





ANEC/BEUC/EEB comments on [Draft] Commission Decision on establishing the ecological criteria for the EU Ecolabel for office buildings

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Summary

In general, ANEC/BEUC/EEB welcome the recent developments in the proposed Ecolabel criteria for office buildings. We support the basic concepts followed in the draft decision as well as the choice of indicators and the envisaged benchmarks. However, we believe that some improvements are still needed.

In particular, we call for:

- The impacts relating to the construction activities (such as noise, dust, particles) should be addressed. They have unfortunately been completely neglected so far.
- Indicators relating to the use stage of office buildings to be improved and/or clarified.
- A criterion on adaptability to be introduced so as to avoid future energy and mass flows when converting the building from an office to a residential building (caused by necessary adaptations). Hence, it needs to be proven whether the assembly itself allows for easy backfitting in the way it is constructed. (e.g. whether components are glued, rather than fixed in a detachable way).
- A criterion on accessibility to be included considering that the award of the EU Ecolabel for buildings should take into account the needs and interests of society and local community in particular.

Finally we would like to express our strong disapproval with the proposal to put on an equal footing environmental product declarations (EPDs) and ISO Type I Ecolabels. EPDs indeed only represent (questionable) numbers of limited benefit and robustness whilst ISO Type I Ecolabels are awarded to products of excellent environmental performance and are verified by a third-party. We trust that the future EU Ecolabel for office buildings addresses consumer concerns in a decent manner by elaborating an ambitious criteria catalogue.

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Detailed comments on the proposed criteria

Criterion 1- Overall energy consumption (alternative options A or B)

Option a)

The overall energy consumption of the office building shall be comprised into the best energy performing new and major renovated office buildings of the member state where it is located.

- a) If Member State where the office building is located developed an energy rating A-G, the building shall meet the energy performance rated with class A or better on the respective national calculation methods.
- b) If no energy ratings were developed, the energy performance of the office building shall be comprised into the 20% best energy performing new and major renovated office buildings of the Member State where it is located.

Option b)

The maximum overall energy consumption shall be equally or less than 53 kWh/m²year. The overall energy consumption of the office building is reported as yearly final energy consumption divided by the floor area. The floor area referred as conditioned floor area that should not include areas such as parking car places, unfinished basements, storage space, stair cases, lounges.

The overall final energy consumption includes lighting, heating, cooling, DHW and auxiliary energy partial consumptions of the building. All kinds of fuels and all energy carriers should be included (electricity, natural gas, oil fuel, PV, solar thermal, etc.).

> ANEC/BEUC/EEB Comments

Today energy class rating does not exist in every EU countries. Furthermore, existing energy class ratings differ significantly. For instance different scales are used (e.g. with A or A++ as top level) and the national calculation methods used are barely comparable. In this context, option a) would mean that buildings bearing the Ecolabel could have completely different performance levels. In our view it is not a consistent approach and we therefore strongly support option b).

However we believe that the maximum overall energy consumption of 53 KWh/m²year proposed under option b) could be made more ambitious. This is indeed feasible and would contribute to reach the objective of zero energy buildings by 2020 set in the EPBD¹. We appreciate that there have been concerns expressed about the risk that a common value for all EU countries would not be feasible due to the existence of different climatic zones. However we believe that this could be easily overcome by taking into account climatic zones in the calculations.

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¹ Energy Performance of Buildings Directive.







Moreover, we agree that referring to the primary energy consumption (as proposed during discussion) would distort the result. In our view, the calculated energy need of the building is the main characteristic and should therefore be taken into account in the process of awarding the Ecolabel to a building. On the contrary, the efficiency of the plants (energy losses) should not be taking into account as they are not part of the characteristics of a building. Like in the previous case, different national conversion factors would lead to different results (as stated in the technical analysis document).

<u>Criterion 2 – Use of less polluting energy sources</u>

The calculated CO2eq emissions during the use phase of the office building should be lower than 20 kg CO2eq/m2a. The CO2eq corresponds to the conversion factors shown in the database of ECLD and CML2002 method and the floor area is calculated as conditioned floor area.

The overall CO2eq emission of the office building is reported as yearly CO2eq emissions divided by the floor area. The floor area referred as conditioned floor area that should not include areas such as parking car places, unfinished basements, storage space, step cases, lounges.

> ANEC/BEUC/EEB Comments

The proposal consists of calculating the $\rm CO_2$ equivalent emissions during the use phase by conversion factors for different energy carriers and a related requirement of 20 kg CO2eq emissions. The difficulty with CO2eq emission factors is similar to the use of primary energy factors: different factors are used in different countries and change over time. In addition, the users can choose different electricity suppliers with different energy mixes and change their supplier at any time. Therefore again, the resulting figures reflect not only the building but also the efficiency of the energy supply. Hence, the question is how to include renewable energy generated e.g. by solar panels attached to the roof, solar thermal devices, air ventilation units including heat recovery or geothermal devices. We therefore believe that it would be better to add some requirements regarding the contribution of these energy sources to the overall energy consumption (e.g. a percentage for renewable energy used or installation of solar collectors/panels) rather than relying on a CO2eq figure. Additionally, a conversion factor on district heating is missing.

<u>Criterion 3 – Energy monitoring system</u>

The office building shall be provided with an energy monitoring system that is able to report the overall energy consumption of the building. An energy monitoring system able to report separately the energy consumption of at least heating, cooling, lighting and domestic hot water shall be installed. This system shall allow the identification of the possible mismatches and improvement potentials during the use phase of the office building.

A user's information system shall be established ensuring that the information regarded to energy consumption is distributed to at least the maintenance staff.

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ANEC/BEUC/EEB Comments

We support this criterion. We however ask not to restrict the distribution of the energy consumption information to the staff but instead, to extend it to either a visible display for all users or by intranet.

<u>Criterion 4 – Use of low environmental impact construction products</u>

At least 80% in cost of the major building elements shall be low environmental impact building products. At least one of the following criteria shall be complied with the construction products with low environmental impact in the following order:

- 1) Ecolabelled products (labels Type I or Type III in accordance to ISO 14024 or ISO 14025 respectively) shall be selected.
- 2) If point 1 is not possible, materials with LCA information in accordance with ISO 14024 demonstrating low environmental impact shall be selected.

> ANEC/BEUC/EEB Comments

We strongly oppose the use of Type III labels as alternative to type I labels which are awarded to products with superior environmental performance whilst EPDs are just declared numbers. In our view EPDs related data is questionable from a methodological perspective (e.g. the numbers are not robust as there is a lot of freedom to calculate them). Moreover, key information (on e.g. chemicals, indoor emissions) is not considered in the new European standard EN 15804. Impact assessment categories are of limited use – in case of buildings the impact indicator results correlate with energy consumption anyway (as pointed out by the IMPRO Building study²) and do not provide added value. The IMPRO Building study considers energy consumption as good proxy indicator. Furthermore, the contribution of building materials to the overall energy balance is rather limited (as pointed out in the technical analysis document and in the IMPRO Buildings study). The improvement potential is, therefore, quite limited. It is also just a small number of products which constitute the large proportion of the embedded energy. As pointed out in the technical analysis document, it is also difficult to set criteria for embedded energy.

In our view, instruments like EPDs and ISO type III label cannot and should not be used for identifying products of best performance within a product category. EPD TYPE III labels are not the right means to provide useful information regarding environmental performance of (building) products. This is more detailed in an ANEC position paper regarding the work of CEN TC 350^3 .

There is also limited benefit in having LCA information "demonstrating low environmental impact". It is not clear who decides what a low environmental impact is given that benchmarks of superior performance are missing. The EU Ecolabel is the label of excellence - an LCA is certainly not one.

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² Environmental Improvement Potentials of Residential Buildings (IMPRO-Building), http://ftp.jrc.es/EURdoc/JRC46667.pdf

³ ANEC position paper "Sustainable construction – a building site without end. Alternatives to flawed standards, September 2011 (available at http://www.anec.eu/attachments/ANEC-ENV-2011-G-037.pdf)







We therefore propose to follow a product specific approach and establish minimum percentages of Eco-labelled Type I products for each product group. Alternatively, where the availability of construction products awarded with ecolabels is low, environmental criteria from labels and equivalent criteria can be used to choose non-certified products (likewise the benchmarks of the EMAS reference document "Construction" under development). Priority should of course always be given to third party verified schemes.

Finally it is questionable whether the 80 % of costs is the right value (80% might be difficult to achieve, at least if the requirement is limited to type I labels).

<u>Criterion 5 – Material recovery potential of the building materials</u>

The preparing for re-use, recycling and other material recovery, including backfilling operations using waste to substitute other materials, of non-hazardous construction and demolition waste excluding naturally occurring material defined in category 17 05 04 in the list of waste of the Directive 2008/98/EC on waste shall be increased to a minimum of 80% by weight.

➤ ANEC/BEUC/EEB Comments

The value of 80% seems to be a good proposal. However, criteria must be included on what is to be considered as "re-useable", "recyclable" and "other material recovery" based on the state-of-the-art. In principle, everything can be recovered – it does not mean that recovery actually takes place. Only those materials which are actually being recovered in significant amounts can be accepted in the calculation. This assessment cannot be shifted to the applicant as it could open the door to many different interpretations. Another question is whether or to which extent "downcycling" is accepted. Finally, the quality of recycling must also be addressed.

<u>Criterion 6 – Recycled and reuse content in the building materials</u>

At least 50% in weight of the building components installed in the building, excluding the structure, will be formed by products containing at least 30% of recycled or reused materials.

> ANEC/BEUC/EEB Comments

We propose to separate between the idea of re-use and recycling of building products because different sets of related criteria need to be established. Furthermore, a definition is needed for both terms to allow common understanding.

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Criterion 7 - Hazardous substances and materials in the building components

The following formulation is proposed:

In accordance with Article 6.6 of Regulation (EC) No 66/2010, the office building or any building element of it shall not contain substances referred to in Article 57 of Regulation (EC) No 1907/2006 nor substances or mixtures meeting the criteria for classification in the following hazard classes or categories in accordance with Regulation (EC) No 1272/2008 of the European Parliament and of the Council.

. . . .

The use of substances or mixtures in the final product which upon processing change their properties in a way that the identified hazard no longer applies is exempted from the above requirement.

Concentration limits for substances or mixtures meeting the criterion for classification in the hazard classes or categories listed in the table above, and for substances meeting the criterion of Article 57 (a), (b) or (c) of Regulation (EC) No 1907/2006, shall not exceed the generic or specific concentration limits determined in accordance with the Article 10 of Regulation (EC) No1272/2008. Where specific concentration limits are determined, they shall prevail against the generic ones.

Concentration limits for substances meeting criteria of Article 57 (d), (e) or (f) of Regulation (EC) No 1907/2006 shall not exceed 0.1 % weight by weight.

➤ ANEC/BEUC/EEB Comments

This criterion reflects Article 6.6 of the Ecolabel Regulation and adds concentration limits. This may be acceptable as a general approach. However, it must be borne in mind that the generic or specific concentration limits determined in accordance with the Article 10 of Regulation (EC) No1272/2008 were intended to classify chemical mixtures and were not intended to establish safe limits for products. Hence, the concentration limits can be too high. Also certain categories of dangerous substances are not included in the list (such as sensitizing compounds). The provision may have to be complemented with substance specific limits (e.g. for heavy metals). ANEC will further investigate the issue and come forward with additional proposals.

<u>Criterion 8 - Substances listed in accordance with Article 59(1) of Regulation (EC)</u> No 1907/2006

No derogation from the exclusion in article 6(6) may be given concerning substances identified as substances of very high concern and included in the list foreseen in article 59 of Regulation (EC) No 1907/2006, present in mixtures, in a building element or in any homogenous part of a complex building element in concentrations higher than 0.1%. Specific concentrations limits determined in accordance with Article 10 of Regulation (EC) No 1272/2008 shall apply in case it is lower than 0.1%.

> ANEC/BEUC/EEB Comments

This criterion can be deleted. It is based on Article 6.7 of the Ecolabel Directive which allows the Commission to grant derogations from the provisions of Article 6.6 subject to certain conditions. This means that e.g. industry can propose such derogations which would then – if adopted – be part of the criteria giving a permit to use a certain substance although not in conformity with Article 6.6. So there is no point in putting this text in here.

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Criterion 9- Responsible sourcing of wood and wood-based materials

At least 80% of the wood and wood-based materials shall be responsibly sourced materials.

> ANEC/BEUC/EEB Comments

From a consumer's perspective only FSC and PEFC should be taken into account as reliable certification systems.

Environmental criteria area: indoor air quality

Criterion 10 - IAQ in office buildings (Alternative options A or B)

Option A

The IAQ pollutants should be tested according to the standards summarized in the following table. Their concentrations shall be lower than those summarized in table 3.

Option B

Not to be considered any IAQ criteria in the EU Ecolabel

> ANEC/BEUC/EEB Comments

We consider this criterion as an important one. The concept of the presented table seems to rely on measuring product emissions using chamber tests. However, the table is just a fragment of a meaningful set of rules (e.g. it must be stipulated which products are to be tested, conversion factors from emission measurement to room concentration taking into account the covered area, definition of aldehydes, other emitted compounds, carcinogenic compounds etc. (all the details defined in e.g. the AgBB scheme. It looks that formaldehyde is missing. The LCI values (Lowest Concentration of Interest) – thresholds for non-CMR substances – are missing. We propose to base limits on Blue Angel or Natureplus levels rather than on the AgBB levels. For instance, carcinogenic substances should be below 1 μ g/m³ already after 3 days and TVOC below 1000 μ g/m³ after 3 days.

An on-site measurement would be an alternative, particularly for existing buildings. However, in this case one would have to describe the number and place of the measurements have to be performed. The AgBB scheme is not applicable to indoor air quality measured on site (it is only used in chamber tests). Hence, other test protocols would need to be referenced.

During discussion, a minimum and a maximum ventilation rates were proposed. Although a ventilation system will presumably be installed in new buildings it seems feasible to tackle the problem at the source of the emission rather than trying to solve it by adjusting the ventilation rates.

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Criterion 11 Visual comfort (criterion to be further developed)

Visual comfort shall be achieved by balanced illumination without appreciable interferences such as direct and reflected glare, a sufficient illumination level and possibility to adjust illumination individually to the particular needs. View out, non-glaring, proper light distribution and spectral colour in the permanent workplaces shall be guaranteed. The following checklist shall be considered following the respective national best practice daylighting guides:

- daylighting availability for the permanent workplaces;
- visibility to the exterior at least for 80% of the workplace;
- non-glaring daylight and artificial light;
- light distribution artificial light;
- color reproduction and spectral colour.

> ANEC/BEUC/EEB Comments

Most of the measurement has been taken from the existing assessment scheme of the German society for sustainable buildings (DGNB). We believe that this chapter needs further elaboration and would therefore propose to refer to the IBO study Environmental and health related criteria for buildings⁴ Chapter 9 "Daylighting.

Criterion 12 - Separate room for printers and office equipment

The building shall have apposite service rooms for placing imaging and office equipment generating dust and/or noise (such as printers, copy machines, plotters).

ANEC/BEUC/EEB Comments

ANEC/BEUC/EEB support inclusion of this criterion.

Environmental criteria area: Waste Management

Criterion 13 - Recycling facilities and waste management plan.

Dedicated storage space to cater for recyclable materials generated during the use phase shall be constructed. The waste collection area provided with the different containers shall be clearly labelled for recycling and adequately dimensioned according to the building operation.

A waste management plan shall be developed containing information on how to collect the waste generated, the monitoring of the waste streams and giving instructions on how to dispose of the separated waste streams.

> ANEC/BEUC/EEB Comments

ANEC/BEUC/EEB support the inclusion of this criterion.

⁴ Environmental and health related criteria for buildings,, Vienna 2011 (available at http://www.anec.eu/attachments/ANEC-R&T-2011-ENV-001final.pdf

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<u>Criterion 14 – Construction and demolition waste management plan</u>

A waste management plan shall be developed by the constructor and applied for the construction and demolition phases. The waste management plan shall include:

- an analysis of the project with the analysis of the type, amount and timing of the construction waste.
- a plan for the project: statement of the objectives of the waste management plan which contains the strategies and methods for disposing the waste of the construction projects. The waste management plan shall be developed by the constructor and clearly understood by the person/company in charge of the demolition and construction waste management. The waste management plan shall be submitted to the developer/owner, municipality and the regulatory agency. A person shall be appointed to implement and monitor the plan.
- an implementation plan and track record system: the waste management plan shall be flexible, recognizing changes and emerging technologies and methods. Issues to be recorded are the description of the materials, disposal alternatives, landfill, recycling, amount of waste, date when the C&D waste is removed from job site, tipping fees and mileage paid for the generated waste.
- a cost tracking/control shall be regarded as long as the waste management plan runs.
- post project evaluation: a final report indicating to which extent the goals were met with the project shall be reported (only for the construction waste).

> ANEC/BEUC/EEB Comments

FromTo our point of view requirements are missing. We propose setting required percentage of waste recycled and similar indicators.

Criterion 15 - Maximum water consumption

The estimated maximum water consumption shall be equal or less than 20 liter/person/day, where person refers to equivalent of a full-time employee in the office building.

> ANEC/BEUC/EEB Comments

Water consumption per person per day will highly rely on the consumer's behaviour and will only be estimated by means of scenarios or - in case of existing buildings – be measured. To our opinion the best performing state of the art with respect to water using devices should be taken as a benchmark, such as I per toilet flush or even waterless urinals in office buildings. From an ecological point of view, we support the idea of awarding the re-use of rainwater as grey-water. However, this requirement does not seem to be suitable for buildings with low water consumption (such as office buildings). The use of rainwater is also a question of local climate economic efficiency.

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Environmental criteria area: facilities

Criterion 17 - Promotion of bicycles

Dry bicycle storage space with slots shall be available for at least 15% of the building users. The cycle storages shall be safe, secure and accessible. Showers, changing rooms and lockers shall be set up in sufficient quantify according to the number of bicycle storage space

> ANEC/BEUC/EEB Comments

We strongly support this criterion and would suggest to increase the availability of bicycle storage place to at least 50% of the building users.

Environmental criteria area: corporate criteria

Criterion 18 - User information

The office building shall be supplied with relevant user information which provides advice on the building's proper end environmentally friendliest use, as well as its maintenance. It shall bear the following information on the most appropriate way to communicate relevant information to end-users and/or on documentation accompanying the building:

- Information concerning the buildings proper environmental use as well as information that the main environmental impacts are related to the use phase of the building shall be provided by the designer/developer to the owner.
- The proper maintenance of the office building in electronic or printed form (user's manual) shall include the energy saving management plan, the waste management plan and the water saving management plan.
- Information shall be provided that the building has been awarded the EU Ecolabel together with a brief specific explanation of the relevant criteria.
- Recommendations on the proper maintenance of the building and the proper management of the C&D waste shall be provided.
- This information shall contain all relevant instructions, particularly referring to the maintenance and use of the building.

> ANEC/BEUC/EEB Comments

We support the inclusion of this criterion.

Criterion 19 - Information appearing on the EU Ecolabel

The logo should be visible and readable. The use of the EU Ecolabel logo is protected in primary EU legislation. The EU Ecolabel registration/license number must appear on the visible part of the building, it must be readable and clearly visible.

The optional label with text box shall contain the following text:

- improved energy efficiency;
- improved water efficiency;
- reduced GHG emissions;
- -... (to be discussed further during the meeting, if additional information shall be placed on the label.)

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The guidelines for the use of the optional label wit label with text box can be found in the "Guidelines for the use of the Ecolabel logo" on the website: http://ec.europa.eu/environment/Ecolabel/promo/logos_en.htm

> ANEC/BEUC/EEB Comments

We understand that any building owner who is awarded with the Ecolabel should be able to promote his engagement by displaying it. This should not be awarded in the criteria catalogue but be part of the conditions of the contract of the licence holder.

END.

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