



IL FUTURO  
DELL'EFFICIENZA ENERGETICA  
PARTE DA QUI

# **PRINCIPLES, EXPECTED EFFECTS AND NATIONAL IMPLEMENTATIONS OF EUROPEAN DIRECTIVE 31/2010 AND 27/2012**



Cultura e Tecnica per Energia Uomo e Ambiente

**An AiCARR-REHVA Seminar**



REHVA  
Federation of  
European Heating,  
Ventilation and  
Air-conditioning  
Associations

**Fiera Milano Rho, 17 marzo 2016**



Associazione Italiana Condizionamento dell'Aria Riscaldamento e Refrigerazione



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# **Public consultation on the evaluation of EPBD**

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Cultura e Tecnica per Energia Uomo e Ambiente

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# The objective

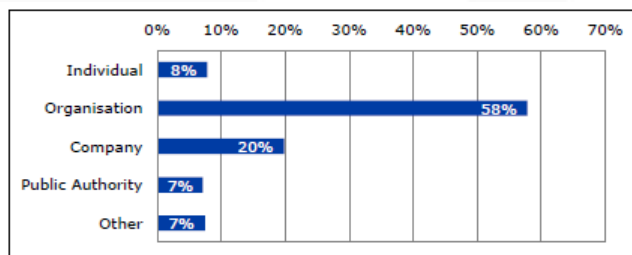
The European Commission launched a public consultation on June 30<sup>th</sup> till October 31<sup>st</sup> 2015 to consult stakeholders on the **review of the Energy Performance of Buildings Directive** and **evaluate whether the directive has met its aims.**

The respondents cover all Member States of the European Union. Responses from outside the EU have also been submitted.

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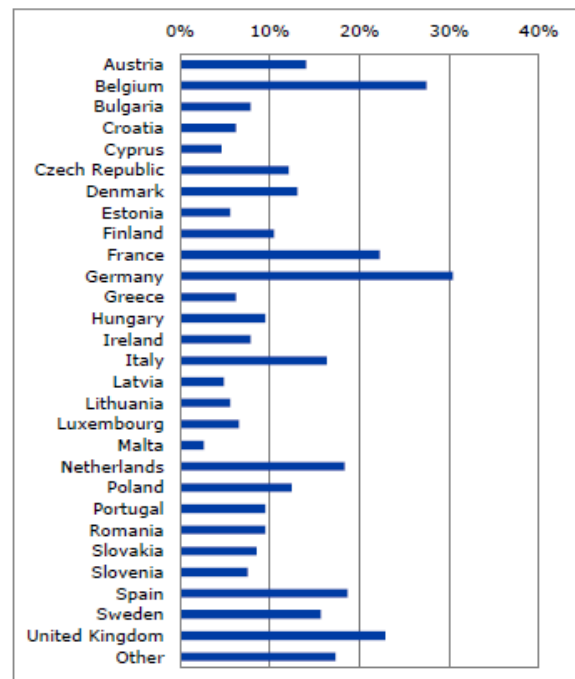


# Contributions



Between 30th of June to 31st of October 2015 **308** stakeholders replied to the questions of the public consultation.

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## Public consultation on the evaluation of EPBD

# REHVA as Stakeholder

REHVA was involved as stakeholder in this consultation and, through its Technical and Research, Committee answered to a selected number of questions.

A final report was provided to the Commission by ECOFYS analysing all received answers to gain an in-depth view of the public opinion on the EPBD review. [http://bpie.eu/wp-content/uploads/2015/12/Task2\\_final-report\\_Public-Consultation-on-the-Evaluation-of-the-EPBD.pdf](http://bpie.eu/wp-content/uploads/2015/12/Task2_final-report_Public-Consultation-on-the-Evaluation-of-the-EPBD.pdf)

Have been the REHVA comments taken into consideration? [http://www.rehva.eu/fileadmin/Publications\\_and\\_resources/Position\\_papers/REHVA\\_comments\\_submitted\\_version\\_2015-10-30.pdf](http://www.rehva.eu/fileadmin/Publications_and_resources/Position_papers/REHVA_comments_submitted_version_2015-10-30.pdf)

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GENERIAMO IDEE PER UN'ENERGIA SOSTENIBILE



## Public consultation on the evaluation of EPBD

	Sections	Quest.	Answ.
A	Overall Assessment	1-16	8/16
B	Facilitating enforcement and compliance	17-24	5/8
C	Energy Performance Certificates and stimulating energy efficient renovation of the building stock	25-33	5/9
D	Financing energy efficiency in buildings and creation of markets	34-41	3/8
E	Energy poverty and affordability of housing	42-45	0
F	Ensuring new highly efficient buildings using a higher share of renewable energy	46-53	0
G	Links between the EPBD and district and city levels, smart cities, and heating and cooling networks	54-62	3/9
H	Awareness, information and building data	63-68	0
I	Sustainability, competitiveness and skills in the construction sector	69-71	1/3
J	Building systems requirements	72-76	5/5
K	Operational management and maintenance	77-79	3/3
L	Further comments	-	yes

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GENERIAMO IDEE PER UN'ENERGIA SOSTENIBILE





## Public consultation on the evaluation of EPBD

# Overall Assessment

N.	Question	Report	REHVA
3	Has EPBD helped to increase renovation (more than 25% of the surface of the building envelope) rates?	Not sufficiently	Only when incentives have been added too
4	In your view, has the EPBD sufficiently contributed to accelerating investment in improving the energy performance of the EU's building stock?	Not sufficiently or partially	Yes
	Why?	through EPCs and nZEB	through EPCs
	Why not?	control of compliance with requirements is left to the MS	lack of strict and regular surveillance schemes

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## Public consultation on the evaluation of EPBD

# Overall Assessment

N.	Question	Report	REHVA
5	Overall, do you think that the EPBD is contributing to cost-effective improvements in energy performance?	At least partly contributing	Yes
	Why?	no particular technologies are prescribed; when ambitious energy performance requirements are not in place	setting up minimum energy and maintenance requirements and increasing consumers' consciousness through EPCs; <b>cost optimality proc.</b>
	Why not?	clear definition of cost-effectiveness is missing	

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# Overall Assessment

N.	Question	Report	REHVA
6	Do you think that the aim of ensuring the <b>same level of ambition</b> across the EU in setting minimum energy performance requirements within the EPBD <b>has been met</b> ?	Not met	Not met
	Why not?	MS have interpreted the requirements of the EPBD in different ways; it does not make sense to implement the same energy performance requirement across all the Member States	MS have interpreted and applied the EPBD in different ways: different definitions, different metrics, and different calculation procedure despite the CEN-EPBD standards package

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# Overall Assessment

N.	Question	Report	REHVA
7	Has the EPBD effectively <b>addressed the challenges</b> of <b>existing</b> buildings' energy performance?	<b>No</b> , EPBD does not give a clear path for existing buildings towards increasing energy performance	<b>No</b> , EPBD didn't address sufficiently the challenge of reaching nZEB performance of the existing building stock
8	Has the EPBD set <b>effective energy performance</b> standards for <b>new</b> buildings?	<b>Yes</b> , but more guidance and clarity on nZEB definition is required and the gap between predictions and real performance has not been tackled.	<b>No</b> , <b>some aspects shall be improved: nZEB requirements and standard use input data has to be defined for each building category; the hourly approach is a necessary requirement for nZEB assessment procedures.</b>

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# Overall Assessment

N.	Question	Report	REHVA
10	How successful has the inclusion of Energy Performance Certificates in the EPBD been? Have the certificates contributed to improvements in energy performance of buildings?	<p>EPCs have been successful in their prime purpose: to inform and empower building users and owners to make informed choices on the way they consume energy.</p> <p>Still work is required for improving the quality and for including all energy uses.</p> <p>Need to improve the competences of the energy auditors and certifiers.</p>	<p>EPCs have made good progress and are evidently successful. However there's a need for measures certifying the quality (=correct data) of EPCs:</p> <ul style="list-style-type: none"> <li>- certification or qualification schemes for persons and/or companies issuing EPC</li> <li>- regular surveillance schemes.</li> </ul> <p>The level of surveillance and the actions following infringement procedures are often insufficient.</p>



# Overall Assessment

N.	Question	Report	REHVA
11	What has worked well in the EPBD? What needs to be improved?	<p>Well:</p> <ul style="list-style-type: none"> <li>- increasing awareness for energy efficiency in the building sector,</li> <li>- the setting of minimum energy performance requirements at cost-optimal level</li> <li>- the introduction of NZEB for new buildings</li> </ul> <p>Several issues:</p> <ul style="list-style-type: none"> <li>- inconsistent implementation of the EPBD across EU MS,</li> <li>- poor quality of EPCs,</li> <li>- missing increase in renovation rate, national compliance and enforcement,</li> <li>- missing definition of NZEB</li> <li>- an improved use of financing instruments</li> </ul>	<p>EPBD was implemented in most Member States without paying attention to indoor environment quality (IEQ). EPBD shall create a mandatory link between IEQ and energy efficiency measures in buildings, defining minimum IEQ requirements that should be monitored and reported in a harmonised way in building regulations across Europe. EPBD shall require regular inspection of ventilation systems</p>

# Facilitating enforcement and compliance

N.	Question	Report	REHVA
18	Is the definition of nZEBs in the EPBD sufficiently clear?	<b>Not for the majority.</b> nZEB requirement values vary to a great extent between different Member States. Many terms in the definition (e.g. “significant share”) are too vague and therefore subject to interpretation. Suggestion to have energy efficiency as foremost criterion for nZEBs and renewable energy as secondary criterion.	<b>No.</b> Especially the use of the renewable energy sources is unclear (i.e. on-site or nearby). <b>Energy performance is not sufficiently clear from the aspect of primary energy indicator (non-renewable or total). EPBD should specify more detailed definitions.</b>
19	Is the nZEB target in the EPBD sufficiently clear to be met?	<b>Not for the majority.</b> Only weak nZEB targets maybe meet.	<b>No.</b> nZEB requirement vary from <0 to 270 kWh/m <sup>2</sup> . There is no common understanding.

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# Facilitating enforcement and compliance

N.	Question	Report	REHVA
20	What, in your view, are the missing factors that would ensure compliance with:		(for both new and major renovation)
a.	Minimum energy performance requirements in new buildings?	Energy performance targets for different building types; qualification of certifiers; testing of issued EPCs.	<b>Energy performance shall be verified by recalculation for final design and also for as built building.</b>
b.	Minimum energy performance in major renovations of existing buildings?	harmonisation of EPC calculations, on-site compliance and quality checks	<b>insufficient focus on installation and commissioning of the systems.</b>
c.	Minimum energy performance for the replacing/ retrofitting parts of the building envelope and replacing/ upgrading/ installing technical building systems?	<b>Use of the energy balance approach</b> , introduction of minimum energy performance requirement at point of sale/lease, fines for non-compliance, installation of effective controls, long term renovation strategies	Compliance requires not just a product based approach: unless the whole system functions effectively then it does not matter how good the individual components are. <b>Overall performance of the building is needed.</b>

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# Facilitating enforcement and compliance

N.	Question	Report	REHVA
20	What, in your view, are the <b>missing factors</b> that would ensure compliance with:		
d.	Minimum renewable energy requirements to meet the NZEB target by 2020?	Integrated systems approach, technology neutrality, guidelines for understanding the contribution of renewable energy sources in NZEBs	<b>Setting renewables targets without first setting targets for reduced energy demand in buildings may not be effective</b>
e.	Certification of the energy performance of buildings, including tailor-made recommendations for the improvement of the energy performance of buildings?	Development of "building passports", attention to performance gap, high quality of certifier, <b>clear compliance control procedures for EPC (buildings EP = EPC)</b> .	The EPBD has to take a step further in requiring control mechanisms and compliance frameworks beside the building permit. Verification is needed.
f.	Regular inspections of heating and air conditioning systems?	Mandatory systems inspections including control functions, quality insurance combined with financial incentives	<b>Inspection shall include the whole A/C and also the ventilation system for proper IEA and efficiency.</b>

# Facilitating enforcement and compliance

N.	Question	Report	REHVA
21	Do you think the cost-optimum methodology gives sufficient evidence regarding the actual cost of renovating buildings on top of the additional cost for Near Zero-Energy Buildings?	2 opinions: - sufficient; - does not correspond to reality due to too low energy price	<b>No.</b> It doesn't give sufficient evidence. Mostly applied to new buildings, while existing buildings (the majority and with local constraints) are not analysed enough.
22	Are there any cost-effective measures for ensuring compliance at local and regional level that could be replicated and used to improve compliance on a larger scale?	standard formats for data input and calculations, automatic checks in calculation software, product databases and catalogues of construction methods, airtightness tests	<b>Existing comprehensive compliance frameworks covering the final design, the construction and the commissioning phases, can be replicated as good example across the EU</b>
23	What do you think of the various ways of calculating building energy performance at national/regional level? Please include examples.	large differences between energy certificates and energy performance classification of similar buildings <b>due to national deviations</b> from the CEN standards and too much degrees of freedom	EC has not obliged MS to adopt CEN standard as they are, thus today there is a large variety of deviations. This should be avoided.





## Public consultation on the evaluation of EPBD

### Energy Performance Certificates and stimulating energy efficient renovation of the building stock

N.	Question	Report	REHVA
27	Have EPCs played a role in increasing the rate of renovation, the extent of renovation, or both? For instance, are EPC recommendations being defined as the most effective packages of measures to move the performance of buildings and/or their envelopes to higher energy classes?	The impact is <b>very limited</b> ; their potential is very far from being realised. They cannot be used as a benchmark for asset value or a driver for renovation. Only half of the MS have included performance rating in their EPC calculation methodology.	EPCs have played an indirect positive role. Usually EPC recommendations are effective packages to improve the energy performance of buildings, depending on MS level policies and financial support schemes
28	Is setting a minimum renovation target for Member States to undertake important and requires further attention in the context of meeting the goals of the EPBD?	Yes, a minimum renovation target is needed, but accompanied by appropriate financial mechanisms and by regulatory requirements	Yes, setting binding renovation target is important but has to be done with care in order to define affordable, country specific targets



## Public consultation on the evaluation of EPBD

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## Public consultation on the evaluation of EPBD

# Energy Performance Certificates and stimulating energy efficient renovation of the building stock

N.	Question	Report	REHVA
29	Are obligations or binding targets for renovation or any other <b>mandatory measure missing</b> from the EPBD <b>to ensure that the directive meets its goals</b> ? If, yes, what kind of obligations and targets	Divided opinions: <ul style="list-style-type: none"> <li>- some favour mandatory requirements</li> <li>- others point out that voluntary elements seem to be more effective</li> <li>- a balance would be better</li> </ul>	<b>No.</b> There are more obligations and binding targets than what MS can comply with for the time being; therefore more attention shall be paid to compliance check, and the proper implementation of existing regulations.
32	Have EPCs <b>raised awareness</b> among building owners and tenants of <b>cost-efficient ways of improving the energy</b> performance of the buildings and, as a consequence, <b>help to increase renovation rates</b> across the EU?	Awareness level of the value of an EPC across tenants is still low. Tailor-made recommendations incl. multiple benefits are missing from the EPC, to provide a clear understanding of possibly expected costs and benefits	Yes, they have for sure raised awareness of owners, but there's no robust evidence of a direct impact on increased renovation rates.



## Public consultation on the evaluation of EPBD

# Energy Performance Certificates and stimulating energy efficient renovation of the building stock

N.	Question	Report	REHVA
33	Should EPCs have been made <b>mandatory for all buildings</b> (a roofed construction having walls, for which energy is used to condition the indoor climate), <b>independent of</b> whether they are rented out or sold or not?	Divided opinions: <ul style="list-style-type: none"> <li>- some favour mandatory, if improved quality and full implementation of EPC is ensured at first;</li> <li>- others not, pointing out that original intent for EPCs was to impact purchase and rental decisions, which is far to be reached.</li> </ul>	<b>Yes.</b> EPCs have to be seen as a mandatory requirement just like the certificate of conformity of electric and gas systems in buildings



## Public consultation on the evaluation of EPBD

# Financing energy efficiency in buildings and creation of markets

N.	Question	Report	REHVA
35	What <b>non-financing barriers</b> are there that hinder investments, and how can they be overcome?	<ul style="list-style-type: none"> <li>- insufficient price signals (low fuel price and not recognized high perf. b. value)</li> <li>- insufficient regulatory signals</li> <li>- complexity</li> <li>- quality of the offers</li> <li>- lack of long term political objectives</li> <li>- <b>a lack of a continuous support of building owners from selection of renovation options and economic calculations to recommendations for communication with tenants and support in the implementation</b></li> <li>- lack of track record of building renovation</li> </ul>	<b>The lack of knowledge and independent technical assistance and guidance to non-professional building owners both in public and private sector hinders investment.</b>

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## Public consultation on the evaluation of EPBD

# Financing energy efficiency in buildings and creation of markets

N.	Question	Report	REHVA
36	What are the <b>best financing tools</b> the EU could offer to help citizens and Member States facilitate deep renovations?	<ul style="list-style-type: none"> <li>- long-term access to soft loans and default guarantees have to be established that make maximum use of EU funds and national revenues;</li> <li>- tax exemptions</li> <li>- VAT reduction for renovation works</li> <li>- property tax reductions <b>linked to EPCs</b></li> <li>- lower or graduated interest rates linked with deeper renovation projects</li> <li>- salary sacrifice scheme</li> <li>- risk-sharing facilities</li> <li>- first-loss guarantee funds and On-bill financing</li> <li>- green bonds</li> <li>- emissions reductions obligations, etc.</li> </ul>	Incentive based logic is good and shall be mainstreamed. However renovation grants and other financial support schemes <b>have to be linked to real and certified energy performance improvements</b>

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# Financing energy efficiency in buildings and creation of markets

N.	Question	Report	REHVA
41	Taking into account the experience and achievements to date, would:		
a)	scaling-up of existing public funds alone be sufficient to meet the goals of the EPBD?	It was not sufficient to meet EPBD goals. Need for better coordination between EPBD requirements on deep refurbishment and the available ESIF funds and MS level support schemes	No. There's a need for better coordination between EPBD requirements on deep refurbishment and the available ESIF funds and MS level support schemes
b)	aggregation of energy efficiency investments in buildings (e.g. enabled by standardisation of Energy Perform. Contracts and clarification of regulatory and accounting issues) contribute to the achievement of EPBD goals?	Yes. In some cases, more the lack of awareness and knowledge, in combination with regulatory and accounting barriers, makes difficult for EPC market to evolve.	Yes.

# Links between the EPBD and district and city levels, smart cities, and heating and cooling networks

N.	Question	Report	REHVA
58	Has the promotion of smart cities, smart buildings, sustainable transport solutions, smart mobility, and similar initiatives been linked with the EPBD and its aims? If so, how?	<b>No.</b> The current EPBD focuses on the performance of individual buildings. EPBD could promote inter-sectoral energy synergies and opportunities.	<b>No.</b> The current EPBD focuses on the performance of individual buildings. Inter-sectoral energy synergies and opportunities for a more efficient energy use at societal level should be considered in the EPBD.
60	What incentives are missing, that would help promote efficient district heating and cooling or meeting the goals of the EPBD?	on utilization of waste/ industry surplus heat; on flexibility requirement, to increase uptake of thermal storage and integration of small-scale combined heat and power (CHP) to match peak demand.	<b>As DH system become more sustainable by integrating RES this should be avoided by incentives.</b> <b>Local level incentives for the urban planning sector.</b>



## Public consultation on the evaluation of EPBD

### Links between the EPBD and district and city levels, smart cities, and heating and cooling networks

N.	Question	Report	REHVA
62	Does the EPBD and its definition of nZEB <b>reflect the requirements</b> that could derive from the energy systems of nearly zero-emissions <b>districts and cities</b> ?	<p><b>No.</b> The current EPBD focuses on individual buildings.</p> <p><b>Split views</b> on the required scope of NZEBs districts and cities:</p> <ul style="list-style-type: none"> <li>- nZEB definition should be expanded to a system level to harvest benefits of a total system optimisation;</li> <li>- actual nZEB definition is a good basis for nearly zero emissions districts and cities.</li> </ul>	<p><b>No.</b> The current EPBD focuses on the performance of individual buildings.</p> <p>nZEB definition should be expanded to a system level to harvest benefits of a total system optimisation</p>

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## Public consultation on the evaluation of EPBD

### Sustainability, competitiveness and skills in the construction sector

N.	Question	Report	REHVA
69	How does the construction sector cost-effectively demonstrate and check compliance with the EPBD while also upgrading the skill and knowledge of tradespeople and professionals?	<ul style="list-style-type: none"> <li>- integrated planning and the involvement of the full construction team</li> <li>- mitigating the communication gap between the different building professionals</li> <li>- standards for retrofit should be implemented which are <b>assessed by</b> a respected <b>qualification body</b>.</li> <li>- trainings for all professionals covering the life cycle of buildings</li> <li>- <b>periodic inspection of building sites by the authority</b></li> </ul>	<ul style="list-style-type: none"> <li>- training and qualification/certification schemes to continuously upgrade the skills and knowledge of professionals</li> <li>- schemes to guide and check the quality of the work in the construction sector</li> <li>- educate all parties involved in the life cycle design and management of buildings</li> </ul>

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# Building systems requirements

N.	Question	Report	REHVA
72	Based on existing experience, do you think the setting of <b>minimum requirements in the EPBD for technical building systems is missing?</b> Would have technical building systems minimum requirements contributed to the improvement of buildings' energy performances?	<b>No clear picture.</b> The requirements are unclear in the way the energy performance of such systems would be measures and which products should be considered part of that system. Controls and building automation should be included.	The minimum overall performance requirement in terms of non-renewable primary energy is sufficient. Additional requirements are not necessary. Too many constraints reduce the designers' freedom in choosing the best solution for the given case.
73	Based on existing experience, do you think in the EPBD minimum requirements for <b>technical buildings systems</b> focussing on other factors than HVAC is <b>missing?</b>	Mainly building automation and controls, plus lifts, escalators and moving walks should join the already included technical buildings systems	Internal transportation systems (elevators, escalators, etc.), telecommunication and security systems should be included in the total energy balance of the building.

# Building systems requirements

N.	Question	Report	REHVA
74	74. Based on existing experience, do you think in the EPBD <b>requirements are missing</b> for regular <b>inspections</b> of the technical building systems to ensure:	¼ share the opinion that requirements <b>are not</b> missing for. Less have the opposite opinion.	(reference to IEQ has been made here, which is inconsistent with the questions)
a.	that systems' performance is maintained <b>during their lifetime?</b>	HVAC inspections do not guarantee that the benefits achieved will last in post-inspection operation	Yes. Continuous monitoring and commissioning is the only guaranty that the EP level can be maintained or even improved.
b.	that owners/occupiers are properly <b>informed about the potential improvements</b> to the efficiency of their systems?	No common picture exists: ½ yes, ½ no. Performance requirements for technical building systems are vague	
c.	that <b>replacement/upgrading</b> of the technical building systems is <b>triggered?</b>	No common picture exists: ¼ yes, ¼ no. Yes mainly due to absence of a control systems.	

## Building systems requirements

N.	Question	Report	REHVA
75	Have inspections required by the EPBD, been incorporated into or more tightly linked to other inspection/ certification/ energy auditing activities and schemes under other EU or national directives?	>¼ no; < ½ yes; the remaining feel a strong resistance in many MS to require more inspections than those due to safety and health.	<b>No</b> , we are aware off the strong resistance in many MS's to require more inspections, apart from those directly related to safety and health.
76	Are the requirements for building elements set by Member States optimised to avoid market barriers limiting the installation of building products complying with EU requirements/standards e.g., under eco-design requirements?	>¼ no; only few yes. A respondent states that as eco-design requirements are product related and minimum building element requirements should be building-system related there is not a one to one relation and sub-optimal choices could result e.g. from misleading Eco-design declarations.	<b>No</b> , as eco-design requirements are product related and minimum building element requirements should be building-system related there is not a one to one relation.

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## Operational management and maintenance

N.	Question	Report	REHVA
77	Based on existing experience, does the EPBD promote the key ways to ensure that buildings meet stringent efficiency targets in their operation?	<b>No</b> ; minimum energy performance requirements are based on “as-designed” energy values, and not on “as-built” energy values	<b>No</b> , the introduction of intelligent metering and control systems when doing energy renovation shall be mandatory for every MS.
78	Based on existing experience, does the EPBD promote the best way to close the gap between designed and actual energy performance of buildings?	<b>No</b> ; it requires to develop calculation metrics that assess a building's energy consumption in design condition and not in real operational conditions	<b>No</b> , to close the gap there is a need for mandatory building commissioning followed by the monitoring of actual operational performance to be required in MS level regulations

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# Operational management and maintenance

N.	Question	Report	REHVA
79	Based on existing experience, <a href="#">are the provisions</a> provided by the EPBD <a href="#">to stimulate a proactive, innovative maintenance market effective</a> ?	<b>No</b> ; EPBD Articles 14 15, 16, 17 and 18 on inspection of heating and air-conditioning systems, inspectors and control schemes to check the inspectors, based on anecdotal evidence, seem to be too fragmented and heterogeneous to stimulate the maintenance market effectively.	<b>No</b> . In the EPBD there is no clear distinction between inspection and maintenance, which are two separate measures. The EPBD actually targets only inspection. Inspectors and maintainers are different professionals. Thus there is no direct “stimulation” to develop an effective innovative maintenance market.

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# Further comments (by REHVA)

1. The revised EPBD shall set a clear mandate to MS to define minimum IEQ requirements that are monitored and reported in a harmonised way in building regulations across Europe.
2. REHVA recommends developing a common methodology for an indoor environmental quality indicator to be used together with primary energy indicator.
3. **Inspection:** the EPBD shall require regular inspection of ventilation systems and not only of air conditioning.
4. **Calculation of energy performance of buildings:** the calculation methodology shall consider ventilation and IEQ appropriately by taking into account all the relevant aspects.
5. When building or renovating buildings minimum air quality requirement (e.g. air flow rates and ventilation efficiency) must be safeguarded, and controlled ventilation systems built in if necessary.

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## Public consultation on the evaluation of EPBD

# (Official) Main Key Findings

- Generally, the **importance of energy efficiency** and renovation measures for tackling energy poverty is **increasingly acknowledged**.
- Many of the respondents state that the **EPBD has set a good framework** for improving energy performance in buildings and that **it has raised awareness** on energy consumption in buildings giving it a more prominent role in energy policy and its necessary contribution to 2030 and 2050 energy and climate targets.
- Most respondents state that compliance with the **provisions of the EPBD is not adequate** and could be significantly improved
- Related to the question for the main reasons for the insufficient take-up of the financing available for energy efficiency in buildings, **barriers** mentioned are **the complexity of the renovation decision-making process** as such, which requires insight and decisions not only of financial nature but also of technical, organisational and legal nature.

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## Public consultation on the evaluation of EPBD

# (Official) Main Key Findings

- Stakeholders mention a lack of consumer demand, which is also linked to the absence of long term goals.
- Some respondents take position that in order to realise energy efficiency improvements in the building sector and increase the amount of renewable energy **an approach needs to be taken that focuses on the reduction of primary energy at system level**.

On <http://www.buildup.eu/en/practices/publications/public-consultation-evaluation-directive-201031eu-epbd>  
More from the report

- Various recommendations stress the need to follow the Energy Efficiency First principle and trias energetica, in a way that once **heating and cooling energy needs are minimized through demand reduction** from the building envelope, the opportunities offered by the surrounding environment should be considered.

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# Conclusions

There is still a lot to do!

Good starting point but today we are still far from the goal.

The REHVA central focus on the Indoor Environmental Quality minimum requirement as parallel mandatory quality index together with the energy index has not been included in the Overall Summary of Responses!

( the only that politicians are going to read).

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