

24TH ENERGY EFFICIENCY COORDINATION GROUP MEETING AND WORKSHOP

CERTIFICATION OF BUILDINGS AND INSPECTIONS OF SYSTEMS-
MEEC - Montenegrin Energy Efficiency Certification

November 17th 2020

Venue: online

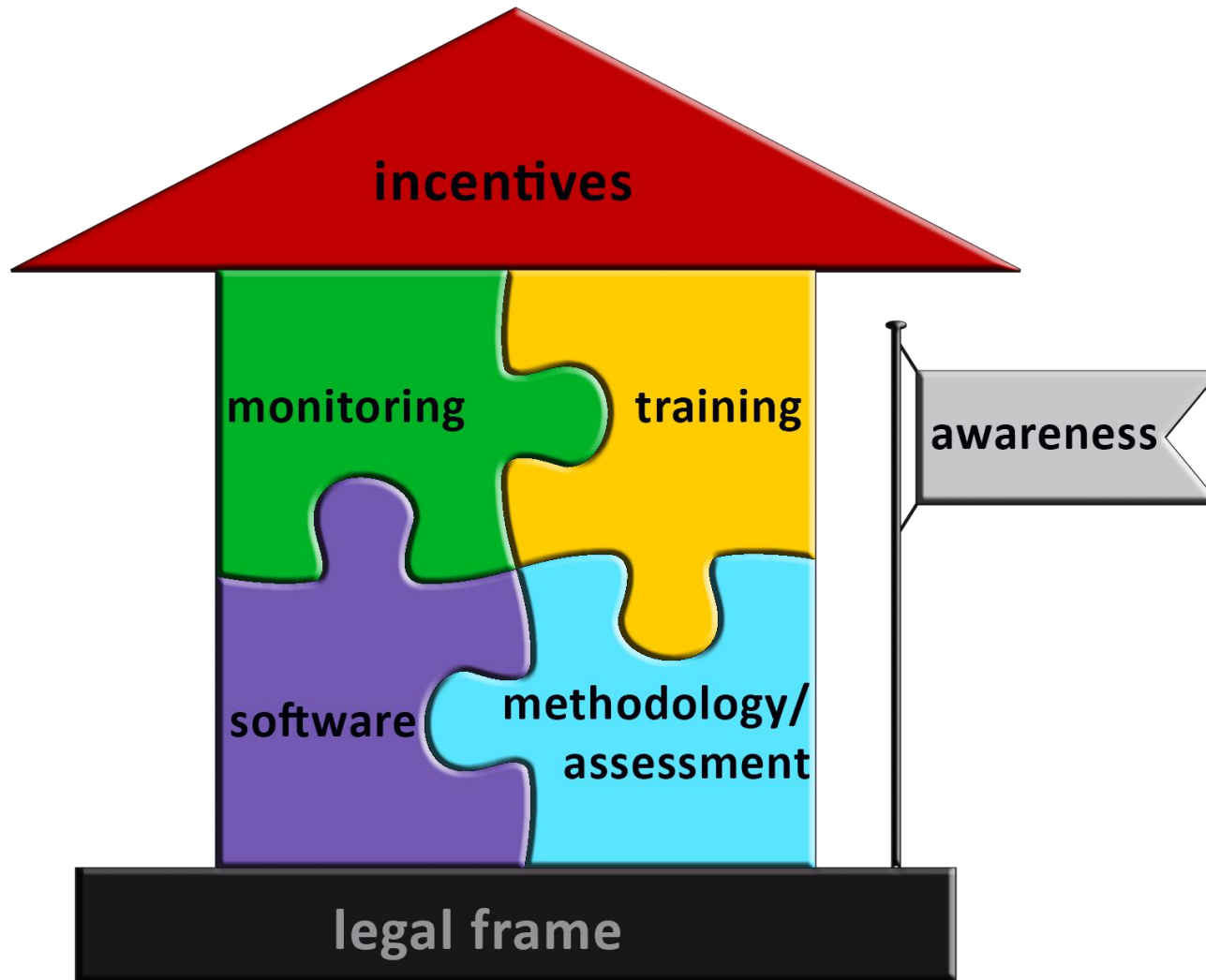
Simon Wössner

Hans Erhorn

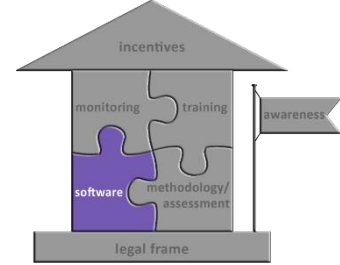
Building on knowledge



Bigger picture

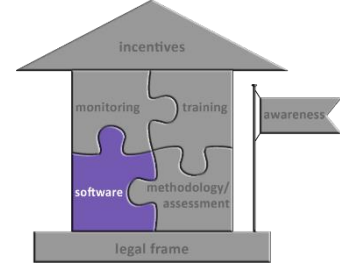


Software Key Features

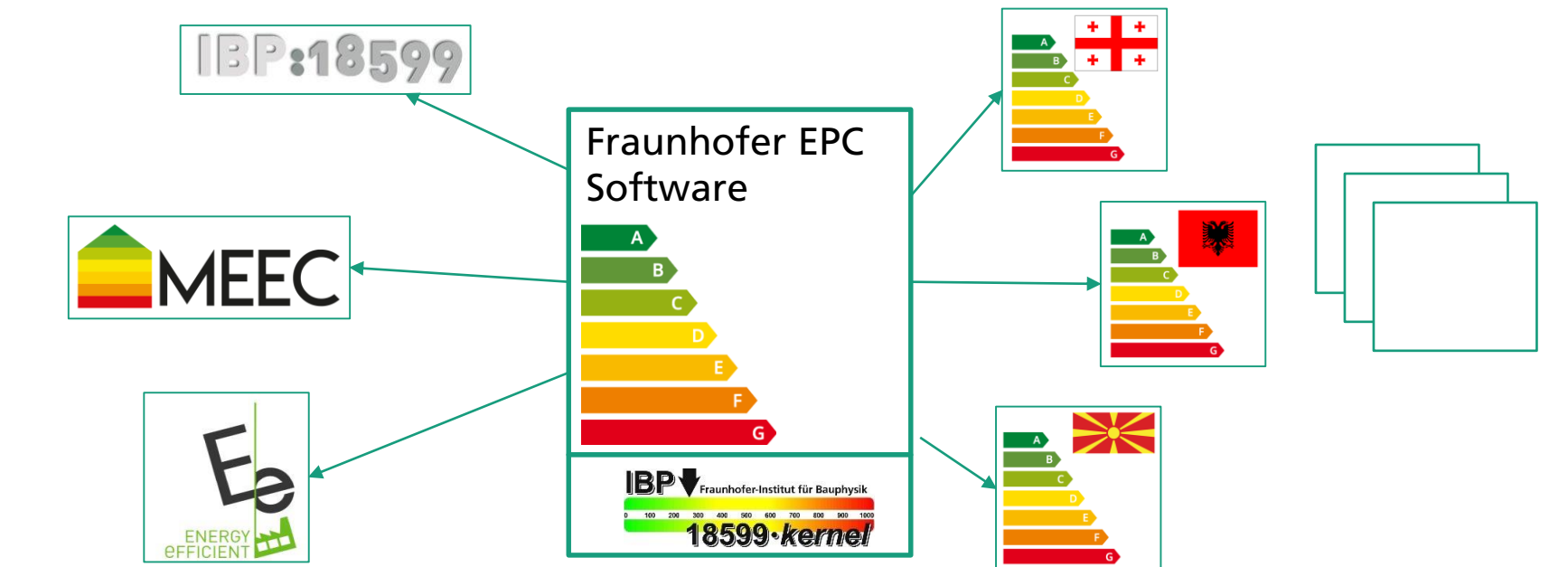


- Main goal is to enable energy auditors to calculate energy demand with this software with a flat learning curve
 - Input similar to calculations with EN ISO 13790
 - Expert mode included (especially for HVAC part)
- Ensure calculation is in accordance with the rulebook/national regulations without distinct expert knowledge of the rulebook/national regulations for the calculation itself
 - User profiles with all requirements on temperatures, occupancies, lighting levels, air volume flows, etc. included
 - HVAC efficiencies are not an input to the calculation, but a result of the calculation

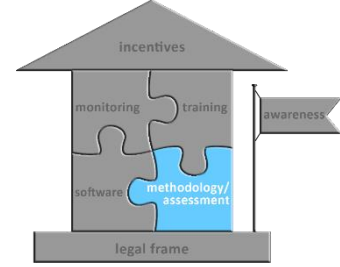
Software Key Features



- Customized software for a specific country, but based on an overall core.
 - It is not a “one for all” software!
 - User dialogs as well as calculation routines themselves can be customized



Methodology / Assessment

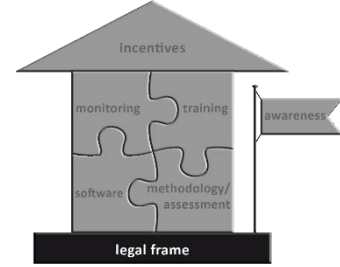


- Assessment based on DIN V 18599:2018
 - Compatibility as required in EPBP 2018 can be shown

- EPC calculations are according to requirements from EPBD, international standards and national requirements
 - Climate zones
 - National user profiles can be adjusted, but are still in line with international standards and national law and/or rulebook

- General
 - DIN V 18599 in progress of being translated to English
 - DIN V 18599 can be applied in other countries without licence fees to DIN

Legal Frame



- Software in line with the main requirement of primary energy use in EPDB 2010 and 2018

ANNEX

The annexes to Directive 2010/31/EU are amended as follows:

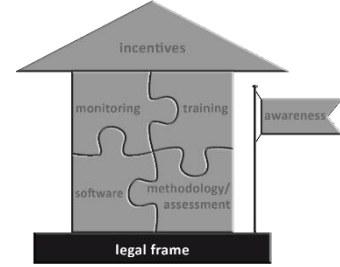
(1) Annex I is amended as follows:

(a) point 1 is replaced by the following:

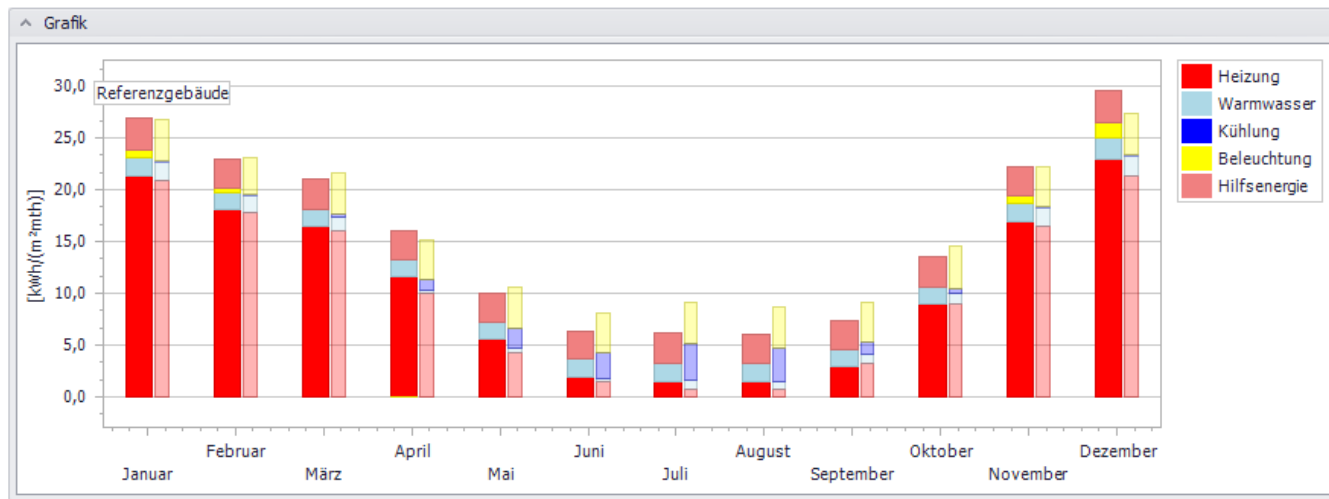
1. The energy performance of a building shall be determined on the basis of calculated or actual energy use and shall reflect typical energy use for space heating, space cooling, domestic hot water, ventilation, built-in lighting and other technical building systems.

The energy performance of a building shall be expressed by a numeric indicator of primary energy use in kWh/(m².y) for the purpose of both energy performance certification and compliance with minimum energy performance requirements. The methodology applied for the determination of the energy performance of a building shall be transparent and open to innovation.

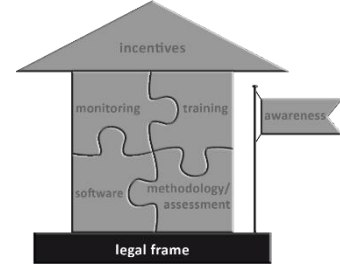
Legal Frame



- Software in line with the main requirement of primary energy use in EPDB 2010 and 2018
- Notional building approach or tabularized values as maximum requirement are possible

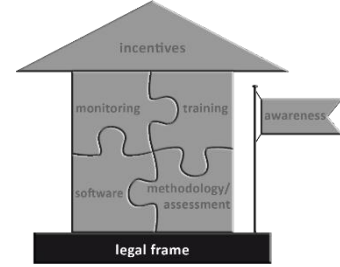


Legal Frame

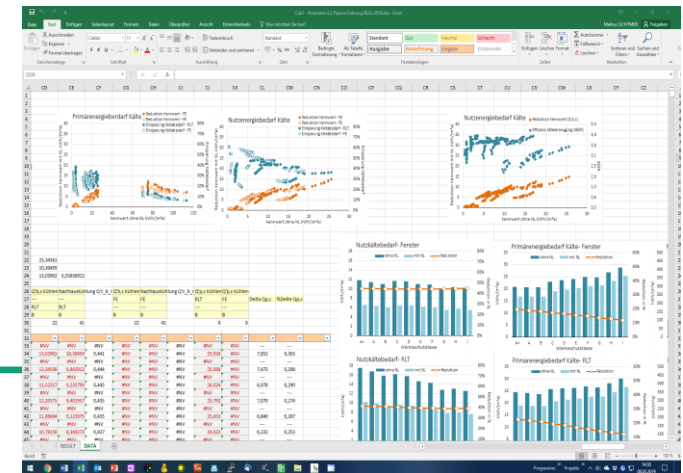
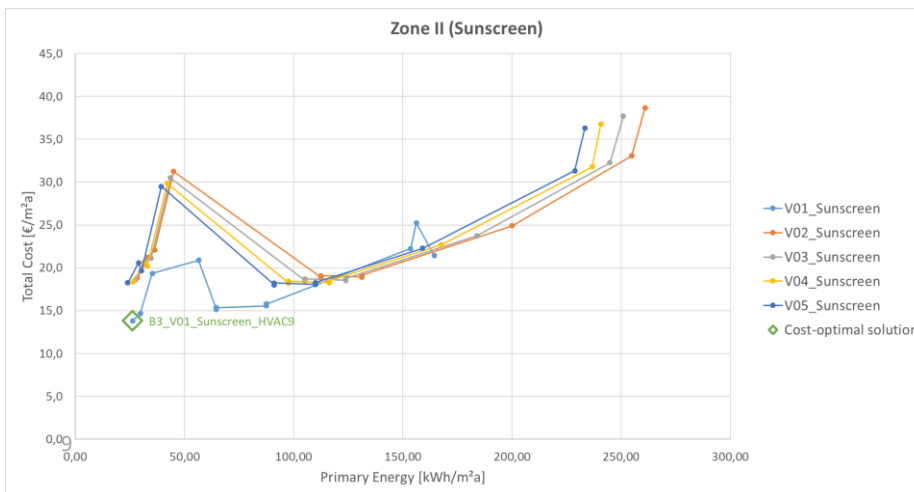


- Software in line with the main requirement of primary energy use in EPDB 2010 and 2018
- Notional building approach or tabularized values as maximum requirement are possible
- Checks with additional requirements possible (mean U-values, HVAC efficiencies, EERs, etc.)

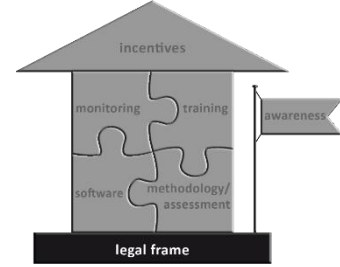
Legal Frame



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- Minimum requirements (cost benefit analysis) can be assessed with bulk calculation tool



Legal Frame



- Software in line with the main requirement of primary energy use in EPDB 2010 and 2018
- Notional building approach or tabularized values as maximum requirement are possible
- Checks with additional requirements possible (mean U-values, HVAC efficiencies, EERs, etc.)
- Minimum requirements (cost benefit analysis) can be assessed with bulk calculation tool
- Includes upload to EPC registrar and 1st level checks according to EPDB §18



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MEEC - Montenegrin Energy Efficiency Certification

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Home

The software MEEC—Montenegrin Energy Efficiency Certification was developed for the certification of the buildings according to the law on efficient use of energy (published in the official gazette of Montenegro

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Data protection

meec.me



KFW



amending Directive 2010/52/EU on the energy performance of buildings and Directive 2012/27/EU on energy efficiency)

The calculation itself is using the German DIN V 18599. This standard meets the requirements in EPBD 2018 Annex 1, where it is defined that "Member States shall describe their national calculation methodology following the national annexes of the overarching standards, namely ISO 52000-1, 52003-1, 52010-1, 52016-1, and 52018-1, developed under mandate M/480 given to the European Committee for Standardization (CEN)". The software uses the calculation library ibp18599kernel from the Fraunhofer Institute for Building Physics, which implements the methodology of DIN V 18599:2018 to calculate energy need, energy use and primary energy of buildings

The software can be downloaded after registering as a user on this site.

Acknowledgements

The software has been developed in the context of the Energy Efficiency Programme in Public Buildings.

The partners in the project are:

- Fraunhofer Gesellschaft zur Förderung der Angewandten Forschung EV - Fraunhofer Institute for Building Physics IBP, Germany
- Ministry of Economy / Directorate for Energy Efficiency, Montenegro
- Energy Efficiency Programme in Public Buildings (EPPB)
- Ministry for Economic Cooperation and Development, Germany