Energy certificate in Germany

Energy pass for new, refurbished, saled or rented buildings

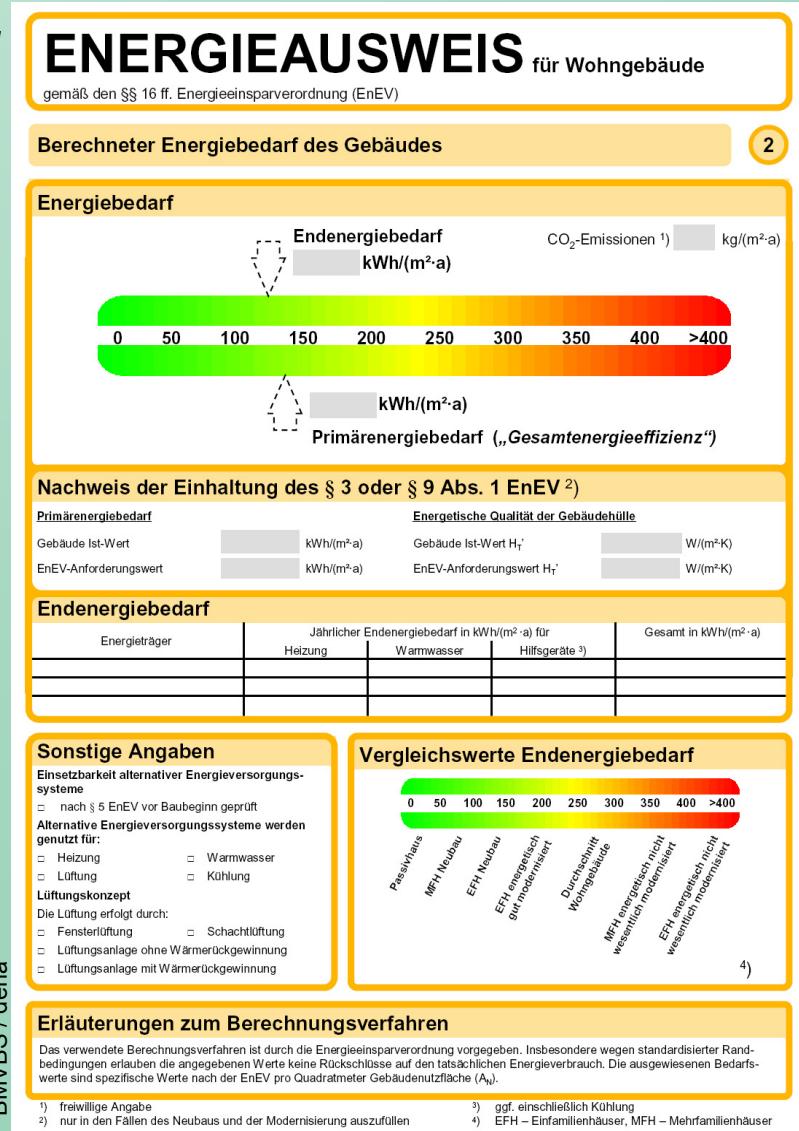▶ **Calculated energy requirement** [kWh/(m²*a)] :

- end energy for heating, DHW, *ventilation, cooling*

- primary energy (« total energy efficiency »)

- energy quality of building envelope $(H_T' = U_{building})$

- optional: CO_2 emissions [kg/(m²*a)]

▶ **Actual energy consumption** [kWh/(m²*a)] :

(buildings with > 4 flats, energy standard 1977-94)

- use of energy bill (min. 3 years)

- adjusted degree days

- end energy for heating, DHW

Reference values for end energy

Recommendations

TREES

CESR Center for Environmental Systems Research