PRESS RELEASE
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ADEME STUDY ON ENERGY EFFICIENCY IN THE WORLD

NOTICEABLE PROGRESS, BUT NEW SOLUTIONS MUST BE INVENTED TODAY TO REVERSE THE RECENT DECREASE

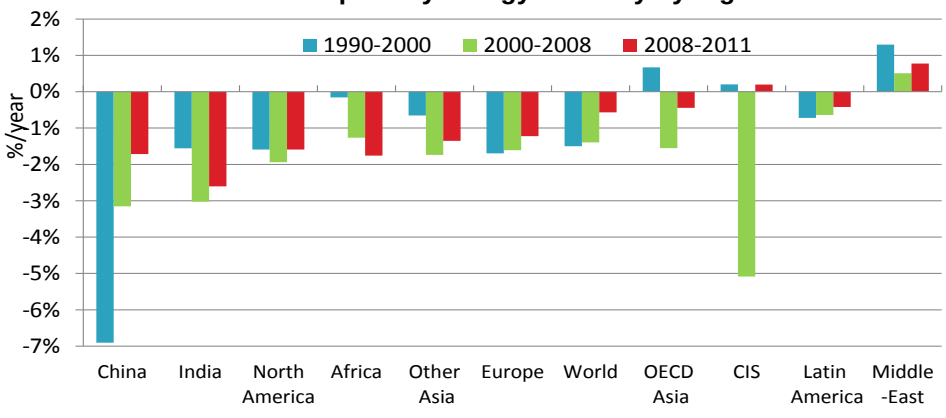
Long considered simply as an "option" in the OECD countries, energy efficiency is spreading, with notable progress in all major regions of the world. The experience gained by the OECD countries[1] benefits so-called emerging countries, as demonstrated by the study of energy efficiency in the world conducted by ADEME for the World Energy Council. A relative international consensus is emerging. It sees energy efficiency as a beneficial strategy for each stakeholder: reducing dependence on energy imports, reducing emissions of greenhouse gas emissions related to energy, preserving the competitiveness of companies and household purchasing power, etc.
This good news appears to be an illusion, however, with a general decrease in energy efficiency over the recent years. Regional disparities remain and new solutions must be found to take the reality of each country into account and thus move to the next level.

Dr Christoph Frei, Secretary General of the World Energy Council, comments on the report's findings ahead of its global release during the World Energy Congress in Korea next week: "*Over recent years there has been a general slowdown in energy efficiency improvements. The main concern is that absolute energy demand is still growing, driven by rapid non-OECD economic growth*."

Energy efficiency has become a global reality but significant disparities remain

The 2013 edition of the energy efficiency in the world report, produced by ADEME for the World Energy Council, with the assistance ENERDATA, highlights **the noticeable progress observed all over the world with, of course, some regional differences that are still significant and strongly influenced by the so-called emerging economies**. Since 1990, primary energy intensity (i.e. the ratio of primary energy consumption to the GDP of a country) at the global level decreased at an average rate of 1.3% per year and the reduction in final energy intensity (i.e. the ratio of final energy consumption to the GDP) is even higher, at 1.6% per year. This difference is explained by the rapid increase in electricity consumption whose production generates energy losses due to low production yields and thus a decrease in the efficiency of the energy conversion system.

Evolution of primary energy intensity by region



[1] OECD: Organization for Economic Co-operation and Development

Beyond the impact of the economic crisis, energy efficiency is progressing in most countries in the world as a result of policies implemented. Performance differences are primarily related to disparate economic contexts such as, for example, the strong presence of heavy industry in China, or the price of energy in the Middle East and in the Commonwealth of Independent States. The significant decrease in energy efficiency in India and especially in China since 2008 is a concern and weighs heavily on global performance.

Dr Frei comments: "*While the progress highlighted in this report is encouraging, it is clearly not enough. We will need to develop new policies and strategies to meet the challenge of securing tomorrow's energy today*."

From a sectorial point of view, **energy intensity in transportation decreased by an average of 10% in all regions of the world**, between 1990 and 2011. The decline is even more pronounced in China and India, where transportation energy consumption per capita is much lower than in the OECD. Progress in the energy consumption of cars, the development of public transport and rising fuel costs account for these differences.

In the residential sector, though energy consumption per household has decreased by 0.8% per year on average globally since 1990, national disparities persist. The differences are particularly noticeable in electricity consumption: 750 kWh per household per year in India, compared to 1,300 in China, 3,500 in Europe, 5,000 in Japan and 10,000 in North America!

For industry we note some convergence in performance between regions of the world due to globalization, and the best performance is no longer noticeable in the OECD countries.

Public policies on energy efficiency, standards and financial and tax incentives are increasing

Beyond these regional differences in energy efficiency indicators, the study carried out by ADEME is also interesting for public policies carried out in each of the 85 countries surveyed, which represent more than 95% of world energy consumption.

Energy efficiency has become a global priority. **Nearly three-quarters of the countries now rely on a specialized institution to implement a national policy for energy efficiency, by building on new regulations, financial mechanisms or even tax measures (mainly in the OECD)**. Similarly, **80% of countries have set themselves quantitative targets in this area, compared to 40% in 2006**. Data indicative of this "globalization" of energy efficiency: 70% of countries surveyed have banned incandescent lights.

Specifically, **labelling and minimum energy efficiency standards are spreading rapidly throughout the world. 100% of OECD countries, 90% of Asian countries and 50% of African countries surveyed have introduced performance labelling of equipment or even buildings, which are often mandatory and on a growing number of devices**. The minimum energy efficiency standards concerning household appliances, vehicles and new construction have been implemented in 80% of the countries surveyed. However these standards are less common for vehicles and limited to OECD countries and BRIC.

In the residential sector, regulation is gaining momentum: 70% of countries have regulations on the construction of new buildings, which are mandatory in 90% of cases. Performance labelling of buildings is also a new approach, recently implemented in the EU and spreading to other regions (Chile for example).

For household appliances, labelling is the most common measure, with a growing number of labelled devices (9 in the EU, over 10 in Canada, China and Brazil, up to 19 in the U.S.). A good way to introduce minimum energy efficiency standards, labelling is also growing, particularly in the European Union with new efficiency categories A+, A++ and A+++, or in Japan with the "top runners" program[2].

Approximately 70% of countries surveyed have implemented tax or financial measures, mainly in the form of direct subsidies for investments, increasingly replaced or combined with low interest loans in the OECD countries. **Financial measures mainly target the building sector (40%) while tax measures are often applied to cars** (tax based on CO_2 emissions, for example) **. In industry, energy audits (subsidized or mandatory) are increasing,** as are tax incentives.

However, new solutions have yet to be invented.

If "best practices" tend to spread, the specifics of each country require further appropriate measures combining support for innovation, regulation, taxation, information, guidance and monitoring.

[2]For more information on the "top runners" program, click here

The rate of energy efficiency has decreased in the last decade, especially in developed countries, which have already used the "easiest" measures and must now think of innovative measures: this is particularly the case in Europe for the renovation of existing buildings.

The involvement of private companies (professionals and energy producers) appears essential for this new quantitative and qualitative leap and to introduce more flexibility in the implementation of public policies in energy efficiency. This is the case, for example, with **the approach of "white certificates",** the principle of which, for the State, is to set quantitative targets for energy savings for some stakeholders (called the "obligated:" electricity suppliers, fuel distributors, etc.) for a given period and to encourage other stakeholders ("non-obligated") to obtain certificates. The "obligated" then have a choice between making energy saving measures themselves, buying certificates from the "non-obligated" or paying a fine to the State.

The attitudes and practices of citizens are also key in improving energy efficiency. In many non-OECD countries, energy prices are still heavily subsidized and should be gradually adjusted to reflect the actual costs and provide more incentive signals to consumers to promote the most virtuous and efficient behaviour.

Innovative financing tools should also be created to support investment by consumers. The information that is given to them should be improved, in particular by disseminating devices and equipment such as smart meters that deliver energy consumption information to users. A case study in 8 countries conducted by ADEME for the World Energy Council shows that "smart" billing of energy consumption depending on the time of consumption results in a significant reduction in the consumption of electricity and gas.

The evaluation of actions implemented also proves essential to check the real impact of energy efficiency policies. The collection and use of data as well as the development of energy efficiency indicators should thus lead to better control of the actions taken.

Finally, the strengthening of regional and transnational cooperation could only be beneficial, to **standardise regulations gradually and share knowledge and best practices.**