EED Article 7 - the Key Mechanism to Renovate Europe's Buildings

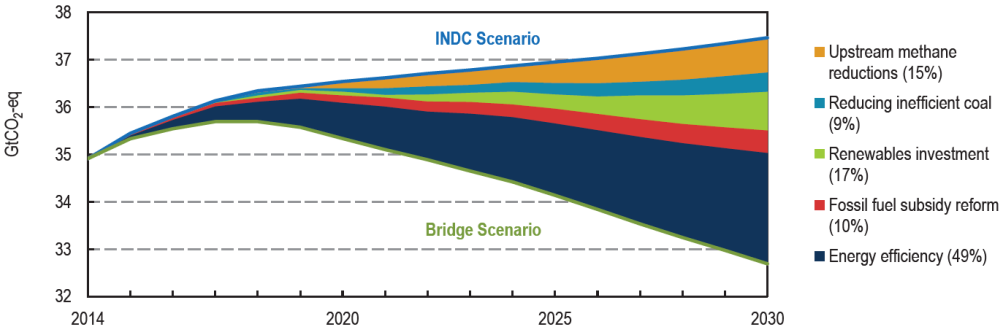
Summary

1. Building renovation will provide a large share of energy savings required to comply with the Paris Agreement.
2. Article 7 is the key enabler for the uptake of renovation measures across Europe.
3. A long-term framework gives Member States multiple options to achieve energy efficiency improvements.
4. Article 7 needs to be ambitious, clear and focussed on end-use energy savings which benefit citizens and businesses whilst providing investor confidence.
5. Existing exemptions and loopholes complicate Article 7 whilst providing no added value.

Energy efficiency is key to achieving the ambitious carbon reduction goals set out in the Paris Agreement. The International Energy Agency (IEA) created a model scenario[1], aligned with the Agreement, which indicates that half of global emission reductions will be achieved through energy efficiency measures. In Europe, this is 76 percent according to the IEA. In other words, without bold energy efficiency policies it will be impossible to reach the Paris Agreement.

It is for this reason and the many social benefits of energy efficiency that the European Commission has adopted the principle of Efficiency First in its Clean Energy for All Europeans package. The Energy Efficiency Directive (EED) is a key part of the package, which the Commission intends to deliver energy savings of at least 30 percent by 2030, although the cost-effective savings potential is closer to 40 percent[2]. Article 7 of the EED, outlining requirements for energy efficiency obligations, would deliver about half of the entire savings of the Directive[3] and is a key driver of energy efficiency in Europe.

Figure 1: Share of emissions savings by measure by 2030



Source: IEA 2016

1 IEA. (2016). Energy, Climate Change and Environment: 2016 Insights. Retrieved from http://www.iea.org/publications/freepublications/publication/ECCE2016.pdf

2 Braungardt et al. (2014). Study evaluating the current energy efficiency policy framework in the EU and providing orientation on policy options for realising the cost-effective energy efficiency/saving potential until 2020 and beyond. Report for DG ENER: Fraunhofer Institute, TU Vienna, and PricewaterhouseCoopers.

3 EC. (2016). The new energy efficiency measures. Retrieved from: https://ec.europa.eu/energy/sites/ener/files/documents/technical_memo_energyefficiency.pdf

The current framework for building renovation in Europe

The Energy Performance of Buildings Directive (EPBD) has served European Member States well in making sure that new buildings are built to high energy efficiency standards. However, most of the building stock in 2050 already exists today. A recent survey by the Building Performance Institute Europe (BPIE) demonstrates the huge potential in renovating our buildings, since less than 3% is currently in class A of the Energy Performance Certificates (EPC). It is for this reason that the Energy Efficiency Directive (EED) identified the existing building stock as "*the single biggest potential sector for energy savings […] crucial to achieving the Union objective of reducing greenhouse gas emissions by 80-95 percent by 2050 compared to 1990.*"[4]

The EPBD only requires buildings undergoing major renovations (when more than 25 percent of the surface of the building envelope undergoes renovation or total cost of renovation exceeds 25 percent of the value of the building) to meet energy efficiency standards (Minimum Energy Performance Requirements, MEPR). The vast majority of building retrofits, however, fall under this threshold and only individual building elements that are replaced need to comply with minimum standards. However, the EPBD does not provide a strong driver to increase the renovation rate. Article 7 of the Energy Efficiency Directive (EED) has a major role to play to support energy efficient building renovations measures in Europe, delivering end-use savings that directly benefit households and businesses.

What is Article 7?

Article 7 is a key provision of the 2012 Energy Efficiency Directive (2012/27/EU) which established a set of binding measures to help the EU reach its 20 percent energy efficiency target by 2020. Each Member State has to calculate its own savings target, and demonstrate how it will deliver the target between 2014 and 2020. Overall, the savings have to amount to yearly savings of 1.5 percent of final energy consumption. However, in its current version, the final energy savings target may be lower than this headline rate for two reasons.

Firstly, Member States can exclude the energy consumption of particular sectors from their target, most significantly the transport sector. **Secondly,** they can use exemptions, reducing the original target by up to 25 percent. Previous analysis shows that the combined effect of these factors is that the notified saving targets are only about half of what they would be without those adjustments—i.e., the annual economy-wide saving rate of 1.5 percent is reduced to about 0.75 percent[5].

Article 7 is deliberately flexible; it allows MS to choose how and in which sectors to deliver their savings commitments. Each MS has chosen a different mix of policies to deliver savings. Because of the large potential to save energy in a cost-effective manner in existing buildings[6] all Member States have chosen to focus on this sector to different degrees with some Member States delivering more than 80 percent of their savings from building renovation (e.g. France, Greece and Latvia).

How important is Article 7 for building renovations?

Building retrofits most important for Article 7 savings

Most of the energy savings delivered by Article 7 arise from building renovation. It is not possible to determine precisely the share of energy efficiency improvements delivered in buildings but a conservative estimate is that

[4] http://eur-lex.europa.eu/legal-content/en/TXT/?uri=celex%3A32012L0027

[5] Rosenow, J., Leguijt, C., Pato, Z., Fawcett, T., Eyre, N. (2016): An ex-ante evaluation of the EU Energy Efficiency Directive - Article 7. Economics of Energy & Environmental Policy 5(2), p. 45-63

[6] Braungardt et al. (2014). Study evaluating the current energy efficiency policy framework in the EU and providing orientation on policy options for realising the cost-effective energy efficiency/saving potential until 2020 and beyond. Report for DG ENER: Fraunhofer Institute, TU Vienna, and PricewaterhouseCoopers.

64 percent of all Article 7 savings stem from building renovation.[7] And most of the energy efficiency improvements have long lifetimes exceeding 20 years or even 30 years, delivering energy savings for a long time after their installation.[8]

Driving investment and job creation

Article 7 is an important driver for investment in energy efficient building renovations - around €40 billion per year are triggered by policies implemented as a result of Article 7.[9] This investment supports a large number of jobs in Europe - for each €1 million invested per year 19 jobs are supported[10] meaning that Article 7 supports almost 800,000 jobs in the building renovation sector alone.

Policy measures and best-practice examples

Article 7 resulted in more than 100 new policy instruments being implemented by Member States.[11] Examples of new policy measures include 10 Energy Efficiency Obligations and about 60 financial instruments, most of which deliver building retrofits.[12]

There is limited data on the depth of renovations delivered by those instruments but the evidence suggests that prior to the implementation of Article 7 85 percent of the energy renovation market focused on the implementation of 1 or 2 measures (e.g. a new boiler or loft insulation) resulting in a reduction in energy consumption of up to 30%.[13] It is likely that most of the building renovations delivered by Article 7 falls into the same segment.

There are, however, also excellent examples of policies that support deeper renovation works such as the German KfW programme for building retrofits. In principle, loan schemes tend to deliver the greatest depth of retrofits followed by grant programmes and financial incentives provided through Energy Efficiency Obligations as research based on expert assessment has shown.

However, the data availability regarding which types of technologies are supported by the various instruments is relatively poor and more comprehensive reporting would really help to get a better understand what types of retrofits are being delivered. The Governance Regulation reporting framework would be a good starting point.

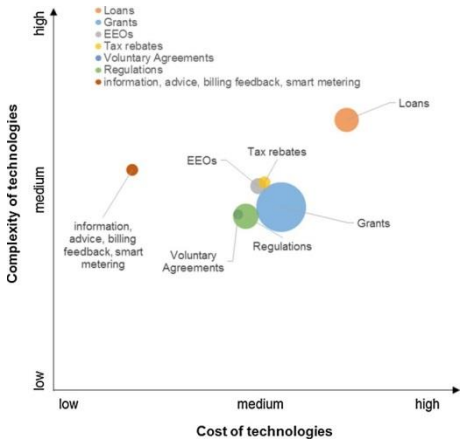


Figure 2: Technology cost and complexity by policy instrument type for the residential sector

[7] Based on Forster, D., Kaar, A.L., Rosenow, J., Leguijt, C., Pato, Z. (2016): Study on evaluating the implementation of Article 7 of the Directive 2012/27/EU on energy efficiency. Report for the European Commission. Buildings contribute 42% of all notified savings. For 44% of the notified savings it is not possible to attribute them to a specific sector because many of the policy instruments deliver savings in a range of sectors. Assuming the same split within the cross-cutting category as for the non-crosscutting share of the savings, the total savings from the buildings sector amount to 75% of the total. A more conservative assumption is that about 50% of all savings delivered by cross-cutting instruments stem from buildings, this is in line with recent data on Energy Efficiency Obligations, the major cross-cutting policy instrument. In total, this adds up to ~2/3.

[8] based on Forster et al. 2016

[9] based on annual savings of Article 7 in buildings estimated using data from Forster et al. (2016) and data obtained from the De-risk Energy Efficiency Platform: DEEP https://deep.eefig.eu

[10] Janssen, R. and Staniaszek, D., 2012. How many jobs? A survey of the Employment Effects of Investment in Energy Efficiency of Buildings.

[11] Rosenow, J., Leguijt, C., Pato, Z., Fawcett, T., Eyre, N. (2016): An ex-ante evaluation of the EU Energy Efficiency Directive - Article 7. Economics of Energy & Environmental Policy 5(2), p. 45-63

[12] See NEEAPs of all 28 Member States

[13] BPIE, 2011. Europe's Building under the Microscope: A Country-by-Country Review of the Energy Performance of Buildings.

Outlook

The Commission's proposal set out in November 2016 was meant to maintain the ambition level of Article 7 and ensure regulatory stability. As per the General Approach (19 June), regrettably the position taken by the European Council would mean to dilute Article 7 substantially (though countries like Germany and France have called for higher ambition). Independent experts from the Regulatory Assistance Project have carried out a detailed analysis[14] of the final Council position on Article 7. Their analysis shows that the 1.5 percent target will still be reduced by well over half and, in the worst-case scenario, it could plummet to just 0.04 percent.

What would this mean for building renovation?

Given that Article 7 is the key driver of building renovation in Europe a significantly lower ambition level or retroactive changes would mean uncertainty for the energy efficiency industry including installers and manufacturers. This uncertainty would lead to a slow-down in investment, to fewer jobs and higher energy bills for consumers.

It would also mean higher bills for consumers and is economically illiterate. Analysis by the Regulatory Assistance Project shows that the cost of energy efficiency improvements delivered through public policies are typically around 2 cents (€) per kWh which is well below the cost of supplied energy (on average more than 10 cents per kWh).[15]

In order to prevent this, the European Parliament needs to ensure that Article 7 as proposed by the Commission is strengthened and not weakened. This means a higher target, fewer loopholes such as excluding the transport sector and allowing a range of exemptions and a longer time horizon past 2030 and to 2050 to be in line with the Paris Agreement. The European Parliament is now in a position to not only mitigate the potential damage, but to draft robust amendments for Article 7 that will help deliver the 40 percent improvement in energy efficiency that the European Parliament has consistently voted for since 2014[16].

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This paper has been commissioned by Eurima and been written by Dr. Jan Rosenow, who is an energy efficiency expert

[14] http://www.raponline.org/knowledge-center/assessing-european-councils-proposal-for-article-7-energy-efficiency-directive/

[15] http://www.euractiv.com/section/energy/opinion/its-cheaper-to-save-energy-than-to-buy-it-despite-misleading-claims/

[16] http://www.europarl.europa.eu/news/en/press-room/20160622IPR33205/meps-call-for-more-ambitious-and-consumer-focused-energy-targets-beyond-2020