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**Fourth International Forum:
Energy for Sustainable
Development
Workshop 2**

**Public policies to attract investment
in energy efficient housing**

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Agenda

Content

- Opportunities for EE investments in housing
- Barriers for financing EE in housing
- Financing vehicles for EE in housing
- Examples
- Conclusions
- Recommendations

EE in Housing

Opportunities

- Large social impact of EE in housing
- Removal of subsidies on energy tariffs
- Long life-time of technically simple measures
- Labour intensive, locally implemented projects
- Positive micro and macro economic impact

EE in Housing

Barriers for Commercial Financing

- Substantial capital investments
- Uncertainties about market demand for energy efficiency financing
- Fragmentation of housing sector (millions of stakeholders)
- Legal enforcement in property and multi-storey apartment buildings
- Lack of technical expertise for appraisal and risk assessment
- Perverse governmental incentives (e.g. support schemes)
- Discrepancies between technical risks and financial benefits of energy efficiency (**investment barriers**)
- Tenors longer than those of commercial business lending (**long pay back periods**)

Financing Vehicles for EE in Housing

Measures overcoming Investment Barriers

- **Objective**
 - Overcoming initial investment barrier
 - Using measure as a communication vector
 - Market transforming by involving banking sector (leverage effect)
- **Types of measures**
 - Specific credit line
 - Interest rate subsidy
 - Credit guarantee systems

Financing Vehicles for EE in Housing

Measures overcoming Investment Barriers

Measures	Advantages	Disadvantages
Specific credit lines	<ul style="list-style-type: none"> • Solve problem of down stream resources • Involving of banking sector • Good vector of awareness • Possibility to neutralize reimbursement of loan by saving on energy bill 	<ul style="list-style-type: none"> • Implementation slowness • High cost of loan dsbursement and management • Exclusion of non banked households
Interest rate subsidy	<ul style="list-style-type: none"> • Good vector for awareness • Improve profitability for end- user 	<ul style="list-style-type: none"> • Currency risk coverage • Sustainability of interest subsidy • Financial market distortion • Preassure on public finance
Loan guarantee systems	<ul style="list-style-type: none"> • Easy access to loans • Incentive for banking sector 	<ul style="list-style-type: none"> • Complexity of implementation in developing countries • Risk of derive

Measures reducing Payback Period

Financing Vehicles for EE in Housing

- **Objective**

- Reducing the payback period for end-user:
Improvement of EE option attractiveness
- Using measure as a communication vector
- Stimulating offer by market initialization:
progressive decrease of investment costs

- **Types of measures**

- Public investment subsidy
- Indirect taxes advantage (VAT, customs duties, etc.)
- Reduction of direct taxes: **tax credit** .

Measures reducing Payback Period

Financing Vehicles for EE in Housing

Measures	Advantages	Disadvantages
Public Investment Subsidy	<ul style="list-style-type: none"> • Clear effect on cost reduction • Strong signal to market • Good vector for awareness • Stimulation effect for supply side 	<ul style="list-style-type: none"> • Pressure on public finances • Low sustainability • High management costs
Indirect tax advantages	<ul style="list-style-type: none"> • Easy implementation • Low pressure on public finances 	<ul style="list-style-type: none"> • Low visibility • Low efficiency in informal markets • Difficulty to apply on service costs
Reduction of direct taxes	<ul style="list-style-type: none"> • Low pressure on public finances 	<ul style="list-style-type: none"> • Low efficiency in developing countries • Complexity of implementation in developing countries

Examples

Financing Vehicles for EE in Housing

Policy instruments	Country examples	Effectiveness	Energy or emission reductions for selected best practices	Cost-effectiveness	Cost of GHG emission reduction for selected best practices
Tax exemptions/reductions	US, Fr, NI, Kor	High	US: 88 MtCO ₂ in 2006 FR: 1Mt CO ₂ in 2002	High	US: B/C ratio commercial buildings: 5.4 New homes: 1.6
Public benefit charges	BE, Dk, Fr, NI, US states	Medium/Low	US: 0.1-0.8% of total el. sales saved /yr, 1.3 ktCO ₂ savings in 12 states NL: 7.4TWh in 1996 = 2.5 MtCO ₂ Br: 1954 GWh	High in reported cases	US: From - 53\$/tCO ₂ to - 17\$/tCO ₂
Capital subsidies, grants, subsidised loans	Jp, Svn, NL, De, Sw, US, Cn, UK, Ro	High/Medium	Svn: up to 24% energy savings for buildings, BR: 169ktCO ₂ UK: 6.48 MtCO ₂ /year, 100.8 MtCO ₂ in total Ro: 126 ktCO ₂ /yr	Low some - times High	Dk: - 20\$/ tCO ₂ UK:29\$/tCO ₂ for soc, NL: 41-105\$/tCO ₂ for society

Conclusions EE in Housing

Ideal profile of financial mechanisms

Mechanisms combining several types of tools, instruments and measures

- Financial instruments:
 - **Win –Win** Public subvention to reduce the payback period for the end-user
 - Indirect taxation measures
 - Bank credit over an enough long period to alleviate the payment capacity barrier
 - **Sufficient upstream resources for both public subsidy and loan distribution**
- Institutional and organizational instruments
 - Simple and effective distribution system of loans
 - Effective Operators, accredited to be eligible to the programs
 - Effective quality control, but simple and cost-effective
 - Accompanying measures including awareness and capacity building
 - Coordinating agency to monitor all the mechanisms

Recommendations EE in Housing

Selected Policy Options

- Establishing financial markets motivated in lending for efficiency
 - E.g. Loan guarantee schemes
- Exemplary role of public sector: leadership programs
 - E.g. German and Austrian governmental commitments
- PPP solutions to be preferred
 - E.g. ESCO arrangements in Germany
- Preferential mortgage schemes for low-E housing
 - “feebate” (fee+rebate) schemes in mortgages
- Green Investment Schemes – huge opportunity
 - E.g. Hungary as front-runner (awards and grants)



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THANK YOU

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