



Comments of BING¹
on the
Study for the Development of European Ecolabel Criteria for Buildings –
Second background report (version March 2009)

General comments:

BING fully supports efforts to increase the environmental performance and sustainability of buildings. An ambitious and coherent set of measures can lead to a triple win situation: providing sustainable buildings for users, protecting the environment and offering new business opportunities to industry. However, there are serious concerns that the European Union is overshooting the mark. Currently, the following systems are in place or under development:

- Energy Performance of Buildings Directive (EPBD) – recast in progress;
- Construction Product Regulation (CPR) – revision in progress;
- CEN / TC 350 (sustainable construction) – under development;
- CEN / TC 351 (Release of dangerous substances) – under development;
- Eco-design directive / energy labelling directive – revision almost finalised;
- the green public procurement initiative – under development;
- the eco-label for buildings (and, at a later stage, for construction) – revision almost finalised.

➤ **BING pleads in favour of developing one single set of EU sustainability indicators.**

BING believes that that work of CEN/TC 350, mandated by the European Commission, provides the most appropriate framework, as it will allow the assessment of product at the building level.

The eco-label for buildings should establish ambitious thresholds for the indicators agreed upon TC350. Setting up parallel and sometimes conflicting sets of criteria and labels will increase the cost for industry (and ultimately end-users) with SMEs being most severely penalised.

¹ BING is the European association representing the rigid polyurethane insulation industry (PUR/PIR). Rigid polyurethane foam is a premium insulation material used in a wide variety of applications in buildings, district heating, cooling and refrigeration, and industrial systems.

Definition of the product group:

BING has doubts about the feasibility of a single eco-label covering all types of buildings. The promoters are requested to demonstrate that prefabricated detached houses should be treated exactly the same way as complex buildings such as hospitals.

➤ **The working group should take a clear decision on the definition of the product group.**

Comments on the energy efficiency criteria:

Generally, BING supports the proposal to base the energy efficiency criteria on the national building rating systems developed under the Energy performance of buildings directive. This clearly demonstrates the feasibility of integrating existing European schemes into new initiatives and reducing costs for industry and society as a whole.

This advantage outweighs the fact that the large number of different national or even regional rating systems will make comparisons difficult.

By the middle of the next decade, all new buildings in a number of countries (A, D, DK, F, FIN, NL, UK) must meet very low or zero energy levels. Hence, the Eco-label, as it stands today, may fall behind minimum requirements in many countries, whereas it would still be very ambitious in others.

The draft recast Energy performance of buildings directive (first reading position of the European Parliament) requires all new buildings to be zero energy buildings from 2019 onwards.

➤ **The working group must find a way to reconcile these two realities.**

Comments on the proposed set of indicators:

The state of discussion clearly demonstrates the difficulties to agree on a simple but comprehensive set of indicators. The use of the TC 350 indicators would have provided a coherent framework and BING urges the working group again to use them.

BING cannot support the methodology used by the promoters for the pre-selection of eco-label indicators. Whilst it was certainly necessary to look at existing schemes, this purely statistical analysis did not provide any indication of the relevance of the selected criteria. It was not distinguished between mandatory and voluntary indicators and their true meaning remains highly unclear in many instances.

The Eco-label regulation requires indicators to focus on the most significant environmental impacts of the product – in this case – the building. Furthermore, indicators should take account of the

- net environmental balance between the environmental benefits and burdens and
- life cycle data and quantitative environmental impacts;

Taking this into account, BING strongly believes that the starting point should have been the end product: a highly energy efficient and durable building which minimizes impacts on health and the environment.

Federation of European Rigid Polyurethane Foam Associations

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The next step should have been the selection of the most relevant indicators which account for let's say 80 % of the building's overall environmental impact over its lifetime. Each of the selected indicators should have been weighted according to their relevance.

Example:

40 % of the energy consumption of buildings is used for heating purposes. Hence, indicators need to be developed to minimize heating demand, and generate the largest possible part of the remaining heating energy demand by renewables.

Once these major indicators identified, the promoters should have looked at the remaining 20 % of the building's environmental impact and propose a list of voluntary criteria from which the specifier could choose. Indicators with minor relevance should be excluded completely.

➤ **BING calls on the working group to proceed with a new scientifically sound selection of indicators.**

Material-related indicators:

A recent study conducted by the Joint Research Centre shows that the **use phase** accounts for 98 % of the environmental impacts of buildings in the case of existing buildings and about 80 % in the case of new buildings². In other words, material-related indicators must focus on the environmental performance in a given end-use application. The most ecological product will not necessarily show the best environmental life cycle performance in a given building design.

Example:

Insulation material A is considered very ecological with low-embodied energy. Hence one may conclude that this material should be favoured over others.

However, insulation material A has a thermal conductivity which is twice as high as that of insulant B, a product with high embodied energy. Hence, in order to achieve the same thermal resistance for an outside wall, the insulation layer using insulant A needs to be twice as thick. For a low energy building, the difference in thickness can realistically be estimated at 15 cm. If the overall façade length of the building is 60m, the buildings footprint increases by 9.0 m² when insulant A is used. Furthermore, thicker walls will require larger window boards, longer beams and larger roofs. More insulation material may mean higher weight, which in turn may require a stronger building structure (foundations, walls, beams).

The decision, which of the two insulants performs better depends on the building design and needs to be taken at that level.

² Environmental Improvement Potentials of Residential Buildings (IMPRO-Building), JRC 2008

Indicator C2.9: Plastics products – halogen free / additives

The chairman clearly stated in the meeting of 26 March 09 that the eco-label for buildings should not interfere in the choice of materials. This indicator would however exclude a large group of highly performing building materials. The proposers have not provided any life cycle data or quantitative analysis as to why these products should show an unacceptable life cycle performance in terms of environmental or health hazards.

The proposers also failed to quantify the impact of this indicator on the buildings environmental performance. BING is convinced that this impact would be marginal and, hence, not relevant for the eco-label.

Example:

TCPP is a halogenated flame retardant used in a number of building products. The EU risk assessment concluded that there is no risk for any of the downstream users (material manufacturers, builders, users). The eco-label cannot be more ambitious than “no risk”. TCPP is not emitted during the lifetime of the construction product and will be destroyed at the end of the product life through energy recovery. On the other hand, in its use phase, the flame retardant will help protect the health of users.

- **BING calls on the promoters to remove this indicator from the list or replace it by specific substances representing a high risk for health or the environment.**

Indicator C2.21: Embodied energy in materials

As outlined in the meeting, this indicator is clearly not related to the life-cycle performance of a construction product. If the working group insists on including this in the final list, it must be ensured that the embodied energy is not measured per weight unit (i.e. kg) but at the level of the end-use application (for example the building, wall, roof etc.). Otherwise, the system would penalise light products.

- **BING invites the promoters to clarify this indicator or remove it.**

Brussels, 24 April 2009