Promotion of energy efficiency in Industries

Experiences from Kenya

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A Case for Energy Efficiency

- Ever rising energy costs
- Cost reduction and increased profitability
- Acute shortage of commercial energy.
- Dependence on imported petroleum products for Industry and Transport.
- Energy Insecurity
A Case for Energy Efficiency

- Low levels of electrification due to cost and insufficient supply – 1200MW Installed Capacity
- Energy wastage of up to 30% of primary energy input in manufacturing
- Increased thermal electricity generation with increased GHG emissions

Energy Efficiency in Kenya
Promotion of Energy Efficiency

Successful Energy Efficiency programme

- Awareness/Sensitization
- Capacity Building
- Implementation and Financing
- Policy and Legal framework

Energy Efficiency in Kenya
1st Pillar - Energy Efficiency Promotion

- Constant awareness raising among all stakeholders
- Market development for energy efficiency services
- Build confidence among industry
- Industrial Energy Efficiency Network (IEEN) to help share energy efficiency information and introduce a spirit of healthy competition.

Energy Efficiency in Kenya
Annual Energy Management Awards

Energy Efficiency in Kenya
Energy Efficiency in Kenya
2nd Pillar - Capacity Building

Continuous training is necessary to develop adequate capacity at all levels.
Capacity Building Activities

- Short courses for engineers and consultants in numerous locations.
- Develop curriculum for undergraduate and postgraduate courses in Nairobi University and Kenya Polytechnic.
- Strengthen the industrial–learning Institutions links.
Capacity Building efforts

- Over personnel trained in specialized courses & Energy audit training and financial engineering.
- Senior consultants attained Certified Energy Manager (CEM) certification:
- Over 300 enterprises involved

<table>
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<th>Year</th>
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3rd Pillar: Implementation at Facility Level

- To translate knowledge into energy cost savings at enterprise and national level,
- Need for Qualified consultants and a well functioning private sector
- Strong Energy Service Companies (ESCOs)

Energy Efficiency in Kenya
4th Pillar: Institutions and Policy

- Activities to incorporate energy efficiency considerations into the energy policy
- Development of legal framework for promoting energy efficiency
- EE fully recognized in new government energy policy
- Energy Act of 2006 has specific chapter on Energy Efficiency
- Utilities and energy regulator now fully embrace energy efficiency
Institutional support

- Centre for Energy Efficiency and Conservation (CEEC) at Kenya Association on Manufacturers
- Integration of energy efficiency with the Government’s Private Sector Development strategy
- Getting Government funds to support energy efficiency
Partnerships

- Dynamic and vibrant partnerships
  - Ministry of Trade and Industry
  - Ministry of Energy
  - Kenya Association of manufacturers
  - United Nations development Programme
  - Global Environment Facility
  - United Nations Office for Project Services
  - UNIDO
  - Industry, Utilities, University,
Engagement of all stakeholders

Energy Efficiency in Kenya

public-private partnership
Results of Energy efficiency Promotion in Kenya - 2001-2006

- **Energy savings**
  - Toe 155,400
  - GWh 1,808 - Equivalent to **140MW**
    - power plant operating for 1 Yr
  - Value in USD – 36million

- **Co2 Emission Reduction**
  - 580,000 tons @ USD 5.50 per ton

- The savings continue to accrue

- Good for Energy Security

Energy Efficiency in Kenya
Challenges

1. Continuous promotion and learning
2. Financing Mechanisms not established
   - Financial sector not fully involved
   - ESCO concept still slow and ESCO still weak
3. Energy Standards and Labels not widely applied
4. Absence of incentive mechanisms
Thank You

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