

## EVOLUTION AND LEGAL STATUS OF THE ENERGY EFFICIENCY FIRST PRINCIPLE IN EUROPEAN UNION LAW

**Rafał CIEŚLAK**

Assistant Professor, University of Warsaw, Poland  
Faculty of Law and Administration  
e-mail: [rcieslak@uw.edu.pl](mailto:rcieslak@uw.edu.pl)

### **Abstract**

The Energy Efficiency First (EE1) principle has emerged as one of the most interesting concepts in contemporary European Union energy and climate policy. Initially developed as a policy objective within the Energy Union framework, EE1 has gradually evolved into a legally recognized governance principle requiring policymakers and public authorities to systematically assess energy-efficiency solutions alongside traditional supply-side alternatives. This evolution reflects a broader transformation in European energy governance, characterized by a shift from infrastructure-centered approaches towards demand-side optimization and integrated energy-system planning.

This article examines the legal evolution and legal status of the Energy Efficiency First principle within the European Union legal order. It demonstrates that EE1 has evolved from a political concept into a legally recognized governance principle through its codification in Regulation (EU) 2018/1999 and its subsequent operationalization in Directive (EU) 2023/1791 on energy efficiency.

Particular attention is devoted to the legal nature of EE1 and its relationship with broader principles of EU law, including environmental integration, sustainable development, proportionality and good administration. The article concludes that EE1 should be understood as a principle of optimization that increasingly shapes energy-related decision-making throughout the European Union and is becoming embedded within the broader constitutional framework of European energy governance. The article also identifies selected implementation challenges, including methodological uncertainty, administrative discretion, monitoring obligations and the emerging role of national regulatory authorities.

**Keywords:** *Energy Efficiency First; Energy Efficiency; EU Energy Law; Sustainable Development*

## 1. Introduction

Energy efficiency occupies a central position in contemporary European energy and climate policy. Over the last two decades, it has evolved from a relatively narrow policy objective concerned primarily with reducing energy consumption into one of the principal instruments supporting decarbonisation, energy security and economic competitiveness. The International Energy Agency has repeatedly characterised energy efficiency as the world's "first fuel", emphasising that doing more with less energy is fundamental to boost energy security. Energy efficiency is a key pillar to achieve emissions reduction goals and to support increased electrification of end-uses. It is a cost-effective strategy to enhance near- and long-term energy security at local, national and regional levels<sup>1</sup>.

Traditional energy policy was largely based on the assumption that growing energy demand required corresponding increases in energy supply. Consequently, policy discussions focused primarily on generation capacity, fuel diversification and network expansion. Contemporary approaches increasingly challenge this assumption. Energy demand is no longer viewed as a fixed parameter but as a variable that can be influenced through technological innovation, behavioral change, energy management and improvements in energy efficiency<sup>2</sup>. Within the European Union, this shift has been particularly visible since the adoption of the Energy Union Strategy in 2015. The Strategy explicitly recognized energy efficiency as a strategic resource and introduced the idea that efficiency improvements should be considered before investments in new energy infrastructure<sup>3</sup>. This approach subsequently developed into what is now known as the Energy Efficiency First (EE1) principle. The EE1 principle occupies an increasingly important position within the European Union's efforts to achieve climate neutrality by 2050. The European Green Deal, the European Climate Law and the recast Energy Efficiency Directive<sup>4</sup> all recognize that significant reductions in energy demand are indispensable if the EU is to achieve its decarbonisation objectives in a cost-effective manner.

---

<sup>1</sup> International Energy Agency. (2021). Security of Clean Energy Transitions, p. 13. Retrieved from <https://iea.blob.core.windows.net/assets/f29e5cf4-bdef-44ac-a3a3-7a685f1fd560/G20SecurityofCleanEnergyTransitions.pdf>.

<sup>2</sup> International Energy Agency. (2022). Energy Efficiency. Retrieved from <https://iea.blob.core.windows.net/assets/7741739e-8e7f-4afa-a77f-49dadd51cb52/EnergyEfficiency2022.pdf>.

<sup>3</sup> European Commission. A Framework Strategy for a Resilient Energy Union with a Forward-Looking Climate Change Policy. COM(2015) 80 final.

<sup>4</sup> Regulation (EU) 2021/1119 of the European Parliament and of the Council of 30 June 2021 establishing the framework for achieving climate neutrality [2021] OJ L243/1; Directive (EU) 2023/1791 of the European Parliament and of the Council of 13 September 2023 on energy efficiency [2023] OJ L231/1.

Despite the growing practical significance of EE1, legal scholarship remains relatively underdeveloped. Existing literature has primarily focused on policy analysis, economic evaluation and implementation methodologies. Significant contributions have been made by Mandel, Rosenow, von Malmborg, and others concerning the conceptual development and practical application of the principle<sup>5</sup>. However, comparatively little attention has been devoted to the legal nature of EE1 and its relationship with general principles of European Union law. These issues have become increasingly important following the incorporation of EE1 into binding European Union legislation: while Regulation (EU) 2018/1999 introduced the first legally binding definition of the principle, Directive (EU) 2023/1791 significantly strengthened its operational significance by imposing procedural obligations concerning planning, policymaking and investment decisions<sup>6</sup>.

This article seeks to contribute to the emerging legal scholarship concerning EE1 by analysing the evolution of EE1 within European Union law, tracing its development from early energy-efficiency policies to its codification in contemporary legislative instruments and by investigating the legal status of EE1 and evaluating its relationship with general principles of European Union law. In addition, in response to the growing practical significance of the principle, the article briefly examines selected challenges associated with its implementation by Member States and public authorities, including methodological difficulties, administrative discretion and monitoring mechanisms under Directive (EU) 2023/1791. The paper employs a doctrinal legal methodology supplemented by elements of policy and governance analysis. Primary attention is devoted to European Union legislation, official documents and academic literature.

## **2. Evolution of the Energy Efficiency First principle in European Union Law**

### **2.1. From Energy Efficiency to Energy Efficiency First**

Although the Energy Efficiency First principle is frequently presented as a relatively new issue, its regulatory origins can be traced to earlier stages of European energy policy. It should be emphasized that EE1 did not emerge suddenly through a

---

<sup>5</sup> Tim Dominik Mandel. The Energy Efficiency First Principle in European Energy and Climate Policy (PhD thesis, Utrecht University). (2024); Fredrik von Malmborg. First and Last and Always: Politics of the Energy Efficiency First Principle in EU Climate and Energy Policy. *Energy Research & Social Science* (101/2023); Jan Rosenow et al. Assessing the European Union's Energy Efficiency Policy: Will the Winter Package Deliver on Efficiency First? *Energy Research & Social Science* (26/2017).

<sup>6</sup> 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 [2018] OJ L328/1, art 2(18); Directive (EU) 2023/1791, Article 3.

single legislative act. Rather, it evolved gradually as the European Union's understanding of energy efficiency changed from viewing efficiency as a supplementary policy objective to recognising it as a strategic resource capable of contributing simultaneously to energy security, economic competitiveness and climate protection.

The first generation of European energy-efficiency legislation focused primarily on promoting reductions in energy consumption. These measures reflected growing concerns regarding energy dependence, environmental degradation and the economic costs associated with increasing energy demand. Nevertheless, energy efficiency remained largely subordinate to broader supply-side energy planning. While Member States were encouraged to improve efficiency performance, energy demand itself continued to be treated as an external variable requiring accommodation through additional infrastructure investments.

An important milestone was Directive 2006/32/EC on energy end-use efficiency and energy services<sup>7</sup>. The Directive established a common framework for promoting energy efficiency and introduced indicative national energy-saving targets. It also encouraged the development of energy services and recognised the importance of market mechanisms capable of delivering energy savings. However, the Directive did not fundamentally alter the logic of energy governance. Energy efficiency remained primarily an instrument for reducing energy consumption rather than a principle guiding investment and planning decisions. Public authorities were encouraged to promote efficiency, but they were not required to systematically assess efficiency alternatives before investing in supply-side infrastructure.

A more significant development occurred with the adoption of Directive 2012/27/EU on energy efficiency<sup>8</sup>. This instrument consolidated several earlier legislative initiatives and introduced a much more ambitious framework for improving energy efficiency across the European Union. The Directive established obligations concerning energy savings, public procurement, energy audits and the renovation of public buildings. It also reflected a growing recognition that energy efficiency could contribute to a broad range of policy objectives extending beyond environmental protection. Despite these advances, the 2012 Directive still did not establish a clear hierarchy between demand-side and supply-side solutions. Energy efficiency was promoted extensively, but it was not yet treated as a mandatory consideration within strategic planning and investment processes.

The emergence of the Energy Efficiency First principle should therefore be understood as a response to perceived shortcomings in earlier energy-efficiency policies. Policymakers increasingly recognised that efficiency measures were often overlooked despite offering lower-cost and lower-risk alternatives to conventional

---

<sup>7</sup> Directive 2006/32/EC of the European Parliament and of the Council of 5 April 2006 on energy end-use efficiency and energy services [2006] OJ L114/64.

<sup>8</sup> Directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency [2012] OJ L315/1.

infrastructure investments. Consequently, these policy efforts for energy supply have been largely indifferent to the integration of energy efficiency solutions<sup>9</sup>.

## **2.2. The Energy Union Strategy and the Clean Energy for All Package**

The decisive political breakthrough for the Energy Efficiency First principle occurred within the framework of the Energy Union Strategy adopted by the European Commission in 2015<sup>10</sup>. The Energy Union emerged in response to several interrelated challenges confronting the European Union, including growing dependence on imported energy resources, increasing geopolitical uncertainty, the need to accelerate decarbonisation and persistent fragmentation of European energy markets. The Commission sought to address these challenges through a comprehensive strategy structured around five dimensions: energy security, the internal energy market, energy efficiency, decarbonisation and innovation.

Within this framework, energy efficiency occupied a particularly important position. For the first time, the European Commission explicitly described energy efficiency as an energy source in its own right and argued that efficiency improvements should be treated as equivalent to investments in energy production. The Commission argued that improved energy efficiency will reduce dependence on energy imports, lower emissions, and drive jobs and growth<sup>11</sup>. This conceptual shift represented a fundamental departure from traditional energy-policy thinking. Rather than focusing primarily on increasing energy supply, the Energy Union Strategy recognized that reducing demand could often constitute a more effective means of achieving energy-policy objectives. The Strategy also introduced language that would later become central to the development of EE1. The Commission argued that energy efficiency should be considered first in planning and investment decisions because efficiency measures frequently offer lower costs, lower environmental impacts and shorter implementation periods than supply-side alternatives.

The next major stage in the evolution of EE1 occurred through the “Clean Energy for All Europeans” package presented by the European Commission in 2016<sup>12</sup>. The package constituted one of the most ambitious legislative initiatives in the history of European energy policy. Its objective was to modernize the European energy system while simultaneously advancing climate objectives, improving competitiveness and strengthening consumer participation. Within this broader reform agenda, the Energy Efficiency First principle assumed a central role. Importantly, the Clean Energy Package moved beyond political declarations and began translating EE1 into concrete governance mechanisms. Legislative proposals

---

<sup>9</sup> See Mandel, p. 22.

<sup>10</sup> European Commission. A Framework Strategy for a Resilient Energy Union with a Forward-Looking Climate Change Policy. COM(2015) 80 final.

<sup>11</sup> See [https://energy.ec.europa.eu/strategy/energy-union\\_en#ref-5-dimensions-of-the-energy-union](https://energy.ec.europa.eu/strategy/energy-union_en#ref-5-dimensions-of-the-energy-union).

<sup>12</sup> European Commission. Clean Energy for All Europeans. COM(2016) 860 final.

increasingly required Member States and market actors to assess demand-side solutions alongside traditional supply-side investments. The package also reflected an increasingly sophisticated understanding of energy systems. Rather than focusing exclusively on end-use efficiency, policymakers recognized the importance of demand response, system flexibility, digitalization and integrated energy-system management. At this stage, however, EE1 still lacked a clear legal definition and remained primarily a governance objective rather than a legal norm.

### **2.3. Legal Codification of EE1**

The legal codification of the Energy Efficiency First principle occurred through Regulation (EU) 2018/1999 on the Governance of the Energy Union and Climate Action<sup>13</sup>. The significance of this development cannot be overstated. As it was stated before, prior to the adoption of the Governance Regulation, EE1 existed primarily as a policy concept. Following its incorporation into binding legislation, the principle acquired formal legal recognition within the European Union legal order.

Article 2(18) of the Regulation provides the first legally binding definition of EE1: ““energy efficiency first” means taking utmost account in energy planning, and in policy and investment decisions, of alternative cost-efficient energy efficiency measures to make energy demand and energy supply more efficient, in particular by means of cost-effective end-use energy savings, demand response initiatives and more efficient conversion, transmission and distribution of energy, whilst still achieving the objectives of those decisions”.

Several elements of this definition merit particular attention. First, the principle is not confined to traditional energy-efficiency measures. The definition explicitly includes demand response, efficient conversion technologies and improvements in transmission and distribution systems. Second, EE1 applies not only to investment decisions but also to planning and policymaking processes. Consequently, its scope extends across multiple stages of governance. Third, the definition does not require efficiency solutions to be selected in every case. Instead, it requires decision-makers to take “utmost account” of such alternatives. This language suggests an obligation of consideration and assessment rather than an absolute obligation of prioritization. The Governance Regulation further strengthened the principle through Article 3(3)(b), which requires Member States to apply EE1 when preparing National Energy and Climate Plans (NECPs). The inclusion of EE1 within the Governance Regulation therefore marked a decisive transition from political aspiration to legal obligation. Moreover, with the Governance Regulation energy demand and demand-side response entered the agenda of energy efficiency policy<sup>14</sup>.

---

<sup>13</sup> Regulation (EU) 2018/1999 on the Governance of the Energy Union and Climate Action, OJ L 328, 21.12.2018, pp. 1-77.

<sup>14</sup> Von Malborg, p. 7.

#### **2.4. From Definition to Methodology**

Although the Governance Regulation established the legal definition of EE1, considerable uncertainty remained regarding its practical implementation. Questions persisted concerning how public authorities should apply the principle in planning, regulatory and investment decisions. The European Commission sought to address these challenges through Commission Recommendation (EU) 2021/1749 on Energy Efficiency First: from Principles to Practice<sup>15</sup>. The title of the Recommendation accurately reflects its primary objective. Rather than redefining EE1, the Commission sought to transform a relatively abstract governance principle into a practical methodology capable of guiding decision-making processes.

The Recommendation is particularly important because it articulates a structured approach to implementing EE1. According to the Commission, application of the principle requires decision-makers to: define policy objectives, identify efficiency alternatives, assess lifecycle costs and benefits, evaluate wider societal impacts, compare alternative solutions and document the decision-making process transparently.

The Recommendation also broadened the understanding of EE1 by emphasizing that efficiency should be considered not only within energy policy but also across transport, industry, buildings, digital infrastructure and financial decision-making. Another important contribution lies in its emphasis on societal cost-benefit analysis<sup>16</sup>. The Commission explicitly recognized that traditional financial evaluations often underestimate the benefits of energy-efficiency measures because they fail to account for externalities, public-health benefits, climate impacts and broader economic effects. The Recommendation therefore represents the most important interpretative document concerning the practical meaning and application of EE1.

#### **2.5. Step Towards Operationalization of EE1**

The most important stage in the legal evolution of the Energy Efficiency First principle occurred with the adoption of Directive (EU) 2023/1791 on energy efficiency<sup>17</sup>. The recast Directive transformed EE1 from a governance concept into a significantly more operational legal principle. Unlike earlier legislative instruments, the Directive imposes concrete procedural obligations requiring Member States to integrate EE1 into planning, investment and policymaking processes.

---

<sup>15</sup> Commission Recommendation (EU) 2021/1749 of 28 September 2021 on Energy Efficiency First: from principles to practice - Guidelines and examples for its implementation in decision-making in the energy sector and beyond, OJ L 350, 4.10.2021, pp. 9–59.

<sup>16</sup> Commission Recommendation (EU) 2021/1749, p. 30.

<sup>17</sup> Directive (EU) 2023/1791 of the European Parliament and of the Council of 13 September 2023 on energy efficiency, OJ L231, p. 1.

Particularly important is Article 3(1), which requires Member States to ensure that energy-efficiency solutions are assessed in planning, policy and major investment decisions exceeding specified financial thresholds - of a value of more than EUR 100 000 000 each or EUR 175 000 000 for transport infrastructure projects, relating to the sector of energy systems, and non-energy sectors, where those sectors have an impact on energy consumption and energy efficiency such as buildings, transport, water, information and communications technology (ICT), agriculture and financial sectors.

This provision is significant for several reasons. First, it extends EE1 beyond traditional energy policy and applies the principle to both energy and non-energy sectors. Second, it requires the use of methodologies capable of assessing wider societal benefits, including climate impacts, security of supply, sustainability and resource efficiency. Third, it introduces monitoring and reporting obligations designed to ensure accountability in the implementation of EE1<sup>18</sup>.

The recast Directive may be seen as a culmination of a process that began with early energy-efficiency legislation, continued through the Energy Union Strategy and the Clean Energy Package, and ultimately resulted in the creation of a legally operational governance principle. However, as von Malborg observes, it is not sufficiently clear what is meant by energy efficiency in the EE1 principle. It is a means to reach the EU headline energy savings target by 2030, as well as to improve energy efficiency in projects, companies, municipalities, city planning and sectors. Thus, it links to several of the perspectives making the way it should be measured ambiguous<sup>19</sup>. Perhaps for this reason, research carried out by Marc Ringel has shown that the 'Energy Efficiency First' principle is not regarded by stakeholders as crucial to achieving the Directive's objectives<sup>20</sup>. In spite of this, we can assume that the Directive provisions on EE1 mark the current endpoint of the principle's legal evolution and provide the foundation for analyzing its legal status within the European Union legal order.

### **3. Legal Status of the Energy Efficiency First principle**

#### **3.1. Rules and Principles in EU Law**

The legal significance of the Energy Efficiency First principle ultimately depends on its position within the normative structure of European Union law. The distinction between rules and principles has occupied a central position in modern

---

<sup>18</sup> See Article 3(5).

<sup>19</sup> See von Malborg, p. 8.

<sup>20</sup> Marc Ringel (2025). Is the updated Energy Efficiency Directive fit for purpose? A critical assessment based on replies from European stakeholders. *Energy Research & Social Science* (127/2025), p. 6.

legal theory. Ronald Dworkin<sup>21</sup> famously argued that legal systems contain both rules and principles, but that these categories differ fundamentally in their structure and operation. Rules generally apply in an all-or-nothing manner: if the conditions of a rule are satisfied, the prescribed legal consequence follows. Principles operate differently. They possess a dimension of weight and may compete with other principles within a particular factual context. This distinction was subsequently refined by Robert Alexy, whose theory of constitutional rights remains one of the most influential accounts of legal principles in contemporary jurisprudence. According to Alexy, principles should be understood as optimization requirements. They require that a particular objective be realized to the greatest extent possible, taking into account legal and factual constraints. Rules, by contrast, prescribe definitive legal consequences and do not permit balancing in the same manner<sup>22</sup>.

These findings have been widely adopted in European legal scholarship. Tridimas notes that principles perform particularly important functions within EU law because they: serve to fill the lacunae of written law (i), promote a systematic, teleological and consistent interpretation rationalizing polynomy and ensuring coherence (ii), serve to promote the development of a *jus communae* even in areas which hitherto have been largely untouched by EU law (iii)<sup>23</sup>. Additionally, rules and principles should also be distinguished from policy objectives, which generally identify desired outcomes rather than imposing specific normative requirements. They may guide legislative activity and influence policy development, but they do not necessarily generate legal obligations.

This distinction is especially relevant for the Energy Efficiency First principle. During its early development, EE1 was often described as a policy objective associated with the Energy Union and the Clean Energy Package. Such a characterization was understandable because the principle initially appeared primarily in communications and political documents rather than binding legal instruments.

However, the subsequent incorporation of EE1 into aforementioned Regulation (EU) 2018/1999 and Directive (EU) 2023/1791 fundamentally altered its legal status. Once embedded within binding legislation, the principle acquired normative significance that extends beyond the realm of political aspiration. The question therefore becomes whether EE1 should now be regarded as a legal principle and, if so, what type of principle it represents.

---

<sup>21</sup> Ronald Dworkin (1977). *Taking Rights Seriously*. (Harvard University Press 1977), pp. 23-30.

<sup>22</sup> Robert Alexy (2002). *A Theory of Constitutional Rights* (Oxford University Press), pp. 44-48.

<sup>23</sup> See Takis Tridimas. *Review of European Administrative Law (REALaw)* (2/2020). Retrieved from <https://www.uitgeverijparis.nl/en/reader/207197/1001497668>.

### **3.2. EE1 as a Principle of Optimization**

Among the available theoretical frameworks, it seems that Alexy's theory of optimization offers the most persuasive explanation of the legal nature of EE1. At first glance, one might assume that EE1 establishes a simple hierarchy according to which efficiency measures must always be preferred to alternative solutions. However, such an interpretation would be inconsistent with both the wording and the logic of the relevant legislative provisions.

The definition contained in Article 2(18) of Regulation (EU) 2018/1999 requires decision-makers to take "utmost account" of alternative cost-efficient energy-efficiency measures. Similarly, Article 3 of Directive (EU) 2023/1791 requires Member States to ensure that efficiency solutions are assessed in planning, policy and major investment decisions. Neither provision requires efficiency measures to be selected automatically. This distinction is crucial. The legislation imposes an obligation of assessment and consideration rather than an obligation of unconditional prioritization. Energy-efficiency measures may ultimately prove inappropriate where they are technically infeasible, economically disproportionate or incapable of achieving the objectives pursued by public authorities. Consequently, EE1 does not establish a rigid hierarchy between demand-side and supply-side solutions. Instead, it requires decision-makers to identify, assess and compare alternative options before selecting the most appropriate solution.

This structure closely resembles Alexy's concept of optimization principles. EE1 requires energy-efficiency objectives to be realized to the greatest extent possible within the limits imposed by competing considerations. Such considerations may include security of supply, reliability, affordability, technological feasibility and broader public-interest objectives. Mandel reaches a similar conclusion in his analysis of EE1. He argues that the principle constitutes a decision-making framework requiring decision-makers to thoughtfully consider demand-side resources as an alternative to supply-side resources prior to investment decisions<sup>24</sup>. This interpretation is reinforced by Commission Recommendation (EU) 2021/1749. The Recommendation repeatedly emphasizes comparison, lifecycle assessment and societal cost-benefit analysis rather than automatic prioritization of efficiency measures<sup>25</sup>. The Commission's approach therefore confirms that EE1 operates through optimization rather than hierarchy.

Understanding EE1 as a principle of optimization also explains its growing relevance within contemporary energy governance. Decarbonisation, electrification and energy-system integration frequently require balancing multiple objectives that may occasionally point in different directions. A rigid rule would be poorly suited to such circumstances. By contrast, an optimization principle provides flexibility while simultaneously ensuring that efficiency considerations receive appropriate attention.

---

<sup>24</sup> Mandel, p. 163.

<sup>25</sup> See pp. 17-19.

For these reasons, EE1 should be understood as a principle of optimization rather than a substantive rule prescribing predetermined outcomes.

### **3.3. Relationship with Principles of EU Law**

The legal significance of EE1 becomes clearer when examined in the context of certain principles of European Union law. Although the principle possesses its characteristics, it does not operate in isolation. Rather, it forms part of a broader normative framework governing sustainable development, environmental protection and evidence-based decision-making.

#### ***Environmental Integration***

The strongest connection exists between EE1 and the principle of environmental integration enshrined in Article 11 TFEU<sup>26</sup>. According to Article 11, environmental protection requirements must be integrated into the definition and implementation of Union policies and activities, particularly with a view to promoting sustainable development. The provision reflects the recognition that environmental concerns cannot be confined to a single policy sector but must influence decision-making throughout the legal system. EE1 performs precisely this function within energy governance. Rather than treating energy efficiency as an isolated environmental objective, the principle requires efficiency considerations to be integrated into planning, regulation and investment decisions. The relationship between EE1 and environmental integration is particularly evident in Directive (EU) 2023/1791, which requires decision-makers to evaluate energy-efficiency solutions not only from a financial perspective but also with regard to environmental impacts, climate neutrality, resource efficiency and sustainability<sup>27</sup>. Several scholars have argued that environmental integration has evolved from a programmatic objective into a substantive governance principle<sup>28</sup>. EE1 may therefore be viewed as a sector-specific manifestation of this broader constitutional commitment.

#### ***Sustainable Development***

EE1 also exhibits a close relationship with the principle of sustainable development. Article 3(3) of the Treaty on European Union<sup>29</sup> establishes sustainable development as one of the fundamental objectives of the European Union. Sustainable development requires reconciliation between economic growth, social

---

<sup>26</sup> Consolidated version of the Treaty on the Functioning of the European Union [2016], OJ C202/47.

<sup>27</sup> See Article 3(5).

<sup>28</sup> Vasiliki Karageorgou. The Environmental Integration Principle in EU Law: Normative Content and Functions also in Light of New Developments, such as the European Green Deal. *European Papers – A Journal of Law and Integration* (8/2023).

<sup>29</sup> Consolidated version of the Treaty on European Union [2016], OJ C202/1.

welfare and environmental protection. The Energy Efficiency First principle contributes directly to this objective. By promoting solutions capable of delivering equivalent energy services at lower economic and environmental cost, EE1 advances all three dimensions of sustainability simultaneously. This connection is reflected throughout the legislative framework governing EE1. Recitals to the recast Energy Efficiency Directive repeatedly refer to climate neutrality, resource efficiency and sustainable economic development as core objectives supporting the application of the principle. EE1 may therefore be understood as one of the mechanisms through which sustainable development is operationalised within the energy sector.

### ***Proportionality***

A further connection exists between EE1 and the principle of proportionality. The principle of proportionality occupies a central position within European Union law and requires public authorities to adopt measures that are appropriate, necessary and proportionate in relation to their objectives<sup>30</sup>. Although EE1 and proportionality remain distinct concepts, they share important structural similarities. Both principles encourage decision-makers to evaluate alternatives and avoid unnecessarily burdensome solutions. Where energy-efficiency measures are capable of achieving policy objectives at lower cost and with fewer adverse environmental consequences, significant questions may arise regarding the necessity of more resource-intensive alternatives. In this sense, EE1 complements proportionality by providing a framework for identifying less burdensome means of achieving legitimate public objectives.

### ***Good Administration***

Finally, EE1 exhibits a close relationship with the principle of good administration recognized in Article 41 of the Charter of Fundamental Rights of the European Union<sup>31</sup>. Good administration requires decisions to be based on objective assessment, adequate information and transparent reasoning. The procedural obligations associated with EE1 reinforce these requirements by ensuring that decision-makers systematically evaluate available alternatives before committing public resources. The connection is particularly evident in Commission Recommendation (EU) 2021/1749, which emphasises transparency, documentation and evidence-based assessment throughout the decision-making process. Accordingly, EE1 contributes not only to environmental and energy objectives but also to broader principles of sound public administration.

---

<sup>30</sup> See Article 5(4) of the Treaty on European Union.

<sup>31</sup> Charter of Fundamental Rights of the European Union [2016], OJ C202/389.

#### 4. Implementation Challenges

Although the Energy Efficiency First principle has acquired a clear legal basis in European Union secondary legislation, its practical implementation by Member States and public authorities remains complex. The transformation of EE1 from a general governance principle into an operational decision-making standard requires administrative procedures, analytical methodologies and institutional capacities that are not yet fully developed across the EU.

A first challenge concerns methodology. Article 3 of Directive (EU) 2023/1791 requires Member States to ensure that energy-efficiency solutions are assessed in planning, policy and major investment decisions<sup>32</sup>. However, the practical application of this obligation depends on the availability of methodologies capable of comparing demand-side solutions with supply-side investments on a consistent basis. Such comparison is difficult because energy-efficiency measures frequently produce benefits that are not fully captured by conventional financial analysis, including avoided network investments, reduced greenhouse-gas emissions, improved air quality, lower exposure to energy-price volatility, health benefits and energy-security effects<sup>33</sup>. For this reason, Commission Recommendation (EU) 2021/1749 emphasizes lifecycle analysis, societal cost-benefit assessment and the inclusion of wider benefits<sup>33</sup>. Nevertheless, the valuation and monetization of these wider benefits remain methodologically demanding, particularly where data are incomplete or where impacts occur over long periods<sup>34</sup>.

A second challenge concerns the relationship between EE1 and security of supply. The principle does not imply that energy-efficiency measures must always prevail over supply-side investments. Rather, it requires decision-makers to assess whether efficiency solutions can achieve the relevant policy objective more cost-effectively while preserving other legitimate public interests<sup>35</sup>. In practice, public authorities may need to balance energy efficiency against security of supply, system resilience, affordability and technological feasibility. This confirms the character of EE1 as a principle of optimisation rather than as a rigid rule. Thus, it could be assumed that where efficiency alternatives cannot provide the required level of reliability or system adequacy, supply-side infrastructure may remain justified.

---

<sup>32</sup> Directive (EU) 2023/1791, Article 3. The Commission explains that Article 3 requires Member States to ensure that EE1 is respected in planning, policy and investment decisions in energy and non-energy sectors.

<sup>33</sup> See Commission Recommendation (EU) 2021/1749, p. 9-59.

<sup>34</sup> See further the recommendations: Analysis to Support the Implementation of the Energy Efficiency First Principle in Decision-Making. European Commission, 2020, p. 95-102.

<sup>35</sup> Mandel, p. 40-42; Theodoros Zachariadis. Implementing the Energy Efficiency First Principle in revised National Energy and Climate Plans, ODDYSEE-MURE, January 2025, p. 4. Retrieved from: <https://www.odyssee-mure.eu/publications/policy-brief/ee1st-implementation-necps.pdf>

A third challenge concerns administrative discretion. Directive (EU) 2023/1791 leaves Member States considerable discretion in designing national procedures for the application of EE1, where in particular policy makers and regulators have a crucial role to play<sup>36</sup>. This discretion is unavoidable, given the diversity of national energy systems, administrative traditions and investment-planning frameworks. However, it also creates the risk of uneven implementation. The form and depth of implementation are likely to vary between Member States, since EE1 may be incorporated through different sectoral and administrative frameworks, including energy and climate planning, electricity and gas network regulation, buildings policy, district heating and cooling planning, and public investment procedures. Existing comparative work indicates that national implementation remains at an early stage and depends substantially on the availability of country-specific methodologies, institutional arrangements and administrative capacity, which is clearly visible especially in terms of implementation of the National Energy and Climate Plans<sup>37</sup>. The effectiveness of EE1 therefore depends not only on the wording of EU legislation but also on the quality of national transposition, administrative guidance and institutional practice. Emerging national practice suggests that the implementation of EE1 is likely to develop first in areas where planning procedures already exist. Abovementioned National Energy and Climate Plans provide one such example. Under the Regulation (EU) 2018/1999, Member States are required to report on their energy and climate policies, while the recast Energy Efficiency Directive strengthens the role of EE1 in planning and reporting. The European Commission's assessment of National Energy and Climate Plans may become an important instrument for evaluating whether Member States have integrated EE1 into their planning frameworks in a meaningful way<sup>38</sup>. Monitoring and enforcement mechanisms are also central to the practical relevance of EE1. Article 3 of Directive (EU) 2023/1791 requires Member States not only to apply the principle in relevant decisions but also to promote cost-benefit methodologies, monitor the application of the principle and report on its consideration in integrated national energy and climate progress reports.

It is worth mentioning, that at present there appears to be no developed judicial practice of the Court of Justice of the European Union directly interpreting the Energy Efficiency First principle. This absence should not be surprising, given the relatively recent codification and operationalization of EE1. Existing case law concerning proportionality, environmental integration and energy solidarity may nevertheless provide useful interpretative context. In particular, the OPAL judgment

---

<sup>36</sup> Commission Recommendation (EU) 2021/1749, section 3.2.

<sup>37</sup> See for example ENEFIRST. Energy Efficiency First Status (2023). Retrieved from: [https://ieecp.org/wp-content/uploads/2024/04/D2-1\\_ENEFIRSTplus\\_PolicyReview2024.pdf](https://ieecp.org/wp-content/uploads/2024/04/D2-1_ENEFIRSTplus_PolicyReview2024.pdf)

<sup>38</sup> More on National Energy and Climate Plans and their implementation see: [https://energy.ec.europa.eu/strategy/energy-union/national-energy-and-climate-plans\\_en](https://energy.ec.europa.eu/strategy/energy-union/national-energy-and-climate-plans_en)

demonstrates that principles embedded in EU energy law may have legal significance extending beyond purely political declarations<sup>39</sup>. Likewise, the Court’s jurisprudence concerning proportionality and environmental objectives may provide interpretative guidance as EE1 gradually matures as a legal principle<sup>40</sup>. However, until courts or national administrative bodies apply EE1 directly, any conclusions concerning its judicial enforceability should remain cautious.

## 5. Conclusions

The Energy Efficiency First principle has emerged as one of the most important conceptual and normative developments in contemporary European Union energy law. Although its origins can be traced to earlier debates concerning energy efficiency, integrated resource planning and sustainable development, the principle has undergone a remarkable transformation during the last decade. What initially appeared as a policy concept within the Energy Union Strategy has evolved into a legally recognized governance principle capable of influencing planning, policymaking and investment decisions across multiple sectors.

The article has demonstrated that the legal evolution of EE1 within the European Union has been gradual but significant. Early legislative instruments, including Directives 2006/32/EC and 2012/27/EU, promoted energy efficiency without fundamentally altering the structure of energy governance. A decisive shift occurred with the Energy Union Strategy and the Clean Energy for All Europeans Package, which introduced the idea that energy efficiency should be treated as a strategic resource rather than merely as a supporting policy objective. This conceptual development was subsequently translated into law through Regulation (EU) 2018/1999, which provided the first legally binding definition of EE1, and further strengthened through Directive (EU) 2023/1791, which operationalized the principle by introducing concrete procedural obligations relating to planning, policymaking and investment decisions.

Particular attention has been devoted to the legal status of the principle. The article has argued that EE1 could be understood as a principle of optimization as it requires decision-makers to identify, assess and compare efficiency alternatives systematically and to favor them where they provide superior societal outcomes. The article has also highlighted the close relationship between EE1 and several established principles of European Union law, particularly environmental

---

<sup>39</sup> See [https://infocuria.curia.europa.eu/tabs/affair?sort=AFF\\_NUM-DESC&searchTerm=%2522C%252D848%252F19%2522&publishedId=C-848%2F19&lang=EN](https://infocuria.curia.europa.eu/tabs/affair?sort=AFF_NUM-DESC&searchTerm=%2522C%252D848%252F19%2522&publishedId=C-848%2F19&lang=EN)

<sup>40</sup> See eg. [https://infocuria.curia.europa.eu/tabs/affair?sort=AFF\\_NUM-DESC&searchTerm=%2522C%252D379%252F98%2522&publishedId=C-379%2F98](https://infocuria.curia.europa.eu/tabs/affair?sort=AFF_NUM-DESC&searchTerm=%2522C%252D379%252F98%2522&publishedId=C-379%2F98) and [https://infocuria.curia.europa.eu/tabs/affair?lang=EN&sort=AFF\\_NUM-DESC&searchTerm=%2522c%252D343%252F09%2522&publishedId=c-343%2F09](https://infocuria.curia.europa.eu/tabs/affair?lang=EN&sort=AFF_NUM-DESC&searchTerm=%2522c%252D343%252F09%2522&publishedId=c-343%2F09)

integration, sustainable development, proportionality and good administration. These connections reinforce the conclusion that EE1 is becoming increasingly embedded within the broader constitutional framework of European energy governance.

Finally, the article has shown that the growing normative significance of EE1 is accompanied by important implementation challenges, including methodological difficulties in assessing cost-efficient alternatives, the need to balance competing policy objectives, and the development of appropriate monitoring and reporting mechanisms at both Union and national levels. The Energy Efficiency First principle therefore deserves continued scholarly attention not only as an instrument of energy policy but also as a developing component of the European Union legal order.