

# Improving compliance of building energy performance certificates



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The European Directive on the Energy Performance of Buildings (EPBD) [1] requires that Member States set up a certification, with an Energy Performance Certificate (EPC). Member States must also establish an independent control system for the EPCs (Art. 18), as well as effective, proportionate and dissuasive sanctions in case of non-compliance (Art. 27). A draft source book [2] has been published from the QUALICheck project. It provides suggestions for a more effective compliance of the EPCs with the national or regional legislations. This article summarizes its contents.

**Keywords:** EPBD, building, certification, energy performance, certificate, EPC data, EPBD compliance

## What are compliant EPCs?

The Energy Performance Certificates are produced by collecting data and using them as input in a software that gives an assessment of the energy performance (**Figure 1**).

Input data describe the building, its environment, its systems (including HVAC) and its operation. They must be determined according to the applicable procedures, found in regulations, codes, standards, professional rules, etc. These procedures must be clear and

unambiguous in order to allow for control and enforcement with reasonable effort.

The EPC must provide an energy performance value determined as per the rules, so that minimum energy performance requirements are met and the consumer is well informed.

In this context, “**compliant**” means: “in accordance with the procedures of the applicable legislation”. This applies to the input data as well to the EPC itself.

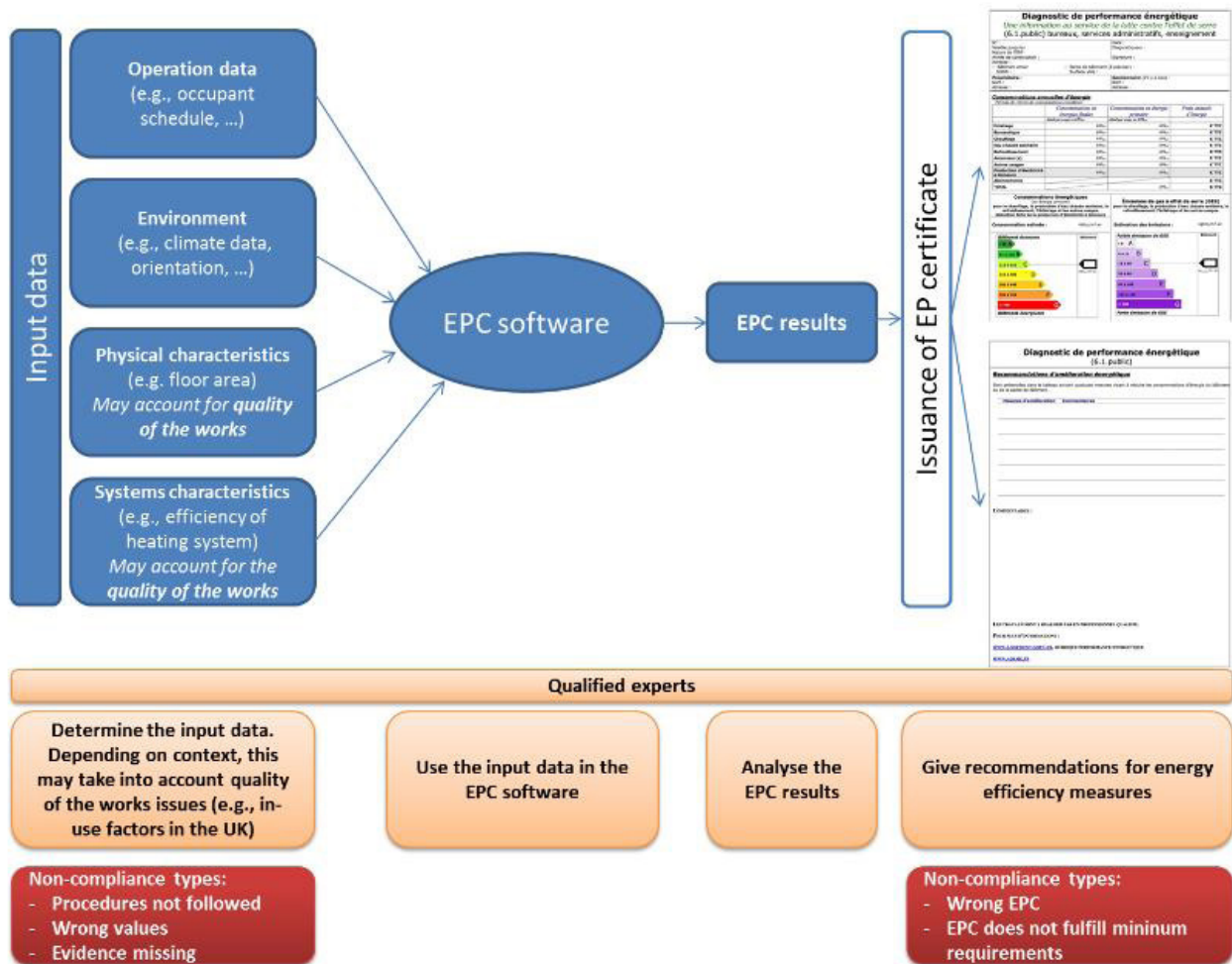


Figure 1. Key steps for the issuance of Energy Performance Certificates (from [3]).

A three-step approach has been identified in order to achieve and enforce compliance (Figure 2):

- there should be clear procedures on how to obtain and prove compliant input data (step 1),
- there should be clear legal procedures on how to decide of non-compliance of EPC and/or input data, and what are the related actions (step 2),
- there should be effective control and sanctioning mechanisms in case of non-compliance (step 3).

It is essential that each of these three steps is understood and supported by stakeholders, in order to get the necessary societal support.

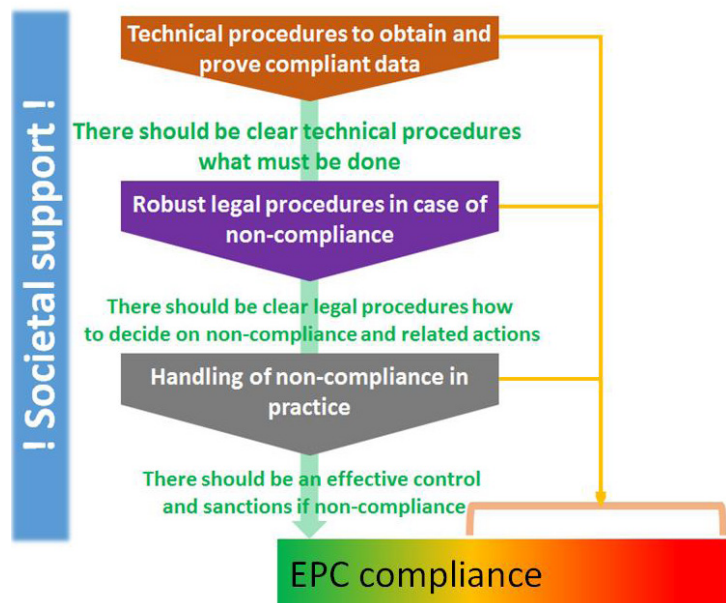


Figure 2. The three-step approach to get compliant EPCs.

## Compliance of the EPC input data

The procedures to obtain and prove compliant data should include:

- Clear technical procedures that explain how to determine the data (what is the quantity concerned, its unit, the method to determine it?)
- Clear organizational procedures (for example: mandatory EPC input data form, penalty to the input data value if not determined by a third party, way to use default values if the data is not known,...)
- Clear procedures on how to prove compliance of the input data (third party control, declaration by the one who provides or determine the data, proven competence of persons or companies).

These procedures must be in line with other EU legislations, for example concerning construction products and eco-design of energy related products. They must not restrict imports and exports between Member States.

An easy access to the EPC input data is essential. Tools making use of modern information and communication technologies such as BIM and product databases can play a major role in this respect.

The source book [2] details the issues addressed above. It also includes information and recommendations on topics such as: procedures on how to deal with innovative products, specificities for the input data related to the execution of the works or installation/commissioning of the systems, specificities for existing buildings.

More information about existing approaches to get compliant and accessible EPC input data can be found in [4] and [5].

## Procedures on how to decide on non-compliance and related actions

Non-compliance can be (Figure 1):

- Non-compliance of the input data (procedures not followed, wrong values, evidence of compliance missing)
- Non-compliance of the EPC (wrong EPC, energy performance not fulfilling the minimum energy performance requirements).

Clear procedures should exist on how to decide of non-compliance and what are the related actions in case of non-compliance. They should cover the following cases:

- No submission of required documents or not done in due time
- EPC not issued according to the procedures or using a wrong value of the energy performance
- EPC not meeting the minimum energy performance requirements
- Non-compliant input data
- EPC indicators not published in real estate advertisements or not made available when selling or renting a property
- EPC not hung out in public buildings and buildings frequently visited by the public.

The legislation must clearly specify the latest moment to submit the EPC and related documents serving as evidence for control to the authorities. Actually, the latest moment should be at least after the completion of the works allowing to take into account changes during building design and construction, but can be also up to 6 months after occupation or based on real consumption requiring at least 1 year of occupancy. Submitting the EPC at building permit stage can be necessary due to existing procedures but will not be sufficient from the energy performance perspective and must be complemented by submitting an updated EPC.

In addition, the moments of the control by the authorities must also be precisely determined, and appropriate resources for effective compliance controls must be available (financial and human resources, database of all issued EPCs, sampling scheme and methodology of control). Appropriate moments for control are prior to building permit approval and prior to issuing the permit of use.

In case of detected non-compliance, an effective enforcement is easier if the legislation itself specifies who can be sanctioned, what are the penalties, and how the sanction is decided.

The source book [2] details these issues. It also includes information and recommendations on topics such as: philosophy on the level and the timeline for the evolution of requirements, clarity in size and proportionality of the penalties, specificities of the execution related performances, specificities for existing buildings, smart procedures.

## Handling of non-compliance in practice

Handling of non-compliance in practice must be effective, cost-efficient and affordable.



Experience shows that stakeholders respect clear enforcement procedures resulting in adequately severe sanctions executed in case of non-compliance.

First of all, sanctions should address the room for improvement detected during the compliance-check, not only to ensure compliance but also to assure the quality of EPCs and constructed buildings in general.

Thus, apart from financial sanctions such as penalties and withdrawal of grants, other types of sanctions can be foreseen, such as additional mandatory trainings for EPC experts.

The source book [2] also provides information and recommendations on topics such as: role of political will, support by stakeholders, communication on outcomes of compliance checks, economics of controls and enforcement.

### Conclusion

The source book from the QUALICHECK project about compliance of the Energy Performance Certificates of buildings [2] aims to act as a guidance and support for persons and organizations who want to know if a better enforcement of the EPCs is needed, and what are the ways and points of attention to implement improvements. This source book has been issued as

a draft. A final version, including information from other experiences and feedback from stakeholders, will be published in 2017. Contributions are still welcome and are invited to be submitted to the authors. ■

### References

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