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Energy Management Services the European landscape

<u>Introduction</u>

For the commercial sector applies that with the aid of energy management systems the energy bill could be reduced by up to 50%. For the industrial sector energy as part of cost of goods sold can range from a few percent to 10 - 20%. This means that substantial savings can be made and competitiveness boosted. Liberalisation of energy markets, energy trading and energy management are of among others factors that could influence the final energy bill. In this article we would like to highlight the market of energy management services.





The market

The European market for non-residential energy management services has been slow to develop as a result of economic difficulties and energy price uncertainty. However, the total European market has grown from 2 billion Euro in 1994 to 3 billion Euro in 2001.

The energy management services (EMS) market includes energy audit services (18%), on site generation services (35%), operation and maintenance contract services (36%), and project finance services (11%).

Energy audit services

The energy audit service market includes services used during an audit usually at the conception stage prior to implementation of an energy management system. The resulting "product" is an assessment of the end users' use of energy, where it is wasted and where this can be rationalised. This is usually in the format of a report that can be used to decipher further energy management investments and / or services required. The average price for energy audits in medium to large sized company lies between 13,000 and 15,000 Euro, although small scale audits can cost as little as 250 Euro. Traditionally energy audits have been the domain of small specialist EMS consultants. However, increased need for a strategic single source supplier of both equipment and services has enabled large engineering and facility management companies (particularly in Germany and the United Kingdom) to successfully penetrate this market. In deregulated markets energy suppliers also provide these services as a useful marketing tool. In less developed regional markets, such as Spain and Greece, small consultancies still dominate.

On site generation services

This market covers the on site generation of energy and is increasingly concerned with CHP (combined heat and power) plants. CHP is one of the most effective means of reducing energy costs as it integrates the production of heat and electricity, meaning the combined cost is lower than buying separately. The



segment is concerned with the running and management of the plant. CHP is widely used in both industrial and commercial buildings and is increasingly being used for district heating applications. In France and Germany up to 10% of the country's total energy requirement is generated by CHP. The high initial capital costs incurred with CHP equipment have reduced the potential demand for this form of energy generation, but the increased availability and the falling costs of CHP plants will help boost levels of demand. These services are mainly offered by large engineering companies as complementary services to their core business of designing and installing power equipment.

Operation and maintenance contract services

This market pertains to those companies that provide a service to operate and maintain an energy management system. This contract can be applied as a complete package by the company supplying the system, but also by a specialised operation and maintenance contractor that will undertake the contract on the existing system. In the less developed markets small engineering companies dominate in this segment. However, in the more developed regions, the operations and maintenance role is increasingly being undertaken by engineering, building management or facility management companies as a total building services package.

Project finance services

This segment incorporates companies able to assist with finance, either from third parties, as a co-operative agreement, by managing the client's finances or by assisting with obtaining finance from national or European programmes. The provision of project finance and third party finance deals is more prolific in the developed markets in Europe. Large facility management companies, building management companies and engineering companies have the capital available to loan money to clients for the installation of large energy related equipment, such as CHP plants. Such companies can also act as mediators between clients and financial institutions. This service can also be provided by smaller consultancies.



Also of note is the ability of some clients to pay for such equipment through the use of their own capital, thus negating the need for financial services, which limited the development of this area in many ways.

Drivers & restraints

For the next years good overall growth is expected as a result of a combination of factors including strict energy guidelines, European Union directives, funding programmes to reduce carbon dioxide emissions and the need to reduce and take responsibility for energy consumption. Additional drivers include energy saving and the increased desire by end users to outsource their contracts and concentrate on core competencies and obviously the deregulation of energy markets.

On the other hand, the deregulation of energy markets in European countries acts as an effective restraint on the EMS market. Uncertainty exists about the competitive environment, with particular reference to energy prices, after deregulation has taken place. This makes many companies wait until after the deregulation process before committing themselves to a particular energy strategy that may include EMS.

Furthermore, the low prices for energy in many European countries are also restraining the EMS market. A major benefit of EMS, namely the reduction of energy costs, is negated to varying degrees if the price of energy is relatively low. The initial costs incurred by implementing an EMS program can take a prohibitively long time to recoup if energy prices are low, and this effectively restrains the growth of the EMS market. The cost in general may be prohibitive as the initial capital costs for equipment are significant, which makes it more suitable for larger companies than SMEs. Finally, also low environmental awareness and different company priorities might restraint the market.

Players

The European market for EMS is highly fragmented. There are approximately 1,000 companies active in the market, ranging from small consultants to large



multinational control and engineering groups. The majority of companies do not provide energy management services as their core business but as a complementary service to improve their scope of capabilities. Companies in the market come from a number of different backgrounds including energy, construction, facility management and engineering. Examples with an international background include Honeywell, Johnson Controls, Dalkia, Siemens, ABB, Elyo, Amec, Electrabel, EdF, RWE, Vattenfall etc.

According to 1997 data Dalkia is one of the market leaders with a share of 16.8%, followed by Johnson Controls with 12.3%, Elyo (part of Suez) 6.0% and Utilities 5.1%.