



EUROPEAN ALLIANCE TO
SAVE ENERGY

Creating an Energy-Efficient Europe

Making the Energy Efficiency Directive fit for 55%



E3G



Energy efficiency, the bedrock of a decarbonised EU energy system

The European Union announced in late 2019 the launch of the European Green Deal, the block's growth agenda which aims to climate neutrality by 2050. The agreement on the European Climate Law enshrines this goal in the EU's legal framework and establishes, on the way to 2050, an intermediate 2030 target to reduce greenhouse gas emissions by at least 55% compared to 1990 levels. Cutting greenhouse gas emissions requires a deep transformation of the energy system to make it more efficient, smart and sustainable.

Setting the global economy in a net-zero pathway demands a massive increase of energy efficiency gains. According to the International Energy Agency (IEA), the path to global Net Zero Emissions implies a push in energy efficiency gains resulting in the annual rate of energy intensity improvements averaging 4% to 2030 – about three times the average over the last two decades¹.

Energy efficiency is a no brainer. However, the current actions are simply not delivering on the scale required. Data from Eurostat² confirm that the EU was unable to achieve the 20% Energy Efficiency target for 2020. In addition, the first assessment of national energy and climate plans (NECP) underlines there is still a gap compared to the Union's 2030 energy efficiency target of at least 32,5%. On top of this, energy efficiency progress, already lagging, faces further setbacks from the Covid-19 pandemic. As a result of the crisis, energy intensity is expected to improve by 1.9% in 2021 after improving by only 0.5% in 2020, well below the 4% prescribed in the IEA's Net Zero Emissions by 2050³.

To achieve the Union’s objective to diminish GHG emissions by 55% by 2030, the European Commission proposed a revision of the Energy Efficiency Directive (EED) to make it fit for purpose. The recast proposal would increase the Union’s energy efficiency target for 2030 from current 32,5% to 36% in final energy consumption and 39% in primary energy consumption. Additionally, the target is proposed to be binding, and each Member State must set national contributions to collectively achieve the overall target.

As the energy system is evolving with the penetration of more renewable energy sources, the EED should promote energy system integration and facilitate the interlinkages between the electricity, heating, building, transport and industry sectors. This includes looking at how integrating sectors can improve the overall efficiency of the energy system through accelerating the direct and renewable-based electrification of end-use sectors, enabling reuse of excess/waste energy, storage of surplus electricity in thermal networks, buildings and transport as well as to incentivise interconnectivity.

The Commission introduces a new article enshrining the Energy Efficiency First principle (EE1) to address the overall efficiency of the entire energy supply chain (generation, conversion, transmission, distribution), with the aim of achieving a highly efficient and renewable based energy system. The principle calls for decision-makers to take into account energy efficiency measures in all relevant policy, planning and major investment decisions. By applying the EE1

principle and carrying out a systematic technical and economical assessment of energy investments, the EED will avoid the creation of an oversized energy system and stranded assets, while reducing emissions and keeping energy prices affordable for citizens and businesses. In this respect, the EE1 principle is the key to increase overall system efficiency. Furthermore, the principle is also a driver to increase circularity. Its full application should guide the revision of other relevant EU directives. The effective enforcement of the EE1 principle is a precondition for a more holistic approach to reduce whole life-cycle emissions.

For policy-makers, investing in energy efficiency means laying the groundwork for a fast, smart and sustainable ‘made in Europe’ economic recovery. It means supporting growth, competitiveness and long term sustainability of European manufacturers, solution providers and local value chains.

The EED review is paramount in that respect and should be carried out in such a way to support job creation, sustainable growth and climate change mitigation and adaptation for key EU sectors like the energy, industry and buildings sectors.

The following pages include our recommendations to help making the energy efficiency directive fit for 55% and set the longer track to achieving climate neutrality by 2050.

1. IEA (2021), [Net Zero by 2050](#), Paris
 2. Eurostat (2021), [Energy saving statistics](#), Luxembourg
 3. IEA (2020), [Energy Efficiency 2020](#), Paris

Executive Summary



Energy efficiency targets for increased ambition

- Holistic application of the EE1 without limits in investment size.
- Reporting on the EE1 in the NECPs must be integrated with publicly available indicators.
- Increase the EU-wide target for 2030 from current 32.5% to a binding 40%.
- Mandatory national contributions. The result of the formula in Annex I must be made binding. The subjective criteria included in Article 4 of the recast must be deleted.
- Strengthen monitoring and enforcement mechanisms at EU level.
- Create an EU-wide methodology for counting energy efficiency as a First Fuel.



Public sector leading by example

- Support the introduction of an annual target for public bodies to reduce their energy consumption by 1.7% annually.
- Unlock the energy savings potential by addressing the water-energy nexus.



Expanding the scope to all public and private non-residential buildings

- Boost the rate and depth of renovation of public buildings, covering the need for holistic deep and staged deep renovations.
- Support the expansion of the renovation obligation scope to all public bodies from central, regional and local authorities.
- Extend the renovation obligation to private non-residential buildings, either with an obligation of means or obligation of results.
- Support the removal of alternative measures.
- Link with EPBD renovation strategies and minimum energy performance standards.



Public procurement

- Support link with the EE1 principle.
- Promote uptake of business models like Energy Performance Contracting, digitalization, public-private partnerships and innovative technologies.



Align the Energy Savings Obligation with 2030 and 2050 ambition

- Increase the annual energy savings obligation beyond the 1.5% proposed by the Commission as of 2024 onwards.
- Support exclusion of policy measures promoting direct fossil fuel combustion and counting energy savings from the ETS for buildings.
- Assess interaction with EPBD, water-energy nexus, carbon pricing, ESR and RED.
- System that pays the way for quality of measures and performance, promoting use of digital technologies to measure real energy savings in PEC and FEC, and reduction of CO2 emissions.
- Ensure optimal implementation by verifying policies and measures.



Energy audits and management systems

- Support the Commission's proposed methodology to mandate energy audits and energy management systems based on annual energy consumption.
- Mandatory application of recommendations from audits.
- Incentivise enterprises implementing audits recommendations or energy management systems with highest decarbonization impact.
- Support the promotion of Energy Performance Contracting by enterprises.
- Promote medium to long-term GHG reduction targets for companies.



Energy efficiency in Heating & Cooling

- Support the mandate for Member States to set comprehensive H&C assessment in NECPs.
- Support development of local H&C plans.
- Support the decarbonization pathway proposed for H&C installations to ensure the sector is energy efficient by 2050.
- Strengthen link with the EPBD long term renovation strategies.



Demand response and efficiency in transformation and distribution networks

- Encourage network operators to reduce energy losses, implement efficient infrastructure investment programmes and account for energy efficiency of the grid.
- Promote demand-side flexibility.
- Promote establishment of a Smart Grid Indicator.



Availability of qualification, accreditation and certification schemes

- Promote accreditation and certification schemes.



Information and training

- Link with the EE1 principle
- Raise awareness for citizens about benefits of energy efficiency improvements.
- Promote the establishment of databases for accredited EPC assessors.



Energy services market

- Mandate the use of Energy Performance Contracting for public bodies when renovating large buildings.

- Require all large non-residential buildings undergoing renovations to put in place energy management systems.
- Assess the possibility of introducing off-balance sheet treatments for private companies and investing in energy efficiency measures.



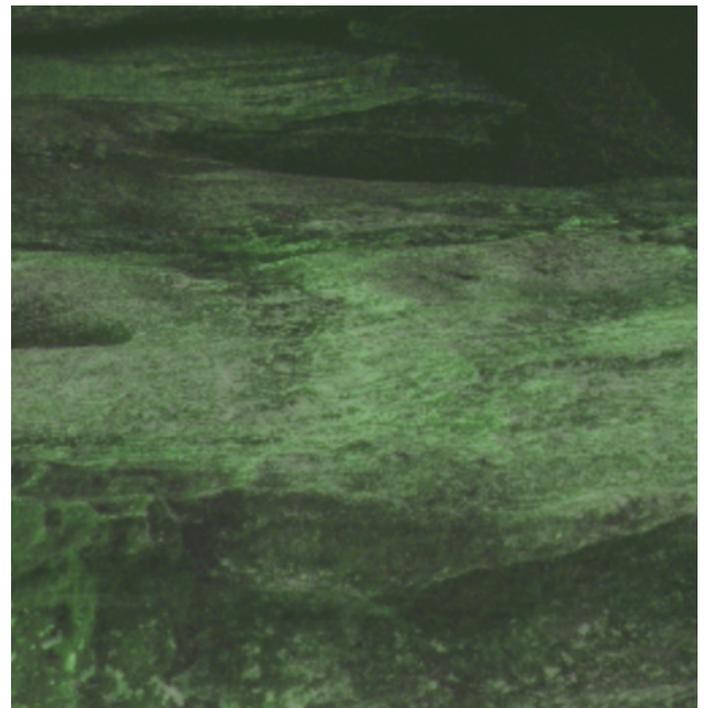
Energy efficiency national funds and other support mechanisms

- Condition the allocation and expenditure of public funds and investments to energy audits conducted pre and post intervention and encourage credible monitoring systems that measure real energy savings.



Primary Energy Factor

- Base the PEF value on a robust and transparent methodology
- PEF to consider upstream energy losses and be based on geographical and seasonal considerations.





Energy efficiency targets for increased ambition

Energy Efficiency First principle

The Commission proposes that Member States have to ensure that energy efficiency solutions are taken into account in the planning, policy and major investment decisions in energy systems and non-energy sectors. The holistic application of the principle is of high importance to trigger energy savings in both energy demand and supply sectors. We welcome this proposal and recommend the principle is applied regardless of the size of an investment. Recital 14 seems to limit the application of the EE1 principle only to “*large-scale investments with a value of more than 50 euro million each*”. This would leave out projects that do not reach the thresholds, like housing renovations projects. In addition, we welcome the Commission’s proposal that Member States must report about the application of the principle in their National Energy and Climate Plans (NECP), however the proposal should be integrated with clear indicators for better comparability and transparency.

Level of the target

The current headline energy efficiency target is insufficient to reach Europe’s energy and climate objectives. Tapping the full cost-effective potential for energy savings must be the aim of the EU energy efficiency target for 2030. In this sense, the Commission’s proposal to increase the target to a 36% for final energy consumption and 39% for primary energy consumption by 2030 is too low⁴. An ambitious and binding energy efficiency target would promote cost-effective investments and makes achieving the targets for greenhouse gas emission reductions and renewable energy cheaper for consumers. Following the Union’s ambition to increase the GHG emission reduction target by at least 55%, we call for increasing the EU’s energy

efficiency target for 2030 accordingly from the current 32.5% to at least cost-effective 40% and tending to 45% considering the EU’s technical energy efficiency potential⁵.

Nature of the target

Currently, the Union’s energy efficiency target for 2030 is not binding, which is an anomaly if compared to the targets for greenhouse gas emissions and renewable energy. We welcome that the recast proposes a European binding target, which is necessary to ensure long term certainty for businesses and investors. In addition, the energy efficiency targets for the EU and at national level should be expressed systematically in both primary and final energy. Also, the progress towards the target achievement should be expressed in a similar manner. This will enable the implementation of a holistic approach towards end-use and energy system efficiency, and to address the need for energy savings on both the demand and supply side.

Monitoring and enforcement mechanisms

The current monitoring and enforcement mechanisms have been too weak to achieve the energy efficiency targets. The Commission’s proposal sets national contributions through which Member States should meet, collectively, the binding Union target for 2030. Member States have to notify those contributions together with an indicative trajectory to the Commission as part of their National Energy and Climate Plans (NECP). When doing so, Member States must use a formula defined in Annex 1 of the recast proposal. However, as it stands, only the use of the formula is binding, not its result, which would allow Member States to deviate from its result and adapt it to adjust to their national circumstances. This provision does not ensure liability and enforceability to help achieve the

EU 2030 target. Therefore, we recommend to set binding national contributions. To avoid any deviation from the formula's result, we recommend the subjective criteria included in Article 4 of the proposed EED recast should be deleted. In addition, Member States should set their trajectories according to a linear pathway to their 2030 contribution and include clear milestones. We also recommend to develop effective incentives and enforcement schemes, more transparency and accountability so that reported energy savings are more accurate and consistent across Member states. In this perspective, real energy performance – measurable thanks to digital solutions, IoT and energy performance contracting - should be promoted to support delivering real results and greenhouse gas emission reductions.

Creating an EU-wide methodology to make energy efficiency as a first fuel

In line with the EE1 principle, energy efficiency should be considered as the First Fuel. Thanks to technological developments, energy savings can be measured in the same way as energy produced. An EU-wide methodology for accounting energy efficiency as part of the national energy mix would help Member States to make the EE1 principle operational and account for energy savings.

4. These targets are based on the PRIMES 2007 reference scenario used in the current EED. The level of target for energy efficiency proposed by the European Commission for 2030, expressed on the new PRIMES 2020 scenario, is of 9%.

5. Recent study finds that the EU can cost-effectively save energy for 2030 at around 41% (based on the 2007 reference scenario) for final energy consumption (FEC) and 45% for primary energy consumption (PEC). This would correspond to a level of target of 17% below FEC (REF 2020) and 18% below PEC (REF 2020). In terms of millions tonnes of oil equivalent, the economic potential foreseen is of 718 Mtoes for FEC and 928 Mtoes for PEC by 2030. The technical potential is even higher, with a 23% potential for FEC and PEC (REF 2020), which corresponds to a 45% for FEC and 48% for PEC (REF 2007). Such technical potential implies the realisation of all the technical possible energy savings through existing technologies. Stefan Scheuer, Fraunhofer ISI, [Will the Fit for 55 package deliver on energy efficiency targets? A high-level assessment](#) (2021)

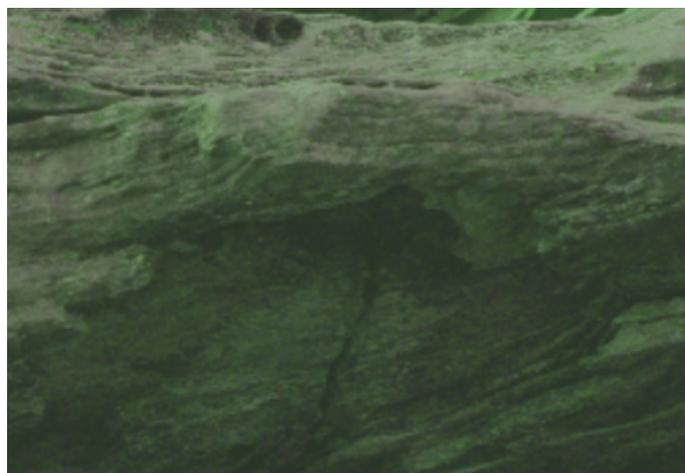
Public sector leading by example

New article to ensure energy savings by public bodies

We welcome the proposal to set in the EED an obligation for the public sector to deliver annual energy savings. The public sector represents 5% to 10% of the EU's final energy consumption. According to the recast, Member States shall ensure that the total final energy consumption of all public bodies combined is reduced by at least 1.7% annually. Further on, EU countries must include in their NECPs the list of public bodies which shall contribute to the fulfilment of the obligation.

Addressing the water-energy nexus

In municipalities, water and waste water facilities account for the largest consumption of electricity, representing 30-40% of local authorities' total electricity bill. Smart water management and water efficiency measures are an important driver of energy savings. So far, the EU did not grasp this opportunity. The Commission's proposal to set an obligation for public bodies to diminish their final energy consumption is an opportunity to address the water-energy nexus. We call on the EU to fully realize the energy saving potential that exist across water cycles and in the wastewater treatment sector.





Expanding the scope to all public and private non-residential buildings

A holistic approach to renovation

Because of the exemplary role of public buildings, the EED should aim at realizing all available energy savings potential, meaning both the rate and depth of renovation of public buildings should be boosted. We welcome that the Commission's recast proposal requires all renovation of public bodies' buildings to achieve nearly zero energy building status (NZEB) as defined in the EPBD. We believe it requires covering the need for holistic deep and staged deep renovations where envelope elements (i.e. roofs, walls, windows) are upgraded alongside smart lighting and technical buildings systems (i.e. building automation and control, energy management systems, on-site electricity generation, systems using energy from renewable sources). Energy audits and EPCs should be promoted for the renovation of public buildings in order to guarantee quality and real performance over time.

The scope should be expanded to all public buildings and to private non-residential buildings (tertiary buildings)

The importance of public authorities leading by example cannot be overestimated and is an essential part of the EU Green Deal. The recast proposal extends the current mandatory renovation rate of 3% of the total floor area of heated and/or cooled buildings owned by public bodies to all levels of the administration, and not just central government buildings. Given that public buildings account for around 12% by area of the European building stock, the impact of such an extension will be substantial, in terms of energy savings, improved health, comfort, and productivity. A particular focus should be given to public buildings such as schools and hospitals, especially in the context of post-COVID19 recovery. In addition to all

public buildings, the revision should consider extending the scope to non-residential buildings as well, firstly because of their high energy intensity and energy consumption, which have the similar consumption patterns of public buildings, and secondly considering their contribution to the achievement of the increased EU targets for 2030 and 2050. In the EU, tertiary buildings represent 25% of the building floor space, 32% of the final energy use in buildings, and about 13% of CO₂ emissions. With a GHG emission reduction objective of 40% by 2030, the emission target from non-residential buildings was 140MtCO₂. With the new GHG emission reduction target of 55%, the non-residential buildings target becomes 122MtCO₂. Moreover, this article should offer more flexibility to deliver energy savings results, with two options: either an obligation of means (i.e. the current 3% annual renovation rate) or an obligation of results (i.e. definition of milestones for energy consumption reduction, based on existing scheme such as the French Tertiary Decree). The French Tertiary Decree, for example, requires tertiary buildings to reduce their final energy consumption of about 40% by 2030, 50% by 2040 and 60% by 2050.

Removal of alternative measures

The Commission proposal deletes all alternative measures as they do not lead to proper energy savings measures and further weakens the effectiveness of the Directive. We believe this is a positive provision and should be preserved.

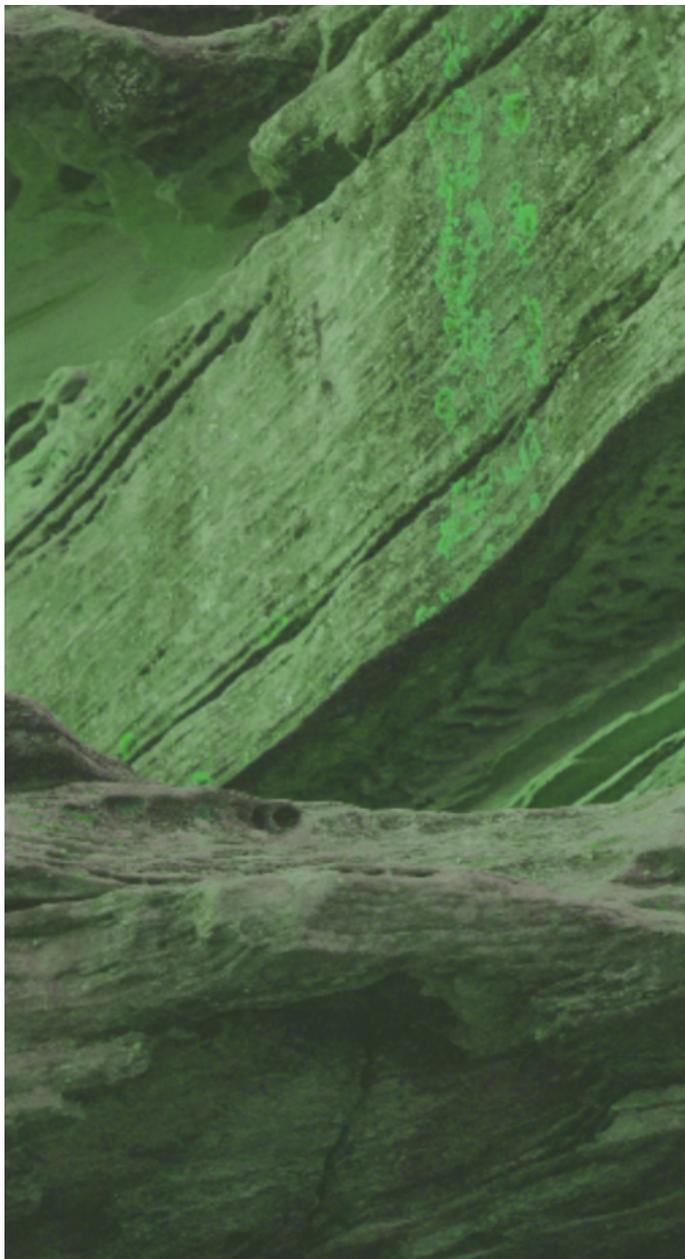
Link with the Long-Term Renovation Strategies

In order to promote a coordinated approach to renovation and strengthen the coherence between the EED and Energy Performance of Buildings Directive (EPBD), it is necessary

to link the effort to renovate public buildings with Article 2a of the EPBD.

Minimum Energy Performance Standards

The revision of this article should foresee the introduction of mandatory Minimum Energy Performance Standards (MEPS) for all public buildings. This will encourage deep and staged deep renovations and would pave the way for the introduction of such standards across all building segments. If MEPS are introduced as part of an early revision of the EPBD, a clear link should be established.



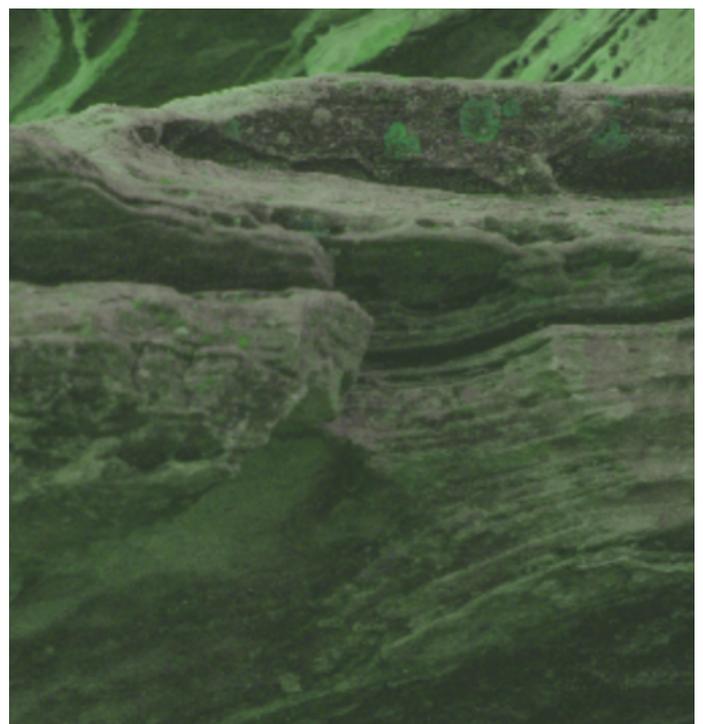
Public Procurement

Energy Efficiency First and system efficiency

Purchasing by public bodies and public procurement rules must be systematically guided by the Energy Efficiency First principle and the best energy performance over the lifetime of products and systems. In addition, public bodies shall carry out comprehensive assessments of the potential for energy savings regarding heating and cooling options (Article 14), and factor in system efficiency and CO2 emission reduction considerations.

Promoting the uptake of new business models in the public sector

Procurement rules should assist public bodies in using new business models, e.g. Energy Performance Contracts (EnPCs), innovative public-private partnerships, digitalisation (Building Information Modelling - B.I.M) and innovative technologies in order to facilitate the uptake of energy efficiency measures and ensure energy savings.





Align the Energy Savings Obligation with 2030 and 2050 ambition

Increase the level of the annual energy savings

The energy savings obligation, as it stands, is not adequate for a higher 2030 energy efficiency target. The current annual energy savings requirement of 0.8% for the period up to 2030 must be at least doubled. Although it is positive that the Commission proposed to increase the objective from 0.8% to 1.5% as of 2024, the level of ambition will still not be sufficient to deliver the necessary energy savings. Indeed, an increase in that range will just bring the level of the annual energy savings in line with what the provision was meant to deliver when it was originally adopted back in 2012.

Assessing the interaction of the article with other EU policies

The EU is introducing new policies on GHG emissions, carbon pricing, building renovations, circular economy, vehicle standards and on the decarbonisation of industrial production. The interaction between the provisions of these measures and this article needs to be carefully assessed to maximise energy savings.

Energy Performance of Buildings Directive

An example of useful interaction between the EED and EPBD is provided by the role that Energy Saving Obligations can play in the implementation of Long-Term Renovation Strategies (Article 2 EPBD) from a system efficiency perspective. The ESO can promote energy efficiency measures in the building sector and generate additional energy savings resulting from holistic deep and staged deep renovations including envelope elements (ie. roofs, walls, windows), smart lighting and optimisation of the buildings maintenance and operations through monitoring; buildings automation and controls, and buildings

management systems. Furthermore, the monitoring, reporting and verification rules must be strengthened to ensure new, real and additional energy savings, supporting the aims of the Renovation Wave that directly benefit citizens and businesses, including alleviating energy poverty.

Water-Energy nexus

Another example of interaction with other EU policies is the link between the EED and water related legislation. The article should include specific provisions to drive the implementation of water and energy savings measures across industrial sectors and municipalities.

Carbon pricing

Measures designed for the decarbonisation of the building stock, such as carbon pricing, can only work effectively and efficiently as part of a well-designed broader policy mix and it should never be considered as a replacement for existing measures to boost energy efficiency such as those included in the EED and EPBD. Carbon pricing schemes should not replace energy efficiency policies in buildings because of the non-economic nature of several market barriers, low price elasticity and the ownership structure of buildings. Dedicated energy efficiency policies can deal with these failures and barriers to ensure that energy efficiency investments are taking place, resulting in energy savings that will keep down the cost of reducing emissions in the long-term. Policies related to the building sector should be kept in the Effort Sharing Regulation (ESR) sectoral scope with increased ambition. Furthermore, the EED recast proposal sets that for the fulfilment of the energy savings obligation, a Member State cannot count reduced energy use in sectors that would have occurred in any event as a result of emission trading stemming

from policies like the EU ETS expansion to the buildings and transport sectors. This is a positive outcome which should be preserved.

Effort Sharing Regulation

Annual and additional energy savings have the potential to achieve and over-achieve the current 2030 GHG emissions reduction targets under the ESR. At the same time, the national GHG emissions reduction targets set by the ESR are an important driver for the uptake of energy efficiency policies and measures. The Commission's proposal to increase the Energy Savings Obligation from 0.8% to 1.5% as of 2024, it could deliver half of the GHG emissions reduction needed to achieve the higher EU ESR target that will be needed⁶ (projected ambition level of 39% under REG, MIX and C PRICE scenarios in the 2030 Climate Target Plan Impact Assessment)⁷.

Renewable Energy Directive II

A better alignment between the EED and the RED II is needed. The prerequisite for such positive synergy is the operationalization and prioritization of the Energy Efficiency First principle. We recommend that the revision of the EED, in synergy with the RED, creates the conditions so that the reduction of energy demand catalyses renewable energy penetration and ultimately phases out fossil fuels. In this regard, we welcome the Commission's proposal to not count towards the fulfilment of the energy savings obligation the energy savings resulting from measures which imply direct fossil fuel combustion. Digitalisation also plays a key role in managing and integrating renewable and distributed generation, while reducing energy consumption and empowering end-users towards energy efficient behaviours. The EED should not overlook the new role that smarter and more efficient buildings, powered by renewable energy, can have responding to market signals through demand response, as well as the potential of highly efficient heating solutions to provide flexible and green and

low carbon heat and electricity.

Real energy savings

The article should make the best use of innovative digital technologies to measure real energy savings in terms of primary and final energy consumption and reduction of CO₂ emissions. In practice it should encourage Member States to base their national Energy Efficiency Obligation Schemes on measured energy savings. Both energy performance contracting (EnPC) and active energy efficiency measures will enable real-time monitoring, analysis and optimisation of energy performance. Calculated metrics by a real energy savings approach will deliver actual and measurable results and will enable a gradual transition towards a system that pays for the quality of measures and performance. Better monitoring and verification mechanisms would oblige Member States to provide evidence on how the energy efficiency measures implemented contribute towards the overall energy efficiency target.

Ensure optimal implementation

The revision should tackle shortcomings regarding the late and low-quality reporting by the Member States. Effective enforcement of the EED's provisions requires verification of Member States' policies and measures at the planning stage, during their implementation and ex-post to ensure the most optimal implementation of this article and the delivery of adequate energy savings for 2030.

6. Jakob Graichen, Stefan Scheuer, Samuel Thomas, [Strengthening synergies between climate effort sharing & energy savings obligations, an input to the Fit for 55 package](#) (2021)

7. European Commission, [2030 Climate Target Plan Impact assessment](#) (2020)

Energy audits and management systems

Uptake of recommendations

The Commission proposes that enterprises with an average annual consumption higher than 10TJ of energy over the previous three years must do an energy audit. Despite the good Commission's proposal requiring the results of audits to be transmitted to the management of the enterprise, it is not required to implement the audits recommendations, therefore, in many cases, the recommendations of the energy audits are not implemented. Energy audits are an important tool to increase energy savings in the private sector, but companies consider these audits an administrative burden which delivers low-quality audits without taking any further actions. To avoid this, we recommend that the implementation of recommendations stemming from energy audits, and in particular on measures with short pay-back period (less than 5 years), should be made mandatory.

Energy Management Systems

EU-ASE welcomes and supports the Commission's proposal to set with clear requirements a mandatory energy management system (EMS) for enterprises with an average annual consumption of 100TJ over the previous three years. However, energy management system is only used as an alternative option to an audit. As a matter of fact, the current standard mentioned in the EED (ISO5000-1) is much more ambitious than the standard for audits (EN16247-1). Indeed, ISO5000-1 requires to meet a set of specific criteria to achieve energy efficiency gains. Such criteria include energy objectives and planning, energy baseline and performance indicators, objectives, targets, monitoring, measurement and analysis. We support the Commission's proposal which addresses enterprises with annual energy consumptions

over 28GWh, taking into account all sites of the company operating in a EU Member State. This threshold would tackle most of the sites and production facilities from large enterprises within a given territory. Most of the SMEs would be excluded from the scope.

Incentives for enterprises

To support both energy management systems and the implementation of energy audits recommendations, financial incentives should be set up as part of Member States obligation to implement this article. For instance, in Germany, the Federal government has included a clause in the Renewable Energy Sources Act (EEG) which allows energy-intensive companies to benefit of a tax reduction when proving that they have implemented an energy management system in accordance to ISO 50001. The companies implementing the audits recommendations with the highest decarbonisation impact (combining energy efficiency measures, renewables deployment and energy conservation measures) should be rewarded with the highest level of incentives.

Energy Performance Contracting

Furthermore, the recast EED also promotes the use of energy performance contracting (EnPC). These are very positive developments that broaden the range of solutions that can be used to improve energy efficiency in the private sector.

Focus on energy consumption rather than size

We welcome the Commission proposal to change the methodology for mandating an energy audit or an EMS. We support the idea of basing the methodology on the annual energy consumption of an enterprise, rather than considering its size. In this context,

in order to provide additional focus and a framework to companies to apply the recommendations of audits, medium-to-long-term GHG reduction targets for companies should be promoted to ensure that measures encompass both energy efficiency actions and renewable energy deployment.

Potential of smart technologies

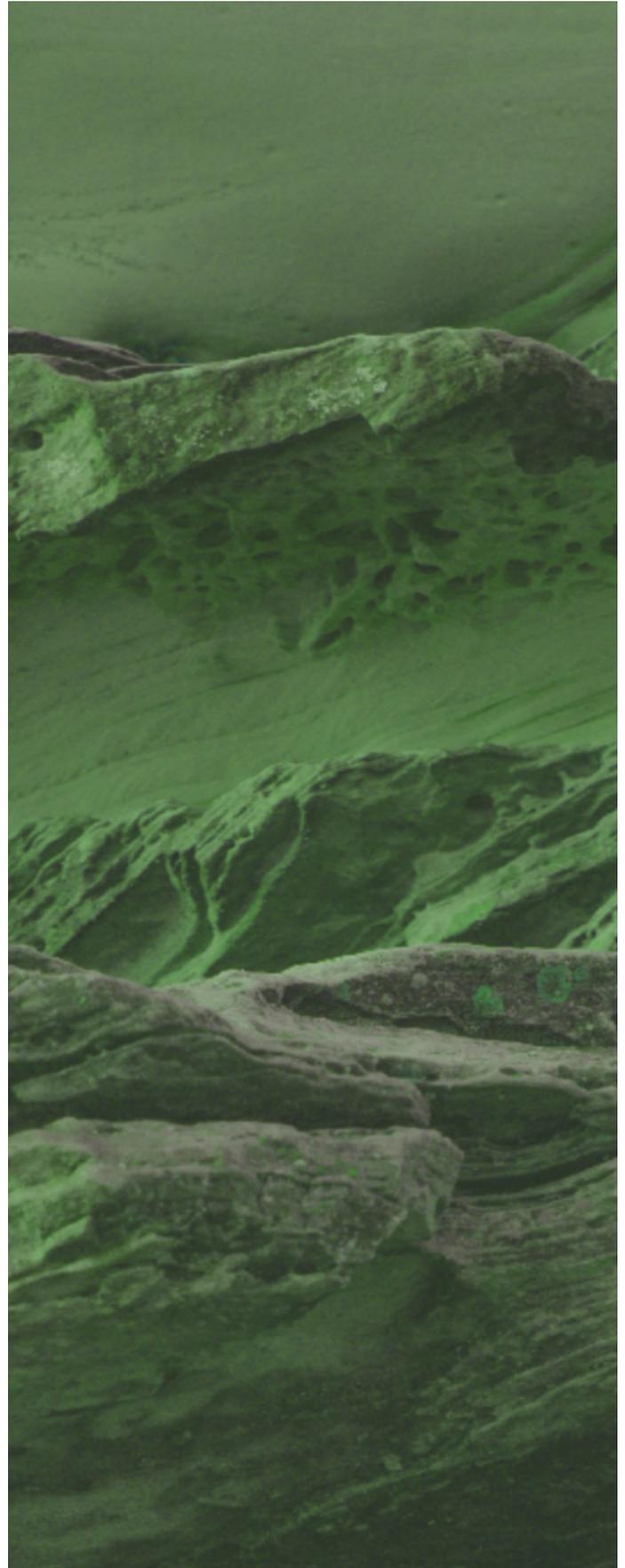
Smart technologies (such as smart connected building sensors, building automation and energy management systems) through real-time measurement, ongoing monitoring and reporting could complement energy audits.

Broadening the scope to accelerate the implementation of the results of the audits

Audits should be broadened to solutions that additionally comprise concrete actions to improve energy efficiency. In this context, the revision should also accelerate the deployment of energy management systems based on digital interfaces, as well as EnPCs. Through the implementation of energy efficiency measures included in the recommendations from audits, this article would also contribute to the reduction of whole-life cycle carbon emissions from the industry sector.

Ensuring coherence with Energy efficient H&C

The provisions regarding efficient heating and cooling solutions should be strengthened, to make sure that in the framework of audits, Member States require a systematic assessment of the technical and economic feasibility of connection to an existing or planned district heating or cooling network, in particular where the heating and cooling network is highly efficient and /or where waste heat potential has been identified in the vicinity (in line with article 14). Such an assessment should always be guided by the Energy Efficiency First principle and careful cost-benefit analysis.





Energy Efficiency in Heating and Cooling

Energy system integration and the Energy Efficiency First principle

The identification and access to information on waste heat recovery potential are key for optimal exploitation of this energy source, which contributes towards greater energy system integration and Energy Efficiency First principle implementation. It will require rigorous execution of comprehensive assessments to be carried out by the Member States, followed by concrete measures and commitments. As such, we welcome that the EED recast proposal mandates Member States to set a comprehensive heating and cooling assessment in their National Energy and Climate Plans.

Going local

The Commission's proposal supports the development of local heating and cooling plans, but the provision could be strengthened to further encourage public authorities to set an assessment. The comprehensive assessment for efficient and decarbonised heating and cooling solutions should be carried out at the same time as the preparation of long term renovation strategies (Article 2b of EPBD). This will ensure a more granular approach, by looking at locally available energy sources, including waste heat, and the potential for reduced heat demand. This would respect the application of the Energy Efficiency First principle and would contribute towards the realisation of the concept of a district approach to energy planning and renovation as well as smart energy system integration that can take place only at the level of a territory.

Efficient heating and cooling systems

Article 24 of the proposed EED recast establishes a number of criteria to identify energy efficient heating and cooling systems aligned with the EU's energy and climate objectives. Based on a timeline starting

from the 31 December 2025, DHC systems will transition gradually and by 2050 they will be considered efficient only when using renewable energy and waste heat, where the share of renewable energy is at least 60%. In addition, Member States shall ensure that as from 2025 and every five years, DHC operators with a total energy output exceeding 5 MW that do not meet the aforementioned criteria have to prepare a plan to increase primary energy efficiency and renewable energy and it will have to be approved by the competent authority. This provision will ensure the steady decarbonisation of the EU's heating and cooling sector, which today is still very dependent on fossil fuels.

Strengthened link with article 2a of EPBD

To make sure that planning for renovation and decarbonised heating and cooling supply happens at the same time and at the right level of districts/neighbourhoods the link between the two articles should be strengthened.

District Heating Networks

The EED has the potential to enhance the contribution of District Heating Networks to energy savings. It has introduced comprehensive assessments for efficient heating and cooling and CHP, as well as cost-benefit analysis for planning new investments. Such assessments should be systematically integrated with Energy Efficiency First principle considerations in view of improving the design of national, regional and local energy supply policies. Moreover, the definitions of efficient district heating and cooling and CHP should be revised to solve current issues (e.g. concerning thermal losses) to incentivise the reduction of heat losses and uptake of renewable energy technologies and to be aligned with reaching climate neutrality by 2050.

Demand response and efficiency in transformation and distribution networks

Reinforcement

Increasing the share of renewable energy sources and growing penetration of electric vehicles create new challenges for the electricity networks, especially on the distribution side. Given growing pressures on the grids, the article should encourage network operators to reduce energy losses, implement cost-efficient and energy-efficient infrastructure investment programmes and properly account for the energy efficiency and flexibility of the grid.

Demand-side flexibility

Demand-side flexibility is the bridging solution supporting greater electrification and smart sector integration and it is at the heart of the EU Strategy for Energy System Integration. It helps stabilise an increasingly variable power system and contributes to reaching climate neutrality cost-effectively. The EED should further promote demand-side flexibility to increase system efficiency. This would allow the energy sector to evolve from a static to a dynamic sector in benefit of all end-users. As such, we welcome that national energy regulatory authorities shall apply the EE1 principle. It is paramount that transmission system operators do not invest in stranded assets.

Smart Grid Indicator

A way to counter the main factors limiting energy efficiency improvements of networks would be to enhance monitoring of energy efficiency in transformation and distribution networks through the establishment of a Smart Grid Indicator. The readiness of a grid to support active contributions to energy

efficiency, either directly within the grid or indirectly, can be monitored by looking at the deployment of suitable solutions. The Indicator should be designed following the provisions established in the Electricity Directive, enabling operators to assess the progress of efficiency and flexibility in their network.

Availability of qualification, accreditation and certification schemes

Improve certification schemes

Although such schemes are more and more available across Member States, their design is not necessarily the most appropriate to really promote certain professions and to ensure technical competence and quality of services. More focus on the latter should be developed within existing and emerging schemes to make them more effective. The Commission proposes that Member States have to ensure appropriate level of competences for energy efficiency professions. This should include also coherence between qualification, accreditation and certification schemes across Member States. Well-developed, accreditation and certification schemes can certify and guarantee the availability, quality and technical competence of energy efficiency experts and services providers. This should help increase awareness about available solutions and their benefits, and thus enhance trust. However, quality criteria and quality checks are often missing in existing schemes and the proliferation of schemes and labels in some countries has generated an increasing complexity, which goes against the original aim of such schemes (which should be to support the development of qualified experts and providers).

Information and training

Reinforce the application of the Energy Efficiency First principle

The revised EED should provide additional guidance and support measures to further improve the implementation of the energy efficiency first principle. In this respect, the Member States should, with the participation of all relevant stakeholders, including local and regional authorities, share information, raise awareness and train citizens about the benefits of energy efficiency improvement measures, including on behavioural changes, impacting both primary and final energy consumption. One possible action in this direction could be to establish national public databases of accredited EPC assessors.

Energy services market

Incentivise EnPCs and energy management systems uptake

This article contributed to the development of energy services, however barriers persist. The EED recast only sets that Member States have to encourage public bodies to use energy performance contracting (EnPC) for renovation of large buildings. In order to effectively stimulate the EnPC market in the EU, we believe that a transition from a voluntary to a mandatory approach is needed. This provision should require that all large non-residential buildings that undergo renovations put in place energy management systems.

Assess the possibility of introducing off balance sheet treatments for private companies

The Eurostat Guidance Note⁹ on the recording of energy performance contracts

in government accounts must be promoted. In this respect, the EED introduces that Member States shall support the public sector to take into account the existing European or international standards and Eurostat guide to the statistical treatment of EnPCs in government accounts. In order to assess the possibility for an introduction of a scalable and replicable solution for off-balance sheet treatment for energy efficiency investments conceded by private sector companies, the EED should foresee a consultation with relevant stakeholders.

Energy efficiency national funds and other support mechanisms

Condition the allocation and expenditure of funds for energy efficiency investments

To stimulate the market which has suffered great losses due to the COVID-19 outbreak and the economic recession, we should focus on the effective leveraging of public money spent on energy efficiency measures across sectors. For example, between 2014 and 2020, the EU Cohesion policy allocated a budget of around €14 billion to improve the energy efficiency of buildings¹⁰. Even greater amounts are likely to be available for this purpose in the framework of the EU Recovery Plan¹¹. To ensure cost-effective use of public funds, the European Commission must condition their allocation and expenditure to energy audits (conducted pre- and post-intervention), Building Renovation Passports, and encourage credible monitoring systems that measure real energy savings.

8. Eurostat, [A guide to Statistical Treatment of Energy performance Contract](#) (2018)

9. European Court of Auditors, [Energy efficiency in buildings: greater focus on cost-effectiveness still needed](#) (2020)

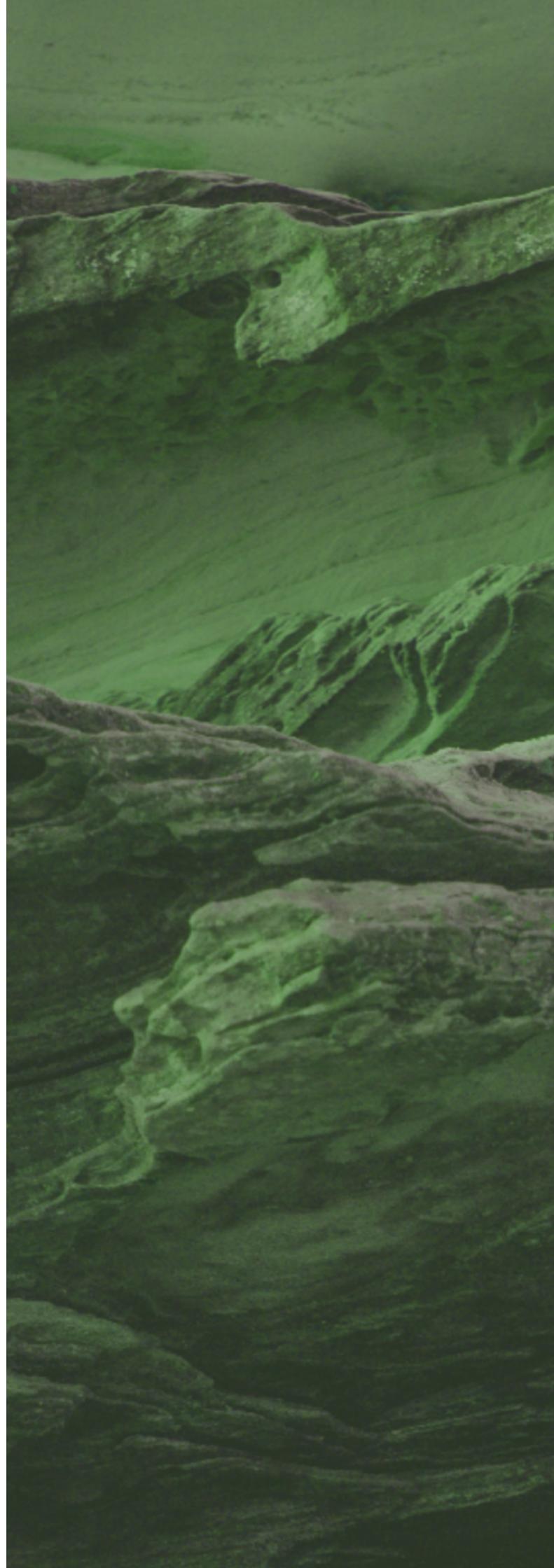
10. European Commission, [State of the Union address](#), (2020)

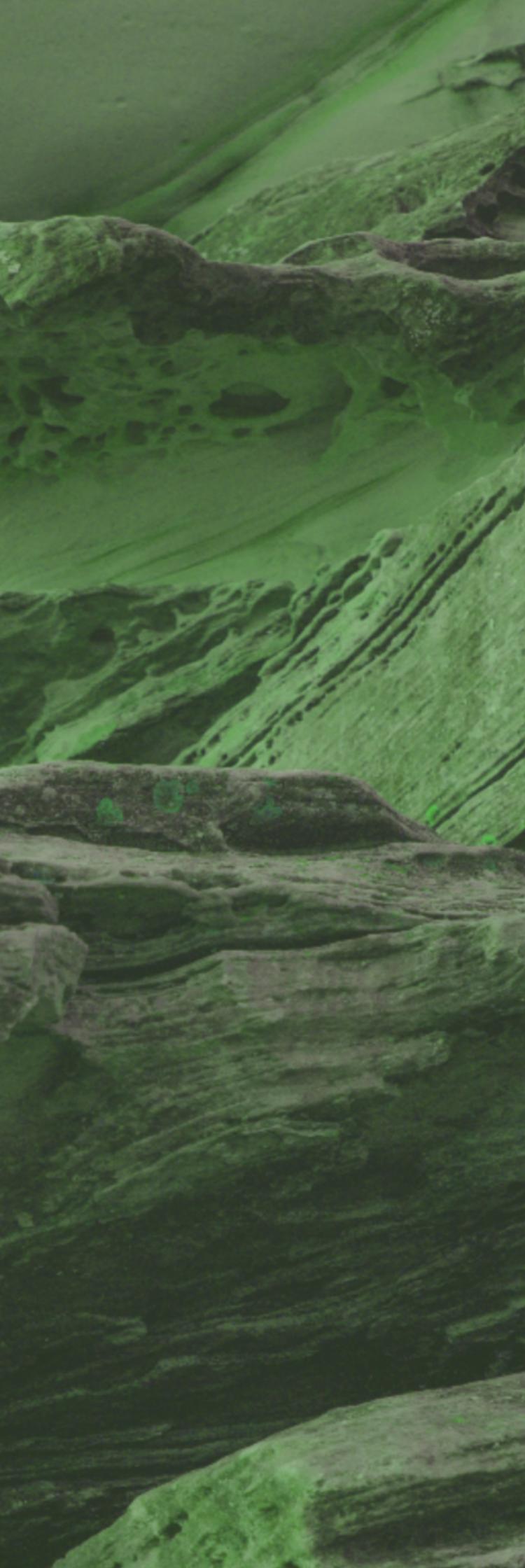


Primary Energy Factor

Base PEF value on a robust and transparent methodology

The Primary Energy Factor is intended to provide information about the actual efficiency of a given energy mix, to inform investment choices, in particular applied to buildings renovations and construction of new buildings. For the PEF to correctly play this role, its value needs to be based on a robust and transparent methodology, referring to the latest available EU statistics, to be reviewed regularly to account for the changes in the average EU energy mix. Moreover, a well-designed PEF should duly consider upstream energy losses and be based on geographical and seasonal considerations, which have an impact on the real energy mix in use at different times and in different areas. In our view the development of such methodology would greatly help to gather correct information about the efficiency gain of a given energy mix.





The European Alliance to Save Energy (EU-ASE) aims to advance the energy efficiency agenda in Europe. The Alliance allows some of the world's leading multinational companies to join environmental campaigners and a crossparty group of Members of the European Parliament.

EU-ASE business members have operations across the 27 Member States of the European Union, employ over 340.000 people in Europe and have an aggregated annual turnover of €115 billion.

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