



25th world gas conference
"Gas: Sustaining Future Global Growth"

Energy Services - A new challenge for domestic & small commercial market

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Agenda - Items

Background

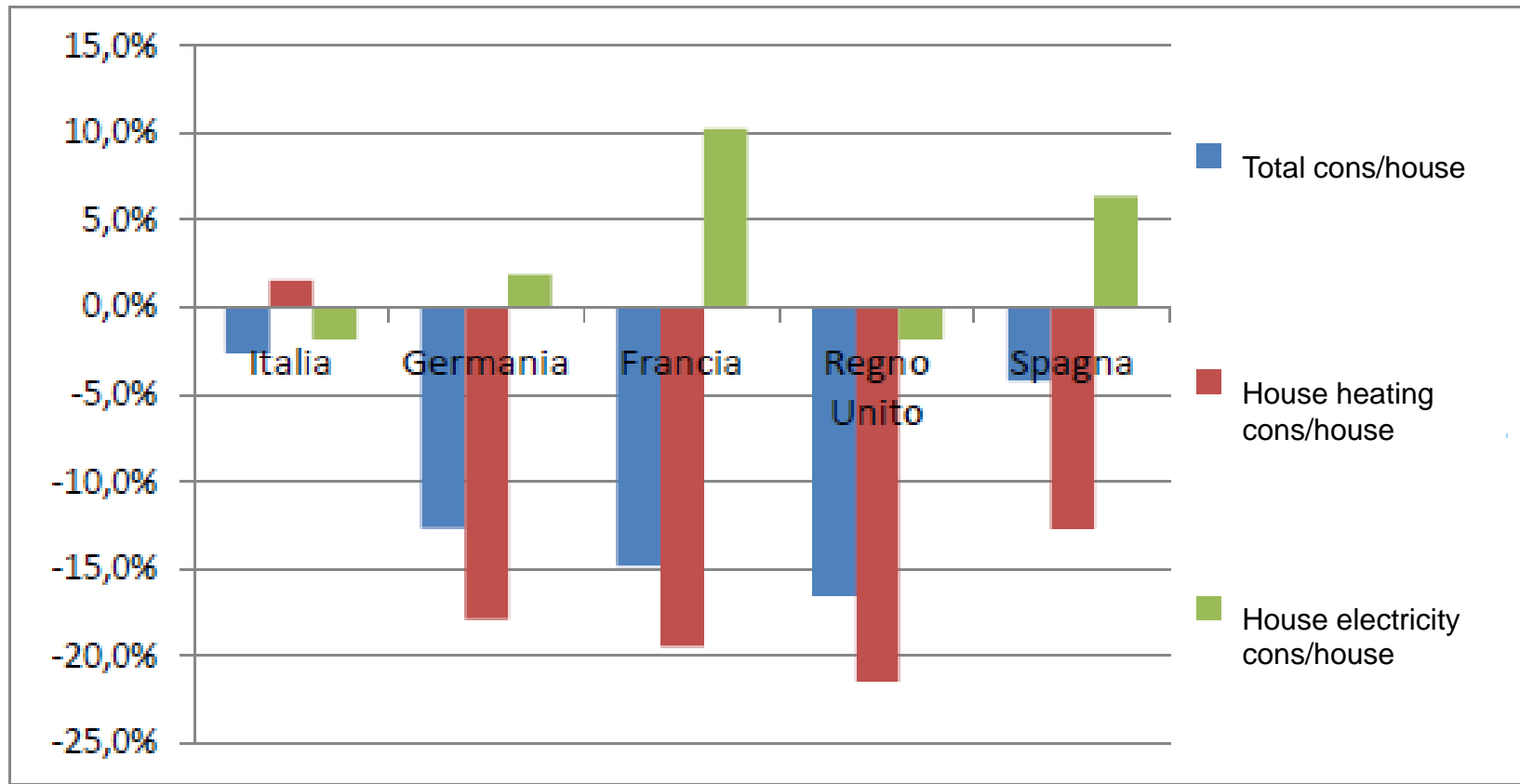
The European Approach

The National Energy Efficiency Action Plans

Summary conclusions

- The **Energy Services Directive (ESD)** was adopted on 5 April 2006 and transported for all Member States in 2008.
- The purpose of this Directive is to **enhance the cost-effective improvement of energy end-use efficiency** in the Member States, providing indicative targets and legal frameworks to remove non-technical barriers that impede the efficient end use of energy.
- In this framework, there is the aim to create conditions for development and promotion of a **market for energy services** and other energy efficiency improvement measures to final consumers.
- **Energy service is defined as the physical benefit, utility or good derived from a combination of energy with energy efficient technology and/or with action**, which may include the operations, maintenance and control necessary to deliver the service, which is delivered on the basis of a contract and in normal circumstances has proven to lead to verifiable and measurable or estimable energy efficiency improvement and/or primary energy savings.

Total energy consumption, electrical and thermal: variation for single house in period 2000-2009



Source: Italian National agency for new technologies, Energy and sustainable economic development – ENEA

The European Approach

Energy efficiency is considered by the most as an alternative source. Due to the increase of energy demand, it can be defined a way to use less amount of energy keeping the same level of life quality.

- Lots can be done using the right strategy in **energy management**. Energy services are a great instrument, which can help to preserve the technologies available, to monitor the consumption, to create a clever and critical user.
- EU has adopted a **framework for energy end-use efficiency and energy services**, which includes an indicative energy savings target for the Member States, obligations on national public authorities as regards energy savings and energy efficient procurement and measures to promote energy efficiency and energy services.
- **Improving the know-how and sharing information** on energy services will surely help to enforce this statement and contribute to create the bases on monitoring and developing energy services matter.

This analysis has been merged with the result of a specific questionnaire on country policy on energy service, energy services offered, energy services development.

The National Energy Efficiency Plans

- **European Union Member States (MS)** are required to report on **National Energy Efficiency Action Plans (NEEAPs)** every 3 years. The aim was to share their experiences and the different approaches they have taken as well as the development and implementation of energy efficiency improvement programmes and measures
- NEEAPs have proven their value not only as a policy document, but also **as a tool**. The 1st NEEAPs (2007) were also used in MS to exchange information and identification of good practices – “**transferability’ of good practices**” - because calculation methodologies can be particularly difficult to transfer between countries.
- There are clear needs to streamline the different reporting periods and obligations under the EU legislation. To harmonise the methods used to measure energy savings, clarification, flexibility and room for the use of national methods are required.
- **ESD require MS to place obligations on energy suppliers to offer and promote energy services**, energy audits and/or other energy efficiency improvement measures to their customers.

The National Energy Efficiency Plans

Voluntary agreements

- Voluntary Agreements are better implemented where large national frameworks exist and they are successful when targets are met and outperformed, and the number of companies joining is high. They should be embedded in existing legislation
- Some criteria for successful Voluntary Agreements:
 - clear targets, rights and obligations of parties in the agreement
 - a monitoring system and reporting carried out in an independent way
 - existence of a win-win situation both for government and participants

Qualification, Accreditation and Certification schemes

- 74% of MS have Qualification Schemes, mostly dedicated to energy audits.
 - 37% of MS have Accreditation Schemes
 - Around 50% of MS have Certification Schemes in force, provided mostly for building and industrial auditors.
- Clarification on terminology and common definitions would allow MS to use similar methodologies and schemes and it would enable ESCO's/professionals to operate in the same way in different contexts.

The National Energy Efficiency Plans

White Certificates

- White Certificates are Energy Efficiency Certificates proving primary energy savings amount obtained in terms of TOE.
The concept of “white certificates” refers to schemes in which energy efficiency measures are certified. This scheme is often combined with an obligation to achieve a certain target of energy savings for some “obliged parties”.
- Evaluations have shown the success of this measure. The implementation of a White Certificate mechanism is favoured by the long-term nature of the Energy Efficiency (EE) programmes.
- The five systems in the EU based on the mechanism of white certificates, implemented in Belgium (Flanders), Denmark, France, Italy and the UK. They differ for:
 - the type or number of obliged subjects; presence and type of threshold;
 - apportionment rules;
 - possibility for non-obliged subjects to join the mechanism;
 - time of production of savings;
 - value and tradability of certificates;
 - measure units of savings and measurement and verification procedures;
- In Italy from the beginning of the mechanism until December 2010, more than 9.6 Million TOE have been saved, with respect to available technologies (Source: Italian Regulatory Authority for Electricity and Gas)

The National Energy Efficiency Plans

Energy Service market

- at EU level is still in an early stage of market growth: incentives along with activation of market mechanisms and establishment of a regulatory framework (possibly associated with standards) are still needed in order for this market to be further developed..
- Efficient, high-quality energy audits schemes, which are designed to identify potential energy efficiency improvement measures, are needed

Audits

- A wide range of different auditing schemes is in place in the MS.
- The primary source of funding is national and regional budget. The costs of audits differ because of scope and quality. Two thirds of the auditing schemes have an active quality control scheme.
- Training of energy auditors and specific rules for their curricula will improve energy audit effectiveness

The National Energy Efficiency Plans

Metering and billing

- In only 52% of the MS there is an obligation in place to provide individual meters that give information on actual consumption and actual time of use in the case of a new connection.
- The ESD requires that billing shall be “performed frequently enough to enable customers to regulate their own energy consumption.” Across all energy streams, monthly billing is the most common. 40% of MS currently operate monthly or bi-monthly billing.

Financial Instrument and Subsidies

- Sufficient funding and appropriate financial mechanisms (market mechanism but not mandatory) are crucial for the implementation of energy efficiency measures
- The main beneficiaries of EE related funds are households (76% of countries), SMEs (56%), and large companies (52%). In all countries, building renovations are stimulated. Fuel switch is the second most supported investment (in 64% of the countries).
- The financing of EE measures originates mainly from national sources and few countries rely heavily on international financing. Most countries still have no experience with Public Private Partnership related to energy efficiency investments.
- The ESCO market development is very different from one country to another: in well-developed market based systems and countries where public subsidies for ESCOs are available

Summary Conclusions

- In the frame of energy efficiency enhancement, a new approach to energy service has been identified: they should be considered a key use to reach energy efficiency in final uses.
- On the other hand, energy services can be seen as a vector:
 - to support natural gas market
 - to improve the existing appliances
 - to develop new technologies based on energy efficiency performancesaccording to a customer oriented approach.
- Due to the worldwide economic situation, energy services can be seen as a way to increase the energy performances of engines, to reduce consumption and consequently to save money. Moreover, they will create employment (ESCo, Facility management society, Consulting society, ecc.) and identify a new way to follow the energy business.
- Energy services are more than a way to achieve energy efficiency targets: they should be considered part of a system built up to manage the energy day by day uses and to reduce at the same time costumers overall costs.

Thank you for your attention!

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5.2 Study Group WOC 5

Main Source:

<http://www.esd-ca.eu/>

http://ec.europa.eu/energy/efficiency/index_en.htm