

**Submission to European Commission
on Energy Efficiency Green Paper
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1. Introduction

On 22 June 2005, the European Commission adopted a Green Paper on Energy Efficiency (COM (2005)265) that seeks to put energy savings higher on the agenda. The Commission has called for comment on the Green Paper by March 2006 in order to assist it to reach solid, practical and implementable proposals in its action plan that will make a real difference in 2006.

The responsibilities of CEER members in regard to energy efficiency vary considerably. Certain regulators have responsibility for implementing government policy in this area. Others do not have any direct competence in energy end-use. Nonetheless, the Green Paper will have direct implications for regulators as well as the potential for significant effects on energy markets, and prices.

This submission focuses on those issues that affect all regulators in their market regulation role; it is expected that regulators that have particular responsibility in the area will be submitting to the Commission separately, either on their own behalf or through their Member State government.

The CEER wishes to bring to the attention of the Commission a number of issues raised in the Green paper of interest to energy regulators. These are:

- Promoting efficiency in the generation of electricity
- Regulation of transmission and distribution networks
- Regulation of supply markets and energy services;
- The role of demand side actions;
- Proposals for White Certificate Schemes

2. Promoting efficiency in the generation of electricity and the role of the EU ETS.

2.1. Green paper questions

The Green paper poses the following specific question for discussion:

The Emission Trading Mechanism [EU ETS] is a key tool in developing a market-based response to meeting the goals of Kyoto and climate change. Could this policy be better harnessed to promote energy efficiency? If so, how? (Question 2)

The Green Paper also raises a number of issues specific to the efficiency of electricity generation (Section 2.3) including:

- to ensure that the most fuel-efficient (CCGT) technology for electricity production is being used in Europe
- promotion of distributed generation
- encouragement for cogeneration, including where fuelled by renewables, and district heating

2.2. CEER position

Key point: The EU ETS is intended to provide an incentive for the improvement of energy efficiency in electricity generation. This incentive could be improved through changes to the EU ETS and greater progress in liberalisation of electricity markets.

Different policy instruments currently promote energy efficiency in the generation sector:

- *Competition*: Since the liberalisation and unbundling of the power sector, competition has been a driving force behind generation activity. Electricity producers have received, as a result, incentives to improve technical and economical efficiencies in order to reduce costs and maximise benefits.
- *Stringent emission standards*: Stringent emission standards that have been implemented during recent years across Europe have contributed to improvements in energy efficiency.
- *EU ETS*: the system puts an opportunity cost on carbon dioxide emissions and therefore provides a positive incentive to improve power station efficiency and thereby reduce emissions.

In addition there are incentives provided by member states for the promotion of renewable energy. These incentives, however, vary in their level and method of support and the extent to which they create distortions in the underlying energy markets.

Consistent with the roles of CEER members to protect the interests of consumers and to promote competitive markets, CEER generally supports the establishment of broad, market-based instruments such as the EU ETS as the most cost effective way to achieve environmental objectives in a manner that is consistent with the EU's developing competitive energy markets.

The EU ETS and competitive pressure provide signals to power producers to invest in efficient low emission technology either in existing or new plants. However, the full potential of these incentives could be maximised by changes to the EU ETS, and by strengthening competitive markets.

A number of design features of the EU ETS act to reduce the strength of the signal imposed by the scheme. These include free allocation, distortions in new entry rules, and the disincentive to long term investment as a result of the short phases. The Commission should address these issues in the current review of the EU ETS.

CEER members are wholly committed to the vision of a competitive, liberalised and well-functioning EU energy market, established for the benefit of all energy consumers. Liberalised and unbundled markets, which are being developed and regulated across Europe by CEER members provide the vehicle by which the price signal provided by the EU ETS is acted on by market players. Conversely, delay and incomplete transposition in some cases of the gas and electricity Directives can have the effect of limiting the capacity of the market to respond to the signals provided by the EU ETS.

Further development of liberalised markets, including the measures regarding non-discriminatory access to cogeneration and distributed generation (as required under the various Directives) ensure that competitive firms will react to market conditions when taking investment decisions, including location and technology choice. Issues like the transparency of the market, regulatory environment and future prices will have a direct impact on investment decisions.

On the more general point of the application of the EU ETS as an instrument to promote energy efficiency, the scheme is a direct instrument that targets generators and other major emitters. As such, the EU ETS does not provide direct incentives to electricity transmission and distribution operators and consumers (in their role as electricity consumers) except through the price signal.

In theory, the effect of incorporating carbon dioxide emissions in prices should send signals to increase efficiency among electricity consumers. However, the potential incentive provided by higher electricity prices (and less consumption by end users) is arguable. First, the mechanism by which the cost of a carbon dioxide allowance is passed on to electricity prices depends on a number of issues. Second, the demand side of the energy sector is often not very responsive to price incentives, especially in the short term.

For this reason it may be appropriate for Member States to develop measures specifically targeted at end-use energy efficiency. However, it is the CEER view that these measures should be subject to rigorous cost-benefit analysis and implemented in a way that minimises the cost to consumers and the impact on liberalised energy markets.

3. Regulation of transmission and distribution networks

3.1. Green paper questions

The Green paper poses the following specific question for discussion:

What can be done to improve the efficiency of electricity transmission and distribution? How to implement such initiatives in practice? What can be done to improve the efficiency of fuel use in electricity production? How to further promote DG and co-generation? (Question 13)

The Green Paper also raises a number of issues regarding incentive regulation for electricity transmission and distribution networks and proposes that the ERGEG (European Regulators Group for Gas and Electricity) be invited to propose guidelines on good regulatory practices for transmission and distribution tariff regulation and energy efficiency. In particular they consider the following:

“That the guidelines are based on the principle that transmission and distribution system operators should be placed under a positive obligation to carry out all investments that are cost-beneficial (i.e. with result in a net reduction of tariffs), and be permitted to retain a fair proportion of the resulting net benefits.”

3.2. CEER position

Key point: CEER acknowledges the important contribution to energy efficiency that can be made by reducing transmission and distribution losses. Accordingly the regulators will undertake research into guidelines as proposed in the Green Paper, noting any potentially competing objectives.

Electricity losses on transmission and distribution systems impose a cost on society, both financial and environmental. This cost has three main components. First, the cost of purchasing lost units of electricity; second, the environmental costs of producing and transporting additional units of energy; third, the cost of providing operating and maintaining additional transmission and distribution assets to transport the additional units.

On the issue of incentives concerning losses, significant national differences exist in network regulation across Member States and each country deals with transmission and distribution losses in its own way.

As the network sectors are not open to competitive pressures and are generally subject to price control regulation, that regulation has a direct role in achievement of environmental aims. Through incentives provided to the transmission and distribution companies to reduce electricity losses, regulators could implement frameworks that tackle electricity losses in an efficient way. According to Directive 2003/54/EC, where transmission and distribution companies are obliged to buy electricity to replace losses they must do so using market-based methods.

Under cost reflective charging arrangements, new generation plant and major consumers, by receiving strong financial signals, can be encouraged to locate closer to each other so the amount of losses they cause is reduced. This is significant with distributed generation, as it can in some cases positively contribute to the management of electrical losses on the distribution networks. Where there is evidence that distributed generation impacts on losses and does not add disproportionately to costs, distribution companies should be encouraged to reflect this in their charges.

It is very important that energy is produced in a most efficient way so that scarce primary energy is turned into electricity in most efficient processes including also the transport of fuels. In this context the energy efficiency of distributed generation should be enhanced by cogeneration and implementing more advanced technologies in distributed generation. Usually large production units have higher efficiency compared to smaller units but fuel transportation and losses in electricity transmission and distribution decrease the total energy efficiency of the energy conversion process.

However in considering the incentives on network owners and operators to minimise losses, a number of additional factors need to be taken into account. These include the impact on consumers located in remote areas and the environmental benefits of granting access to networks to renewable generators, which may also be located in remote areas. In the latter case there is a potential trade-off between the environmental benefits associated with renewable generation and the environmental costs of increased network losses. Transparent cost-reflective charges on network users would allow these trade-offs to be made.

CEER agrees that ERGEG should carry out the research on the development of guidelines on good regulatory practice on transmission and distribution losses as proposed by the Green Paper. This work could consider a number of factors including the following:

- the impact of volume drivers in transmission charges
- the impact and incidence of incentives to minimise losses
- the effect of location based charging in the context of both national or European wide locational signals
- the impact on remote communities
- the impact on renewable generation located in peripheral areas
- the potential involvement of suppliers and system operators as well as network owners.

4. Regulation of supply markets and energy services

4.1. Green paper questions

The Green paper poses the following specific question for discussion:

Encouraging electricity and gas providers to offer an energy service (i.e. agreeing to heat a house to an agreed temperature and to provide lighting services) rather than simply providing energy is a good way to promote energy efficiency. Under such arrangements the energy provider has an economic interest that the property is energy efficient and that necessary investments are made. Otherwise, electricity and gas companies have an economic interest that such investments are not made, because they sell more energy. How could such practices be promoted? Is a voluntary code or agreement necessary or adequate? (Question 14)

The Green paper raises a number of further issues relevant to the supply market (Section 2.2) including metering and the promotion of lower consumption at peak times.

4.2. CEER view

Key point: The promotion of energy services, and other matters concerning supply to end consumers, such as metering and billing, are included in the soon to be finalised Directive on energy efficiency in end use and energy services. Therefore implementation of the Directive should be the first priority for action in this area.

Improvements in energy efficiency contribute to climate change goals, security of supply and the competitiveness of the European economy. Energy regulators support the objective of improving energy efficiency in a cost effective way. CEER therefore supports the Green Paper view that energy efficiency improvements should be undertaken in the industrial and domestic sectors if projects with positive net benefits exist.

Integrated energy services potentially allow market forces to play an important role in improving energy efficiency at the point of supply. Moreover, the Green Paper also proposes the re-examination of the pricing structure for energy products with the aim of encouraging consumers to more rational use.

The Green Paper states correctly that the Directive on energy efficiency in end use and energy services will oblige distributors and suppliers to diversify by also offering consumers the opportunity to opt for energy services.

The Directive contains a number of provisions concerning the promotion of energy services, and obligations on energy suppliers. These include the use of time-of-use and other advanced metering including consumer displays and remote reading. They also include changes to the frequency and detail of bills so that consumers can get more information about trends in their consumption and comparison with other similar consumers, creating important connections with existing obligations such as in fuel mix disclosure. Where these innovations are cost effective they are likely to deliver considerable energy efficiency benefits as well as other costs savings such as in meter reading and in reduced theft of energy.

CEER members will individually and collectively work with their Member State governments to ensure that the Directive is appropriately implemented to the benefit of consumers. CEER believes that, in the first instance, implementation of the Directive as agreed should be the major path to achieving change in this area, and that a separate stream of work is not warranted. CEER members will also work with their Member State governments so that implementation of the Directive makes maximum use of existing information provision and does not create unnecessary new burdens on suppliers.

CEER underlines the importance of a market for energy services. However, at the same time it notes that only clearly defined roles with consistent economic interests will succeed. CEER believes that integrated energy services (energy supply and provision of energy services like heat or light) should be subject to market forces except in the case when a market failure exists. Consequently, CEER has taken the view in the past that it may not be appropriate for regulatory action to force incumbent energy suppliers to take on the role of energy services providers. Incentives could be provided for incumbents and new entrants in this area, which may provide more innovative offerings.

5. Consumer demand

5.1. Green paper questions

The Green Paper raises a number of issues concerning the potential for greater efficiency in the use of energy by consumers – including in relation to appliances and buildings.

5.2. CEER view

Key point: Regulators are already involved in actions to incentivise demand side participation in energy markets. CEER will undertake a study to determine the scope and practicality of greater demand side participation, especially for small and medium consumers.

Energy companies have close links with consumers through the sale of energy and, in many cases, supplying installing and maintaining equipment that uses energy. They also have frequent contact with consumers through billing and safety issues. Energy companies are therefore well placed to play a role in the promotion of energy efficiency through the choice, replacement, use and maintenance of appliances.

CEER members are involved in supporting and incentivising this activity to varying degrees. The extent of this involvement is however a matter for individual Member States according to the particular remit that each regulator is given.

However a particular area where energy companies and regulators could have a significant influence is through demand side participation in energy markets. Load reduction to reduce consumption or to smooth peaks has clear benefits in terms of more efficient use of generation, transmission and distribution assets - as well as emissions because in many cases peaking plant tends to be higher emitting. CEER members are already involved to some extent in incentivising demand side participation where consumers contract with system operators to manage peak loads. This, however, principally applies to large consumers. There is likely to be

considerable additional potential for the application of the same principles to small and medium users if appropriate incentives can be provided.

CEER undertakes to carry out research into how greater demand side participation in energy supply markets can be encouraged, including the use of differentiated tariffs, advanced metering and other methods. The work will include a focus on the potential for small and medium consumers and on the practicality of implementation. In addition, CEER members will individually and collectively continue to work with the Commission to explore new approaches in this area.

6. Proposals for White Certificate Schemes

6.1. Green paper questions

The Green Paper raises the following question for discussion.

In a number of Member States, white (energy efficiency) certificates have been or are being introduced. Should these be introduced at Community level? Is this necessary given the carbon trading mechanism? If they should be introduced, how could this be done with the least possible bureaucracy? How could they be linked with carbon trading mechanism? (Question 15)

In addition, the Green Paper suggests that “the group of network regulators [ERGEG] and the other players concerned could look into the possibility of an energy efficiency certificate system”.

6.2. CEER view

Key point: While there may be considerable potential benefits in market-based schemes to promote energy efficiency such as white certificates, CEER does not consider that it is best placed to establish a new initiative in this area.

White certificates have been widely proposed as a market based instrument to enhance energy efficiency in a cost-reflective way and are in use or being developed in several Member States. In particular, white certificates are a market based policy to promote energy efficiency in end use, creating an energy savings obligation for certain market players (distributors, suppliers, large consumers etc) coupled with a trading system for energy savings.

The introduction of an EU-wide white certificate system would allow for a broadened scope of energy efficiency projects, possibly including actors not covered by the EU ETS. The main advantage would be the increasing the number of lower cost projects and therefore enhancing the cost effectiveness of any scheme.

An option to correctly internalise the effects of energy efficiency and reductions of carbon dioxide emissions could be the harmonisation of the white certificates with the EU ETS. However, the introduction of European wide white certificates – and any other market-based measures that promote energy efficiency – should be dependant on an extensive cost benefit analysis. Among other things, the factors to be considered include:

- the development of harmonised definitions and measurements;
- the incidence of a white certificate scheme (for example would it create an obligation on suppliers, distributors, consumers, a currency for use in existing national or international schemes);
- the cost of accreditation and auditing of measures;
- the cost of administration and operation of registries
- the need to ensure additionality;
- the interchangeability with other schemes.

In regard to the specific Green Paper call for ERGEG to take an active role in looking into such a scheme, the CEER notes that there is a significant amount of work being undertaken by the Commission in this area, including recently published research for DG Environment¹.

CEER members, individually and with through their Member State governments, will continue to support and participate in this work. CEER does not consider that it would be appropriate to establish a new initiative in this area. However, this position may be reconsidered in the light of future developments.

¹ http://europa.eu.int/comm/environment/climat/pdf/ec_green_summary_report051117.pdf