BPIE BUILDINGS PERFORMANCE INSTITUTE EUROPE

STRONG EVIDENCE FOR ENERGY SAVINGS IN RESIDENTIAL BUILDINGS SINCE THE EPBD RECAST IN 2010

A convincing argument to strengthen Europe's energy efficiency policy

Briefing

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^2 since 2010 - Adjusted to normal climate
(Source: EU Building Stock Observatory, 2017)

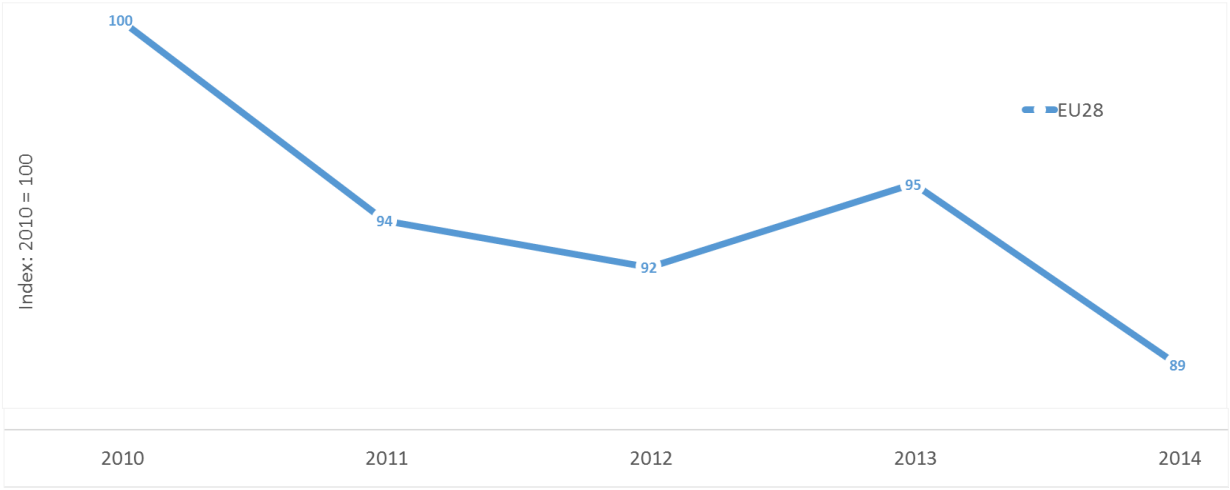
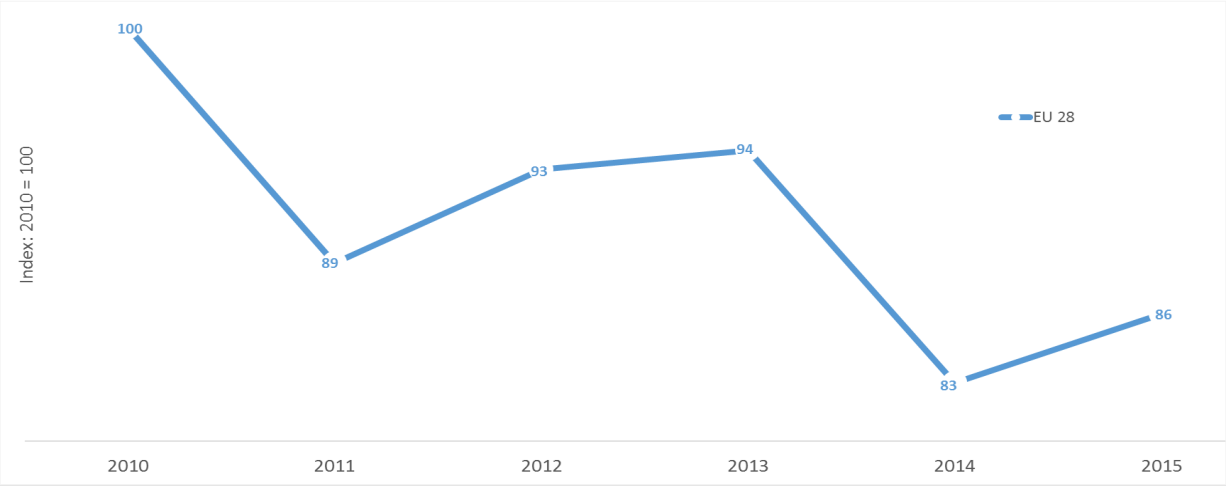


Figure 2 - Evolution of total final energy consumption in residential buildings since 2010 (Source: Eurostat, 2017)



The Energiesprong project, The Netherlands

The Dutch Energiesprong project reduced the cost of a net-zero energy renovation of a terraced house from €130,000 for the first pilot project in 2010 to €65,000, thanks to economies of scale, 3D-technologies and pre-fabricated materials. On-site work takes only a week, limiting the burden for inhabitants, while increasing their comfort and improving the look of the house. This state-of-the-art renovation programme is embedded in a holistic approach that involves all relevant actors and considers regulations, sales channels, energy performance guarantees, marketing, increases in property value, and finance. This approach enables deep energy renovation to be scaled up through an industrialised production process.

The Multi-apartment Building Modernisation Programme, Lithuania

In Lithuania, the *Multi-apartment Building Modernisation Programme* has been providing low interest bank loans to homeowners to implement efficiency measures since 2005. So far, 3,682 investment projects have been approved, 1,928 multi-apartment buildings are undergoing modernisation, and 1,251 are already renovated. In 2016, a new instrument was created with support from EU funds to increase the number of loans banks give for energy efficiency measures (up to €500m).

BPIE RECOMMENDATIONS

- **The EPBD should encourage Member States to strengthen their renovation strategies and introduce more effective tools to achieve deep renovation, such as trigger points for renovation, individual building renovation passports, minimum energy performance requirements for the renovation of commercial and public buildings, financing mechanisms and investment programmes.**
- **Europe should aim at achieving a decarbonised building stock consisting of highly efficient, healthy, comfortable, affordable and sustainable buildings, with a very low energy demand, supplied by renewable energy sources and intelligently integrated into a decarbonised, flexible energy system.**
- **The targets for buildings set out in the EPBD should be consistent with an ambitious 2030 framework and a clear vision for 2050: the proposed reform of the EPBD won't deliver this vision unless it is accompanied by an ambitious energy saving target to drive change.**

The Buildings Performance Institute Europe is a European not-for-profit think-tank with a focus on independent analysis and knowledge dissemination, supporting evidence-based policy making in the field of energy performance in buildings. It delivers policy analysis, policy advice and implementation support.

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