

Executive Summary (english)

Planners are entrusted with the energy balancing of buildings within the framework of the building application or modernisation of existing buildings. For non-residential construction, the only permissible standard in Germany is the DIN V 18599 series of standards, for residential construction one of several alternative methods. If DIN V 18599 is used, the use of a software is necessary. A manual calculation can be excluded in practice, as the calculation procedure is based on an iteration calculation. In addition, a monthly balance sheet must be carried out for each zone of the calculation model, for example for the times of use and non-use as well as for the heating and cooling cases. The quantity of the necessary calculations alone requires the use of software.

Since in some federal states additional inspection experts are involved in the process of submitting building applications and the Deutsche Institut für Bautechnik (DIBt) is also entrusted with the inspection of energy balances, albeit under a different measure, the need for standardised calculation documentation has become increasingly clear. In addition to these public-law concerns, energy balances are also used when it comes to state subsidies. The Kreditanstalt für Wiederaufbau (KfW) uses, among others, energy balances according to DIN V 18599 (efficiency buildings), but also the Bundesamt für Wirtschaft und Ausfuhrkontrolle (BAFA) in its building energy consulting programme (renovation roadmap).

The aim of the project was therefore to develop a binding documentation guideline (output format and instructions for preparation) that meets all the requirements of an audit and all the wishes of the parties involved. The aim is to publish the project results as a supplement to DIN V 18599.

The fundamental considerations for the documentation of calculations according to DIN V 18599, which are reflected in the withdrawn supplement 3 to DIN V 18599, were taken up and enhanced. In particular, the reference to energy-saving regulations and the predominant use of formula symbols is still omitted. This takes account of the structural problem that several months or even years can pass between the publication of the individual principles and their implementation in a documentation guideline. In addition to the incorporation of the changes that have occurred between the 2011 and 2018 versions of the standards, the former form character of the documentation has been abandoned. Two reasons can be given for this: On the one hand, it became apparent that the revision of the documentation directive on a form basis would require considerable effort which is not affordable within the framework of the usual standardization work. On the other hand, by structuring the documentation guideline in sections, the level of detail in the output can be easily controlled by activating or deactivating individual sections.

Due to the committed participation of the parties involved as well as the knowledge gained from the past years that a standardized output is necessary, especially in connection with the testing of energy performance certificates, it can be assumed that the new documentation guideline will be widely applied and thus lead to an improved acceptance of the DIN V 18599 series of standards.
