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European Commission

Annual Activity Report 2024

DIRECTORATE GENERAL FOR ENERGY

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Introductory message by the Director-General

Throughout 2024, the European Commission's Directorate-General for Energy (DG ENER) continued its work to ensure affordable, secure and sustainable energy for Europeans. We prepared the implementation of the new legislative framework for the European energy system while engaging in an extensive reflection process on the policy priorities in view of the upcoming Commission mandate.

In this context, DG ENER prepared analyses and proposals on how to support **competitiveness and sustainable prosperity,** while **staying the course to achieve our climate objectives** and tackling the challenges related to **security aspects**. DG ENER's work was aligned with both the Political Guidelines of the President of the Commission for the term 2024-2029 and the Mission Letter of the new Commissioner for Energy and Housing, and will help to shape the competitiveness and energy agenda of the new mandate.

The challenging geopolitical context, combined with Europe's competitiveness challenge, underscores the importance of a genuine **Energy Union** for the supply of secure, affordable and clean energy to our citizens, businesses and industry. Close cooperation across the European Union is necessary for an efficient and secure energy system at lower cost.

The work of DG ENER through 2024 sets a solid foundation for this continued work to strengthen Europe's energy system and lower energy costs. This Annual Activity Report (AAR) provides a detailed outline of **our achievements in 2024** related to the objectives set in DG Energy's Strategic Plan 2019-2024 and Annual Management Plan 2024. Part 1 sets out our main policy achievements in the past year, and part 2 provides insights on how we reached these and provides information about the management of the allocated resources as well as the internal organisation of the Directorate-General.

For more information on the activities of DG Energy, please visit our website: https://ec.europa.eu/energy/

With thanks to everyone across DG ENER who have contributed to developing a secure, affordable and clean energy system, I wish you an interesting read.

Ditte Juul Jørgensen

DG ENER IN BRIEF

The Directorate-General for Energy (hereafter 'DG ENER' or 'the DG') is responsible for the development and implementation of the **European energy policy**, under the political guidance of Commissioner Dan Jørgensen since the start of the new Commission on 1 December 2024.

As of 31 December 2024, DG ENER had 610 establishment plan staff and 91 external staff (Contract Agents and Seconded National Experts). Four Directorates (A, B, C and TF) are based in Brussels, while another two Directorates (D and E) plus the Euratom Supply Agency (ESA) are based in Luxembourg. DG ENER activities are supported by the 'Shared Resources Directorate' (SRD), shared with and administratively assigned to DG MOVE. In 2024, the SRD had 90 staff, all based in Brussels. The work of the DG is also supported by CINEA, ACER, F4E Joint Undertaking ([1]). As of February 2025, DG ENER has welcomed a new Task Force responsible for **housing policy**.

DG ENER contributes to ensuring sustainable prosperity in Europe with its competitiveness and security-driven approach to decarbonisation. European energy policy will both accelerate Europe's clean and just energy transition to be the first climate-neutral continent by 2050 and make energy secure and affordable for citizens and companies. The DG sets out policies to develop an innovative, resilient and integrated energy system, to deliver affordable, secure, reliable and clean energy to citizens and businesses in line with the Green Deal, the Competitiveness Compass and the Clean Industrial Deal.

The EU primary law concerning the energy sector consists of the Treaty on the Functioning of the European Union (TFEU) and the Treaty establishing the European Atomic Energy Community (EURATOM Treaty). Under Article 194 TFEU, energy is a shared competence between the Union and its Member States. DG ENER works closely with Member States to ensure sustainable prosperity and competitiveness.

EU competitiveness is under pressure in an uncertain global landscape. Persistently high energy prices have an impact on households and industry and retail electricity prices have been at record levels. The growing price gap between the EU and main global competitors remains and demands urgent and strategic action. The Clean Industrial Deal (CID) and the Affordable Energy Action Plan (AEAP) presents an ambitious vision for a genuine Energy Union with a comprehensive set of actions to bring affordable, clean and secure energy to European industry and households.

Nuclear energy is an integral part of the EU energy mix, representing close to a quarter of European electricity generation and the largest source of climate neutral electricity. Nuclear

([1]) Additional details on the functioning of CINEA, ACER and F4E JU as well as the supervisory measures put in place by DG ENER are covered in Annex 7 to the AAR.

energy policy is governed by the EURATOM Treaty, a *lex specialis* in relation to the TFEU, applying to the nuclear energy sector and covering the civil use of nuclear energy. DG ENER develops and monitors the implementation of the Euratom legal framework for the safe use of nuclear energy, the safe and responsible management of radioactive waste and the protection of EU citizens from radiation. The DG ensures that civil nuclear materials are not diverted, and that relevant international agreements are complied with, through the implementation of Euratom safeguards. Finally, the DG contributes to the development of fusion energy technologies through the International Thermonuclear Experimental Reactor (ITER) project.

Expenditure supporting the work of DG ENER in 2024:

- *CEF-Energy programme (implemented by CINEA)*
- *LIFE Clean Energy Transition sub-programme (implemented by CINEA)*
- *Horizon Europe & Horizon 2020 legacy on energy efficiency and societal challenges calls (implemented by CINEA)*
- *European Energy Efficiency Fund (EEEF)*
- Procurements and other operational expenditure (6%)
- Subsidy to ACER (3%)
- Financing the ITER project via F4E JU (66% of total payments in 2024)
- The Nuclear Decommissioning Assistance Programmes (NDAP) (21%)
- Nuclear Energy including the operation of nuclear safeguards (4%)

DG ENER substantially contributed to the preparation of the next Multiannual Financial Framework (MFF), the implementation of InvestEU (as co-chair of the Sustainable Infrastructure Window), and the implementation of the Recovery and Resilience Facility, assessing the energy-related parts of the payment requests and amendments proposed by the Member States to their Recovery and Resilience Plans. In 2024 DG ENER also contributed to preparing the implementation of the Social Climate Fund, namely contributing to the development of specific guidance, one for the preparation of the Social Climate Plans, and another on the application of the 'Do No Significant Harm' principle.

EXECUTIVE SUMMARY

This annual activity report is the management report of the Director-General of DG ENER to the College of Commissioners. Annual activity reports are the main instrument of management accountability within the Commission. They constitute the basis on which the College takes political responsibility for the decisions it takes as well as for the coordinating, executive and management functions it exercises, as laid down in the Treaties ([2]).

A. Key results and progress towards achieving the Commission's general objectives and department's specific objectives

2024 marked the conclusion of a mandate during which the Commission confronted unprecedented developments and challenges, with DG ENER making a significant contribution to the EU response. In particular, as highlighted in the 2024 **State of the Energy Union report** ([3]), the past year saw a series of extraordinary actions aimed at strengthening the policy framework necessary to meet our international commitments and the Union's energy and climate targets, beginning with the finalisation of interinstitutional agreements on the remaining European Green Deal files and their subsequent implementation.

In February 2024, the Commission presented a Communication for a **2040 climate target** for the EU, recommending a **90% reduction in the EU's net greenhouse gas emissions by 2040** compared to 1990 levels. The recommended 2040 climate target is based on the Commission's detailed impact assessment, drawing on DG ENER and DG CLIMA's **modelling work**. The Communication launched a process leading to a proposal for an amendment of the Climate Law.

To identify measures necessary to achieving those ambitious, long-term targets and foster sustainable prosperity and competitiveness, DG ENER performed an internal large-scale and inclusive reflection exercise. This exercise intensified in the first half of 2024, and resulted in a series of proposals, **ENER key priorities**, many of which were included in the Political Guidelines and the Mission Letter to Commission Jørgensen for his 2024-2029 mandate. These include, among others, strengthening the Energy Union, securing supplies of clean and affordable energy, scaling up investment, infrastructure and flexibility and implementing the 2030 framework.

Bridging the ambition gap towards 2030 renewables and energy efficiency targets begins with ensuring effective cooperation between the Commission and Member States, including streamlining reporting and assessment processes. In 2024, DG ENER worked on the evaluation of the **Regulation on the Governance of the Energy Union and Climate Action** published in September 2024, drawing the lessons of the first years of its

([2]) Article 17(1) of the Treaty on European Union.
([3]) COM(2024)404 final

implementation and laying the ground for the work on the impact assessment of the upcoming revision.

In 2024, actions, as described under **Specific Objective 1**, were designed to provide European Citizens with **clean, affordable and secure Energy**.

In this respect, following the agreements on the Green Deal energy files, DG ENER published throughout 2024 a large set of guidance documents to support EU Member States' work in transposing and implementing the revised directive on renewable energy into national law. On 30 July 2024, the Commission launched the second cross-border tender for renewables under the **EU Renewable Energy Financing Mechanism**.

While scaling up renewable energy production is essential to reach our targets, other decarbonisation solutions - such as nuclear, low-carbon fuels and carbon management – are also vital, especially for hard-to-abate sectors,

In 2024, DG ENER achieved significant milestones in this regard. On 6 February, the Commission adopted the **Industrial Carbon Management Strategy**, outlining the role of Carbon Capture and Storage (CCS) and Carbon Capture and Utilisation (CCU) in decarbonizing the EU economy by 2050 and fostering a more attractive investment environment for industrial carbon management technologies. Later, in September 2024, DG ENER launched a 4-week public consultation on the **draft delegated act on low-carbon hydrogen**, well ahead of the legal deadline. **Interconnected and stable energy networks** are essential to deliver clean, affordable and secure energy.

In September 2024, the Commission launched the selection process for the second Union list of **Projects of Common Interest** and **Projects of Mutual Interest** under the revised TEN-E Regulation, which are crucial for the development of **cross-border interconnections** between EU Member States, and between them and non-EU countries. By helping to integrate energy grids across borders, interconnectors are essential for creating a **single European energy market**, as stressed in the Draghi and Letta reports. A new call for proposals under the **Connecting Europe Facility** for energy was launched on 30 April 2024.

The implementation of the **Recovery and Resilience Plans (RRPs)**, including **REPowerEU** chapters which had been analysed by DG ENER, allowed Member States to further implement **reforms and investments that are supporting the clean energy transition** and the REPowerEU objectives. By the end of 2024, all Member States had amended their Recovery and Resilience Plans and had them assessed by the Commission and approved by the Council, 26 of them including also a REPowerEU chapter. Furthermore, DG ENER developed **energy-related Country-Specific Recommendations** for sixteen Member States in the context of the 2024 European Semester cycle, which reflected the strong role played by the energy system in upholding economic competitiveness and resilience.

DG ENER led the drafting of the Impact Assessment on energy related aspects for the preparation of the next **Multiannual Financial Framework (MFF)** in the second half of

2024. The document was discussed with various Commission services and agreed with the Secretariat-General. DG ENER was also involved under the lead of other DGs in the drafting of other ten Impact Assessments on various policy areas. In addition, DG ENER participated at Spending Review of the current programmes of the current MFF 2021-2027 in the first part of the year.

The energy security outlook for 2024 has been shaped by the impending **expiration of the gas transit agreement between Russia and Ukraine on 1 January 2025**, alongside Russia's continued weaponisation of energy. DG ENER organised and chaired a series of meetings in a dedicated regional coordination group to prepare the end of the Ukraine gas transit agreement. Furthermore, DG ENER worked closely with Member States to help ensure that filling trajectories were met and that storage levels reached over 95% as of 1 November. These developments underscored the critical need for enhanced vigilance and robust contingency planning throughout the year. A Working Group on security of supply has also been set up with the UK. DG ENER also launched a fitness check on security of gas and electricity supply, including a public consultation, to prepare a revision of the energy security framework in the coming mandate.

In addition, DG ENER continued to leverage the benefits of **AggregateEU**, which proved its effectiveness once again in 2024. The mid-term round, launched in February 2024, successfully matched supply and demand for the next five years, attracting significant interest, with more than 33 billion cubic meters (bcm) of Europe's demand matched with supply.

In 2024, significant progress was also made in advancing **energy efficiency policies** as shown by the many initiatives listed under **Specific Objective 2.** These were undertaken by DG ENER to support Member States in the transposition and implementation of the **2023 Directive on energy efficiency (recast) – with nine Recommendations and Guidance documents** published in September 2024 ([4]), as well as the **Energy Performance of Buildings Directive (recast)**. Where no other options were available, infringement procedures were launched to ensure that the new obligations were fully incorporated at national level.

The most significant policy achievement in **Research and Innovation**, DG ENER **Specific Objective 3**, was the contribution to the **Net-Zero Industry Act (NZIA)** which entered into force on 29 June 2024. NZIA is a milestone initiative for innovating and scaling up the manufacturing of net-zero technologies in the EU, reinforcing **EU's competitiveness and open strategic autonomy**.

Furthermore, DG ENER launched the **European Industrial Alliance (IA) on Small Modular Reactors (SMRs)**, that can contribute to decarbonising sectors with hard-to-abate emissions such as transport, chemical and steel industry, and district heating.

([4]) Directive (EU) 2023/1791 on energy efficiency.

At the same time, DG ENER worked relentlessly on pursuing **Specific Objective 4** which requires that **all stakeholders are involved** and **a just transition is ensured.** This included, amongst other successful events listed in this chapter, the **Citizens Energy Forum**, that served as the starting point for the development of the Citizens Energy Package, as outlined in Commissioner Jørgensen's Mission Letter.

Finally on **Specific Objective 5** meant to position the **EU as a global energy leader in promoting clean energy**, the Commission worked closely with partners and industry bilaterally and in multilateral settings, such as the International Energy Agency (IEA), the International Renewable Energy Agency (IRENA) and the climate Conference of the Parties (COP29), to ensure secure and transparent global markets and energy transition.

Additionally, DG ENER co-chaired the **UN Secretary-General's Panel on Clean Energy Transition Minerals**, which developed seven principles and five actions addressing global issues of equity, justice, and the protection of human and environmental rights along mineral value chains. In 2024, DG ENER also continued to spearhead the Commission's ongoing engagement with international partners on renewable energy and clean tech development, working on implementing a memorandum of understanding with Tunisia, and successfully undertook negotiations with Saudi Arabia. Policy work continued as in previous years to be supported by external communication actions.

To support those actions, DG ENER developed **external communication and outreach actions**. DG ENER continued working closely with European Commission Representations in the Member States and organised a series of stakeholder dialogues on specific topics, as well as other types of actions, including in cities, responding to the needs emerging from the evolving crisis context. These activities were in line with DG ENER's 2020-2024 Communication strategy.

External Communication Activities

The following actions, delivered in 2024, ensured engagement of citizens and stakeholders in the policy making process and empowered consumers in the energy transition helping the Commission in implementing the specific Energy Objectives:

- **SET Plan Annual Conference** ([5])
- **BRIDGE General Assembly** ([6])
- **Organisation of the European Citizens' Energy Efficiency Panel** ([7])
- **Youth engagement actions**, including the Youth Energy Day at EUSEW and the development of youth engagement strategy launched in the autumn 2024 ([8])
- **Citizens Energy Forum** ([9])
- **DG ENER participation in the Hannover Fair** ([10])
- **EU Sustainable Energy Week** ([11])

([5]) Strategic Energy Technology Plan: Scaling up research, innovation and competitiveness in clean energy technologies - European Commission
([6]) BRIDGE General Assembly 2024 | Bridge
([7]) Energy Efficiency Panel - European Commission
([8]) Youth engagement activities - European Commission
([9]) 16th Citizens' Energy Forum
([10]) EU Energy Day at the Hannover Messe
([11]) Homepage - European Commission

- **European Nuclear Energy Forum (ENEF)** ([12])
- **Annual Political Dialogue on the coal regions in Transition Initiative** ([13])
- **Just Transition Platform meetings (co-organised with DG REGIO)** ([14])

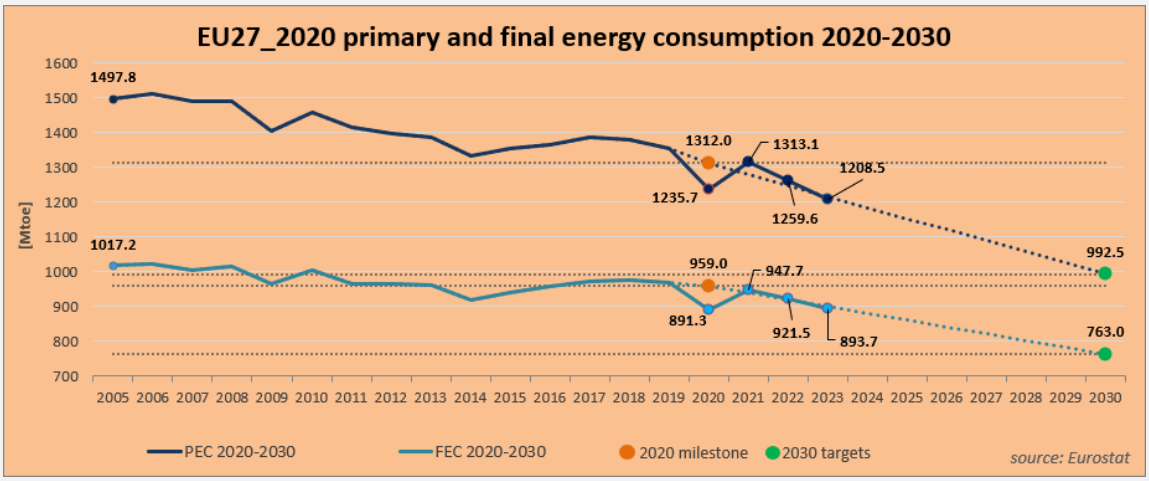
DG ENER organised two press trips in 2024 – to Seville and Brussels/Antwerp - stimulating more than 30 articles about EU energy policy in national newspapers, economy magazines, online media and specialised media, showcasing the links between the projects visited and EU policies. Digital Media is another channel for DG ENER to provide information about the developments on policies, news and events. DG ENER relies on the policy site ([15]) and social media accounts ('X' and Youtube) to reach out to both general and specialised audiences. ENER produced new AV material and sent 11 monthly newsletters. ([16]).

B. Key performance indicators

In line with the Strategic Plan, the following indicators are given special attention:

1. Final Energy Consumption (FEC)

Baseline (2017)	**Interim milestone** (2020)	**Target** (2030)	**Latest known results** (2023)
988 Mtoe ([17]) (for EU27_2020)	959 Mtoe (for EU27_2020) by 2020	846 Mtoe (for EU27_2020) by 2030	893.7 Mtoe



2. Completion of EU Market Coupling

Baseline (2019)	**Interim milestone** (2022)	**Target** (2024)	**Latest known results** (2024)
Market coupling for electricity not	Day-ahead market coupling at all EU borders (inclusion of 11 outstanding	Completion of day-ahead and intraday market	The **single Day-Ahead coupling** covers 25 EU Member States and Norway, with

([12]) 17th European Nuclear Energy Forum
([13]) Annual Political Dialogue – Initiative for coal regions in transition
([14]) Inforegio - Just Transition Platform Conference – 15-17 October 2024
([15]) https://energy.ec.europa.eu/index_en
([16]) https://ec.europa.eu/newsroom/ener/newsletter-archives/view/service/225
([17]) Million Tonnes of Oil Equivalent

completed (notably in Eastern Europe). 20 Member States coupled to the pan-EU day-ahead market; 21 coupled to the pan-EU intraday market.	borders in Single Day Ahead Coupling") by the end of 2022. All Member States with interconnector coupled for day-ahead electricity trading.	coupling at all EU borders. All 25 Member States with interconnectors coupled for day-ahead and intraday trading.	98.6% of EU consumption being coupled (only Malta and Cyprus are not covered). The **Single Intraday market** currently covers 24 EU Member States and Norway (only Malta, Cyprus and Ireland are not covered). In the future, the commissioning of the Celtic interconnector between Ireland and France - planned for 2026 - will allow Ireland to join the Intraday market as well.

3. NECPs ([18]) implement European Green Deal and EU post-2020 energy and climate goals, and thereby contribute to the economic recovery

Baseline (2019)	**Interim milestone** (2023)	**Target** (2024)	**Latest known results** (2024)
Final NECPs detailing existing and additional policies and measures to be implemented in the period 2020-2030.	100% of the policies and measures introduced by MS, reflected in their NECP and Integrated Progress Reports, are in line with the European Green Deal objectives and contribute to the economic recovery.	100% of the policies and measures introduced by MS in their revised NECPs to be submitted by June 2024 are in line with the European Green Deal objectives and contribute to the economic recovery.	**Not all policies and measures** reflected in Member States' (draft) updated NECP fully **reflect the European Green Deal objectives/REPowerEU***. The Commission in its recommendations on draft updated NECPs called on Member States to address shortcomings. Some Member States have scope to increase the ambition of their NECPs, and to better map investment needs towards the achievement of the targets.

** Delay of Member States in submitting final updated NECPs. 9 Member States missing at the end of the year. Infringement procedures and political dialogue has been intensified to ensure submission of all 27.*

4. Estimated risk at closure

Baseline (2019)	**Interim milestone** (2022)	**Target** (2024)	**Latest known results** (2023)
0.1%	< 2% of relevant expenditure	< 2% of relevant expenditure	The estimated overall risk at closure represented 0.27% of the DG's total relevant expenditure for 2024.

C. Key conclusions on internal control and financial management

In 2024, DG ENER managed to maintain a robust degree of control to ensure that its resources were used effectively and efficiently. DG ENER successfully mitigated the risks

([18]) National Energy and Climate Plans.

related to the energy crisis, kept its effort as regards to the control of the cost and schedule of the ITER programme and supported the reform of the ITER Organisation.

DG ENER has systematically examined the available control results and indicators, including those from supervised entities to which it has entrusted budget implementation tasks, as well as the observations and recommendations issued by the internal auditor and the European Court of Auditors. These elements have been assessed to determine their impact on management's assurance about the achievement of the control objectives. Please refer to Section 2 for further details.

In conclusion, management has reasonable assurance that, overall, suitable controls are in place and working as intended; risks are being appropriately monitored and mitigated. Improvements are necessary concerning Internal Control Principle 11. The Director-General, in her capacity as Authorising Officer by Delegation, has signed the Declaration of Assurance.

D. Provision of information to the Commissioner(s)

In the context of the regular meetings during the year between DG ENER and the Commissioner(s) on management matters, the main elements of this report and assurance declaration have been brought to the attention of Commissioner Kadri Simson, responsible for Energy until 30 November 2024, and Commissioner Dan Jørgensen, responsible for Energy and Housing since 1 December 2024.

1. KEY RESULTS AND PROGRESS TOWARDS ACHIEVING THE COMMISSION'S GENERAL OBJECTIVES AND SPECIFIC OBJECTIVES OF THE DEPARTMENT

The strategic vision of DG ENER for the period 2020-2024, and reaffirmed for the 2025-2029 Commission's mandate, was to fully support through its actions, policies and instruments the competitiveness of the European economy, stabler energy supplies and the **European Green Deal** for the European Union (EU) and its citizens. Securing supplies of **clean and affordable energy** will continue to be critical to reach decarbonisation, security and competitiveness.

At the same time, **price volatility** and **increasing energy insecurity** across the world, triggered by Russia's unprovoked and unjustified war of aggression against Ukraine has strongly affected the EU's energy system in the past three years and is reflected in the many political and legislative initiatives undertaken to counterbalance them. While 2022 and 2023 were dedicated to immediate and concrete actions towards the **REPowerEU objectives** — aimed at rapidly reducing the EU's dependence on Russian fossil fuels through energy savings, supply diversification and accelerated deployment of renewables and energy efficiency measures—**2024 shifted focus** to the necessary follow-up and **implementation actions** to ensure continued access to clean, affordable and secure energy, while also **reinforcing the existing framework** required to meet our energy and climate goals.

The sections below detail how DG ENER's work contributed to achieving its five specific objectives and how these contributed to the European Green Deal.

Rationalisation of report obligations	Performance information
In March 2023, the Commission announced the goal to reduce the reporting burden by 25% for companies and administrations, without undermining the policy objectives. To contribute to this objective, DG ENER adopted its rationalisation plan in February 2024, based on in-depth screening of all the reporting and planning obligations of the energy and climate acquis, and interlinkages between reporting in the energy/climate sectors with sustainability reporting obligations in other policy areas, including those resulting from the European Green Deal and the REPowerEU plan. The rationalisation plan includes 14 actions, 5 actions have been completed in 2024, with the rest ongoing.	With a view to implement the criteria for a strengthened common control approach on the reliability of performance information on EU financial programmes, DG ENER has put in place an assurance process based on the EC control framework and the necessary procedures to identify possible significant weaknesses. DG ENER relied on trusted sources such as ESTAT as well as information provided by partner organisations and implementing bodies. It carried out the necessary controls to assess the reliability of the performance information.

Specific Objective 1: Energy is clean, affordable and secure by fostering a decarbonised energy production and use in the EU that contributes to economic recovery and increased climate ambition. It relies on a well-functioning and secure internal energy market, fit for decarbonisation where progress is monitored through the Energy Union Governance.

Clean energy

REPowerEU put the accelerated production of clean energy at the centre of efforts to enhance the EU's energy security to **ensure the decarbonisation of our economy**. At the same time, as the 2024 Draghi report ([19]) shows, producing clean energy and tackling green-house gas emissions is also a **powerful driver of growth**.

The Commission provided extensive support in 2024 to Member States in their transposition of the legal framework for 2030 with particular focus on **implementing the permitting provisions** of the revised Renewable Energy Directive ([20]).

In May 2024, a new 'package' was adopted, including 3 targeted measures to further accelerate the deployment of renewables in the EU

- a **Commission Recommendation and guidance on the design of renewable energy auctions** ([21])
- an updated **Recommendation and guidance on speeding up permit-granting procedures for renewable energy projects** ([22])
- a guidance on **designating renewables acceleration areas** ([23])

To enhance visibility and predictability for the whole value chain, an EU-wide **renewables auctions platform** was launched as part of the package, consolidating information on planned renewable energy auctions in all EU countries.

On **solar**, the Commission supported the competitiveness of the EU solar manufacturing industry, including through the signing of the **European Solar Charter** on 15 April 2024, which sets out voluntary actions to be undertaken by Member States and industry representatives to support the sector.

The Commission published on 5 February 2024 the **Industrial Carbon Management Strategy** ([24]), which presents a comprehensive approach for the EU to scale up carbon management. The strategy identifies a set of actions to be taken, at EU and national level, to

([19]) The Draghi report on EU competitiveness
([20]) Directive (EU) 2023/2413 of the European Parliament and of the Council of 18 October 2023 amending Directive (EU) 2018/2001, Regulation (EU) 2018/1999 and Directive 98/70/EC as regards the promotion of energy from renewable sources, and repealing Council Directive (EU) 2015/652
([21]) Recommendation and guidance on auction design for renewable energy - European Commission
([22]) https://energy.ec.europa.eu/publications/recommendation-and-guidance-speeding-permit-granting-renewable-energy-and-related-infrastructure_en
([23]) Guidance on designating renewables acceleration areas - European Commission
([24]) EU Industrial Carbon Management Strategy

establish a single market for CO2 in Europe and to create a more attractive environment for investments in industrial carbon management technologies.

The **EU Methane Regulation** as well as the package related to the **new rules on the gas and hydrogen internal market** were finalised and adopted in 2024 with the aim to create a regulatory framework for the development of European hydrogen markets and facilitate the uptake of renewable and low-carbon gases in the natural gas network. The first steps towards their implementation were launched shortly after adoption by the co-legislator.

In particular, as regards **hydrogen**, DG ENER prepared– well ahead of the legal deadline – the draft delegated act on **low-carbon hydrogen** and published it for public consultation and closely followed the activities of the relevant stakeholders (network operators and others) and ACER on the setting up of the **European Network of Network Operators for Hydrogen (ENNOH)**. This association will be providing crucial input to the planning of hydrogen infrastructure and to the development of technical and market operation rules.

Numerous technical implementing acts linked to the **bioenergy part** of the Renewable Energy Directive, were also adopted in 2024 and several reports were published under the auspices of the Biomethane Industrial Partnership (BIP).

The Commission continued to make use of the **Connecting Europe Facility (CEF)** focusing specifically on cross-border cooperation to optimise national efforts on the deployment of renewable energy.

Connecting Europe Facility (CEF) – Cross-border Renewable Energy Projects in 2024:

1. The Commission **updated the list of cross-border renewable energy projects**, which now includes eight projects.
2. The Commission **awarded grants** for works and studies for an amount of **67 million euros** following the dedicated call for proposals organised by CINEA.
3. The Commission also launched a **54.4 million euros cross-border tender** under the EU renewable energy financing mechanism which supports cooperation between Member States for the cost-effective achievement of the renewable energy targets.

Interconnected and stable energy networks are the backbone of the EU's internal energy market and key to enable the green transition.

To deliver on the implementation of the **revised TEN-E Regulation** and the **Grids Action Plan**, the Commission adopted **Guidance on collaborative investment frameworks for offshore energy projects** in June 2024.

In June 2024, DG ENER organised the **10th annual Energy Infrastructure Forum** in cooperation with the Danish Ministry of Climate, Energy and Utilities to discuss the challenges of modernising Europe's energy infrastructure to ensure a truly functioning internal energy market. In September 2024, the Commission launched the selection process for the second Union list of **Projects of Common Interest** and **Projects of Mutual Interest** under the revised TEN-E Regulation. The annual call for proposals under the Connecting Europe Facility for Energy (CEF-E) aims to allocate €1.25 billion in EU funds to 41 cross-border energy infrastructure projects.

Affordable energy

Bringing down prices for households and businesses and supporting industries and companies through the transition has been strongly reaffirmed by the new College as being one of the Commission priorities. President Von der Leyen tasked the new Commissioner for Energy to put forward in the first 100 days of the new mandate an **Action Plan for Affordable Energy** as part of the Clean Industrial Deal.

One of the main drivers for reducing energy prices, the reform of the **electricity market design** ([25]), was formally adopted and entered into force in July 2024. The reform addresses and mitigates the impact of high electricity prices on consumers and the economy and strengthens transparency and oversight of energy markets. This will support the **acceleration of the clean energy transition**, by providing more investment certainty, unleashing the benefit of renewables for the consumers and preserving the **affordability of energy system costs**. The Commission followed its adoption and provided support to Member States for its transposition and implementation.

Furthermore, the Commission continued to follow the proper implementation of the Electricity Regulation ([26]) and Directive ([27]) to ensure a **fully integrated electricity market**, integrating all players and allowing electricity to move freely to where it is most needed. **Long term electricity contracts** have been incentivised to promote the deployment of renewable energy sources and to shield electricity consumers against electricity price volatility through new Articles on **power purchase agreements** and **two-way contracts for differences**. The Regulation also introduces a new support scheme to promote non-fossil flexibility.

The Commission continued to work on preparing the review of a specific set of the existing **electricity network codes and guidelines** with a view to update and future proof them to further support the EU power markets and the EU power grid embracing emerging developments. In particular, the Commission worked on the development of a **new network code on demand side flexibility** aiming at addressing remaining regulatory barriers for the development of demand side flexibility and other flexibility resources in the electricity market, with a draft submitted by the system operators in May 2024 for ACER review.

With regard to the natural gas market DG ENER prepared a report assessing the impacts of the **abolition of cross-border tariffs**.

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[25] Regulation (EU) 2024/1747 as regards improving the Union's electricity market design; Directive (EU) 2019/944 on common rules for the internal market for electricity and amending Directive 2012/27/EU (recast)

([26]) Regulation (EU) 2019/943 of the European Parliament and of the Council of 5 June 2019 on the internal market for electricity (recast)

([27]) Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU (recast)

Secure energy

Energy security and strategic autonomy are essential in a global economic system fractured by geopolitical competition and trade tensions and can become a driver for competitiveness and innovation. To enhance those aspects, DG ENER has worked throughout 2024 on different workstreams:

On tackling **remaining energy imports from Russia**, a dedicated workstream was established to develop a **Roadmap aimed at ending Russian energy imports** as soon as possible. As part of this effort, DG ENER organised three meetings with Member States' Director-Generals. The exchanges played an important role in shaping the forthcoming Roadmap as flagship of the new Commission. It will provide a clear pathway forward, outlining the necessary steps to end the EU's reliance on Russia and enhance its energy security by moving away from unreliable suppliers.

On the **Diversification Strategy and Joint Purchasing** angle, **AggregateEU**, the Commission's **natural gas** demand aggregation and joint purchasing mechanism, launched in 2023, continued to demonstrate its effectiveness in 2024. The mid-term round matching demand and supply for 5 years, launched in February 2024, attracted big interest, with **more than 33 billion cubic meters** (bcm) of Europe's demand matched with supply. A **total of 77 bcm of gas** have been matched between European off-takers and suppliers across six rounds of demand aggregation.

While AggregateEU will be discontinued by the end of Q1 2025 as per contractual provisions, its success has paved the way for the launch of demand aggregation initiatives in relation to other strategic commodities such as **hydrogen**, **critical raw materials**, and gases (including **biomethane**) as requested in the relevant provisions in the "Decarbonised Gases and Hydrogen Regulation" and the "Critical Raw Materials Act".

Ensuring **security of supply and winter preparedness** for 2024/2025 has remained one of ENER's key priority actions in 2024, especially with the end of **Ukraine-Russia gas transit agreement** looming over 2024.

To facilitate enhancing alternative gas supply routes, the Commission has been working with transmission system operators to harmonise gas quality requirements in regions bordering Ukraine as outlined in the Memorandum of Understanding signed at the CESEC Ministerial on 29 October 2024. Additionally, the Commission worked closely with Member States to ensure that gas storage trajectories foreseen for 2024 were met. Both the ENTSOG Winter Supply Outlook 2024/2025 and the Commission's 2024 quarterly gas market reports indicate relatively smooth filling trajectories throughout 2024.

As a result, the **EU was well prepared for the winter of 2024-2025**.

The 90% target of filling gas storage for 2024 was reached already on 19 August 2024, well over 2 months ahead of the deadline.

On 1 November 2024, the EU-wide gas storage level was over 95%, recording approximately 100 bcm of gas in stock at the beginning of the winter. It represents around one third of the EU's annual gas consumption.

In October 2024, the Commission publicly launched the **interactive security of gas supply dashboard** that provides comprehensive weekly data on imports, storage levels, transport and consumption of gas in the EU, allowing national and EU decision-makers to take swift and informed actions to ensure energy security across the EU. The **2025 targets** were also formally set in November 2024 by the Commission Implementing Regulation (EU) 2024/2633. The **certification process of gas storage facilities** continued during 2024.

Regarding **electricity security of supply**, the Commission supported Member States in the implementation of the Risk Preparedness Regulation while also continuing to **assist Ukraine** by ensuring electricity supplies to the country following Russian attacks on electricity infrastructure.

Oil security of supply remained stable, despite the delicate geopolitical situation in Ukraine and the Middle East and the continued OPEC+ output cuts throughout 2024. Almost all Member States have ensured the mandatory oil stocks reserves through 2024, and immediate action was undertaken following Druzhba pipeline incidents.

Regarding the **protection of critical energy infrastructure**, DG ENER continued its close cooperation with DG HOME, particularly concerning the **stress tests** in the energy sector, as foreseen in the Council Recommendation to strengthen the resilience of critical infrastructure ([28]). In particular DG ENER and DG HOME **shared information** when critical energy infrastructure incidents occurred, such as the Estlink2 disruption during December 2024. DG ENER also contributed to the follow-up of the recommendations of the **EU-NATO Task Force** on the Resilience of Critical Infrastructure in the Structured Resilience Dialogue.

As regards the **cybersecurity angle**, DG ENER worked closely with ACER, ENTSO-E, EU DSO Entity and other stakeholders on the delegated act containing a network code ([29]) on sector-specific rules for cybersecurity aspects of cross-border electricity flows, on common

([28]) Council Recommendation of 8 December 2022 on a Union-wide coordinated approach to strengthen the resilience of critical infrastructure (Text with EEA relevance) 2023/C 20/01

([29]) C/2024/1366

minimum requirements, planning, monitoring, reporting and crisis management which entered into force on 13 June 2024.


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On nuclear energy, DG ENER continued to ensure that the **Euratom legal framework on nuclear safety, radioactive waste management and radiation protection** is correctly transposed and implemented in the EU Member States, particularly as regards the implementation of the amended **Nuclear Safety Directive** ([30]). In particular, DG ENER facilitated Member States' obligations to implement the second topical peer review (on 'fire protection in nuclear installations') under the Directive in coordination with the European Nuclear Safety Regulators Group (ENSREG). The **third report on the implementation of the Radioactive Waste Directive** ([31]) was published in May 2024.

In addition, in 2024, to further enhance the protection of workers and patients against the dangers arising from ionising radiation, the Commission issued two recommendations to clarify the implementation of the individual monitoring requirements for workers ([32]) as well as the implementation of clinical audits of medical radiological practices ([33]) in Council Directive 2013/59/Euratom.

In the context of the implementation of Chapter 4 of the Euratom Treaty, several investments in nuclear projects (Art. 41-44 of the Euratom Treaty) were assessed. Most of these projects concerned investments in installations which will contribute to the **decarbonisation of the European energy mix**. Given the interest in new nuclear investments in several Member States and the increasing number of notifications, preparations started for the **nuclear illustrative programme (PINC)** under Art. 40 of the Euratom Treaty.

In **nuclear emergency preparedness and response (EP&R)**, DG ENER ensured with the support of JRC the operation of the ECURIE system for the exchange of urgent information in case of a radiological emergency, and of the EU system for the exchange of radiation monitoring data (EURDEP).

DG ENER also led the Commission's negotiating team on the **Commission Regulation (Euratom) on the application of Euratom safeguards** ([34]). On 24 June 2024, political agreement was reached in the Council for the compromise text of the new (revised) Regulation. Following the approval of the draft Regulation by the Council in February 2025,

([30]) Council Directive 2014/87/Euratom of 8 July 2014 amending Directive 2009/71/Euratom establishing a Community framework for the nuclear safety of nuclear installations.
([31]) Council Directive 2011/70/Euratom of 19 July 2011 establishing a Community framework for the responsible and safe management of spent fuel and radioactive waste.
([32]) Commission Recommendation 2024/440 of 2 February 2024 on the use of dose coefficients for the estimation of the effective dose and equivalent dose for the purposes of Council Directive 2013/59/Euratom.
([33]) Commission Recommendation 2024/1112 of 18 April 2024 on clinical audits of medical radiological practices carried out pursuant to Council Directive 2013/59/Euratom.
([34]) COM/2023/793

the Commission will formally approve the new Safeguards Regulation, which will replace the previous Regulation (Euratom) 302/2005.

Energy Union strategy and implementation

In 2024, DG ENER coordinated efforts to define the **new energy priorities** for the upcoming Commission mandate, building on the achievements of the past four challenging years. This work focused on areas critical to keeping the EU on track toward its energy and climate goals, while at the same time investigating the driving role that decarbonisation policies can play for Europe's economic growth if well integrated with industrial, competition, economic and trade policies. This is reflected in the Commission's political guidelines ([35]) and the Commissioner's mission letter ([36]).

With the implementation of the 2030 legal framework and the strengthening of the Energy Union Governance being amongst the new mandate's key priorities, an important milestone has been set in this regard with the publication, in September 2024, of the evaluation of the **Regulation on the Governance of the Energy Union and Climate Action**. The evaluation builds up on the lessons learnt during the first years of implementation and lays the ground for the impact assessment of the upcoming revision.

DG ENER coordinated the stocktake on progress towards the 2030 Energy Union objectives and targets as part of the **State of the Energy Union Report** adopted in the same month. DG ENER also continued to monitor the implementation of the **REPowerEU plan** and produced a detailed report accompanied by key performance indicators ([37]) and 27 fact sheets, one per EU country, providing a detailed country specific analysis ([38]).

In parallel, progress was made on the implementation of the **Governance Regulation**, including preparing guidelines in cooperation with Member States and further developing the e-reporting platform with a view to the 2025 progress reporting exercise.

In line with the requirements set in the Governance Regulation, the Commission further assisted Member States in the preparation and submission of their final updated **National Energy and Climate Plans (NECPs)**. In cases where no other options were available, infringement procedures were launched to urge Member States to comply with the obligation to submit their final updated NECPs to the Commission.

([35]) Political Guidelines for the next European Commissionhttps://commission.europa.eu/document/download/e6cd4328-673c-4e7a-8683-f63ffb2cf648_en?filename=Political Guidelines 2024-2029_EN.pdf
([36]) Commissioner Jorgensen Mission Letter
([37]) REPowerEU – 2 years on
([38]) REPowerEU - 2 years on - European Commission

DG ENER continued to put emphasis on implementation and enforcement of EU energy legislation to ensure that all the Member States have fully and correctly transposed the provisions of the ENER Directives, as well as following up on important **infringement cases**.

In total in 2024, DG ENER coordinated and prepared the adoption of 102 infringement decisions with 37 cases closed, 49 decisions of letters of formal notice, 15 reasoned opinions and 1 decision to suspend a Court referral. Package meetings to discuss all open infringement cases were held with 9 Member States.

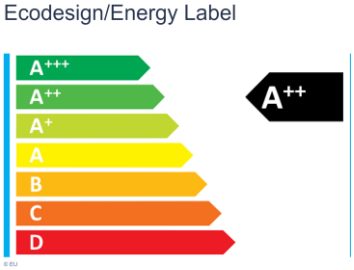
While looking at the future, DG ENER's **Energy Market Observation System (EMOS)** continued closely monitoring energy markets developments throughout 2024 assessing the impact of existing policies and feeding reflection on new policy initiatives. This included regular publications of weekly oil bulletin (with over 0.5 million downloads), the revamped Quarterly Reports on gas and electricity and the annual Energy Statistics Pocketbook. DG ENER was also instrumental in the preparation of the energy-related parts of the 14th and 15th sanction packages on Russia. DG ENER also finalised the technical **studies** in 2024 that feed the **energy subsidies report** and the **biennial energy prices and costs report** that will all be published by the new Commission in 2025.

Specific Objective 2: Buildings and renovations are performed in an energy and resource efficient way and the Energy Efficiency First principle is applied in investment decisions on energy infrastructure in the Union

Buildings and products

As regards **energy efficiency of buildings and products**, 2024 saw the entry into force of a new policy framework in the form of the recast **Energy Performance of Buildings Directive (EPBD)** and of the **Ecodesign for Sustainable Products Regulation (ESPR)**.

To support the **EPBD** implementation, the Commission issued a Guidance on the phasing out, from 1 January 2025, of any financial incentive for the installation of new stand-alone boilers powered by fossil fuels. Several additional guidance documents and delegated and implementing acts were in preparation in the course of 2024. DG ENER together with DG DIGIT and CINEA continued enhancing the **EU Building Stock Observatory (EU BSO)**, the main EU repository for energy performance of buildings data, while conducting a risk and security assessment for it. Progress has also been made in the implementation of the **Citizen-led renovation initiative**.



In relation to **Ecodesign**, revised minimum requirements were adopted for **local space heaters** and for **industrial fans** in 2024. Regarding **EU Energy Labelling**, a Eurobarometer survey confirmed that EU Energy Labels remain well-known and trusted among EU citizens, 30 years after the first mandatory EU Energy Label came into being. DG ENER launched a new

Energy **Efficient Products Portal** ([39]) to provide targeted information to consumers, retailers and suppliers. The **European Product Registry for Energy Labelling (EPREL)** introduced a new system for suppliers to digitally verify their identify and establishment in Europe, to improve the quality of information in the database. EPREL reached more than 100.000 visitors/week.

Energy efficiency

In 2024, significant progress was made in advancing energy efficiency policies under the European Green Deal and REPowerEU priorities. To support Member States in the transposition and implementation of the **Directive on energy efficiency (recast) (EED recast)** ([40]), the Commission adopted **nine Recommendations** and related Guidance documents on the most significant articles of the EED recast. An important step was the adoption of Commission Delegated Regulation ([41]) on the first phase of the establishment of a **common Union rating scheme for data centres** aiming to increase transparency and efficiency developments in data centres, estimated to account for close to 3% of EU electricity demand, and likely to significantly increase in the coming years.

Between February and April, the Commission organised a **Citizens' Panel on Energy Efficiency**, which brought together (twice in Brussels and one online) 150 citizens from all EU Member States. The panel resulted in 13 recommendations that will form the basis of a forthcoming Commission Action Plan.

On financing, the Commission launched the **European Energy Efficiency Financing Coalition**, a trilateral initiative involving Member States, financial institutions, and the Commission to facilitate the mobilisation of private financing for energy efficiency. The implementation of the **LIFE Clean Energy Transition (CET)** sub-programme continued under the coordination of DG ENER, while CINEA implemented the bulk of the grant calls on behalf of DG ENER.

Specific Objective 3: Research is mobilised and innovation fostered by designing a modern EU energy system that relies on clean energy technologies and digitalisation

Promoting competitive clean energy technologies

The most significant policy achievement in this field in 2024 was the entry into force on 29 June of the **Net-Zero Industry Act** ([42]) **(NZIA)**, the preparation and negotiations for which were co-led by DG GROW, DG ENER, and DG CLIMA. The Act aims at innovating and scaling

([39]) Energy Efficient Products - European Commission
([40]) Directive (EU) 2023/1791 on energy efficiency
([41]) C(2024)1639
([42]) Regulation (EU) 2024/1735 on establishing a framework of measures for strengthening Europe's net-zero technology manufacturing ecosystem)

up the manufacturing of net-zero technologies in the EU, reinforcing **EU's competitiveness and open strategic autonomy**. Subsequently, DG ENER led the preparation of the delegated act on primarily used components and the implementing act on non-price criteria in auctions. DG ENER also ran an independent **study on the Net-Zero manufacturing industry landscape across Member States** ([43]), offering a detailed overview of manufacturing capacities in key sectors such as wind, solar, batteries, heat pumps, and grids. The study also examines national policies and incentives supporting production scale-up while identifying bottlenecks, challenges, and opportunities for increasing manufacturing capacity in Net-Zero technologies.

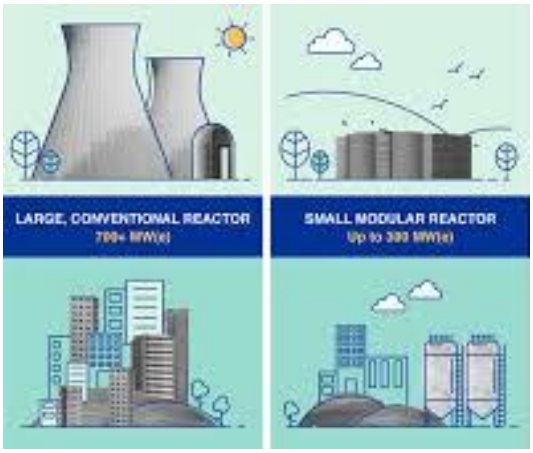
DG ENER further contributed to the ongoing revision of the **Strategic Energy Technologies Plan (SET Plan)**, with the establishment of task forces aimed at better addressing aspects related to societal needs, skills, digitalisation, circularity, and market access. How to make research and innovation in clean energy a driver of EU's competitiveness was the main topic of the annual **SET Plan conference** in Budapest on 14-15 November 2024, drawing record attendance.

In parallel, DG ENER together with DG CNECT and other DGs, implemented the **EU Action Plan on the Digitalisation of the Energy System**: the progress in the development of smart grids indicators and digital twins, the publication of the delegated regulation establishing a reporting scheme for data centres, and the entry into force of the network code on sector specific rules for cybersecurity aspects of cross-border electricity flows are just a few examples of actions in this field.

On funding for **research and innovation**, DG ENER, in cooperation with DG RTD and other DGs, implemented its chapter of the Horizon Europe Work Programme 2024 and contributed to the adoption, in March 2024, of the **Horizon Europe Strategic Plan 2025-27**.

Within SAMIRA's Research and Innovation strand, DG ENER also prepared a **Strategic Research Agenda** and **Roadmap for medical applications of ionising radiation** to serve as a basis for building synergies between the Euratom research programmes, the "Health" topic of Horizon Europe and Digital Europe.

([43]) The net-zero manufacturing industry landscape across the Member States



Furthermore, DG ENER led the work of several Commission services (GROW, RTD, JRC) to establish, with the support of key industrial stakeholders, the **European Industrial Alliance (IA) on Small Modular Reactors (SMRs)**. Its launch in early 2024 attracted interest from over 300 stakeholders, encompassing SMR technology designers, utilities, energy-intensive users, supply chain companies, research institutes, financial institutions, and civil society organisations. By November, the SMR IA identified the first nine projects that should contribute to its general objective - to facilitate and accelerate the development, demonstration, and deployment of the first SMRs projects in Europe in the 2030s.

Developing nuclear fusion energy technologies (ITER)

In relation to fusion, a **Fusion Expert Group (FEG)** was established jointly with RTD and held its first meetings in 2024. Its aim is to improve the complementarities and synergies between Euratom's and Member States' activities in developing fusion as a future energy source.

In the **ITER project**, DG ENER supported Euratom's chairmanship of the ITER Council as well as the new management of the ITER organisation (IO) in order to secure steady progress in the project restructuring, including the definition of the new project baseline presented by IO Director-General in June 2024. In parallel, DG ENER continued to stimulate corresponding reforms in the Joint Undertaking in charge of the European contribution to the ITER project, Fusion for Energy (F4E). After delays and cost overruns, the **first European sector of the vacuum vessel** was delivered in 2024. The implementation of the ITER project has been recognised as a critical risk by DG ENER. The risk is managed by regular and systematic supervision of F4E and by active involvement of DG ENER in the governance of both IO and F4E. DG ENER follows a comprehensive supervision strategy which is regularly reviewed and updated according to the project developments.

Specific Objective 4: All stakeholders are involved and a just transition is ensured by enabling energy consumers to be at the heart of the clean energy transition and ensuring that no one is left behind, building on the European Climate Pact

In 2024, the adoption process of the **revised provisions on consumer empowerment and protection in the Electricity Directive and in the Gas Directive** was completed. DG ENER worked throughout the year with Member State authorities and with stakeholders to prepare the implementation of the new rules.

On 5 December, DG ENER co-organised the **Citizens Energy Forum** in Budapest under the theme "*Towards a Citizens Energy Package: Empowering citizens for a just energy transition*". This kickstarted the preparations for the development of the **Citizens Energy Package** called for in Commissioner Jørgensen's Mission Letter, to increase citizen participation in the energy transition and strengthen the social dimension of the Energy Union.

DG ENER also continued to work to deliver the energy transition on the ground across the Union. In July, Vice President Šefčovič led the **Annual Political Dialogue of the Coal Regions** in transition held in Velenje, Slovenia marking 5 years of this EU initiative.

On **energy poverty**, DG ENER helped implement the European Green Deal legislation addressing energy poverty and engaged with local authorities and civil society through the **Energy Poverty Advisory Hub**, notably through two large scale events organised in April and October 2024 on empowering local actors to tackle energy poverty.

The **European Covenant of Mayors (CoM)** for Climate and Energy continued to support cities of all sizes in their efforts on climate mitigation, climate adaptation and fighting energy poverty. The **Smart Cities Marketplace** continued facilitating and strengthening strategic partnerships between businesses, municipalities and the financing sector.

Finally, this year's edition of the European Nuclear Energy Forum (ENEF), co-organised by DG ENER in Prague on 30 September and 1 October, once again served as a valuable platform for comprehensive discussions on the opportunities and risks associated with nuclear energy.

Specific Objective 5: The EU acts as energy global leader by contributing to an increased ambition for clean energy produced and used in third countries

DG ENER aims to advance **EU's strategic external energy policy interests,** critical for ensuring energy security and accelerating the clean energy transition in line with the REPowerEU plan, the External Energy Engagement Strategy, the European Green Deal Industrial Plan, the Net-Zero Industry Act, and the European Economic Security Strategy.

Building on previous efforts to spearhead the **Global Pledge to triple the world's renewables capacity and energy efficiency measures by 2030**, DG ENER continued driving the implementation of the United Arab Emirates Consensus, notably in deploying additional grids and storage to facilitate the uptake of renewable energy technologies at a pace compatible with a 1.5°C trajectory. On top of this, DG ENER ensured a **strong presence at COP29.** As a continuation of these efforts, DG ENER began working at technical level on establishing a **Global Energy Transitions Forum**, set to launch in 2025.

DG ENER co-chaired the UN Secretary-**General's Panel on Clean Energy Transition Minerals**, which developed 7 principles and 5 actions on global issues of equity, justice, human and environmental protection along mineral value chains.

DG ENER continued deepening relations with the **United States**, notably via the EU-US Energy Council, the EU-US Task Force on Energy Security, and bilateral engagements with the US administration and stakeholders. In particular, the 11th EU-US Energy Council, which took place on 15 March 2024 resulted in a **Joint Statement on reinforcing support for Ukraine, Moldova, and the Western Balkans**, deepening cooperation on energy policy, technology, and innovation. Energy cooperation with **MENA** ([44]) **partner countries** was further intensified, with engagements with Algeria, Egypt, Tunisia, Jordan, and Saudi Arabia.

2024 was also an intense year on the **international front**. Here below a few highlights:

- DG ENER actively participated to the Buildings and Climate Global Forum held in Paris, during which **70 countries committed to implement national building decarbonisation pathways** and foster international collaboration on this topic.
- The **Energy Efficiency Hub Buildings Task Group** held several workshops and released a study on "Deep Retrofit Models" in selected countries contributing to enhance the exchange of lessons learnt and good practices between the respective governments.
- DG ENER also continued engaging with the International Energy Agency, the **Clean Energy Ministerial** (CEM), the **Mission Innovation Initiative**, and the **International Partnership for Hydrogen in the Economy**, to foster cooperation on both innovation and deployment.
- The **Global Covenant of Mayor** (GCoM) consolidated its global presence (e.g. 727 cities in Latin America), launched city-business matchmaking (20 EU SMEs), delivered project development assistance and projected EU multilevel governance worldwide through the 73-country strong COP28 CHAMP ([45]) coalition.
- DG ENER closely cooperated with the **International Atomic Energy Agency** and under the lead of the Commission President and Commissioner Simson represented the EU and Euratom Community in the first Nuclear Energy Summit reiterating the role of nuclear power in the transition to clean energy.

The Commission remained strongly engaged with the **International Renewable Energy Agency (IRENA)**, with an active participation in the IRENA General Assembly and a cooperation throughout the year on the modelling and design of global renewable energy targets. The Commission provided political support to Ukraine at the IRENA Assembly and covered its membership fees.

DG ENER contributed to the work of the **International Energy Agency Task Force on Gas and Clean Fuels Market Monitoring and Supply security (TFFS)** as its Vice-Chair. In this context, DG ENER and Japan launched a **Global Early Warning Mechanism** (GEWM), where participating parties can exchange information related to their gas and LNG security of

([44]) Middle East and North Africa
([45]) Coalition for High Ambition Multilevel Partnerships (CHAMP) for Climate Action

supply. In 2024, the GEWM expanded to include new partners (LNG producers and consumers): the US, Canada, Australia, South Korea.

In 2024, DG ENER worked with the nine non-EU Energy Community Contracting Parties (namely Western Balkans and the three Eastern Partners, Ukraine, Moldova and Georgia) under the **Energy Community framework**, focused particularly on the support to Ukraine including gathering international assistance, as well as on the implementation of the Electricity Integration Package, decarbonisation, and advancing towards the implementation of a carbon pricing system for the Energy Community. DG ENER facilitated the establishment of the first list of **Projects of Energy Community Interest** (PECI list), to boost regional infrastructure investments in alignment with the adapted and adopted TEN-E (2023), as well as a recommendation on accelerating the deployment of renewable energy projects and implementing the energy efficiency first principle.

The **United Kingdom** and the EU continued to strengthen their relationship at technical level on energy matters within the framework of the EU-UK Trade and Cooperation Agreement. The operational conclusions of the 7 November 2024 meeting of the Specialised Committee on Energy ('SCE') provide to ([46]): i) Establish a **Security of Supply Working Group**; ii) Publish a **Roadmap on efficient electricity trading arrangements** and adopt the related **SCE Recommendation**; iii) Request Transmission System Operators and regulators to enter into the agreed draft **Cooperation frameworks**; and iv) Exchange on current and foreseen regulatory developments with regard to certain **new technologies**.

Regarding **bilateral energy relations of the Commission with the Western Balkans**, DG ENER was highly involved in the preparation of the Reform Agendas under the **New Growth Plan for the Western Balkans** –adopted in Q4 2024– outlining key socio-economic and fundamental reforms and milestones underpinning the adopted EUR 6 billion Reform and Growth Facility for the Western Balkans.

DG ENER continued working closely with **Ukraine and Republic of Moldova** in response to Russia's unprovoked war of aggression in Ukraine.

([46]) Specialised Committee on Energy – minutes of the Meeting

Support to Ukraine and Moldova:

- Preparation and monitoring of the **Ukraine Plan**, underpinning the Ukraine Facility, which will allow the disbursement of the EUR 50 billion for Ukraine's green and sustainable recovery and reconstruction.
- Emergency support to Ukraine's energy infrastructure. Notable achievements include **EUR 1 billion raised under the Ukraine Energy Support Fund** and the increase of electricity export capacity to the Ukraine/Moldova control block.
- Support for the preparations of the energy-related steps of the **Growth Plan for the Republic of Moldova** worth EUR 1.8 billion.
- **Assessment of the risks** for both banks of the river Nistru **in the Republic of Moldova** stemming from the expiring of the Russia-Ukraine transit agreements.
- **Optimization of the allocation of electricity export capacity** between Ukraine and Moldova to allow Moldova to make use of more EU imports.
- Actively showed, promoted, and mobilised **legal and diplomatic support to Ukraine** at the international level to address continued Russian attacks on Ukraine's energy infrastructure and occupation of the Zaporizhzhia Nuclear Power Plant (ZNPP).
- Contribution to **accession process screenings** for both countries.

On **nuclear energy**, beyond the ITER project, DG ENER promoted the **highest levels of nuclear safety** standards internationally and the need to ensure security of supply in the nuclear fuel cycle, in cooperation with international partners and like-minded countries related to Ukraine. DG ENER facilitated the launch of a Euratom Research and Training Programme project to boost the development of other alternative fuels for Russian-designed VVER reactors. By the end of the year, four out of five Member States operating VVER reactors had supply contracts in place with alternative suppliers of nuclear fuel, while the remaining Member State was also exploring alternative fuel supplier contracts. In response to Russian continued attacks on energy infrastructure and attempts to legitimise the occupation of the Zaporizhzhia Nuclear Power Plant, DG ENER worked with other services and in various multilateral fora on unprecedented nuclear safety risks and development of coordinated common positions in support to Ukraine. The long-standing collaboration with INTPA and JRC allowed the stress test of the **Akkuyu Nuclear Power Plant** (Türkiye) to be completed in 2024, with a peer review assessment of the Turkish national report to be published in early 2025

Furthermore, DG ENER cooperated with Japan under the Broader Approach Agreement for fusion development projects, in particular with the construction and operation of the biggest fusion reactor in the world after ITER. These projects progressed well in 2024.

Examples of EU Added Value:

Nuclear Decommissioning Assistance Programmes (NDAP). The Nuclear Decommissioning Assistance Programmes (NDAP) implement comprehensive decommissioning plans for disused nuclear power plants, establishing broad expertise in the decontamination, removal and disposal of the reactors' equipment. This can valuably be utilised by other decommissioning projects in Europe. Building on the first knowledge products prepared in the period 2021-23, in 2024 the NDAP decommissioning operators created additional four decommissioning knowledge products thereby contributing to the new objective of knowledge dissemination across the EU. While there is no measure yet of the effectiveness of those products, they could directly be used between the 3 operators assisted via the NDAP.

ITER. In the short term of 2024 alone, the EU added value came from the direct economic impact of the contracts issued to the EU companies for designing and manufacturing the first of the kind components and equipment for the project. In the medium term, the EU funding helps to engage and build highly skilled and qualified EU workforce. The know-how and expertise generated can be leveraged internationally where fusion related projects are strongly promoted by public and private funding. In a longer-term perspective the new energy source would help to ensure EU energy security and contribute to fighting climate change. ITER expenditure is recognised as contributing 100% to the climate-mainstreaming target of the EU budget.

2. INTERNAL CONTROL AND FINANCIAL MANAGEMENT

Management monitors the functioning of the internal control systems on a continuous basis and carries out an objective assessment of their efficiency and effectiveness. In Annex 7, there is a list and details of the reports that have been considered. The results of the above assessment are explicitly documented and reported to the Director-General.

2.1. Control results

Management uses control results to support its assurance and reach a conclusion about the cost-effectiveness of those controls, meaning whether the right balance between the following elements is achieved:

- Effectiveness The level of error found, based on the controls carried out.
- Efficiency The average time taken to inform or pay.
- Economy The proportionality between the costs of controls and the funds managed.

2.1.1. Overview of the budget and relevant control systems

DG ENER's assurance building and materiality criteria are outlined in Annex 5 whilst Annex 6 describes the main risks together with the control processes to mitigate them and the indicators used to measure the performance of the relevant control systems (RCS).

The systematic analysis of the available evidence provides sufficient guarantees as to the completeness and reliability of the information reported and results in the full coverage of the budget delegated to the Director-General of DG ENER.

The total payments of DG ENER in 2024 amount to EUR 841.25 million. In 2024, DG ENER achieved 100% execution of its payment appropriations. DG ENER further implemented 100% of its commitment appropriation (EUR 608.45 million). As in the past few years, DG ENER's main budget management mode for the year was indirect management.

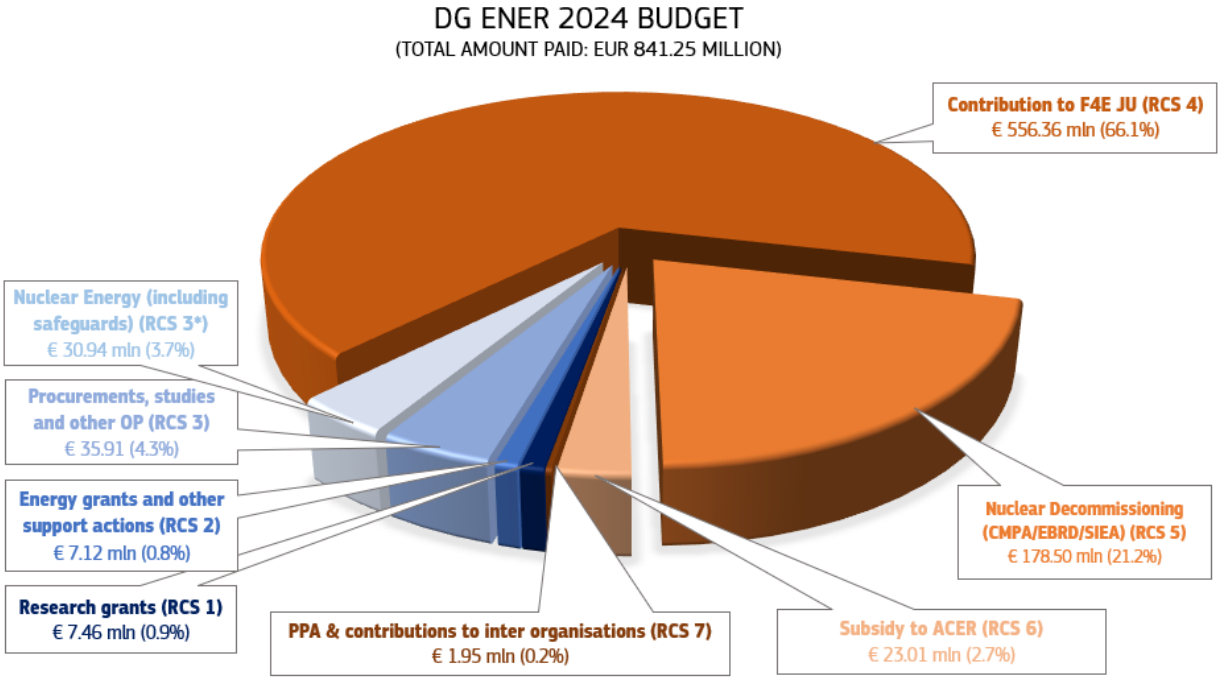
- **Under direct management** (9.7% of the expenditure) DG ENER principally manages procurements, studies and other operational expenditure, including payments to the JRC, described in detail in Annex 6, RCS 3, which also covers the payments related to nuclear energy (including safeguards). DG ENER has a limited exposure to research grants (Horizon Europe and Horizon 2020) and energy grants(prerogative) (RCS 1 and 2) ([47]). In addition, the payments of membership fees and other support actions to international institutions (prerogative & CEF) re also covered by RSC 2.

- **Under indirect management** (90.3% of the expenditure) DG ENER has entrusted tasks to F4E JU (RCS 4) and the NDAP bodies (RCS 5) as well as the ACER decentralised agency (RCS 6). Other payments under indirect management (RCS7)

([47]) Less than 2% of the total payments of DG ENER for 2024.

include pilot projects and preparatory actions, and contribution agreements with international organisations.

The chart below provides an overview of DG ENER's implementation of its programmes and activities.



In addition to this expenditure, DG ENER manages tangible assets related to the operations on nuclear safeguards, a share in the legacy of the European Energy Efficiency Fund and a share in the CEF Financial Instrument (see Annex 6 (RCS 8) and Annex 7 for further details).

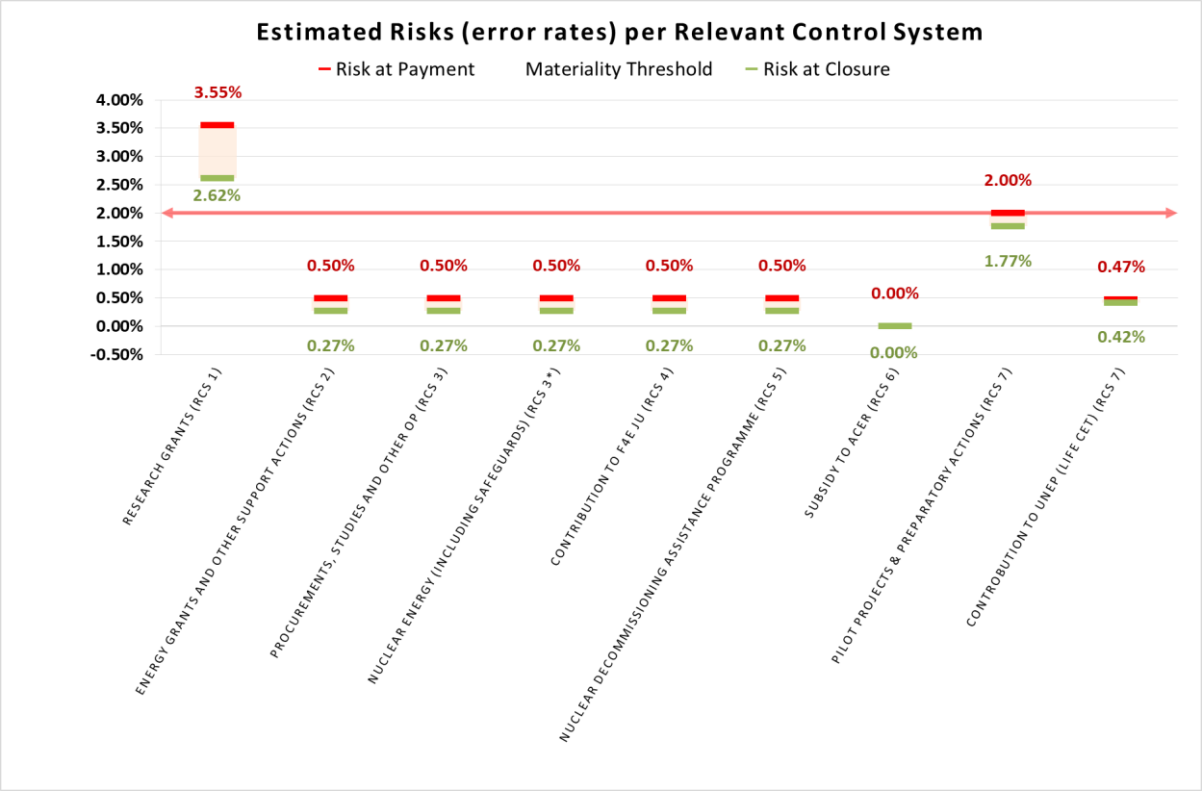
The revenues assigned to DG ENER include EUR 40 million, corresponding to the participation received from one Member State to the Union renewable energy financing mechanism ([48]) as well as EUR 7.7 million encompassing recovery of expenses, financial income, and other exchange revenues.

2.1.2. Effectiveness of controls

a) Assessment of control results per RCS for expenditure

DG ENER has established a system of internal controls and checks, aiming to ensure sound financial management and to build reasonable assurance on the legality and regularity of all financial transactions it is responsible for. These controls are embedded in the roles and responsibilities of the different actors as per DG ENER's Control Strategy. The main indicators are the residual error rate, the risk at closure and the financial performance of the funds, which takes into account the multiannual character of programmes and the nature of the payments concerned.

([48]) Reg EU 2020/1294



Control objective

The overall control objective is to ensure that risks relating to the legality and regularity of the underlying transactions are adequately managed. The main indicator, the residual error rate affecting the relevant expenditure of 2024, remains below 2%. For the expenditure under the Horizon 2020 programme (see RCS 1), the control system aims at giving a reasonable assurance that the risk of error over the course of the multiannual expenditure period is, on an annual basis, within a range of 2-5%, with the ultimate aim to achieve a residual level of error as close as possible to 2%. For other grants (RCS 2) and procurements (RCS 3) and nuclear safeguards under direct management (RCS 3), the objective is to remain strictly under the 2% threshold. For expenditure under indirect management (RCS 4, 5, 6 & 7) the control objective is to also obtain the necessary assurance as regards the legality and regularity and performance of the operations managed by the entrusted entities. Further details on DG ENER's assurance building and materiality criteria are outlined in Annex 5. For the supervision of CINEA (RCS 9), the control objective is to obtain the necessary assurance as regards the performance of the operations of the Agency in respect of the energy programmes it implements.

Assessment of the control results

DG ENER's Control Strategy comprises all control activities applicable to the operational and financial implementation of its spending programmes.

ENER's portfolio mainly consists of segments with a low risk profile (procurements, administrative agreements, support to International Institutions) thanks to their management mode and the nature of the beneficiaries, and the performance of the related control systems.

Regarding the **directly managed actions**, the ex-ante controls put in place by DG ENER contributed to the achievement of the policy and operational objectives and provided an assurance that the projects are running adequately. The ex-post controls on segments involving grants had a positive deterrent effect, fostering system improvements and a better compliance.

One segment has a relatively high error rate, i.e., the directly managed research grants (RCS 1). This concerns the **Horizon 2020 grants** – the cumulative residual error rate was estimated at 2.62% in 2024 vs 2.08% in 2023. This error rate is due to the complexities of the programme and the type of beneficiaries and is largely mitigated by efforts made to reinforce the related controls systems. The estimated residual error rate for the directly managed Horizon 2020 funds remains within the estimated band of 2%-5% for this programme. The evolution of the risk at closure/payment for Horizon 2020 is decreasing in line with the evolution of the underlying amount of relevant expenditure. Considering the limited exposure of DG ENER to this programme, the situation does not impair the assurance.

For the segment of energy grants (prerogative) and other support actions (prerogative & CEF) (RCS 2) one audit was performed without observations. This segment also includes the budgetary support provided by DG ENER to the Energy Community Secretariat and as such is not affected by an error rate. However, the governance of the secretariat is complex (see Annex 7 for details). DG ENER therefore uses a conservative error rate of 0.5% for the whole segment.

Regarding procurements including nuclear safeguards (RCS 3), payments are made in accordance with contractual provisions and therefore at low risk of error. DG ENER uses a conservative error rate of 0.5%.

The same conservative error rate is used regarding the contributions to NDAP and F4E JU under **indirect management**. The key elements considered for the assurance are: the delegation of implementation of the Euratom contribution to the ITER project through F4E JU; the delegation of implementation to the NDAP, for which DG ENER relies on updated pillar assessments for its relationship with the European Bank for Reconstruction and Development (EBRD) and the National Agencies in Lithuania (CPMA) and Slovakia (SIEA). The reports received from the entities implementing NDAP and F4E JU provide the necessary assurance. The control objective is considered fulfilled. The subsidies to ACER and ESA are considered error free. The error rate affecting the LIFE CET programme ([49]) is used for the contribution to the UN Environmental Programme, whereas a conservative 2% error rate is used for other pilot projects and preparatory actions.

DG ENER is a parent DG for CINEA. The controls performed to the monitoring of the agency and the steering of its governance provided DG ENER with a reasonable assurance that the Agency implemented effectively the programmes, protected the financial interests of the EU and that there are no particular issues, events or problems that could have a material impact

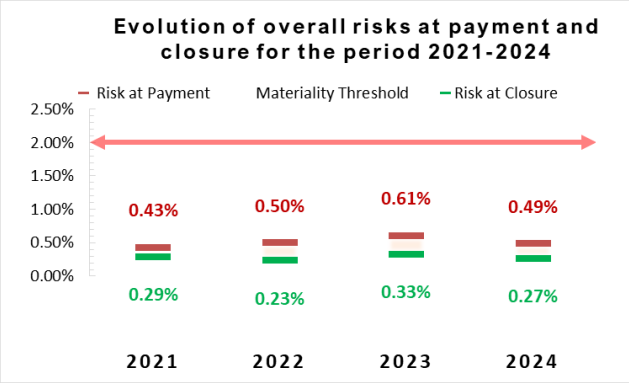
([49]) Calculated by CINEA.

on the assurance. DG ENER confirms the effective fulfilment by CINEA of the implementation of the Energy programmes delegated to it ([50]).

While F4E JU is an autonomous EU body and has the full responsibility for the design and operation of its controls, DG ENER is responsible for the oversight, within the framework of a supervision strategy, of its operations and of its work to implement the Euratom contribution to ITER. It does not aim at a daily monitoring of all transactions carried out by the entrusted entities, but to ensure that the internal governance of the F4E JU allows for the achievement of its objectives. In 2024, DG ENER, as representative of the Commission in the different governance entities of the JU ([51]) maintained its effort to improve the governance of the project both at ITER and F4E JU levels. While significant improvements were achieved at the level of the JU, the situation of the ITER project itself remains challenging. In this respect, DG ENER focuses its effort on supporting ITER Organisation's reform and on the finalisation of the new baseline and schedule for the project.

DG ENER ensures the supervision of ACER. In 2024, ACER carried out its work in line with the objectives agreed with DG ENER. The monitoring and supervision activities are effective and ensured regular information and steering of the work of ACER towards achieving Commission objectives allowing decisions on potential actions in adequate time.

b) Estimation of the overall risk at payment and risk at closure



The estimated overall risk at payment for 2024 expenditure is the Authorising Officer by Delegation's (AOD) best conservative estimate of the amount of relevant expenditure during the year, not in conformity with the contractual and regulatory provisions applicable at the time the payment was made. This expenditure will subsequently be subject to ex-post controls and a proportion of the underlying errors will be detected and corrected in subsequent years, corresponding to the conservatively estimated future corrections for 2024 expenditure. The difference between those two results in the estimated overall risk at closure ([52]).

This year's result (0.49% risk at payment and 0.27% risk at closure) is well below the materiality threshold of 2% and is comparable to previous years. The graph presents a stable trend since 2021.

([50]) See CINEA's AAR and Annex 7 of DG ENER AAR for further details on the agency performance.
([51]) Administrative and Management Committee, Bureau and Governing Board.
([52]) This is the AOD's best, conservative estimation of the expenditure authorised during the year that would remain not in conformity of applicable regulatory and contractual provisions by the end of implementation of the programme.

For an overview at Commission level, the departments' estimated overall risk at payment, estimated future corrections and risk at closure are consolidated in the Annual Management and Performance Report (AMPR).

c) Quantitative benefits of controls: Preventive and corrective measures

With its ex-ante and ex-post controls, DG ENER has an effective mechanism in place for detecting and correcting errors, reaching in total EUR 3.92 million of corrections for 2024. Ex-ante controls resulted in EUR 0.14 million of corrections (EUR 0.28 million in 2023) and ex-post controls resulted in EUR 3.78 million of corrections (EUR 0.04 million in 2023). Please see details in Annex 3 table 8.

The increase in the corrective measures compared to 2023, is explained by the recovery of sums due following ex post audits carried out in previous years on legacy European Energy Programme for Recovery (EEPR) projects.

d) Assessment of control results for non-expenditure items

The intangible assets managed by DG ENER as well as the tangible assets related to its 'Euratom Safeguards' activity are under the reporting thresholds ([53]). As regards the specific off-balance sheet items. DG ENER's current procedures and controls are considered as robust and effective. It also covers contingent liabilities, which correspond to the guarantees given in the framework of the CEF Debt Instrument. The control objective is to ensure the protection of the interest of the EU through alignment of priorities and safeguarding of the funds committed as guarantees. These guarantees remained stable. The report received from the EIB regarding the DG ENER share in the CEF Debt Instrument indicates a positive economic result amounting to EUR 3.63 million.

There were no contingent liabilities in respect of on-going legal cases in 2024.

The value of the shareholding in the European Energy Efficiency Fund (EEEF), a legacy fund under the form of a SICAV ([54]) decreased from EUR 110.18 million to EUR 102.77 million. While the decline in valuation is above the 2% threshold, DG ENER considers that this situation does not weaken its assurance as the individual share value (EUR 65.46) remains above the initial investment value (EUR 61.81), as more than half of the loss should be compensated in 2025 and as the remaining write-off was of precautionary nature and in line with the governance of the fund.

e) Fraud: prevention, detection, and correction

DG ENER has developed and implemented its own anti-fraud strategy since 2012, based on the methodology provided by OLAF. It is updated every three years and was last updated in November 2023 following a fraud risk assessment. Its implementation is being monitored

([53]) EUR 0.47 million for tangible assets and EUR 2.64 million for intangible
([54]) Société d'Investissement à Capital Variable

and reported to the management at least two times per year through DG ENER Control Board and when necessary, through targeted reports. All necessary actions have been implemented.

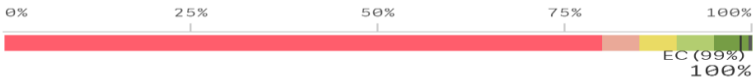
DG ENER received no OLAF financial recommendations during the period 2020-2024. The implementation of pre-2020 OLAF financial recommendations is ongoing, pending current legal actions at Member State level.

On the basis of the available information, DG ENER has reasonable assurance that the anti-fraud measures in place are effective. However, DG ENER will consider opportunities to further improve staff awareness (including cybersecurity) as it operates in a fast-changing environment.

2.1.3. Efficiency of controls

The assessment of the most relevant key indicators and control results shows that DG ENER is compliant with the rules and efficient with the budget execution.

As far as the **'timely payments' indicator** is concerned (i.e., payment accepted amount in time/payment accepted amount in EUR), DG ENER managed to achieve 100%, which is higher than the Commission average, demonstrating effective processing of payments and deadline monitoring, despite the increased pressure on its activities.

Timely Payments	ENER Score	EC Score
	**100%**	**99%**

Due to the limited exposure to directly managed grants, the **time-to-grant** and **time-to-inform** indicators are not relevant for DG ENER.

Initiatives to improve the efficiency of operations include:

- Further strengthening the supervision of the EURATOM contribution to **ITER** by enhancing oversight of F4E JU and revising its risk-based supervision strategy, aligned with the 2022 IAS audit recommendations. A mid-term evaluation further refined strategic priorities, while ITER risks were closely monitored through a dedicated Risk Register. Monthly performance reports and updated KPIs provided better oversight of costs and delays.
- An Action Plan to monitor the **individualisation of global commitments** and the timely conclusion of procurement procedures was reconducted in 2024. It led to further improvements in the levels of budget implementation, individualisation of all the global commitments and reduced number of global commitments at the end of 2024. Financial operations were finished earlier than in previous years, on time for the migration to SUMMA, the European Commission's next-generation corporate financial system.

- The **transition to SUMMA** and the introduction to eContracting were accompanied by staff training and capacity building actions, nomination of key users and local access managers and the establishment of a first line of support. Data quality was monitored throughout the year. These efforts led to a high level of readiness in DG ENER. SUMMA contributes to the rationalisation and modernisation of the EU administration and to a sound Commission corporate IT landscape. By the end of the year, the SUMMA readiness indicator had reached 100%, reflecting a high level of preparedness for the system's deployment.

2.1.4. Economy of controls

Ex-ante controls contribute to the achievement of the policy and operational objectives and provide an assurance that the projects are running adequately. Ex-post controls have a positive deterrent effect within the programme, which will foster system improvements and a better compliance with regulatory provisions.

Overall, the total cost of the controls performed by DG ENER in 2024 was EUR 13.23 ([55]) million or 1.57%. This cost is proportionate to the activities and comparable to the costs for 2023 of EUR 13.09 million (see Annex 7, in particular table Y).

The relatively high costs reported regarding directly managed grants correspond to the final stage of these programmes where very little relevant expenditure remains while controls need to be maintained for their closure.

The costs related to financial and supervisory controls for F4E JU, NDAP and ACER remain under 2%.

Details of the estimated cost related to shared/pooled control activities carried out by the European Research Executive Agency (REA) and hosted by DG R&I (Common Implementation Centre including Common Audit Service) for the Research and Innovation family are reported in the AARs of REA and DG R&I.

2.1.5. Conclusion on the cost-effectiveness of controls

Based on the most relevant key indicators and control results reported above, DG ENER has assessed the effectiveness, efficiency and economy of its control system and reached a positive conclusion on the cost-effectiveness of the controls for which it is responsible. This can be attested by an overall trend of decreasing error rates, timely operations and low costs of controls.

The efficiency and the effectiveness of the controls are supported by quantitative and qualitative benefits, identified for the relevant stages of the process. The costs of the controls

([55]) of which EUR 12.51 million (1.49% of related payments) of ex ante controls and EUR 0.71 million (1.21% of the verified value) of ex post controls.

remain overall low and the higher cost items are justified by objective needs or by specific circumstances, thus providing a positive impact on the assurance.

In conclusion, DG ENER considers that the current control system fulfils the intended control objectives efficiently and represents a good balance between the invested efforts (internal control costs and remuneration fees), the obtained error rates (effectiveness of controls) and delivery of objectives (efficiency).

2.2. Audit observations and recommendations

This section sets out briefly the state of play for all audit observations and recommendations reported by auditors related to internal control and financial management – including the limited conclusion of the Internal Auditor on the state of internal control. Further details for IAS and ECA audits can be found in Annex 8.

Where an audit has detected weaknesses affecting any internal control principle or the department's assurance, a detailed analysis is provided further below in section 2.3 and 2.4, accordingly.

Internal Audit Service

In its contribution to the 2024 Annual Activity Report process, the Internal Audit Service concluded that the internal control systems in place for the audited processes are effective, except for the observations from the audit on IT security risk management at the Commission. Two very important recommendations issued in January 2025 were accepted and need to be addressed by an action plan, which is in preparation as of February 2025. The recommendations were reflected in the internal control self-assessment.

Reported	Audit Title	Accepted Recommendation	State of play in 2024	Impact on the assurance for 2024
2025 ([56])	IT security risk management at the Commission – DG ENER	1. Very important: IT Security risk assessment and treatment 2. Very important: Risk appetite and acceptance criteria		☑

European Court of Auditors

Reported	Audit Title	Accepted Recommendation	State of play in 2024	Impact on the assurance for 2024
2024	2023 ECA Annual Report	N/A	☑	☑

([56]) Draft audit report presented in December 2024; Final audit report completed in January 2025.

2024	SR 09/2024 Security of the supply of gas in the EU	4	⏳	☑
2024	SR 11/2024 - The EU's industrial policy on renewable hydrogen	3b & 5a	⏳	☑

☑ Action plan implemented and closed by IAS or ECA / No impact on the assurance
⏳ Action plan implementation is ongoing or awaiting review from IAS or ECA
📝 Preparation of the action plan
🚩 Impact on the assurance

The ECA audit findings do not indicate any systemic problem in DG ENER's internal controls or financial management and rather focus on policy development and implementation.

2.3. Assessment of the effectiveness of internal control systems

The Commission has adopted an Internal Control Framework based on the highest international standards ([57])

DG ENER has adapted the Internal Control Framework to its specific characteristics and organisational structure. The internal control systems are suited to achieving its policy and internal control objectives in accordance with the internal control principles, having due regard to the risks associated with the environment in which it operates.

DG ENER self-assessment of internal controls focused on verifying the presence and effective functioning of the Internal control Framework components and principles as a system throughout 2024. It was based on four main building blocks: monitoring indicators, audits results and recommendations, control incidents and management reporting.
It also looked at the state of play of deficiencies identified in 2023 (see Annex 8 for further details).

The critical risk related to the implementation of the ITER project was acted upon and maintained. The evolution of the risk is dependant of both ITER Organisation (IO) as an entity and of the ITER project as a whole. The situation of the project itself remains difficult, due to technical or regulatory obstacles to the completion of the construction. DG ENER closely monitors and takes part to the risk response of ITER Organization, including a comprehensive reform of the project management and a new baseline for the project which should be presented by the ITER Organization to the ITER Parties in 2025 (see Annex 7 for more details).

DG ENER has assessed its internal control system during the reporting year and has concluded that it is effective and the components and principles are present and functioning well overall, but some improvements are needed as one moderate internal control deficiency

([57]) The Committee of Sponsoring Organizations of the Treadway Commission Internal Control Integrated Framework, the golden standard for internal control systems.

was identified related to IC Principle 11 (control over technology). The deficiency mirrors one of the two very important recommendations from the IAS audit on IT security risk management. The identified deficiency will be closely monitored during 2025 through the implementation of the audit action plan to mitigate the risks. DG ENER took immediate actions as regards the recommendation related to the IT security indicators, and DG ENER Internal control monitoring criteria have been adjusted by end 2024. This weakness does not impair the assurance.

The three minor deficiencies identified in the 2023 assessment were addressed and are now considered as closed.

2.4. Conclusions on the assurance

The controls carried out by DG ENER for the management of the budget, implemented directly or indirectly, were effective, efficient and economical for the reporting year. The high cost of control observed for directly managed grants has no material impact on the overall economy of the controls. The resources assigned in 2024 to the activities described in this report were used for their intended purpose and in accordance with the principles of sound financial management. The control procedures put in place give the necessary guarantees concerning the legality and regularity of the underlying transactions, safeguarding of assets and information and the prevention, detection and correction of fraud and irregularities.

The conservative assessment of the AOD is that the overall amount at risk at closure is not material and corresponds to about 0.27% of the relevant 2024 expenditure. Taking into account the multiannual character of the main programmes, no new reservation is introduced in this AAR.

Concerning directly managed expenditure, DG ENER implements appropriate ex-ante and ex-post controls. Regarding indirectly managed expenditure, DG ENER maintained a critical risk on the ITER Programme ([58]). DG ENER considers that it is too early to assess the impact of the on-going revision of the ITER baseline. DG ENER closely monitors and participates to the process and considers that its assurance for 2024 is not impaired. There is no indication of any other element that would impair the assurance. The information received from F4E JU, CINEA, the NDAP entrusted entities and from ACER is considered as adequate and reliable.

DG ENER assessed its internal control systems and concluded that the internal control framework is implemented and functioning as intended, however one moderate internal control deficiency in relation to the control over technology was identified. DG ENER identified the necessary corrective actions, which will be implemented in 2025. Risk management processes worked as intended and contributed to the good operation of the control systems. DG ENER demonstrated its agility as an organisation in the management of its budget and its adaptability through efforts in the field of HR management and IT security.

([58]) Note that however that scope of the critical risk for 2024/2025 is focused on revision of the ITER schedule and cost baseline and that the issues affecting F4E JU were mitigated.

In relation to the recommendations issued in 2024 by ECA and the IAS, none is considered to have a material impact on the declaration of assurance of DG ENER. All accepted recommendations issued by the IAS have led to specific action plans addressing the underlying issues. The first steps are taken towards their implementation, and the recommendations are not yet due. The current residual risk from the ECA audit recommendations remaining open for DG ENER does not impair the declaration of assurance. The audit results, the internal control assessment and the control indicators do not reveal any significant weaknesses and do not fulfil any of the materiality criteria laid down in Annex 5.

In conclusion, based on the elements reported above, management has reasonable assurance that, overall, suitable controls are in place and working as intended; risks are being appropriately monitored and mitigated; and necessary improvements and reinforcements are being implemented. The Director-General of DG ENER, in her capacity as Authorising Officer by Delegation has signed the Declaration of Assurance.

2.5. Declaration of Assurance

Declaration of Assurance

I, the undersigned,

Director-General of DG ENER

In my capacity as authorising officer by delegation

Declare that the information contained in this report gives a true and fair view ([59]).

State that I have reasonable assurance that the resources assigned to the activities described in this report have been used for their intended purpose and in accordance with the principles of sound financial management, and that the control procedures put in place give the necessary guarantees concerning the legality and regularity of the underlying transactions.

This reasonable assurance is based on my own judgement and on the information at my disposal, such as the results of the self-assessment, ex-post controls, the work of the Internal Audit Service and the lessons learnt from the reports of the European Court of Auditors for years prior to the year of this declaration.

Confirm that I am not aware of anything not reported here which could harm the interests of the institution.

Brussels, 31 March 2025

(signed)

Ditte Juul Jørgensen

AOD

([59]) True and fair in this context means a reliable, complete and correct view on the state of affairs in the DG/Executive Agency.

3. MODERNISING THE ADMINISTRATION

3.1. Human resource management

In 2024, DG ENER's HR processes focused on managing significant organisational changes linked to the transition between Commission Colleges. As part of this transition, staff were reinstated in DG ENER from Cabinets, and vice versa, ensuring a seamless process. Following the appointment of the new Commissioner for Energy and Housing, DG ENER submitted a reorganization request to establish the Housing Task Force, which became a self-standing entity within DG ENER on 1 February 2025, coordinating housing policy across the Commission. To facilitate alignment, a management retreat was organized with the new Commissioner, his Cabinet, and DG ENER's senior management. Additionally, multiple middle management positions had to be filled in 2024, with several senior managers departing throughout the year. DG ENER's HR unit launched selection procedures for middle managers and conducted a major internal mobility exercise for Deputy Heads of Unit, ensuring continuity and leadership stability.

In June, the European Personnel Selection Office (EPSO) published a reserve list of successful candidates from the EU Green Deal competition in energy, climate, and environment, from which DG ENER recruited 21 laureates in the second half of the year. This process required close coordination across the DG and flexible resource redeployment to address evolving unit needs. Meanwhile, the EPSO specialist competition for nuclear energy (AD level), launched in 2023, remained ongoing throughout 2024, with the reserve list expected in summer 2025. The competition aims to recruit 130 nuclear safeguards inspectors (for inspections, research, and project management) and 68 policy officers (for legislative, administrative, scientific, advisory, and supervisory roles), with most positions based in Luxembourg.

DG ENER continues to strengthen its strategy to improve the working relations between staff located in Brussels and Luxembourg. A Senior Management Meeting and an All-Staff event were organised in February 2024 in DG ENER's site in Luxembourg (EUFO), with the participation of the Commissioner and the Director-General. A second All-Staff event with the Director-General took place in EUFO in May, and an ENER management seminar was organised in December, focusing on workforce agility and flexibility.

DG ENER analysed the results of the 2023 staff survey and adopted a local action plan. As part of its strategy, DG ENER organised two HR roadshows, one in each of its sites, to allow staff to directly engage with the HR team and give them the opportunity to ask questions related to HR business. In addition, DG ENER started a weekly live debrief by the Director-General to ENER staff on the outcome of management meetings.

Ethics and security matters continued to be placed at the core of DG ENER's HR principles values. ENER staff are required to sign a declaration on their obligations on ethics and are continuously reminded of their obligations on how to handle sensitive information. A review of the posts with sensitive functions was launched, and an awareness info session by the Chief Confidential Counsellor for staff in Luxembourg and an info session by DG HR to ENER

managers were organised, aimed at presenting the new anti-harassment strategy adopted by the Commission.

DG ENER's internal communications strategy continued to focus on staff engagement through webinars, increasing and sharing knowledge and through improved newcomers' and staff's experience. In 2024, DG ENER organised over 70 webinars, covering multiple policy topics in the field of energy, info sessions by the Shared Resource Directorate on procurement, finance and IT, and HR sessions on ethics, mindfulness and well-being. Their recordings are kept available in ENER hub for staff to rewatch.

DG ENER's equality network pursued its work on raising awareness on equality and diversity agenda, while the Equality Platform for the Energy Sector held two meetings in 2024, promoting inclusive and sustainable practices across the energy industry. Finally, the first edition of the ENER4TALENT programme, hosting for the first-time men and women ended in October 2024, after six group coaching sessions.

3.2. Digital transformation and information management

Digital Transformation

In 2024, DG ENER advanced its digital transformation and efficiency of its operations in alignment with the Corporate Digital Strategy ([60]). Through its Shared Resources Directorate, DG ENER is a Member of the Information and Technology Cybersecurity Board (ITCB).

DG ENER strengthened its **digital culture** by launching a SharePoint-based intranet to improve collaboration, cybersecurity awareness, while fostering the inter-DG collaboration (EMPL and MARE) to share best practices. To prepare for the Interoperable Europe Act and enhance **digital-ready policymaking**, DG ENER organized awareness sessions, developed training materials, and established a team to advise on policy digitalization.

To ensure **seamless digital environment**, DG ENER modernized its IT landscape by migrating key systems to the cloud, transitioning to an Open Source Java framework for cost efficiency, and integrating corporate solutions to streamline operations. Additionally, corporate solutions like the Corporate Notification System and Ares Integration streamlined operations. As regards, **IT Governance**, the Steering Committee acknowledged progress in ongoing IT projects and the reliable performance of operational systems. It also approved a revised governance framework for the Union Biofuels Database and Policy Reporting Platform to improve efficiency. These requests were approved at corporate level by the ITCB, including the launch of a new platform proposed by ENER Task Force 1.

In relation to the **business-driven digital transformation**, automation tools improved business processes, including consultant contract management and risk assessments. Committed to **secure, and resilient infrastructure**, DG ENER adopted Continuous Security Assurance, strengthened cybersecurity risk management, and expanded security plans to

([60]) European Commission Digital Strategy - European Commission

cover all systems. Furthermore, the efforts to raise cybersecurity awareness among staff were reinforced, alongside continued remediation of critical vulnerabilities. Despite heightened risks due to the geopolitical situation, no serious IT security incidents impacted DG ENER systems or staff in 2024.

Information Management

As regards document management, the rate of unfiled registered documents remained below 2% target. Training sessions focused on document management, electronic workflows, and security, supporting the transition to a more efficient paperless work environment. In line with this goal, DG ENER gained access to the IAEA encrypted portal, replacing paper-based report submissions, and removed 65 linear meters of paper archives from the Laccolit building.

DG ENER expanded and enhanced its Policy Reporting Platform (e-Platform) to reduce administrative burdens and increase transparency in national reporting and work continues on integrating reporting for environmentally harmful subsidies in collaboration with DG ENV.

Data Protection

DG ENER continued internal training on data protection, raising awareness of privacy statements, records management, and obligations for operational data controllers. Efforts to implement the Commission Data Protection Action Plan progressed, ensuring proper records of processing operations and improving the quality and accessibility of information provided to data subjects.

The Data Protection Coordinator actively collaborated with the Commission's Data Protection Officer and the European Data Protection Supervisor, while also addressing data protection issues in projects involving DG ENER units, other Commission services, and decentralized agencies.

3.3. Sound environmental management

The European Commission's Political Guidelines for 2019-2024 acknowledge the EU's crucial role in mitigating environmental impacts. DG ENER implements its initiatives through the European Commission's Environmental Management (EMAS) program. The priorities include maximising the efficient use of resources (such as energy, water, and paper), reducing CO_2 emissions, promoting waste reduction, recycling, and sustainable mobility.

In line with the Commission's Greening Strategy, DG ENER privileges videoconferencing and aims at reducing business missions, in its commitment to decrease its carbon footprint. As part of its Green Deal reporting, DG ENER closely monitors its travel-related emissions. In 2024, total emissions increased by 7% compared to the previous year, as part of DG ENER's outreach work to mitigate the energy crisis, including missions outside the EU. Nevertheless, DG ENER's footprint remained 25% lower than the Commission average.

In 2024, DG ENER maintained its efforts to raise awareness concerning CO_2 emission and waste reductions. It participated to corporate energy saving and sustainable commuting actions.

3.4. Examples of economy and efficiency

DG ENER expanded and enhanced its **Policy Reporting Platform (e-Platform)** to reduce administrative burdens and increase transparency in national reporting. The platform was fully integrated with the corporate records system Hermes-Ares-Nomcom, streamlining processes and incorporating three new reporting obligations: National Climate Progress Reports, EED Data Centers, and EED Skills. To streamline IT solutions, DG ENER decommissioned or integrated systems, leveraging synergies with DG MOVE. This integration, eliminated duplication, improved interoperability, and ensured long-term cost savings in line with the Commission's digital transformation goals.

DG ENER conducted an in-depth assessment of its **framework contracts** to evaluate their adequacy in providing the necessary expertise for delivering on its policy agenda. The review focused on ensuring that these contracts effectively supported regulatory oversight, the preparation of impact assessments, and the enforcement of legislation. DG ENER aimed to optimize resources and procurement to enhance efficiency, identifying gaps where additional contracts could strengthen policy implementation and cost-effectiveness.

To improve internal collaboration and knowledge-sharing, DG ENER fully migrated to **SharePoint Online** in 2024. A new intranet based on this technology was deployed and became fully operational, providing a more structured and efficient document management system. The adoption of SharePoint Online facilitated real-time collaboration, improved accessibility to shared resources, and streamlined internal workflows. Beyond document management, DG ENER leveraged SharePoint Online to automate several business processes, further increasing operational efficiency. The transition enabled tools for automating contracts, tracking recruitment, and centralizing risk assessment, reducing administrative burdens and enhancing efficiency in line with the Commission's digital-first approach.