

Dear reader,

Data evidence from the [European Building Stock Observatory](#) shows that policies to improve the energy performance of buildings are working. Energy consumption dropped on average by 2% since 2010 in the residential sector, the year when the recast Buildings Directive entered into force. While this is a positive development, we know that [more needs to be done to deliver Europe's commitment to the Paris Agreement on climate change](#). The Clean Energy Package and its regulatory proposals are an opportunity to sustain and increase our energy saving success, but the proposals need improvement, as a [recent analysis by BPIE and RAP](#) explains.

Member states have an immediate opportunity to demonstrate that they are taking action to deliver the many benefits which an energy renovation of the building stock would bring. At the end of this month, the next version of national renovation strategies as required by Article 4 of the current EED is due. A [2016 BPIE survey](#) however showed that not much preparation was undertaken in the national capitals. Let's hope for a positive surprise at the end of the month! Other good news come from many angles - implementation of energy saving measures are happening. Check out recent examples from the [Building Efficiency Accelerator](#), the [European project to renovate shopping malls](#), and the [Green Solutions Awards](#).

And don't forget to use the last minute opportunity to register for our [workshop on smart buildings](#) on April 26.

Kind regards,

Oliver Rapf, Executive Director



### **Workshop: "A vision for smart buildings in Europe", and more on the topic**

The [event](#), April 26 in Brussels, will discuss the definition of the smart buildings' concept, a vision for the future built environment and the concretization of the "smartness indicator" set out in the Winter package. Participants will discuss tangible recommendations of what can be done at the EU level to bolster smart buildings. [Registration](#) by April 21. An [executive briefing](#) of the report 'Is Europe ready for the smart buildings revolution' summarises it and its key findings. A [discussion paper](#) in German analyses the smart-readiness of the country. "Das smarte Gebäude in der Energiewende" finds evidence that smart buildings will support the German-energy-system transformation towards an increased use of renewable energy. An [infographic](#) in German is also available.

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**RAP** **BPIE** **BRIEFING**

**WILL THE WINTER PACKAGE DELIVER ITS PROMISE TO PUT 'EFFICIENCY FIRST'?**

**WHAT IS THE WINTER PACKAGE?**

On 30 November 2016, the European Commission published its long-awaited Winter Package (also called the Clean Energy for All Europeans proposals). The Winter Package sets out the energy policy framework going forward to 2030 and beyond. It contains important proposals for a wide range of energy-related issues including energy markets, energy infrastructure, renewable energy, climate policy, and energy demand.

**ENERGY EFFICIENCY IN THE WINTER PACKAGE**

The Winter Package is meant to deliver on the commitment of the European Union to make 'Efficiency First' a guiding policy principle in future energy policy making (EC 2015). Energy efficiency is one of the key elements of the Winter Package and features in the various legislative proposals. Five of the proposed legislative instruments that directly affect the Energy Union's goals to deliver greater energy efficiency to European energy economies are: the revised Energy Efficiency Directive

(EED), the Energy Performance of Buildings Directive (EPBD), the Directive on common rules for the Internal Energy Market for electricity (IEM), the Regulation on the electricity market, and the Regulation on Governance of the Energy Union.

**ASSESSMENT OF KEY PARTS OF THE WINTER PACKAGE**

A team of experts from the Regulatory Assistance Project (RAP) and the Buildings Performance Institute Europe (BPIE) has analysed the proposals in detail - this assessment has been published as a peer-reviewed journal article and can be downloaded [here](#). We assess each of the key elements of the Winter Package in this briefing. Our assessment is carried out against the commitment of the European Union to make 'Efficiency First' a guiding policy principle in future energy policy making. We assign a rating of "Supports Efficiency First" (green), "Needs Improvement" (yellow), and "Inconsistent with Efficiency First" (red) in the sections overleaf.

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## Assessing the European Union's energy efficiency policy

This [briefing](#), developed by RAP and BPIE, assesses the EU Commission's Winter Package and the proposals on energy-related issues such as markets, energy infrastructure, renewable energy, climate policy and energy demand, as well as the potential impacts on energy efficiency. Each key element of the Winter Package is assessed against the commitment of the EU to make 'Efficiency First' a guiding policy principle in future energy policy-making. A peer-reviewed article with a more detailed analysis originally published in [Energy Research and Social Science](#) is now [also available](#).

**POLICY FACTSHEET**

**REDUCING ENERGY POVERTY WITH NATIONAL RENOVATION STRATEGIES: A UNIQUE OPPORTUNITY**

The long-term renovation strategies developed by Member States are an opportunity to reduce energy poverty through stimulating deep renovation of buildings.

Member States cannot miss the opportunity to achieve the triple goal of increasing the rate and depth of renovation, achieving energy savings targets and improving the living conditions of millions of vulnerable citizens. National renovation strategies must include dedicated policies and measures for low income households.

**POLICY RECOMMENDATIONS**

Article 2a of the Energy Performance of Buildings Directive (EPBD) should require Member States to establish specific measures and financing instruments in their renovation strategies to decrease energy demand and contribute to the alleviation of energy poverty.

National programmes renovating low income and energy poor homes can be highly cost-effective considering the wider health, societal and economic benefits of renovation. Shifting public budgets from energy subsidies to the energy poor to energy renovation programmes will mobilise investment in renovation, which is a key aim of the national renovation strategies. Member States can use EU funds, such as Structural and Cohesion funds that aim to improve the welfare of EU countries, as source of funding for programmes to renovate the homes of the energy poor.

Deep renovation has far-reaching benefits for society and public spending, since increasing indoor comfort and air quality avoids illnesses and premature deaths associated with living in cold and damp homes, and this in turn reduces pressures on the healthcare and social services. The construction sector will also benefit from increased renovation activities as it creates more jobs.

**BPIE**

## Factsheet: reducing energy poverty with national renovation strategies, and more.

A short [BPIE factsheet](#) analyses why and how renovation strategies developed by Member States are an opportunity to reduce energy poverty through stimulating deep renovation of buildings. With at least 50 million Europeans, around 10% of the total population, being exposed to energy poverty, it is urgent to tackle the matter. Successful policies to address energy poverty through deep renovation are presented and completed with policy recommendations. INZEB proposed green and social innovation measures to address the problem, in [a report in Greek](#) (executive summary in English), building on [BPIE's earlier findings](#) from 2014. BPIE contributed to a [publication on energy](#)

[poverty](#) led by the Greens/EFA group of the European Parliament and MEP Tamás Meszlerics: a [booklet](#) presenting good practices aiming to end energy poverty in Europe is now available



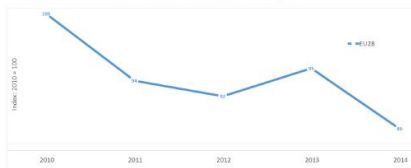
An analysis of the energy consumption in the residential sector since 2010 shows an annual average decline of over 2%, and a total reduction of almost 11% of energy consumption. This relative improvement per square meter of the residential building stock shows that policies and programmes put in place by the Member States, and supported by European legislation and funding instruments, have a positive effect, albeit not to the level needed to meet the Paris commitment to limit global warming well below 2°C.

In order to sustain this effect and to continue planning and investment for the construction sector, the current revision of the Clean Energy for all Europeans policy framework (including the Energy Performance of Buildings Directive (EPBD) and

Energy Efficiency Directive) is an opportunity to increase the ambition of delivering energy savings beyond the current 1.5% required annually.

This analysis provides proof that higher ambition is possible. Continuing ambitious standards for new buildings while increasing the number and depth of renovations will enable the buildings sector to deliver its contribution to the energy saving target while spurring innovation in the sector. Projects in Europe have demonstrated that innovation offers great opportunities to reduce the cost and increase the pace of deep energy renovation, while boosting economic growth, creating jobs and reducing emissions.

Figure 1 - Evolution of final energy consumption in residential buildings per m<sup>2</sup> since 2010 - Adjusted to normal climate  
(Source: EU Building Stock Observatory, 2017)



## Strong evidence for energy savings in residential buildings since EPBD recast

An [analysis](#) of the energy consumption in the residential sector since 2010 shows an annual average decline of over 2%, and a total reduction of almost 11% of energy consumption. This relative improvement per square meter of the residential building stock shows that policies and programmes put in place by the Member States, and supported by European legislation and funding instruments, have a positive effect, albeit not to the level needed to meet the Paris commitment. Higher ambition is possible: continuing ambitious standards for new buildings while increasing the number and depth of renovations will enable the building sector to deliver its contribution to the energy saving target while spurring innovation in the sector, offering opportunities to reduce the cost and increase the pace of deep energy renovation, while boosting economic growth, creating jobs and reducing emissions.

## FOCUS ON

The European Calculator (EU Calc) project aims to allow an informed debate around the 2050 European competitive low-carbon economy and a resilient Energy Union with a forward-looking climate change policy as well as engage stakeholders from short-term participation to long-term research-participation/collaboration.



The European Calculator (EU Calc) project will develop a smart, novel, and innovative open-source modelling-tool based on empirical information about human behaviour, resource constraints and performance of innovative technologies at European Member State level plus Switzerland.

The web-tool will be based on a multi-sector approach (power and heat generation, transport, industry, buildings, agriculture and food and the underlying lifestyle choices of Europe's citizens) co-designed between scientific and societal actors. The "Transition Pathways Explorer" will relate emissions reduction with human lifestyles, the exploitation and / or conservation of natural resources, job creation, energy production, agriculture, costs, etc. and be underpinned by comprehensive trade-off analyses, which will support informed decision-making. Users will be able to create their own decarbonisation pathways: online and directly visualise European and Member State greenhouse gas emissions and their relation to current and future climate development and policies.

Finally, a common platform (Wiki) will be developed where science, policy and civil society stakeholders can share and test their understanding of the interaction between climate change, resource utilisation and evolving policy targets.

The goals are to allow an informed debate around the 2050 European competitive low-carbon economy and a resilient Energy Union with a forward-looking climate change policy as well as engage stakeholders from short-term participation to long-term research-participation/collaboration.

For more information, a website will soon be available.

Instrument: Research and Innovation Action (RIA)

Total EU contribution: 5,283,351,25€

Duration: 3 years from November 2016-2019



The project leading to this application has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N° 730459.

### Survey: evaluating the social and socio-economic impacts of various energy technologies

[EUCalc](#), an EU-funded project that will develop an innovative open-source modelling-tool for future CO2 emission scenarios based on a multi-sector approach (power and heat generation, transport, industry, buildings, agriculture and food and more), is [conducting a survey](#), to help the project evaluate the social and socio-economic impacts of different energy technologies and develop viable low-carbon pathways towards a sustainable European future with respect to energy, food, resources and jobs. Filling in the survey (before April 30) will not take more than 5 minutes.

### Green solutions award Construction21

BPIE is a supporter of the [Green Solutions Awards 2017](#), an international competition opened to all types of buildings, districts or infrastructures, new or renovated. Competing realisations must be finalised before June 30, 2017 (and after January 1st, 2012 for buildings and infrastructures). To enter the contest, participants only need to publish a case study before June 1st, 2017 in one of the [Construction21](#) databases. The winners will be announced in Bonn, Germany, in November 2017, during the Conference of the Parties on climate change (COP23). The competition is part of the actions of the [Global Alliance for Buildings & Construction](#).



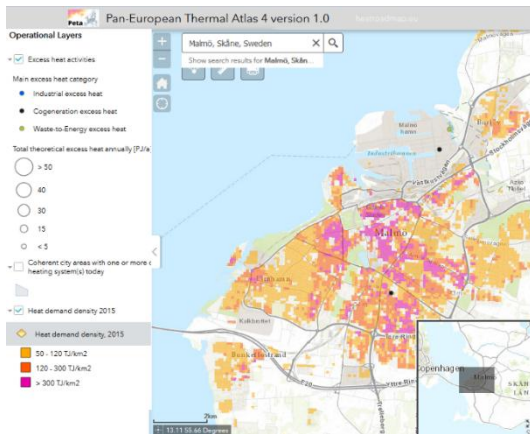


# Building Efficiency Accelerator

**The Building Efficiency Accelerator launches its new website with useful resources for cities**

Aiming at accelerating local government implementation of building efficiency policies and programmes, the [Building Efficiency Accelerator \(BEA\)](#), which BPIE is supporting as a partner, engages with cities based on the needs of the city and the activities that the partnership can provide in each location.

Cities will prioritize policies and activities, and the partnership will connect them to technical resources and engagement opportunities around those priorities.



**Heat Roadmap Europe: Peta4 maps for easier local and regional energy planning**

HRE held in March a packed workshop in Brussels ([recorded and available](#)), to launch the [Pan-European Thermal Atlas \(Peta4\)](#), allowing for better viewing, sharing and communication of smart heating solutions for Europe. These interactive maps of the heating and cooling demand, efficiency and supply in Europe allow assessing thermal resources and thermal demand in a region and aim at supplying specific and realistic heat demand data by costs of infrastructure development and access to renewable energy sources. They contain a 100m-resolution grid of the modelled heat demand in 2015, a layer showing city areas where district heating systems exist in these countries, as well as a database of modelled excess heat supply. A cluster called TWEED is also focusing on the topic of waste heat turned into energy. They recently held a conference to assess the potential of the waste heat recovery sector in Belgium and France, the [presentations are available](#) (in French).



## Retail buildings: several reports available and new tool to assess scenarios to 2030

The EU-funded project *CommONEnergy*, focusing on shopping centres retrofitting, published reports on iBEMS (intelligent Building Management System) [architecture](#) and [ICT platform](#), [ventilative cooling](#), [heat recovery solutions and scenarios](#), [interactions between shopping centres and energy grids](#), [daylight strategies](#) and more.

A [new online scenario tool](#) included in the existing data mapper, gives a quick, easy and tailor-made access to national and international indicators on the commercial building stock (energy demand and renovation by 2030). The tool allows a comparative cross-country analysis of the most relevant commercial building types with a specific focus on shopping centres throughout Europe. The [project newsletter](#) includes more of the latest information.

## EVENTS

**“Cost-competitive deep renovation of shopping centres: technologies and drivers for EU policies”,** **September 7,** **Brussels**

What are European retail buildings’ key features? How are they included in both EU and national legislation? The project *CommONEnergy* not only worked these past 4 years on providing an answer, but also on developing, implementing and testing innovative technologies improving comfort, reducing costs and energy consumption. The benefits are wide for a range of stakeholders (customers, tenants, owners) and will be demonstrated in the project final conference. Best practices of recently-retrofitted shopping centres will be awarded during the *Sustainable Building Challenge* ceremony, held together with the event. The day will close with a networking cocktail gathering retailers, architects, researchers, policy-makers and the industry to discuss in a relaxed atmosphere and discover the demo cases and technologies in a photo exhibition. [More information](#) - [Registration](#)

Training sessions are offered in the morning: [book a session](#) to dig into the continuous commissioning software; energy demand scenarios tool; environmental and social impact assessment tool; Integrated Design Process library and more.

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## Will the Clean Energy Package help in the fight against smog in Poland: event presentations available (in Polish)

BPIE organised in March a workshop to explore the role of the "Clean Energy for All Europeans" package on the renovation market, and in particular whether it does enough to address the country's smog problem. This was the third BPIE workshop in Poland on improving the framework conditions for building renovation and gathered nearly 40 participants. [All presentations are available in Polish.](#)

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## EE global, EU Utility Week and the WSED: events not-to-be-missed!

BPIE invites its readers to the [Energy Efficiency Global Forum](#), May 8-9 in Washington D.C. with a few invites to distribute for free access to the event. [Reach out to us](#), first come, first served!

The [World Sustainable Energy Days](#) had a very successful event with over 700 experts from 59 countries participating: the new dates for 2018 are already set, February 28 to March 2, save the date!

BPIE also renewed its partnership with [EU Utility Week](#) that will take place this year in Amsterdam, October 3-5. The event will include this year again a hub session called *Intelligent Buildings Europe*, supported by BPIE, putting focus on the importance of buildings in people's everyday life and the key role they have in smart cities future.

### A few additional events where BPIE will speak

- [Reducing energy poverty by energy efficiency projects in residential buildings: the case for Eastern Europe](#), 24 April, Brussels,
  - [EHPA DecarbHeat conference](#), 12 May, Brussels
  - [11th National Conference of Energy Auditors Association from Romania](#), 12 May, Bucharest
  - [22<sup>nd</sup> BIBM Congress](#), 17-19 May, Madrid, Spain
  - [Agenda Constructiilor conference](#), 23 May, Bucharest
  - [eceee Summer Study](#), 29 May - 3 June, Presqu'île de Giens, France
  - IX International Conference of the University of Construction, 2 June, Bucharest
  - [CommONEnergy final conference and award ceremony](#), 7 September, Brussels
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