



# EuroACE

THE EUROPEAN ALLIANCE OF COMPANIES  
FOR ENERGY EFFICIENCY IN BUILDINGS

HOW TO ADDRESS THE EXISTING BUILDINGS  
CHALLENGE?

HOW TO IMPROVE ENERGY PERFORMANCE  
CERTIFICATES?

HOW TO UNLOCK FINANCING FOR ENERGY  
EFFICIENT BUILDINGS AND BUILDING  
RENOVATION?

HOW TO MOVE TO NZEB LEVEL BUILDING  
STOCK AT EU LEVEL BY 2050 AND DEVELOP  
SMART BUILDINGS?

**2016 is an important year for energy efficiency legislation at EU level, with the upcoming revisions of the Energy Performance of Buildings Directive (EPBD) and the Energy Efficiency Directive (EED). In this regard, EuroACE organised, in the first quarter of the year, a series of workshops which discussed policy evaluations, expectations, and possible ways forward for energy efficiency legislation, in order to set a more solid framework for building renovation. Discover the main take-aways from our workshops in this Summary Booklet.**

## 2016 EPBD WORKSHOP SERIES

*Summary Booklet*

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## ACKNOWLEDGMENTS

### **EuroACE would like to thank all the speakers**

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- » Adrian JOYCE, Secretary General, EuroACE
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## EXECUTIVE SUMMARY

**2016 is an important year for energy efficiency legislation at EU level**, with the upcoming revisions of the Energy Performance of Buildings Directive (EPBD) and the Energy Efficiency Directive (EED), which will shape the way energy efficiency in buildings policy will be implemented for years to come. Therefore, the forthcoming proposals and negotiations will be an opportune moment to improve the current policy framework, in order to **create more local jobs, especially in SMEs, and restore growth in the EU**. In this context, EuroACE organised a series of workshops at the beginning of 2016, so as to debate expectations and possible ways forward, inviting a large variety of stakeholders. This Summary Booklet outlines the main issues raised and the suggested improvements discussed during these workshops.

### *So what does EuroACE take away from the debates so as to improve the EPBD?*

The EPBD should, while keeping its provisions on new buildings, move its focus towards **existing buildings**, with the objective to reach a nearly-zero energy building stock within the EU by 2050. In making this shift, sufficient flexibility should be given to Member States to achieve this goal in a technologically neutral way. **Energy renovations** in existing buildings should be scaled up, using defined trigger points, adapted to each segment of the building stock and set in the framework of long-term stable strategies. Actually, **almost two-thirds of Member States** already include these **trigger points** in their legislation – so there is a good starting point for widening this concept which makes full sense.

An important tool which should be improved to enhance energy renovations in existing buildings is the **Energy Performance Certificate (EPC)**. This is not only key to deliver energy savings, and provide reliable information to consumers, but also to give investors sufficient confidence, and to boost economic activity in the construction sector. More importantly, EPCs would then **serve consumers by making their life easier** when deciding on renovation works – EPCs give consumers more choices and advice on where to find adequate funding. To be strengthened, EPCs should be transformed into more dynamic tools, like individual Building Passports adapted to each building.

The EPBD review will also have to touch upon the question of **financing energy renovation of buildings**. In this regard, developing a **long-term policy objective** for the energy performance of the building stock - a shared 2050 vision – will give the financial sector sufficient confidence to invest – and that is actually what they are calling for. This shared vision will also give trust to consumers at individual level that their projects will be supported, either by public or private financing. Better **linking the volume** of financing available to the **energy performance** reached after an energy renovation, as well as to the **use of qualified and trained professionals**, would also incentivise quality works, and would represent an accountable way to manage funds.

Finally, as we turn our minds to the future, it is important to define new concepts, such as **Smart Buildings** or the role of **buildings in the energy transition**. EuroACE believes that a highly energy efficient building stock is the best starting point for the decarbonisation of the energy system that will at the same time, provide consumers with the best **comfort and added-value**.

**EuroACE EPBD Workshop Series 2016**  
**Workshop 1 - The EPBD and the Challenge of Existing Buildings**  
28 January 2016

2016 will be an important year for energy efficiency legislation at EU level, with the upcoming revisions of EPBD and EED. In this regard, EuroACE organised, in the first quarter of the year, a series of workshops which discussed policy evaluations, expectations, and possible ways forward for energy efficiency legislation, in order to set a **more solid framework for building renovation** in the future. The first workshop, gathering around 35 participants, discussed the **challenge of existing buildings**. In fact, the current EU regulatory framework on buildings, whilst offering a good basis for the energy performance of new buildings, does not yet do enough to stimulate the right level of ambition in relation to the energy renovation of existing buildings, in order to get towards an **nZEB level building stock at EU level by 2050**.

**TAKE-AWAYS FROM PRESENTATIONS**

- ***That's what we want!*** A **40% energy efficiency target for 2030** is the lowest objective to adopt to meet the COP21 Agreement – President JUNCKER said “*when it comes to buildings, I am in favour of an ambitious binding target*” (2014)
- ***That's what we can do!*** Setting a **cap for the energy consumption** of the overall building stock is no longer a taboo for 17 Member States
- ***That's where we are!*** The current energy performance of the building stock at EU level is **far from nZEB level**, when buildings hold the **highest cost-effective savings potential**



Yamina SAHEB



Oliver RAPP

- ❖ **Soft measures** are not enough – they fail to tap the full cost-effective potential
- ❖ **Bolder measures** to reduce the energy demand from buildings are **not a taboo** anymore in several Member States
- ❖ **Trigger Points for building renovation<sup>1</sup>** – diversified, easily adaptable to national context, delivering benefits – the solution!

- » **EPBD Public Consultation** received more than 300 replies.
- » Majority of respondents agree that **EPBD has not sufficiently incentivised** the increase of the renovation rate
- » **Recommendations** include the adoption of a definition for **deep renovation**, the transformation of Energy Performance Certificates into more **dynamic Building Passports, a more solid long-term vision** for the national renovation strategies with a **better link to finance**, and minimum **renovation targets**.



Thomas BOERMANS

**The EuroACE Position**

- The **EU is best placed** to take the renovation challenge forward
- The objective of an nZEB level building stock at EU level by 2050 requires the adoption of **strategic pathways** (national renovation strategies, individual holistic planning)
- **Stable regulatory framework** needed for financial sector to invest, for building professionals to upgrade skills, for industry to innovate, for the sector to grow and create jobs
- **Collaboration** between technologies and actors to achieve ambition is key



Céline CARRE

<sup>1</sup> Within a specific timeframe, when undertaking maintenance work, when renting a property, at change of building use, when changing a boiler, or when extending a building

## HIGHLIGHTS FROM THE DEBATE

### **What role for public authorities in the challenge of existing buildings?**

The public sector should make efforts to be exemplary and this should help in accelerating learning curves towards deeper renovation.

Plus, public authorities are accountable to taxpayers – they can't afford not to keep their infrastructure in tip-top condition. Yet, other segments might also be in a position to transform faster.



### **How to deal with the administrative burden that building renovation could represent for homeowners?**

An "Energy Renovation Facilitator", aggregating small projects, and proposing renovation kits, would make projects easier, as would more dynamics EPCs, suggesting improvement management plans.

### **How to ensure a continuous good energy performance of the building after its renovation?**

If adopting a holistic approach, combining all the right technologies, the high energy performance of the building will be maintained through continuous monitoring during its entire lifecycle

Adrian JOYCE

## CONCLUDING REMARKS FROM WORKSHOP 1

2016 will be an important year for energy efficiency legislation at EU level, with the upcoming revisions of EPBD and EED. In this regard, EuroACE proposes to outline the **lessons learnt** from the workshops it organised.



### **How to address the challenge of existing buildings?**

- At EU level, with the involvement of national authorities and the collaboration of all actors;
- Empower consumers to be more active in the renovation process by demonstrating multiple benefits of renovation and explaining when are the best moments to anchor energy upgrades;
- Through defined trigger points for building renovation, adapted to each segment of the building stock, and set in the framework of long-term and stable strategies which would also help to unlock financing;
- These trigger points already exist in several Member States, are accepted and deliver benefits to all – see footnote page 3.

**EuroACE EPBD Workshop Series 2016**  
**Workshop 2 - How to improve Energy Performance Certificates?**  
16 March 2016

The second workshop discussed the **possible ways to improve Energy Performance Certificates**. In fact, while they are a means to give information to consumers on the energy performance of their building, the current design and display of EPCs does not trigger enough energy renovation of existing buildings in order to achieve an **nZEB level building stock at EU level by 2050**. How to make EPCs more reliable and increase their quality? How to move towards more dynamic tools like Building Renovation Roadmaps or Passports? How to better link EPCs with access to financing?

**TAKE-AWAYS FROM PRESENTATIONS**

- EPCs are **successful information tools** regarding energy performance of buildings
  - Growing impact of EPCs on **increased property values**
    - The potential for EPCs to be **'renovation accelerators'** is not fully realised
    - To increase the renovation rate and depth, **EPC recommendations** should be more **tailored** and part of a **holistic plan at building level**
    - Individual renovation roadmaps should provide a better understanding of **wider benefits** of energy renovation
    - **More convergence** in national designs and calculations methodologies would help comparisons at EU level
    - **Improved skills** and training for auditors and certifiers is key
  - More **publicly available data** is needed to monitor the quality of the building stock - **mandatory EPCs for all buildings** could help in this regard
  - EPCs should be **better linked to financing** tools and national renovation strategies



Thomas BOERMANS

- » Around **€100 billion per year** is needed to achieve the 2020 energy savings target
- » **Banks are ready** to underpin the EU's work in this area by **supporting households in the energy efficient renovation** of their properties
- » Financing energy efficiency should **focus primarily on renovating existing buildings** and is a way to **conserve citizens' wealth**
- » Banks could support households by offering a **preferential interest rate or additional funds** on the basis that **'green' borrowers** represent a **lower risk for the bank** - *in the U.S., borrowers for green loans have on average 32% lower probability of default than borrowers for conventional loans*
- » The European Mortgage Federation is currently developing an **Energy Efficient Mortgage Project** – EPCs are central in this initiative



Jennifer JOHNSON

**The EuroACE Position**

EPCs should be strengthened in order to support the transformation of the building stock towards **nZEB level at EU level by 2050**, and drive both renovation rate and depth

EPCs are currently **'pictures'** and should move towards **'movies'** of the building's energy performance overtime – **user-friendly IT tools** could be developed

Individual Renovation Passports give a **secure pathway to consumers**, show benefits to consumers, and help to **avoid a lock-in effect** by making all steps coherent

EPCs should be connected to people's lives and inform them **when it is most relevant** to undertake renovation works

There are already of dynamic Building Passports at **national level** (FR, DE, Flanders)



Céline CARRE



**HIGHLIGHTS FROM THE DEBATE**

**How to ensure that EPC recommendations are properly taken up by property owners and tenants?**  
 One-stop-shops run by third parties should be developed at local level so as to provide consumers with independent, reliable information and guidance on where and how to start renovation works

**How can improved skills increase EPC reliability?**  
 In the U.S. for example, workers from the construction sector are required to get specific training in order to be allowed to perform Home Energy Ratings, and are required to work together, from the start, with energy auditors, in order to participate to publicly funded building renovation programmes. If home renovations are performed by certified constructors and auditors, homeowners may have better access to financial incentives and rebates. This has led to increased reliability of Home Energy Ratings and quality of renovation works.

**What is the appropriate nature and level of recommendations included in EPCs?** One solution could be to better segment the market, e.g. having more stringent (or mandatory) EPC recommendations for commercial buildings compared to residential

**CONCLUDING REMARKS FROM WORKSHOP 2**

2016 will be an important year for energy efficiency legislation at EU level, with the upcoming revisions of EPBD and EED. In this regard, EuroACE proposes to outline the **lessons learnt** from this workshop.



Adrian JOYCE

**How to improve Energy Performance Certificates?**

- Strengthened EPCs are key to the delivery of building renovations in the EU and to the achievement of an nZEB-level building stock at EU level by 2050 – this means improving certifiers’ skills and enhancing certification through on-site visits;
- Increased EPC reliability is key, not only for achieving energy efficiency and energy renovation purposes, but also for investors (to step up the market of green loans) and the construction sector (to reward SMEs);
- But more importantly, EPCs must serve consumers and make their lives easier when deciding on renovation works – the EPC is a tool to increase the range of consumer choices;
- The best way to deliver to consumers, the construction sector and investors is to transform EPCs into more dynamic tools – individual Renovation Roadmaps adapted to each building, including in the way recommendations are formulated.

**EuroACE EPBD Workshop Series 2016**  
**Workshop 3 - Unlocking financing for energy efficiency in buildings and energy renovation**  
16 March 2016

The third workshop discussed the **best ways to unlock financing for energy efficiency in buildings and energy renovations**. In fact, according to the EFIG (*Energy Efficiency Financial Institutions Group*), an additional **€60 to €100 billion** should be invested every year in energy renovation of buildings. This huge investment should then lead to a **nZEB level building stock by 2050 at EU level**. In this respect, what are the current best financial instruments? How could access to financing be simplified, notably for local authorities? How could financing be better linked with indications of the energy performance of buildings, like Energy Performance Certificates?

**TAKE-AWAYS FROM PRESENTATIONS**



Thomas  
BOERMANS

- One important tool to unlock financing for energy efficiency in buildings is the **national renovation strategies** (EED Article 4) – however, they must be **better implemented**
- Recommendations from the Public Consultation on national renovation strategies are to **include a long-term objective for the building stock**
- Developing databases of energy renovation projects would help to improve **standardisation procedures**
- There are already **numerous financial tools**, both mature and emerging, for energy efficiency in buildings
- Besides the question of volume, it is also a question of better **linking the level of financing to the level of energy performance**, also in relation with *ex ante* conditionalities currently used by DG REGIO

- » **CITYNVEST** project benchmarked available financial tools for energy retrofits in 11 Member States, and delivered guidance on how to use **innovative financing**, especially at local level, to stimulate the renewal of the housing stock
- » There is no silver bullet, and **several operational models can deliver** if well adapted to the context
  - **Facilitator Model** (e.g. project assistance by an expert)
  - **Integrator Model** (e.g. one-stop-shops integrating demand & supply, and sometimes financing into one body)
  - Both models can be combined with **Aggregation** (e.g. combining projects with same characteristics, like social housing, or at a neighbourhood level, into a single larger project)
- » These different models **address the vast majority of 'barriers'** usually described in relation to energy efficiency in buildings

Miguel CASAS



**The EuroACE Position**

Investing in energy efficiency in buildings is a **huge market opportunity** in Europe – 210 million buildings

**Use of public funds** for energy efficiency in buildings should be made **easier** (e.g. reform of accounting and public procurement rules)

**Subsidies for fossil fuel** consumptions should be **phased out** and funds should be redirected towards energy renovation of buildings

The reliance on public funds should shift **towards private financing** and involve the **insurance sector**

**Staged-deep renovations** and resorting to **qualified professionals** should be rewarded with a **preferential access to financing** (e.g. lower interest rate, tax exemptions, reduced VAT)

This could be done through **independent** third-party bodies at local level, **one-stop-shops** to advise consumers in their choices



Bruno PEDROTTI



## HIGHLIGHTS FROM THE DEBATE

### ***How to move forward on financing issues when taxes are a Member State competence?***

There are several financial tools which are not related to taxes and which could be further developed. As for reforming tax law, a first step for the EU institutions could be to issue further guidance, based on existing best practices at national level. For example, in France, a reduced VAT for energy renovation work services has enabled the creation of 30, 000 jobs in the renovation market.



### **What kind of financing models bring the most energy savings?**

Typically, Integrator Models deliver more energy savings (50% or more), but their timeframe is rather medium to long-term. Their success is also linked to the clear leadership role of public authorities in setting the right enabling framework.

## CONCLUDING REMARKS FROM WORKSHOP 3

2016 will be an important year for energy efficiency legislation at EU level, with the upcoming revisions of EPBD and EED. In this regard, EuroACE proposes to outline the **lessons learnt** from this workshop.



Adrian JOYCE

### **How to unlock financing for energy efficiency in buildings and energy renovation?**

- Developing a long-term policy objective for the energy performance of the building stock would give the financial sector sufficient confidence to invest - this shared vision, an nZEB building stock at EU level by 2050, would also give trust to consumers at individual level that their projects will be supported, either by public or private financing;
- Independent one-stop-shops at local level should be further developed to advise consumers in their choices;
- Access to financing needs to be better linked to the level of energy performance to be achieved during building renovation works and to the use of qualified and trained professionals, in order to incentivise training and quality works.

**EuroACE EPBD Workshop Series 2016**  
**Workshop 4 - From nZEBs to Smart Buildings: how to put Energy Efficiency First?**  
 14 April 2016

The fourth workshop discussed the topic of **Nearly Zero Energy Buildings and Smart Buildings** in the framework of the **Energy Efficiency First principle**. What will the buildings of the future look like? What does nZEB mean for existing buildings? How to achieve a nZEB level building stock at EU level by 2050? How can Smart Buildings contribute to this evolution and to the energy transition? How to achieve the best possible synergies between efficient buildings and the district level?

**TAKE-AWAYS FROM PRESENTATIONS**



Thomas  
BOERMANS

- **nZEB definition and targets** are still unclear, especially for existing buildings, but very much depends on national transposition – **energy efficiency** should come **first**
- **Long-term planning** with intermediate targets would be very helpful
- It is possible and meaningful to apply the **Energy Efficiency First** principle in an **integrated approach**
- Highly energy efficient buildings, which should be more **'demand-response ready'**, would also be **resilient buildings** within the energy system
- Emerging questions like **efficient mobility or Smart Cities** would be better placed in the **EED**
- Current **EPBD** and CEN standards already give some good tools, but should be **better coordinated** with EED and Renewables Directive

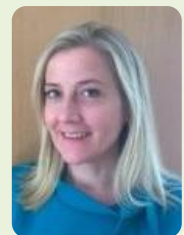
- » **Concerted Action EPBD** adopted an *integrated* system approach, as being **holistic** is the solution for the buildings sector, whether from a technology or from a policy point of view
- » To **increase energy renovations**, a **package of measures** will be needed
- » It is important to get definitions and implementation of provisions right for new buildings (nZEBs), as **new buildings lead the market for existing buildings**
- » A Smart Building should be **designed, constructed and managed** in a smart way, i.e. adapted to climate, users, and changes over its lifecycle

Jens  
LAUSTSEN



**The EuroACE Position**

- Smart Buildings are set within the wider, decentralised energy system
- Smart Buildings are **first highly efficient**, then equipped for **demand-response, energy generation and storage**
- Smart Buildings deliver **benefits to their occupiers** (indoor air quality, comfort) and **empower** them with real-time data
- Smart Buildings are at the same time energy **consumers** (with smart meters and controls), **producers** (enable cost-effective use of RES) and **managers** (grid stabilisers as they reduce peak demand)
- Revised EPBD could do much more on Smart Buildings: improve nZEB definition, enhance the **link between existing buildings and nZEB level**, promote a holistic approach to energy renovation using **all technologies**



Jonna  
BYŠKATA



## HIGHLIGHTS FROM THE DEBATE

**How to bridge the gap between as-designed and actual energy performance, especially in nZEBs?**  
 EPBD Article 8 on *Technical Building Systems* could be a good instrument by promoting constant monitoring and control by building management systems

**How to address the affordability question of nZEBs and Smart Buildings?** The nZEB definitions developed by Member States should be improved to allow more comparability across the EU. These definitions are already based on the concept of cost-effectiveness, and the definition of Smart Buildings should be too. For example, the latest data collected in Germany shows that increased energy performance does not come with increased costs if the lifecycle cost of the building is considered.

**Could prioritising buildings in the EED be a good implementation of the Energy Efficiency First principle?**

If there are some articles tackling buildings in the EED (Article 4, 5, 6), the target included in Article 7 could also be much more directed towards the buildings sector, and ensure that long-term renovation strategies are well financed

## CONCLUDING REMARKS FROM WORKSHOP 4

2016 will be an important year for energy efficiency legislation at EU level, with the upcoming revisions of EPBD and EED. In this regard, EuroACE proposes to outline the **lessons learnt** from this workshop.



Adrian JOYCE

### **From nZEB to Smart Buildings, how to put Energy Efficiency First?**

- The building stock should move towards nZEB at EU level by 2050, as it is the best starting point for an effective energy transition; working at local and/or district level can be a valuable basis to achieve this goal;
- The question is also how well can smart buildings be delivered to consumers? The EuroACE definition, putting buildings at the centre of the energy system, gives a comprehensive view of a Smart Building that also benefits building occupiers;
- The right requirements on nZEBs should be effectively implemented for new buildings, as they lead the way for existing buildings;
- The EPBD Review, which should keep a building level focus, is the right and timely opportunity to embed these concepts into the legislative framework, as it will set the scene for the building stock in 2030 onwards.



## 2016 EPBD WORKSHOP SERIES

*Summary Booklet*

### For further information

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### About EuroACE

EuroACE represents **Europe's leading companies** involved with the manufacture, distribution and installation of energy saving goods and services for buildings. EuroACE members **employ over 280 000 people** in these activities in Europe, and have **around 900 production facilities and office locations**. The mission of EuroACE is to work together with the EU institutions to help Europe move towards **a more efficient use of energy in buildings**, thereby contributing to Europe's commitments on climate change, energy security and economic growth.

### EuroACE Members

