

Post-2030 Energy Efficiency Framework

WE DATA EUROPE'S CONTRIBUTION TO THE EUROPEAN COMMISSION'S CALL FOR EVIDENCE ON THE POST- 2030 ENERGY EFFICIENCY LEGAL FRAMEWORK

EXECUTIVE SUMMARY

Buildings account for 40% of the EU's total energy consumption¹, with heating and cooling demand alone responsible for over half of final energy use in the residential sector².

To accelerate the decarbonisation of heating and cooling systems and maximise energy efficiency in buildings, leveraging the Energy Efficiency Directive submetering provisions is essential.

Article 15, 16 and 18 already provide a robust and future-proof framework to empower consumers and shield them from energy price volatility. They also deliver the data layer necessary to promote efficient energy use and enable the development of data-driven services that optimise energy consumption, distribution and generation, while removing technical and economic barriers to the integration of renewable energy sources.

Ensuring legal stability and consistent implementation of these provisions across Member States is therefore crucial to unlock their full potential, and a central pillar of an ambitious yet streamlined post-2030 Energy Efficiency Framework.

WE Data Europe, representing the energy and water data management sector, and supporting 45 million dwellings across the EU, accounting for around 40% of all European homes, proposes the following recommendations:

- **Articles 15, 16 and 18 of the EED are fit for purpose to protect consumers; ensuring legal stability and pursuing the efforts towards their full implementation is essential;**
- **Ensure the timely roll-out of remotely readable submeters to meet the January 2027 deadline and support the deployment of data-driven optimisation services;**
- **Strengthen the implementation of cold-submetering in Member States to improve the efficiency of collective cooling systems.**

¹ Eurostat, March 2026, Energy Balances, available [here](#).

² Eurostat, June 2025, Energy consumption in households, available [here](#).

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1 OUR RECOMMENDATIONS

1.1 Ensure Legal Stability to Deliver the Full Potential of the EED Submetering Mandate

The Energy Efficiency Directive has put in place a legal framework that has already delivered major benefits across the European Union in terms of energy security, competitiveness, affordability, and decarbonisation.

By driving efficiency improvements across sectors, it has significantly reduced overall energy demand and improved the EU resilience to external shocks. Without the EED and the efficiency gains it has enabled, total EU energy consumption in 2023 would have been around 29% higher.³

The implementation of energy efficiency measures is also a major driver of emissions reduction and affordability. It has contributed, alongside the decarbonisation of the energy mix, to offsetting more than twice the emissions increases linked to economic growth and population expansion between 2010 and 2022.⁴

Energy efficiency is also a powerful **competitiveness lever**: a stable and ambitious EU energy efficiency framework directly supports over 1.2 million jobs in the European industrial ecosystem.⁵ Built on mature, readily available technologies, energy efficiency enables cost-effective pathways toward achieving the EU's 2050 climate neutrality targets while strengthening the energy independence of the Union.

1.1.1 Submetering Provisions are Fit for Purpose to Protect Consumers

Articles 15, 16, and 18 of the Energy Efficiency Directive provide a robust framework for consumer protection, ensuring access to frequent, accurate, and actionable energy consumption data. This assessment is supported by a recent European Commission study, which concludes that these provisions remain fit for purpose in the context of emerging energy services and do not require amendment (see Annex, Section 2.2.1).

In addition, real-world implementation across Member States demonstrates that submetering not only protects consumers but also drives measurable energy savings and system efficiency gains (see Annex, Sections 2.2.2–2.4). In particular, submetering ensures that consumption is linked to individual use rather than estimated or flat-rate billing, creating direct incentives for energy-efficient behaviour and enabling system-level improvements. Evidence shows that such approaches can deliver **15–30% energy savings on average** in comparable contexts (see Annex, Section 2.2.2).

³ Odysee-Mure, Energy Efficiency in time of crisis at EU level, available [here](#).

⁴ *Ibid.*

⁵ International Energy Agency, World Energy Employment, 2025, available [here](#).

1.1.2 Full Implementation Expands the Range of Data-Driven Optimisation Services

The rollout of remotely readable submeters across Europe enables new energy services that optimise generation, distribution, and consumption at both building and district levels. By providing highly granular consumption data, down to unit level, submetering establishes the foundation for digital optimisation of heating and cooling systems (see Annex, Section 2.3).

Evidence from multiple Member States shows that such data-driven optimisation, including improved hydraulic balancing and system control, can deliver **energy savings of up to 30% on average while maintaining thermal comfort** (see Annex, Section 2.3).

Maintaining legal stability and the January 2027 deadline of Article 16 is crucial to allow the development and deployment of these data-driven optimisation services and to ensure that existing building stock becomes compatible with low-temperature and decarbonised heating solutions, such as heat pumps and renewable-based district heating..

Any uncertainty in the legal framework would reduce the full range of benefits that submetering can deliver, while slowing down the decarbonisation of heating and cooling systems and the uptake of renewable energy sources.

1.1.3 Monitor Cold Submetering transposition to support Collective Cooling Systems Efficiency

Our internal analysis have indicates that the cold-submetering mandate under Article 15 of the EED has so far seen **limited implementation by Member States**, largely because collective cooling solutions were uncommon at the time of transposition.

However, as summers grow warmer and cooling demand increases, also in line with the objectives of the upcoming Heating & Cooling Strategy, submetering of collective cooling systems in multi-unit buildings will become increasingly important to ensure their efficiency. As demonstrated for heating systems, access to accurate and frequent consumption data is a key enabler for both behavioural change and system optimisation (see Annex, Sections 2.2.2 and 2.3).

Remotely readable submeters provide the data layer needed to operate these systems efficiently and incentivise occupants to use energy wisely. Thorough implementation of the cold submetering mandate under Article 15 will hence be essential to maximise energy savings and system performance of collective cooling solutions.

1.2 Provide Guidance on the Use of Consumption Data for Optimisation of Energy Use in Buildings

Data protection rules should safeguard user privacy and trust while not preventing the implementation of digital heating optimisation. Submetering data provides the level of granularity required to detect inefficiencies, optimise system performance, and enable continuous monitoring of buildings (see Annex, Section 2.4). This approach aligns closely with the Energy Performance of Buildings Directive, which encourages the use of detailed energy data to improve energy performance certificates and supports the operational optimisation of heating systems, thereby facilitating more effective building renovations and enhanced energy efficiency.

In several Member States, such data is already used to identify system malfunctions, trigger energy audits, and support targeted renovation strategies, thereby unlocking additional energy savings beyond billing purposes (see Annex, Section 2.4.1 and 2.4.2).

In practice, some national frameworks require individual consent to use personal energy consumption data for optimising heating system performance. This can create administrative complexity and limit the scalability of initiatives delivering clear collective environmental benefits, including digital optimisation of heating and cooling systems.

A constructive way forward would be to state that the processing of the relevant personal data can take place not only based on consent from the data subject, but also according to one (or more) of the options mentioned in GDPR, article 6, section 1 (c, e or f)⁶. This would help balance data privacy rules with the effective use of consumption data for the direct benefit of consumers, while removing barriers that currently limit the deployment of data-driven optimisation services, enabled by the EED submetering mandate.

⁶ General Data Protection Regulation (EU/2016/679), Article 6, available [here](#).

2 ANNEX: SUPPORTING EVIDENCE

2.1 What is Submetering

Submetering is a key tool for energy-efficient and future-proof buildings. It provides precise data on energy consumption at the unit, zone, or system level, enabling fair cost allocation based on actual usage rather than estimates. Submetering and cost-allocation for heating, cooling and domestic hot water is enshrined in the Energy Efficiency Directive (Article 15 and 16)⁷.

It represents a major step forward for consumer protection and energy efficiency of the heating and cooling systems in buildings. Where submetering is in place, consumers pay only for what they consume, instead of fixed estimates based on flat dimension or number of occupants, and receive frequent information on their consumption, providing a direct financial and cognitive incentive to adopt more efficient behaviours.

2.1.1 How it Works

Submeters track near real-time energy consumption at radiator, room and unit level to determine the amount of energy used by each consumer in multi-unit buildings. This enables precise cost distribution according to real energy use, but also helps identify system inefficiencies, optimise energy use and support smart building solutions.

2.1.2 Why it Matters

Submetering enables data-driven efficiency and unlocks on average 15 to 30% energy savings⁸. By integrating it with automation and heating and cooling optimisation technologies, additional 20 to 40% energy savings can be unlocked⁹, with minimal upfront costs and no modifications to the structure of the building.

⁷ Energy Efficiency Directive (EU/2023/1791), available [here](#).

⁸ See the studies supporting these findings on our website [here](#).

⁹ See Smarter Heating, Lower Emissions: Case Studies on Data-Driven Heating Optimisation in Buildings (Page 10) available [here](#).

2.2 EED Submetering Provisions Enable 15 - 30% of Energy savings

2.2.1 EED Submetering Provisions are Fit for Purpose to Protect European Consumers

A recent European Commission study¹⁰ assessing the relevance of consumer rights and protections in the context of innovative energy services. Encompassing the Energy Efficiency Directive, the study concludes that **Articles 15, 16 and 18**, relating to submetering and billing information to consumers, are **fit for purpose** and adequately **protect consumers' rights** in their current form, and therefore **do not require amendment**.

2.2.2 Submetering Delivers 15 to 30% of Energy Savings

Almost half of the dwellings in the Union (48%) are located in multi-apartment and multi-purposes buildings¹¹, many of which are connected to district or central heating and cooling systems for the provision of space heating and cooling, or for domestic hot water preparation.¹² Because occupants often have limited control and insights in these, centralised, accurate, reliable, and timely information about energy consumption is essential for consumers to monitor usage, manage costs, and improve efficiency.

Thanks to the legal framework established by the Energy Efficiency Directive¹³, many buildings across the EU are now equipped with submeters or heat cost allocators, to measure the consumption of heating, cooling, and domestic hot water for each unit. The implementation of the submetering framework ensures that **consumers are not billed based on a flat fee** determined on the surface of their dwelling or the number of occupants living in the unit, but on their **actual usage**. This creates a simple and direct financial incentive to adopt energy-efficient behaviours and invest in energy efficient appliances.

Following the installation of submetering devices or heat cost allocators, multiple studies carried out in different EU Member States have demonstrated that building occupants are paying more attention to their consumption and adjust their behaviour, resulting in **15 to 30% of energy savings** on average without additional renovations or loss of comfort.¹⁴

The effective **implementation** of submetering provisions under the Energy Efficiency Directive is therefore **essential to protect consumer rights** and **empower final users** to play an active role in the energy transition, as envisioned in the Citizens Energy Package¹⁵, while mitigating the impact of energy price volatility, an aspect that has proven to be particularly important to **offer quick relief during the various energy crises** the EU has faced in the last years.

¹⁰ European Commission, October 2025, *A study on the relevance of consumer rights and protections in the context of innovative energy-related services. Annex II, Comparison table*, available [here](#).

¹¹ Eurostat, 2024, *Housing in Europe*, available [here](#).

¹² Commission Recommendation (EU) 2011/660 of 25 September 2019 on the implementation of the new metering and billing provisions of the Energy Efficiency Directive 2012/27/EU, available [here](#).

¹³ Energy Efficiency Directive (EU/2023/1791), Article 15 and 16, available [here](#).

¹⁴ See the studies supporting these findings on our website [here](#).

¹⁵ Communication on the Citizens Energy Package, COM/2026/115, available [here](#).

2.3 Submetering Drives the Decarbonisation and Optimisation of Heating & Cooling Systems

Most heating systems in multi-family housing often run on outdated settings, wasting energy without residents realising it. In Germany, more than 80% of heating systems are either oversized or lack active management. This leads to **persistent system misconfiguration** and unnecessarily **high supply temperatures**, resulting in excessive energy consumption and sustained high costs for both building owners and tenants.

In addition, multi-unit buildings, whether supplied by on-site central systems or connected to district heating and cooling systems and equipped with a substation, typically rely on continuous circulation. In the absence of proper hydraulic balancing, this leads to substantial standby and distribution losses: some radiators are over-supplied while others are under-supplied, prompting occupants to increase the overall energy demand of the building.

Multi-unit buildings supplied by a collective heating or cooling solutions are ideally suited for a comprehensively managed approach, where energy generation, heat distribution, and consumption can be smartly interconnected.

Submetering data is essential to enabling this transformation. The deployment of remotely readable submeters for heat, cold and domestic hot water, or heat cost allocators by January 2027, as required by **Article 16 of the EED**, provides highly granular data on heating and cooling demand, down to room level. This data establishes the foundation needed to **align energy demand with generation** and **optimise energy flows** at both building and district levels.

Digital optimisation, supported by submetering data, is already being deployed across Europe in a wide range of buildings, including those constructed in the 1970s and 1980s. By improving hydraulic balancing and system control, it enables occupants to maintain the same level of thermal comfort with lower supply temperatures and reduced energy input, delivering **consistent energy savings of up to 30% on average**. At the same time, it makes existing building stock compatible with low-temperature and decarbonised heating solutions, such as heat pumps, geothermal and solar thermal systems, as well as new generation district heating networks using renewable energy sources or waste heat.

By making buildings ready for low-temperature heat sources, the deployment of remotely readable submeters helps remove major technical and economic barriers to the deployment of efficient and decarbonised heating and cooling systems. The timely and effective implementation of Article 16 therefore **directly supports the objectives of Articles 25 and 26** by enhancing the efficiency of district heating and cooling systems and facilitating the increase of the share of renewable and waste heat in their energy mix.

Multiple case studies, carried out in several Member States, using submetering data to enable digital optimisation of heating and cooling systems, are available [here](#).

2.4 Submetering Simplifies the Identification of Buildings and Systems Inefficiencies

Submetering provides the necessary data granularity on energy consumption at both building and unit level to allow for continuous monitoring of performance. This simplifies the **rapid detection of inefficiencies in heating and cooling systems**, as well as in the building envelope.

As part of the implementation of Article 15 and 16 of the EED, some Member States have taken full advantage of the available submetering data and mandated its use beyond billing and consumers information purposes, to unlock further energy savings and **streamline buildings and heating and cooling systems management**.

2.4.1 Detecting and Repairing System malfunctions

In **Bulgaria**¹⁶ and **Spain**¹⁷, submetering data is used to **detect system malfunctions** and unusual deviations in heating, cooling, and domestic hot water demand, triggering inspections and corrective measures when abnormal consumption patterns are identified.

In **Poland**¹⁸, submetering data is used to establish thresholds that **trigger energy audits** when buildings exhibit excessive energy use, ensuring that corrective actions are taken in a timely manner. Data-based inspections and energy audits simplify the detection of anomalies and avoid that consumers waste money without realising it.

2.4.2 Simplifying the Identification of Worst Performing Units for More Targeted Building Renovations

Polish legislation also mandates the use of submetering data to **identify the worst-performing units** within a building, supporting targeted interventions and a more effective allocation of renovation efforts. It thereby directly supports the objectives of the Energy Performance of Buildings Directive¹⁹ at a lower cost for the building owners.

2.5 Submetering Data Streamlines Reporting and Compliance for Building Portfolios

Submetering data provides actual energy consumption at the unit level, **simplifying and digitalising environmental reporting** for building owners' property portfolios. This streamlines compliance with the EU **Sustainability Reporting framework** while making it more less costly and reliable.

Furthermore, the availability of submetering data provides verifiable and reliable consumption data informing the real performance of each building units during their use stage. This will **simplify the life cycle assessments of buildings** and the disclosure of their global warming potential by 2030, as required under Article 7 of the Energy Performance of Buildings Directive²⁰.

¹⁶ Bulgarian Ordinance E-RD-04-1 of 12 March 2020 for heat supply, available [here](#).

¹⁷ Spanish Royal Decree 736/2020, of 4 August, regulating the accounting of individual consumption in thermal installations in buildings, available [here](#).

¹⁸ Polish Act of 10 April 1997, last amended on 15 January 2026, Energy Law, available [here](#).

¹⁹ Energy Performance of Buildings Directive (EU/2024/1275), available [here](#).

²⁰ *Ibid*.

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