

Scaling up Energy Efficiency: Bridging the Action Gap

An international workshop co-organised by the International Energy Agency, the International Finance Corporation and the United Nations Environment Programme

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Standards and Labels for Energy Efficiency

Presenter: Ms Kawther Lihidheb

Ms Lihidheb is a chemical engineer by training. She is Assistant Director of the Energy Efficiency department in Tunisia's National Agency for Energy Conservation. Her career spans over a period of ten years and has focused on the promotion of efficient uses of energy in the residential and service sectors.

Ms Lihidheb has contributed to a range of energy standards and labels programmes, including a certification programme for household refrigerators in Tunisia and a programme for the distribution of one million low-consumption lamps for households, also in Tunisia. She has also conducted market studies for energy-efficient appliances, audits and training programmes targeting the services sector.

Discussant: Mr Benoît Lebot

Since joining the United Nations Development Programme in 2004, Mr Lebot has led the technical aspects of its Global Environment Fund-sponsored energy efficiency projects. These have focused on both public policies and legal, fiscal and technical measures on the energy demand side in Africa, the Middle East and, to a lesser extent, India and Latin America.

Prior to joining the United Nations Development Programme Mr Lebot was employed in Energy Efficiency Policy Analysis division of the the International Energy Agency. Between 1990 and 1997 he worked for ADEME, the French National Energy and Environment Agency.

Description of the programme presented

The government of Tunisia has recently implemented an energy performance standards and labelling programme for household appliances and other energy-using equipment. This programme, which is the fruit of six years labour supported by the Global Environmental Facility, has so far led to the issue of energy labelling and minimum energy efficiency standards regulations for refrigerators in 2004. It has also led to the implementation of framework legislation for energy labelling and minimum energy performance standards for household appliances, which allow specific requirements for other products to be added in the future.

The presentation summarises the design and implementation of the programme, which not only serves as a role model for how such programmes can be conducted in developing countries, but also matches or exceeds the design and implementation of similar programmes in developed countries. In particular, it presents findings on the following elements:

- consumer research that was used to design the Tunisian energy label;
- the establishment and accreditation of national test facilities;
- the energy performance certification, verification and compliance process;
- the development of refrigerator energy efficiency and labelling criteria;
- public communications and outreach strategy;
- projected programme impacts.

Results are also presented from a detailed and sophisticated refrigerator techno-economic energy engineering analysis that provided much of the analytical basis for the choice of labelling and efficiency standards thresholds.

As a result of its careful design and implementation it is forecast that by 2030 the programme will have saved 3.4 Mt of CO₂ emissions at a cost to the Global Environment Facility of just 20USc/tonne. The cost of conserved electricity for Tunisian consumers is projected to be less than 1USc/kWh, which compares favourably with the current tariff of 7.4USc/kWh.

Main points of the presentation

1. When appropriately assisted, developing countries can design and implement state-of-the-art energy efficiency regulatory policies and programmes.
2. A systematic approach to energy efficiency programme development and implementation is crucial: each barrier must be considered and addressed.
3. The needs of all stakeholders have to be considered, and due attention needs to be paid to infrastructure requirements and capacity building.
4. Having access to high quality international resources is crucial: a relatively small amount of international support aimed at assisting best practice in policy and regulatory development and implementation has leveraged remarkably cost-effective energy services and impressive levels of CO₂ abatement at a much lower cost than supply side projects have been able to achieve.
5. To work effectively standards and labelling programmes need to be comprehensive and address the following areas:
 - market assessment (both nationally and internationally);
 - reliable energy end-use data;
 - consensus and prioritisation across several parts of government, including definition of institutional responsibilities;
 - appropriate product categorisation and energy efficiency metrics;
 - reliable test facilities, certification and enforcement regimes;
 - statistical market assessments and international / regional benchmarking;
 - manufacturer and supplier assessment and support efforts;
 - techno-economic energy-engineering analysis;
 - development of broad-based regulatory framework for standards and labels;
 - energy label design based on proper market research;
 - establishment of energy efficiency thresholds and associated implementing regulations for specific products, following stakeholder dialogue informed by the preceding analyses;
 - consumer and retailer awareness buildings programmes;
 - supporting stakeholder incentive programmes.
6. Support is needed even in the aftermath of a highly successful programme targeting a specific end-use.