

SUMMARY REPORT

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Policy Instruments for the energy efficiency sector: enabling mechanisms for a “FIT for 55”

Workshop and kick-off event co-organised by the Environmental research group and the European Investment Bank, in partnership with Sciences Po's European Chair for Sustainable Development and Cambridge University

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Introduction:

This event was organised as a kick-off consultation and workshop for the project “Policy Instruments For The Residential Energy Efficiency Sector: Enabling Mechanisms For A Fit For 55 Efficient Transition” (PIREES55)¹. The project aims to investigate the challenges and opportunities of the implementation of new European energy efficiency policies. Such policies are key elements to both the ‘Fit-for-55’ package and the ‘RePowerEU’ communication. Energy efficiency measures are also considered to be amongst the most economical, quickly implementable, and efficient levers to reach the EU’s goals of a just transition to climate neutrality.

The event brought together policymakers, stakeholders, and industry experts to outline and discuss the implementation of the EU’s energy efficiency policies. Speakers were the two leading researchers of the programme, [Dr. Cristina Peñasco](#) (University of Cambridge) and [Dr. Marc Ringel](#) (Sciences Po) as well as Robert Nuji (DG Energy at the European Commission), Juan Magaña Campos (EIB), and Ralf Goldman (EIB). The workshop was chaired by [Dr. Charlotte Halpern](#) (Sciences Po, CEE & LIEPP) and Fulceri Bruni Roccia (EIB).

The workshop commenced with welcoming words by the co-organisers, Dr. Charlotte Halpern and Fulceri Bruni Roccia, followed by a keynote about the revision of the EU’s Energy Efficiency Directive by Robert Nuji, deputy Head of the Energy Efficiency Unit at the Directorate-General Energy of the European Commission. The workshop was split in two sections. The first part focussed on the ‘upstream’, aspects of European energy efficiency policy making. It was introduced by Dr. Marc Ringel, followed by a presentation by Juan Magaña Campos on the EIB’s support schemes and programmes to promote energy efficiency projects. The second part of the event was centred around the ‘downstream’ aspects of the policy area, focussing mainly on energy efficiency in households. After an introduction by Dr. Cristina Peñasco, Ralf Goldman presented some particular projects and offers by the EIB concerning energy efficiency in the buildings and household sector. Both parts were followed up by a discussion with the experts and stakeholders present. The participants were asked to anonymously participate via an interactive survey using the platform Sli.do during the workshop. Some 30 people attended the event. According to the first survey conducted, 20% of participants were European public actors, 13% worked in academia or research, 33% in

¹ Funded under LIEPP’s environmental research group. All the projects carried out at LIEPP benefit from the support provided by the ANR and the French government under the "Investissements d’Avenir" program LABEX LIEPP (ANR-11-LABX-0091, ANR-11-IDEX-0005-02) and the IdEx Université Paris Cité (ANR-18-IDEX-0001).

business organisations, 17% in companies and private firms and 17% in NGOs. Some of these surveys' results will also be included in this report.

This summary reports the key messages and take-aways from the workshop following the outline of the event held in Brussels.

Keynote: Revision of the EU Energy Efficiency Directive

The first input was given by Robert Nuji from the Directorate-General Energy's Energy Efficiency Unit. Mr Nuji presented the ongoing revision of the EU Energy Efficiency Directive (EED). While the Green Deal provides for a "unifying theory" on the agenda the Commission should set to achieve the EU's climate goals, the "Fit for 55" package is designed to implement the policies needed to achieve the net zero goal of 2050. One part of the "Fit for 55" package, which was adopted by the European Commission in July 2021, is the revision of the EU Energy Efficiency Directive originally adopted in 2012 and revised in 2018. Since energy efficiency is defined as one of the key levers to deliver on emission and consumption reduction goals in both 'Fit for 55' and the 'RePowerEU' communication, the revision of the Energy Efficiency Directive is the EU's main tool to implement energy efficiency policy. The directive's Revision is currently being negotiated in the Trilogue between the European Parliament, the Council, and the Commission that facilitates these negotiations.

The directive presents itself as a multi-faceted framework directive. It proposes an increase of 9% in the targets associated to the **reduction of primary and final energy consumption** in the EU setting them at 39% and 36% respectively. It also wishes to put an end to the reliance on national action of member states through the assignment of **national contribution targets** per member states, even if they remain indicative and are not binding. The new Article 8 on savings on the national level also includes an almost 100% **increase in the national annual energy savings obligations** (+1.5%) compared to the prior target.

The **five focus areas of the revised directive** are **renovation**, as the biggest challenge lies in the renovation of existing buildings rather than with the newly built stock; **decarbonisation**, with a clear focus on zero emissions buildings; **financing**, **modernisation**, and **system integration**, with smart readiness indicators and demand side responses as central tools. The "RePowerEU" communication introduced three pillars to guideline the EU's reaction to the Russian invasion of Ukraine: **diversification** of supply and storage, acceleration of **renewables deployment**, and **demand reduction** through energy efficiency and energy consumption reduction.

The keynote underlined that one of the biggest challenges to implement energy efficiency measures remains their **financing**. Projects like the Recovery and Resilient Facility, Cohesion Policy Funds, the Just Transition Fund, the Modernisation Fund, Invest EIB, Horizon Europe, and the Innovation Fund LIFE provide **large amounts of public financing**. However, this only covers about 10-15% the funds needed for the transition. A big share of the funding must be taken on by **private investment**. How to incentivise this investment remains one of the key challenges to implement energy efficiency measures.

The outlook on the next steps of the EED remains vague as the Trilogue negotiations have not yet reached an agreement on the increase of the EU's energy efficiency ambition in 2030 compared to the 2020 Reference Scenario's effort level: in the 'RePowerEU' communication the Commission proposed a 13% increase, while the Council adopted a general approach fixing

it at 9%. The speaker expects the final target increase to be found somewhere in the middle. The revised directive is expected to be finalised by **mid-2023** and will be accompanied by **implementation guidance** for the member states.

Mr Nuji also stressed that it is important to put emphasis on energy efficiency, demand side response, and flexibility, so that these topics are taken into account in the current discussion on energy market design. When asked about the biggest obstacles encountered in his day-to-day work, he identified a disconnect between political statements made by European leaders and the level of ambition of European policies. On the local level he experiences that the implementation of energy efficiency measures is slow since the scale of energy efficiency related projects is often small, especially compared to development projects for renewables generation such as wind parks.

Part I: Implementation of “Fit for 55”

Introduced by Dr. Marc Ringel, the first part of the workshop was focussed on the ‘**upstream**’ elements of the implementation of energy efficiency policies. Mr Ringel stressed, that while the HORIZON Europe and the LIFE Programme as well as the third version of the Energy Efficiency Directive of the next year all faced usual policy-making challenges, especially in the complex field of energy efficiency measures, the current situation is different for two reasons. Firstly, the war in Ukraine has posed **new time constraints** in the very short-term and secondly, the war has opened a **window of opportunity** creating a momentum to act swiftly.

Presentation - Juan Antonio Magaña-Campos, Head of Unit Innovation Finance Advisory, EIB

Mr Magaña-Campos presented the European Investment Bank’s projects in the energy and climate sector with a special focus on projects promoting energy efficiency. The total size of projects contributing to climate action supported by the EIB rose to one trillion in the last year and thus the EIB exceeded its goals regarding the share in climate-related investments. Further, the **climate efficiency** of a given project is always taken into account in the bank’s decision-making process, even if the investment in question relates to an entirely different sector.

The EIB seeks to support the implementation of energy efficiency measures through **innovative funding and programme structures**. The focus lies here on financing investment in renewable energy production and electric vehicles. The EIB is further the main lender for hydrogen-related projects in Europe.

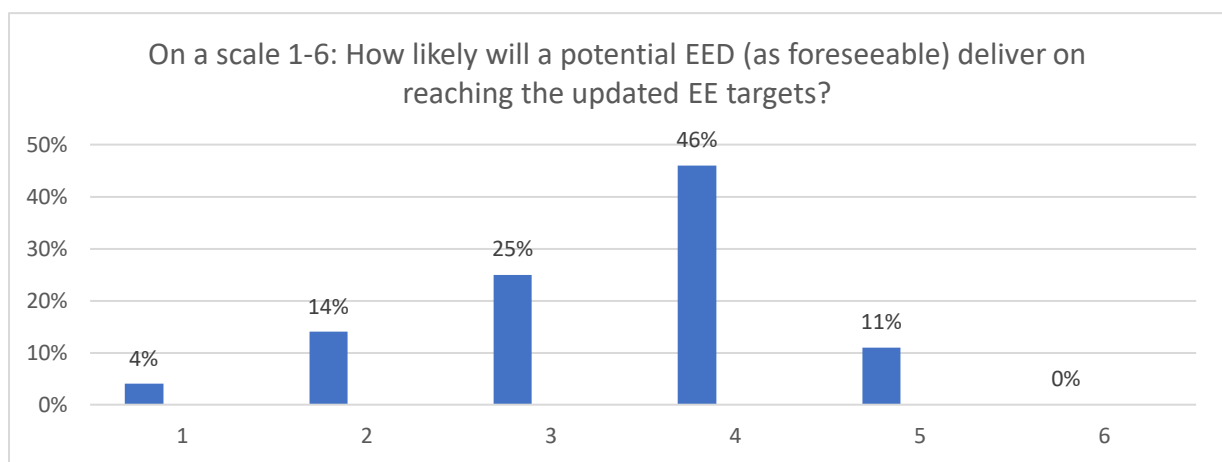
In the discussion, a main challenge was identified in a lack of **knowledge about the vast financing resources and opportunities** by the policy makers and political actors negotiating the directives. An industry representative emphasised that a narrative is often brought forward that justifies a lack of ambition with a lack of financing opportunities – an argument which is partly refuted by Mr Magaña-Campos’ presentation of the financial volume of the EIB’s investment projects. The representative emphasised that there is an artificial wall between the support offered by institutions such as the EIB and the projects that are needed to achieve set goals which needs to be broken down.

Feedback round with stakeholders

The discussion and feedback round with the present stakeholders were structured by questions answered through an interactive survey tool.

Question 1: Will the upcoming EED deliver on updated targets?

Participants were asked to rate on a scale from 1-6 how likely a potential EED (as foreseeable) would deliver on reaching the updated EE targets (1 = not likely at all, 6 = definitely). The average response was 3.5/6 with almost half of all participants answering 4/6. When correlated with their area of work, the most optimistic participants were those working in European institutions and in business organisations.



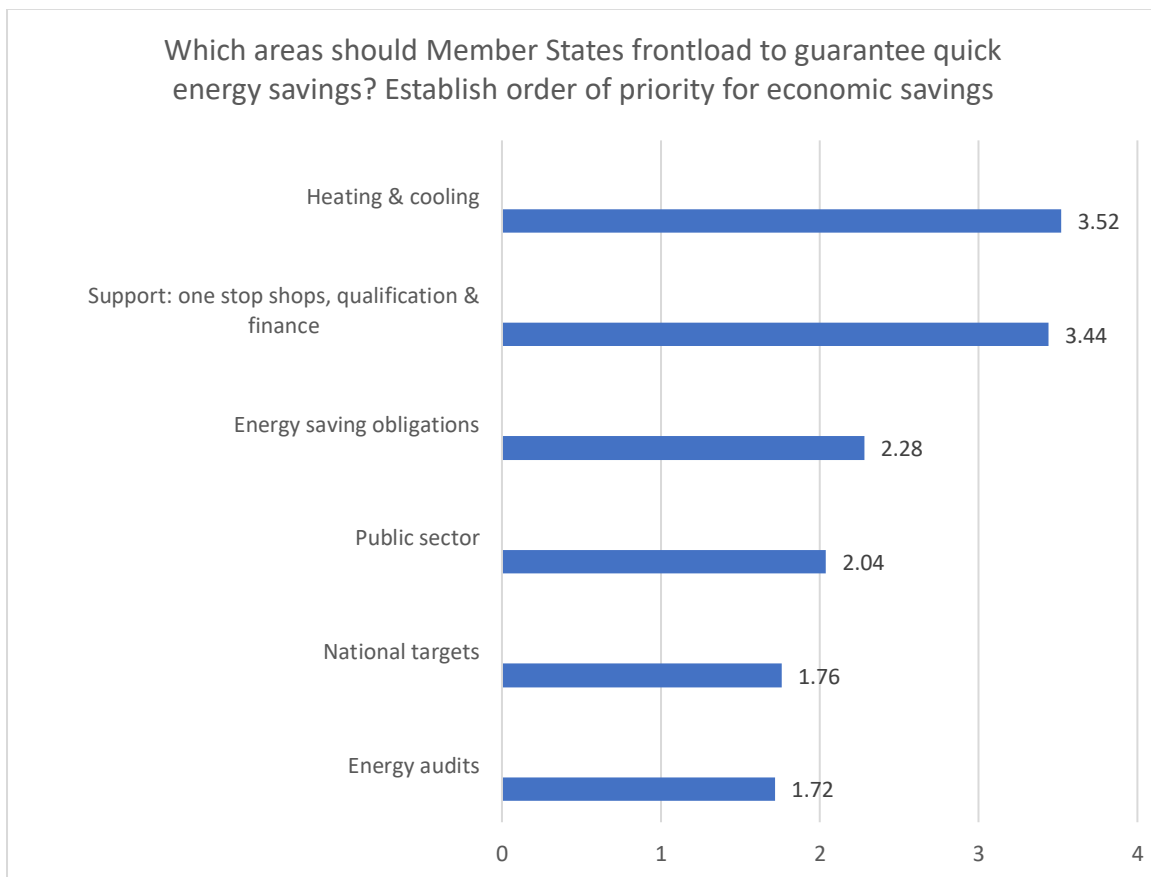
In the discussion following the first question multiple challenges regarding the implementation of the EED were brought up.

- It was argued that the risk remains that the EED will not suffice to implement the changes needed and that additional legislation including concrete measures especially regarding the renovation of buildings might be necessary. It was also mentioned that other legislation is not always necessarily going hand in hand with the EED.
- This problematic is reinforced by the fact that the energy efficiency debate, as underlined by a participant from the research sector, remains a niche topic. A clear definition and outlining of what is meant by energy efficiency would be needed according to the participant and that momentarily mechanisms like the heating target in the renewable energy directive (RED) make the least energy efficient measures the most prominent. A renewed emphasis on energy neutrality would be needed to accelerate the implementation of energy efficiency measures.
- The lack of an energy efficiency in industry directive is mentioned as one of the obstacles to reach energy efficiency targets.
- Another problem is that energy efficiency measures are still not always the most cost-efficient solutions as member states keep subsidising fossil fuels or technologies that are counterproductive regarding the implementation of energy efficiency measures. Member states must implement policies with more clarity regarding energy efficiency.

- Clarity and empowerment are generally considered to be lacking. As consumers are looking for the most cost-efficient solution, they must be guided on the search for both the most energy efficient and affordable solution. Especially regarding the achievement of the targets for 2030 the knowledge must be dispersed now.
- Lastly, the difficulty to measure or observe the success delivered of a new EED is mentioned.

Question 2: Frontloading measures

The participants were asked to rank which areas Member States should frontload to guarantee quick energy savings in an order. The proposed answers were public sector, national targets, heating and cooling, support: one stop shops, qualification and finance, energy audits, energy saving obligations.



Most participants ranked ‘heating and cooling’ as the area Member States should prioritise to save energy quickly. Second ranked ‘support: one stop shops, qualification and finance’, third ‘energy saving obligations’, fourth the public sector, fifth national targets and last ‘energy audits’.

While discussing the poll, multiple solutions to the implementation challenges were brought up.

- A participant from an NGO brought forward that the introduction of quantitative targets on heating appliance changes would bring more certainty to markets. For that, Member

States could make use of existing energy savings obligations. Overall, an alignment of incentives and of agents in the sector is necessary to deliver on national targets, while it is also important that delivering agents do so in a metric that can be used to measure progress on targets.

- Industry representatives also underlined that the focus should be shifted more towards the potential for energy efficiency measures in the industry sector. Further, a tax rebate policy put forward at a European level could help the implementation of tax rebates as an incentive for energy efficiency measures, since they are challenging to put in place. The question of the combined incentivisation was also underlined and the potential combining renewables build-out with energy efficiency measures and an 'energy efficiency first' approach would have.
- A present researcher pointed out that especially in heavy industries the creation of a market context where energy efficient production is also always the most cost-efficient is imperative. For in some heavy industries an increased electrification is only hindered by the higher costs of electricity compared to traditional fuels. Further, it was stressed that the renewed EED must be integrated into and monolined with other policies of the 'Fit for 55' Package and of the Green Deal.

Question 3: Research design

When asked to list what should be the focus in the tracking of the implementation of the 'Fit for 55' and the EED, participants listed the following.

- Monitor both primary and final energy savings as well as returns on investments compared with final energy savings.
- The social impact of decarbonisation.
- The alignment across different 'Fit for 55' files to create a narrative to incentivise investments and a coherence across the package and other European legislation, especially regarding its social impact.
- Counting the number of remaining fossil fuel boilers and the reduction in GWh of imports of Russian gas.
- Another focus should be district heating and the availability of financial resources.
- How to reach people that are not interested in the topic of energy efficiency as financial means are not always the main hurdle.
- The ability to meet objectives while optimising the use of local resources through a flexible and creative approach.
- The actual reduction of fossil CO2 reduction as *in fine* this is the goal.

Part II. Energy efficiency in buildings

Introduced by Dr. Cristina Peñasco, the second part of the workshop focussed on **energy efficiency in buildings and households** and thus on the ‘**downstream**’ aspect of European energy efficiency policies. The transition towards more energy efficient buildings must be accelerated, especially in the **context of the war in Ukraine**, but the challenges policy makers face are again multiple. What challenges and opportunities are Member States facing when transposing measures from the ‘Fit for 55’ package regarding energy efficiency? How do ex-ante and ex-post assessments of energy consumption reductions in the residential sector vary due to the technologies’ technical assessment prediction? How can the delays in the introduction and implementation of energy efficiency policies in households be explained? How should policy makers react to a non-receptive public, especially if due to a lack of information and understanding of the complexity of the subject? What are the factors influencing energy consumption in households, especially in the context of a need to increase energy consumption in a large share of households to fight energy poverty?

After transport, the buildings sector is the second biggest in terms of energy consumption and there has been **no big reduction in final energy** use in the EU’s household sector over the last ten years. Further, it has been proven that **households are reactive to prices**, which must be kept in mind when price caps are discussed in the context of the war in Ukraine – as must be the problem of **energy poverty**. However, households vary in their reaction and so do gas and electricity prices. Thus, it is necessary to **monitor fuel poverty indicators** and **trigger energy consumption reductions** through energy efficiency measures.

The main share in energy consumption in households stems from heat, water heating, lightning, and cooking appliances. One of the main challenges that the implementation of energy efficiency measures is facing in the household sector is that it necessitates **large-scale changes in infrastructure** and thus not only **big investments**, but also **organisational efforts**, time, and chaos at home. In addition to that, rebound effects of policy induced improvements are common – especially among households from low-income areas.

Regarding future policies Dr. Peñasco brought forward that while technical improvements reduce gas consumption in the short-term, mediating factors independent from the adopted measures’ savings potential level out this effect in the medium and long term. The effect of measures also varies on where the households are located and the area’s level of deprivation. Moreover, while energy efficiency policies can help reduce energy poverty, they are currently ineffective when it comes to reducing energy consumption. The **positive impact of technical solutions is limited to the short-term** which indicates that policy interventions must go beyond support schemes for technical improvements and include forms of behavioural interventions. Therefore, it is necessary to develop **individually adjusted policies that include regulatory instruments** such as higher building standards for newly built substances, financial incentives, and soft measures.

Presentation – Ralf Goldmann, Head of Division Energy Efficiency and Energy Advisory, EIB

Head of Division for Energy Efficiency and Energy Advisory at the European Investment Bank, Ralf Goldmann, provided concrete examples of support schemes offered by the EIB in his presentation. He emphasised the **role of the bank as a policy taker** that seeks to support the implementation of objectives and targets set at the European level through programmes such as the Energy Lending Policy, that follows the ‘energy efficiency first’ principle since 2019, the Climate Bank Roadmap, and the project ‘Climate Action and Environmental Sustainability’. The bank provides for around **EUR 4.5 billion in lending for energy efficiency projects**, of

which a majority flows into the buildings sector. The bank's main levers are **loans and funds, technical assistance, and advisory services**. Especially the latter remains crucial as even with existing energy audits projects, and most importantly large-scale projects, are lacking. The EIB identifies a lack of capacity in the public sector as well as in the private sector due to lacking staff, knowledge, and up-front information as the main reasons. The EIB aims to support the bridging of gaps between project ideas and their implementation.

One example of the EIB's contribution to this effort are their schemes to support the **implementation of the Italian Ecobonus and Super Ecobonus system**. The main hurdles in their implementation are the fragmentation of the relevant markets which the EIB tries helping to overcome through outsourcing and aggregation of knowledge and capacities. For that, the EIB collaborated with Italian Energy Services Companies. The bank also created **'top-up loans' for recent home buyers in Portugal and Spain** to incentivise renovations as isolated consumer credits are often not sufficient. Generally, the EIB observes that conditional loans have a high average leverage ratio.

Currently, the biggest challenges the EIB identifies are **inflation, the availability of materials, a lack in technical expertise, split incentives, fragmentation, subsidised energy costs, and capital constraints** that hinder the expansion into new products. The EIB's main levers to respond to these challenges are the **aggregation** of a broad range of instruments such as **direct and intermediate loans, private financing of energy efficiency related projects (PF4EE)** that are blended with the European Structural and Investment Funds (ESIF), and **technical assistance** through programmes such as the European Local ENergy Assistance (ELENA), the Joint Assistance to Support Projects in European Regions (JASPERS), the European PPP Expertise Centre (EPEC), and the InvestEU Advisory Hub. Some of the challenges, however, cannot be addressed by the EIB such as regulatory barriers, challenges related to the European Energy Service Companies (ESCO) markets, and limits in the public sector.

When asked about the effects of the war in Ukraine on EIB loan requests, Mr Goldman replied that large scale real estate companies now seem to tend to shift their operations from construction to renovation and that the uncertainty that stems from the volatility of renovation materials' prices affect project planning. He also underlined the remaining effects on planning security due to the COVID-19 pandemic and that some investors are currently waiting for the updated modalities of grants from the HORIZON Europe programme.

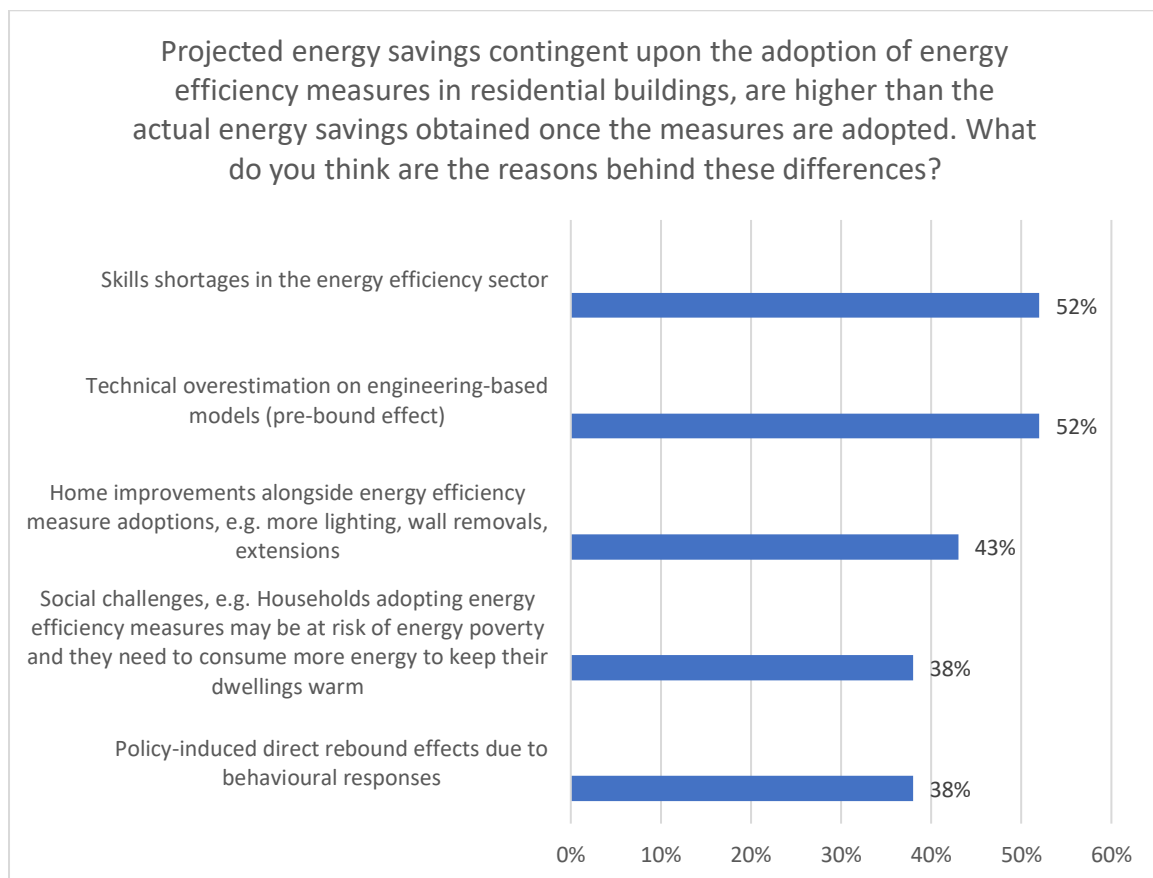
One participant underlined the potential and importance of standardised loan products for the building sector such as the EIB's 'top up loans' throughout Europe. The impact that interest rates might have on the success of offers of mortgage top up was also mentioned, a challenge that could be tackled by the EIB by taking up part of the risk associated with rising interest rates as an intermediary. The necessity of an EU-wide qualification scheme for renovations related to energy efficiency measures was also brought up. Lastly, one participant proposed that member states' initiatives to incentivise reforms should be encouraged by proposing a standard offer to which member states can contribute by increasing the loan volume.

Feedback round with stakeholders

The feedback and discussion round were again structured with the help of an interactive polling tool.

Question 1: Divergence between ex-ante and ex-post energy savings

For the first question, participants were asked about the main reasons behind the differences in projected and actual energy savings through energy efficiency measures proposing multiple answer choices. Participants identified a pre-bound effect and shortages in skills as the main reasons.

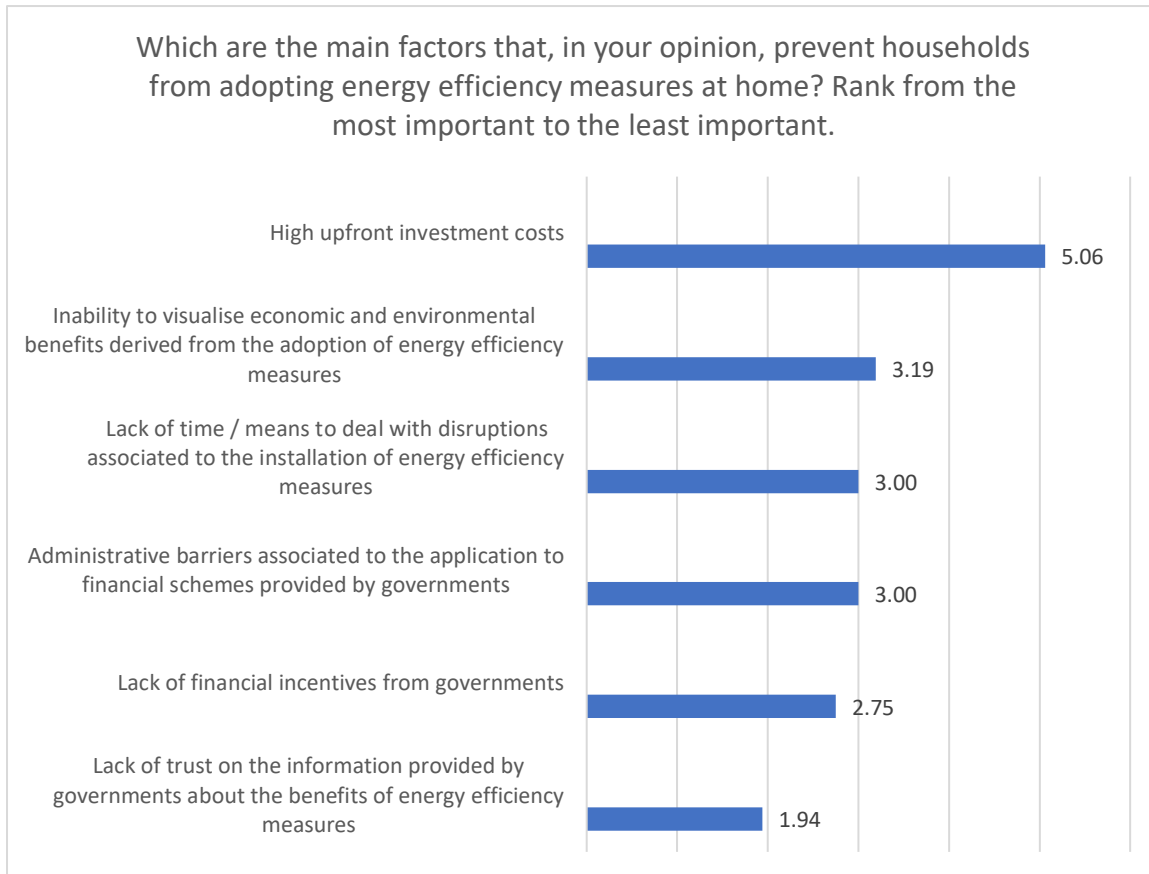


Two challenges related to skilled workers were brought up in the discussion:

- A representative from a trade union underlined that shortages in the construction sector are due to shortage of materials and waste management, but also related to the fact that the construction sector is highly characterised by small and micro companies.
- Another participant linked the size of companies in the construction sector to the problem of certifications, as there are multiple barriers associated with certification schemes for small and very small companies. At the same time the need for certification and quality standards was emphasised as low-quality renovations can cause damage to the motivation to support and implement energy efficiency measures in the population.

Question 2: Main factors preventing adoption of energy efficiency measures in households

Participants were asked to rank what they consider to be the main factors that prevent households from adopting energy efficiency measures. The highest average ranking had the hurdle of high upfront investment costs.

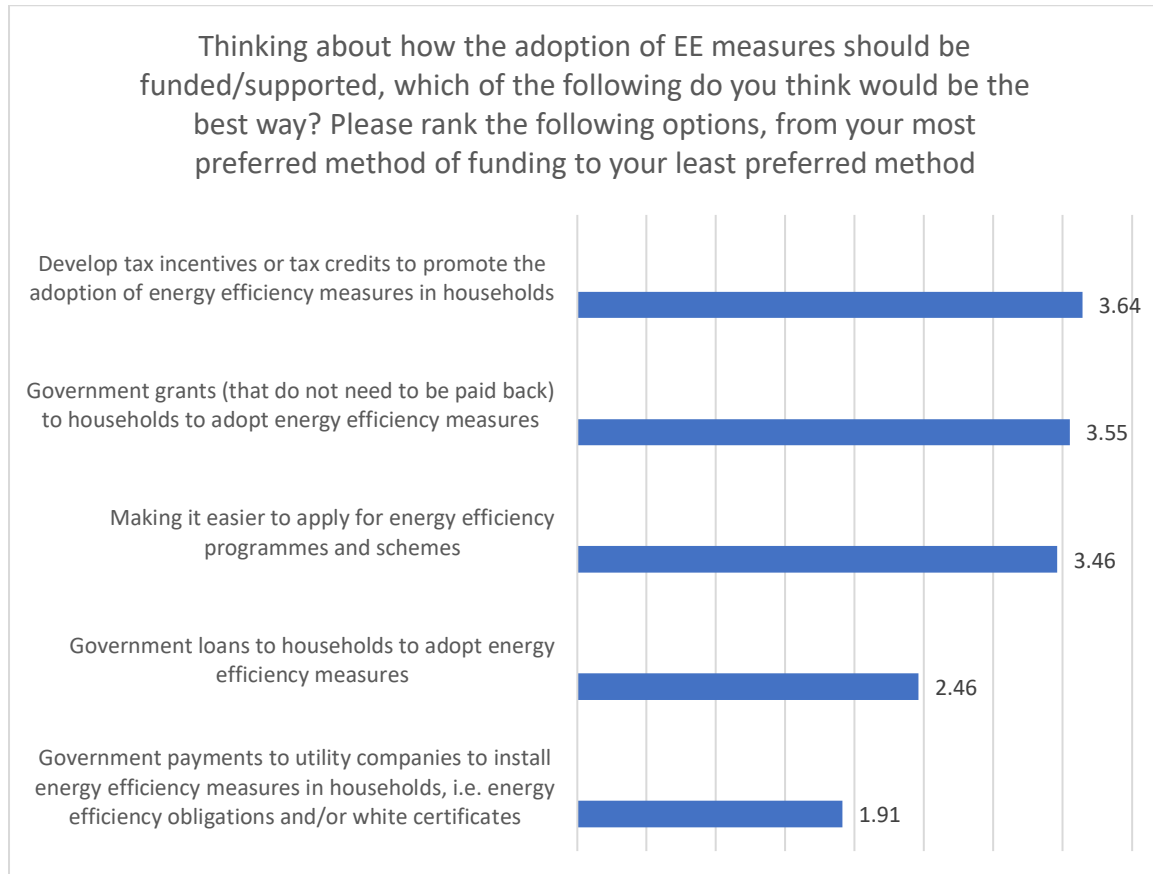


In the discussion three related points were brought up:

- One participant underlined that all energy efficiency measures do not necessarily provide payback as singular investments might not have the desired success.
- As a possible solution, Dr Peñasco put forward linking policy incentives to changes in ownership to reduce barriers to renovation as well as the possibility of connecting taxes associated to real estate assets' transfer with specificities related to energy efficiency in the buildings transferred.
- The returns not only from energy savings but also increased retail prices were brought up by another participant, who underlined the tenant / landowner issue. The possibility exists to incentivise renovation through financial means such as allowing to increase base rents, but the social issue of the landlord holding power over the tenants remains and should be addressed through state obligations to renovate mixed with tax reductions.

Question 3: Funding and support of energy efficiency measures

For the third question, participants were again asked to rank funding and support for energy efficiency measures from most to least preferred methods. The option with the highest average score were tax incentives or credits.



In the discussion examples of challenges from two countries were mentioned:

- As one participant argued, getting renovation loans in France is very difficult and the repayment delay of four to seven years is very short given the high upfront costs of many energy efficiency measures.
- Another participant mentioned that in Italy the tax credit system can now be passed over to banks which has resulted in three problems. First, banks had to stop taking up tax credits quickly as they cannot match them anymore, second, because is a lack in construction companies, and third, a lack of scaffolding.

Question 4: Additional initiatives and policies

For the last question, participants were asked to choose multiple options for additional initiatives and policies that governments should consider or implement, given that technical energy efficiency improvements are essential but do not seem to be sufficient to generate the expected energy savings in households. The option that was chosen by the most candidates was to make smart meters compulsory and free of charge, followed by energy reduction targets for households associated to waivers in the energy bills and banning the sale of fossil fuel boilers by 2025 and a reduction of electricity levies for households installing heat pumps that shared

the second place. Third came the option ‘soft instruments to promote behavioural changes – provision of economic/health and environmental information benefits’ and last ‘stamp duty refunds for home buyers who upgrade their properties, e.g., with heat pumps and insulation retrofits’.

In the discussion, one participant emphasised that to motivate the implementation of energy efficiency measures, the know-how from marketing specialists in the commerce sector should be mobilised.

Key Takeaways

- There is a **disconnect between the level of ambition communicated** in statements by European leaders and **adopted in European policies**.
- The war in Ukraine created **new short-termed time constraints** on the one hand but also opened a **window of opportunity with a momentum to act swiftly** on the other hand.
- Additionally to the EED, legislation including **concrete measures** especially regarding the **renovation of buildings** and an **energy efficiency in industry directive** might be necessary.
- One of the main challenges to implement energy efficiency measures remains their **financing**. However, there is also a **lack of knowledge about the vast financing resources** and opportunities on the side of the policy makers and political actors negotiating the directives.
- It is vital to emphasise the importance of topics such as energy efficiency, demand side response, and flexibility in the **current discussions on energy market design**
- Most participants believe that the **area of heating and cooling** is what should be prioritised by the Member States to **implement quick energy saving measures**, followed by **support through one stop shops, qualification, and finance and energy saving obligations**.
- When tracking the implementation of the ‘Fit for 55’ and the EED the participants believe it to be important to **focus on district heating, the availability of financial resources, and how people that are not interested by energy efficiency can be reached**.
- According to the participants, the difference between projected and obtained energy savings are due mainly to **skills shortages in the energy efficiency sector** and the **technical overestimation** on engineering-based models, the pre-bound effect. The main hurdle **preventing households from adopting energy efficiency measures** is believed to be the **high upfront investment costs**.