

# **ENERGY EFFICIENCY POLICIES AND MEASURES: LESSONS FROM IMPLEMENTATION OF SELECTED MEASURES IN OECD AND NON-OECD COUNTRIES**

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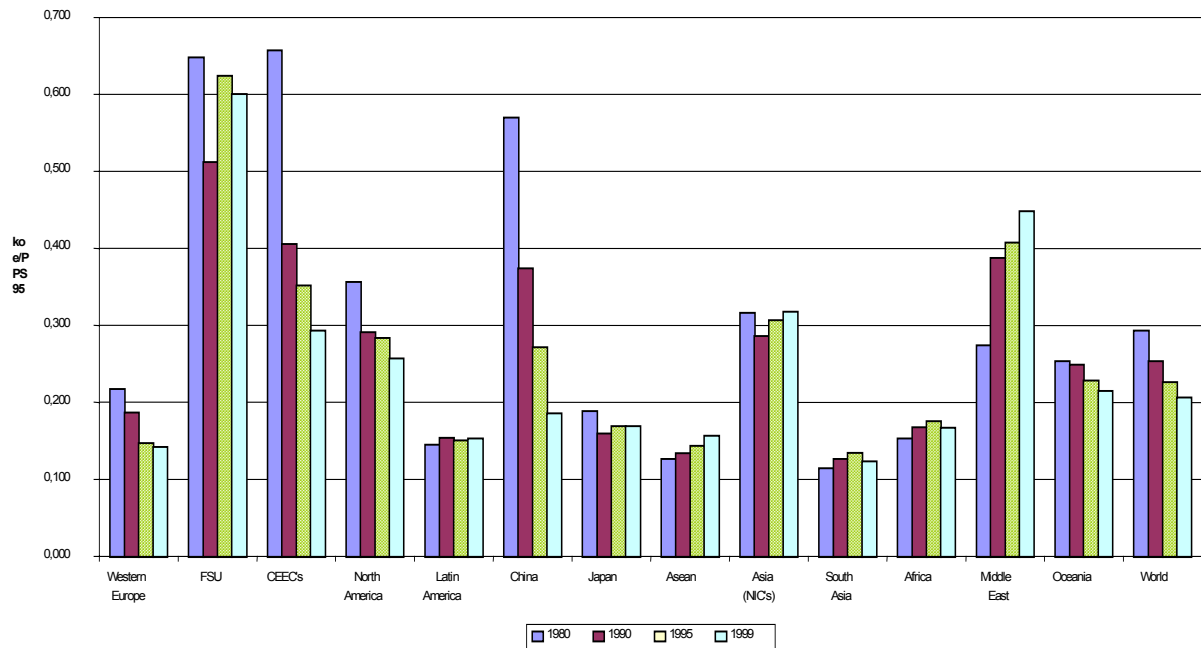
Domestic policies and measures to increase energy efficiency in various sectors have been implemented recently in many countries responding to several goals (energy security, climate change issues...). The World Energy Council set up since 1995 a "service" to its members in order to analyze trends in energy efficiency and identify most relevant policies and measures implemented. A collaborative study conducted in 2001 through this WEC framework aimed at analyzing the conditions of implementation of selected measures in a large number of different countries.

The selected measures cover all sectors and different types (regulatory, market instruments) : thermal efficiency standards for new buildings, labeling, standards and target values for electrical appliances, fiscal measures on car purchase and using, energy audits, financial incentives for investments. The study analyzes the effectiveness and the conditions of implementation of these measures in more than 50 countries, developing as well as developed ones), identifying national circumstances and factors of success.

The study stresses several conclusions concerning some convergence between policies implemented in different countries and some discrepancies due to national circumstances.

## **1) Energy efficiency trends in the world**

At the world level, there is a continuous decline of the primary energy intensity: - 1.9%/year between 1980 and 1999 and even - 2.3%/year since 1990.



**The main results observed on energy efficiency trends at world level are the following:**

- **A significant decrease in the energy intensity of industry in OECD countries, China, and Central and Eastern European countries, with a slow-down after 1990**
- **Except in North America, the energy efficiency is almost absent in the transport sector in OECD countries; however North America starts from a very high level**
- **Prices influence electricity consumption but cannot explain all the differences between countries**

## **2) Evaluation of energy efficiency measures implemented by governments**

Measures implemented in several countries have been analysed, comparing the design of the measures, the implementation conditions and the results identifying national circumstances:

- Energy efficiency standards for new dwellings and buildings
- Labeling and energy efficiency standards for household electrical appliances
- Fiscal measures on cars and motors fuels
- Energy audits (in industry and building sector)

- Economic and fiscal incentives for investments
- **OECD and non OECD countries are developing energy efficiency standards for new buildings adopting a global approach (energy consumption as a whole) rather than component standards.**
- **Labeling of electrical appliances and minimum energy efficiency standards are implemented in a growing number of countries: the globalization of mass products markets induces a convergence in unit efficiency of appliances sold.**
- **In the transport sector taxes on cars (cars purchase tax, annual tax on cars and taxes on motor fuels) differ widely from one country to the other due to national circumstances. Voluntary agreements among car manufacturers (as well as standards or target efficiency) need an international coordination to avoid market distortions.**

### **3) Conclusions :**

- Economic (or market) measures are not exclusive of mandatory measures in all countries.
- Cooperation between countries may help increase measures effectiveness and prevent economic distortions.
- Further experience sharing is necessary for the evaluation of measures impacts :  
WEC will continue this service to members