

Standards and Benchmarking for Energy Efficient Products

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Energy Efficiency and Climate Change

- Energy efficiency is seen as one of the most cost effective ways to mitigate GHG emissions
- Energy efficiency improvements can also make countries more resilient to adaptation concerns
- Improved energy efficiency, even in developing countries, has many secondary benefits

Short history of energy efficiency standards

- The first efforts started in OECD countries in the late 1970s after the first oil crisis. The US and Canada were leaders in labelling and standards. There were efforts in Europe but they were poorly co-ordinated and less effective. Japan, however, was active as well with min. efficiency standards for refrigerators and air conditioners in 1979.
- More happened in the 1970s for passenger cars: both efficiency standards and labelling – and test procedures

Short history - 2

- In the 1980s, activity was slow and the priority for energy efficiency was low
- EU did not have labelling or standards until the early 1990s. Directive from 1992 was limited to a few products. More emphasis on labelling than efficiency standards then.
- Canada introduced MEPs in 1995 for 22 products
- US bodies also got quite active internationally on this in 1990s. These included national laboratories and then creation of CLASP in 1999
 - + ENERGY STAR started in US in 1992
- Japan Top Runner Programme started 1998

Why?

- In 1970s, it was for energy security primarily
- In 1980s for acid rain as well
- In 1990s, climate change was added as a reason
- Trade came into it in the 1990s concerning the European Union and the open market
- Trade is a growing concern now given how industries are so globalised

Why (2)

Standards shift the distribution of energy-efficient models of products sold in the market upward by eliminating inefficient models and establishing a baseline for programs that provide incentives for "beating the standard." Labels shift the distribution of energy-efficient models upward by providing information that allows consumers to make rational decisions and by stimulating manufacturers to design products that achieve higher ratings than the minimum standard.

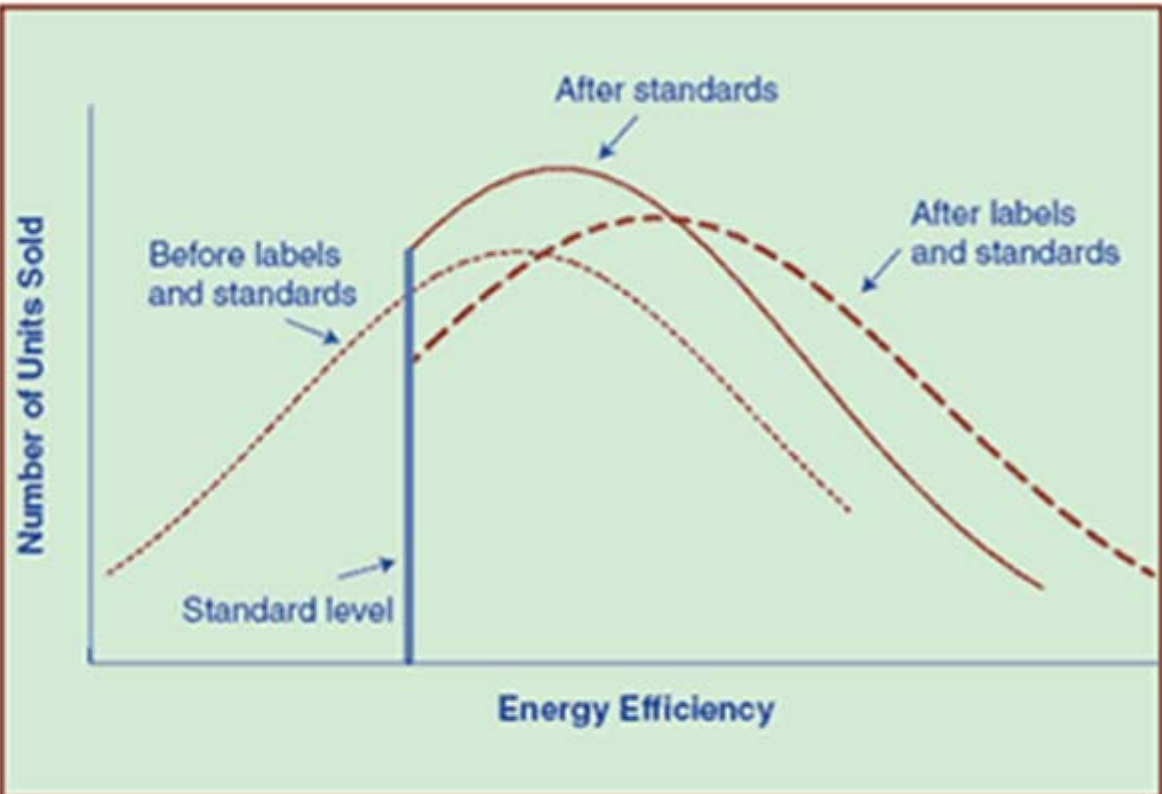


Figure 2-1 The impact of energy-efficiency labels and standards on the distribution of products in the marketplace: The Concept

What?

- Forms of government policies
 - Energy performance labelling
 - Comparison
 - Endorsement
 - Warning
 - Mandatory government programmes
 - Minimum energy performance standards
 - Mandatory fleet average
 - Energy utility obligations
 - procurement

What? (2)

- Forms of government policies
 - Fiscal measures
 - Other programmes
 - E.g. Tradable energy or greenhouse gas savings schemes
 - Voluntary agreements
 - Retailer programmes
 - etc

Where?

- Global Efforts, for example:
 - ClimateWorks setting up best practice network on standards and labelling through CLASP (the Collaborative Labelling and Appliance Standards Program) in N. America, China, India, Europe and Latin America. CLASP has provided S&L technical assistance with national implementation to over 50 countries. Since 1999, CLASP has assisted with the implementation of 24 standards and/or labels.
 - ENERGY STAR has effectively gone global as an endorsement label. Only for ITC and consumer electronics globally
 - Standby initiatives, starting at the International Energy Agency
 - IEA “global” reports on Lighting, Gadgets, Cool Appliances, etc.
 - Implementing Agreement at IEA 4E agreement for end-use electrical equipment – one annex on mapping and benchmarking
 - Global CFL Harmonisation initiative (under APEC)
 - Efficient Lighting Initiative (ELI) of World Bank

Where? (2)

- Some Regional/National Efforts:
 - Europe:
 - Eco-design
 - Appliance labelling
 - The two directives are basically integrated where applicable
 - North America
 - ENERGY STAR, many other initiatives
 - International organisations – UNDP, GEF, etc.
 - Australia
 - Equipment Energy Efficiency (E3) Committee
 - China has major programme. India's is growing. There are several others

More on harmonisation

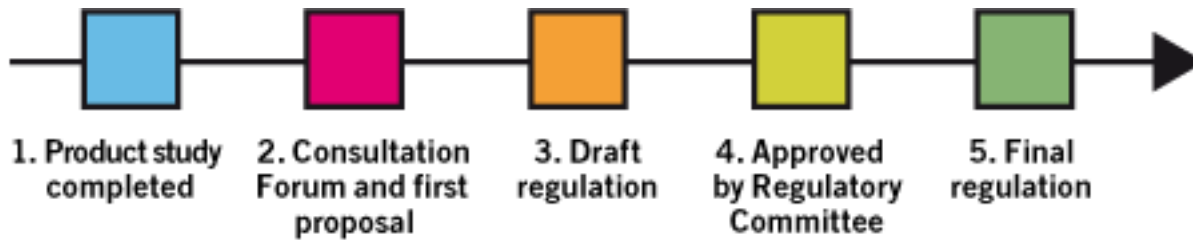
- *CLASP* has a study underway. The main deliverables are:
 - * Comparison of S&L test procedures, efficiency metrics, thresholds, certification, accreditation and compliance procedures
 - * Estimation of energy & CO₂ savings potentials from harmonization/alignment of most promising products
 - * Development of harmonization/alignment strategic work plan and associated risks/benefits
- Report due in January 2010

And . . .

- CLASP is going to launch call for partners for a benchmark study on air conditioners (cooling and heating modes) for both residential and commercial buildings.
- CLASP will probably publish before the end of the year another call for partners for benchmark study on Boilers (they are trying to figure out if it's something that can be done at international level or only at regional level)
- The plan is for CLASP to work on benchmark studies for 2 or 3 products per year

. . . Even more

- In Europe, eceee (The European Council for an Energy Efficient Economy) follows the entire Eco-design process and one can monitor on its website (www.eceee.org)



- eceee undertakes studies to develop eceee policy position during the approval process
- Other . . .

. . . Even more (2)

- eceee wants:
 - MEPS should be introduced in areas such as boilers, halogen lighting, appliance standby energy consumption and transformer performance.
 - MEPS should be dynamic and revised frequently.
 - MEPS should be monitored for compliance.
 - MEPS must be based on realistic least life-cycle cost assumption that take the learning capability and associated potential for cost reduction into account. LCC evaluations done in retrospect show that assumptions are typically too conservative and the costs of new, efficient technologies assumed to be too high.
 - The interaction between MEPS and labelling is important. Therefore, it is very important that the energy labelling of cold appliances is revised. Moreover, energy labelling must be extended to product areas such as fossil fuel boilers, and heating and ventilating systems (including air conditioning).

When?

Is it too late?

Thank you

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Useful links

- www.eceee.org
- www.clasponline.org
- www.helio-international.org
- www.iea-4e.org/
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