

# Green Paper on Energy Efficiency

## Doing More with Less

March 2006

### **1 Introduction - Process**

Our submission to the Green Paper on Energy Efficiency is based upon an examination of each of the key sectors described and the questions posed, principally through a programme of 7 internet-based seminars. These were organised in cooperation with the World Wildlife Fund (WWF)'s European Policy Office, and widely advertised and promoted. Each was addressed and led by an international expert, and also provided scope for direct dialogue between delegates, and the subsequent exchange of research material, reports and ideas.

Our attention focussed closely on the stimulation of energy efficiency actions. We also considered how efficiency interfaces with the other components of energy consumption and management, and the principal alternative options for containing growth in demand, mitigating climate change, managing Europe's energy security etc.

Detailed reports from each of the sessions, together with a discussion of specific concerns and additional emerging issues, were circulated in the form of a web-log to our network of international contacts. Here we were able to draw upon our worldwide experience of promoting energy-efficient products and new energy technologies. This material is available at <http://www.sustenerg.org/EEGP>. We also undertook a web-based survey of opinions on specific Green Paper targets.

## 2 Main findings

### Target setting

o The web survey on targets demonstrates a preference for quantified targets, expressed in relative terms to economic activity, and defined in combination with a renewable target. There is little consensus regarding an appropriate level for a target, but a tendency to prefer a target phrased in terms of  $CO_2$  reductions, and complementing a 2020 target with both a shorter-term and longer-term target.

### Financing

Considering that the kWh saved is the greenest, investors into energy efficiency need to be rewarded for the environmental benefit they contribute, in the same way as other sustainable energy investments. Indirect trading of carbon emissions accelerates carbon reductions per amount invested. At a more local level, energy efficiency obligations and certificates provide a promising way to change the market.

We see a need for market mechanisms, such as prices, taxes, investment costs, subventions, to converge within Europe. This seems to be essential to lead to rational consumer decisions, and ensure that energy efficiency's crucial contribution to climate change is optimised. It also has a key specific role to play in consumer education, influencing behaviour and the adoption of new technology throughout the Community.

This does not mean that taxes and support levels must be identical or similar, or that Member States will lose the ability to direct their economies to reflect their own situations or development plans. It simply involves the combination of prices, fiscal measures, subsidies etc together creating broadly similar incentives for energy efficiency actions.

### Outreach

There is a need for consumer education, which should be life-long, to value energy efficiency, and learn to build its dimension both into major decision-making and routine day-to-day life. Often this valuation, and the underlying understanding, is lacking at present, even in the business world. Education should be linked to a personal commitment to save energy, assisted by concepts such as planning to consume energy sparingly, reducing or avoiding energy consumption.

The provision of tools to manage consumption, and raise awareness of consumption levels, could be an important aid. High technology and equivalent levels of investment should

be applied to achieve less rudimentary control of both heating equipment and ambient temperature, including meter-reading, intelligent controls, remote management.

Building these attitudes requires the development of the best available financial data, particularly on projected energy costs, which can be fed into investment decisions, the choice of technology etc. The cost balance between the various fossil fuels, nuclear generation and renewables is likely to change fundamentally in the near future, as well as the likely returns from investing in efficient plant, insulation etc. Forecasts should reflect the medium to long term nature of decisions on choice of fuel, plant performance etc

## **Introducing technology**

The considerable barriers to the introduction of new energy generation and energy efficiency technologies indicate a need to raise confidence in all end-use sectors. We must remember that they are seeking to compete with conventional practice. Established technology promises reliability, long experience in service, availability of standard products in various sizes, expert skills for repair and maintenance, acceptance by third parties ranging from sources of finance to tenants and customers, planning authorities, neighbours.

Demonstration and dissemination remain the tools to employ, but must be expertly managed and adequately funded to make an impact, develop a reputation for excellence and create opportunities for replication. Modern communications methods now offer much wider scope for influencing attitudes, and the promotion of nodes of good practice that can be expected in time to develop into a critical mass.

## **Improving quantitative systems**

We believe that the systems and methodologies currently being used to measure energy production and consumption in Europe could be improved. The aim should be to make them more detailed, accurate and sensitive, to help manage energy effectively, and monitor progress towards specific energy efficiency and climate change goals. This concern spans almost all areas, from climate change inventories and national energy consumption statistics, to basic operations such as energy transmission losses, consumer metering and billing practices.

Perhaps most importantly, regular access to reliable quantitative data appears to offer outstanding scope to educate and stimulate the attention of energy consumers at all levels. Investment in reliable and informative metering technologies is just one area with enormous scope for improvement.

## **Liberalisation and the role of utilities**

Apart from their responsibilities under the proposed Energy End-use Efficiency and Energy Services Directive, gas and electricity utilities are mentioned in the Green Paper only in connection with their position as a sector stakeholder for undertaking promotional initiatives in the "Doing More with Less" campaign.

Before liberalisation gas and electricity suppliers were probably the most active promoters of energy efficiency, the rational use of energy, new energy technology and consumer advice in Europe. The breadth of their expertise, spanning the domestic, commercial, tertiary and industrial sectors, was a particular strength. Their activities included information for domestic consumers, advice and publications targeted at professionals and specific industries, the introduction of high technology eg heat pumps, automation and control, conferences, demonstrations. The provision of this service was often a statutory requirement.

Some of these activities were also coordinated on a pan-European or global level, for example through the utility-supported Union Internationale de l'Electrothermie /International Union of Electroheat (now UIE).

## **Global dimension**

It is important not to be complacent about Europe's relative strengths in advanced energy technologies. Europe's position is strong, particularly in R&D and demonstration, but others have shown considerable abilities, particularly with a readiness to invest in the development of marketable products and build up a potential customer base. This appears to be reflected in current global market shares for advanced technologies such as fuel cells, and the speed of getting them to market.

There has been comment on the export opportunities for Europe that will open up in the energy sector. Our international record in engineering and construction, exports of capital plant, are very impressive, as well as experience of providing consultancy and managing generation and distribution utilities worldwide. But at the same time client countries also have a lot to teach us about sustainability.