

# Political framework and strategies for EE-incentives in buildings

# Overview

- goals: security of supply, sustainability, red. ghg, economy, competitiveness creating new jobs ...
- promotion: credits and allowances in Germany
- German strategies (e.g. KfW - credits, funding of measures for more EE, BAFA – promotion e.g. of Solar Energy systems and energy consultations)
- additional EU funding – Intelligent Energy for Europe
- conclusions

# Promoting of Saving Energy,

**some reasons:**

- **new products need a market for better prices to become competitive**
- **some EE techniques need a push to break trough**
- **to interest more house owners for refurbishment and to invest in EE and RE**
- **to collect private money for energetic better buildings and to create new jobs**
- **to reduce energy demand and contribution to global warming**

# funded measures e.g.:

RE – heating systems (BAFA, KfW)

solar-heating systems

solar hot water supply

renewable energies

insulation, energetic  
quality of construction material (KfW)

EE – building designs

KfW 40 [kWh] building

passive house

energy consulting

# German strategies to decrease energy demand by legislation and promotion



## **Law**

(Energy Saving Act, EnEV -  
Energy demand for space heating lower than 70 kWh/(m<sup>2</sup>xa))



## **Financial benefits**

(promotion by KfW-Federal Bank – 1.5 billion €/a federal budget,  
additional BAFA 175 millions for renewable energies)



## **Information, transparency in the market, best practice projects**

(German Energy-Agency (dena), Energy Certificates, PR)

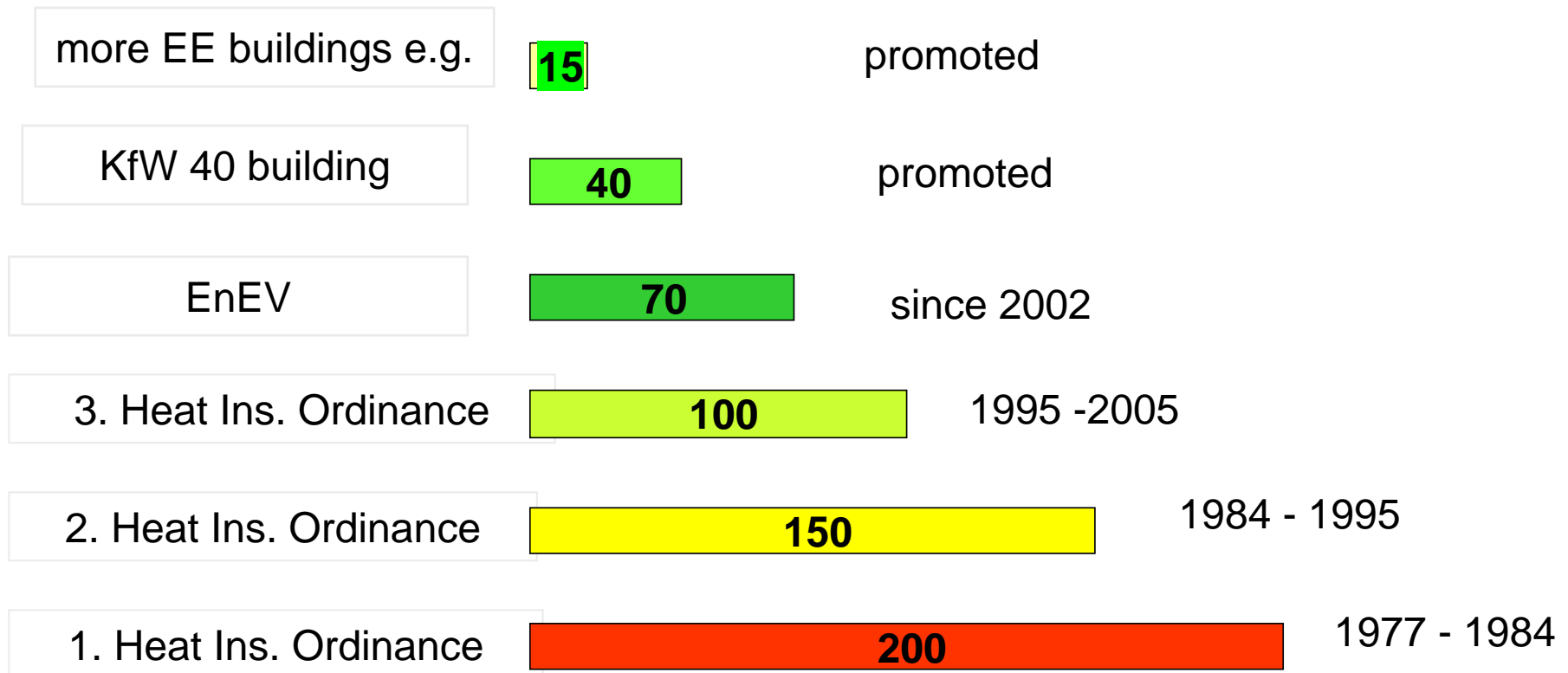


## **Research**

(New programm on research in the building sector –  
rd. 32 Mio. € from 2006 to 2009)

# Requirements in Germany

(energy demand for space heating in kWh / (m<sup>2</sup> x a))



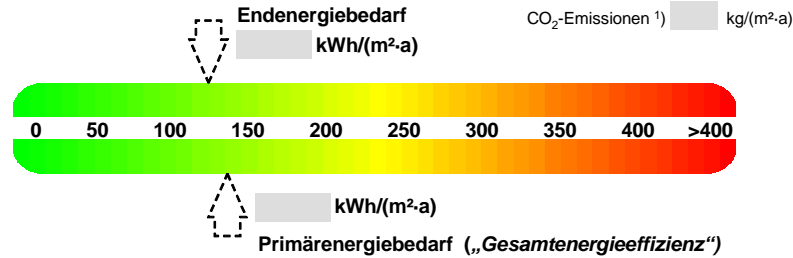
# ENERGIEAUSWEIS für Wohngebäude

gemäß den §§ 16 ff. Energieeinsparverordnung (EnEV)

## Berechneter Energiebedarf des Gebäudes

2

### Energiebedarf



### Nachweis der Einhaltung des § 3 oder § 9 Abs. 1 EnEV <sup>2)</sup>

#### Primärenergiebedarf

Gebäude Ist-Wert   $\text{kWh}/(\text{m}^2\cdot\text{a})$   
 EnEV-Anforderungswert   $\text{kWh}/(\text{m}^2\cdot\text{a})$

#### Energetische Qualität der Gebäudehülle

Gebäude Ist-Wert H<sub>t</sub>'   $\text{W}/(\text{m}^2\cdot\text{K})$   
 EnEV-Anforderungswert H<sub>t</sub>'   $\text{W}/(\text{m}^2\cdot\text{K})$

### Endenergiebedarf

| Energieträger | Jährlicher Endenergiebedarf in $\text{kWh}/(\text{m}^2\cdot\text{a})$ für |            |                           | Gesamt in $\text{kWh}/(\text{m}^2\cdot\text{a})$ |
|---------------|---|------------|---------------------------|--|
|               | Heizung   | Warmwasser | Hilfsgeräte <sup>3)</sup> |  |
|               |   |            |                           |  |
|               |   |            |                           |  |

### Sonstige Angaben

#### Einsetzbarkeit alternativer Energieversorgungssysteme

nach § 5 EnEV vor Baubeginn berücksichtigt

#### Alternative Energieversorgungssysteme werden genutzt für:

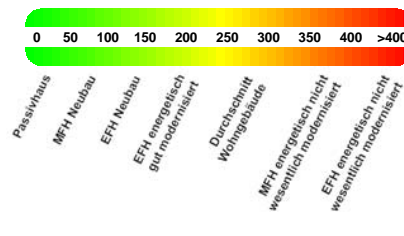
- Heizung  Warmwasser  
 Lüftung  Kühlung

#### Lüftungskonzept

Die Lüftung erfolgt durch:

- Fensterlüftung  Schachtlüftung  
 Lüftungsanlage ohne Wärmerückgewinnung  
 Lüftungsanlage mit Wärmerückgewinnung

### Vergleichswerte Endenergiebedarf



### Erläuterungen zum Berechnungsverfahren

Das verwendete Berechnungsverfahren ist durch die Energieeinsparverordnung vorgegeben. Insbesondere wegen standardisierter Randbedingungen erlauben die angegebenen Werte keine Rückschlüsse auf den tatsächlichen Energieverbrauch. Die ausgewiesenen Bedarfswerte sind spezifische Werte nach der EnEV pro Quadratmeter Gebäudenutzfläche (A<sub>n</sub>).

<sup>1)</sup> freiwillige Angabe

<sup>2)</sup> nur in den Fällen des Neubaus und der Modernisierung auszufüllen

<sup>3)</sup> ggf. einschließlich Kühlung

<sup>4)</sup> EFH – Einfamilienhäuser, MFH – Mehrfamilienhäuser

# KfW Förderbank (KfW promotional bank)

## [Housing Construction](#)

### [KfW Home Ownership](#)

**Housing construction and modernization, energy conservation.**

### [Ecological Construction](#)

### [Housing Modernization](#)

### [KfW CO2 Building Rehabilitation](#)

### [Solar Power Generation](#)

**Your own four walls. Build or modernize your home with low-interest loans from KfW Förderbank (KfW promotional bank).**

source: [www.kfw.de](http://www.kfw.de)

Here you will find all the possible ways to finance the **construction of owner-occupied housing, the renovation and modernisation of housing and the use of renewable energies.**

**KfW Home Ownership Programme** (124/126)

for the construction or acquisition of owner-occupied homes or condominiums.

**Ecological Construction** (144/145)

for the construction of new KfW Energy-Saving Houses 40 and 60 and passive houses, and for the installation of heating technology on the basis of renewable energies in new buildings.

**Housing Modernization** (141/143)

for modernization measures and CO2 reduction measures in residential buildings across the Federal Republic of Germany and also for the demolition of empty residential rental buildings for the purpose of urban renewal in the eastern federal states and eastern Berlin.

**KfW CO2 Building Rehabilitation Programme** (130)

for extensive energy rehabilitation measures in residential buildings completed in 1983 or earlier, the replacement of old heating systems and KfW Energy-Saving Houses 40 including passive houses.

**Solar Power Generation** (140)

for the installation, the expansion and the purchase of small photovoltaic systems.

# Promotion in wich way?

**e.g.:**

**KfW mainly credits with low rates of interest,**

**BAFA 175 Mio. Euro in 2007 subsidies for renewable Energy systems in buildings (different subsidies for measures like biomass boilers or solar energy systems)**

# Conclusions

EE-incentives leaves to

- **reducing energy consumption,**
- **contribute to security of energy supply**
- **c. meeting the ghg-emissions commitment,**
- **decreasing running energy costs for building,**
- **activate private capital for sustainable measures,**
- **creating jobs esp. in the SME area**