

**Brussels, 20 June 2008**

## **Recasting of Directive 2002/91/EC on the Energy Performance of Buildings**

Orgalime thanks the Commission for consulting stakeholders on the recast of the above mentioned directive and herewith provides its contribution to the debate.

Orgalime's comments are structured in two parts:

1. Our industry's potential to contribute to the realisation of the EU energy and climate change objectives & general position for the EPBD recast
2. Responses to Commission stakeholder questionnaire

### **1. ESSENTIAL ELEMENTS FOR A RECAST EPBD DIRECTIVE**

Orgalime is committed to contribute to the achievement of the EU's targets of 20 % energy efficiency improvement, 20 % greenhouse gas emission reductions, and 20 % share of renewables by 2020.

In the framework of the ELECTRA High Level Experts Group, our industry has in cooperation with the European Commission and other stakeholders, developed a series of recommendations for realising these targets, which, if implemented render these targets achievable.

The buildings sector has attracted particular attention in the ELECTRA work considering its high potential for energy efficiency improvements.

We therefore agree with the emphasis of the consultation document placed on the scale of potential carbon savings that can be achieved from buildings and that it is an essential sector to address. Notwithstanding the long and difficult transposition process of the EPBD by Member States in their national building regulations and construction practices, it has brought very significant changes and has framed the energy efficiency actions of the building sector.

However, more needs to be done to explore the full potential of possible energy savings.

We therefore also support the main motivation for recasting the Directive that is to ensure that the potential for cost effective energy efficiency improvements is realised.

**In our view, the following elements need to be taken into account when recasting the EPBD in order to realise this potential:**

The recast launched by the European Commission offers the opportunity to enhance and extend this frame taking into account the lessons learnt so far so as the evolution of the eco system. We feel that **a shift of the legal base of the directive from article 175 to article 95 of the EC Treaty** would strengthen the directive in the future. Especially, better harmonisation would be necessary in the fields of using the **same calculation methods or harmonised EU standards throughout all member states**. Especially, infrastructure related systems should be further standardised. Standardisation of system aspects would also be necessary to enable services to buildings.

*Orgalime, the European Engineering Industries Association, speaks for 35 trade federations representing some 130,000 companies in the mechanical, electrical, electronic, metalworking & metal articles industries of 23 European countries. The industry employs some 10.6 million people in the EU and in 2007 accounted for some €1,813 billion of annual output. The industry not only represents more than one quarter of the output of manufactured products but also a third of the manufactured exports of the European Union.*

- **EPBD needs to work cohesively with other directives** that impact on the energy use in buildings. Specifically, there is a need for additional provision to **draw a cohesive borderline between the Energy Using Products Directive (EUPD) and the EPBD.**
  - Product requirements established under EuP should neither be duplicated by, nor overlap with requirements included in the EPBD.
  - It is appropriate that the setting of minimum standards for installed standards should be applied under EPBD and, through this, onto the organisations responsible for the installation. EPBD should be developed to operate cohesively with EUPD. In particular, product manufacturers could be required to provide information on efficiencies of potential system installations and installers use these to provide, install and certify efficient systems.
  - Innovative consumer electronics and intelligent home appliances should be promoted.

Legal consistency should also be fostered with the Energy End Use and Energy Services Directive (2006/32/EC).
- **Action on new buildings** will certainly be of relevance for energy efficiency improvements. However, massive renovation of the installed base is necessary if the EU's 2020 targets as adopted in last March 2007 by the European Council are to be achieved in reality. Therefore, **action on existing buildings** should be the top priority for the recast of the EPBD.
- **All types of building** are concerned (residential buildings as well as commercial, tertiary buildings) and the **1000m<sup>2</sup> threshold restrictions in any article of the directive should be deleted.**
- With respect to the EPBD, what must be avoided are scenarios where the detailed provisions can be met without the strategic rationale for those provisions being achieved. This is most clearly exemplified with regard to building certification, which has an enormous potential to drive improvements in installed energy saving measures and high efficiency systems. But the potential of such a tool is likely to be missed unless it is structured appropriately and can be used as a focal point for other policy interventions. For this, cooperation with industry stakeholders is essential.
- **Changing consumption patterns** will be a vital prerequisite to realise energy efficiency improvements. Such a change can only take place if the consumer or end user is aware of the energy consumption data of his building. The following proposals for the recast of the EPBD aim at helping the consumer to have access to such information:
  - **Beyond thermal insulation and use of high efficiency equipment, active control systems such as automation, control and metering systems (for electricity, gas, waster, heating, ventilation, air conditioning, lighting ... so-called Smart Metering) should be promoted:**  
The use of active control/metering systems can in our view considerably contribute to achieving the EU's energy efficiency targets. E.g.: a shift in temperature of 2°C can result in an increase up to 15% of Heating or Air Conditioning energy use, which represents the main energy use in a building. Or, effective lighting control combined with high efficient lighting bulbs can half the energy used for lighting.

*We recommend*

- *making reference to active control systems in the preamble specifically in items (9), (10), (14), (15).*
- *making reference to CEN standards EN15232 and EN 15913 in item (10) of preamble.*
- *adding a definition of active control systems in article 2.*
- *adding an article on regular service of control systems by qualified personnel in line with article 8 and 9, and*
- *to list automation and control systems should be listed in annex 1.*

- *promoting smart metering as a starting point for “home automation” throughout the EPBD.*
- **Measuring, displaying and monitoring the energy used by type of energy and by energy usage can be provided by technology at an economical cost and will be a strong mean to change behaviour of building occupants, which is vital to reach the targets:**  
It will particularly provide essential information to consumers and end users to make informed choices. This is lacking today. Users need to get proper energy usage data to adapt their behaviour and real benefits would come from measuring different users/tenants of a building, distributing actual costs rather than distributing based on square meters occupied, or some other more fixed factor.

*We recommend*

- *mentioning in a new item in the preamble that a provision for monitoring energy used by type of energy and by energy usage shall be made.*
- *referring in item (17) of the preamble to this as good energy management practises.*
- *referencing this in article 2, definition 2 “energy performance of building”: the amount of energy actually consumed of a building and use of data coming from such energy monitoring systems should be encouraged for energy performance certificates of existing non residential buildings (Calculation should be applied for new buildings; measures should be the reference for existing).*
- *Introducing an obligation to indicate the global cost and the cost by users in users’ invoices which should be made available on a more regular basis (e.g. monthly).*
- **Making consumption data available and publishing benchmark data by type of building and usage would foster implementation of saving actions; the public sector should take the lead in such a move and build the references:**  
Energy consumption data in the form of comparable benchmarks are rare today in the European Union. The energy performance certificate’s process is a unique source of data, which could be very useful to all actors in the building chain. A single method for calculation, with a formula for accounting for local climatic conditions, would enable common technology assessment and the ability to benchmark.

*We recommend*

- *implementing this in a coordinated way at EU level and as a first step at least for residential and public buildings.*
- *modifying article 12 accordingly.*
- *using annex 1 paragraph 3, complemented by a list of energy usages, as a first structure of this benchmark.*
- *Article 7 paragraph 1 refers to a 10 years validity period for Energy Performance Certificate, according to the above, at least for non residential buildings the period should be reduced to a shorter period.*
- **Servicing of all equipment by qualified personnel should be made mandatory at installation and on regular basis throughout the life of the building to ensure persistence of the performance.**  
Buildings are subject to numerous modifications and control systems should be adjusted accordingly in order to maintain the energy performance.  
A number of building control systems are not properly installed or maintained, settings are not adjusted to the building occupancy conditions and it has been observed that up to 8% to 10% of energy consumption can be lost due to this.

*We therefore recommend that, similar to article 8 on boilers and article 9 on air conditioning, a specific article should be added for building automation and control*

systems. Instead of the “inspection concept” of articles 8 and 9, however, this new article should foresee a regular maintenance by qualified personnel.

- **Beyond energy performance certificates including recommendations for implementing saving actions, real implementation of the actions shall be encouraged by incentives and valued in instruments such as “building passports”:**

Fiscal incentives (such as rebate schemes or tax credits) should be recommended for enactment in all Member States. They could be linked to the implementation of energy performance certificates.

*We recommend*

- *adding an article dealing with this issue in line with article 11 of the actual directive.*
- *adding a new annex with a list of indicative improvement recommendations.*

- **Extended use of Energy Performance Contracting should be facilitated and promoted:**

Energy Performance Contracting has proved to be a very good model in some Member States specifically in the public sector allowing financing of the energy savings actions and investments by the future energy savings.

*We recommend*

- *adding a definition of Energy Performance Contracting (in line with the one of Directive 2006/32/EC) in article 2.*
- *Article 12 could include the obligation of all member states to:*
  - *Ensure local regulations do not prevent the use of the model or render it inefficient through administrative burden.*
  - *Promote the use of the model specifically in the public sector.*

- **Training of all actors in the building chain is necessary and massive actions should be launched, if possible in harmonised programmes across the European Union.**

From design, installation, operation and occupancy up to services including certification the actors along the chain are numerous. Massive training (technical as well as behavioural) is necessary to raise the level of awareness and knowledge and thereby provide a persistently high level of performance.

*With the recasting of the Energy Performance of Building Directive, we encourage the European Commission to launch a massive pan European training plan.*

*In line with existing article 12, a specific article could frame this plan to be organised with the European Commission, the Member States and the Stakeholders representative associations.*

- **Provisions for Installers**

The current EPBD provisions stop short of applying requirements for installers, yet the availability of installers is a critical infrastructural requirement to achieve the potential in buildings, particularly in the domestic sector.

*Member States should be required to train more and more thoroughly installers who are able to support the improvement of building energy efficiency. We propose that such development should focus on two elements:*

- *Providing a suitable capacity of installers competent in the installation and integration of the energy efficient and renewable technologies required.*
- *Training installers who are able to advise homeowners in respect of their building energy performance (including the energy performance certificate) and on potential improvements.*

This would encompass training and the production of a standard to validate trained installers. It could also be incentivised through the EPBD.

This Orgalime position translates into the following answers to the Commission's stakeholder questionnaire:

## 2. ORGALIME RESPONSES TO STAKEHOLDER QUESTIONNAIRE

- **CLARIFICATION and SIMPLIFICATION ASPECTS**

*Full realization of the Directive's objective to reduce energy consumption in the buildings sector could fail due to unclear, imprecise or excessively complex definitions and requirements in the current text.*

**QUESTION 1.** Which of the definition(s) or requirement(s) of the existing Directive should be clarified or simplified? Please choose the part(s) of the Directive you refer to: (compulsory)

**ORGALIME REPLY:** Preamble, articles 1-7, 10 and 11.

- **THRESHOLDS WITHIN THE DIRECTIVE**

*The obligations of the current Directive on minimum energy performance requirements and inspections respectively cover existing buildings above 1000 m2 total useful floor area that undergo major renovation, and all new buildings, as well as boilers and air-conditioning systems above a certain rated output (in kW) respectively.*

*Please provide an answer to each of the following questions and, if possible, **justify it by quantifying the environmental, social and economic impact of your proposal.***

**QUESTION 2.1:** Do you propose that the 1000 m2 total useful floor area threshold for existing buildings that undergo major renovation (article 6 of the Directive) be changed or eliminated? (compulsory)

**ORGALIME REPLY:** Yes, Orgalime agrees that it should be eliminated.

**QUESTION 2.2:** Do you propose that the 1000 m2 total useful floor area threshold for the requirements on 'alternative systems' (article 5 of the Directive) and/or on the display of the energy performance certificate (article 7(3) of the Directive) be changed or eliminated? (compulsory)

**ORGALIME REPLY:** Yes, Orgalime agrees that it should be eliminated.

**QUESTION 2.3:** Do you propose that the thresholds on the rated output of boilers and/or air-conditioning systems subject to regular inspections (article 8 and article 9 of the Directive) be changed or eliminated? (compulsory)

**ORGALIME REPLY:** Yes, Orgalime agrees.

Regarding environmental, social and economic impacts, please consult Electra Working Group 1 report or annex 2 of the final short report.

- **STRENGTHENING OF REQUIREMENTS**

*The existing Directive gives room for implementation at national/regional levels. Some national, regional or local authorities have laid down requirements which go beyond the Directive's requirements, e.g. on control schemes, link to financial incentives or on the realization of energy efficiency improvement measures.*

Please provide an answer to each of the following questions and, if possible, **justify it by quantifying the environmental, social and economic impact of your proposal.**

**QUESTION 3.1.** Which new/changed requirement(s) or content concerning the energy performance certificate (article 7 of the Directive) do you consider to have a high impact on realizing energy savings in the buildings sector?

(Max. 2000 characters) (optional)

**ORGALIME REPLY:** Article 7 paragraph 1 refers to a 10 years validity period for Energy Performance Certificate, according to the above, at least for non residential buildings the period should be reduced to a shorter period.

Beyond energy performance certificates, including recommendations for implementing saving actions, real implementation of the actions should be encouraged by incentives and valued in instruments such as “building passports”.

**QUESTION 3.2.** Which new/changed requirement(s) concerning the inspection of boilers (article 8 of the Directive) do you consider to have a high impact on realizing energy savings in the buildings sector? (Max. 2000 characters) (optional)

**ORGALIME REPLY:** Article 8.a: Delete unnecessary differentiation between oil and gas and lower rated output down to 4 kW. Replace the word “boiler” by “heat generator”. Delete clause 8b.

**QUESTION 3.3.** Which new/changed requirement(s) concerning the inspection of air-conditioning systems (article 9 of the Directive) do you consider to have a high impact on realizing energy savings in the buildings sector?

(Max. 2000 characters) (optional)

**ORGALIME REPLY:** The threshold should refer to the total of installed appliances in buildings. Lower rated output to 4kW.

**QUESTION 3.4.** Due to the complexity and variation of boundary conditions in the 27 Member States (e.g. with regard to the existing buildings stock, outdoor climate conditions, costs of energy, labour and material, taxes, etc.), minimum energy performance requirements are not stipulated at EU level in the existing Directive. They are left for the Member States to define as regards both their definition and parameters instead. What type of approach do you consider feasible and effective which could be laid down at EU level with regard to minimum energy performance requirements for buildings? (Max. 2000 characters) (optional)

**ORGALIME REPLY:** Measures to increase energy efficiency are not necessary when the total energy demand is less than 10 kWh/m<sup>2</sup>a.

**QUESTION 3.5.** Which other requirement(s) do you consider need strengthening, and in which way? (Max. 2000 characters) (optional)

**ORGALIME REPLY:** Change legal basis to article 95 of EC Treaty.

Regarding environmental, social and economic impacts, please consult Electra Working Group 1 report or annex 2 of the final short report.

#### • THE ROLE OF THE PUBLIC SECTOR

*The public sector is often seen as an important actor to raise broad awareness on energy efficiency in buildings and which can therefore also contribute to stimulating energy savings by acting as a leading example.*

*Please, if possible, justify your answer by quantifying the environmental, social and economic impact of your proposal.*

**QUESTION 4:** Besides the current requirement of the Energy Performance of Buildings Directive for the public sector to display the energy performance certificate in a prominent place: Do you

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consider the public sector should play a stronger role to act as a leading example for energy savings in buildings? (compulsory)

**ORGALIME REPLY:** Yes, it should.

- **OTHER**

**QUESTION 5.1.** Do you consider that climate adaptation should significantly influence the level of requirements laid down by buildings regulation? (compulsory)

**ORGALIME REPLY:** Yes. A single method for calculation, with a formula for accounting for local climatic conditions, would enable common technology assessment and the ability to benchmark.

**QUESTION 5.2.** Do you propose other aspects/ideas than the aforementioned to be included in the recasting of the Energy Performance of Buildings Directive? (compulsory)

**ORGALIME REPLY:** Yes (see position under chapter 1).

- Beyond thermal insulation and use of high efficiency equipments, active control systems such as automation, control and metering systems (for heating, ventilation, air conditioning, lighting ...) should be promoted.

- Measuring, displaying and monitoring the energy used by type of energy and by energy usage can be provided by technology at an economical cost and shall be a strong mean to change behaviour of building occupants which is mandatory to reach the targets.

- Making consumption data available and publishing benchmark data by type of building and usage would foster implementation of saving actions; the public sector should take the lead in such a move and build the references.

- As for article 8 on boilers and article 9 on air conditioning, a specific article should be added for building automation and control systems. Instead of the “inspection concept” of articles 8 and 9, however, this new article should foresee a regular maintenance by qualified personnel.

- Servicing of all equipment by qualified personnel should be made mandatory at installation and on regular basis throughout the life of the building to ensure persistence of the performance.

- Include lighting and luminaries used inside or outside a building systematically in the recast EPBD.

- Evaluations should be done according to CEN Standards.

- Energy Performance Contracting has proved to be a very good model in some Members States, specifically in the public sector, allowing financing of the energy savings actions and investments by the future energy savings, extended use of this model should be facilitated and promoted.

- Training of all actors in the building chain is necessary and massive actions should be launched in a possible harmonised program across European Union.

- Provisions for installers should be introduced.