

Promoting Energy Efficiency in Buildings

Experiences from KfW

Georg Grüner

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Die Zukunftsförderer



kfw
ENTWICKLUNGSBANK



Germany

**SMEs,
start-ups,
environ-
mental &
climate
protection**

**Promotion of
housing and
education**

**Financing of
municipal
infrastructur
e projects
and
promotion in
Europe**

International

**International
project and
export finance**

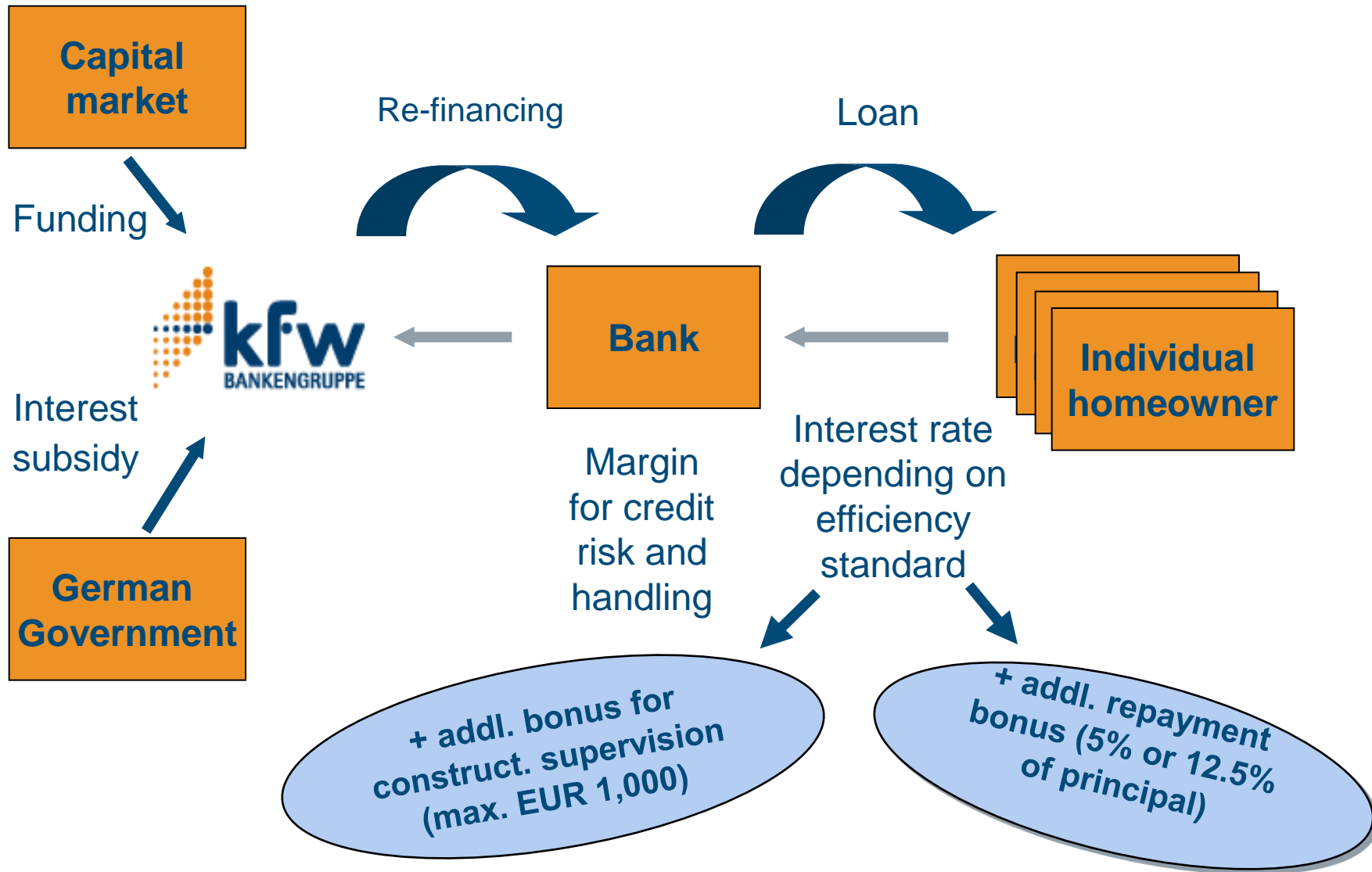
**Promotion of
developing and
transition
countries**

Promotion of Environmental and Climate Protection



Experiences from Germany

Funding and On-lending for Energy Efficiency



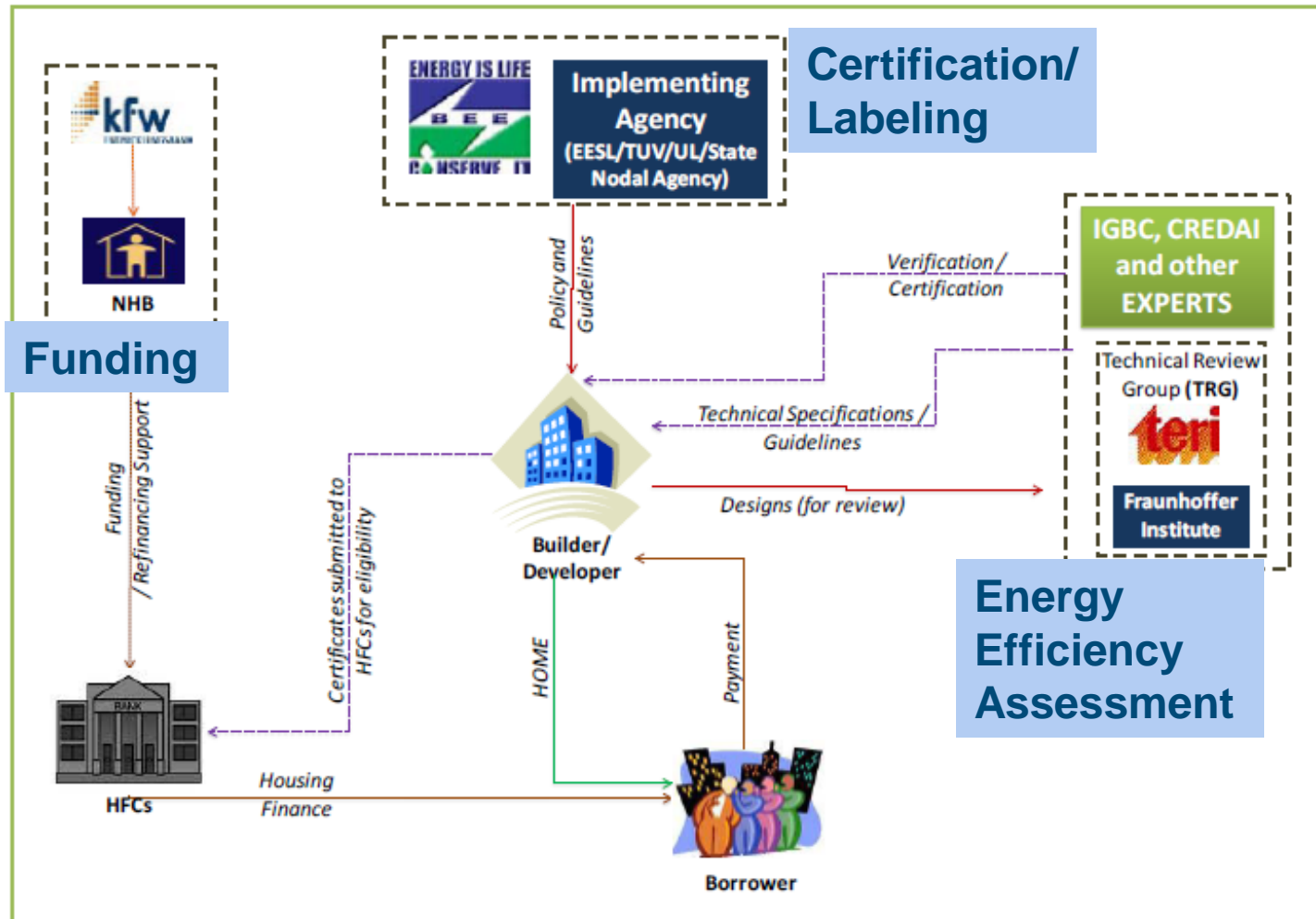
National Housing Bank (NHB) applying KfW model:

- Refinancing sub-loans for buyers of energy efficient new urban apartments
- Fraunhofer/TERI **assessment tool** and labelling approach
- Highest **energy savings** potential in new apartment blocks for middle income residents: 46-51% depending on climate zone
- Investments to achieve up to **40% savings** financially attractive at 5 yr. payback (Average FIRR 25%)

Promoting EE buildings in India I

Promotional Programme - Funding and Certification

Stakeholder Dialogue/Policy Development



Promoting EE Buildings in India I

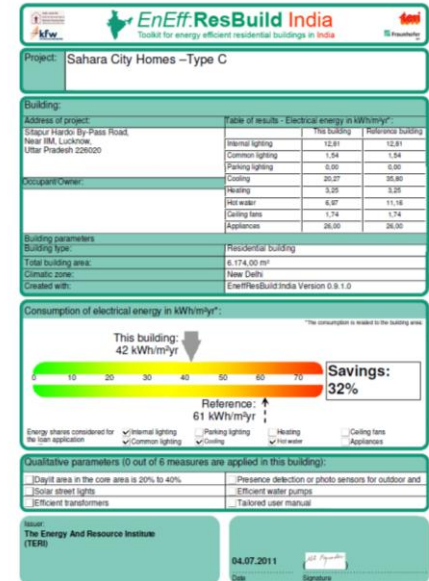
Promotional Programme – Pre-conditions & Challenges

Preconditions for Feasibility:

- **optimization** of whole building **design** at planning
- **early contact** to advise architects/developers
- robust energy performance **assessment tool**
- **training** of auditors and energy advisors

Challenges:

- **No** mandatory minimum EE **standard** for residential buildings
- **Multiple** ministries and public agencies dealing with the residential building sector
- Lack of sustainable financial **incentives** to promote EE residential buildings



“Energy Efficiency Services Limited” (EESL)

- set up as “**Super-ESCO**” by the Indian Government to support development of the EE and ESCO market in India

Envisaged **Functions of EESL** :

- facilitate **preparation, financing and implementation** of EE projects for public buildings, municipal infrastructure (e.g. street lighting), etc.
- promote private **ESCO market** („sub-contracting“ for implementation)
- provide consultancy and **capacity building** for stakeholders
- **support implementation** of central and state government schemes

FIDE- Energy Efficiency Fund

- Electric appliance **labelling** by FIDE
- Direct payments to **suppliers**
- Sales through local **retailers**
- **Disposal** of old appliances
- **Credit analysis** based on electricity bill
- Repayment of loans via **electricity bill**



Solar Home Systems in Eastern Cape

- KfW funding 25 million EUR
- Off-grid electrification through ESCO
- Installation of ~ 30.000 SHS

Challenges

- **Quality** of installation
- **Capacity** of implementers
- **Customers'** expectations
- **Ownership** of installations
- **Reliability** of financial contributions
- **Coordination** of stakeholders



THANK YOU!

For more information,
please contact:

Georg Grüner
Senior Project Manager

KfW Development Bank

georg.gruener@kfw.de



KfW Office Building “Westarkade”,
Electricity Consumption: 98 kWh/p.sqm/p.a.