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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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