



Executive summary

This report has been prepared as part of a study commissioned and supervised by the European Commission's (EC) Directorate-General for Energy. It is intended to provide technical support about the feasibility of introducing an optional building renovation passport in the European Union (EU). This work is carried out in close consultation with stakeholders and in collaboration with leading experts in the field. As part of the consultation process, a first stakeholder meeting was organised in June 2019, and a second meeting is planned for November 2019 where the content and suggestions in this report will be discussed.

The report comprises an analysis of the relevance and feasibility of introducing optional building renovation passports, and an investigation of the possible scope for additional measures for introducing a building renovation passport at EU level. The report also outlines six policy options for the EU to consider, on which the impact analysis in the last deliverable will be based.

Definition

The Directive on the Energy Performance of Buildings (EPBD) [2010/31/EU] does not include a definition of a building renovation passport, and no commonly agreed definition exists in the EU. Existing building renovation passports differ in some key features, purposes and in the terminology used. The definition presented below is based on the text in the EPBD, stakeholder input, and existing research.

Proposed definition of building renovation passport



A building renovation passport provides a long-term, tailored renovation roadmap for a specific building, following a calculation based on available data and/or an on-site audit by an energy expert. The instrument identifies and outlines deep renovation scenario(s), including steps to implement energy saving measures that could improve the building's energy performance to a significantly higher level over a defined period of time¹. The instrument can be complementary to energy performance certificates and/or combined with digital logbooks².

Relevance

The relevance of the BRP refers to how well the instrument fulfils its overall objectives. The analysis discusses the BRP's suitability for different building typologies and how it can alleviate key barriers to renovation by facilitating staged and one-step deep renovations. This section also includes an analysis of how BRPs can support Member States' long-term renovation strategies.

Key lessons learnt:

- Together with high cost and difficulties in accessing finance, two of the most-often quoted barriers are the low awareness of the long-term benefits of renovation and the lack of knowledge about what to do, where to start, and which measures to implement in which order. The building renovation passport ought to be accompanied by an **enabling policy framework** to effectively alleviate these barriers.

¹ The time of the roadmap could span from 5 to 20 years and the definition of the time horizon should be left to the implementing authority based on national/local conditions. The building owner can, of course, opt to implement all steps in one go.

² See chapters: Linking the BRP with EPCs and Linking the BRP with a digital registry.



- The largest information deficit about energy renovations is among **single-family owners**. It is relatively common for larger buildings (multi-family, commercial and public) to perform a detailed energy audit before detailing the renovation steps, while many single-family owners often make their decision by relying on the advice of friends and family members instead of building professionals. Most stakeholders think the building renovation passport is suitable for all buildings, followed by residential buildings. Evidence from existing building renovation passports³ also show that single-family buildings is a relevant first implementation stage.
- Existing building renovation passports **do not favour staged or one-step deep renovations** over the other. The instrument is most relevant if the building owner gets to decide if they prefer to implement the renovation steps in multiple stages or all in one go.
- Building renovation passports could **support the preparation and implementation of long-term renovation strategies** by providing data on the status of the building stock and the renovation measures mostly needed. This requires the instrument to be linked to a database or a logbook.
- The building renovation passports should be coupled with existing EPC frameworks where it is feasible to do so. The **existing EPC 'infrastructure' can be used to introduce and facilitate the use of building renovation passports**, including relying on, and additional training for, building professionals issuing EPCs. In some Member States, the instrument is more complementary to an audit framework or potentially other renovation advice frameworks.

Feasibility

The feasibility analysis comprises an assessment of the practicality of implementing the BRP, including the related costs, the need for an enabling framework and data protection and privacy issues.

Key lessons learnt:

- The building renovation passport comes with a cost and initially it is necessary for Member States to **subsidise the cost for the development** of the instrument to a level where it becomes attractive to building owners. The subsidy can be reduced when the instrument has penetrated the market.
- The success of the implementation of the building renovation passport is dependent on an **increase in competence and skills** of the construction workforce.
- While legislation exists in the EU to ensure building owners' data privacy, a **guidance document clarifying existing rules and options** to ensure proper data protection would be useful for public authorities that are designing and implementing building renovation passports and aiming to link them with external registries, such as EPC databases.

Policy packages

Six feasible policy packages were developed (see Figure 1) based on an initial list of 33 plausible policy options. Every policy package consists of one direct option and a number supporting options. The direct options are ways the EU can support the building renovation passport. Each of the three direct options has been included in two policy packages, and complemented by suitable supporting measures.

³ Most of them have plans to launch the concept for larger and non-residential buildings.



Figure 1: Policy package measure tree

Type of measure	Group of measures - code	MS decide whether to design and implement BRP (soft)	MS decide whether to design and implement BRP (stringent)	Introduce a common reference framework (soft)	Introduce a common reference framework (stringent)	Incorporate BRPs as a requirement under the EPBD (soft)	Incorporate BRPs as a requirement under the EPBD
Voluntary	Encourage BRP in LTRS (EPBD art. 2a)						
Voluntary	Introduce awareness programme to promote renovation advice						
Voluntary	Qualification and training programmes for energy experts and auditors						
Voluntary	Encourage MS to set up financial support schemes linked to BRP						
Voluntary	Encourage financial institutions to link services (loans, mortgages etc.) to BRPs						
Voluntary	Set up a forum of best practices exchange of BRP design and implementation						
Voluntary	Develop a guidance document outlining how a BRP can be combined with a logbook						
Voluntary	Support BRP through regional energy advice centres and one-stop shops						
Voluntary	Develop a guidance document on how to integrate the BRP into existing EPC, energy audit schemes						
Mandatory	Create a common EU framework for certification of building experts carrying out BRPs						
Mandatory	Introduce minimum energy efficiency standard for renovation						
Mandatory	Make BRP mandatory for certain building segments (EPC rating, buildings for sale etc.) after 2030						
Mandatory	Buildings with EPC below class D can only be sold if step 1-2 of renovation roadmap implemented by 2030						



As Figure 1 displays, the three direct measures have one policy package that is 'soft' and one that is more 'stringent'. The supporting measures have been tailored to the direct measure and the ambition level of the specific package.

- The direct measure in policy packages 1 and 2 leave the decision to implement, and design, the building renovation passport fully to the Member States. In both packages, the EU encourages Member States to explore the instrument through existing legislations (most notably through the long-term renovation strategies). Both packages include enabling options, including finance, communication and training, however the second package is more wide-ranging. In the second package, the EU encourages Member States to introduce minimum energy efficiency standards for renovation to boost the uptake of renovations and need for building renovation passports.
- In policy packages 3 and 4, the EU introduces a common reference framework for building renovation passports. In policy package 3, the framework does not include minimum requirements for the Member States, while policy package 4 does. The common reference framework is supported by other guidance documents and efforts, best practice exchange, as well as communication campaign and training for energy experts. Package 4 complements this with financial support measures and an EU framework for certification of experts. In package 4, the option is supported with more far-reaching financial instruments.
- In policy options 5 and 6, the EU actively promotes the idea of building renovation passports, as complementary to the energy performance certificates, and proposes their introduction to complement EPCs in the next EPBD revision. In policy package 5, the uptake is complemented by targeted financial measures, best practice exchange, training, communication campaigns as well as guidance documents. In policy package 6, the provision is supported by mandatory measures driving a deep renovation of the building stock.

The impact of the six policy packages will be analysed and modelled in the final report and presented at the stakeholder meeting in November 2019.