GEF-KAM Industrial Energy Efficiency Project

- Removal of Barriers to Energy Conservation and Energy Efficiency in Small and Medium Scale Enterprises (SME)
  - A Project of the Government of Kenya with Support from UNDP-GEF
  - Executed by UNOPS at the Kenya Association of Manufacturers (KAM)
Background

- **Kenya’s development scenario**
  - GDP growth rate declining since 1995
  - Real industrial output decrease by 1.5% in recent years
  - Industrial energy waste of 10% to 30% is common

- **Impacts of inefficient energy utilization**
  - High production costs and non-competitive products
  - Slow economic and industrial development (closures)
  - Increased unemployment and poverty
  - Negative environmental impacts
Background – Energy saving potential

Estimated annual savings for different types of industry

- Food
- Textile
- Paper
- Tea
- Hotel

Kshs million

- Electricity
- Fuel Oil
- Wood

Industrial Energy Efficiency Project
Background – Investment in Energy Efficiency

<table>
<thead>
<tr>
<th>Sector</th>
<th>Annual Savings</th>
<th>Investment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food &amp; Bev.</td>
<td>USD 10m</td>
<td>USD 30m</td>
</tr>
<tr>
<td>All Sectors</td>
<td>USD 80m</td>
<td>USD 300m</td>
</tr>
</tbody>
</table>

* Kenya aims to become a newly industrialized nation by the year 2020. There is scope for investments of approx. USD 15m/yr in EE improvements.
The Project Goal

- To remove barriers to energy efficiency and conservation (information, technical, financial, institutional)
- Enhance energy efficiency in SMEs, and enable investments in energy efficiency
- Reduce CO$_2$ emissions
- Industry to produce high quality products at lower cost
- Increase the institutional capability to implement energy efficiency projects
Project Activities

- Awareness raising among business owners and operators (Workshops, Networking)
- Overcoming financial barriers
  - Financial Engineering Courses (RFP issued)
  - Guide for Investors (under preparation)
- Financing and implementing demonstration projects to test and prove the new approaches (e.g. CDM)
  - Canada CDM Small Projects Facility
  - Baltic CHAIN (Clearing House and Information Network)
Guide for Investors in Industrial Energy Efficiency Projects

Part I – Project Development Module

1. Energy Efficiency Technologies and Market Feasibility
   What is an energy efficiency investment?

2. Project Development Process
   What are the steps to follow to develop an energy efficiency investment project?

3. Project Financing Modalities
   How to develop financing for an energy efficiency investment project?

4. Project Implementation and Monitoring
   How to ensure that the investment meets financial and energy performance expectations?

Part II – Support Module

5. Policy, Legal and Regulatory Considerations
   What is the supporting regulatory framework?

6. Sources of Information and Assistance
   What information is available?

7. Case Studies
   Are there real projects to build confidence?
Project Activities

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Canadian CDM Small Projects Facility

Objectives

- Promote small GHG reduction projects that qualify under the CDM simplified approval process.
- Increase CDM opportunities in countries and regions with existing investment barriers.
- Support communities, NGOs, SMEs, and other potential project hosts in preparing project documents for small CDM projects.
- Link Canadian CDM investors with viable projects.
Canadian CDM Small Projects Facility

Services

- Use CDM to assist host organization meet their objectives,
- Apply the simplified baseline and monitoring and verification procedures that will apply under the special simplified process for small CDM projects,
- Develop the most appropriate business models to implement and finance projects,
- Carry out basic financial and CER analysis for the project,
- Identify the role for a carbon investor and prepare a CER purchase agreement.
Project Activities

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**CH Brokerage Model**

- **FCCC CO₂ certification**
- **Investor**
  - Investment ($)
  - CO₂ certificate or ROI
- **CH Brokerage Service**
  - Investment ($)
  - Return on invest.
- **Project A**
- **Project B**
- **Project C**
  - Return on invest.

**CH Project Identification Model**

- **Investor**
  - Service fee
  - Project portfolio
- **CH Project Identification Service**
  - Investment ($)
  - CO₂ certificate
- **Project A**
  - Investment ($)
  - CO₂ certificate
- **Project B**
  - Investment ($)
  - CO₂ certificate
- **Project C**
  - Investment ($)
  - CO₂ certificate

**CH Buyer Club Model**

- **Enterprise 1**
  - Enterprise 2
  - Enterprise 3
  - Enterprise 4
- **CH develops a dedicated project portfolio for its client enterprises**
- **CH PIS**
  - Investment ($)
  - CO₂ certificate
- **CH BS**
  - Investment ($)
  - CO₂ certificate
- **Projects**
  - Investment ($)
  - CO₂ certificate
Kenya – Institutional Framework for CDM

- National Climate Change Focal Point (NCCFP)
  - Define national CDM policy
  - Appoint members of an expert panel and a NCH
  - Approve CDM projects

- National Clearing House (NCH)
  - Set criteria for CDM projects
  - Process project proposals
  - Promote CDM projects
  - Monitor and evaluate projects
  - Liaise with stakeholders and coordinate CDM activities
  - Advise Government through the NCCFP
  - Develop national database for CDM projects
Institutional Arrangement GEF-KAM Project

- UNDP - GEF
- UNOPS
- Ministry of Trade and Industry
- Kenya Association of Manufacturers
- Project Management Unit
- Industries, Financial Institutions and Stakeholders
Results to date

- Expressions of interest from industry
  - Workshops, training courses
  - Industrial Energy Efficiency Network (IEEN)
- Guide for Investors
  - Expert Panel: technical, economic, financial, policy, legal, regulatory, academic specialists
- Institutional framework for CDM in Kenya
  - Business planning
  - Clearing house
- Public-Private-Partnership
Conclusions

- The GEF project has succeeded in mobilizing active industry and government participation
- Financing modalities are being developed
- Sources of financing are being identified
- Framework is in place to attain investment targets
  - Industrial Energy Efficiency Network
  - Financial Engineering Courses
  - Guide for Investors
  - CERs
- Promote sustainable economic development
- Alleviate poverty through industrial development