Green Investment Facility

Danish-Vietnamese support scheme for high-potential Energy Efficiency technologies among Vietnamese SMEs

5th Asia Regional Dialogue Mitigation Action Implementation Network (MAIN-Asia)

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Special Advisor
Danish bilateral Energy and Climate cooperation (GtG programmes)

Utilizing the Danish Energy Model:
- Renewable Energy (wind, biomass, etc.)
- Energy Efficiency
- System integration and Optimization
- Energy System Optimization (CHP/DH)

Support of international climate finance:
- Int. initiative: GCF, GCPF, FFSR+, CFM, etc.
- Nat. initiative: NAMA Facility, NDC Partnership
- Innovation: Global Innovation Lab
- Green agenda: WB, EIB, NIB, ERBD, etc.
Foundation for the Danish-Vietnamese cooperation

- Long-term relationship and trust between Vietnam and Denmark
- Exchange of ideas and knowledge in many sectors
- Fruitful cooperation both in the public and private sector
- Specific cooperation within energy and low carbon development with key stakeholders in Vietnam like MONRE. MOIT. MOC. etc.
Why focus on energy efficiency in Vietnam?

Carbon Intensity in Asia 2011
(tonnes per USD 1.000 – 2005)

Source: IEA
The Danish Energy Model
- de-coupling economic growth, energy consumption and emissions

Index: 1990 = 100

3 reasons:
• CHP/DH.
• Renew. Energy
• Energy Savings

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Green Investment Facility (GIF)

Main Features:

• Combining technical and financial assistance for Energy Efficiency (EE) technologies and projects among SMEs in Vietnam

• Sector specific focus based upon energy intensity

• Technology specific support scheme based upon proven international track record

• Promotion of local private funding of EE projects

• Inherent capacity building element for both SMEs and local banks and support of the Theory of Change

• GIF is based upon bilateral cooperation between the government of Vietnam and Denmark to support Vietnams EE targets and NDC
GIF EE technology maturing cycle

EE technology A
- Knowledge building
- Economic sustainable
  Exit support
- TA assistance
- Bank guaranty
- Performance premium

EE technology B
- Knowledge building
- Economic sustainable
  Exit support
- TA assistance
- Bank guaranty
- Performance premium
# Theory of Change in GIF

<table>
<thead>
<tr>
<th>Impact</th>
<th>Reduced carbon footprint and increased competitiveness of the Vietnamese industry through EE market transformation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outcome</td>
<td>Suitable technical solutions available</td>
</tr>
<tr>
<td>Outputs</td>
<td>Suppliers capacitated to deliver solutions</td>
</tr>
<tr>
<td>Activities</td>
<td>Staff trained</td>
</tr>
</tbody>
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Example of EE projects in Ceramics

Current situation:
• Coal-fired ceramic kilns
• Poor insulation = High energy consumption per unit
• Poor product quality and productivity
• Negative local environmental impacts (air pollution)

New gas-fired kilns:
• Significant low energy consumption and GHG emissions
• Improved product quality and productivity
Financial elements in GIF

Bank Guaranty:

• Guaranty covers 50% of the loan related to specific EE investments
• Portability – Utilizing local banks
• Loan size – 20,000 to 200,000 USD

Performance Premium – Energy Sawing Award (ESA):

• Post-project energy reduction:
  • +20% = 10% loan reduction
  • +30% = 16% loan reduction
  • +40% = 23% loan reduction
  • +50% = 30% loan reduction
Current status for GIF projects

GIF projects

<table>
<thead>
<tr>
<th>USDm</th>
<th>Project approved</th>
<th>Pipeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Investments</td>
<td>3.0</td>
<td>11.0</td>
</tr>
<tr>
<td>Eligible loan</td>
<td>1.0</td>
<td>3.6</td>
</tr>
<tr>
<td>Bank guaranty</td>
<td>1.9</td>
<td>7.4</td>
</tr>
<tr>
<td>Energy Saving Award</td>
<td>0.1</td>
<td>2.0</td>
</tr>
</tbody>
</table>

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Carbon reduction potential of current GIF supported technologies

<table>
<thead>
<tr>
<th>Carbon reduction potential by intervention sector</th>
<th>Share of baseline</th>
<th>Tonnes/year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fossil fuel boilers</td>
<td>69%</td>
<td>18.000.000</td>
</tr>
<tr>
<td>Cooling systems</td>
<td>20%</td>
<td>3.300.000</td>
</tr>
<tr>
<td>Brick production</td>
<td>25%</td>
<td>4.500.000</td>
</tr>
<tr>
<td>Ceramics</td>
<td>34%</td>
<td>50.000</td>
</tr>
<tr>
<td>Total of the four solutions</td>
<td>-</td>
<td>25.850.000</td>
</tr>
</tbody>
</table>
Key features and next steps for GIF

• Add external TA verification to the funding process (technical due diligence, etc.)
• Mobilize local Lending Banks
• Utilizing existing bank relationships
• Reducing financial risk of bank guaranty through local credit evaluation and risk sharing
• Increase knowledge of economic and financial benefits of specific EE investment among local Lending Banks
• Focus on successful implementation and operation through performance premium both for SME and Lending Bank

Next step: Creation of a permanent Trust Fund and involve new donors
Mobilizing new international support

Fruitful discussions with GCF

- First step: Find an Accredited Entity as a partner - HSBC
- Next step: Formulate an application, concept note and other relevant documentation
- Good ongoing dialog with GCF team (telco’s, etc.)
- Shortlisted for the Private Sector Facility call MSME RFP in October
- Issues with GIF business model including the grant element (Energy Saving Award)
- Transferred to the Public Sector Facility Mitigation & Adaptation (M&A)

Next step:
- New approval and hopeful GCF Board decision next summer
Conclusion - Key messages

✓ **Target:** Maturing and mainstreaming energy high-potential efficient solutions

✓ Raising awareness about the operational and economic benefits EE investments among Vietnamese SMEs

✓ Mobilize local banks in funding of EE investments through TA support and risk sharing

✓ **Goal:** Making EE investments bankable and mobilizing private funding without support

More information: [http://en.lcee.vn/]
For more information:

**LCoE Calculator**

Scan QR-code for website and download

**Link:** https://ens.dk/en/our-responsibilities/global-cooperation
Back-up Slides
The market transformation process of GIF

```
Select solution
- Widely applied
- Energy and GHG intensive process
- High potential for improved EE and reduced GHG

Develop guideline
- Description of EE design
- Minimum requirements for obtaining TA and financial support
- How to assess the Energy Savings Award

Promote solution
- Outreach to and training of equipment suppliers and service providers
- Demo projects
- Dissemination at fairs, internet etc.

Monitor impact
- Monitor transformational effect: development of market share of the improved solution

Revise guideline
- Update the recommendations
- Strengthen the minimum EE requirements
- Reduce financial support for self-sustainable and fully bankable EE solutions
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## Institutional setup of GIF

<table>
<thead>
<tr>
<th>Overall Fund Management</th>
<th>Pilot structure</th>
<th>Tentative permanent structure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Danish Embassy; MOIT</td>
<td>Board or other management body assigned by trustees; MOIT</td>
</tr>
<tr>
<td>Fund Holding Bank</td>
<td>ANZ Banking Group</td>
<td>Any international AA rated bank</td>
</tr>
<tr>
<td>Application management</td>
<td>Designated Administration and Management Unit (AMU)</td>
<td>Scaled-up designated Administration and Management Unit (AMU)</td>
</tr>
<tr>
<td>Project validation</td>
<td>Technical Service Providers (TSP) - 2 service companies</td>
<td>TSP (5-10 companies with specific technical and geographical focus)</td>
</tr>
<tr>
<td>Technical framework development</td>
<td>Project Management Unit (PMU) of the LCEE project; MOIT; DEA</td>
<td>Designated Technical Unit (TU)</td>
</tr>
<tr>
<td>Promotional activities</td>
<td>AMU; PMU</td>
<td>TU /AMU</td>
</tr>
</tbody>
</table>
GIF implementation procedures

SME
• EE project application submission

AMU
• Check eligibility of EE project

TSP
• Technical pre-check of application

Fund Holding Bank
• Issue bank guarantee

Lending bank
• Loan agreement

SME
• Implementation of EE project

TSP
• Technical post-check of EE project

AMU
• Calculate possible Energy Saving Award

Fund Holding Bank
• Issues Energy Saving Award by reducing EE loan