DEVELOPMENT OF SUSTAINABLE MECHANISMS FOR FINANCING ENERGY EFFICIENCY IN EUROPE AND EURASIA

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Energy Community
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Region’s energy intensity remains significantly higher than EU member states

Low Energy Intensity Countries (<0.10 kgoe/GDP in 2011 $)
- EU-28

Medium Countries (0.10-0.20 kgoe/GDP in 2011 $)
- Slovakia
- North Macedonia
- Kosovo
- Montenegro
- Georgia
- Albania

High Energy Intensity Countries (0.20-0.30 kgoe/GDP in 2011 $)
- Serbia
- Bosnia & Herzegovina
- Moldova

Very High Energy Intensity Countries (>0.30 kgoe/GDP in 2011 $)
- Ukraine

Source: IEA, 2014
Energy Efficiency (EE) – current financing support mechanisms provided by donors and IFIs

**INVESTMENT GRANTS:** grants provided by donors or others representing part of project cost and accompanying bank loans

**CONCESSIONAL LOANS:** loans with more favorable terms - interest rate, tenure or grace period - than commercial loans

**INCENTIVES:** payments by IFIs to PFI s for extending specified loans to sub-borrowers, or to sub-borrowers for using loans for specified purposes

**RISK SHARING:** assumption of credit risks by donor-provided funds in specified kinds of lending

**TECHNICAL ASSISTANCE:** grants cover cost of consultants and technical services needed to prepare and verify projects

**INSTITUTIONAL CAPACITY BUILDING:** support government agencies and civil society institutions with legal, financial, behavioral aspects

Source: EBRD
**US AID energy efficiency portfolio**

**PAST ACTIVITIES:**
- EE LAWS, NEEAPS, Legal dialogue
- Municipal energy efficiency, Urban heating
- EE Funds, ESCO support, Credit guarantees

**CURRENT ACTIVITIES:**
- Residential Energy Efficiency for Low Income Households (REELIH)
- Industrial energy management
- District heating, Utilities
- Development Credit Authority
US AID support of residential energy efficiency investments

- TECHNICAL ASSISTANCE
  - Bank/microcredit foundation
  - LOAN
  - Homeowners Association (HOA)
  - TENDER
  - Construction Company

- TECHNICAL ASSISTANCE
  - Municipality
  - LIH GRANT
  - RETROFIT
  - Building

- LOW INCOME HOUSING MOUs
- TECHNICAL ASSISTANCE
- Energy Auditors
- AUDIT and CERTIFICATION
Citizens (homeowners, business owners, home owner associations) will invest in energy efficiency if:
- Benefits are understood (improve comfort/productivity, reduce energy costs)
- Investment is economically justified (i.e., reasonable payback time)
- Funds are available to cover initial investment costs (savings, bank loans)
- A functioning legal framework is in place (protect lenders and borrowers)

Government’s role and responsibilities are primarily to:
- mitigate negative impact on environment,
- reduce dependence on energy import, or
- support economically vulnerable citizens through targeted, limited time subsidies.

Subsidies and incentives are needed only under very specific conditions.
- If applied prudently, subsidies function as “startup fuel”
- Otherwise, they cause market distortion and create disincentives to investment
EE financing support mechanisms study

- Analyze currently available financing and support mechanisms for energy efficiency investment, focus on multi-apartment buildings in 3 countries
- Compare use of financing support mechanisms across different market segments (public, residential, commercial/industrial) over last 10 years
- Assess intended and unintended consequences of current financing support mechanisms
- Recommend strategies for improving use of financing support mechanisms to achieve sustainable financing of energy efficiency
Donor and IFI financing support for EE in sample countries

**Industrial, SME**
- Competitive-priced, commercially available loans
- Incentives for achieving target energy savings (up to 25%)
- Technical assistance

**Public**
- Competitive-priced, commercially available loans
- Concessional loans
- Investment grants cover part or full cost (national and foreign)
- Technical assistance

**Residential - Individual**
- Competitive-priced, commercially available loans
- Incentives for installing EE technology (15-25% cash back)
- Technical assistance (technology selection, monitoring, verification)

**Residential – Multi-Apartment Buildings**
- Competitive-priced, commercially available loans
- Investment grants cover part or full cost (municipal, national)
- Incentives for installing EE technology (15-35% cash back)
### Estimated market size for EE investments in buildings

<table>
<thead>
<tr>
<th></th>
<th>North Macedonia</th>
<th>Serbia</th>
<th>Ukraine</th>
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<tbody>
<tr>
<td>No. of public buildings</td>
<td>2,441</td>
<td>12,470</td>
<td>120,000</td>
</tr>
<tr>
<td>Investment needed to achieve NEEAP targets</td>
<td>€95M</td>
<td>€269M</td>
<td>€1.3B</td>
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<tr>
<td>No. of individual houses</td>
<td>471,235</td>
<td>2,186,246</td>
<td>6,500,000</td>
</tr>
<tr>
<td>Investment needed to achieve NEEAP targets</td>
<td>€322.8M</td>
<td>€811.2M</td>
<td>€3.5B</td>
</tr>
<tr>
<td>No. of multi-apartment buildings</td>
<td>12,000</td>
<td>60,074</td>
<td>240,000</td>
</tr>
<tr>
<td>Investment needed to achieve NEEAP targets</td>
<td>€17.1M</td>
<td>€1.7B</td>
<td>€3.0B</td>
</tr>
<tr>
<td>Total investment needed across building types</td>
<td>€434.9M</td>
<td>€2.78B</td>
<td>€7.8B</td>
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<tr>
<td>Investments covered by currently available donor/IFI financing</td>
<td>€145.5M (33%)</td>
<td>€458.5M (16%)</td>
<td>€809.4M (10%)</td>
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Source: ENSI, 2012; RTI consultant team calculations
## Multi-apartment buildings: EE financing options

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<td>Legal status of HOAs</td>
<td>Weak, which makes borrowing extremely difficult to non-existent</td>
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<td>Established, and several banks offer commercial or warm loans</td>
</tr>
<tr>
<td>Commercial Loan Interest Rate</td>
<td>5-6%</td>
<td>5-6%</td>
<td>20+%</td>
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<tr>
<td>Available Financing Mechanisms</td>
<td>GEFF (25-35% cash incentive available but unused)</td>
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<td>Warm loans (10-20% interest, 20-40% incentive)</td>
</tr>
<tr>
<td></td>
<td>IQ Energy/UREEFF (40% incentive)</td>
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Multi-apartment buildings: unintended consequences in Ukraine

- Warm loans have raised awareness of EE: 33,000 registered HOAs, ~1/2 created to access loans
- Incentives cause HOA demand for EE loans to “freeze” when grant funds are not available
- Early repayment of loans is customary, indicating use by wealthier clients or fraudulent use of funds

“After getting incentive, they [HOAs] often repay immediately…
Cash savings are near 100%, they essentially wait to apply for loan in order to get the grant.”

Ukraine bank representative

“HOAs have never applied for green loans outside of warm credits”
Ukraine bank representative
Multi-apartment buildings: unintended consequences in North Macedonia & Serbia

- Lending to HOAs is non-existent
- Banks perceive lending to HOAs as extremely high risk due to multiple decision-makers and lack of collateral
- There is no market!

“GEFF offers HOAs [incentives], but we decided not to offer this sector."

“There is a risk with the HOA as they are not functioning as they must. People don’t even pay their utilities for common areas!”

North Macedonia Bank representative
Preliminary findings

• For industries/SMEs and individual households in some countries, EE investment market is functioning well, but presence of grant co-financing HINDERS disbursement of commercial loans.

• For public buildings, grant co-financing has not phased out, so the energy efficiency investment market has not commercialized. Notably, some municipalities are borrowing commercially for other EE investments, such as street lighting.

• For multi-apartment buildings, grant co-financing creates expectations that EE is not attractive without grant component. In some countries, financing is not offered to home owner associations, even with grants.
Preliminary recommendations: strengthen focus on multi-apartment buildings

- Create or strengthen legal framework for HOAs
- Develop de-risking mechanisms (e.g. guarantee funds) for commercial banks to get comfortable lending to HOAs
- Blend financing with technical assistance to ensure capacity building and project quality
- Use general subsidies only when market failures exist or to kick-start new market, and phase-out must be planned
- Target subsidies to vulnerable consumers and building structural enhancement

- EE investments in HOAs in Slovakia went from 86% grant-funded in early 2000s to 5% grant-funded in 2017
- Slovak State Fund of Housing Development supported housing renovation, offered soft loans and grants, intermediary between banks and HOAs
- IFC’s CEEF offered partial loan guarantee and TA
- Grants remain for vulnerable households and structural safety/resilience upgrades
Next steps

• Expand study geographic coverage
• Explore legal and financing aspects for increasing EE in multi-apartment buildings
• New USAID program under development
  – Address under-served needs that have significant potential to transform energy consumption in region
  – Utilize market approach: risk reduction and technical assistance, without subsidies
  – Cooperate with IFIs on process to develop more sustainable financing mechanisms
Thank you

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