

# GERMAN RETROFIT FINANCING

SIAMEN CONNECTION  
LEFT: STAIRWELL AND NORTH  
RIGHT: STAIRWELL AND NORTH

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## KfW – Housing, Home Modernization and Energy Conservation

The Kreditanstalt für Wiederaufbau (KfW) is a federal German bank that was created to facilitate post-war reconstruction and today provides key financial support for both new build and retrofit prospects to meet climate change goals. The KfW is a government corporation that acts as an intermediary between owners and capital markets.

The German government is committed to a strategy that combines efficiency improvements and renewable energy sources in an effort to create a climate-neutral building stock nation-wide. Climate change measures are a federal responsibility, but there is strong coordination between regional and local levels. Germany's climate change policy is focused on energy efficiency, energy savings, and the promotion of renewable forms of energy. Through sustained policy over many years, it has become a world leader in the production of renewable technologies and the promotion and adoption of energy efficiency measures.

The strategy works to reduce the energy demands of buildings through a long-term and incremental process, with the goal of 80% GHG emission reduction by 2050. As part of this plan, the remaining demand will be met through renewable energy sources. The German government drives the development of renewable energy, energy efficient construction and refurbishment of all types of buildings, under both public and private ownership, based on three pillars:

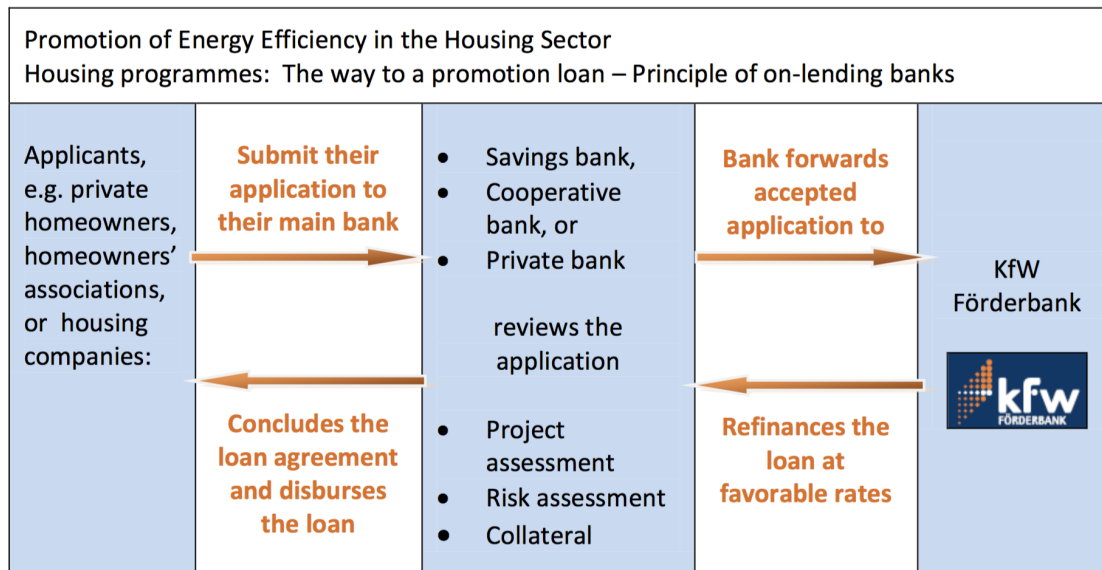
1. Regulation to reduce energy demand and promote renewables;
2. Creation of financial incentives and stimulation of investment to reduce energy demand and promote renewables; and
3. Provision of energy saving information and advice.

### Key principles within this system include:

- Provide repayable loans with favourable terms
- Provide performance-based investment subsidies
- Provide qualified expert advice and installation
- Require investments in energy efficiency to be made before subsidies for renewable energy are paid
- Adopt a whole-building approach to energy savings
- Support experimentation and innovation, building awareness for new approaches to energy efficiency
- Recognize the important role public buildings play in demonstrating retrofit measures



## KfW Quality Management System



Source: UCL Energy Institute THE KfW EXPERIENCE IN THE REDUCTION OF ENERGY USE IN AND CO2 EMISSIONS FROM BUILDINGS: OPERATION, IMPACTS AND LESSONS FOR THE UK. 2011

## Hybrid Loan-Grant Program

The KfW supports the retrofit economy through a program calibrated to building performance outcomes. Low interest long term loans are supplemented by a robust granting program. Grants act as powerful incentives for owners to improve their buildings beyond legislated base performance requirements.

### The KfW:

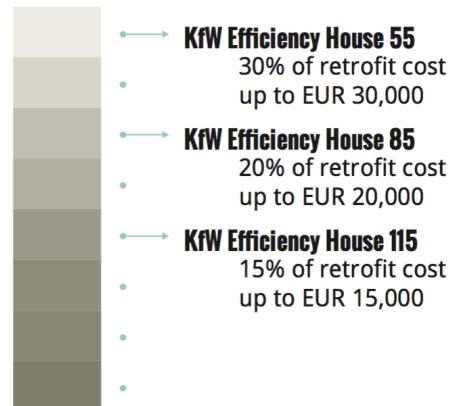
- Offers loan programs below market, financing at favourable interest rates (as low as 0.75%)
- AAA ratings due to guarantees accorded by its public status
- Federal funding allocated annually in the national budget used to further decrease interest rates
- Covers retrofit costs up to 100,000 Euros per unit
- Transfers up to 30% of this loan into a grant if energy performance standards are met

### Technical measures covered by this program include:

- Increased insulation of walls and roofs
- Replacement windows
- Replacement of existing boilers
- Installation of solar thermal, heat pumps and local district heaters
- Measures leading to application of renewable energy sources
- Building modernizations

## KfW Quality Management System

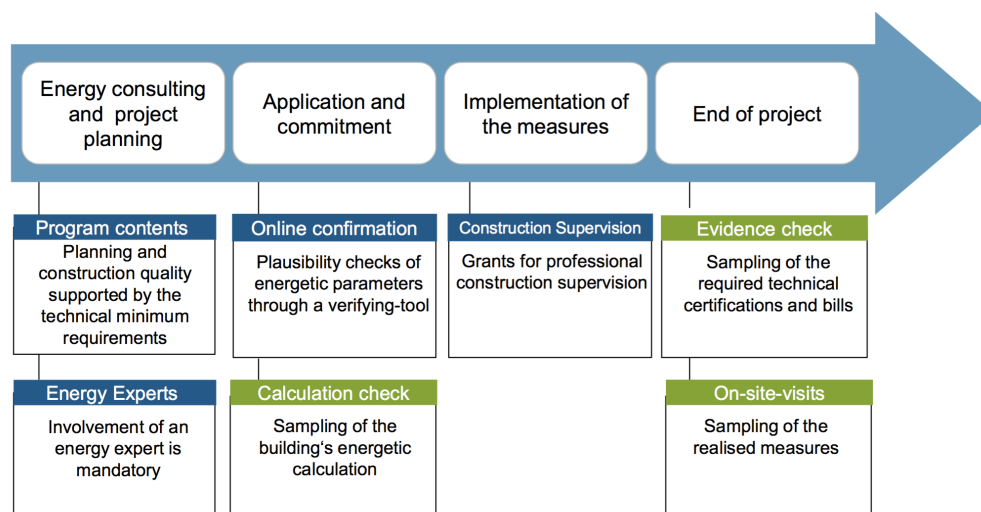
### Grant per Housing Unit by Retrofit Efficiency



### Retrofit Level

Source: KfW Bank, Accessed 06/08/2016  
[www.kfw.de/inlandsfoerderung/Privatpersonen/Bestandsimmobilie](http://www.kfw.de/inlandsfoerderung/Privatpersonen/Bestandsimmobilie)  
 Retrofit Incentives (Germany)

## KfW Quality Management System



### Quality checks

Source: UCL Energy Institute THE KfW EXPERIENCE IN THE REDUCTION OF ENERGY USE IN AND CO2 EMISSIONS FROM BUILDINGS: OPERATION, IMPACTS AND LESSONS FOR THE UK. 2011

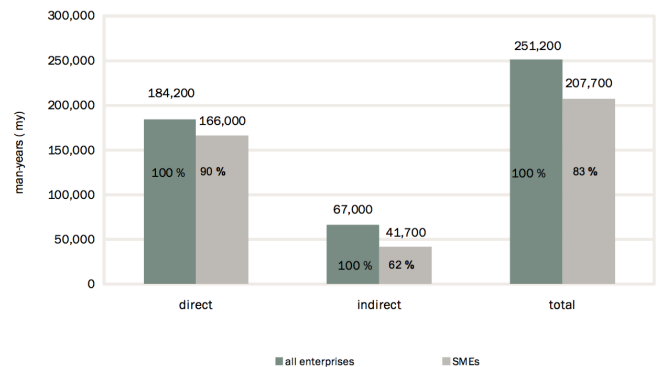
## Key KfW Outcomes

Between 2006 and 2009:

- 27 billion Euros were rewarded in loans and grants which triggered 54 billion Euros in investment
- 9 million units from the pre-1979 stock have been rehabilitated to high energy standards
- 1 billion Euros in heating costs were saved on a yearly basis equaling 1.2 metric tons of CO<sub>2</sub>/yr.
- 894,000 jobs were created in the building and supply related industries
- All of these jobs lasted at least one year or turned into long-term jobs

Between 2006 and 2011:

- In 2011 alone, loans and grants triggered 18.4 billion Euros in investments including 181,000 commitments to modernize homes
- 5.7 megatonnes in GHG emissions were eliminated and more than one billion euros in heating costs were saved



Source: IWU/BEI 2012.

Employment effects of the Energy Efficient Construction and Refurbishment and programmes 2011 (man-years)