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COMMISSION RECOMMENDATION

of 28.9.2021

on Energy Efficiency First: from principles to practice. Guidelines and examples for its implementation in decision-making in the energy sector and beyond.

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THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union, and in particular Article 292 thereof,

Whereas:

- (1) In the Communication on the stepping up Europe's 2030 climate ambition¹, the Commission to put forward the 2030 Climate Target Plan, a comprehensive plan to increase the European Union's greenhouse gas emission reduction target for 2030 towards -55% (compared to 1990) in a responsible way.
- (2) The European Climate Law² lays down that Union-wide emissions and removals of greenhouse gases regulated in Union law shall be balanced at the latest by 2050, thus reducing emissions to net zero by that date.
- (3) The Communication on the European Green Deal³ states that energy efficiency has to be prioritised and identifies energy efficiency as one of the key solutions across sectors that will help to achieve climate neutrality at the lowest possible cost.
- (4) The energy efficiency first (EE1st) principle is defined in Article 2(18) of the Regulation on the Governance of the Energy Union and Climate Action⁴ which also requires Member States to take into account the principle in the integrated National Energy and Climate Plans (NECPs). The Energy Efficiency Directive⁵ contributes to the implementation of the principle, but it does not contain any specific requirements how the principle should be applied.

¹ Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions – Stepping up Europe's 2030 climate ambition, COM(2020) 562 final.

² Regulation (EU) 2021/1119 of the European Parliament and of the Council of 30 June 2021 establishing the framework for achieving climate neutrality and amending Regulations (EC) No 401/2009 and (EU) 2018/1999 ('European Climate Law'), OJ L 243, 9.7.2021, p. 1–17.

³ Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions – The European Green Deal, COM(2019) 640 final.

⁴ Regulation (EU) 2018/1999 of the European Parliament and of the Council of 11 December 2018 on the Governance of the Energy Union and Climate Action, OJ L 328, 21.12.2018, p. 1–77.

⁵ Directive (EU) 2018/2002 of the European Parliament and of the Council of 11 December 2018 amending Directive 2012/27/EU on energy efficiency, OJ L 328, 21.12.2018, p. 210–230, as stated in Article 1.

- (5) The EU Strategy for Energy System Integration⁶ puts energy efficiency as a core element and calls for application of the EE1st principle across the whole energy system. This includes giving priority to demand-side solutions whenever they are more cost-effective than investments in energy infrastructure in meeting policy objectives and properly reflecting life cycle efficiency of the different energy carriers, including conversion, transformation, transmission, transportation and storage of energy, and the growing share of renewables in electricity supply.
- (6) EE1st is also one of the key principle in the Renovation Wave strategy⁷ and should be part of the national Long Term Renovation Strategies.
- (7) EE1st, as a horizontal guiding principle of the European climate and energy governance and beyond, should ensure, while taking full consideration of security of supply and market integration, that only the energy needed is produced and that investments in stranded assets are avoided in the pathway to achieve the climate goals. The conditions that the climate change is likely to bring about and their impacts on energy infrastructure and material use, should also be taken into account in decisions taken for energy efficiency measures.
- (8) The principle aims to treat energy efficiency as the “first fuel”, that is a source of energy in its own right, in which the public and the private sectors can invest ahead of other more complex or costly energy sources (“save before you build”). It involves a shift from the traditional model of energy production and consumption, based on large fossil-dominated suppliers and passive, price-taking consumers, towards a more flexible system, which incorporates renewable technologies and focuses on actively engaged energy consumers.
- (9) The EE1st principle implies adopting a holistic approach, which takes into account the overall efficiency of the integrated energy system and promotes the most efficient solutions for climate neutrality across the value chain (from energy production, network transport to final energy consumption) so that efficiencies are achieved both in primary and final energy consumption. This approach looks at the system performance and dynamic use of energy, where demand side resources and system flexibility are considered as efficiency solutions. At the same time, the principle can also be applied at a lower, asset level when energy efficiency performance of specific solutions is to be identified and solutions are adapted to prefer those that imply a better energy ratio.
- (10) Analysing properly costs and benefits is a key element of the principle. While applying the principle, a societal perspective to assessing the impacts of various alternatives is taken when analysing cost-effectiveness and wider benefits of energy saved. Still, at the operational and sub-national levels the implementation decisions should consider cost-effectiveness of energy-efficiency from the investor and end-user perspectives.
- (11) The principle does not mean that energy efficiency is always a preferred option. The main objective of the EE1st principle is to consider actions in energy efficiency and

⁶ Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions – Powering a climate-neutral economy: An EU Strategy for Energy System Integration, COM(2020) 299

⁷ Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions – A Renovation Wave for Europe - greening our buildings, creating jobs, improving lives, COM(2020) 662 final

energy demand management on an equal footing with alternative actions to respond to a specific need or objective, in particular when energy supply or energy infrastructure investments are at stake. Subsequently, the principle is expected to lead to identification and implementation of cost-effective energy-efficient solutions, while achieving the intended objectives.

- (12) Application of the principle should support investments contributing to environmental objectives listed in the Taxonomy Regulation⁸. This means that energy-efficient solutions considered under the EE1st principle should meet environmentally sustainable investment criteria at all stages of the energy value chain.
- (13) The application of the principle is without prejudice to the obligations of Member States under the Renewable Energy Directive⁹. By looking at primary energy efficiencies the EE1st principle also supports deployment of sources of renewable energy and their efficient integration in the energy system. There are also significant synergies between investments in energy efficiency and renewable heating and cooling solutions.
- (14) Research and innovation is recognised as a key enabler to create and exploit new synergies in the energy system: relying on clean and innovative processes and tools, the path towards system integration will also trigger new investments, jobs and growth, and strengthen EU industrial leadership at a global level, thus also facilitating achieving climate neutrality in emerging countries. The application of the EE1st principle shall be in line with and support the implementation of innovative solutions to societal problems. The ‘innovation principle’ is a tool to help achieve EU policy objectives by ensuring that legislation is designed in a way that creates the best possible conditions for innovation to flourish¹⁰ and should be applied in conjunction with the EE1st principle, where relevant.
- (15) The principle complements the Circular Economy Action Plan¹¹. Designing products and infrastructures for longer lifetimes, or re-using and recycling raw materials, leads to lower energy consumption and GHG emissions along the life-cycle of products and infrastructures. Applying circularity principles to building renovation can lead to significant co-benefits in terms of energy and resource efficiency, decarbonisation and depollution.
- (16) Regardless of whether the energy efficiency-related action is taken, careful assessment of energy-efficient solutions should always be demonstrated. Reducing the full potential of implementing energy efficiency as an option should be justified. The risk of not applying the EE1st principle is to commit to more expensive solutions, with more negative externalities. In particular, when energy demand is overestimated, investments can lead to underused capacity and stranded assets.

⁸ Regulation (EU) 2020/852 on the establishment of a framework to facilitate sustainable investment, OJ L 198, 22.6.2020, p. 13–43

⁹ Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources, OJ L 328, 21.12.2018, p. 82–209

¹⁰ https://ec.europa.eu/info/research-and-innovation/law-and-regulations/innovation-friendly-legislation_en

¹¹ Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions – new Circular Economy Action Plan For a cleaner and more competitive Europe COM(2020) 98 final

- (17) A major driver for the EE1st principle are undistorted prices for energy commodities and transportation, internalising to fullest possible extent the environmental and climate costs of energy alternatives.
- (18) The principle applies to planning, policy and investment decisions having impact on energy consumption and energy supply. It is relevant for various decisions, in different sectors, taken by policy makers, regulators, public and private companies or investors. Policy makers and regulators have also a particular role to play in supporting and enabling the proper application of the principle.
- (19) The application of the principle will have positive impact on addressing energy poverty. Energy efficiency improvements can reduce energy bills and have the most significant positive impacts on health and comfort in low-income households.
- (20) The level of efforts needed to properly apply the EE1st principle in a decision making process, in particular to identify and analyse energy efficiency options, depends primarily on the context of the decision and significance of the impacts on energy consumption.
- (21) The application of the EE1st principle should be based on evidence, which requires proper verification, monitoring and evaluation of impacts, in particular on energy consumption, of the decisions taken. This also requires detailed and correct information and data. In many cases, energy related information is not available for taking better informed decisions. Appropriate resources should be devoted to data collection and compilation of statistics, which should be available to relevant entities. Decisions should also be assessed in view of future technological developments and should encourage innovations that help realise the EU's environmental, social and economic objectives.
- (22) More targeted manuals at national, local and sectoral level could complement the recommended guidelines. They should be adapted to regional climate and social contexts.¹² The Commission might issue more detailed and specific recommendations in the coming years.
- (23) The Guidelines aim at supporting Member States in applying the EE1st principle in various decision making processes related not only to energy systems, but also to other sectors where energy consumption could be affected. It provides various clarifications and recommendations for practical solutions that should help make the principle more operational. More specific guidance per sector might be subsequently developed, if needed.

HEREBY RECOMMENDS MEMBER STATES TO:

- (1) Ensure that the energy efficiency first principle is applied in policy, planning and investment decisions at various decision making levels, when energy demand or supply is affected. The principle needs to be applied in a proportional way depending on the context, objectives and impacts of the decision concerned. Existing modalities for applying the energy efficiency first principle should be given priority and should not be duplicated.

¹² In particular to the EU outermost regions specificities as recognised in the Treaty on the Functioning of the European Union (Article 349 TFEU), which provides for specific measures to support these regions (Guadeloupe, French Guiana, Martinique and Saint-Martin, Réunion and Mayotte, the Canary Islands, the Azores and Madeira), including tailored conditions for the application of EU law in these regions.

- (2) Treat the energy efficiency first principle as an overarching principle to be applied in a wider policy context, rather than an ultimate goal to reduce energy consumption. The principle shall be applied in conjunction and compliance with other policy objectives. Even if other policy objectives prevail, it shall not be disqualified by default.
- (3) Take a system approach when applying the energy efficiency first principle while paying attention to security of supply and the transition to climate neutrality. Assess cost-effectiveness and wider benefits of energy efficiency measures from a societal perspective when making strategic decisions, designing regulatory frameworks and planning future investment schemes. Demand side resources and flexibility shall be considered as part of energy efficiency solutions from a system efficiency perspective. At asset level the principle shall lead to the selection of energy-efficient solutions, whenever they also represent a cost-effective decarbonisation pathway.
- (4) Ensure that the application of the energy efficiency first principle is verified by the relevant entities in those cases where policy, planning and investment decisions are subject to approval and monitoring requirements. Identify and define competences of these relevant entities and set modalities for monitoring the impacts of policy and investment decisions on energy consumption. If needed and without duplicating existing assessments, establish new additional verification procedures for projects that are likely to have significant impacts on energy demand or supply by virtue, in particular of their nature, size or location.
- (5) Provide the framework conditions that enable the application of the principle and remove barriers to the energy efficiency first principle in all relevant policy areas and sectors. The application of the principle shall be accompanied by adequate incentives and measures addressing distributional impacts and ensuring that societal benefits are maximised.
- (6) Provide information, guidance and assistance to relevant entities, in particular at local level, on how the energy efficiency first principle should be applied. In this context, if there is no system in place ensuring application of the principle, the relevant national regulatory authority shall develop, provide and promote the application of a cost-benefit assessment methodology that would allow estimating energy savings co-benefits. The methodology should be adapted and applicable to energy related sectors, in particular energy generation, transformation, transmission and distribution (in line with Article 15 of the Energy Efficiency Directive), and energy using sectors, such as buildings, industry, transport, Information and Communications Technology (ICT) services and agriculture. The assessment should take into account the future impacts of climate change on the energy system, including on the energy efficiency solutions themselves. The methodology shall be made public and available to all relevant entities.
- (7) Ensure sufficient resources are allocated for data collections, compilation of statistics and monitoring developments in energy efficiency. All statistics that relates to monitoring of the progress of energy efficiency shall be made public and available to all relevant entities with respect to principles of statistical confidentiality.

- (8) Follow and promote the guidelines provided in the Annex to this Recommendation, when applying the energy efficiency first principle.

Done at Brussels, 28.9.2021

For the Commission

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