implementing the SRI. In particular, the former will be established by a delegated act and the latter by means of an implementing act, following the respective procedures³.

Legal Framework

Article 8(10) of the EPBD sets out the following text with regard to the SRI’s scope:

‘The rating shall be based on an assessment of the capabilities of a building or building unit to adapt its operation to the needs of the occupant and the grid and to improve its energy efficiency and overall performance.’

In addition, Annex Ia of the EPBD details the technical framework of the SRI’s scope and calculation methodology, in particular emphasizing the key functionalities to be considered when calculating the SRI:

‘The methodology shall rely on three key functionalities relating to the building and its technical building systems: (a) the ability to maintain energy performance and operation of the building through the adaptation of energy consumption for example through use of energy from renewable sources; (b) the ability to adapt its operation mode in response to the needs of the occupant while paying due attention to the availability of user–

¹ DIRECTIVE 2010/31/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 19 May 2010 on the energy performance of buildings

² DIRECTIVE (EU) 2018/844 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 30 May 2018 amending Directive 2010/31/EU on the energy performance of buildings and Directive 2012/27/EU on energy efficiency

³ https://ec.europa.eu/info/law/law-making-process/adopting-eu-law/implementing-and-delegated-acts_en



friendliness, maintaining healthy indoor climate conditions and the ability to report on energy use; and (c) the flexibility of a building's overall electricity demand, including its ability to enable participation in active and passive as well as implicit and explicit demand response, in relation to the grid, for example through flexibility and load shifting capacities.'

Technical Studies

A first technical study to support the development of the SRI concluded in August 2018 and aimed at investigating the possible scope and characteristics of such an indicator. At the end of December 2018, a second technical support study was launched with the aim to provide further technical input to support the establishment of the SRI scheme. Building on the outcomes of the first technical study, this second study will deliver the technical inputs needed to refine and finalize the definition of the SRI and the associated calculation methodology. At the same time, this study explores possible options for the implementation of the SRI and evaluates their impact at the EU level in order for the Commission services to assess the technical modalities of an effective implementation of the SRI scheme. Both the first technical study and details of the progress of the second can be found at: <https://smartreadinessindicator.eu/>

About this consultation

In the policy context described in the previous section, this consultation aims to offer to stakeholders the opportunity to contribute to the SRI development process and to provide relevant and robust information in a structured way.

This consultation will ultimately inform the development of the SRI and in particular the establishment of the legal acts to be adopted by the European Commission (namely, a delegated act to establish the definition and methodology of the SRI and an implementing act detailing the technical modalities for the effective implementation of the scheme).

The consultation consists of a questionnaire, divided into the following parts:

- Part 1: General information about the respondent;*
- Part 2: Questions on the audience and scope of the SRI*
- Part 3: Questions on communication of the SRI*
- Part 4: Questions on the implementation of the SRI*
- Part 5: Additional opportunity to provide comment*



Most questions do not require technical expertise to answer but it would help if respondents could familiarise themselves with the main findings from the first technical study before answering this consultation.

Please note that questions with a “” have to be answered.*

Thank you for your feedback.

Related links

- 1) *Directive (EU) 2018/844 of the European Parliament and of the Council of 30 May 2018 amending Directive 2010/31/EU on the energy performance of buildings and Directive 2012/27/EU on energy efficiency: https://eur-lex.europa.eu/legal-content/EN/TXT/?toc=OJ%3AL%3A2018%3A156%3ATOC&uri=uriserv%3AOJ.L_.2018.156.01.0075.01.ENG*
- 2) *SRI technical study website: <https://smartreadinessindicator.eu/>*
- 3) *Executive summary and final report of the first technical study: https://smartreadinessindicator.eu/sites/smartreadinessindicator.eu/files/sri_1st_technical_study_-_executive_summary.pdf; https://smartreadinessindicator.eu/sites/smartreadinessindicator.eu/files/sri_1st_technical_study_-_final_report.pdf*



Part 1 – About you

1. Please provide your name and surname (Note that submissions that are sent anonymously will not be taken into consideration):

Brittney Elzareï

2. Please provide your email address in case we need to follow up with you about your reply

b.elzareï@ease-storage.eu

3. Please provide your telephone number in case we need to follow up with you about your reply:

003226432982

4. Please select your country of residence:

Belgium

5. Please indicate whether you are replying as/on behalf of:

a) A citizen/consumer

b) A local public authority

c) A regional public authority

d) A national public authority

e) An international public authority

f) A standardisation organisation

g) A non-governmental organisation representing societal interests (for example, environmental or consumer interests)

g) A company or a business organisation

h) Other



If applicable, please briefly describe the organisation and main field of activity:

The European Association for Storage of Energy (EASE) located in Brussels, Belgium, is the leading member-supported association representing organisations active across the entire energy storage value chain. EASE supports the deployment of energy storage to support the cost-effective transition to a resilient, low-carbon, and secure energy system.

If applicable, please provide the name of your company/organisation:

EASE – European Association for Storage of Energy



If applicable, please indicate the size of your company/organisation:

- self-employed*
- micro (1–9 employees)*
- small (10–49 employees)*
- medium-sized (50–249 employees)*
- large (250 employees or more)*
- Not applicable*

If applicable, which of the following activities are performed or represented by your company/organisation?

At least 1 choice

- Property owner*
- Facility management*
- Property development*
- Architecture*
- Engineering*
- Manufacturer / supplier of construction products*
- Manufacturer / supplier of technical building systems*
- Energy supplier*
- Energy service company and aggregators*
- Grid operator*
- Supplier of energy management solutions*
- Supplier of ICT solutions*
- Other*
- Not applicable*

If applicable, in which country is your company / organisation most active?

- Belgium*



If applicable, is your organisation registered with the EU Transparency Register? If not, you may do so here. However, please note that registration is not compulsory to complete this questionnaire.

- Yes*
- No*
- Not Applicable*

6. Do you consent to the Commission publishing your replies?

Note that, whatever the option chosen, your answers may be subject to a request for public access to documents under Regulation (EC) N°1049/2001. Note: respondents who select the option "only anonymously" should not include personal data in documents submitted in the context of the consultation.

- Yes*
- Only anonymously*



Part 2 – Questions about the audience and scope of the SRI

7. Who should be the audience(s) for the SRI? (If more than one, list them in order of priority)

Please enter your response below against the options provided, such that if you only choose one option enter “1” in the box next to it, but if you choose more than one enter your ranking from 1 (most important), 2 (next most important), 3 (next most important) to up to 11 (least important):

- Building occupants 3
- Building visitors
- Property owners 1
- Facility managers
- Property developers 2
- Architecture, construction and engineering companies
- Energy service companies and aggregators
- Energy utilities
- Grid operators
- Authorities
- Other

If you answered “Other”, please state your preference in the box below. In addition, if you wish to explain your answer please add an explanation in the box below. 500 characters maximum.

8. To which categories of buildings should the SRI be applicable? (multiple answers are permitted)

- All categories of buildings
- Non-residential buildings
- Collective residential buildings
- Individual houses
- Large buildings (e.g. above 1000 m² surface area)
- Other



If you answered "Other", please state your preference in the box below. In addition, if you wish to explain your answer please add an explanation in the box below. 500 characters maximum.

9. Should the SRI be applicable to new buildings, existing buildings, or both?

- New buildings*
- Existing buildings*
- Both new and existing buildings*

Please explain if you wish your answer in the box below. 500 characters maximum

The SRI should be applicable to both new and existing buildings. According to Commission statistics, in most EU countries, half of the residential stock was built before 1970. This means that many buildings have significant potential for renovations. Also, since the percentage of new buildings is only a small part of the overall building stock, applying the SRI only to these buildings would limit its impact.

10. Should it be possible to adapt the scope and calculation methodology of the SRI depending on specific conditions, e.g. the type of building or climatic conditions? (please note that SRI calculation methodology is not yet developed: the aim of this question is to assess whether in principle it would be desirable to allow for such adaptations)

- Yes*
- No*

If you answered "Yes", please state your preference on specific conditions that should be considered in the box below. In addition, if you wish to explain your answer please add an explanation in the box below. 500 characters maximum

The SRI scope and methodology should be adapted to various conditions, avoiding a "one-size-fits-all" approach which would have several limitations. Different states/geographical areas have specific energy-related challenges and, consequently, different smart building solutions are required. For instance, buildings in Northern Europe may have more of a need for heat storage to support effective heating, while buildings in Southern Europe may benefit more from cold storage solutions.



11. What should be the update period of the SRI calculation framework (in particular in relation to technological progress)? (please note that SRI calculation framework is not yet developed: the aim of this question is to assess what update period would in principle be most adequate)

Please select one of the choices indicated below:

- 1 to 3 years*
- 3 years*
- 5 years*
- more than 5 years*
- Other*

If you answered "Other", please state your preference in the box below. In addition, if you wish to explain your answer please add an explanation in the box below. 500 characters maximum

The update period should be defined taking into account several factors. On the one hand, the rapid developments in clean energy technologies, such as storage, make short update periods necessary; on the other hand, enough time between updates must be present to conduct thorough consultations, provide regulatory certainty to energy technology providers and investors, and limit the administrative burden for stakeholders. A 5- year update period represents a good balance between these elements.



Part 3 – Questions on communication of the SRI

12. Do you think that other aspects of buildings (e.g. energy performance or broader life cycle aspects) should be expressed conjointly with the SRI?

Yes

No

If you answered “Yes”, please state your preference on which other aspects should be expressed in the box below. In addition, if you wish to explain your answer please add an explanation in the box below. 500 characters maximum

Energy performance, and the Energy Performance Certificates (EPCs), should go hand in hand with the SRI – they may be seen as complementary. They can both increase energy efficiency while raising awareness among building owners, tenants, investors, and other relevant stakeholders. Combining the SRI with EPCs would decrease the administrative burden for building owners and also facilitate a faster roll-out of the SRI.

13. Do you think that, where relevant, smart ready accessibility⁴ services should be communicated jointly with the SRI?

Yes

No

If you answered “Yes”, please state your preference on which other aspects should be expressed in the box below. In addition, if you wish to explain your answer please add an explanation in the box below. 500 characters maximum

The SRI should be inclusive towards all citizens, including those with disabilities.

⁴ For persons with disabilities



14. Should the SRI of a building be presented as an overall smartness score, or sub-scores for each of the three key SRI functionalities highlighted in the EPBD⁵, or sub-scores by specific technical domains⁶, or sub-scores by specific impacts⁷, or all of these?

Please indicate which of the options below are appropriate, noting that they are not mutually exclusive, so more than one, or all options may be selected:

- An overall smartness score for the whole building*
- Smartness scores along the three key SRI functionalities*
- Smartness scores per technical building system or technical domain*
- Smartness scores per impact criterion*
- Other smartness scores*

⁵ “(a) the ability to maintain energy performance and operation of the building through the adaptation of energy consumption for example through use of energy from renewable sources; (b) the ability to adapt its operation mode in response to the needs of the occupant while paying due attention to the availability of user-friendliness, maintaining healthy indoor climate conditions and the ability to report on energy use; and

(c) the flexibility of a building’s overall electricity demand, including its ability to enable participation in active and passive as well as implicit and explicit demand response, in relation to the grid, for example through flexibility and load shifting capacities.”

⁶ The following domains were identified for SRI assessment in the first technical study: heating, cooling, domestic hot water, controlled ventilation, lighting, dynamic building envelope, on site renewable energy generation, demand side management, electric vehicle charging, monitoring and control. Note – there could be changes to these in the course of the development of the SRI.

⁷ The following impact criteria were considered for the SRI assessment in the first technical study: energy consumption, flexibility for the grid, self-generation, comfort, convenience, well-being & health, maintenance & fault prediction, information to occupants. Note – there could be changes to these in the course of the development of the SRI.



If you answered "Other", please state your preference in the box below. In addition, if you wish to explain your answer please add an explanation in the box below. 500 characters maximum

Smartness scores covering the three key SRI functionalities present a more multifaceted picture, providing more useful information to consumers and other stakeholders (e.g. local authorities, utilities) about the smart readiness and flexibility of the building stock in a given area. This could help utilities and grid operators in their planning, while also supporting policymaking.

15. When the SRI is reported to the users should it include recommendations on the options to improve a building's smart readiness?

Yes

No

If you wish to explain your answer, e.g. to elaborate on the type of recommendations that could be provided, please add an explanation in the box below. 500 characters maximum

It is extremely important to include recommendations to promote understanding among consumers/building owners about the different SRI components and the added value of each. Recommendations are necessary to help stakeholders adopt good practices, and it can help facilitate consumers turning into 'active customers', one of the major goals of the Clean Energy Package.

16. What presentational format should the SRI have?

Please select one of the choices indicated below:

Reporting the SRI score(s) as percentages from 0% (no smart readiness) to 100% (maximum currently achievable smart readiness)

Reporting the SRI score(s) on a mnemonic scale (such as A to G, or 1 to 10 stars, etc.)

Reporting the SRI score(s) as both percentages (from 0% (no smart readiness) to 100% (maximum currently achievable smart readiness)) and on a mnemonic scale (such as A to G etc.)

Other



If you answered "Other", please state your preference in the box below. In addition, if you wish to explain your answer please add an explanation in the box below. 500 characters maximum

SRI and EPC should be jointly used to inform users. Consequently, the SRI should adopt the same scale system used for EPC to ensure uniformity between the two indicators. The score would be clearer and easier to interpret for users, since they are often already familiar with the EPC system.

17. What form should the SRI have?

Please select one of the choices indicated below:

- A printed certificate*
- Presented electronically (i.e. in an on-line database and/or sent via an email)*
- Smartness scores per technical building system or technical domain*

If you answered "Other", please state your preference in the box below. In addition, if you wish to explain your answer please add an explanation in the box below. 500 characters maximum

An electronic SRI would be easier to share and store. Besides, utilities would be able to embrace it more easily – digitalisation is a cornerstone for many of them. An electronic SRI would also mean better accessibility for people with disabilities: blind people, for example, would be able to access it through screen reading software.

18. Should the SRI be presented in accessible formats for persons with disabilities and older persons?

- Yes*
- No*

If you wish to explain your answer, e.g. to elaborate on the type of recommendations that could be provided, please add an explanation in the box below. 500 characters maximum

All consumers should be able to appreciate the value of the SRI and understand the technologies behind it. Being able to involve persons with disabilities and older persons should be one of the cornerstones of this initiative.



Part 4 – Questions on the implementation of the SRI

19. Should the SRI operate independently, or should it be combined with existing schemes (e.g. energy performance certificates) or future schemes (e.g. life cycle performance of buildings, with the Level(s) tool)?

- Independently*
- In combination*

Please elaborate on your answer in the box below, if you wish. 500 characters maximum.

As stated above, we believe that the SRI and the Energy Performance Certificates (EPCs) should be presented together and go hand in hand. This would reduce the administrative burden on consumers and support a faster roll-out of the SRI.

20. Who should be responsible for the implementation of the SRI (multiple answers are permitted)

Please select from the choices indicated below

- Member states*
- European Commission*
- Private sector*
- Other*

If you answered "Other", please state your preference in the box below. In addition, if you wish to explain your answer please add an explanation in the box below. 500 characters maximum

As Member States must implement the directive, they should also be in charge of implementing and monitoring the SRI. Local and regional authorities should be involved: they would be able to further promote the SRI implementation among stakeholders and foster dialogue with citizens.

21. How should the SRI be assessed?

Please select one of the choices indicated below:

- Independent inspection process*



- Self-assessment*
- Both self-assessment and independent inspection process*
- Other*

If you answered "Other", please state your preference in the box below. In addition, if you wish to explain your answer please add an explanation in the box below. 500 characters maximum

Similarly to the approach adopted for the EPC, an independent inspection process is the most reliable way to guarantee uniformity, validity, and reliability of the evaluation. This would also mean that the EPC assessment and SRI assessment could be done together.

22. If in the future it becomes possible to assess the smart readiness of a building through remote measurement of the technical building systems, should this option be permitted?

- Yes*
- No*

Please explain if you wish your answer in the box below. 500 characters maximum

One of the added values of the SRI would be the possibility to have a remote measurement. However, it is important to ensure that the channel through which the remote measurements are done is secure and controllable (e.g. strong system logs, encryption of sent and received messages, etc.). Additionally, cyber security measures should be taken to mitigate any weaknesses in design, implementation, operation or internal control (e.g. the possibility to attack the technical systems of the building through an unsecured remote measurement channel.)

23. Who should pay the costs of the SRI assessment? (Please note that these costs are not yet known; however, the Impact Assessment accompanying the proposal for amending the Energy Performance of Buildings estimated these at a fraction of the costs of an energy performance certificate)

Please indicate which of the options below are appropriate, noting that they are not mutually exclusive, so more than one or all options may be selected:

- Building owners and occupants*



- Member States*
- Utilities*
- Smart services and technology industry*
- Other*

If you answered "Other", please state your preference in the box below. In addition, if you wish to explain your answer please add an explanation in the box below. 500 characters maximum

As with the EPC, building owners should bear the costs of the SRI assessment. It is very important to keep costs as low as possible in order to not burden consumers, without jeopardising the quality of the assessment.

24. Should other measures be used to support the implementation of the SRI? If so, which?

- Yes*
- No*

If you answered "Yes" then please indicate which of the measures mentioned below the SRI's operation should be combined with (you may choose as many of the measures mentioned, including the other option, as you wish):

- Incentives*
- Mandatory regulation at Member State level*
- Integration with existing schemes (e.g. EPC)*
- Supporting policies targeting the uptake of specific smart technologies*
- Awareness raising and promotional campaigns*
- Other*

If you answered "Other", please state your preference in the box below. In addition, if you wish to explain your answer please add an explanation in the box below. 500 characters maximum

To guarantee the success and uptake of the SRI, a combination of measures should be put in place. Incentives are important to defray the costs of smart energy technologies and ensure accessibility also for low-income consumer groups. In addition to the points mentioned above, it is important to collaborate with industry players and associations to maximise the results of awareness campaigns, and to obtain valid inputs in the consultation phases.



25. How else should the SRI be implemented to overcome barriers to the uptake of beneficial smart technologies?

Please enter your answer in the box below or leave it empty if all your implementation preferences have previously been expressed. Note, you may include an explanation of your answer too. 500 characters maximum.

During the implementation phase, it is paramount to focus on users' needs, understanding the possible risks that may lead to low uptake of SRI and devising related possible solutions. Education and awareness raising are highly important to address the lack of awareness that some users may have about smart energy technologies. The administrative burden and costs for consumers should be kept as low as possible.

26. What measures, and standards, if appropriate, should be developed and used to support the implementation of the SRI in line with the GDPR, having regard in particular to data protection by design and by default?

Please enter your answer in the box below. 500 characters maximum.

In the time of IoT, mass-collection of consumer data, and AI it is crucial for the successful implementation of the SRI that users feel safe about sharing their personal data. Customers are interested in understanding how their personal data is processed, who has access to their data, and the possible outcomes of the processed data (e.g. profiling). A trustful relationship can be created by high security levels on system operation/management and transparency in data processing. For a better understanding of the appropriate technical and organisational measures, a data protection impact assessment (DPIA) should be made. As the SRI is implemented on the Member State level and may possibly vary in some areas, the DPIA template process similar to the one used in smart grid deployment would be a good practice to follow.



Part 5 – Questions on the implementation of the SRI

*27. Are there further comments you would like to make on anything that is not covered above? If so, please use the box below.
2000 characters maximum.*

The SRI can play an invaluable role in raising awareness among consumers about smart energy and flexibility technologies, while also sending important investment signals to industry. It can help customers become more informed and active in the energy markets, one of the key priorities of the Clean Energy Package.

The EPC succeeded in raising consumers' awareness about the importance and benefits of energy efficiency in the building stock. The SRI can be similarly successful, serving as an excellent tool to help users understand the importance of smart-ready and flexible buildings.

Energy storage technologies can provide many benefits to building owners, tenants, and users. This can apply to both residential buildings and commercial/industrial buildings, due to the diversity and scalability of storage technologies. Buildings with solar PV can benefit from installing energy storage (e.g. batteries) in order to maximise renewable self-consumption and provide grid flexibility. Thermal energy storage can help support renewable or low-carbon heating and cooling solutions such as heat pumps or solar-thermal panels, increasing efficiency and facilitating the provision of flexibility services.

Another important aspect of energy storage is its ability support the roll-out of electric vehicle charging infrastructure in buildings. Stationary storage co-located with charging infrastructure can reduce peaks in demand and facilitate smart charging in response to signals from the grid.

Since it has so many different applications, the benefits of storage cannot be fully captured only by one domain in the SRI. Energy storage can support heating, cooling, domestic hot water, on-side renewable energy generation, demand-side management and flexibility to the grid, as well as electric vehicle charging. The SRI should reflect all of the different benefits and potential roles of energy storage, both in the assessment of the SRI score for each building and in the report that is prepared for consumers with suggestions for actions to improve the score.



One point that is not adequately addressed in this consultation is the issue of interoperability. Different smart energy technologies must be able to interact with one another, as this will enhance the overall functioning of the building, allow consumers a wide array of choice between different technology providers, and facilitate the installation of various different technologies.

Finally, we believe that collaboration with industry is essential to ensure the success of this initiative. Industry players, such as energy storage providers, should be able to share technological developments and performance characteristics of different technologies with those who are defining the SRI and are in charge of the subsequent revisions. In implementing the SRI, collaboration between Member States, regional and local authorities, and industry will be essential to ensure that the SRI is carried out effectively.



About EASE

The European Association for Storage of Energy (EASE) is the voice of the energy storage community, actively promoting the use of energy storage in Europe and worldwide. It supports the deployment of energy storage as an indispensable instrument within the framework of the European energy and climate policy to deliver services to, and improve the flexibility of, the European energy system. EASE seeks to build a European platform for sharing and disseminating energy storage-related information and supports the transition towards a sustainable, flexible and stable energy system in Europe.

For more information please visit www.ease-storage.eu

Disclaimer

This response was elaborated by EASE and reflects a consolidated view of its members from an energy storage point of view. Individual EASE members may adopt different positions on certain topics from their corporate standpoint.

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