Public policies to attract investment in energy efficient housing

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Content

- Opportunities for EE investments in housing
- Barriers for financing EE in housing
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- Examples
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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
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)
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
# Measures overcoming Investment Barriers

## Financing Vehicles for EE in Housing

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<tr>
<th>Measures</th>
<th>Advantages</th>
<th>Disadvantages</th>
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<tbody>
<tr>
<td><strong>Specific credit lines</strong></td>
<td>• Solve problem of downstream resources&lt;br&gt;• Involving of banking sector&lt;br&gt;• Good vector of awareness&lt;br&gt;• Possibility to neutralize reimbursement of loan by saving on energy bill</td>
<td>• Implementation slowness&lt;br&gt;• High cost of loan disbursement and management&lt;br&gt;• Exclusion of non banked households</td>
</tr>
<tr>
<td><strong>Interest rate subsidy</strong></td>
<td>• Good vector for awareness&lt;br&gt;• Improve profitability for end-user</td>
<td>• Currency risk coverage&lt;br&gt;• Sustainability of interest subsidy&lt;br&gt;• Financial market distortion&lt;br&gt;• Preassure on public finance</td>
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<tr>
<td><strong>Loan guarantee systems</strong></td>
<td>• Easy access to loans&lt;br&gt;• Incentive for banking sector</td>
<td>• Complexity of implementation in developing countries&lt;br&gt;• Risk of derive</td>
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Financing Vehicles for EE in Housing

Measures reducing Payback Period

• **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

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<tr>
<td>Public Investment Subsidy</td>
<td>• Clear effect on cost reduction&lt;br&gt;• Strong signal to market&lt;br&gt;• Good vector for awareness&lt;br&gt;• Stimulation effect for supply side</td>
<td>• Preassure on public finances&lt;br&gt;• Low sustainability&lt;br&gt;• High management costs</td>
</tr>
<tr>
<td>Indirect tax advantages</td>
<td>• Easy implementation&lt;br&gt;• Low preasure on public finances</td>
<td>• Low visability&lt;br&gt;• Low efficiency in informal markets&lt;br&gt;• Difficulty to apply on service costs</td>
</tr>
<tr>
<td>Reduction of direct taxes</td>
<td>• Low pressure on public finances</td>
<td>• Low efficiency in developing countries&lt;br&gt;• Complexity of implementation in developing countries</td>
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### Financing Vehicles for EE in Housing

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<th>Policy instruments</th>
<th>Country examples</th>
<th>Effectiveness</th>
<th>Energy or emission reductions for selected best practices</th>
<th>Cost-effectiveness</th>
<th>Cost of GHG emission reduction for selected best practices</th>
</tr>
</thead>
</table>
| Tax exemptions/reductions | US, Fr, NL, Kor | High | US: 88 MtCO2 in 2006  
FR: 1 Mt CO2 in 2002 | High | US: B/C ratio commercial buildings: 5.4  
New homes: 1.6 |
| Public benefit charges | BE, Dk, Fr, NL, US states | Medium/Low | US: 0.1-0.8% of total el. sales saved /yr, 1.3 ktCO2 savings in 12 states  
NL: 7.4 TWh in 1996 = 2.5 MtCO2  
Br: 1954 GWh | High in reported cases | US: From - 53$/tCO2 to - 17$/tCO2 |
| 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: 169 ktCO2  
UK: 6.48 MtCO2 /year, 100.8 MtCO2 in total  
Ro: 126 ktCO2/yr | Low some times High | Dk: – 20$/tCO2  
UK: 29$/tCO2 for soc  
NL: 41-105$/tCO2 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
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)
THANK YOU

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