



POSITION PAPER

ANEC views on a "Common EU framework of core indicators for the environmental performance of EU buildings"

October 2016

Contact Person: Michela Vuerich (anec@anec.eu)
ANEC-SUST-2016-G-035

Background on ANEC's perspective

ANEC position on environmental performance of buildings is shaped by the 2011 [technical study 'Environmental and health related criteria for buildings'](#) we commissioned as basis for developing a European set of environmental and health-related indicators and corresponding minimum and excellence criteria, primarily for new residential buildings. The scope included provision of information to consumers on ways to achieve energy savings, for example.

ANEC has given its input in the standardisation committee CEN TC 350 "Economic performance assessment of buildings" tasked with developing standards for the sustainability assessment of buildings and building products. ANEC has repeatedly expressed its opposition to this work and stressed that the standards will be of limited use, not only in B2C transactions but also for other purposes, such as public procurement.

The study results were released in September 2011 together with an ANEC position paper "[Sustainable construction – a building site without end. Alternatives to flawed standards](#)". ANEC urgently called for decision makers to initiate a broad debate including all interested parties in order to work together and develop a stringent European concept for sustainability issues in the construction area.

ANEC was pleased to note that the draft Reference [document on best Environmental Management practice in the building and construction sector](#), drafted by Joint Research Centre in the context of EMAS took the [ANEC study report on "Environmental and health related criteria for buildings"](#) into account. We however regret that the current exercise on the common EU framework of core indicators for the environmental performance of EU buildings is not consistently taking existing EU initiatives on the subject in account.

In 2015 ANEC further supported its position when [responding](#) to the [EC public consultation on the review of the Energy Performance of Buildings Directive](#) also publishing the [ANEC position paper "Laying the foundations for sustainable buildings"](#). In the paper, we call for development of a European strategy for sustainable construction in order to achieve a reliable sustainable performance assessment of buildings, provision of meaningful measurement indicators and meaningful information to consumers and construction professionals. We provide recommendations on how to tackle the aspects we deem crucial: energy savings, durability, and information provision to enhance sustainable choices.

Building on the experience described above, ANEC considers and comments below the proposals for a common EU framework of core indicators for the environmental performance of EU buildings.

Introduction

The European Commission is running a [public consultation](#) on its draft proposals for a common EU framework of core indicators for the environmental performance of buildings. Stakeholders are invited to consult the ['summary findings and indicator proposals' consultation document](#).

Considering the limited space for comments and input in the consultation questionnaire, we explain our views in this paper complementing the response to the public consultation on "Common EU framework of core indicators for the environmental performance of EU buildings".

ANEC finds the questionnaire in this consultation is very biased and does not allow space for proper assessment of the issues at stake. In particular:

- The background document has limited use, it hardly provides any substantive information and does not include proper justifications of choices (maybe because this is just a summary).
- The perspective is very narrow and allows only to choose from a limited set of options.
- The important issues are not even touched upon - e.g. to prolong the service life of buildings.
- The predetermined service life times are unusable.
- Quantitative indicators are not useful for many aspects, the obsession to express everything using quantitative indicators and LCA is absurd and unhelpful. Qualitative indicators (i.e. compliance with a set of criteria) are more suited in many cases (e.g. for design for deconstruction, indoor quality criteria). In many cases the quantitative indicators are based on numerous assumptions and deliver junk numbers;
- Many questions do not make any sense (e.g. how many indicators should be established, levels of expertise, etc.).
- There is almost no possibility to provide comments.
- The LCA bias is unacceptable. According to several past ANEC research projects on environmental product information, it has become clear that indicators based on life-cycle assessment (LCA) methodology may not be the best means to characterise and declare the environmental performance.

Below we address the aspects covered in the consultation following each section of the Commission questionnaire.

ANEC remarks to specific themes in the study

The distinction between "basic" and "optional" indicators in Q2.1 does not make a lot of sense given that all indicators are optional in view of the goal "not to create a new standalone building certification scheme, or to establish performance benchmarks, but rather that it should provide a voluntary reporting framework". So the indicator framework should just establish options, perhaps with suitable qualifiers: more advanced - less advanced, more common - less common, more difficult - less difficult etc..

Below ANEC details the answers to the questionnaire based on the questions for each theme identified in the study.

Theme 1: Encouraging professional development and life cycle thinking

Q2.3 Asks 'to what extent should the indicators require differing levels of expertise'. There is no description of what are the criteria for "basic" level and "greater" level of expertise. We would refrain from answering this question.

Theme 2 Indicators to measure intensity of resource use

ANEC believes reporting should be possible using additional more targeted indicator metrics.

Theme 3: existing standards and methodologies

Q2.5 asks "to what extent could narrower life cycle stage boundaries be defined in order to encourage greater reporting on life cycle Global Warming Potential (GWP), Life Cycle Assessment (LCA) and Life Cycle Costing (LCC)"

We believe this question is not pertinent.

Indicators make sense which cover only certain life cycle stages - they are even preferable. If we take what is important for the consumer for instance, only the energy used in the use stage is relevant.

The European standard EN 15804 "*Sustainability of construction works. Environmental product declarations. Core rules for the product category of construction products*" does not require to conduct studies covering all life cycle stages - it covers also information modules.

Also Q2.6 on a narrower building component scope is biasing. ANEC stresses it does not make any sense to report Global Warming Potential or any other indicator results on products whose contribution is irrelevant.

Theme 4: Data availability, quality and transparency

As regards Q2.7 on the approach in cases where data are limited in quality to some Member States, ANEC believes the framework should not include indicators where the problem of low quality data is widespread at European level.

Theme 5: Comparability

As regards the level at which it is most appropriate for indicators to support performance comparisons, this depends on the indicator - for heat energy demand performance comparisons across EU may be possible, if the same calculation procedures are used. However, for primary energy (PE) it is not possible as PE factors are different in different countries. The same goes for Global Warming (GW) indicator results. So as general question this is pointless.

However, if a use in a European scheme is envisaged (e.g. ecolabel for office buildings) then everything should be done to avoid (sub)national specificities.

Theme 6: Tracking performance along a projects life cycle

With respect to the question about theme 6 on the extent to which indicators should allow tracking of quantifiable aspects of building performance from design to post-occupation, we believe this should only consider the design phase. Some countries have energy consumption calculation also on number of occupants, however it is more comparable if only the design phase is considered.

Indicators proposed and macro-objectives in JRC study

Detailed ANEC comments to options on suitability of indicators to measure performance (Q3.1)

Indicator 1.1. on Total primary energy is partly suitable. In light of what explained above commenting on 'comparability' we stress total primary energy cannot be the only energy indicator. It must be complemented by other indicators, particularly by the heating (or cooling in the southern countries) energy demand and the final energy demand. It should be indicated for different climate zones.

Indicator 1.2 (GWP) and 2.1 (on cradle to grave) are unsuitable.

Indicator 2.2 on 'Service life reporting' is partly suitable for performance measurement. It is interesting in principle, but the report does not specify how this should be done. A set of requirements to ensure durability (or an obligation to provide commercial guaranties) may be better suited.

Similarly for *indicator 2.4 on construction and waste demolition*, the number will be highly speculative as the demolition will happen many years after the assessment.

Concerning Construction waste it might not even be worth thinking of it compared to the End-of life-waste.

The way the building is demolished is of major importance to the recyclability of building products/components (i.e. blowing the building up versus disassembling it), but it is highly speculative what happens 50-100 years from now.

The aim of the deconstruction process should be to select and collect homogeneous material that can be utilized as well as of hazardous substances. The removal of contaminated material eases the conditioning of high quality secondary raw material. The indicator can even be considered as "unsuitable", unless every scenario possible will be calculated, which nobody will do.

Demolition waste arisings expressed in tonnes/100 m² floor area is an irrelevant number. The longer the service life time of the house the less relevant this is. If the service life time is doubled the waste stream per time unit would be halved. The more relevant question is what to do with the waste (below) – but also this raises many questions:

A % diversion from landfill to recycling and re-use excluding backfilling is hypothetical not only because it will happen in many years from now but also because a theoretical recyclability is one thing and real recycling yet another story (so even if the house was demolished next year we could not make a firm statement about real reuse or recycling by the time the house is built). It also depends on the applied quality criteria – what is accepted as "recyclable"? So in fact any number could be presented.

Indicator 3.1 on total mains drinking water consumption is unsuitable because it is a user indicator and not a building one.

Indicator 4.1 on quantitative reporting on specific pollutant levels is partly suitable. This would need a clear-cut measurement protocol (how many measurements, how many rooms etc.). Also the list of substances would have to be defined (it is not enough just to call for R-values. Also mutagenic and reprotoxic substances are relevant.

Indicator 4.1 on qualitative reporting on the presence of mould is unsuitable because mould should **not** be present.

Indicators 5.2a on additional cooling primary energy factor - is partly suitable

We have a neutral opinion on 6.1a and 6.1b regarding long term utility costs and long term maintenance and acquisition costs. Also for *indicator 6.2* we have a neutral position because value and risk factors are highly subjective.

Macro objective 2 on resource efficient material life cycles

The questionnaire asks what forms a full LCA 2.1 indicator should take. We believe this is again a biased question, presuming this indicator would be useful. We believe this indicator is not to be promoted.

Q3 10 All substances covered by the German AgBB scheme and volatile carcinogens cat. 2 and mutagens/reprotoxic substances. In addition, the absence of specified substances (e.g. sensitisers) in materials should be confirmed.

Missing objectives

Reducing the assessment to "building as product" is an incomplete process for attempts to establish a new set of objectives on sustainable environments. How people choose their environments for living needs further study, and assessment indicators should also aim at upgrading environments and living conditions. In this respect post-occupational studies may also be helpful (for general indicators and not for quantitative indicators or for supporting certification schemes).

Urban design and building design need to be considered jointly: how a building relates to its environment is essential in a sustainable environment. So section B can include another macro-objective on **infrastructure** such as accessibility to goods and services, transportation (mass and pedestrian, parking), work spaces and open space.

Natural light, horticulture and xeriscaping are important landscaping elements, alongside other ecological indicators that support residential environments. The "domesticity" nature of the assessment indicators (soft) to be added for residential environments can be a balance in the face of the technicalities (hard indicators) already imposed in the proposed assessment process.

Conclusions

ANEC regrets the European Commission consultation on the draft proposals for a common EU framework of core indicators for the environmental performance gives a sided interpretation of the meaningful environmental indicators to consider in the construction sector.

Many questions do not make any sense (e.g. how many indicators should be established, levels of expertise, etc.). The presented options to answer reflect a very narrow perspective, while the questionnaire does not offer space for appropriate assessment of the issues at stake. Furthermore, the background document is of limited use, it hardly provides any substantive information and does not include proper justifications of choice.

As detailed above some of the suggested approaches by the authors are questionable or are only partially suitable in addition, the following critical issues are missing:

Foremost, the service life of buildings needs to be prolonged and durability addressed by either a set of requirements or an obligation to provide commercial guarantees. The approach to predetermine service life times is unsuitable.

The end of life stage is associated with durability aspects. The way the building is demolished is of major importance to the recyclability of building products/components (i.e. blowing the building up versus disassembling it), but it is highly speculative on what happens 50-100 years from now.

The aim of the deconstruction process should be to select and collect homogeneous material that can be utilized as well as of hazardous substances. To this end there needs to be a set of standardized scenarios for the different possibilities which then will be comparable, or a default worst-case scenario be chosen.

Quantitative indicators are not useful for many aspects. Qualitative indicators (i.e. compliance with a set of criteria) are more suitable in many cases (e.g. for design for deconstruction, indoor quality criteria). In many cases the quantitative indicators are based on numerous assumptions and deliver unusable numbers.

We especially note that the LCA bias is unacceptable and we refer to the findings in several past ANEC research projects on environmental product information, which made clear that indicators based on life-cycle assessment (LCA) methodology may not be the best means to characterise and declare the environmental performance. In many cases, significant production or use-phase indicators (e.g. energy efficiency, indoor emissions) derived from a variety of tools (e.g. chemical risk assessment) are a better choice for product labelling and differentiation among similar products compared with LCA indicators.

Acknowledgements

We thank Franz Fiala, Guido Hoff and Nerkis Kural for their consideration of the JRC drafts and their contribution to the ANEC consultation reply.

About ANEC

ANEC is the European consumer voice in standardisation, defending consumer interests in the processes of technical standardisation and conformity assessment, as well as related legislation and public policies.

ANEC was established in 1995 as an international non-profit association under Belgian law and is open to the representation of national consumer organisations in 33 countries.

ANEC is funded by the European Union and EFTA, with national consumer organisations contributing in kind. Its Secretariat is based in Brussels.



Raising standards for consumers

**European association for the coordination
of consumer representation in standardisation aisbl**

Avenue de Tervuren 32, box 27, B-1040 Brussels, Belgium

Tel.: +32 2 743 24 70 / Fax: +32 2 706 54 30

E-mail: anec@anec.eu

EC Register of Interest Representatives:

Identification number 507800799-30

www.anec.eu

@anectweet

www.facebook.com/ANEC.Standards



ANEC is supported financially by the European Union & EFTA

This document may be quoted and reproduced, provided the source is given.

This document is available in English upon request from the ANEC Secretariat or from the ANEC website at www.anec.eu

© Copyright ANEC 2016