



# Evaluation of energy passes issued for residential buildings in accordance with the EnEV 2007

- English Abstract -

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## English Abstract

### **Evaluation of energy passes issued for residential buildings in accordance with the EnEV 2007.**

The energy pass system was evaluated on the basis of energy passes already issued in accordance with the Energy Saving Ordinance 2007 (EnEV 2007). To this end, all regulations that make up this system were drawn upon. How the individual elements contribute to achieving the defined objectives - transparency, effectiveness and consumer-friendliness – was also analysed. It was evaluated whether the energy pass system as a broad spectrum is optimally implemented and if its contents are well understood by the different users – tenants, buyers, private property owners and housing companies.

#### *Empirical Basis of the Evaluation*

- ▶ The accrual process and qualities of 94 issued energy passes were reconstructed and analysed in detailed case studies. Additionally, during a discussion with property owners, the understanding and interpretation of the energy passes were also tested.
- ▶ The attitudes and behaviour patterns of 151 tenants and buyers, endeavouring to rent or purchase property, were obtained in a telephone survey. A further six qualitative, guideline-based usability tests were undertaken as to the user-friendliness and comprehensibility of the energy passes.
- ▶ The broad and representative database of the field study undertaken in 2009 by the issuers and purchasers of energy passes was also drawn upon regarding specific questions (Weeber+Partner and Sahrer, Georg (2009): Market development by the issuance of energy passes of existing buildings. Field study of both supply and demand. BMVBS Online Publication no. 06/2010).

#### *Summary of Results*

Pragmatic handling of the wide variety of circumstances:

Due to the variety and complexity of constructional and technical details as well as the accounting systems and administrative practices of houses, the energy pass system doesn't always fit the realities of daily life (e.g. a building uses various different heating systems or includes the billing units of several buildings). It seems appropriate to handle this pragmatically. Making the system even more complicated would be counter-productive. What is needed is a robust system with which the complexities can be confronted.

Increase dependability:

The energy pass is considerably susceptible to errors. This is more true of the rather better perceived demand certificate than the consumption certificate, due to the complexity of the assumptions and calculations involved. Simplification could improve reliability.

Document data and records:

How an energy pass is calculated has not yet been able to be checked. There should be an obligation to document the data and records incorporated in the calculation of energy passes, not least because an energy pass is valid for ten years. This is also important in the event of a conflict.

Adapt the bases of calculation:

From the user's perspective the findings of a demand certificate and a consumption certificate must be

made comparable. The standard assumption of heating and ventilation behaviour used for the calculation of a demand certificate should hence be adjusted to the realities of daily life.

Differentiate the comparative values:

Comparative values are essential for the classification of an energy pass' findings. For the consumer, the choice of comparative values must be differentiated, so that they can more easily find an appropriate comparative value for their particular building.

Improve comprehensibility:

In the interests of comprehensibility and simplicity, the unnecessary and incomprehensible aspects of the energy pass should be separated out. The pass itself could be reduced down to essential information only and additional information could be attached as an appendix if necessary. In particular, those key words confusing to the layperson such as 'energy demand' and 'primary energy demand' should be made clear. What matters to consumers is the end-user energy, the primary energy demand could be communicated with a seal appropriate (✱) symbol.

Optimisation of the forms:

The energy pass is a good form and the visualisation of the findings using a colour scale has been well received. There is some need for revision, but in principle the existing form should be retained and the details optimised.

Retention of both the consumption and demand certificates:

Both different kinds of passes have proven to be successful. Even though they make the market more confusing and their information is as yet incomparable, both kinds of passes are justified in terms of the objectives of consumer-friendliness and acceptance.

Basic recognition:

People generally viewed the efforts to make the energy pass more transparent positively. They assume that the energy pass will become increasingly accepted as an information tool when buying or renting property.