

#### Title

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QUALICHeCK – Quality assurance standards for planning and realising energy-efficient buildings (REF: SWD-10.08.18.7-14.36)

#### Subject of the research project

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The EU Intelligent Energy Europe Project QUALICHeCK [<http://qualicheck-platform.eu/>] addressed the quality assurance of energy-efficient buildings in two different sectors, namely

1. Improved planning and calculation of buildings. In the scope of the project, general conditions were proposed, which will ensure that the energy performance certificate (EPC) corresponds precisely to what has actually been planned.
2. Improved implementation on the construction site. In this context, general conditions were analysed, which enable construction staff to ensure the good quality of the works on the building site while encouraging them to reduce implementation errors.

To this end, project participants from various EU member states compiled the critical situations associated with both issuing EPCs and on-site implementation, including studies conducted in the participating countries. Also, Best Practice Solutions that are available in these countries were compiled and analysed with regard to their replication potential.

The following Best Practice Solutions could be of special interest for Germany:

- AMA (General material and workmanship specifications): Reference documents for technical specifications. Between 90 and 95% of all building projects in Sweden refer to AMA in the contract documents. They also include specifications on how to examine the work for quality.
- Quality assurance procedures regarding cavity wall insulation in conjunction with funded measures in Great Britain and Belgium
- Controlled product data bases for EPC input data
- Regulatory tests of residential ventilation systems in France
- Several quality assurance systems for funded high-performance buildings, e.g. in Sweden and Austria, but also in Germany (KfW programmes). In this respect, it could be examined whether the German system is eligible for improvement or simplification
- Training and certification programmes for different professional trades in the construction sector (e.g. planners and installers of heat-pump systems) in order to ensure sufficient seasonal performance factors (SPF) in practical applications

## **Conclusion**

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The European QUALICHeCK project on quality assurance in planning and construction of energy-efficient buildings has identified a three-stage approach for quality improvement, to be applied both in the planning sector and during implementation on the construction site:

1. Precise definitions: what is sufficient quality and how can it be verified?
2. Precise (legal) procedures that allow to decide whether or not the respective quality requirements were complied with and what will happen in the case of non-compliance.
3. Effective surveillance methods and sanctions, which can be applied in the event of non-compliance with quality requirements.

## **Key data**

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Short title: QUALICHeCK

Researchers / Project management: Fraunhofer Institute for Building Physics IBP

Total cost: € 174,555.89 (Fraunhofer IBP total costs for the duration of BBSR-funded grant)

Share of federal subsidies: € 70,293.66

Project duration: 17 Dec. 2014 through 17 Dec. 2016

## **IMAGES / FIGURES**

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In the scope of the project, footage from the Shutterstock image database was used for illustration purposes. As these images are subject to third party rights, they were not inserted here. There are additional images (photos) available, which were made on the occasion of project events. These photos are, however, considered to be of little significance with regard to the project content and results, which is why they were not included in the present document.