

# Indo-German Financial Cooperation Financing Options for Energy Efficiency

---

German-Indian Sustainability and Climate Change Dialogue

Freie Universität Berlin / Indian Embassy

1 October 2008, Berlin

*KfW Development Bank*

*Andreas Berkhoff*

# Agenda



Introduction KfW Development Bank

Experience in the Indian Energy Sector

Financing Mechanisms, Instruments and Facilities

Financing Building Efficiency in Germany

Financing Building Efficiency in Developing Countries

**We are part of KfW Bankengruppe.**



Promotion of housing,  
environment and  
climate protection, education,  
infrastructure, social issues



Promotion of SMEs,  
business founders,  
start-ups



International project and  
export finance



Promotion of developing  
and transition countries



## KfW Entwicklungsbank: Some key figures

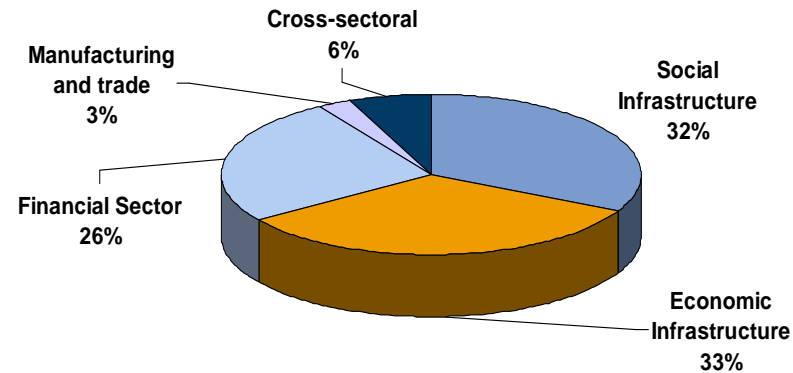
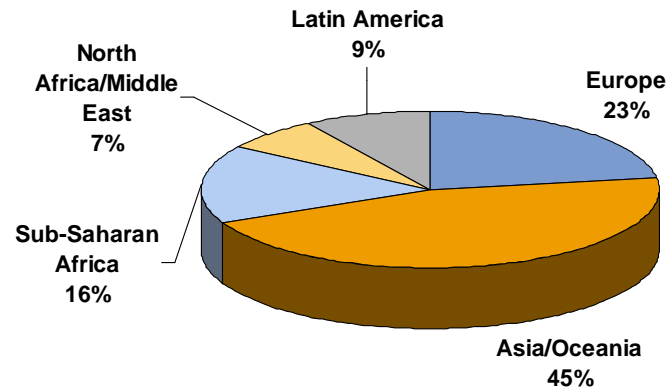


Staff count	423
Ongoing projects	Around 1,600 in over 110 countries
Offices abroad	56
Commitments 2007	EUR 3.0 billion
➤ of which KfW's own funds	EUR 1.7 billion
Disbursements 2007	EUR 2.0 billion (of which EUR 1.1 billion in budget funds)
Loans outstanding	EUR 17.5 billion
➤ of which budget funds	EUR 15.4 billion
➤ of which KfW funds	EUR 2.1 billion (excl. IMF)

# KfW Commitments by Region and Sector



## Distribution of overall (market + budget) commitments in 2007



- Asia (45%) is the region with highest commitments (market + budget funds)
- Infrastructure Development (65%) is the centre of KfW's activities

# KfW Entwicklungsbank:

## Our tasks



We **advise** the German Government on development policy issues; above all, we support its country and priority area strategies.

We **manage projects** on our **own responsibility** and supervise the use of the funds provided.

We **participate** in the selection, preparation and appraisal of development projects (the decision on whether to finance a project lies with the Government).

We **assist** our partners with executing projects and programmes.

# Agenda



Introduction KfW Development Bank

Experience in the Indian Energy Sector

Financing Mechanisms, Instruments and Facilities

Financing Building Efficiency in Germany

Financing Building Efficiency in Developing Countries

# Objective of Development Cooperation with India's Power Sector



- **Why do we support the Power Sector in India?**
  - Crucial for maintaining current GDP growth rate and for reaching the Millennium Development Goals in India.
  - Increasingly of global importance whether India's growth can be managed in an energy efficient and ecological sustainable manner.
  - Strong interest on Indian side to facilitate the technology transfer from Germany to India.





# KfW brings in over 40 years of experience with Indian power sector



- German Financial Cooperation has been India's partner in the Energy Sector for over 40 years:
  - Supported energy sector with nearly EUR 1.3 billion budget funds and more than EUR 1 billion of KfW's own funds
  - Facilitated technology transfer (200 MW, 500 MW unit size, bucket wheel carvator)
- Some of the partners which have been supported in the past:
  - Neyveli Lignite Corporation: Neyveli mine and power station
  - NTPC: Dadri, Singrauli, Farakka, Ramagundam
  - State Electricity Boards: Korba (Chattisgarh), Uran (Maharashtra)



## Current focus: Energy Efficiency & Renewable Energies



Currently, German Financial Cooperation **focuses on energy efficiency and renewable energies** (projects ongoing and under preparation about EUR 1 billion).

- **Projects in Energy Efficiency:**

- Efficient Power Generation (Supercritical power station APGenco, energy efficient R&M of thermal power stations, infrastructure loan to IIFCL)
- Efficient Power Distribution (REC)
- Energy Efficiency in Industry (SIDBI) and in the Housing Sector (under prep.)

- **Projects in Renewable Energies:**

- Hydro Power: Rehabilitation and modernization (PFC) and new construction (110 MW Pare, NEEPCO)
- Renewable energies (several projects with IREDA)
- Study on Integrated Solar Combined Cycle Power Plant at Anta (NTPC)

# Agenda



Introduction KfW Development Bank

Experience in the Indian Energy Sector

Financing Mechanisms, Instruments and Facilities

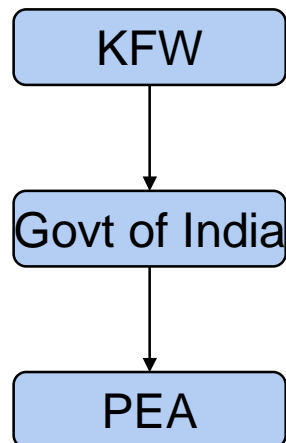
Financing Building Efficiency in Germany

Financing Building Efficiency in Developing Countries

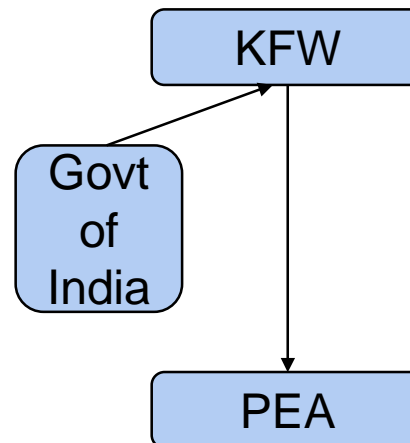
# Bilateral Financial Cooperation Financing Mechanisms



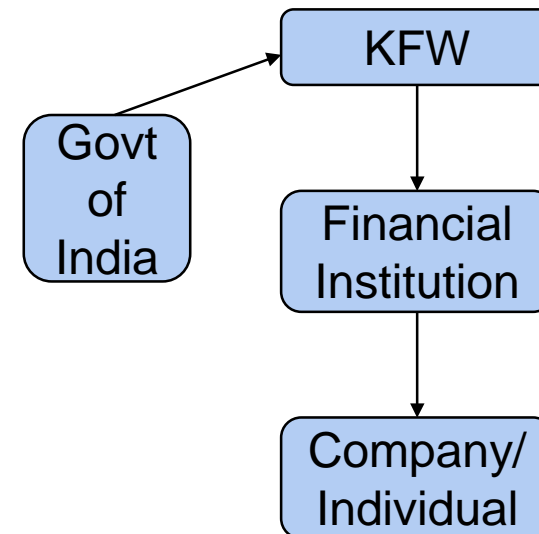
## Option 1: via Gol



## Option 2: direct



## Option 3: via FI



- **Where and how to apply?**

- Project ideas can be developed from all parties
- Project executing agency (PEA): public authority, state owned enterprise
- Partners to submit application to Department of Econ. Affairs (DEA)
- Projects proposed during government consultations / negotiations
- Funds are committed through intergovernmental agreements

# Financing Instruments:

Financing tailored to every partner country individually



## Financial Cooperation (FC)

Budget funds (2007: EUR 1,210 million)

KfW funds (2007: EUR 1,712 million)

### Concessional finance

#### 1. 100% budget funds

1.1 Grants: EUR 803 million

1.2 Loans at IDA conditions

1.3 Loans at standard FC conditions

Loans: EUR 277 million

#### 2. FC development loans

2.1 Mixed financing

2.2 Composite financing

2.3 Reduced-interest loans

Budget funds: EUR 131 million

KfW funds: EUR 448 million

#### 3. FC promotional loans

EUR 1,263 million

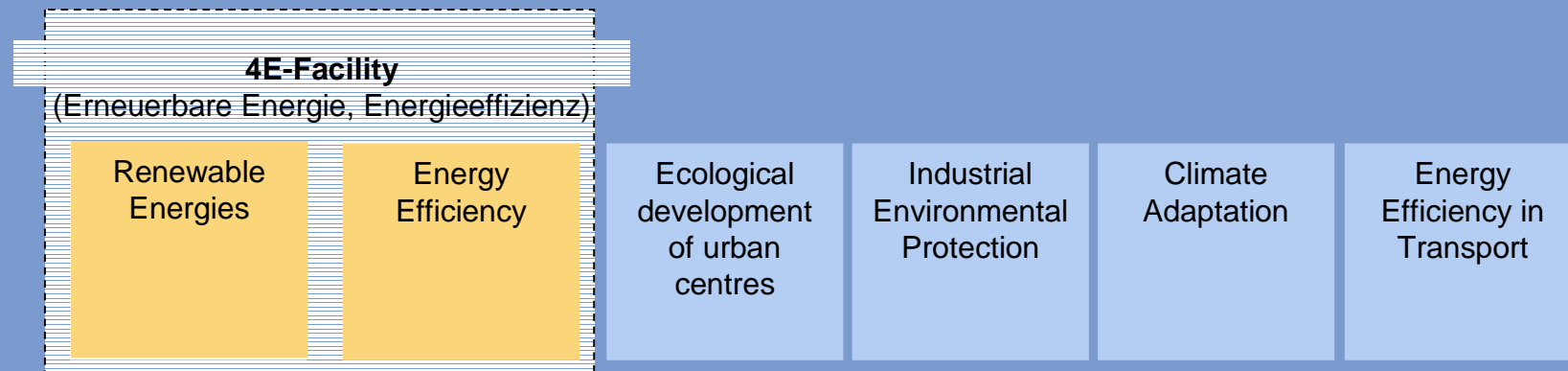
# Financing Instruments relevant in the Indian context



- **Development Loans: Combination of Concessional and KfW's own funds**
  - Composite Finance: includes concessional funds, maturities up to 25 years, risk coverage facility by German Govt (90%)
  - Interest Reduced Loans: 100% market funds, grant for interest subsidy, so far no risk coverage facility, maturity up to 12 years, in EUR / USD / other Currency
- **Promotional Loans**
  - 100% market funds, no concessional element, primarily for public partners
  - Adjusted, lean internal procedures for appraisal and monitoring
  - Ranging from direct senior loans to complex project financings
- **Grants for Studies and Technical Assistance**
  - For project preparation (e.g. feasibility studies) or study and exposure visits
  - For accompanying measures during implementation

# Thematic Initiatives

## Initiative Klima und Umweltschutz (IKLU) [ Initiative for Climate and Environmental Protection ]



- **Features:**
  - Interest reduced loans facility
  - Total volume 2008 – 11 : EUR 2.4 billion
- **Further Initiative:** International Climate Protection Initiative
  - Initiated by Ministry of Environment (BMU)
  - Yearly volume EUR 120 million
  - Available as grant or interest subsidy



# Agenda



Introduction KfW Development Bank

Experience in the Indian Energy Sector

Financing Mechanisms, Instruments and Facilities

Financing Building Efficiency in Germany

Financing Building Efficiency in Developing Countries



# Energy Efficiency in the Housing Sector

## Integrated Approach



Information and  
consulting



Energy-efficient  
construction  
and  
rehabilitation



Promotional  
programmes



German Energy Conservation Ordinance  
(Energieeinsparverordnung – EnEV)

⇒ Energy efficiency requirements for new and existing buildings

-----  
and further regulations

# Promotion of Energy Efficiency in the Housing Sector

## Overview

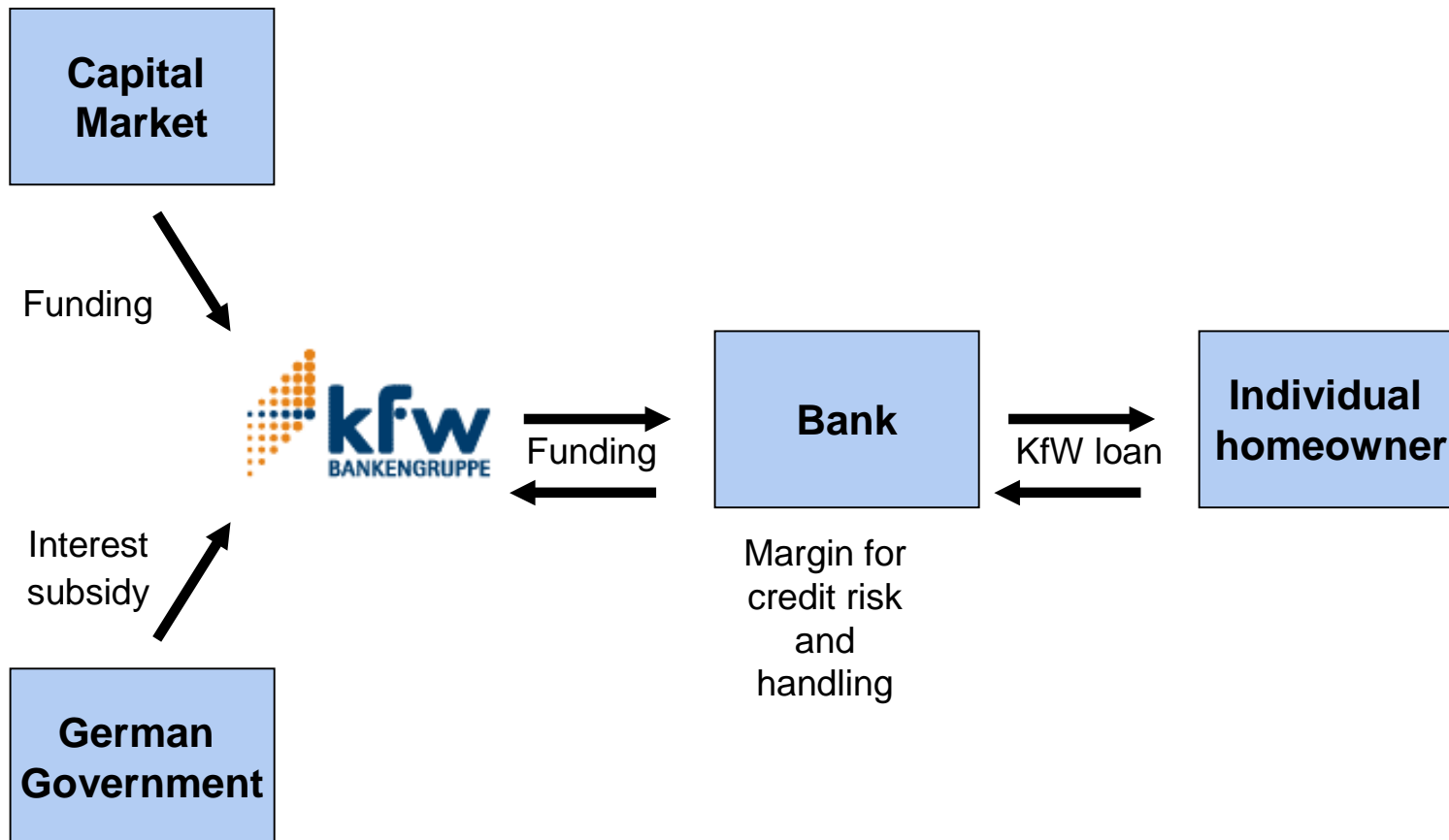


	Programme	Promotional objective
New buildings	<ul style="list-style-type: none"> <li>➤ Ecological Construction Programme</li> </ul>	<ul style="list-style-type: none"> <li>➤ Intensive support as “market maker” for innovations, e.g. low energy houses, passive houses, model projects, renewable energy systems in new houses</li> </ul>
Existing buildings	<ul style="list-style-type: none"> <li>➤ Housing Modernisation Programme</li> </ul>	<ul style="list-style-type: none"> <li>➤ Improvement of the functional value of houses</li> <li>➤ Special window for energy efficiency investments such as thermal insulation, heating with renewable energy etc.</li> </ul>
	<ul style="list-style-type: none"> <li>➤ CO<sub>2</sub> Building Rehabilitation Programme<sup>2</sup></li> </ul>	<ul style="list-style-type: none"> <li>➤ Predefined investment “packages” to reduce CO<sub>2</sub> emissions (nearly to the level of a new building)</li> <li>➤ Investments to reach or surpass the energy efficiency level of a new building</li> </ul>

Long-term loans with favourable or subsidised interest rates and additional debt relief possible (CO<sub>2</sub> Building Rehabilitation Programme)

# KfW's On-lending System

Funding and risk assumption in Germany's housing sector



# Agenda



Introduction KfW Development Bank

Experience in the Indian Energy Sector

Financing Mechanisms, Instruments and Facilities

Financing Building Efficiency in Germany

Financing Building Efficiency in Developing Countries

# Areas of Intervention in Developing Countries



**„There is a significant potential for increasing energy efficiency in the building sector in developing countries and hence to contribute towards promoting sustainable development.“**

- **Approach to realize this potential :**
  1. Adjustment of policy / regulatory framework conditions
  2. Information and awareness
  3. Financing→ German know-how can be utilized to replicate successful models
- **Areas of Intervention under German Financial Cooperation:**
  - Direct support for establishing model cases (pilot projects)
  - Credit Lines via the banking sector
  - Programmatic CDM, incorporating CDM benefits in financing structure

# Project Concept India



- **Savings potential** in buildings estimated to be in the range of 23 % - 46 %
- **Framework conditions** have improved (energy conservation act, energy conservation building code), further improvements are required but on the way.
- Low but increasing level of **awareness** (various activities initiated by Indian side)
- Despite huge potential **only a few visible projects** so far, reasons comprise:
  - Lack of trust (investors, service companies)
  - Financial viability not proven, no specific financial products
- **Project Concept consists of four elements:**
  - Line of Credit at attractive conditions for specific financial products
  - Accompanying measure to support introduction of such products
  - Consulting Services regarding CDM-registration
  - Offer to buy certificates (KfW Carbon Fund)
- **Project Examples in other Developing Countries:**
  - Construction Administrative Building of the East African Community (Tanzania),
  - Line of Credit to CORFO for energy efficient renovation of buildings (Chile),
  - Line of Credit to First Microfinance Bank, focusing on new buildings (Tajikistan)

**For further information contact...**



**Thank you!**

**How to contact us:**

**In Germany:**

KfW Development Bank  
Palmengartenstraße 5-9  
60325 Frankfurt am Main  
Germany

Phone: +49 (0)69 7431-2583  
Fax: +49 (0)69 7431-3609  
mailto:Andreas.Berkhoff@kfw.de  
www.kfw.de

**In India:**

KfW Development Bank  
Jor Bagh 21  
110003 Delhi  
India

Phone: +91 (0)11 2464 - 7113  
Fax: +91 (0)11 2464 - 1203  
mailto: Christian.Haas@kfw.de  
www.kfw.de