Federal Ministry
of Transport, Building
and Urban Development

Promoting energy conservation and climate protection in the building sector is promoting employment

Promotional Programmes for Energy Efficient Residential Buildings

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Overview

1. Political Framework
2. German Strategy: Integrated Energy and Climate Programme, buildings as key element of climate protection and energy conservation
3. Promotional Programmes for Energy Efficient Residential Buildings
4. Impact on employment market
5. Best practise

1. Climate Protection and Energy Efficiency in Buildings – Political Framework EU and Germany

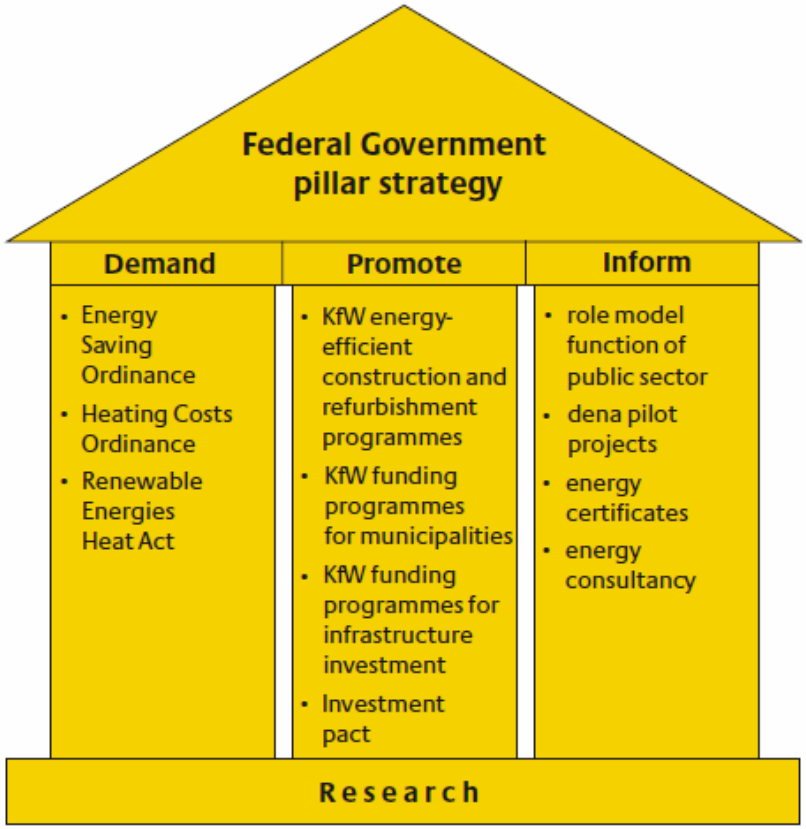
Goals of the EU

- Kyoto commitment: Reduce greenhouse gases (GHG) by a total of 21 % compared to 1990 (2008 – 2012)
- Reduce GHG by a total of 30% by 2020
- Increase of renewable energy to 20% of primary energy consumption by 2020
- Reduce energy consumption by 20% (compared to the trend) by 2020
- Upgrade of national building codes by launching nearly zero energy houses by 2020

Goals of Germany

- Reduce GHG by a total of 40% compared to 1990 by 2020 (coalition agreement)
- Increase of share of renewable energy to 14% for heat consumption by 2020
- Integrated Energy and Climate Programme from 2007
- **NEW:** Reduce GHG by a total of 80 - 95% compared to 1990 by 2050 (Energy and Climate Strategy)

2. German Strategy:
Integrated Energy and Climate Programme adopted in 2007



Referring to Buildings:

- tightening of Energy Saving Ordinance (national building code of Germany) by an average of 30% by 2009 (in force since october 2009)
- Increase of share of renewable energy to 14% for heat consumption by 2020
- Sustaining the promotional programmes for energy efficient residential buildings to reduce CO2-emissions

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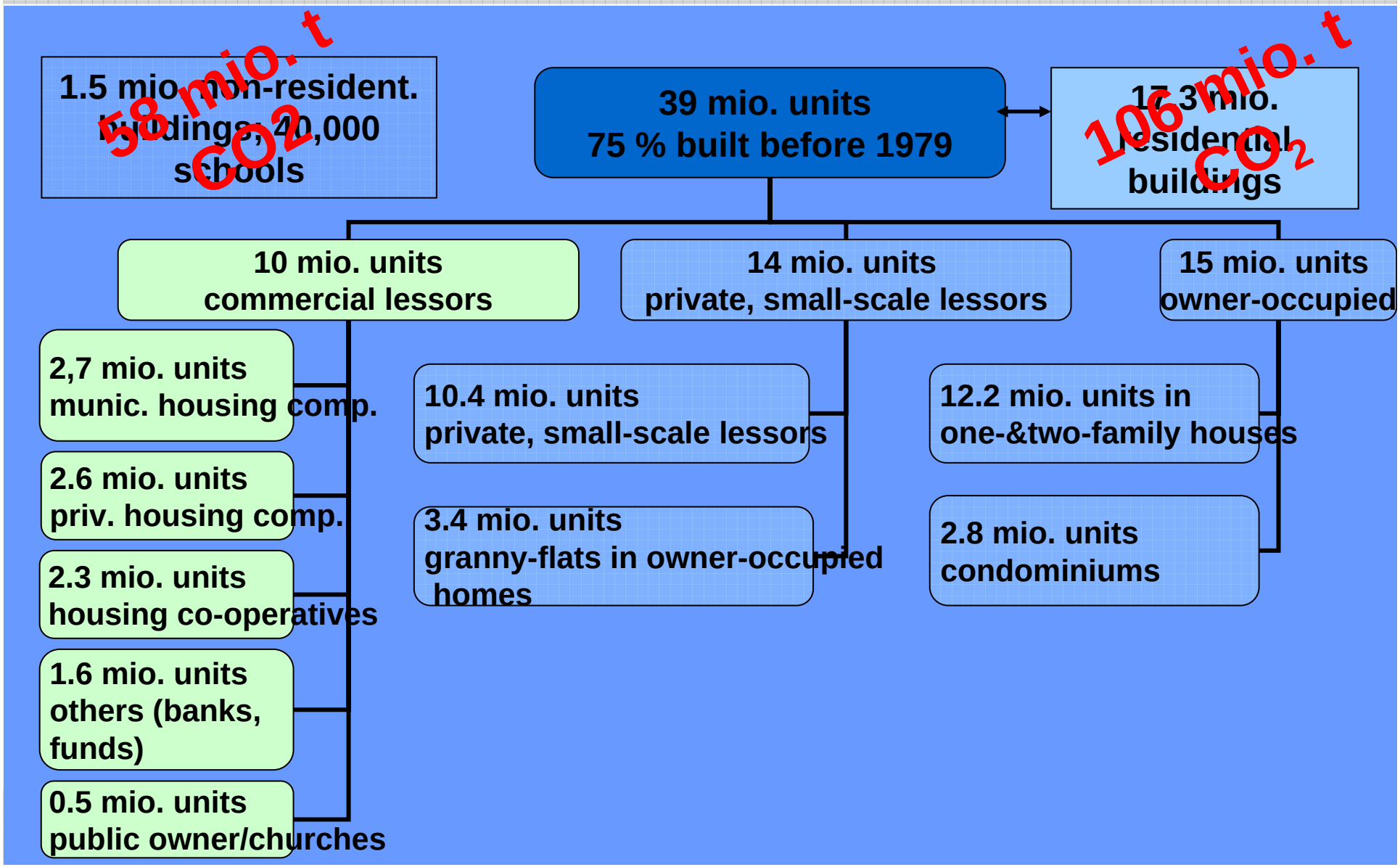

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KfW-55
Effizienzhaus

Federal funds
for loans and grants

New Buildings

Energy-Efficient Construction

Promotion of investments for energy conservation in **new buildings** by

- promotional loans
- max. 50.000 € (loan) per residential unit
- additional repayment bonus possible (max 10%)
- KfW-Efficiency House Standard
- three promotional stages through KfW-Efficiency House 70, 55 and 40

Existing Buildings

Energy-Efficient Rehabilitation

Promotion of investments (comprehensive and single measures) for energy conservation in **existing buildings**

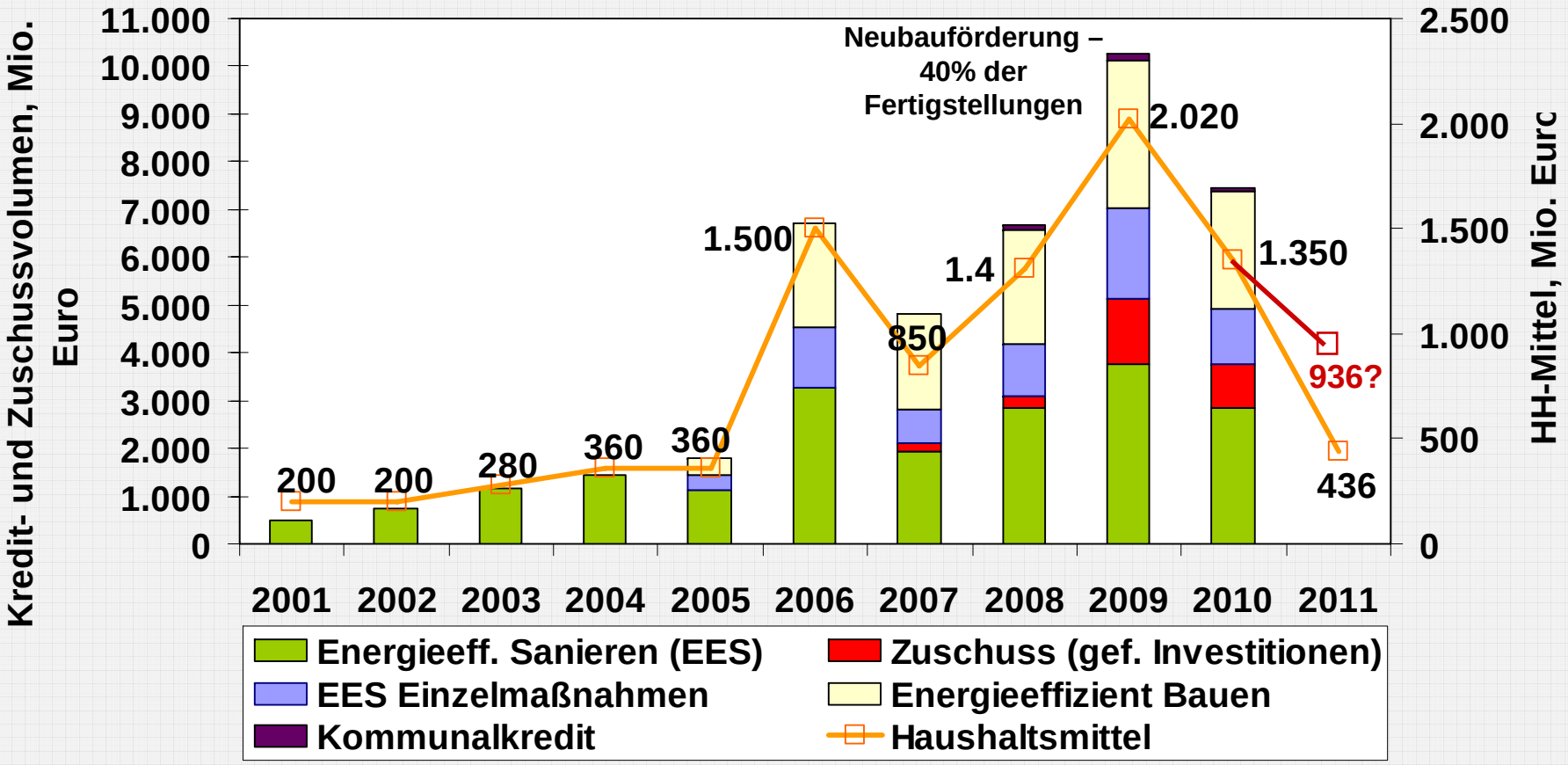
- promotional loans
- max. 75.000 € (loan) per residential unit
- additional repayment bonus possible (max 12.5%)
- KfW-Efficiency House Standard
- five promotional stages through KfW-Efficiency House 115, 100, 85, 70 and 55
- grants as an alternative for small units
- max. 15.000 € (grant) per residential unit

Higher energy efficiency means better conditions

3. Promotional Programmes for Energy Efficient Residential Buildings Main Principles

- Climate protection as a key goal of the promotional programmes
  - the higher the energy savings generated by measures, the better the conditions
- Promotional programmes are carried out by the federal public KfW-Bankengruppe
- Loan terms and conditions are in line with the market, easy access to credits through local banks. Application for grants directly at KfW-Bankengruppe
- Federal funds for loans (to reduce interest rates up to 1.5%) and grants
- Funding available for comprehensive measures („KfW-Efficiency House“):
  - thermal insulation
  - replacement of windows and doors
  - replacement of heating systems
  - installation of ventilation systems
  - installations using renewables with fossil fuel based heating systems
- Financial assistance for all owner groups (housing companies, owner-occupied)

3. Results and financial incentives by federal fund



3. Results of Promotional Programmes from 2006 to 08.2010

- energy efficient refurbishment or erection of nearly 2.4 mil. residential units and 790 municipal buildings
- 40% of new residential buildings and 30% of refurbished buildings are cofinanced by promotional programmes
- climate will benefit due to less GHG-emissions of 4.5 mio. t of CO2 per year (for an estimated 30 years lifespan of measures)
- 7,35 bn € federal funds (2006 – 2010) generated a
  - loan and grant volume of around 34 bn € and
  - total investments of around 70 bn €
- Energy efficiency benefits all
  - saving of heating costs for tenants
  - tenants live in a more comfortable home
  - increase of market value of building

Quelle: BMVBS

4. Impact on employment market

- 1 € public financial resources effects 12 € private investments in 2010
- investments in energy efficiency create and safeguard annually up to 300,000 jobs in the small and medium-sized construction industry
- additional budget of taxes and social security contribution as well as reducing costs of unemployment (expertise of Forschungszentrum Jülich, Germany)
- energy-efficient refurbishment and erection of „KfW-Efficiency Houses“ demand further training of
  - architects and civil engineers
  - engineers for heating etc.
  - energy consultants
  - skilled employees of construction industry

Quelle: BMVBS

5. Best practice

Competition
Energy Efficient Refurbishment of large housing estates

Competition
Efficiency House – Energy Efficiency and high architectonical quality

WETTBEWERB
ENERGIEEFFIZIENZ UND GUTE ARCHITEKTUR
Effizienzhaus

Quelle: BMVBS

Living in the future:
Plus-Energy House of TU Darmstadt and Federal Ministry of Building

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5. Best practice

Model projects by the German Energy Agency

- more than 430 Buildings (residential and non-residential buildings)
- single- and multi-familiy buidlings, schools, town-halls)
- every building type (historical monuments, Jugendstil, Buildings from 1950-1970´s)

Quelle: dena

- constructed in 1951
- before: 358 kWh/ m² / a
- after: 31 kWh/ m² /a
- savings (PE) 92%

- constructed in 1890
- before: 462 kWh/ m² / a
- after: 21 kWh/ m² /a
- savings (PE) 95%

Thank you for your attention!

„…how much does your‘s consume by m²?“

Further information:

www.bmvbs.de/en
www.kfw-foerderbank.de/EN
www.dena.de/en