

Motivations underlying the research

Despite the rising influence of European legislation on national energy efficiency policy, the literature evaluating energy efficiency policy at the EU level is rather scarce. A recent systematic review of peer-reviewed energy efficiency programme ex-post evaluations identified only four studies analysing the effectiveness of EU energy efficiency policies. With regard to ex-ante evaluations, we are not aware of any peer-reviewed papers carrying out ex-ante evaluations of EU energy efficiency policies – the available ex-ante evaluations of EU energy efficiency policy are all located in the grey literature. In order to address this gap, in this paper we provide an ex-ante evaluation of the Energy Efficiency Directive (EED) based on an extensive review of Member States' plans for the implementation of the EED. We focus on probably the most important Article of the Directive (Article 7), which requires Member States to implement Energy Efficiency Obligations and/or alternative policy instruments in order to reach a reduction in final energy use of 1.5% per year. Article 7 is expected to deliver more than half of the required energy savings of the 20% reduction target and is therefore the most important component of the EED in terms of its contribution. We evaluate to what extent Article 7 is likely to deliver its aims and how it is implemented by Member States.

Research performed

Based on a vast amount of information provided by Member States to the European Commission (7,653 pages of material from NEEAPs, Article 7 notifications, EU Pilots and additional documents) we systematically analysed which types of policy measures Member States implemented or plan to implement in order to comply with Article 7.

The data was then used to carry out an aggregate analysis of the total savings that Member States anticipate. Using qualitative data captured in the 28 data templates on the reliability of the savings from individual policy measures we calculated the proportion of savings that were ineligible due to not reflecting end-use energy savings, at risk of not being delivered and at risk of not being additional. Furthermore, the database allowed us to assess which types of policy measures and sectors are expected to deliver the energy savings.

Main conclusions and policy implications

The paper illustrated that there are considerable uncertainties around the reliability of the expected energy savings resulting from the inclusion of non-energy efficiency measures, the potential non-additionality of savings, double counting, the risk of non-delivery, and the implications of weak monitoring and verification systems. For each of those issues we provided an indication of the share of the energy savings that could be affected. Our analysis illustrates that a significant share of the expected savings is at risk of not being delivered in practice, although it is impossible to calculate the effect at this stage. This puts into question whether the EED will achieve its aims.

A number of suggestions for policy reform were developed that would strengthen the Directive and increase the reliability of the anticipated energy savings. Overall, the lack of clarity of the requirements with regards to what is required and how it needs to be reported can be addressed by more detailed provisions, extensive guidance, and reporting templates that ensure Member States follow a more consistent approach in calculating the savings and reporting them as well as outlining their monitoring and verification regimes.