

Shaping the future of the EU energy efficiency framework with predictability and ambition

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Energy efficiency is an EU success story. Over the last 13 years, Europe has positioned itself as a global pioneer in advancing energy efficiency by establishing an ambitious energy efficiency legislative framework. The last revision of the Energy Efficiency Directive (EED) in 2023 marked a turning point in EU energy efficiency legislation, putting in place a binding 2030 energy efficiency target of 11.7%, along with new and strengthened measures to underpin the objective. This target effectively sets a clear direction to the European energy efficiency ecosystem, providing investment certainty and driving the uptake of measures on the ground.

Energy efficiency policy offers the opportunity to advance on the areas that are key priorities for the EU: strengthening energy security by phasing out fossil fuel imports, supporting competitiveness, reducing energy prices and energy system costs, and enabling cost-effective electrification.¹ With this in mind, the EU must leverage policies and tools that are proven to deliver on these objectives – starting with a **2040 energy efficiency target**.

The case for a 2040 EU energy efficiency target

The EU has set clear priorities for the next years: improve energy security and resilience, lower energy bills for households and businesses, bolster EU competitiveness and electrification, and reduce emissions. Energy efficiency has already contributed to advancing all of these objectives and will continue to play an essential role for the next decade and beyond. Importantly, **recent progress² is the direct result of the past and present EU energy efficiency legislative framework**, catalysed by the setting of clear energy efficiency objectives.

Providing certainty and investment stability

An overarching target sends a strong signal to all relevant actors about the ambition and the speed at which measures will have to be adopted, driving investments in energy efficiency solutions. While the 2030 target offers predictability for the next four years, **a 2040 EU energy efficiency target is non-negotiable to sustain investment momentum beyond 2030 and avoid a damaging stop-and-go signal that would paralyse businesses' and citizens' action.**

An EU energy efficiency target also enables coordinated and proportionally comparable energy efficiency efforts in all Member States, supporting a stronger and more integrated internal market for energy efficiency technologies and services. It ensures that the European energy efficiency industrial ecosystem, which employs over 1.2 million people in Europe,³ can maintain its competitive edge and continue to lead in the development and deployment of innovative energy efficiency solutions in the EU.

¹ This is recognised in the Commission's Communication on the [Electrification Action Plan](#) which underlines that "Clean energy deployment and energy efficiency are the enablers of a cost-effective and swift electrification."

² Latest data finds that in 2024 primary energy consumption in the EU reached a record low at 1,202 Million Tonnes of Oil Equivalent, while final energy consumption has been steadily decreasing for the past 15 years. See [Energy efficiency statistics - Statistics Explained - Eurostat](#)

³ [World Energy Employment 2025 – Analysis - IEA](#)

Fast-tracking electrification

An energy efficiency target, especially when expressed in energy consumption, is the prerequisite to plan and design the future EU energy system, as it allows for the size of the system and the needed infrastructure investment to be accurately anticipated, thereby ensuring that unnecessary supply-side investments are avoided and that the limited financial resources are prioritised for the most urgent infrastructure upgrades. This is particularly relevant in the context of grid expansion and modernisation to ensure that the EU's electrification is as fast and cost-effective as possible.

Decreasing demand through energy efficiency measures, particularly at peak times, mitigates grid congestion, which is already delaying electrification and causing grid connection backlogs for renewable energy projects both in industry and energy communities, and, in some cases, (affordable) housing development.

Energy efficiency will also have positive impact on total energy system costs, in particular on electricity infrastructure, leading to substantial monetary savings for public budgets.⁴

As a result, if the EU aims to improve its energy security, boost its competitiveness, reduce its energy prices, and meet its climate goals, **it must maintain its momentum in energy efficiency progress and send a renewed, clear signal for regulatory stability and continuity**. Strong evidence already exists on the value of energy efficiency to the above-mentioned EU priorities.



Strengthening energy security

For the second time in four years, the EU is facing surging energy prices as a result of geopolitical conflict and dependence on foreign fossil fuel imports. Energy savings are a proven tool to improve the EU's energy independence.

Energy efficiency improvements generated 250 Mtoe of energy savings in 2023 compared to 2000 levels, without which final energy consumption in the EU would have been **29% higher**.⁵

Long-term energy efficiency measures put in place in the EU between 2015 and 2024 cumulatively **reduced energy demand by 4.8%**,⁶ significantly easing the pressure on energy imports during the recent energy crises.

⁴ See section 2 of the Coalition briefing: [Energy Efficiency: Enabling, accelerating and lowering the costs of the EU electrification](#)

⁵ Odysee-Mure, "[Energy efficiency in time of crisis at EU level](#)"

⁶ European Commission, "[Better data for energy efficiency](#)"



Bolstering competitiveness

Energy efficiency solutions allow companies, industries, and citizens to reduce their consumption and, by extension, cut their energy-related expenses. [Evidence from the European Investment Bank](#) (EIB) shows that firms that implement energy efficiency measures outperform those without them, a benefit which improves as their energy intensity increases.

In the past 15 years the EU has decreased its final energy consumption by **12.1%**⁷ while the economy grew by **25%**.⁸

In manufacturing alone, the EU now produces 50% more added value with **25% less energy** compared to 2000.⁹



Improving energy affordability

Energy efficiency helps citizens and households reduce their energy bills while improving the comfort and quality of their homes, workspaces, and the buildings they use every day. Energy efficiency improvements have paid off time and time again, improving energy affordability for citizens every day and particularly in times of crisis.

In 2022, Ecodesign and Energy labelling policies reduced annual consumer spending by **90 billion**.¹⁰ In 2023, EE improvements saved European households 540 euros on average.¹¹

When joining an energy community, members typically achieve **energy savings of 10-25%** on their overall consumption thanks to training, education, and tailored advice on installing energy efficiency measures.¹²

⁷ Eurostat, "[Energy efficiency statistics](#)"

⁸ Eurostat, "[National accounts and GDP](#)"

⁹ International Energy Agency, "[Multiple benefits of energy efficiency](#)"

¹⁰ European Commission, "[Ecodesign Impact Accounting Overview Report 2023](#)"

¹¹ Odyssee-Mure, "[Energy efficiency in time of crisis at EU level](#)"

¹² Sifakis et al., "[How Much Energy Efficient are Renewable Energy Sources Cooperatives' Initiatives?](#)"



Accelerating climate action

Reducing energy consumption plays a key role in lowering GHG emissions. To meet the 2040 climate target of at least 90%, the EU must reduce its energy consumption by at least 18.8% between 2022 and 2030 and then by a minimum of 20% between 2030 and 2040,¹³ according to the [Commission's own Impact Assessment](#). In parallel, the IEA highlights¹⁴ energy efficiency as "some of the fastest and most cost-effective actions to reduce CO₂ emissions".

Between 2010 and 2022, energy savings helped to reduce emissions by around **198 Megatonnes of CO₂** in the EU. Together with broader decarbonisation measures, it offset by more than two-fold the increase in economic activity¹⁵ during this period.

According to the IEA, accelerating energy efficiency could deliver **over a third of global CO₂ emissions reductions** between now and 2030,¹⁶ putting the world on a trajectory to reach net-zero by 2050.

Designing the target: matching ambition with delivery

The most effective way to ensure regulatory continuity and investment certainty for all stakeholders is to **design a 2040 EU energy efficiency target that is a natural continuation of the 2030 target**, preserving and building on the existing framework's strengths.

An energy consumption target

From this perspective, a 2040 energy efficiency target should be **based on the metric of energy consumption**. In addition to offering regulatory stability, this is best fitted to support the goal of energy security, as it encourages reductions in energy consumption through energy efficiency measures and directly helps to lower fossil fuel imports. Indeed, past and present energy efficiency targets, based on absolute consumption, have simultaneously supported the reduction of the EU's fossil fuel import bill and delivered emissions reductions while lowering energy costs for citizens and businesses.¹⁷

However, some flexibilities could also be built into the current target design to consider, for example, significant growth of energy demand linked to reindustrialisation processes or electricity consumption of certain sectors, including from data centers. Importantly, the possibility to accommodate expansion of energy use for certain sectors must be accompanied by the highest standards of energy and resource efficiency, demand-side flexibility and renewable energy use.

¹³ Coalition for Energy Savings, "[2040 Climate Target: No decarbonisation without energy savings](#)", based on the Commission's [2040 Climate Target Impact Assessment](#), and négaWatt Association, "[Balancing ambition and feasibility](#)".

¹⁴ International Energy Agency, "[Energy Efficiency Market report 2021](#)".

¹⁵ Odyssee-Mure, "[Energy efficiency in time of crisis at EU level](#)".

¹⁶ International Energy Agency, "[Energy Efficiency Market report 2024](#)".

¹⁷ [JRC Publications - Assessing the impact of Energy Efficiency on the EU Energy Consumption in 2010-2022: an index decomposition analysis](#)

What about an energy intensity target?

As reflected in the European Commission's public consultation for the setting of the post-2030 energy efficiency framework, energy intensity has increasingly been discussed as a potential metric to set the 2040 EU energy efficiency target. Energy intensity is usually defined as the ratio between the energy use of an economy compared to its GDP.¹⁸

An energy intensity target delivers fewer benefits and drives less action on energy efficiency because:

- It cannot be automatically translated or easily communicated in terms of reduced fossil fuel imports for the EU, offering little insight and reduced impact on improving EU energy security and strategic autonomy.
- It can be achieved without a decrease in the EU's overall energy use, yielding a weaker impact on the reduction of greenhouse gas emissions.
- It is not aligned with an electrification target for 2040, which is defined as a rate of EU final energy consumption, making it more difficult to measure and assess progress of increased electrification.
- It is ill-fitted to measure and drive concrete energy efficiency actions in end-use sectors, such as the residential sector, where the correlation between energy use and economic growth is less direct. Similarly, efforts to expand sectors which are more energy intensive for each unit of growth (industry vs services for instance), would be penalised by an energy intensity target, contradicting the goal to reindustrialise the EU.

Finally, as national authorities have already been using absolute consumption in final energy and primary energy metrics to report on their energy efficiency objective, **a different metric would require changes and increase the complexity for national experts, at odds with the goal of simplification.**

A primary and final energy target

A continuation of the target expressed as **both primary energy consumption (PEC) and final energy consumption (FEC)** is essential to achieve a more efficient, renewables-based and electrified energy system. Indeed, FEC and PEC reductions allow the EU to continue its progress in end-use sectors (final energy improvements) while also fostering a more efficient, integrated energy system that reduces energy losses in energy generation, transmission and distribution, before it reaches the consumers (primary energy improvements).

A target expressed in final energy consumption also works in synergy with the announced 46% electrification target by 2040, as decreasing EU final energy consumption will make the electrification rate progress, while, in parallel, electrification measures improve efficiency gains.¹⁹

Similarly, focusing on primary energy cuts encourages the switch from fossil fuels to renewable energy, and also incentivises demand-response measures that reduce peak demand, ensuring the EU's energy system is more efficient and not unnecessarily oversized.

A binding target

In line with the goal of ensuring regulatory stability and sending a clear investment signal, **the 2040 energy efficiency target should be binding.** A binding target ensures the greatest impact, as it is enforceable and creates political accountability: it provides stakeholders with information on the scale and speed of energy efficiency actions expected, enabling Member States and all relevant actors to unlock investments and supportive mechanisms to ensure it is met.

¹⁸ For instance, Eurostat calculates energy intensity based on gross available energy needed to produce a unit of GDP.

¹⁹ Négawatt association, [Make electrification "Fit for 90"](#)

Finally, to ensure clarity and consistency, the governance and enforcement of the 2040 energy efficiency target should be enshrined in the revised Governance Regulation, so it can be integrated into the future National Energy and Climate Plans.

Reflecting national circumstances

As in the existing 2023 EED, the EU energy efficiency target must be supported by a **governance framework that ensures predictability and accountability at the Member State level by dividing the target into national contributions**. It should be done using a pre-defined methodology that duly considers the national circumstances that can influence energy efficiency ambition, aiming for a fair allocation of efforts, alongside monitoring and enforcement mechanisms upheld by the European Commission.

In order to find better alignment between ambition and feasibility, **adjustments could be made to the criteria set to the existing formula in Annex I of the EED to define the national energy efficiency contributions**. These criteria could better reflect national contexts as well as the current EU priorities, by, for example, rewarding countries, in terms of effort sharing, that are deploying efforts to efficiently electrify their economy and/or lower their dependency on fossil fuel imports. In duly justified and exceptional cases, limited deviations from the formula could be allowed, subject to clear conditions and Commission oversight.

Consolidating the right enabling framework

Beyond the designing process, **an energy efficiency target can only be effective and achieved if it is accompanied by good implementation**. This starts with providing Member States with proper support and resources, including in the upcoming Multiannual Financial Framework, and empowering them to achieve their national objectives, which should be well-designed and take into account evidence-based implementation realities.

Such support can include, for example, **more regular interaction between the Commission and Member States** to monitor and support progress on the energy efficiency target while offering opportunities to express concerns and exchanging best practices through peer-to-peer learning, for instance by involving the EU Technical Support Instrument in the implementation of the energy efficiency legislation. The [Concerted Action for the EED](#) should also be expanded to involve other relevant ministries and priorities, such as electrification and energy infrastructure planners, to ensure an integrated and coherent approach.

Conclusion

The EU energy efficiency framework for the next decade must build on the existing legislation, leveraging and reinforcing what has worked and has driven concrete action and tangible benefits on the ground.²⁰ This exercise must place **the EU energy efficiency target at its core as the clearest and most effective regulatory signal**.

There are several ways to tailor the current objectives to better fit national and EU goals and challenges for the coming decade. Adapting the existing structure and governance framework of the EU energy efficiency target is feasible with the right approach. However, **the absence of a target for the next decade would be a strategic mistake for the EU energy system** with long-lasting consequences on the structural challenges faced by all Europeans and would lead to an increase in energy insecurity, costs, and climate change impacts.

A binding EU energy-efficiency target provides citizens and industry with the long-term direction and investment certainty needed to translate ambition into action. Achieving the target requires a robust enabling framework, including effective measures, financing, implementation support and monitoring, that embeds demand reduction in energy-system planning and mobilises sustained public and private investment.