



Implementing the energy savings obligation set by the Energy Efficiency Directive: **sharing experience to deliver**

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May 2026



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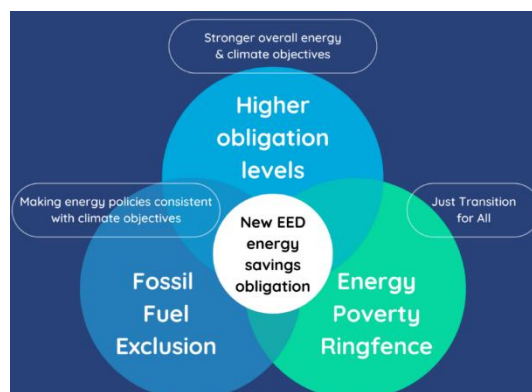
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EXECUTIVE SUMMARY

Previously Article 7 and now Article 8 of the EU Energy Efficiency Directive (EED, now Directive (EU)2023/1791) set an energy savings obligation on Member States for 10-year periods. Member States can achieve the required amount of cumulative energy savings by implementing an Energy Efficiency Obligation Scheme (EEOS) or other policy measures (called 'Alternative measures' in the context of the EED).

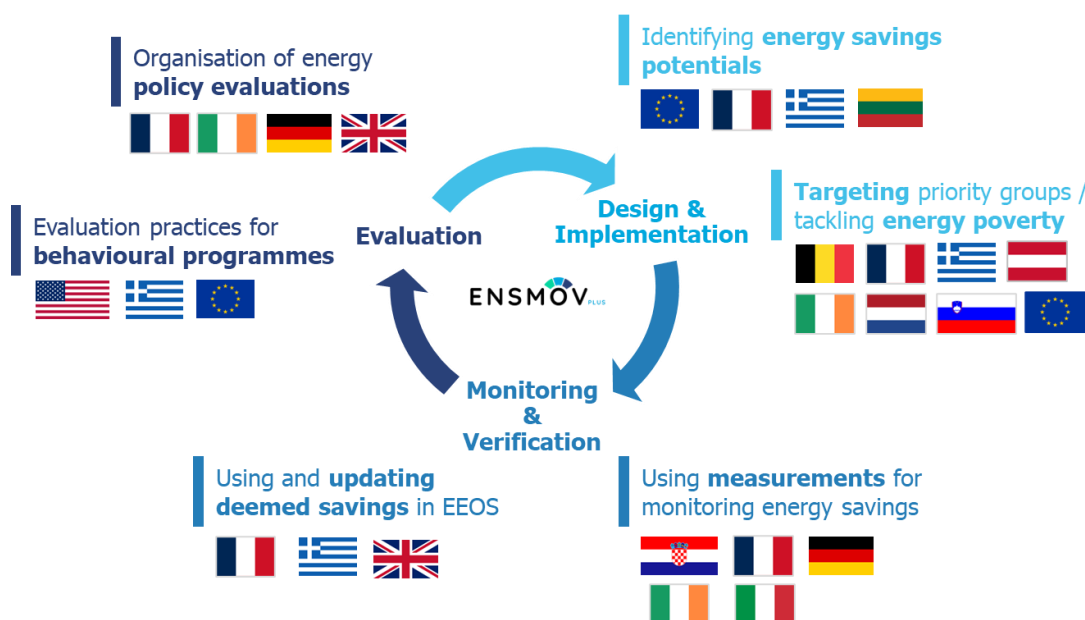
The new EED brought three main changes



To overcome these new challenges, every country and stakeholder can learn from what has happened in other countries, provided that experience is analysed and discussed. This is what the ENSMOV Plus project (December 2022-November 2025) has done:



Six key topics were selected from stakeholders' priority needs, analysing good practices through **27 examples from 13 countries**.



The project facilitated experience sharing and discussions of policy developments, with:

16 European workshops gathering
915 participants

50 national activities gathering
2662 participants

The increased ambition of the new EED may widen the gap between policy intent and effective delivery: the effectiveness of policies depends heavily on data quality, institutional capacity, and adaptive scheme design.

Assessing where cost-effective energy savings lie remains a crucial prerequisite. These assessments should be regularly updated and linked to implementation frameworks. Detailed bottom-up analyses can inform strategic allocation of funds for maximising impacts, provided that ex-post assessments help close data gaps.

Targeting and tackling energy poverty is now formally required by the EED. This is done through income thresholds, building performance criteria, local delivery structures or dedicated registries. Different objectives (e.g. aiming at supporting as many households as possible vs. aiming at higher impacts per intervention) result in various designs of support instrument, implementation process and monitoring system. Stronger integration with other policies (e.g. Social Climate Plans) could help overcome the funding challenge.

Energy Efficiency Obligation Schemes (EEOSs) play a major role in about half of the Member States, and were a core topic, continuing the experience sharing initiated in the previous ENSPOL and ENSMOV projects. Discussions went further in specific key issues, such as the design of substitution fee and good practices to mitigate frauds. All EEOSs keep evolving, from structural changes to fine-tuning. This makes cross-country experience sharing very valuable.

Monitoring & Verification (M&V) also remains a central topic in the experience sharing activities. It is indeed essential for ensuring the quality of the actions delivered, and thereby the actual policy impacts. Public authorities and stakeholders highlighted the need for clear and transparent procedures, as well as on-going communication and information sharing. M&V requirements should be proportionate and not necessarily seen as an administrative burden only. Experience shows that additional M&V effort can bring significant gains in the functioning of schemes, and thereby in the savings delivered.

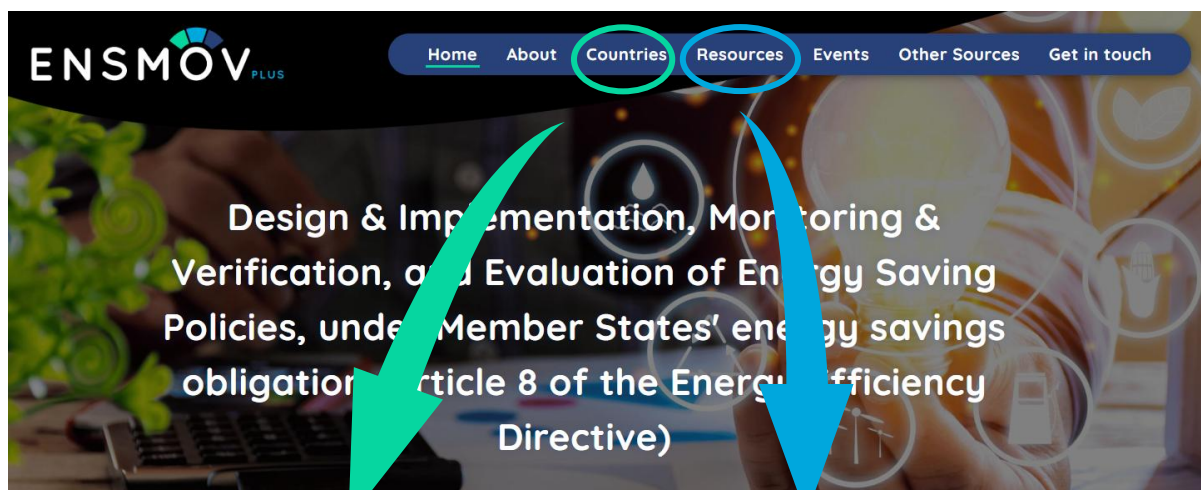
Using measurements in monitoring energy savings help build market credibility and reduce fraud risk. Synergy with other purposes (e.g. process optimisation) increase the cases where metered data are cost-effective. This development can be supported with clear protocols, qualified professionals and keeping flexibility to adapt to changing circumstances.

Deemed savings remain relevant to streamline the monitoring of standardised actions, provided that regular updates maintain their reliability. Formal working groups can support this process and increase the legitimacy of the catalogues of standardised actions.

Policy evaluation complements M&V. Structuring data collection and management over time can be effective to provide robust and updated evidence. Wider impacts are still under-reported, whereas they can represent major value dimensions of energy efficiency policies.

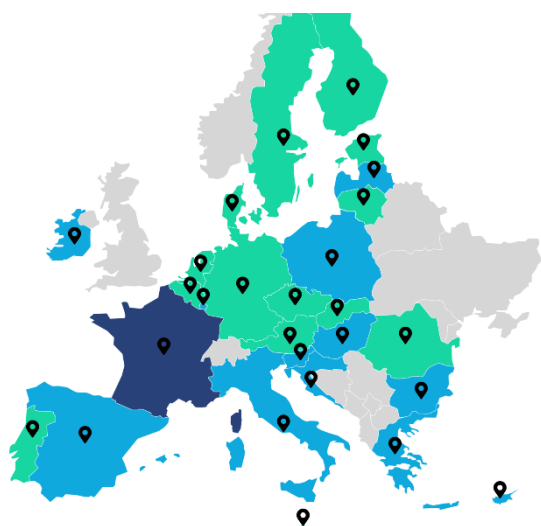
Looking ahead, **two structural trends** will likely shape how energy efficiency policy is redesigned over the coming years: (1) **electrification**, providing substantial energy savings opportunities and aligning with the fossil fuel exclusion; (2) **affordability pressures** to ensure fair policies, with high investment needs at a time of constrained public budget and fluctuating energy prices which implies a renewed focus on cost-effectiveness, targeting and differentiating support according to target groups.

[All resources, proceedings of workshops and webinars, country data and much more are available on the online platform <https://energysavingpolicies.eu/>]



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Report

ENSMOV Plus' Lessons learned from the implementation of the Energy Efficiency Directive's energy savings obligation

This report provides a summary of the main lessons learned from all ENSMOV Plus' resources and activities, following the three main stages of the policy cycle, in the context of Member States' energy savings obligation (Article 8 of the Energy Efficiency Directive EU/2023/1791): Policy design and implementation (cf. chapter 2); Monitoring and verification (cf. chapter 3); and Evaluation (cf. chapter 4). The report concludes with a forward-looking chapter 5, discussing factors that may influence possible re-design of energy efficiency policy measures. [DOWNLOAD THE REPORT] 27 examples addressed six key topics selected from a stakeholder survey. The topics above were complemented with [...]

Ensmov Plus

Monitoring, Reporting and Verification Policy design and implementation Policy evaluation Energy Efficiency Obligation Schemes Alternative Measures Additional and materiality Energy poverty and social aspects Alternatives to fossil fuel technologies Behaviour Cost-effectiveness Multiple impacts of energy efficiency

Report

ENSMOV Plus' Country summaries

Synthesis report from experience sharing about the implementation of the energy savings obligation of the EU Energy Efficiency Directive [DOWNLOAD THE REPORT] Every country and stakeholder can learn from what has happened in other countries, provided that experience is analysed and discussed. In addition to making resources publicly available on the online platform, ENSMOV Plus provided a unique forum for public bodies and private stakeholders from all EU27 countries to share experience, both at EU and national level (in 9 partner countries). This report provides a summary from the national activities done in each country, as well as from the country-related [...]

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Monitoring, Reporting and Verification Policy design and implementation Policy evaluation Energy Efficiency Obligation Schemes Alternative Measures Energy poverty and social aspects Behaviour Cost-effectiveness Multiple impacts of energy efficiency

Case Study

Organisation of Energy Policy Evaluations - Insights from France, Germany, Ireland and the UK

[DOWNLOAD THE REPORT] Following the online workshop "Evaluations of energy efficiency policies: what do they tell us?", this discussion paper explores the practices and methods applied by different countries to organise the evaluation of their energy efficiency policies. A review of practice in the United Kingdom, Ireland, Germany and France shows that governments frequently contract external experts to inform policy revisions. The commissioning landscape is decentralised: multiple ministries, regulators and implementing agencies run or commission evaluations within their respective mandates rather than through a single central evaluator. Across all four countries, evaluation focuses primarily on energy savings and greenhouse-gas reductions, consistent [...]

Ensmov Plus

Policy evaluation Energy Efficiency Obligation Schemes Alternative Measures Additional and materiality Cost-effectiveness France Germany Ireland

Webinar

Webinar materials: Halfway to 2030: snapshots of Member States' energy efficiency policy measures

Article 8 of the Energy Efficiency Directive (EU)2023/1791 requires Member States to achieve a minimum amount of cumulative energy savings over ten years period, currently 2021-2030. Member States can implement Energy Efficiency Obligation Schemes and/or Alternative measures to achieve their target. The ENSMOV Plus project has produced snapshots of Member States' energy efficiency policy measures, collecting detailed policy design and delivery information alongside insights from interviewees involved in policy implementation. This webinar provided an overview of recent developments in Member States' policy measures, and discussing the provisions of the new EED, whose transposition deadline was 11th of October, 2025. The presentation is [...]

Ensmov Plus

Monitoring, Reporting and Verification Policy design and implementation Policy evaluation Energy Efficiency Obligation Schemes Alternative Measures Bulgaria Croatia Portugal Spain

1 Member States' energy savings obligation

1.1 A key component of the Energy Efficiency Directive (EED)

Previously **Article 7** and now **Article 8** of the EU Energy Efficiency Directive (**EED**, now [Directive \(EU\)2023/1791](#)) set an **energy savings obligation** on Member States, first for 2014-2020 and then for 10-year periods. Member States can achieve the required amount of cumulative energy savings by implementing an **Energy Efficiency Obligation Scheme** (EEOS) or other policy measures (called '**Alternative measures**' in the context of the EED).

The Commission's assessment about the **achievement of the 2020 energy efficiency targets**¹ showed a **very mixed picture**: 14 Member States met their energy savings obligation for 2014-2020 (with over-achievements sometimes by more than 50%), whereas ten other Member States did not meet their energy savings obligation (with half of them missing their target by 25% or more). The over-achievements show that doing more is feasible, whereas the under-achievements highlight that not all policies are successful or delivering enough².



Climbing a new hill: a review of Member States' strategies to meet their energy savings obligation for 2021–2030

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Keywords
Energy Efficiency Directive (EED), energy savings obligation, fit-for-55 package, energy efficiency policy

Abstract
The EU and 21 out of 27 Member States achieved their headline 2020 target for energy efficiency in terms of maximum final energy consumption (not to exceed). This was partly due to COVID-19. The picture is even more mixed when looking at Member States' energy savings obligation. 14 Member States met their target of cumulative energy savings over 2014-2020, whereas ten Member States failed, and final data were missing for the three remaining ones (based on Commission's report). The fit-for-55 package brought more ambition for the 2030 targets, including for the energy savings obligation, now Article 8 EED. This paper examines the main changes brought by the EED recast, highlighting the impact they may have on Member States' strategies and capacities to meet their revised obligations. All Member States except Cyprus need to increase their rate of new annual savings, some very significantly. Most of them will need to clarify which measures will deliver energy savings among priority groups. Implementing the EED recast should push Member States to act fast and big, in line with the Global Pledge on Resilience and Energy Efficiency signed at COP28. Based on the large differences in strategies and achievements of Member States as far as the paper ends with a discussion of the importance of experience sharing to support Member States to hit their savings goals.

from being on track in 2021, it shows that there is little predictability when looking at overall trends only. This paper examines the main changes brought by the EED recast, highlighting the impact they may have on Member States' strategies and capacities to meet their revised obligations. All Member States except Cyprus need to increase their rate of new annual savings, some very significantly. Most of them will need to clarify which measures will deliver energy savings among priority groups. Implementing the EED recast should push Member States to act fast and big, in line with the Global Pledge on Resilience and Energy Efficiency signed at COP28. Based on the large differences in strategies and achievements of Member States as far as the paper ends with a discussion of the importance of experience sharing to support Member States to hit their savings goals.

Check the short video introducing the EED energy savings obligation, links to the related Commission's guidelines and more information about the EED in the '**About**' section of the ENSMOV Plus' online platform



¹ EC (2022). [2022 report on the achievement of the 2020 energy efficiency targets](#). Report from the Commission to the European Parliament and the Council, COM/2022/641 final.

² For more details, see: Broc, J., Thomas, S., Exintaveloni, D.S., Oikonomou, V., Schlomann, B., Rohde, C., Di Santo, D. (2024). [Climbing a new hill: a review of Member States' strategies to meet their energy savings obligation for 2021–2030](#). Proceedings of the ECEE 2024 Summer Study, paper 3-117-24.

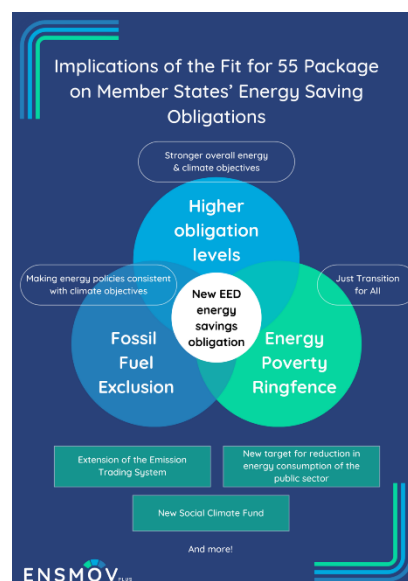
1.2 From Article 7 to Article 8 EED: main changes from the fit-for-55 package

The energy savings obligation set in Article 8 EED is equivalent to energy savings targets at national level. This is a **key element of the EED**, and more broadly of the European Union (EU)'s **Fit for 55 Package**. This package included a recast of the EED, adopted in September 2023 and with major changes applying from 2024.

The EED recast revised the energy savings obligation, including **three fundamental changes**:

- (1) **Higher ambition**: the required amount of energy savings has increased significantly.
- (2) **Energy poverty ringfence**: A mandatory share of these savings must now be achieved among priority groups, such as households affected by energy poverty.
- (3) **Alignment with climate objectives**: Energy savings from fossil fuel technologies are progressively excluded from eligibility.

[see [ENSMOV Plus' infographic](#)]



Implications of the Fit for 55 Package on Member States' Energy Saving Obligations

Changes to the EED and other EU Directives and Regulations (update following the finalisation of the EPBD)

21 May 2024

These changes, along with other legislative updates, are designed to align the EED more closely with the EU's increased climate ambition, have a dual effect:

- **Increasing synergies** (e.g. the Social Climate Fund provides new resources for measures targeting vulnerable groups)
- **Reducing the scope for additional energy savings** (e.g. strengthened Ecodesign regulations and the Emissions Trading System (ETS) Directive tighten the baseline).

[For more details, see: the analyses in "[Implications of the Fit for 55 Package on Member States' Energy Saving Obligations](#)" (updated in May 2024 following the finalisation of the EPBD)]

The changes brought by the fit-for-55 package and the EED recast were further discussed in **two webinars**:

- 10 November 2023: Discussion of the implications of the fit-for-55 package, with a **focus on the EED recast** entered into force in October 2023

ENSMOV Plus workshop materials : Energy savings obligation's road to 2030: bigger, cleaner, fairer!

On 10th of November 2023, the first webinar of ENSMOV Plus discussed the changes brought by the recast of the Energy Efficiency Directive adopted in September 2023. After an introduction about ENSMOV Plus by Jean-Sébastien Broc (IEECP), Samuel Thomas (RAP) presented the report analysing these changes and the new EU context of the fit-for-55 package. Then Antonin Chapelot presented the analysis done by the Coalition for Energy Savings about the draft updates of NECP (National Energy and Climate Plans) that Member States had to submit by June 2023. A panel discussion provided the viewpoints of the European Commission (Margot Pinault). [...]

[Ensmov Plus](#)



[Check the [Proceedings](#)]

- 30 May 2024: Complementary discussion focused on the EPBD recast adopted in May 2024

Webinar materials – The revised EPBD: New opportunities for Member States' energy savings obligations

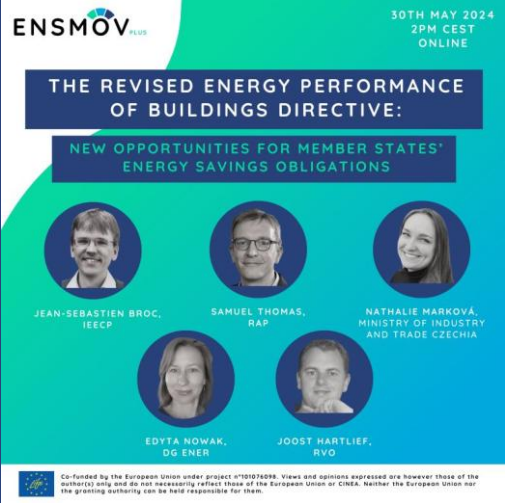
The newest ENSMOV PLUS webinar took place on 30th May 2024 to discuss the revised Energy Performance of Buildings Directive: new opportunities for Member States' energy savings obligations. With the revised Energy Performance of Buildings Directive, new opportunities arise for Member States to implement energy savings obligations. This webinar provided an overview of the main changes and how they relate to the Energy Efficiency Directive for energy savings. Experts from Czechia and The Netherlands also shared their experiences and knowledge on energy savings obligation in buildings. Read the full report prepared by ENSMOV plus on the revision of the EPBD. [...]

[Ensmov Plus](#)

[Buildings](#)

[Interactions with other legislations and objectives](#)

[Czechia](#) [Netherlands](#)



[Check the [Proceedings](#)]

2 Introducing ENSMOV Plus

Every country and stakeholder can learn from what has happened in other countries, provided that experience is analysed and discussed. However, public authorities and other implementing bodies have limited time and resources to coordinate experience sharing between Member States and at EU level. The experience of the [ENSMOV project](#) (2019-2022) has confirmed that national authorities and market stakeholders welcome the opportunity to share experiences, policy implementation challenges and solutions.

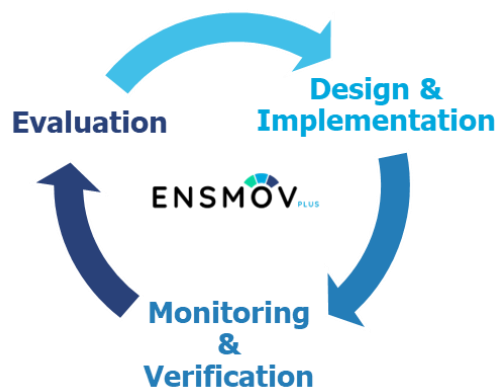
This is what ENSMOV and then ENSMOV Plus (December 2022 – November 2025) have done:

 Providing a forum for public bodies and stakeholders from all EU27 countries Facilitating and expanding experience sharing amongst Member States for the implementation of policies under Art.8 EED through tailored policy support and in-depth exchange of experience and collaboration among key stakeholders.	 Providing analysis and hands-on examples Developing tailored resources for the implementation of Article 8 EED, addressing specific needs of Member States and stakeholders. Developing an online platform to make knowledge and information easy to find and use	 Discussing & disseminating good practices Promoting good practices about policy implementation, M&V (Monitoring & Verification) and evaluation, to ensure robust data and insight to inform the (re)design of policies towards 2030.
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ENSMOV Plus covered the **whole policy cycle**, in line with the approach of Article 8 EED.

The following chapters provide an overview of ENSMOV Plus' outputs:

- **27 hands-on examples** addressing 6 key issues
- **16 European workshops** and **50 national activities** with **more than 3500 participants**
- **Country factsheets and summaries**
- **Quantitative assessments** about (1) multiple impacts of policies and (2) cost-effectiveness of energy saving actions in the residential sector



[All resources, proceedings of workshops and webinars, country data and much more are available on the **online platform** <https://energysavingpolicies.eu/>]



A successful project is first a team!

The ENSMOV Plus' consortium included **14 partners from 12 countries**, with a diversity of organisations representing key stakeholders involved in the implementation of EED energy savings obligation:



- 8 public authorities, agencies or institutes



- 2 national associations of stakeholders



- 4 research labs or think tanks



3 Addressing key issues

3.1 Overview of the issues addressed during the project

The recast of the EED, along with other elements of the Fit for 55 package, introduced significant changes, with three overarching trends:

(1) The recast substantially increased the ambition in terms of required energy savings, in line with other EU goals, that the EED energy savings obligation is designed to contribute to, including notably the EU targets on emissions reduction (Effort Sharing Regulation), renewables (Renewable Energy Directive), and social equity (Just Transition and Social Climate Fund).	(2) The new requirement to deliver a share of savings to people affected by energy poverty signals a clear focus on social fairness, to prevent regressive distributional effects and promote energy saving policies that can become tools for a just transition and actively benefit vulnerable households.	(3) The gradual exclusion of savings from fossil fuel technologies sets a fundamental change in what counts as saving, so Member States prioritise measures that align with the long-term goal of climate neutrality.
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Following the EED recast adopted in September 2023, the recast of the Energy Performance of Buildings Directive (EPBD) was adopted in May 2024:

- The new Minimum Energy Performance Standards in non-residential buildings and trajectories for progressive renovation of the residential building stock (Article 9) should help deliver more energy savings in buildings.
- The National Building Renovation Plans (Article 3) shall contribute to and monitor the reduction of the number of people affected by energy poverty thanks to building renovations.
- The ban on financial incentives for stand-alone fossil fuel boilers from 2025 (Article 17) goes beyond the exclusion of savings from fossil fuel technologies in the EED energy savings obligation, creating a coherent EU-level push to phase out fossil fuels in buildings.

[For a more detailed analysis, see the report [Implications of the Fit for 55 Package on Member States' Energy Saving Obligations](#)]

Building on this analysis of the new legislative landscape, the project conducted a targeted **needs assessment** to identify the most pressing challenges faced by practitioners, who could grade issues to help prioritize the analyses and activities of

ENSMOV Plus. This assessment combined a review of gaps identified in the previous ENSMOV project with an **online survey of 156 stakeholders from across the EU**. The survey gathered inputs from policymakers, energy companies, and other key actors. The results confirmed that the priorities of stakeholders are increasingly driven by the three main trends related to the changes brought by the EED recast, notably the need to identify new energy savings potentials to meet higher targets, to design effective measures for the energy poverty ringfence, and to navigate the phase-out of fossil fuel technologies.

Needs for the implementation of Article 8 EED (energy savings obligation)
Priority topics about policy design, implementation, monitoring & verification and evaluation

10 September 2024



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[For a more detailed analysis, see the report [Needs for the implementation of Article 8 EED](#)]

Matching existing tools and resources with needs and gaps on Art.8 EED (Member States' energy savings obligation)

Final version: July 2024



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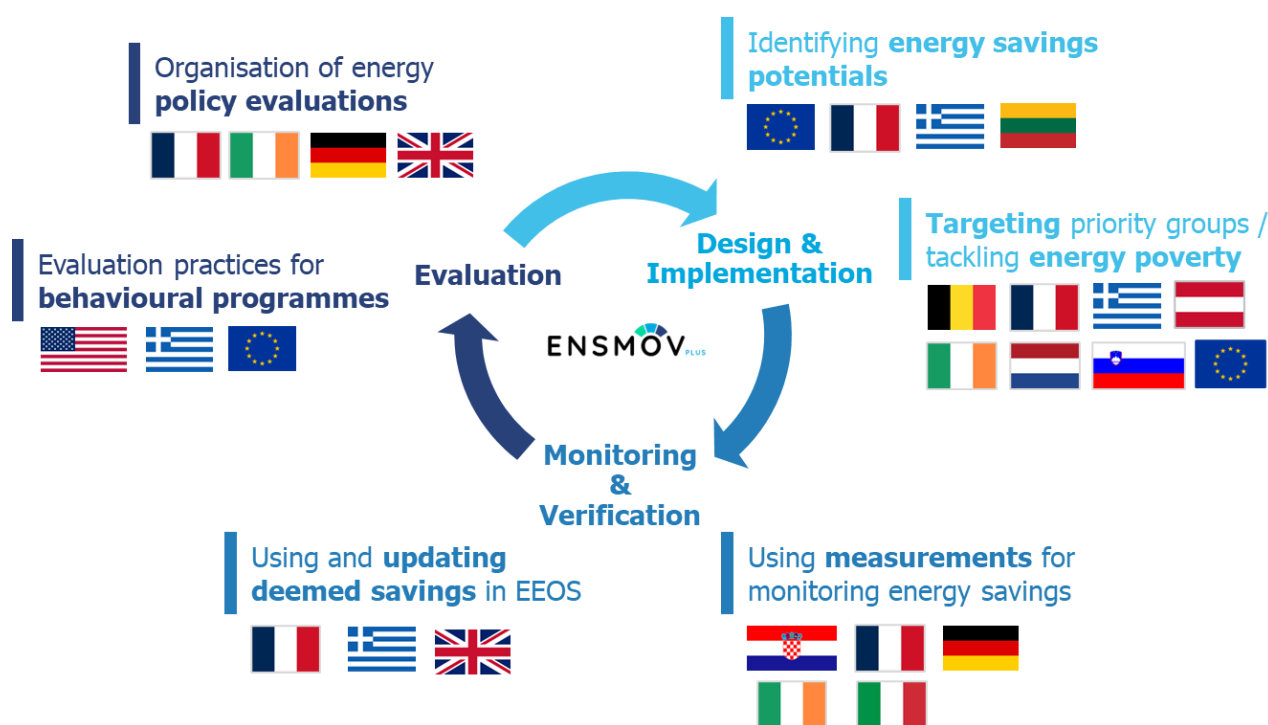
The needs assessment was complemented by a **review of existing tools and resources**, updating the review done in the previous ENSMOV project, and focusing on the key issues selected in the survey.

An Excel-based tool ([ENSMOV Plus Compendium of Resources](#)) compiles the information gathered from this review and offers an extended list of resources relevant to the implementation of Article 8 EED and related policy measures.

Confronting the needs assessment and the review of existing resources made possible to identify key gaps and select topics to be addressed in ENSMOV Plus.

[See the report [Matching existing tools and resources with needs and gaps on Art.8 EED](#)]

The figure below provides an overview of the six key issues selected in ENSMOV Plus, showing the countries where hands-on examples have been analysed.



ENSMOV Plus provided technical support to public authorities and stakeholders by facilitating the exchange of practical insights and lessons learned across Member States. This was achieved through two main channels.

- First, by **developing and curating resources**, such as guidelines, collections of examples, and comparative analyses, that are made available on the online platform (**see Section 3.2**). This was complemented by further research on quantitative assessments (**see chapter 6**).
- Second, by **organising experience-sharing activities**, including European workshops (**see section 4.1**) and national activities (**see section 4.2**), where policymakers and implementers discussed the hands-on examples analysed in ENSMOV Plus as well as experience shared by guest speakers, identifying challenges and solutions from different national contexts.

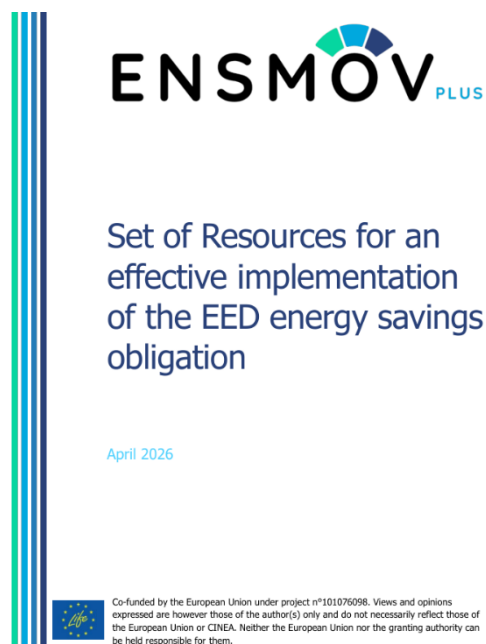
By examining how different Member States design, implement, monitor, and evaluate their policies, the project translated diverse experiences into actionable knowledge for improving the implementation of Article 8 EED across the EU (see main lessons learnt in **chapter 7**).

3.2 Six topics with 27 examples available on energysavingpolicies.eu

ENSMOV Plus thus prepared 27 examples to cover six topics selected from the gap analysis (see above), as well as complementary ad-hoc research and analysis.

The table below provides a detailed list of these examples, with the link to each of them.

[You can also find all the resources at once, in the report [Set of Resources for an effective implementation of the EED energy savings obligation](#)]



Topics	Countries & examples
Energy savings potentials	• France: White certificate saving potential study in France • France: Study of support provided by the white certificates scheme to achieve the objectives of the tertiary decree • Greece: Analysis of the energy saving potentials in enterprises in Greece • Lithuania: Energy savings potential from behaviour changes in Lithuania • EU-wide: Energy savings potentials at national and European level (analysis of the study done by ICF for the Commission in 2021)
Tackling energy poverty and targeting priority groups	• Austria: Clean Heating for All programme • Belgium (Wallonia): Wallonia's complementary set of measures to tackle energy poverty • France: 'Energy poverty' white certificates in France • Greece: Experience with energy efficiency measures to tackle energy poverty • Ireland: Experience with energy poverty targeting • Netherlands: Specific Benefit (SpUK) Local Approach Isolation • Slovenia: Slovenia's experience with targeting priority groups in financial incentives for energy efficiency in buildings

Topics

Countries & examples

+ Policy brief '[Final NECPs, Energy Poverty & Energy Efficiency targets under Art. 8\(3\): Where do we stand?](#)'

Using measurements in monitoring energy efficiency policies

- [Croatia](#): programme for renovation of public lighting
- [France](#): specific operations in the white certificates scheme
- [Germany](#): Energy Savings Meter scheme
- [Ireland](#): non-residential projects in the Energy Efficiency Obligation Scheme
- [Italy](#): standard and monitoring plan projects in the white certificates scheme

Updating deemed energy savings

- [France](#): Experience with deemed savings in the white certificates scheme
- [UK](#): Experience with deemed savings in the EEOS
- [Greece](#): Experience with deemed savings in the EEOS

Evaluation of behavioural measures

- [Greece](#): Evaluation of public awareness campaigns
- [US](#): US protocol to evaluate behavioural measures in the residential sector

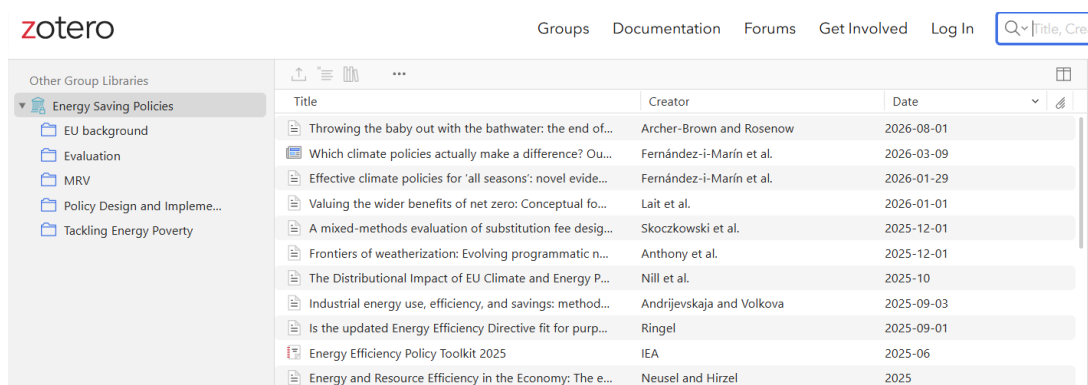
Organisation of Energy Policy Evaluations

- [France](#)
- [Germany](#)
- [Ireland](#)
- [UK](#)

Further ad-hoc analyses were done according to issues raised at national level. For example, a review of the incentive schemes implemented in Poland for building renovation led to developing a [Sustainable Cost-Effectiveness Assessment Methodology for Energy Transformation Support Programs](#).

Moreover, in addition to the [ENSMOV Plus Compendium of Resources](#) prepared from the review of existing resources, references relevant to topics related to Article 8 EED and energy efficiency policies have been added on an on-going basis in an **online library** created on the **Zotero** platform:

https://www.zotero.org/groups/5115257/energy_saving_policies/library



4 Sharing experience

Experience sharing is a cornerstone of effective energy efficiency policy implementation at the European and national level. Member States have large flexibility in selecting and designing their policy measures to meet their energy savings obligation set in Article 8 EED. This also results in a diversity of monitoring, reporting and verification (MRV) frameworks.

In the meantime, Member States face similar issues and challenges, as found in the needs assessment (see section 3.1).

Structured exchanges between public authorities, regulatory bodies, energy companies, and other key stakeholders enables the sharing of good practices, accelerates institutional learning, and helps identify common implementation challenges for which coordinated solutions can be developed.

In this context, ENSMOV Plus has played a vital role in facilitating such exchanges, providing structured and inclusive capacity-building and peer-learning activities. ENSMOV Plus has organised overall:

16 European workshops gathering 915 participants [see section 4.1]	50 national activities gathering 2662 participants [see section 4.2]	And further ad-hoc bilateral or small-group exchanges
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This extensive range of knowledge exchange activities spanning both the European and national levels, engaging **public authorities, energy agencies, obligated parties, industry representatives, and civil society organisations** across all Member States.

These activities dealt with the key topics analysed with the ENSMOV Plus examples (see chapter 3), as well as further topics raised by stakeholders along the project.

National activities were organised in the partner countries (Austria, Croatia, France, Greece, Hungary, Italy, Lithuania, Poland, Romania and Slovenia) as well as with Cyprus.



Report on the knowledge exchange programme for all stakeholders

D 4.2

January 2026



Co-funded by the European Union under project n°101076098. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or CINEA. Neither the European Union nor the granting authority can be held responsible for them.

[See the report [Report on the Knowledge Exchange Programme](#)]

4.1 Cross-country activities: 16 European workshops reaching 915 stakeholders from 25 Member States

The topics and contents of these events can be found below, including the links to the online platform where proceedings of the public workshops are available. See also chapter 7 about the main lessons learnt.

Topics	Countries, presentations & speakers
<u>Direct support #1 on M&V systems</u> (July 3 rd , 2023)	Lessons learnt from developing M&V systems in: <u>Austria</u> , by Elisabeth Böck (AEA) <u>Croatia</u> , by Vesna Bukarica (EIHP) <u>Greece</u> , by Christos Tourkolias (CRES) <u>Slovenia</u> , by Matevz Pusnik (JSI)
<u>Direct support #2 on EEOS</u> (July 12 th , 2023)	EU: <u>overview of available resources on EEOS</u> by Jacopo Romiti (FIRE) Italy's <u>white certificates scheme</u> by Dario Di Santo (FIRE) France's <u>white certificates scheme</u> by Laure Baudart and Solenne Tourn (ATEE)
<u>Measurement in monitoring energy efficiency policies</u> (Sept 25 th , 2023)	Germany: <i>Measurement in MRV: Overview of examples about the use of measurements for the monitoring of energy efficiency policies</i> by Gregor Thenius (AEA) Italy: <i>Experience from an Italian ESCo reporting measured projects to the white certificates scheme - Case study: Energy efficiency project on compressed air production in an Italian glass factory</i> by Giuseppe Pastorino and Ernesto Murru (AICE) Ireland: <i>The evaluation and monitoring of scaled and metered savings: Ireland's approach</i> by Aidan Condell (SEAI) Croatia: <i>Savings from alternative measures: Public lighting</i> by Vesna Bukarica (EIHP) Greece: <i>Measurement in monitoring energy efficiency policies: examples and further developments</i> by Christos Tourkolias (CRES)
<u>Special session at BEHAVE 2023: How much energy do behavioural policy measures save?</u> (Nov 28 th , 2023)	EU: <u>How much energy do behavioural policy measures save?</u> by Margot Pinault (European Commission) Greece: <u>Evaluating Greece's public awareness campaign using the streamSAVE methodology</u> by Christos Tourkolias (CRES) EU: <u>Behavioural science for energy efficiency</u> by Filippas Anagnostopoulos (IEECP) Finland: <u>Significant electricity savings with info nudging during the energy crisis in Finland</u> by Leila Timonen and Päivi Suur-Uski (Motiva) EU: <u>Introducing ENSMOV Plus</u> by Samuel Thomas (RAP)

Energy Efficiency Obligation Schemes and other market-based instruments, part 1: scaling up to the 2030 targets

(Dec 7th, 2023; morning)

What's new in the European context?

- **EU:** [Introducing ENSMOV Plus and overview of EEOS in Europe](#) by Jean-Sébastien (IEECP)
- **EU:** [The new Energy Efficiency Directive: changes and challenges](#) by Margot Pinault and Edyta Nowak (European Commission)

Tour of Europe - 1: White Certificates Schemes

- **France:** [Recent results of France's white certificates scheme](#) by Pascal Barthe and Angélique Lequai DGEC (Ministry of Ecological Transition – General Directorate for Energy and Climate)
- **Italy:** [Recent results and developments in Italy's white certificates scheme](#) by Dario Di Santo (FIRE)
- **Poland:** [Recent results and developments in Poland's white certificates scheme](#) by Marek Zaborowski, KAPE (Polish National Energy Conservation Agency)
- **Spain:** [The new white certificates scheme of Spain](#) by Pablo de la Iglesia, MITECO, Spain (Ministry for Ecological Transition and Demographic Challenge – Subdirector General for Energy Efficiency)

Tour of Europe - 2: Energy Efficiency Obligation Schemes (EEOS)

- **UK:** [Great Britain's Energy Company Obligation: challenges and opportunities](#) by Saibh Finlayson and Ella Sivan DESNZ (Department of Energy Security and Net Zero)
- **Ireland:** [Ireland's Energy Efficiency Obligation Scheme: redesigning to increase ambition](#) by Aileen Duffy, SEAI (Sustainable Energy Authority of Ireland)
- **Croatia:** [Insights from the first years of implementation of the EEOS in Croatia](#) by Vesna Bukarica, EIHP (Croatia's Energy Institute)
- **Cyprus:** [The newly introduced EEOS in Cyprus](#) by Christodoulos Ellinopoulos, MECI (Ministry of Energy, Commerce, and Industry)

Energy savings potentials in the scope of EEOS

- **EU:** [Quick overview of ENSMOV Plus' resources](#) by Solenne Tourn (ATEE)
- **France:** [Study of the French Energy Savings Certificates scheme's support for achieving savings targets in the Tertiary sector](#) by Tony Goma (cabinet Julhiet Sterwen)

Energy Efficiency Obligation Schemes and other market-based instruments, part 2: providing the right support to final customers

(Dec 7th, 2023; afternoon)

Providing the right support to final customers

- **Spain:** [First insights from an obligated party about the new white certificates scheme in Spain: barriers and opportunities](#) by Esperanza Sánchez González (Naturgy)
- **Italy:** [The role played by ESCos in the Italian white certificates scheme](#) by Dario di Santo (FIRE)
- **Poland:** [Experience with supporting market players and final customers](#) in Poland by Piotr Krysiak (KAPE)
- **France:** [Major trends in French people's awareness of renovation works](#) by Alice Monnet (Teksial)

Targeting households at risk of energy poverty

- **UK:** [Energy Saving Trust's experience with energy poverty alleviation programmes and engagement approaches in the UK](#) by Abigail Ward and Harry Mayers (Energy Saving Trust)
- **Ireland:** [SSE Airtricity experience with implementing actions for energy poor households in Ireland](#) and [video](#) by Stuart Hobbs (SSE Airtricity, Ireland)

Direct support #3: Optimising controls and mitigating frauds in EEOS

(Dec 7th, 2023)

This session was restricted to public bodies involved in the implementation and/or M&V of EEOS. The confidential exchanges built on the experience of the French white certificates scheme, and the recent developments in increasing controls and inspections, to discuss how to optimize the use of controls to mitigate frauds.

Alternative measures in the EED context: Achieving energy savings in all sectors

(March 20th, 2024)

Part 1: A cross-cutting tour of Alternative Measures

Hungary: [Introduction to MEKH and Hungarian EEOS](#) by Péter Vedres and Johanna Hohmann (MEKH) and [Merit order of the Hungarian energy efficiency investments](#) by Ármin Bóhm (HUMDA)

Germany: [Alternative Measures in Industry – The German Federal Support for Energy and Resource Efficiency in the Economy](#) by Anne Kimmel (BAFA – Federal Office for Energy Efficiency)

Lithuania: [Lithuania's Energy saving agreements](#) by Mindaugas Mižutavičius (LEA)

Netherlands: [Netherlands' policy package for buildings](#) by René Schellekens (RVO)

EU: [Overview of transport measures reported to the EED energy savings obligation](#) by Samuel Thomas (RAP)

EU: [Latest updates in the ODYSSEE-MURE tools and scoreboard](#) by Didier Bosseboeuf (ADEME)

Part 2: targeting households at risk of energy poverty or other priority groups (Article 8 (3) EED)

EU: [Cross-country findings from the ENSMOV Plus' examples](#) by Laure Baudart (ATEE)

France: [France's experience with the 'energy poverty' white certificates](#) by Solenne Tourné (ATEE)

Belgium: [Wallonia's complementary set of measures to tackle energy poverty](#) by Jean-Sébastien Broc (IEECP)

Greece: [Experience with Greece's energy efficiency measures also tackling energy poverty](#) Harris Andreaosatos (CRES)

Slovenia: [Slovenia's experience with targeting priority groups in financial incentives for energy efficiency in buildings](#) by Matevž Pušnik (JSI)

Stakeholder session: Tapping the energy savings potential in the residential sector: can Energy Efficiency Obligation Schemes help?

Part 1: The residential sector in Energy Efficiency Obligation Schemes (EEOS) in other European countries

EU: [Overview of how the residential sector is addressed in EEDs in Europe](#) by Samuel Thomas (RAP – Regulatory Assistance Project) and Jean-Sébastien Broc (IEECP – Institute for European Energy & Climate Policy)

France: [Why the residential sector is the biggest piece in the French scheme, and recent experience with promoting deep renovations](#) by Daniela Celis Briceño (ATEE – French Technical Association for Energy & Environment)

Italy: [The role of energy managers and other stakeholders in Italy's white certificates scheme](#) by Dario di Santo and Jacopo Romiti (FIRE – Italian Federation for the Rational Use of Energy)

Panel discussion about the [experience from Italy](#) (Dario Di Santo, FIRE) and [Poland](#) (Marek Zaborowski, KAPE): role of standardized measures and saving calculations, aggregation of small energy saving projects, low-hanging measures vs. deep renovations

France: [The importance of regular information to stakeholders, and the added value of technical working groups in France](#) by Laure Baudart and Solenne Tourn (ATEE)

Poland: [KAPE's comprehensive support for stakeholders of Poland's white certificates scheme](#) by Marek Zaborowski (KAPE – Polish agency for energy savings)

Direct support #4: M&V systems for Alternative measures in the context of Article 8 EED

(March 20th, 2024)

This session was restricted to public bodies, and primarily bodies involved in the M&V systems used for monitoring of alternative measures and reporting to Article 8 EED.

The confidential exchanges aimed at sharing experience in the development, use and operation of M&V systems for alternative measures in the framework of Article 8 EED. The issues discussed included the importance of guidelines to harmonise the monitoring of energy savings when different bodies are in charge of different policy measures, or the development of national online platforms to centralise data from various policy measures

Direct Support #5: Q&A Session on the French white certificates scheme

(July 18th, 2024)

This special online session facilitated experience sharing between France's and Poland's white certificates scheme. The objective was to discuss what can be learned from the French scheme that could help improving the Polish scheme. The issues discussed with Polish stakeholders included the way the French catalogue of standardised actions was developed and used, how actions are reported by obligated parties and validated by public authorities, what flexibility options obligated parties may use, among other topics.

[Transport measures in the energy savings obligation of the EED | What Member States plan and report](#)

(November 19th, 2024)

[Introduction and welcome](#) by Gregor Thenius (AEA)

EU: [What the EU Commissions Guidance says on energy savings in transport](#) by Samuel Thomas (RAP)

Croatia: [The support of electric vehicles as an alternative measure in Croatia](#) by Vesna Bukarica (EIHP)

Hungary: [Transport measures in Article 7/8 implementation in Hungary](#) by Armin Bohm (HU)

[Energy savings potentials for policymaking: Examples in the](#)

EU: [Identifying energy savings potentials, a prerequisite to effective policies](#) by Jean Sébastien Broc, (IEECP)

Denmark: [Example of the Danish Technology Catalogues](#) by Christoph Wolter (Danish Energy Agency)

[context of the Energy Efficiency Directive](#)

(December 17th, 2024)

EU: [Key findings from the sEEnergies project](#) by Pr. Brian Vad Mathiesen (Aalborg University and coordinator of sEEnergies)

EU and France: [Examples of studies on energy savings potentials in EU Member States, with a focus on France' white certificates scheme](#) by Solenne Toum (ATEE)

EU: [Example of a specific action type: energy savings potential from early replacement of electric motors](#) by Robin Barkhausen (Fraunhofer ISI and EU-MORE project)

[Added value of using measurements to monitor energy efficiency projects in industry: experience from Italy's and France's market players](#)

(April 1st, 2025)

Italy: [Overview of the M&V framework for industrial projects in Italy's white certificates scheme](#) by Dario Di Santo (FIRE)

France: [Overview of M&V for industrial projects in the context of France's white certificates scheme](#) by Olga Landesman (ATEE)

Italy: [Experience from an ESCo operating in Italy](#) by Ignace de Francqueville (METRON)

Italy: [Energy management in telco sector](#) by Federico Tebaldi (TIM/FiberCop)

France: [Experience from a French delegated party](#) by Antoine Fauchere (Certinergy)

France: [Experience from a French ESCo](#) by Guillaume Asselin de Villequier (ACCIONA Energía Solutions Énergétiques)

EU: [Concluding remarks](#) by Ivana Rogulj (IEECP)

[Bridging Energy Savings Obligations and Social Climate Plans to Tackle Energy Poverty](#)

(April 9th, 2025)

EU: [Where Do We Stand on Tackling Energy Poverty in Final NECP Updates?](#) by Samuele Livraghi (IEECP)

Croatia: [Updates from Croatia](#) by Miljenka Kuhar, DOOR

Lithuania: [Updates from Lithuania](#) by Vakaris Atkočiūnas (Ministry of Environment, Lithuania)

Slovenia: [Tackling energy poverty in Slovenia - from national action plan, to NECP and Social Climate Plan](#) by Katarina Trstenjak, (Jozef Stefan Institute)

[Assessing the options for an EU-wide market for an energy savings certification scheme](#)

(July 3rd, 2025)

EU: [Overview of options \(pros and cons\)](#) by Samuel Thomas (RAP)

EU: [Introduction of ENSMOV plus and an overview of EEOS in Europe](#) by Jean-Sébastien Broc (IEECP)

EU: [Streamlining Energy Savings Calculations in the EU Member States](#) by Jiří Karásek (SEVEn)

[Evaluations of energy efficiency policies: what do they tell us?](#)

(September 10th, 2025)

EU: [Overview of resources about the evaluation of energy efficiency policies](#) by Jean-Sébastien Broc (IEECP, and Energy Evaluation Europe)

France: [Rationale and objectives of the new observation programme about France's white certificates scheme](#) by Gregory Chedin, ADEME (French Agency of Ecological Transition), France

Ireland: [Overview of the activities of SEAI's evaluation unit, and key findings from the latest impact studies](#) by Joel Franklin, SEAI (Sustainable Energy Authority of Ireland), Ireland

UK: [Overview of the activities of DESNZ's Building Energy Evaluation, and key findings from recent evaluations](#) by Marianne Law, Alice Negrini and Adam Fair, DESNZ (Department of Energy Security and Net-Zero), UK

4.2 National activities: 50 workshops or meetings reaching 2662 stakeholders in 11 countries

The national activities took various forms, from small-group ad-hoc meetings with officers of the energy ministry or experts of a key national stakeholder, up to national seminars with 600+ participants.

This diversity of activities enabled to engage with a broad range of stakeholders (policymakers, energy stakeholders, other stakeholders), in ways adapted to each activity's objectives (e.g. confidential exchanges, large dissemination).

The topics were selected according to key issues in the national context, and demands from national policymakers and stakeholders.

The whole list of national activities can be found in the [Report on the Knowledge Exchange Programme](#), including a short summary for each.

An overview of the main topics discussed in each of the 11 countries is provided below. Then section 5.3 presents the [country summaries](#) that capture as well the main outputs and conclusions from other national work done in ENSMOV Plus.

Main topics addressed, per country:

- **Austria** discontinued its Energy Efficiency Obligation Scheme (EEOS) in 2021 and now relies exclusively on well-established Alternative Measures, supported by a comprehensive evaluation of the 2015–2020 EEOS period. This made that Austria's national activities under ENSMOV Plus more focused on knowledge exchange than capacity-building events. Key reforms of the existing Alternative measures address, among other issues, the exclusion of additives for transport fuels and fossil fuel installations from eligible action types. The country's main remaining challenges include tracking energy savings for the new energy poverty sub-target, as data on whether individual vulnerable households are being reached is still lacking,
- **Croatia** updated its Energy Efficiency Act in February 2025, reducing the EEOS's share of the national savings target from 70% to 50% in favour of EU-funded Alternative Measures, while simultaneously upgrading its SMiV digital platform for tracking and verifying savings. The national activities in ENSMOV Plus included a series of workshops and meetings to discuss with the public authorities and stakeholders various ways to improve and further develop the EEOS. This confirmed that many obligated parties treat the EEOS primarily as a financial burden and rely on low-impact actions, pointing to an urgent need for a functioning energy savings trading market and better integration of energy renovation through energy performance contracting. The national activities also

discussed possible synergies between policy measures reported to Article 8 EED and the requirements of Article 11 EED on energy audits and management.

- **Cyprus** exchanged with CRES about the possible use of energy efficiency auctions and other approaches for energy efficiency measures to tackle energy poverty. The discussions identify key points to consider in the design of auction schemes, shared experience about main implementation steps and raised the interest in combining auctions with other financing instruments, notably on-bill financing and guarantee scheme.
- **France** reports a single policy measure to Article 8 EED, its white certificates scheme that is the largest scheme in Europe, in terms of energy savings reported to Article 8 EED. The French experience has therefore raised a lot of interest from other countries. This made that French activities in ENSMOV Plus were mostly about sharing experience bilaterally or in small groups with other countries. Reciprocally, French stakeholders were interested in the Italian experience with the use of measurements for energy saving projects in industry. The French activities also included the organisation of a special session on recent developments at EU level during the national seminar of the white certificates scheme. This was an opportunity to inform more than 600 French stakeholders about the changes brought by the EED recast, and recent trends in other EEOS in Europe.
- **Greece** expanded its EEOS to include electricity and natural gas distributors, introduced standardised methods (including deemed savings) to simplify monitoring and verification, and raised its ambitions in line with the revised National Energy and Climate Plan (NECP). National activities included a series of workshops to discuss with the public authorities and stakeholders how to further develop and improve the Greek EEOS. This consistently highlighted the need to reduce administrative complexity, strengthen enforcement, and develop a data-driven approach to meeting the new Article 8(3) EED sub-target for energy-poor households. The last workshop discussed synergies between the EED and EPBD, notably through the use of Energy Performance Certificates and Smart-Readiness Indicators to better assess energy savings potentials in buildings and monitor impacts from programmes aimed at energy efficiency in buildings.
- **Hungary**'s energy savings strategy combines an evolving EEOS (expected to deliver 26% of its 2030 target) with wide-ranging Alternative Measures. Significant 2025 legislative reforms of the EEOS removed inflated savings multipliers, tightened auditor qualifications, and shifted emphasis toward long-lifetime residential measures. Key challenges going forward include managing the affordability implications of phasing out fossil-fuel heating for an inefficient housing stock, while sustaining the credibility of a secondary market for certified savings that only recently emerged. In addition to discussing improvements of

the EEOS with stakeholders, the national activities done in ENSMOV Plus fostered coordination among public bodies in charge of monitoring Alternative measures and supported capacity buildings about energy audits and the use of calculation methodologies.

- **Italy**'s national workshops focused on relaunching the White Certificates scheme — seen as the best tool for industrial energy efficiency — alongside the new *Transizione 5.0* digitalisation-and-efficiency tax credit for industry, while the flagship *Superbonus* building renovation scheme has been progressively wound down through repeated reductions in its tax relief rate. A series of workshops were focused on the policy measures for energy efficiency in industry, that is a major sector in Italy. Looking at challenges ahead, a key issue was the absence of a national definition and robust indicators for energy poverty, which makes it difficult to assess how much of Italy's Article 8 EED savings are actually reaching vulnerable households.
- **Lithuania** expanded its Energy Savings Agreements to nearly 30 enterprises by 2023 and ran five national workshops targeting state companies, district heating suppliers, energy suppliers, and certified auditors, building capacity across the full chain of Article 8 EED implementation. Recurring challenges include the difficulty of quantifying savings from non-technical education measures, classification rules under the Education and Consulting Agreements, and a need for more digitalised and automated reporting tools. The national activities also included training for certified auditors, with a focus of the specific needs to support the renovation of public buildings.
- **Poland**'s white certificates scheme is significantly underperforming, with only about 30% of expected savings delivered through certificates while the remaining 70% are covered by a substitution fee, prompting national discussions about revising the fee-setting mechanism and introducing French-style standardised action sheets. Another key issue identified was about policy measures for building renovation, and more specifically the fragmented landscape of financing instruments without unified reporting frameworks or cost-effectiveness benchmarks, combined with a lack of a clear mechanism to track the Article 8(3) energy poverty sub-target. The national activities included workshops and the preparation of specific briefings or reports on options to redesign the substitution fee, ways to develop a catalogue of standardised actions and a methodology to assess cost-effectiveness of energy efficiency schemes, that supported policy discussions with the Polish ministry.
- **Romania**'s ENSMOV Plus activities were focused on experience sharing about the possibility to develop an EEOS in Romania. A first workshop facilitated exchanges between Romanian policymakers and ENSMOV Plus experts. The second workshop facilitated exchanges between Romanian stakeholders and

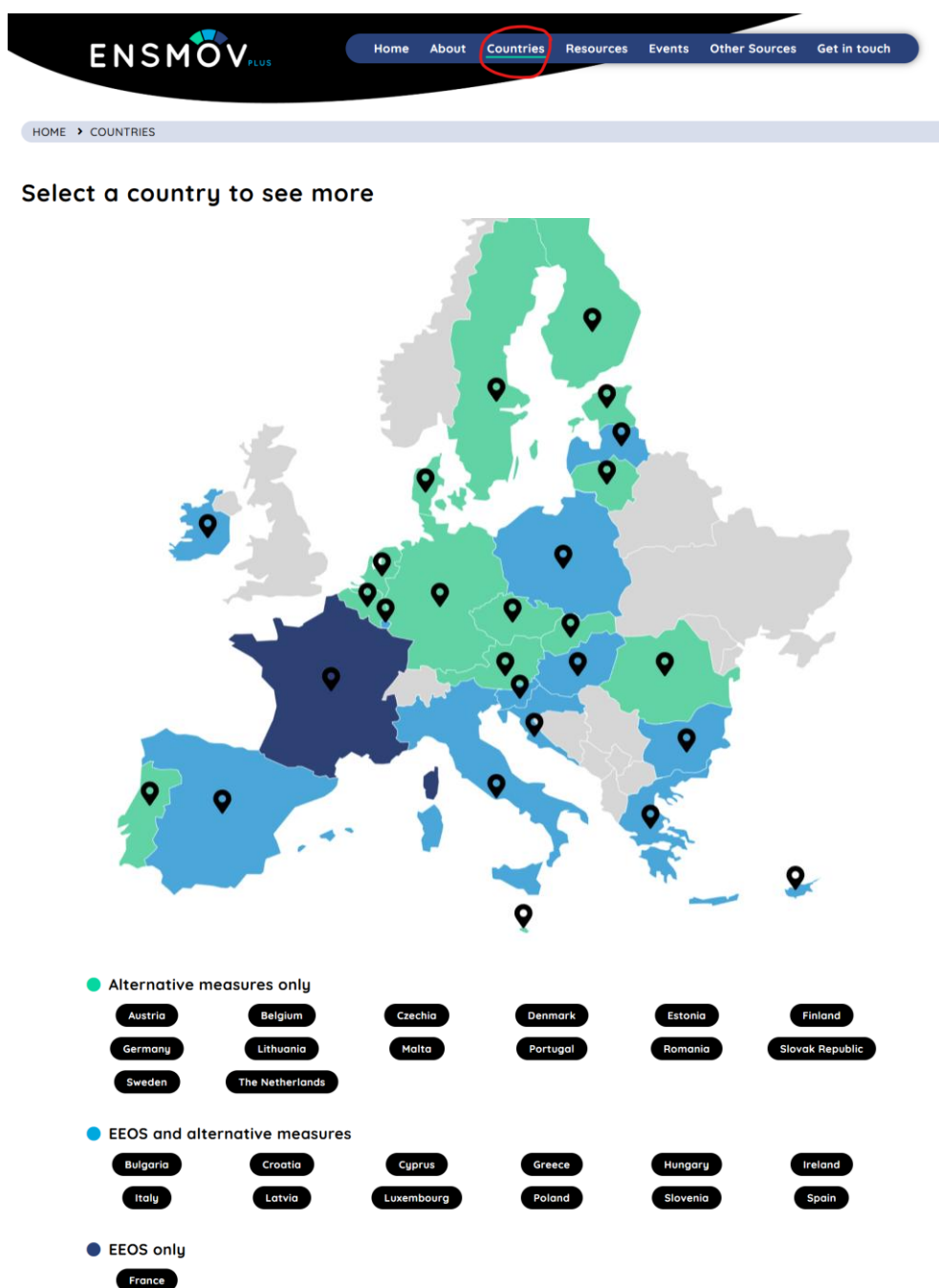
ENSMOV Plus experts. This made possible to identify what lessons learned from other countries can be relevant to the Romanian context.

- **Slovenia's** ENSMOV Plus activities centred on scenario analysis for meeting its 2030 cumulative savings obligations, the planned phase-out of fuel additives from the EEOS, and the legislative revision of the Energy Efficiency Act, while civil society workshops highlighted a need for greater transparency and public access to monitoring data. National challenges include strengthening fragmented data flows between ministries, research institutions, and implementing bodies (Eko Fund and Borzen) to build a credible, unified monitoring and verification system before significantly higher savings requirements take effect.

5 Country analysis

5.1 Providing information per country in the ENSMOV Plus' platform

The ENSMOV Plus' platform includes a "[Countries](#)" section, where visitors can easily navigate in the information available about each Member State, either by clicking on the map or on the country names below the map.



The countries are grouped according to the main categories of policy measures they report to meet their energy savings obligation (alternative measures only; combination of an EEOS and alternative measures; or EEOS only).

For each country, the platform brings together three main types of content:

A country factsheet [see section 5.2]	Example(s) on key issues addressed in ENSMOV Plus [see section 3.2]	Presentations given by national experts during EU workshops [see section 4.1]
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In addition to the access of contents per country, a synthesis of all these contents gather [country summaries](#) that highlight the main topics discussed in each country (see section 5.3).

5.2 ENSMOV Plus' country factsheets

Building on a similar exercise carried out in the previous ENSMOV project, ENSMOV Plus developed an updated set of country factsheets to provide a concise yet comprehensive overview of how Member States are implementing the EED energy savings obligation.

These factsheets are designed to capture fundamental changes and adaptations made by Member States in response to the EED recast. They are structured to offer readers a quick understanding of a country's approach, while also presenting deeper considerations through dedicated sections and interviews.

The structure typically includes:

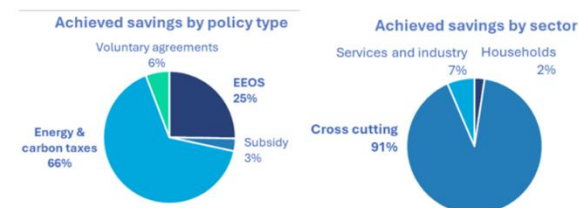
- (1) **background information**, outlining the national context and strategy, an overview of reported policy measures and results;
- (2) a summary of **key changes** compared to the 2014-2020 period, recent policy developments, and a specific focus on energy poverty (cf. Article 8(3) EED);
- (3) a **detailed look at one or two key policy measures**, covering their history, main design features, monitoring & verification practices;
- (4) **one or two interviews** with national policymakers or experts, with lessons learned, observations into the overall Article 8 strategy, and perspectives on challenges ahead.

These different sections of the factsheets are illustrated with extracts of various factsheets below.

Background

National context, strategy, key measures and results in 2021

- General strategy: Alternative measures + EEOS
- Baseline annual Final Energy Consumption¹ (averaged over 2016-2018): 11 863 ktoe/year (source: NECP update)
- Cumulative energy savings target for 2021-2030: 7 576 ktoe (source: Department of Climate, Energy and the Environment, EEOS consultation (2025))
- Achieved new annual savings (all measures): 2021 = 277 ktoe; 2022 = 253 ktoe; 2023 = 294 ktoe (source: NECPR 2025)
- Distribution of cumulative savings achieved 2021-23



Top 5 policy measures

Name of the measure	Sector	Main Policy type	%cumulative savings 2021-23
Carbon Tax	Cross-cutting	Tax	66%
EEOS	Cross-cutting	EEOS	25%
Non-residential bundle	Industry/services	Voluntary Agreement	6%
Residential bundle	Residential	Subsidy	2%
Public sector bundle	Public	Subsidy	1%

Source: NECPR (2025)

Key points, changes vs. 2014-2020 and other recent developments

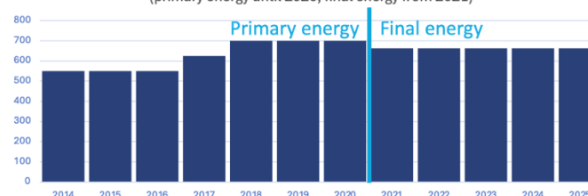
Within the EEOS, the residential sub-target decreased from 20% to 10% of the overall EEOS target in 2023, while qualifying actions required deeper energy savings among a narrower set of choices. Shallower and broader residential actions remained eligible for the cross-cutting target. The 5% energy poverty target remained unchanged but also included stricter rules on qualifying actions, including the achievement of a minimum amount of energy savings among the worst-performing homes (rated D2 or worse), bringing them up to a good quality standard (at least B2).

EEOS – Energy Efficiency Obligation Scheme

History

Starting year: 2014 Latest revision: 2023
Cumulative energy savings reported to Art. 7 EED for 2014-2020: 1 185 ktoe (i.e. 45% of Ireland's cumulative savings for 2014-2020)
Current target: 36 424 GWh (2021-2030) cumulative, equating to 662 GWh new annual savings per year. Expected contribution to 2021-2030 obligation for Art. 8 EED: 60% of EED(2019) obligation (41% of EED (2023) obligation before any future revision to EEOS target). Consultation open (in 2025) on increasing share of EED (2023) target to 45%.

Evolution of annual targets - GWh new annual savings (primary energy until 2020, final energy from 2021)



Key actors and roles

Public authorities:

- The Department of Climate, Energy and the Environment (DCEE) designs and enforces the rules of the scheme.
- The Sustainable Energy Authority of Ireland (SEAI) is the implementing body.

Obligated parties:

- 16 obligated parties (OPs) in 2025, covering energy suppliers and distributors selling more than 400 GWh of final energy per year of electricity, liquid fuels (including importers), natural gas and solid fuels.
- Where suppliers and distributors are involved in the sale of the same final energy, the party closest to the end-user is designated as the obligated party.
- Companies newly achieving sales above the threshold in year X are given their first target in year X+2.

Other key stakeholders: Measurement of energy savings must be carried out by a competent professional, e.g., a Certified Measurement and Verification Professional or Certified Energy Manager.

Alternative measure – Housing subsidy

History

Starting year: Housing Subsidies Act 1954 (BGBl. No. 245/1954) Latest revision: As part of the amendment to the Financial Equalisation Act 2024

Current implementing period:

Housing subsidies in Austria are subject to regular adjustments due to various legal changes at federal and state level. One significant step was the amendment to the Financial Equalisation Act 2024, which was passed by the Federal Council in April 2024. This amendment introduced special-purpose grants from the federal government to the provinces to promote the creation of affordable housing. As part of this housing campaign, the federal government made a total of €1 billion available to the provinces for the years 2024 to 2026.

Cumulative energy savings reported to Art. 7 EED for 2014-2020: 1440 ktoe, 14%

Expected contribution to 2021-2030 obligation for Art. 8 EED: not known but it is expected that the share of total savings will be higher than on the period 2014-2020.

Design and features

Type of policy measure: Target sector / group: various groups of people who receive financial support for the construction, purchase or renovation of housing: Private households and families, Tenants and home seekers, Property developers and housing cooperatives, Senior citizens and people with special needs.
Financing scheme

Key actors and roles:

Federal government (Austrian federal government)

- Defines the legal framework (e.g. via the Financial Equalisation Act).
- Provides financial resources for the federal states (previously earmarked, now flexible).
- Sets energy policy and social targets for housing construction (e.g. climate protection, affordable housing).

Federal states

- Mainly responsible for the allocation of housing subsidies.
- Design their own subsidy guidelines and programmes, as housing subsidies have been a matter of federal provinces since 1988.
- Manage and approve subsidy applications for new construction, refurbishment and rental subsidies.

Housing subsidy offices of the federal states

- Practical implementation of subsidies (processing of applications, disbursement of subsidies).
- Advice for applicants on funding opportunities. Checking compliance with subsidy criteria.

Property developers and housing cooperatives

- Build subsidised housing (e.g. social rental housing, cooperative housing).



Interview with Diana Horvat, Head of Sector for Energy Efficiency in Buildings, Ministry of Physical Planning, Construction and State Assets

Have there been changes in Programme for energy renovation of public sector buildings in recent years? (if so, what would be the main ones?)

Croatia has started renovating its public buildings in 2014, when the first programme has been adopted by the Government. At that time, we have put ESCO model in place to deeply renovate the most complex public buildings (e.g. hospitals). That was a strategy to fulfil the requirements of EED, both for energy service market development and for mandatory renovation of central government buildings. In period 2016-2020, the focus was on the use of ESI funds (ERDF) in form of investment grants to the public sector entities. 2020 earthquakes brought new challenges but also opportunities to build back better the damaged public buildings, with the combined funding from Solidarity fund and RRF. But, apart from damaged buildings, we have enabled the use of RRF for energy renovation of other, non-damaged public sector buildings. And with the RRF support, we are continuing to provide investment grants in a traditional implementing model but we have put the ESCO model back to the agenda as well.

I have to emphasise one constant feature of this Programme – we always require renovations to at least reduce heating demand of the building by 50% in comparison with situation before renovation – this is a constant minimal requirement. Support is differentiated according to the complexity of the renovation – the deeper it is, the higher grant rate may be obtained.

Did you see an impact of the energy prices crisis on the Programme? (e.g. in terms of budget, participation, ...)

The crisis mainly affected the ESCO model by increasing risk perceptions due to price instability. However, government regulations kept energy prices relatively stable, limiting the impact. The biggest challenge has been the surge in construction and equipment costs, driven by global trends and workforce shortages, especially for post-earthquake renovations.

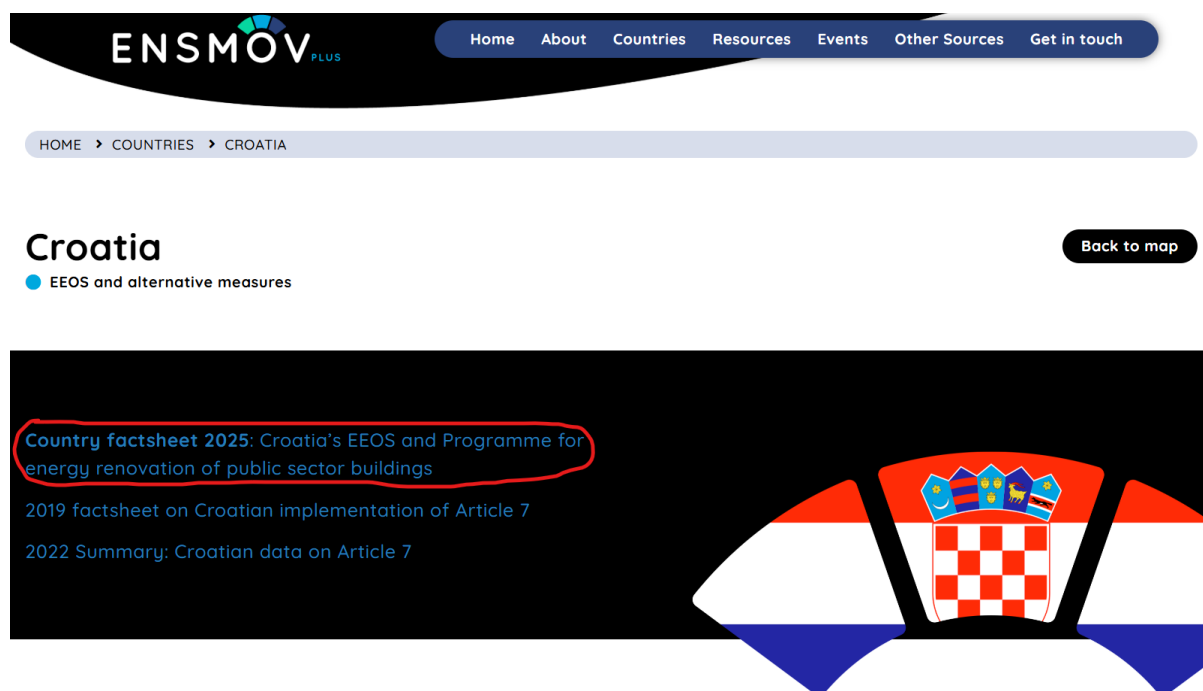
What could be bottlenecks or drivers that could hinder or support the achievement of higher results?

Many earthquake-damaged buildings are large public buildings, often protected as a significant cultural heritage. The damage made was also a huge driver for comprehensive renovation of such buildings. We have insisted that all public buildings are not only brought to their initial state but that their energy performance is improved, along with structural and seismic safety. There are still many projects in implementation, and we are now facing deadlines for the use of RRF, that due to the lack of workforce may be prolonged. The most important bottlenecks are the insufficient construction industry capacities and high investment cost.

Are there specific provisions to ensure the quality of the actions implemented?

Yes, ensuring quality is crucial in the publicly funded projects. All projects undergo mandatory construction supervision and on-site inspections by the implementing body to

Each factsheet can be accessed by going to the page of the country (see section 5.1), through a link on top of the page (see red circle in Croatia's example below).



Visitors can also find the previous factsheet done in the ENSMOV project in 2019, below the 2025 one.

An overview of the country factsheets was provided at the final webinar of ENSMOV Plus on 30 September 2025:



This webinar also included a panel discussion about recent policy developments with policymakers and experts of four countries (Bulgaria, Croatia, Portugal and Spain).

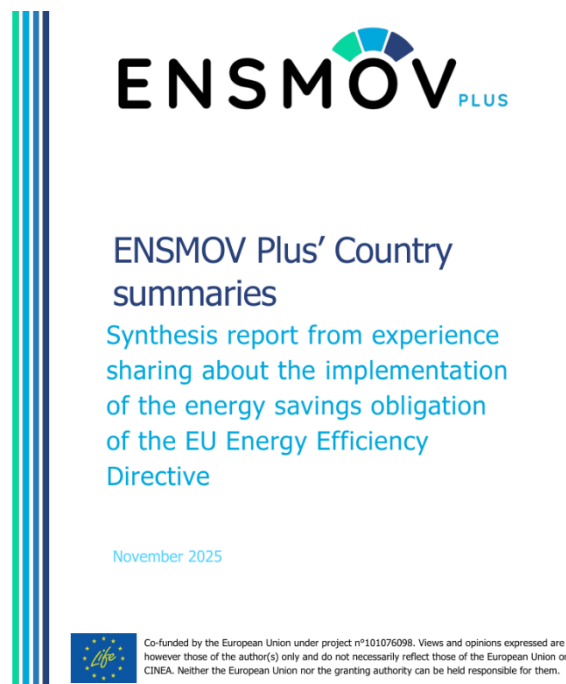
5.3 Country summaries

Complementing the country factsheets mentioned in the previous section, country summaries were prepared for nine partner countries (Austria, Croatia, France, Greece, Hungary, Italy, Lithuania, Poland, and Slovenia).

These summaries aim at providing a concise synthesis of:

- the topics discussed during the national and other experience sharing activities,
- updates and lessons learned on policy design and implementation,
- updates and lessons learned about M&V and evaluation, and
- a specific focus on how each country is approaching the new energy poverty sub-target under Article 8(3) EED.

This synthesis is based on the discussions and conclusions from the national activities, as well as the analyses and interviews done to prepare the country factsheets.



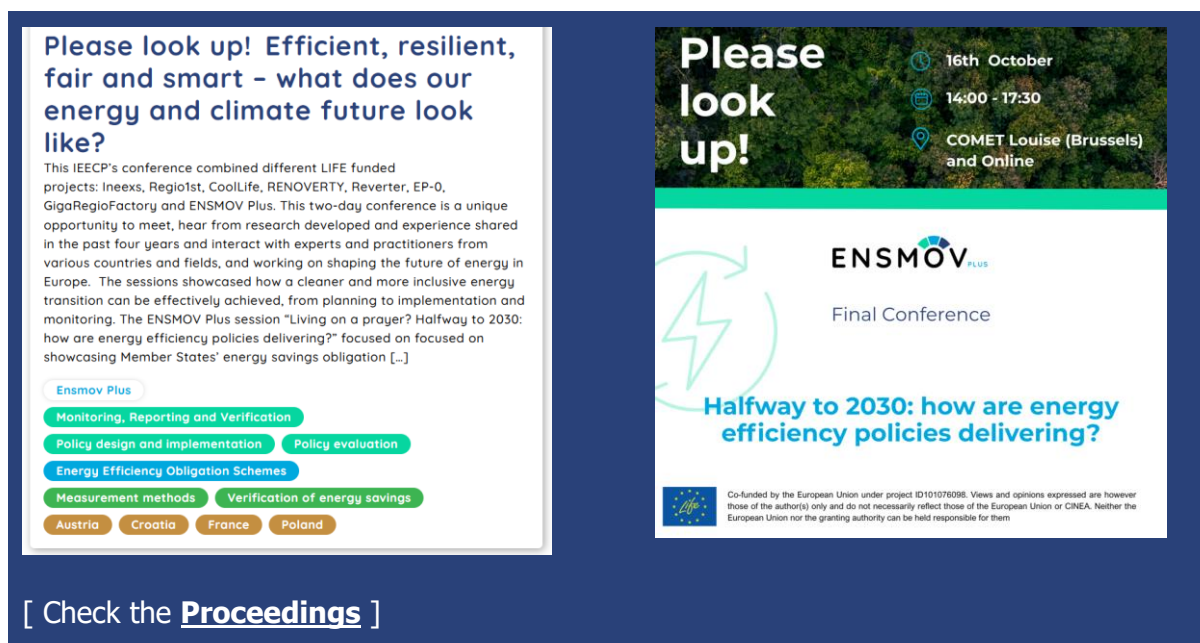
[see the report [ENSMOV Plus' Country summaries](#)]

6 Quantitative assessments

The research partners (Fraunhofer ISI and UPRC) complemented the policy analyses done by the national partners, IEECP and RAP, with research on quantitative assessments, focusing on:

- Assessing Multiple Impacts of energy efficiency policies (done by Fraunhofer ISI, see section 6.1)
- Bottom-Up Modelling Analysis of Renovation Strategies in the Residential Sector (done by UPRC, see section 6.2)

Both aimed at providing complementary data and insights to support enhanced design and implementation of energy efficiency policies, and were presented at the final event of the project on 16th of October, 2025:



Please look up! Efficient, resilient, fair and smart - what does our energy and climate future look like?

This IEECP's conference combined different LIFE funded projects: Ineexs, Regio1st, CoolLife, RENOVERTY, Reverter, EP-0, GigaRegioFactory and ENSMOV Plus. This two-day conference is a unique opportunity to meet, hear from research developed and experience shared in the past four years and interact with experts and practitioners from various countries and fields, and working on shaping the future of energy in Europe. The sessions showcased how a cleaner and more inclusive energy transition can be effectively achieved, from planning to implementation and monitoring. The ENSMOV Plus session "Living on a prayer? Halfway to 2030: how are energy efficiency policies delivering?" focused on showcasing Member States' energy savings obligation [...]

Ensmov Plus

- Monitoring, Reporting and Verification
- Policy design and implementation
- Policy evaluation
- Energy Efficiency Obligation Schemes
- Measurement methods
- Verification of energy savings
- Austria
- Croatia
- France
- Poland

Please look up!

16th October
14:00 - 17:30
COMET Louise (Brussels) and Online

ENSMOV PLUS

Final Conference

Halfway to 2030: how are energy efficiency policies delivering?

Co-funded by the European Union under project ID101076098. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or CINEA. Neither the European Union nor the granting authority can be held responsible for them

[Check the [Proceedings](#)]

6.1 Multiple Impacts Assessment of Energy Efficiency Measures

A systematic assessment of the Multiple Impacts³ of energy efficiency measures was conducted across EU Member States. The core methodological approach involved linking energy efficiency policies catalogued in the [MURE database](#), the majority of which are also reported under Article 8 of the EED, to the [MICATool](#), an online platform designed specifically to quantify Multiple Impacts. This database-to-tool

³ Sometimes termed co-benefits, wider benefits, auxiliary benefits or non-energy benefits.

linkage enabled a consistent, comparable assessment across countries and policy types.

Multiple Impacts describe the variety of accompanying effects of energy efficiency measures, and encompass a broad range of positive and negative externalities, beyond direct energy savings.

Positive impacts span environmental effects (greenhouse gas and local pollutant reductions), social dimensions (energy poverty alleviation, health improvements), economic effects (energy security, macro-economic benefits), and energy system effects (lower marginal supply costs, reduced grid constraints).

Negative impacts include, for example, increased dependence on critical raw materials, potential electricity savings in contexts where renewable generation is already curtailed and flexibility solutions are not in place, and high transaction costs.

The approach thus provides a balanced, net assessment of measures' real-world value. The inclusion of Multiple Impacts in cost-benefit analyses has been shown to considerably **enhance the economic viability** of energy efficiency measures, making the MURE–MICATool linkage directly relevant to policy appraisal and prioritisation.

The broader conceptual framing highlights an important evolution in how Multiple Impacts should be applied. Historically, energy efficiency was compared against fossil fuel alternatives, where most externalities favoured efficiency. Today, under the recast EED's Energy Efficiency First Principle, energy efficiency options may also be **compared with other low-carbon options**, each carrying their own positive and negative externalities. A level playing field therefore requires that Multiple Impacts be assessed symmetrically across all decarbonisation options, not only for energy efficiency itself.

A key analytical distinction is the **perspective considered** (e.g. individual investor, State, society). Some impacts can be crucial from a society's viewpoint (e.g. energy security, climate change), whereas they will not be in the scope considered by individual investors who may prioritize other impacts (e.g. comfort, competitiveness). Bridging this split-incentive gap through regulation, taxation, or targeted subsidies is a prerequisite for Multiple Impacts to effectively shape real-world energy efficiency uptake.

6.2 Bottom-Up Modelling Analysis of Renovation Strategies in the Residential Sector

The methodology used combined policy mapping, stakeholder engagement and high-resolution quantitative bottom-up modelling to provide a robust evidence base for **identifying effective renovation strategies and optimising policy instruments**.

A structured **review of existing measures** across Member States was used to identify those most relevant to Article 8 EED in the residential sector. This was complemented by targeted engagement with national stakeholders, ensuring that the analytical framework and modelling applications reflected real policy needs and data availability. This methodology bridges qualitative policy insights with quantitative modelling, allowing for a more grounded and actionable assessment of energy efficiency interventions.

At the core of the analysis is the **Dynamic high-Resolution dEmand-side Management (DREEM) model**, which enables a detailed representation of building stocks by typology, construction period and climate zone. This granularity makes it possible to simulate both individual measures and integrated renovation packages, while capturing the evolution of technologies such as heat pumps.

The modelling framework estimates baseline energy consumption, projects the impact of different renovation pathways and quantifies associated **energy savings and investment needs** in Croatia and Greece. In the Croatian case, this is complemented by an optimisation framework that allocates subsidy budgets across measures to maximise energy savings, thereby directly linking modelling outputs to policy design. The results highlight the scale of achievable energy savings when renovation strategies are aligned with long-term decarbonisation objectives.

In **Greece**, the modelling indicates that final energy consumption in the residential sector can be reduced by approximately 40% by 2050. Annual energy savings increase steadily over time, exceeding 1,800 ktoe by mid-century. Envelope improvements such as insulation and window upgrades emerge as the backbone of this transition, accounting for roughly a quarter of total savings and requiring the large-scale renovation of nearly two million dwellings. At the same time, the electrification of heating plays a critical complementary role, with the share of heat pumps rising from around 8% in 2022 to 35% in 2050. While deep, integrated renovations are less frequently implemented, they deliver the highest savings per dwelling, underlining their importance in achieving long-term efficiency gains.

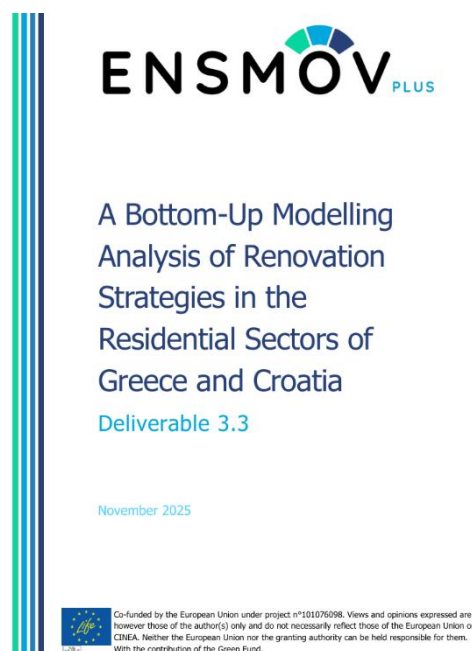
In **Croatia**, the analysis focuses on the effectiveness of subsidy schemes for single-family houses and demonstrates how different policy choices influence outcomes.

Integrated renovation packages consistently deliver the highest energy savings, reducing consumption by up to 70–85% compared to baseline levels. Individual measures yield more moderate savings, typically in the range of 15–45%, although certain technologies, particularly heat pumps, stand out with significantly higher impacts. When applied within a constrained budget, scenarios prioritising electrification achieve the greatest overall savings, reaching approximately 311 GWh per year, compared to around 294 GWh in a baseline allocation. This confirms the strong contribution of heating system transformation to overall energy efficiency gains.

The modelling also reveals important structural insights for **policy targeting**. In Croatia, the vast majority of energy savings are concentrated in continental climate zones, and nearly half originate from buildings constructed before 1969. This points to the critical importance of directing support towards older, high-consumption segments of the building stock. Across both case studies, envelope measures remain essential, but their effectiveness is significantly enhanced when combined with system upgrades, particularly in **integrated renovation approaches**.

Taken together, these findings illustrate the added value of combining high-resolution modelling with optimisation techniques and stakeholder-informed policy design. The results demonstrate that energy savings are not only a function of the measures implemented, but also of **how policies are structured to incentivise their uptake**. By capturing the diversity of building characteristics and intervention pathways, this approach supports the development of targeted, cost-effective strategies that **maximise the impact of public investment**.

The ENSMOV Plus analysis thus provides clear evidence that achieving substantial and sustained energy savings in the residential sector requires a balanced strategy: scaling up envelope improvements, accelerating electrification, and prioritising deep renovations where feasible. Equally, it highlights the importance of aligning financial instruments with these priorities, ensuring that subsidy schemes and policy frameworks are designed to deliver the highest possible returns in terms of energy efficiency and decarbonisation.



[see the report [**A Bottom-Up Modelling Analysis of Renovation Strategies in the Residential Sectors of Greece and Croatia**](#)]

7 Main lessons learnt and perspectives

The revised Energy Efficiency Directive raises Member States' energy savings obligation by around 44%, requires a proportion of savings to be delivered to priority groups, and progressively excludes the possibility of counting savings from fossil fuel combustion technologies. In this context of increased ambition, a gap may widen between policy intent and effective delivery: the effectiveness of policies depends heavily on **data quality, institutional capacity, and adaptive scheme design**.

Assessing where cost-effective energy savings lie is a prerequisite for meeting the new targets. Yet approaches vary considerably across Member States. National studies in Lithuania, France and Greece illustrate the diversity of methods available, ranging from behavioural surveys to bottom-up technical assessments, and collectively underscore the importance of regular updates, reliable data collection and clear eligibility guidelines. About the latter, not all identified potentials may count under Article 8 EED, particularly where overlaps exist with Ecodesign regulations or EPBD provisions for new buildings: policymakers must navigate carefully this principle aimed at ensuring additionality of policy impacts.

In the residential sector, which accounts for around 25% of EU final energy consumption, modelling exercises demonstrated that bottom-up approaches can generate actionable insights for fund allocation and target pathways, provided the necessary data are available. In practice, information on building occupancy patterns, heating technology penetration and energy class by construction period and climate zone is frequently absent, limiting the accuracy of ex-ante assessments. The quality of future policy design depends on **closing these data gaps** and on **making ex-post programme assessments routinely accessible**, since evidence of what actually worked and what households chose is often the most valuable input for the next policy cycle.

Targeting energy poverty is now a formal requirement under Article 8, and the range of national approaches including income thresholds, building performance criteria, local delivery structures and dedicated registries, shows that there is no single model, but several effective ones. France, Ireland, Slovenia, the Netherlands and Wallonia each demonstrate that **well-designed eligibility frameworks combined with strong local delivery mechanisms**, such as municipal one-stop shops and social welfare centres, can reach vulnerable households at scale. Different objectives (e.g. aiming at supporting as many households as possible vs. aiming at higher impacts per intervention) result in various designs of support instrument,

implementation process and monitoring system. Stronger integration with other policies (e.g. Social Climate Plans) could help overcome the funding challenge.

Energy Efficiency Obligation Schemes (EEOSs) continue to evolve. For example, scheme flexibility through substitution fee (buy-out) mechanisms require a careful design to be effective. Setting buy-out prices in secondary rather than primary legislation preserves regulatory flexibility and prevents prices from becoming so low that buying out becomes the default. Channelling buy-out revenues into dedicated Energy Efficiency Funds helps ring-fence resources, though the inherent volatility of buy-out revenues means funds benefit from additional, more predictable income streams. Mitigating frauds is another key issue, as higher targets mean more funding and actions, and thereby higher risks. The possibility of EU-wide energy savings certificates has attracted renewed interest following the Affordable Energy Action Plan, and while harmonised calculation and MRV rules would be a necessary foundation, the deeply entrenched national differences in scheme design make full unification challenging in the near term.

Monitoring and Verification (M&V) is essential for ensuring the quality of the actions delivered, and thereby the actual impacts of policy measures. Public authorities and stakeholders highlighted the need for clear and transparent procedures, as well as on-going communication and information sharing between public authorities and stakeholders. M&V requirements should be proportionate and not necessarily seen as an administrative burden only. Experience shows that additional MRV effort can bring significant gains in the functioning of schemes, and thereby in the savings delivered.

Metered savings, while being administratively more demanding than deemed savings, build market credibility, reduce fraud risk and align private incentives with public policy objectives. Clear and consistent protocols, qualified professionals are important for an effective use of measurements, while keeping flexibility to adapt to changing circumstances. Synergy with other purposes (e.g. process optimisation) increase the cases where metered data are cost-effective.

Deemed savings remain relevant to streamline the monitoring of standardised measures, provided that regular updates maintain their reliability. Outdated values that are driven by changed baselines, new minimum standards or discovered inaccuracies can undermine confidence in reported savings. Dedicated stakeholder working groups have proven effective in sustaining an update process ensuring legitimacy and ownership of catalogues of standardised actions.

Policy evaluation complements M&V, to better understand the delivery mechanisms, what works and where problems remain. Evaluations also aim at

investigating further the actual impacts of policies. Structuring data collection and management over time can be effective to provide robust and updated evidence. Moreover, wider impacts are still under-reported in impact evaluations, whereas they can represent major value dimensions of energy efficiency policies.

Moving forward, **two structural trends** will likely shape how energy efficiency policy is redesigned over the coming years:

- **Electrification**, particularly the shift to heat pumps and electric vehicles, creates substantial energy savings opportunities under Article 8 EED, and most Member States are already moving to align their schemes with the EED's fossil fuel exclusion. At the same time, as peak electricity demand and grid constraints become more pressing, the design of policy measures may need to weight savings according to their value to the energy system, rather than treating all electricity savings equivalently.
- **Affordability pressures** that have been shaped by post-COVID fiscal constraints, the energy crisis and the cost of clean technology adoption are pushing a renewed focus on cost-effectiveness, the targeting of subsidies towards those least able to invest independently, and the role of low-interest loans and leasing as tools to extend the reach of limited public funds.

[For more details, see the report [Lessons learned from the implementation of the Energy Efficiency Directive's energy savings obligation](#)]



Lessons learned from the
implementation of the
Energy Efficiency
Directive's energy savings
obligation

October 2025



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