TIME TO ACT!

EURIMA’s response to the Commission’s Green Paper on energy efficiency, COM (2005)265 final

1. INTRODUCTION

EURIMA (the European Insulation Manufacturers Association) represents manufacturers of glass and stone wool. In addition to thermal insulation, glass and stone wool products provide sound insulation and passive fire protection. EURIMA members are present in all 25 EU Member States and directly employ over 20,000 people, with the installation of insulation accounting for an additional 300,000 jobs.

As an industry that has been actively involved in campaigning, since the late 1980’s, to reduce the staggering waste of energy from the European building stock – currently standing at the equivalent of 3.5 million barrels of oil a day - we welcome the publication of the consultation paper on energy efficiency and congratulate Commissioner Piebalgs for this timely initiative.

With energy prices soaring, the concern about future energy supply from politically unstable countries increasing and the need to curtail greenhouse gases becoming increasingly urgent, this initiative is timely indeed. All these reasons justify vigorous action to improve energy efficiency. With action in the building sector demonstrated to be able to save Europe 8 Billion EURO a year by 2010 rising to 14.5 Billion EURO a year by 2015 and create an estimated 530,000 jobs, there is both a moral and economic imperative to make the building sector the number one area for action.

Twenty years ago the European Commission published a draft proposal for energy certification of buildings. The background paper of that proposal stated that buildings were responsible for 40% of energy consumption in Europe. Twenty years later buildings still account for 40% of Europe’s energy use, even though the tools have existed for more than 20 years to cut this in half. Europe must ensure that this is not still the case in another 20 years. However, to make sure that it is not, Europe needs to deliver policies that work and not words that are forgotten – Its time to act!

2. THE MISSING ELEMENTS

Before providing specific comments on the different questions within the Green Paper, it is important to note that from our point of view two major elements are missing:

I. A clear long-term target: Energy efficiency improvements do not happen overnight but are based on continual improvements over time. To demonstrate that Europe and its member countries are serious about energy efficiency as well as to give a framework for action, it is therefore critical to set an ambitious but realistic target for any future action plan. A 20% improvement by 2020, which has been suggested by Commissioner Piebalgs, would be supported by EURIMA.

II. A clear timetable: With multiple sectors and many different options within each sector for action, it is a challenging task to decide where and with what to start. However, proposing such a timetable will be critical in order to both focus resources and ensure that it is possible to measure progress towards any long term target. The Green Paper does not request an answer on this, but EURIMA believes that it is important that the Commission, working with specific sectors, identifies such blueprints for action, as part of the forthcoming action plan.
3. EURIMA'S RESPONSE

We have divided our contribution in two parts, i.e. the specific questions for the building sector (Q. 8 and 9) and then the general energy policy questions of relevance to buildings.

SECTION 1 – BUILDING SPECIFIC QUESTIONS (QUESTIONS 8 AND 9)

Preliminary remarks

Both questions 8 and 9 refer to the need to reduce energy use in buildings. With buildings accounting for over 40% of all energy use across the EU, i.e. more than transport or industry, any energy efficiency action plan that does not deal with energy consumption in buildings will not deliver the societal and economic benefits that are needed. In addition, action in buildings is the measure most likely to deliver large scale CO2 reductions.

Dealing with energy consumption in buildings in the EU, is first and foremost about tackling energy consumption in existing buildings. With a 1 to 1.5% turnover in the existing building stock, relying on improvements to new buildings, will mean waiting as much as 100 years to capture the potential. Therefore, any realistic measures in the building sector must focus attention on existing buildings.

Such a focus has economic, social and environmental implications. In the Green Paper (page 7) the Commission specifically requests that contributions deal with these implications and enumerates a series of issues to address. In terms of addressing these issues for existing buildings EURIMA would offer the following comments:

- **The economic case for action:** Recent research carried-out by one of Europe’s leading environment and energy institutes (Ecofys) demonstrates that if the Energy Performance of Buildings Directive (EPBD) was extended to cover all residential buildings, it would lead to an annual cost saving of 8 Billion EURO by 2010. By 2015 the annual cost saving would have increased to over 14.5 Billion EURO, as more and more buildings have their energy performance upgraded. These figures are based on 2002 energy prices and projections up to 2030. They do not reflect the current high oil and gas prices. If these are taken into account, EURIMA estimates that this would increase the annual cost saving, by 2010, to closer to 12 Billion EURO, with this figure rising to 22 Billion euro a year by 2015.

- **The job creation potential:** The above annual cost saving figures take into account both the cost of the energy efficiency measures as well as the additional labour costs associated with upgrading the thermal characteristics of existing buildings. As renovation is labour intensive, extension of the EPBD, also leads to significant job potential. EURIMA estimates that an extended EPBD would create up to 530,000 total potential jobs for the entire period that it would take to renovate the total building stock (approximately 30 years if work is done as part of the normal renovation cycle for buildings).

- **The environmental benefits:** More energy efficient buildings would help to deal with two of the most important environmental problems facing Europe, climate change and urban air quality. In terms of climate change, an extended EPBD would lead to a reduction of 83 million tonnes of carbon dioxide (32 MTOE) by
2010, with this figure growing to an annual saving of 144 million tonnes (55 MTOE) by 2015. For air quality, it is clear, from the Commission’s own work, that buildings are responsible for a significant and growing proportion of the air pollution in cities. These emissions are mostly created from the direct burning of oil, gas and other fuels to heat buildings. Therefore reducing the energy demand of these buildings will dramatically reduce the amount of these fuels that are burnt and consequently the air pollution that is created.

- **The security of energy supply benefits:** Bringing all existing buildings up to standard, as would be the impact of fully extending the EPBD to all buildings, has the potential of reducing energy use by 154 MTOE (million tonnes of oil equivalent) per year or expressed more simply the equivalent of 3.5 million barrels of oil a day. Such a dramatic decrease in energy would have clear impacts on reducing Europe’s dependence on foreign energy as well as dampening the effect of sudden rises in world oil prices.

- **The measures themselves:** One of the main reasons that the huge potential from buildings has not been properly seized, is that there is no single measure or a single level of government that can deliver these savings. A mix of measures – regulatory, fiscal and information based – are needed and must work together to reinforce each other. A mix of actors – different levels of government, the private sector, public-private partnerships – must support action and must act in concert. Throughout Europe there are a number of different initiatives that have been launched to improve energy efficiency in buildings including public information campaigns, tax rebates and specific legislation. Experience from these demonstrate that when comprehensive schemes are introduced they work and when one-off single measures are taken, the success is limited. This situation calls for a much more coordinated and comprehensive future strategy on energy efficiency in buildings, not only at the EU level but also from governments. The elements that must be in place would include:
  - **A proper regulatory framework:** An extended EPBD, if rigorously implemented, would be a good start towards ensuring a robust regulatory framework. This suggests that the EU is the appropriate level to set the framework for buildings with Member States responsible for implementation.
  - **Fiscal incentives and funds:** For specific areas of the EU, in particular the new EU Member States, it would seem appropriate for the EU to ensure Structural and Cohesion funds are used for improving the building stock. Such funds should be used to support the Lisbon objectives and given the benefits for jobs, the economy and the environment from action on buildings, it would seem hard to identify measures that are more supportive of these objectives. In other areas of Europe, national and local governments should play a more active role in creating and supporting financial incentives, as these have been demonstrated to have a very positive effect on the renovation of buildings.
  - **Information:** The EU and/or national governments could play an important role in raising awareness about the potential to improve the energy efficiency of buildings. In terms of helping individual owners and tenants to have specific and useful information, the energy certificates within the EPBD are one way to ensure this happens. This reinforces the need for a correct implementation of the EPBD, which is the responsibility of the national government but where the European Commission must play its role, where it is shown that proper implementation has not occurred.
Question 8 - Energy efficiency in buildings is an area where important savings can be made. Which practical measures could be taken at EU, national, regional or local level to ensure that the existing Community Buildings Directive is a success in practice? Should the Community go further than the existing Directive, for example extending it to smaller premises? If so, how could the appropriate balance be achieved between the need to generate energy efficiency gains and the objective of limiting new administrative burdens to the minimum possible?

Proper implementation is key: The most important short-term priority with respect to the EPBD is its correct implementation. In its report on the cost-effectiveness of the implementation of the EPBD, Ecofys demonstrated that its correct implementation across the EU would lead by 2010 to annual cost-savings of 4 Billion EURO, annual CO₂ reductions of 39 million tonnes (15 MTOE) and create 200,000 jobs (EURIMA estimate).

In January 2006, the Directive comes into force and the Commission has a critical role to ensure that it is properly implemented across the EU so as to secure these benefits. Of particular concern for EURIMA in terms of implementation is the ability of the newest European Member States to be ready for implementation. The Commission should carefully examine the situation and consider whether and what additional support is needed to ensure its correct implementation.

In terms of supporting an increased level of thermal upgrading of buildings, EURIMA believes that the energy certificate will play an important role. If consumers are fully aware of the certificate, it has the potential to not only overcome the barrier of information but also supports the creation of a greater demand for energy efficient buildings making it easier for owners and builders to recoup investments. Therefore, one way for the EU and national governments to show real commitment to more energy efficient buildings would be to create a major information campaign on the energy certificate developed by the EU and implemented at the national level.

Extending the EPBD extends the benefits: On the specific question of improving the EPBD, EURIMA urges the Commission to adopt an extended EPBD and in doing so to take the following points into consideration:

- **Action 1** - Remove the threshold under article 6 for renovation requirements (currently 1000m²). This has already taken place as part of the national implementation of the EPBD in several countries, e.g. Denmark and Germany.
- **Action 2** – Combine the renovation requirement with requirement on minimum energy performance on component level when replacement occurs. Introduce requirements to make energy performance calculations whenever a major component of the building envelope (a roof, a wall, a window) is renovated or replaced (measures coupled with repair or renovation activities are most cost effective – repair of a leaking roof facilitates easy access for upgrading thermal insulation)
- **Action 3** – Amend the current calculation methodology for energy efficiency so as to calculate all energy saving devices in the building on a uniform period of 50 years (i.e. the lifespan foreseen under the Construction Products Directive). This will allow the calculation to properly reflect the entire lifetime of the building and the different lifetimes of the different investments.
- **Action 4** – Create a specific obligation on Member States to set minimum requirements for use of energy per m² for existing buildings and have those requirements peer reviewed.
- **Action 5** – Extend the availability and use of the energy label by requiring that a new energy certificate must be established every 10 years whether or not the
building is being sold or rented. This would be comparable to automobiles where regular technical inspection is required. Such a measure would ensure all occupants of buildings are aware of the condition of their building and of the cost-savings that could be made through renovations. By way of example, in Denmark the validity period of an energy certificate is only 5 years and all public buildings independent of size must have a valid energy certificate.

- **Action 6** – To support the above requirement for a certificate put in place an initial requirement that all buildings not sold or rented should nonetheless receive an energy certificate by 2009.
- **Action 7** – Establish the requirement to set a time planning for a mandatory structural improvement for the existing housing stock by segment (in age or type, example: by 2010 all dwellings built before 1990 must meet maximum energy consumption for heating and ventilation kWh/m². Buildings not meeting this requirement should not enter the rental market.

**CASE IN POINT**

**DANISH BUILDING LAWS** - In Denmark, it has been decided that all public buildings must have a valid energy certificate – the validity period is limited to 5 years. Within the coming 2 or 3 years it will be evaluated if it should be mandatory for all buildings to get an energy certificate. Germany has also applied the EPBD to all buildings.

**Question 9** - Giving incentives to improve the energy efficiency of rented accommodation is a difficult task because the owner of the building does not normally pay the energy bill and thus has no economic interest in investing in energy efficiency improvements such as insulation or double glazing. How could this challenge be best addressed?

Indeed, the matter of rented accommodation is a problem in its own right. The EPBD and its associated energy performance certificate will address the problem to some extent but not fully. In particular, ensuring that the energy certificate is widely recognised and that potential tenants are aware of their right to see the certificate, will support more energy efficiency measures. However, more is needed to have a significant impact on the rental market.

In particular, EURIMA suggests that the most effective manner to secure improvements in rented accommodation is a mix of regulatory obligation coupled with market incentives that support compliance.

In terms of regulatory obligation, an extended EPBD would create an obligation that all buildings are upgraded when renovated. As rented properties are in essence small businesses and in some cases large businesses, there is a strong case that this obligation should be extended, so that energy measures suggested to be cost-effective within the energy certificate must be implemented within a fixed time period, such as within five years. It could also be considered that where this is not done, the tenant would have the right to cancel the contract without penalty.

As both society and the tenant benefit from this action, the landlord should be given both incentives and support. Reduction in property tax could be offered for buildings that comply with the energy certificate or national laws could be amended to allow the landlord to increase the rent in proportion to the cost of the improvements based on a calculated pay back period. Other systems and models could work, but it is likely that a mix of obligation, incentives and market forces will have the greatest impact. Additionally, it is appropriate to give financial support to social rental housing organisations to execute the measures proposed by the energy certifier.
SECTION 2 – GENERAL ENERGY POLICY

**Question 3** - In the context of the Lisbon strategy aiming to revitalise the European economy, what link should be made between economic competitiveness and a greater emphasis on energy efficiency? In this context, would it be useful to require each Member State to set annual energy efficiency plans, and subsequently to benchmark the plans at community level to ensure a continued spread of best practice? Could such an approach be used internationally? If so, how?

Energy efficiency in buildings provides great support to the Lisbon strategy given the huge job potential (530,000 jobs), cost savings (8 Billion EURO a year by 2010 rising to 14.5 Billion by 2015) and environmental benefits of action (83 million tonnes of CO₂ by 2010). If Europe believes it is time to act on the Lisbon strategy then it is certainly time to act on energy efficiency.

Annual energy efficiency plans would certainly be useful and provide a basis for moving forward. For buildings, given the large and proven potential and the mix of measures needed to achieve it, it would be best to develop clear sectoral action plan for buildings. This should be then used as the basis for setting objectives and reviewing progress.

EURIMA backs the suggestion to require each Member State to set annual and multi-annual energy-efficiency plans and subsequently to benchmark the plans at community level. EURIMA goes a step further. The individual planning for Member States also must take place for both CO₂ emissions and energy efficiency measures, because by doing so the most cost-effective policy will emerge almost automatically.

Under the present commitment period of the Kyoto Protocol, there is a burden sharing between Member States. We think this should be extended in the next commitment period to sectors as well, i.e. a burden sharing by country as well as by sector. Every Member State should be required to set the energy efficiency target overall and for each sector (transport; industry, heating, etc) and this for the next year, for the next year + 5 and the next year +10. This multi-annual targets should be accompanied by corresponding CO₂ emission targets and by corresponding analyses of cost-effectiveness. The new Member States (EU 10) are not part of the present burden sharing. Yet, we suggest these new Member States as well make a sectoral burden sharing plan as it will show them where savings are possible in a cost-effective manner. The Commission’s task then is to compile and compare the planning and the Member States could discuss the plans in Council (peer review).

**Question 4** - Fiscal policy is an important way to encourage changes in behaviour and the use of new products that use less energy. Should such measures play a greater role in European energy efficiency policy? If so, which sort of measures would be best suited to achieve this goal? How could they be implemented in a manner that does not result in an overall increase in the tax burden? How to really make the polluter pay?

EURIMA supports active benchmarking of annual energy efficiency plans and their sectoral action plans. Equally, this should apply to other policy instruments such as fiscal incentives, tax rebates regulations on mortgages, inspections of building codes, etc. This will allow for best practice to be shared among Member States.

**Question 5** – Would it be possible to develop state aid rules that are more favourable to the environment, in particular by encouraging eco-innovation and productivity improvements? What form could these rules take?
EURIMA is not convinced that aid rules should be developed for new technologies in the building sector, although state aid might well be imminent for other sectors. Rather than developing new technologies, there is a need to develop policies to implement existing technologies. Low energy and passive energy houses are already being built in many countries. There is a need to promote the concept and disseminate the technological and economic knowledge. This is again a place to implement the *Trias Energetica*.

**Question 6** - Public authorities are often looked to for an example. Should legislation place specific obligations on public authorities, for example to apply in public buildings the measures that have been recommended at Community or national level. Could or should public authorities take account of energy efficiency in public procurement? Would this help build viable markets for certain products and new technologies? How could this be implemented in practice in a way that would promote the development of new technologies and provide incentives to industry to research new energy efficient products and processes? How could this be done in a manner that would save money for Public authorities?

EURIMA believes that public authorities should set the example for buildings and that there should be specific obligations on all public authorities to implement all the cost-effective energy saving measures suggested within the energy certificate. When public authorities spend money, they spend the public’s money and therefore if measures are cost-effective and lead to cost savings, there is no reason that they should not be implemented.

As many of the budgets of local authorities are constrained, one action could be for national governments to create revolving funds for energy efficiency measures. Such funds coupled with the obligation to act on the recommendations in the energy certificate, should create the situation where it is possible to upgrade buildings. In fact, some of the current surplus tax revenue from high oil prices, could be allocated to create such funds.

In terms of public procurement, although it would have a less rapid impact, public authorities should have specific rules which oblige them to only rent or purchase new properties that meet certain energy efficiency criteria.

In addition, we think that the energy performance of a public building should be 25% better than a privately owned building.

**Question 7** - Energy efficiency funds have in the past been used effectively. How can the experience be repeated and improved? Which measures can be adopted usefully at: International level; EU level; National level; Regional and local level?

One of the most significant barriers to improved energy efficiency in existing buildings is the initial investment hurdle, i.e. the need to provide an upfront sum of money for the renovation which then pays back over time. This is a barrier even among those who can afford the upfront cost or have easy access to financing. For those who can not either obtain financing or afford the upfront cost, this becomes a block to improved energy efficiency.

This investment hurdle is a particular concern in the new Member States of the European Union. Countries where current buildings use on average 25% more energy per metre square than in the former EU 15. Countries where it has been demonstrated that action to improve energy efficiency in buildings could provide cost savings of almost half a billion EURO a year, reduce carbon dioxide emissions by 14 million tonnes a year (5 MTOE) and create up to 230,000 total potential new jobs.
(EURIMA estimate). Given this, it is essential that European funds and other financing mechanisms are provided to support these regions.

In the present draft Council Conclusions about the future Structural and Cohesion funds (2007-2013), the use of these funds to support thermal upgrading of the building stock is envisaged. EURIMA believes this must be maintained through the negotiations if we are to improve the energy efficiency situation in the new EU Member States.

Of course, ensuring the funding is available does not ensure that it is used. The European Commission therefore must consider as part of its action plan on energy efficiency what measures are needed to ensure that sufficient energy saving projects are selected. There is also a secondary question of legal frameworks in the new Member States which often are a block to energy efficiency. Where these exist the Commission should consider how to support their amendment so that individuals can take advantage of any future funds.

In addition to the Structural and Cohesion funds, other financing sources could also be better used to support energy efficiency. The European Investment Bank and the European Bank for Regional Development have a role to play as well.

Question 12 - Public information campaigns on energy efficiency have shown success in certain Member States. What more could and should be done in this area at: International level; EU level; National level, or; Regional and local level.

Both information on the reasons to improve energy efficiency in buildings as well as more specific information on how to improve the specific situation are needed. However, it should be noted that information campaigns alone are unlikely to be very effective and must be combined with an appropriate legal framework and incentives. Specifically as mentioned in our answer to questions 8 and 9, EURIMA believes that ensuring that the general public and specialists are fully aware of the energy certificate is a key element in ensuring that the EPBD and an eventual extended EPBD are successful. Proper awareness of the certificate being key step towards creating a market for energy efficiency in buildings and a situation where owners and developers see an economic advantage to improving energy efficiency levels. The Commission, working with Member States should therefore actively consider whether a Europe wide campaign is developed to carry-out this awareness raising exercise.

In addition, all levels of government should use the energy certification of public buildings as a way to showcase the benefits of energy efficiency in buildings.
**Question 13** - 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 distributed generation and co-generation?

Although EURIMA members do not deal with energy transmission issues, the question of energy efficiency in buildings does have an impact on the issue of transmission, in particular the issue of peak summer time loads which have been responsible for certain grid problems in the past.

Unlike heating, cooling of a building is almost always done through electrical devices such as air conditioning units. During hot summer days, the use of air-conditioning (which is growing rapidly, particularly in the southern European countries) can impact peak loads. Where houses are poorly insulated the need for the use of the cooling device is significantly increased. In fact, it has been demonstrated that insulation, coupled with other measures, in particular reducing heat load, can reduce the energy needed to cool a building by up to 70%.

Better insulation would improve the thermal comfort in these countries and it would ease the problem of serious investment in electricity grids. Where thermal insulation is a more cost-effective policy option than huge electricity grids, funds should be used to improve the energy efficiency of buildings rather than building grids. On this point, where EU funds are being used to support new grids or grid improvements, EURIMA believes that there should be an obligation that funds are conditional on there being evidence that the grid measures are more cost-effective than improving energy efficiency.

**Question 14** - 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?

EURIMA supports the development of energy service companies (ESCO’s) and believes they could play an important role in creating a market force for energy efficiency improvements. For these building types, basically existing residential buildings, an extended EPBD coupled with appropriate incentives and information, is likely to be the most successful approach.

Another proposal for improvement lies in article 11. If ‘should’ is replaced with ‘shall’ than ‘Member States shall establish a fund or funds to subsidize the delivery of energy efficiency improvement programmes’ This modification would improve the effectiveness of the proposed ESD.

EURIMA suggests studying carefully the British scheme whereby energy improvements are financed by a levy on energy supply companies. The UK experience might well hold lessons for other Member States and the Commission should act as a facilitator in exchanging experience.

**Question 15** - 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?

White energy-efficiency certificates are unlikely to be effective in capturing the full energy efficiency potential from buildings. This is mainly due to the fact that the most significant area for achieving improvements in buildings is within the small residential building sector (less than 1000m²). With the transaction costs for white certificates being very high, they are unlikely to be used for these small buildings.

**Question 22** - In certain Member States, local or regional energy efficiency project financing schemes, managed by energy efficiency companies, have proven very successful. Should this be extended. If so, how?

Indeed, some regional governments use their legislative powers to improve the thermal standards of buildings. We welcome this evolution. EURIMA in particular recommends the actions by the Austrian regional governments. Since 1993, the 9 regional governments in Austria are in a friendly competition to do better with respect to energy savings in buildings (improvement of building and insulation standards, promotion of PassivEnergie houses, emphasis on the thermal improvement of existing houses). Why not take the opportunity of the Austrian Presidency (2006) to organise briefings on the Austrian experience for other legislative authorities?

**Question 25** - Should the Union negotiate tariff or non tariff advantages within the WTO for energy efficient products and encourage other members of WTO to do the same?

As for external relations and WTO, it is indeed a good suggestion to create tariff and non-tariff advantages for the export of energy efficiency products. It will help the development of these industries in the Union and it will help other countries to reduce energy consumption.

As stated at the beginning, the Commission has a long record of recognizing the importance of the building sector in reducing energy use and CO₂ emissions. It is indeed a merit of the European Commission that already in 1985 it recognised the building sector as a top priority. But a good description and analysis is not good enough. Now more than ever before it is the time to act.

07 October 2005