Ref. Ares(2021)2230765 - 31/03/2021

European Commission

Annual Activity Report 2020

Directorate-General for Energy

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Introductory message by the Director-General

2020 was an important year for energy policy and DG Energy. Energy policy is at the centre of the European Green Deal and DG ENER delivered several key strategies to help achieve its objectives while facing the challenges imposed by the pandemic that affected all sectors of the economy including energy. There was no disruption of critical energy supply and DG ENER supported national authorities on handling the energy security related risks of the crisis.

The energy transition is a fundamental component of Europe's future. Accounting for 75% of climate emissions, energy plays a crucial role in the path towards a climate neutral Europe by 2050 and our increased target to cut emissions by at least 55% by 2030. Investment in energy, the energy transition and energy efficiency can help meet these ambitious targets in a cost-efficient way and strengthen our innovation, green technology leadership, jobs and competitiveness.

2020 was the year to lay the foundations with our new Strategies for Energy System Integration, Hydrogen, Offshore Renewable Energy, Renovation Wave and Methane Emissions, all of which set the framework and identified actions which will enable the transformation of the current energy system that is still often built around rigid, separated value chains. 2020 was also the year when - building on the Energy Union and the Clean Energy package - we adopted our first Green Deal legislative proposal on the revision of Trans-European Networks for Energy Regulation and when Member States submitted their final National Energy and Climate Plans (NECPs). This allowed the Commission to confirm its ambitions towards achieving our common 2030 energy and climate targets and assess the plans of Member States on how to reach the targets - which is particularly important in the recovery context.

This Annual Activity Report (AAR) provides a detailed outline of our achievements in 2020 in relation to the objectives set in DG Energy's Strategic Plan 2020-24 and Annual Management Plan 2020. Part 1 sets out our main policy achievements in the past year, and part 2 provides insights into how we reached these and 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/

I wish you an interesting read on how energy policy contributes to the European Green Deal, energy security and a just transition.

Ditte Juul Jørgensen

Director-General of DG Energy

THE DG IN BRIEF

Under the political guidance of Commissioner Kadri Simson, the Directorate-General for Energy (hereafter 'DG ENER' or 'the DG') is responsible for developing and implementing **European energy policy**.

The EU Treaties, together with the Treaty establishing the European Atomic Energy Community (EURATOM Treaty) represent the primary law relevant for the energy sector. Under the Treaty on the Functioning of the European Union (TFEU), energy policy is a shared competence. The EURATOM Treaty is a lex specialis in relation to the TFEU, which applies to the nuclear energy sector and covers all policy aspects relevant for the civil use of nuclear energy.

Commission President, Ursula von der Leyen and Commissioner for Energy Kadri Simson.

DG ENER promotes secure, sustainable, competitive and affordable energy for all EU citizens. It does so by creating the conditions for an integrated energy market which works for citizens, by ensuring energy efficiency first and making the EU a world leader in renewable energy sources. Its policies contribute to the decarbonisation of the European economy and help the EU to meet its ambitious 2030 energy and climate targets in view of achieving climate neutrality by 2050.

DG ENER is working to accelerate Europe's clean and just energy transition for it to become the first climate-neutral continent by 2050. We set out policies to develop an innovative, resilient and integrated energy system, delivering a continuous supply of affordable, secure, reliable and clean energy to its citizens and businesses in line with the Green Deal.

The DG strives to remove barriers for energy transition and to stimulate energy solutions, which will drive the shift to climate neutrality whilst promoting Europe's sustainable growth and job creation. The transition will build on consumer participation and market-driven investments in energy efficiency and renewable energy technologies, which will boost EU's global leadership and competitiveness, while reducing its energy dependency and import bills.

Among its other tasks, the DG develops and monitors the implementation of the EU legislative framework for the safe use of nuclear energy, and ensures the wider application of the Euratom Treaty, including safeguards. It also aims to foster access of EU citizens to high quality radiological and nuclear technologies in medicine, to the highest safety standards. Finally, the DG contributes to the development of fusion energy technologies through the ITER project.

In 2020, the DG defined and ensured sustained progress in achieving the new specific objectives set out in its Strategic Plan 2020-2024 which are fully aligned with the European Green Deal while ensuring an appropriate response to the COVID-19 pandemic.

The DG also developed a new organisation chart that aligns with the new mission statement and European Green Deal objectives, and established a new set of values and principles, a management charter and improvements in its working methods.

The main spending programmes in 2020 that supported the work of the DG ENER were:

- Financing the ITER project via the European Joint Undertaking for ITER and the Development of Fusion for Energy (F4E JU) accounting for more than two thirds of DG ENER's spending in 2020 (73.3% of total spending, or EUR 633.6 million).
- The Nuclear Decommissioning Assistance Programmes for nuclear power plants in Bohunice (Slovakia), Ignalina (Lithuania) and Kozloduy (Bulgaria), accounting for 13.5% of DG ENER's spending.
- The European Energy Programme for Recovery (EEPR), accounting for around 3.5% of DG ENER's spending. EEPR was established in 2009 to address both Europe's economic crisis and European energy policy objectives.
- Research programmes (the Seventh Framework Programme for Research and Technological Development and Horizon 2020), accounting for 1.4% of DG ENER's spending.
- DG ENER's subsidy of EUR 17.3 million (equal to 2% of the total payments) to the Agency for the Cooperation of Energy Regulators (ACER).

The Connecting Europe Facility (CEF)-Energy programme is implemented by INEA. At the end of 2020, the agency managed a portfolio of 66 ongoing actions amounting to EUR 4.41 billion of EU support distributed between the electricity sector, the gas sector, smart grids and cross-border CO2 networks.

The European Fund for Strategic Investments (EFSI) 2015-2020 finances strategic energy infrastructure, energy efficiency, and renewable energy projects. As of 31 December 2020, a substantial number of EFSI projects had been approved, for a total investment of EUR 313.4 billion, of which EUR 84.5 billion directly targeting the energy sector. The energy sector ranks second in EFSI infrastructure financing, where it accounts for around 27% of EFSI operations.

On 31 December 2020, DG ENER had **610 staff in place**, including external staff (contract agents and SNEs). Three Directorates (A, B and C), are based **in Brussels**, which is around half of the staff of the DG: they deal with energy policy coordination and related statistical and economic analysis, international relations, inter-institutional and communication aspects, internal energy market and infrastructure, energy security and safety, renewables, sustainable energy sources, energy efficiency and research and innovation. The other two Directorates (D and E) are based **in Luxembourg** (with the exception of the ITER Unit, which is part of Directorate D but based in Brussels) and cover nuclear safety, safe management of spent fuel and radioactive waste, safe decommissioning, radiation protection and management of the ITER project, as well as nuclear safeguards.

The work of DG ENER is supported by the 'Shared Resources Directorate' (SRD), shared with and technically assigned to DG MOVE. In 2020, the SRD had 86 staff in Brussels, dealing with financial resources (including budget), operational finances and project financing, informatics and logistics, assurance and supervision and with document management /archiving.

The work of the DG is supported by two Executive Agencies: for Innovation and Networks (INEA) and for Small and Medium-sized Enterprises (EASME); by the Euratom Supply Agency (ESA); by the regulatory Agency for the Cooperation of Energy Regulators (ACER); and the F4E Joint Undertaking[1].

1 Additional details of the functioning of INEA, EASME, ACER and F4E JU are covered in Annex 7 to the AAR.

EXECUTIVE SUMMARY

The Annual Activity Report is a 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 and constitute the basis on which the College takes political responsibility for its decisions 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 the achievement of the Commission's general objectives and DG's specific objectives (executive summary of section 1)

The unprecedented COVID-19 crisis has deeply disrupted the economies in the European Union (EU) and those of external trading partners. It has affected global trade and supply chains, impacting the pace and scale of investments and the energy market. Equally, the demand side has been affected. As a result, economic activity and energy consumption have decreased rapidly.

In 2020, Member States and the EU authorities started taking measures with the aim of avoiding that the liquidity shortage induced by the COVID-19 crisis turns into a deeper economic recession. At the same time, climate change remains an overarching challenge with potentially significant impacts on livelihoods. The European Green Deal is Europe's strategy for how to achieve climate neutrality by 2050. It is also Europe's new growth strategy and will help the EU economy recover from the COVID-19 crisis by building back better, creating jobs and making Europe more competitive globally. The energy transition is a central element in this growth and competitiveness strategy.

Therefore, DG ENER defined in 2020 its new strategic vision for the period 2020-24 to fully support through its actions, policies and instruments the **European Green Deal for the European Union (EU) and its citizens** while **providing a rapid response to the impacts of the COVID-19 crisis.**

Key achievements 2020 grouped by the five specific objectives of the DG's Strategic Plan 2020-2024:

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 also relies on a well-functioning and secure internal energy market, fit for decarbonisation where progress is monitored through the Energy Union Governance.*

[2] Article 17(1) of the Treaty on European Union

Under Specific Objective 1, the key achievement for DG ENER was to set out a vision on how to accelerate the transition towards a more integrated energy system in Europe, with the aim of enabling the decarbonisation of the energy system by overcoming the current compartmentalised system which is built on vertical energy value chains. This vision was presented with the adoption of the **energy system integration strategy and the hydrogen strategy**. DG ENER presented the **strategy on offshore renewable energy**, drawing up an enabling framework to facilitate the necessary massive scale-up of this sector in the coming years and integrate it into the wider post COVID-19 recovery strategy. As indicated in the European Green Deal roadmap, DG ENER adopted a legislative proposal for a **revised Trans-European Networks for Energy (TEN-E) Regulation** with the objective to ensure that the TEN-E infrastructure framework is a key enabler towards the Union's decarbonisation objectives for 2030 and 2050. DG ENER also adopted a **Communication on a strategic plan to reduce methane emissions** that considers the establishment of an international independent methane emissions observatory. A legislative follow-up proposal is currently being prepared. As regards progress towards the energy and climate targets for 2030, DG ENER assisted the Member States in the implementation of the Clean Energy legislative package and was, together with DG CLIMA, in the lead for the **EU-wide assessment of the final National Energy and Climate Plans**. This was followed by the first **State of the Energy Union** after the final plans were available, accompanied by a **detailed assessment and guidelines** for the swift implementation of each National Energy and Climate Plan. This detailed assessment provided guidance to Member States, also in relation to the recovery from the impacts of the economic crisis. Moreover, the assessment of the first draft Recovery and Resilience Plans started with the entire DG contributing to the assessment of these plans. This was possible via the active involvement of the network of Country Desks, the creation of an **internal Task Force on Recovery** and ad-hoc working groups looking at the specific components of the draft Recovery and Resilience Plans. The assessment of the National Energy and Climate Plans, together with the **EU-wide impact assessment for revising the climate target up to at least 55%,** on which ENER contributed substantially, was a key input to the **Communication on Climate Target Plan 2030** adopted in September 2020. Further, in 2020, DG ENER continued its work to ensure an effective implementation of the Euratom legal framework on **nuclear safety, radioactive waste management and radiation protection as well as of Euratom safeguards**, an EU approach to control the physical flow of nuclear materials. It pursued its engagement in the international field and the active promotion of the highest levels of nuclear safety outside the EU, in particular through support to the peer review of stress tests of nuclear power plants in the EU neighbourhood, in cooperation with the European Nuclear Safety Regulators Group (ENSREG). Finally, the Commission's services released a guide to good practices on **pandemic and energy security** related risks.

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.*

In the area of energy efficiency of buildings, the year 2020 was marked by several developments which culminated with the adoption of the **Renovation Wave Communication**, containing a strategic action plan for the years to come and accompanying delegated and implementing acts on the **smart readiness indicator**. The Commission adopted the **2019** and **2020 Progress Reports on the progress achieved towards national energy efficiency targets for 2020** and on the implementation of the Energy Efficiency Directive (EED) on the basis of 2018 Eurostat data and Member States annual energy efficiency progress reports under Article 24(1) of the EED of 2019 and 2020 respectively.

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

Under this specific objective, DG ENER contributed to drafting the **Strategic Plan of Horizon Europe**, which set the key research and innovation (R&I) strategic orientations for 2020-2024. DG ENER co-defined the Work Programme 2021-22 of the Horizon Europe Cluster 5 on 'Climate, energy, and mobility'. In order to align national and EU R&I priorities, DG ENER reinforced the Strategic Energy Technologies Plan (SET Plan), by better aligning the Implementation Working Groups (IWG) activities to the European Green Deal priorities. DG ENER also published its first **Competitiveness Progress Report** in October 2020 as part of the State of the Energy Union, reinforcing the nexus between Research, Innovation and Competitiveness, and based on an evidence-based methodology assessed the contribution of the clean energy sector to the EU economy.

DG ENER finalised the preparation of the **Strategic Agenda for Medical Ionising Radiation Applications (SAMIRA)** Action Plan[3], which contributes to the Commission's "Europe's Beating Cancer Plan" flagship initiative with new actions on the supply of medical radioisotopes, quality and safety, and research and innovation in medical applications of nuclear and radiation technology.

In 2020, significant progress **was made in the construction of the ITER device,** whereby the ITER members celebrated the start of the assembly phase. In March 2020, Commissioner Simson and the Japan Ambassador to the EU signed a Joint Declaration for the continuation of the Broader Approach, the scientific fusion cooperation project between the EU and Japan.

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, ensuring that no one is left behind, building on the European Climate Pact.*

Important progress was made regarding the Clean Energy enabling framework. The **'Coal Regions in Transitions Platform'** is fully operational and assistance to the pilot regions

[3] SWD(2021) 14 final: https://ec.europa.eu/energy/sites/default/files/swd_strategic_agenda_for_medical_ionising_radiation_applications_samira.pdf.

in preparing transition strategies has started. The **Covenant of Mayors** passed the 1000 mark in terms of cities committed to 2030 energy and climate targets and the second phase of Global Covenant started. Political support for the **'Clean Energy for EU Islands Initiative' was reinforced through the Memorandum of Split** and the **EU Energy Poverty Observatory** was extended in time and scope.

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

In 2020, DG ENER contributed to developing and implementing the external dimension of the European Green Deal in the energy field in its relations with third partners at regional and bilateral level and through its engagement in international organisations. Despite the global COVID-19 pandemic, dynamics continued to improve in many areas.

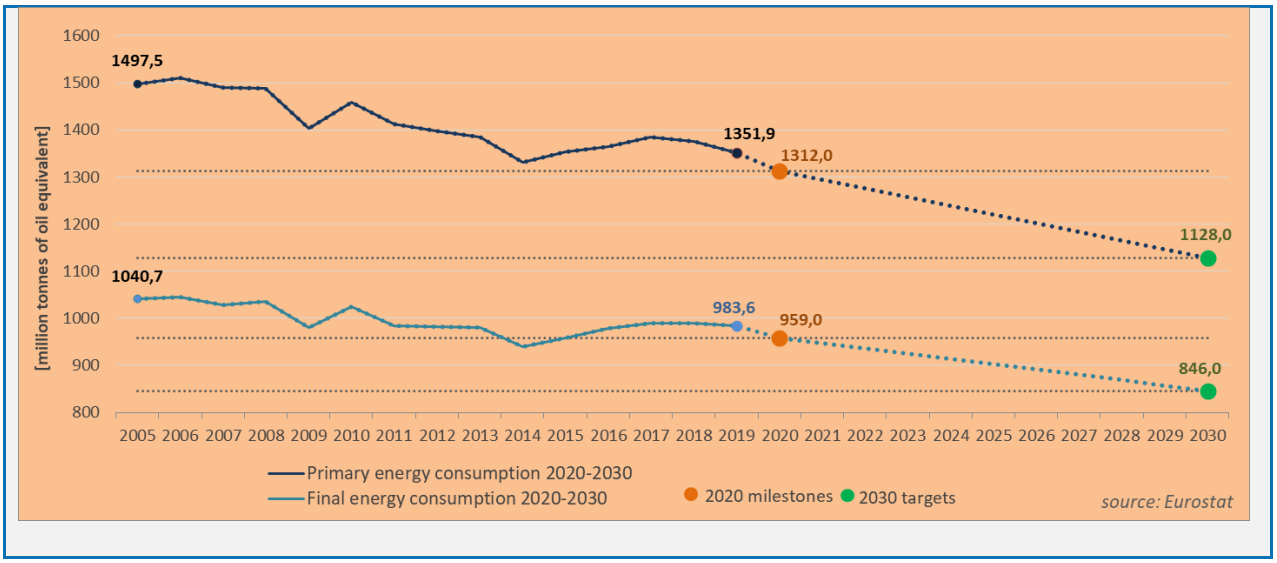
The main achievements include progress in the regional cooperation with the Southern Neighbourhood and Africa; the completion of the Southern Gas Corridor; successful contributions to the Trade and Cooperation Agreement with the United Kingdom based on which bilateral energy relations will be developed; active engagement in the International Energy Agency and its work on a green recovery, as well as an increasing drive towards clean energy policies within the EU-China energy cooperation.

B. Key Performance Indicators (KPIs)

1. Final Energy Consumption (FEC)

Baseline (2017)	**Interim milestone** (2020)	**Target** (2030)	**Latest known results**
988 Mtoe[4] (for EU27_2020)	959 Mtoe (for EU27_2020) by 2020	846 Mtoe (for EU27_2020) by 2030	In 2019, the final energy consumption (983.6 Mtoe) of the Union (EU27_2020) was 2.9% above the final energy consumption milestone of 959 Mtoe targeted for 2020.

[4] Million Tonnes of Oil Equivalent



2. Completion of EU Market Coupling

Baseline (2019)	**Interim milestone** (2022)	**Target** (2024)	**Latest known results** (2020)
Market coupling for electricity trade in the "intraday" and "day-ahead" timeframe not completed in parts of Europe (notably SouthEast Europe).	Day-ahead market coupling at all EU borders (inclusion of 11 outstanding borders in Single Day Ahead Coupling") by the end of 2022.	Completion of day-ahead and intraday market coupling at all EU borders.	On track: The day-ahead market coupling at all EU borders is planned to be completed in 2021: Greece and Italy coupled in December 2020, the pending Interim coupling (ICP) project shall be completed in May 2021 and Greek border with Bulgaria shall be added beginning of 2021.
20 borders coupled for day-ahead trading; 21 borders coupled for intraday trading.	All 25 Member States with interconnector coupled for day-ahead electricity trading.	All 25 Member States with interconnectors coupled for day-ahead and intraday trading.	On track: The intraday market coupling is also planned to be completed in 2021, with north Italian borders to join Cross-Border Intraday Market XBID in May 2021, and Greek, Italian, Bulgarian and Slovakian borders to join end 2021.

3. National Energy and Climate Plans (NECPs) implement European Green Deal and EU post-2020 energy and climate goals, and thereby contribute to economic recovery

Baseline (2019)	**Interim milestone** (2023)	**Target** (2024)	**Latest known results** (2020)
Final NECPs detailing existing and additional policies and measures to be implemented in the period 2020-30.	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 are in line with the European Green Deal objectives and thereby contribute to the economic recovery.	Substantial progress: The 2020 assessment of the final NECPs shows how the full implementation of the plans would lead Europe to overachieve the current 2030 greenhouse gas emissions reduction and renewables targets as well lead to substantial progress towards the energy efficiency target . The assessment also recognises that the NECPs constitute a strong basis for Member States to design their green recovery and resilience strategies and deliver on broader European Green Deal objectives from a clean and circular economy to a zero pollution ambition. 2020 Guidelines for the implementation of the NECPs will ensure that those remain consistent

			with the objectives of the European Green Deal and the EU post-2020 energy and climate goals.

4. Estimated risk at closure

Baseline (2019)	**Interim milestone** (2022)	**Target** (2024)	**Latest known results** (2020)
0.01%	< 2% of relevant expenditure	< 2% of relevant expenditure	The estimated overall risk at closure represented 0.29% of the DG's total relevant expenditure for 2020

C. Key conclusions on Financial management and Internal control (executive summary of section 2.1)

In accordance with the governance arrangements of the European Commission, DG ENER conducts its operations in compliance with the applicable laws and regulations, working in an open and transparent manner and meeting the expected high level of professional and ethical standards.

To ensure the achievement of policy and management objectives, the Commission has adopted a set of internal control principles, based on international good practice. The financial regulation requires that the organisational structure and the internal control systems used to implement the budget be set up in accordance with these principles. DG ENER has assessed its internal control systems during the reporting year and has concluded that it is effective and the components and principles are present and functioning as intended. Please refer to AAR section 2.1.3 for further details.

In addition, DG ENER has systematically examined the available control results and indicators, including those for supervising 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 2.1 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; and necessary improvements and reinforcements are being implemented. 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 the DG and the Commissioner(s) on management matters, the main elements of this report and assurance declaration, have been brought to the attention of Commissioner Simson, responsible for energy.

E. Specific actions on COVID-19

In 2020, Europe was strongly impacted by the COVID-19 pandemic. The Commission has proposed a strong and coordinated response to the health crisis as well as to the impact on Europe's economy and society. COVID-19 has also posed challenges as regards performance, control, audit and assurance in relation to the 2020 EU budget. In an exercise coordinated at corporate level, all Commission services have promoted the consistent and rigorous protection of the EU budget ensuring that appropriate mitigating measures were put in place.

The COVID-19 crisis had a significant impact on the overall economy, including on investments in the energy sector. Negative impacts are likely to continue well into the next years and the energy transition might slow down without the appropriate response. Therefore, the Commission adopted a **Recovery Plan with a central role for the green and digital transitions**. DG ENER started to work closely with other Commission services and Member States in order to identify energy-related **investments and reforms** that are relevant for recovery and for achieving the objective of supplying clean, affordable and secure energy. In particular, as part of the individual assessment of the final NECPs, DG ENER issued, in close coordination with SG RECOVER, DG ECFIN and DG CLIMA **country-specific priorities** in the climate and energy domain Member States should consider when developing their national recovery and resilience plan in the context of the Recovery and Resilience Facility.

DG ENER closely monitored the impact of COVID-19 on the energy sector, in particular on security of supply, through in total 17 meetings of the Electricity, Gas and Oil Coordination Groups as well as the European Nuclear Safety Regulators Group, and the European Offshore Authorities Group. Subsequently, the Commission services prepared a Staff Working Document[5] on **good practices to address pandemic risks** and held dedicated meetings on specific related matters.

In response to the COVID-19 pandemic**,** a **formal Commission Notice** was prepared and adopted by college on 2 June to invite national market surveillance authorities to enforce the legislation in a coordinated way taking account of the special circumstances and challenges.

Another major focus of the response to COVID-19 was to maintain the priority for nuclear safety and safeguards by adapting all essential operations to the particular requirements imposed in terms of travel, hygienic conditions, etc. More generally, DG ENER closely monitored the overall situation in the EU in cooperation with the **European Nuclear Safety Regulators Group** (ENSREG), and facilitated information exchanges amongst national authorities. Moreover, DG ENER supported the continued safe decommissioning operations in Bohunice (SK), Ignalina (LT) and Kozloduy (BG), including through specific

[5] SWD(2020) 104 final

measures to support salaries of local workers during temporary furlough imposed by the pandemic.

As regards **financial and budgetary management**, the effort focussed on allowing DG ENER to continue operating and developing as smoothly as possible its policy agenda in the difficult environment that arose from the COVID-19 crisis, and on the need to operate the financial circuits in an environment where teleworking became the dominant working mode.

The crisis affected the contractual relations between DG ENER and its external partners. Initiatives taken in this respect included the adoption of provisional procedures to allow **continuity of operations** in contract and document management, at accompanying the implementation of the **Qualified Electronic Signature** system and at ensuring its robustness. Additional efforts were made to assess, monitor and address the risks stemming from the crisis.

The travel restrictions significantly affected the **ex-post financial control** activity and the support to ITER IO's Financial Audit Board. DG ENER successfully adopted a remote desk approach to ensure the continuity of operations and maintain the necessary degree of protection of the EU financial interest.

1. Key results and progress towards the achievement of the Commission's general objectives and DG's specific objectives

The strategic vision for DG ENER for the period 2020-24[6] is to fully support through its actions, policies and instruments the **European Green Deal for the European Union (EU) and its citizens** while **providing a rapid response to the impacts of the COVID-19 crisis.** With the production and use of energy across economic sectors accounting around 75% of the EU's greenhouse gas emissions, further **decarbonising the energy system is critical to reaching the energy and climate objectives in 2030, clean energy transition and climate neutrality in 2050, as well as the economic benefits of the transition in terms of growth, job creation and competitiveness**.

In line with the European Green Deal Communication and DG ENER Strategic Plan 2020-24, the **five specific objectives** have been defined to meet the European Green Deal overarching ambitions while ensuring a just transition. The overall challenge for EU Energy Policy is therefore to set the foundations for an energy system fostering a climate-neutral Europe by 2050 while ensuring a **sustainable, affordable and secure energy system** and **leaving no one behind**. Such transition will require **significant investments.** Therefore mobilising both the public and private sector will be a priority for DG ENER under all of its specific objectives.

In 2020, it was crucial to launch the European Green Deal actions across our economy while at the same time supporting economic recovery after the COVID-19 crisis. In this spirit, as highlighted in the European Green Deal Communication and the Commission revised Work Programme 2020, DG ENER put forward a **Strategy for Energy System Integration, EU Hydrogen and Methane Strategies,** and a **Renovation Wave Strategy**, including guidance on how to tackle **energy poverty**.

As part of efforts to relaunch and foster a sustainable economy, DG ENER proposed a comprehensive strategy exploring **Europe's offshore renewable energy potential**. This will help citizens have access to affordable clean energy and contribute to secure energy supply. DG ENER also proposed a **revised framework for trans-European energy networks** to foster smart energy infrastructure as key enabler for the energy transition. DG ENER also contributed through its initiatives and ideas to the **European Climate Pact** which brings together all of these efforts, involving regions, local communities, civil society, schools, industry, businesses and individuals.

In addition, work continued on the implementation of the Energy Union legislation and Governance with the assessment of the final **National Energy and Climate Plans** and on providing the necessary stability and predictability to economic operators, while promoting further market integration.

[6] Strategic Plan 2020-2024, DG ENER, available at: https://ec.europa.eu/info/system/files/ener_sp_2020_2024_en.pdf

The assessment of the National Energy and Climate Plans together with the **EU-wide impact assessment for revising the climate target up to at least 55%** on which DG ENER contributed substantially was a key input to the **Communication on Climate Target Plan 2030** adopted in September 2020. The latter identified energy policy as a key component for the achievement of the revised 2030 climate target.

Progress made on meeting the objectives of the 2020 and 2030 **Energy and Climate Policy Framework** was further assessed in the context of the **fifth State of the Energy Union report**.

None of the significant risks for the DG identified in the Annual Management Plan 2020 materialised in the course of 2020.

1.1 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.

The COVID-19 crisis had a significant impact on the overall economy, including on investments in the energy sector. Negative impacts are likely to continue well into the next years and the energy transition might slow down without the appropriate response. Therefore, the Commission adopted a **Recovery Plan with a central role for the green and digital transitions**.

DG ENER worked closely with other Commission services and Member States in order to identify energy-related **investments and measures** that are relevant for recovery and for achieving the objective of supplying clean, affordable and secure energy. This included exchanges on implementing the country-specific recommendations issued within the **European Semester and following the assessment of the draft National Energy and Climate Plans**, definition of priorities for the implementation of **National Energy and Climate Plans**, and the development of **territorial Just Transition Plans**. Where required, this included **contributions to the shaping and assessment of Member States' national Recovery and Resilience Plans**, and **investments in technical support and capacity building** in cooperation with other Directorates General (for instance SG RECOVER, ECFIN and REFORM).

DG ENER also sought to **intensify the dialogue with institutional investors and financial institutions** (such as the European Investment Bank) to identify, for instance, possibilities to respond to the needs of otherwise healthy companies in recovery.

Clean energy

Clean energy is at the heart of the energy transition. The EU aims to get 20% of its final energy consumption from renewable sources by 2020 and at least 32% by 2030. Several initiatives were adopted in 2020 to contribute to the achievement of specific objective 1.

In 2020, the Commission adopted its **energy system integration Strategy and its hydrogen Strategy**, setting out a vision on how to accelerate the transition towards a more integrated energy system in Europe, with the aim of enabling the decarbonisation of the energy system by overcoming the current compartmentalised system which is built on vertical energy value chains. The **Hydrogen Strategy** sets out how the development of predominantly renewable/clean hydrogen can contribute to the climate neutrality target in 2050, while ensuring industrial leadership and job creation in the EU. It sets ambitious renewable/clean hydrogen targets and was followed by commitment from a large number of Member States to develop renewable/clean hydrogen, also as part of the COVID-19 recovery process. In this context, DG ENER organised two meetings of the "**Hydrogen Energy Network**", an informal network of experts from Energy Ministries, with the aim to support Member States in exploiting the opportunities offered by hydrogen and sharing information about the national hydrogen strategies.

The Commission also presented the **Strategy on offshore renewable energy**, drawing up an enabling framework, relying inter alia on the European energy, maritime, industrial, regional development and R&I policies, to facilitate the necessary massive scale-up of this sector in the coming years and integrate it into the wider post COVID-19 recovery strategy.

In line with the provisions of the Regulation on the Governance of the Energy Union, the Commission laid down the necessary provisions for the establishment and functioning of a **Union renewable energy financing mechanism**, which will tender support for new renewable energy projects in the EU and will also be fed by contributions from Member States with their Recovery and Resilience Facility's allocations. In addition, the Commission clarified the rules Member States have to apply to calculate their renewable energy against the targets set in the Renewable Energy Directive.

DG ENER continued the work to improve measurement and reporting of methane emissions of energy companies, in particular under the Climate and Clean Air Coalition. In particular, it adopted a **Communication on a strategic plan to reduce methane emissions** which considers the establishment of an international independent methane emissions Observatory. DG ENER also launched the necessary consultations in view of the legislative follow up proposal planned in 2021.

In the context of the 2030 increased climate ambition of at least 55% of GHG emissions reduction and following up on the abovementioned initiatives, DG ENER started working on the revision **of the 2018 Renewable Energy Directive** which will adopted by June 2021.

Affordable energy

Promoting the benefits of the world's largest cross-border electricity and gas markets and further developing cross-border energy trade remained a core priority for 2020.

On the regulatory framework ("software"), the focus in 2020 was, together with ACER, on working with Member States and regulatory authorities on the **implementation of the new electricity market design** and the underlying **network codes and guidelines** as well as the pending implementation of the gas network codes, in particular on transmission tariffs and balancing markets. The network codes and guidelines create a common regulatory framework for the internal market. They are the basis for the development of **more than 100 methodologies** to remove barriers to cross-border trade, and to ensure integration of renewable energies, distributed generation, energy storage and demand response into the system. In this context, it remains of prime importance to ensure that, by end of 2025, at least 70% of the capacity of cross-border electricity interconnectors is made available to the market for trade. Improved cross-border integration and market flexibility significantly contributes to lower CO2 emissions from electricity generation. To avoid that state support to capacity mechanisms perpetuates deficits in national energy market, the Commission adopted eight Commission opinions on **market reform plans**, laying the groundwork for necessary market reforms in the concerned Member States. The Commission also adopted five Commission decisions on **exemptions** for major new infrastructure projects, six Commission opinions on the **certification** of transmission system operators, as well as a **derogation** decision ("Kriegers Flak project").

DG ENER, together with the Smart Grid Taskforce, carried out the groundwork for implementing acts on interoperability requirements for access to consumer data, a key element to promote competition in retail markets and the emergence of data-driven services for the benefit of consumers.

On infrastructure ("hardware"), modern trans-European energy infrastructure is crucial for the EU to integrate its energy market and to meet its energy and climate goals. By identifying Projects of Common Interest and offering them a coherent regulatory framework, the EU lays the foundation for ensuring that these objectives are reached in an efficient way by carrying out the infrastructure projects which are considered vital for Europe. In 2020, the Commission adopted a proposal for a **revised Trans-European Networks for Energy (TEN-E) Regulation** as indicated in the European Green Deal roadmap. The objective is to ensure that the TEN-E infrastructure framework is a key enabler towards the Union's decarbonisation objectives for 2030 and 2050, while contributing to sector and market integration, security of supply and competition.

The Commission awarded ten actions a maximum total amount of EUR 998.3 million in 2020 with the Connecting Europe Facility (CEF)-Energy budget for grants under the CEF 2020 call. At the end of 2020, Innovation and Networks Executive Agency (INEA) managed 66 ongoing actions with total CEF Energy support of EUR 4.41 billion. In 2020, INEA closed 20 CEF Energy actions with balances paid. Projects already enjoying CEF support received

EUR 386.8 million (including interim, final and pre-financing payments) in disbursements in 2020.

In 2020, DG ENER's Energy Markets Observatory continued to ensure the collection of multiple sources of best available energy market data to support European energy policy. The fourth edition of the **Report on Energy Prices and Costs** was published along with the State of the Energy Union. It supports the EU energy and climate policies by increasing the understanding and transparency of the evolution, drivers and impact of energy prices and costs.

Secure energy

The security and safety of the Union's energy system are a precondition for the European economy and the health and well-being of Europeans. The security and safety are also a precondition for both the economic recovery and the acceptance and success of the energy transition required by the European Green Deal. While efforts to strengthen the resilience of the energy system and its supply chains must continue, DG ENER integrated the lessons of the COVID-19 crisis in the energy sector by identifying the energy security good practices to address the different risks associated with a pandemic.

In 2020, the Commission continued to steer the work of national competent authorities and other relevant entities to develop crisis scenarios and risk preparedness plans, which integrate the lessons of the pandemic crisis. This was done by issuing **guidance in the electricity sector** and a **Commission recommendation** on the arrangements between Member States for an effective cross-border cooperation and mutual assistance in the field of electricity and by supervising the work by ENTSOE and ACER so that the first draft national risk preparedness plans can be submitted in 2021.

The Commission adopted a series of **Commission opinions on gas security of supply** to guide the finalisation of the national preventive action plans and emergency plans to ensure the security of gas supply. The Commission adopted a decision requesting Member States to ensure that the cross-border pipelines are put in reverse flows unless specific reasons justify new exemptions. A particular attention was paid to effective solidarity arrangements between Member States with the first-of-a-kind solidarity agreement between Member States being adopted in December 2020.

The Commission submitted a **Report on the safety of off-shore oil and gas operations**, which focused on the assessment of the effectiveness of the relevant Directive and integrated the results of the public consultation. The Commission has continued its work with the Oil Coordination Group to fully implement the directive on emergency oil stocks and ensure appropriate level of stocks in particular in view of the after crisis in which a rebound of demand is expected.

DG ENER also contributed to the Security Union strategy and the two horizontal legislative proposals on the **resilience of infrastructure** and **cybersecurity**, both of them including important new measures strengthening the protection of energy infrastructure. DG ENER

also kicked off work on a Network Code on the cybersecurity of cross-border electricity flows with two targeted stakeholders consultations, with the involvement of the still to establish EU-DSO (Distribution System Operator) entity as requested by the Electricity Regulation.

In the field of **nuclear energy**, DG ENER continued to monitor the effective transposition and implementation of the Euratom legal framework on nuclear safety, radioactive waste management and radiation protection. It also launched a **review of the implementation of the Nuclear Safety Directive (NSD)** on the basis of the Member States' reports received by July 2020. DG ENER maintained its close collaboration with Member States' regulatory authorities within ENSREG, including on the follow-up of the first **Topical Peer Review (TPR)** on ageing management and on the timely preparation of the second TPR under the amended NSD.

In February 2020, the European Court of Auditors published its Special Report 03/2020, which concluded that the Commission has contributed well to nuclear safety in the EU, but that there is still some room for improvement. DG ENER is committed to implementing its three recommendations.

DG ENER continued its work to evaluate the notifications of new investments on nuclear projects. It carried out verification missions of Member States' facilities for the monitoring of radioactivity levels in the environment and prepared Opinions on general data submitted by Member States on the plans for the disposal of radioactive waste. In the field of **nuclear emergency preparedness and response**, DG ENER continued to operate the ECURIE system for the exchange of urgent information in case of a radiological emergency and the EURDEP system for the exchange of radiation monitoring data. It carried out successfully the ECURIE 2020 Exercise, together with national competent authorities, in order to test communication channels and response capacity in a confinement situation.

The **Nuclear Decommissioning Assistance Programmes** in Bulgaria, Lithuania, and Slovakia have progressed in spite of the COVID-19 pandemic and continued to reduce substantially nuclear and radiation safety risks related to the concerned reactors. Important achievements in 2020 were the removal and safe storage of over 90% of the spent fuel assemblies in Ignalina (Lithuania), and the removal of the reactor vessel to cutting workshops for size reduction and packaging in Bohunice (Slovakia). A political agreement was reached on the proposals for the continued support to decommissioning activities in Lithuania, Bulgaria, Slovakia and the JRC facilities (EUR 1.02 billion) under the Multiannual Financial Framework 2021-2027[7].

As to its **nuclear safeguards** obligations, the Commission continued to fulfil its duties under the multilateral agreements with the International Atomic Energy Agency (IAEA), and under the bilateral agreements with third countries. Given that the COVID-19 pandemic had

[7] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32021R0100; https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32021R0101.

a severe impact on Euratom safeguards operations, DG ENER has refined its nuclear safeguards programme based upon a risk-based approach, focusing inspections more strongly according to nuclear proliferation risks.

DG ENER, in cooperation with the Euratom Supply Agency (ESA), prepared non-legislative proposals for strengthening **nuclear governance and nuclear safety in the EU**. These include proposals on the revision of the Euratom safeguards approach, on the establishment of an Expert Group on financial aspects of nuclear decommissioning and spent fuel and radioactive waste management, and on the revision of the ESA operational rules. The formal decision making procedures for the three initiatives should be completed during the first trimester of 2021.

DG ENER also conducted preparatory work to engage with stakeholders in order to strengthen cooperation for the safe deployment and licensing of Small Modular Reactors (SMRs), and followed relevant developments at the international level.

DG ENER achieved an **accreditation of quality management system for the radiation protection laboratory** in its Luxembourg premises in accordance to ISO/IEC 17025:2017, and obtained a new operating licence for the laboratories and transport of radioactive material.

Energy strategy and implementation

In 2020, DG ENER continued to play a central role in supporting the implementation of the Clean Energy Package and in the definition of the energy strategy to successfully deliver the clean energy transition as outlined in the European Green Deal.

DG ENER was, together with DG CLIMA, in the lead for the **EU-wide assessment of the final National Energy and Climate Plans** that took place during the second half of 2020. This was followed by the first **State of the Energy Union** after the final plans were available, accompanied by a **detailed individual assessment** of each National Energy and Climate Plan. This detailed assessment provided **guidance** to Member States, also in relation to the recovery from the impacts of the economic crisis. In parallel, the assessment of the first draft Recovery and Resilience Plans started with all units of DG ENER contributing to the assessment of these plans. This was possible via the creation of an **internal Task Force on Recovery** and ad hoc working groups looking at the specific components of the draft Recovery and Resilience Plans.

The Commission also established the **Energy Union Committee**, which is in charge, along with the Climate Change Committee, of the implementation of the Governance of the Energy Union. Work continued on the preparation of implementing acts under the new Governance Regulation, notably the **Implementing Act on the Union renewable energy financing mechanism** which was adopted in the second half of 2020. DG ENER also contributed to Implementing Acts on the reporting of progress on the National Plans prepared by DG CLIMA. DG ENER also continued to support the quantitative and organisational preparations for support of the Governance Regulation, namely regarding

the establishment of the reporting and monitoring framework on progress to energy and climate 2030 targets. In this regard, DG ENER in cooperation with DG CLIMA and the European Environment Agency (EEA) launched the **e-reporting platform** of the Governance Regulation that will mainstream energy and climate reporting. It will be fully operational on time to receive the first progress reports in March 2021.

DG ENER worked closely with the UK Task Force on the implementation of the **Withdrawal Agreement** and the negotiations with the UK on the future relationship which were successfully completed in December 2020. On the Withdrawal Agreement, DG ENER worked to ensure effective implementation of Title IX on Euratom matters and the provision of the protocol on Ireland-Northern Ireland designed to preserve the single electricity market on the island of Ireland. Likewise, in the negotiations on the future relationship, DG ENER worked to achieve agreement with the UK on general energy cooperation (covering sustainable energy, security of supply, competitive markets and trade over interconnectors) and on civil nuclear cooperation.

DG ENER continued enhanced work on planning, monitoring and reporting arrangements in order to ensure that the intended purposes are timely achieved, with regard to both the policy and the management dimension.

In the context of the **European Semester**, DG ENER's internal country desk network ensured that energy policy was adequately addressed in all country reports. Particular emphasis was placed on the investment in recovery-related areas of relevance for energy policy. DG ENER was actively involved in the drafting of the Country Specific Recommendations. Work with Member States also continued within the Energy and Managing Authorities (EMA) network with the aim of ensuring cohesion policy funding into high quality energy projects for the programming period 2021-27. The EMA brings together representatives of national energy authorities with representatives of cohesion policy managing authorities. As regards **enforcements of the energy acquis**, in 2020, the Commission adopted 125 infringement related decisions on the basis of proposals prepared by DG ENER during the monthly infringements decision-cycle. In addition, the Commission opened new infringement proceedings in relation to the late transposition of certain Directives which are part of the Clean Energy Package.

At international level, the Commission continued to promote in 2020, notably in the context of the Energy Community, the adoption of strategic frameworks similar to those of the National Energy and Climate Plans, as to reinforce international strategic efforts aimed at successfully delivering the clean energy transition beyond EU borders.

DG ENER delivered – jointly with DG CLIMA – the Impact Assessment of the Climate Target Plan. This served the Commission as the basis for the proposal of a revised target of at least 55% emission reduction for 2030 (endorsed by the European Council) as well as for the comprehensive legislative package "Fit for 55%" to be delivered in 2021. In the field of sustainable finance, DG ENER was involved in the Impact Assesment on Taxonomy, and is continuing the follow-up work with the delegated act on EU Taxonomy and Technical Expert Group concerning the EU Taxonomy and its elements regarding the energy sector.

Directorate A – market analysis team - contributed to the Impact Assesments on Energy Taxation Directive revision and Cross Border Adjustment Mechanism coordinated by DG TAXUD, Impact Assesment on ETS revision coordinated by DG CLIMA, as well as Impact Assesment on "Guidelines on certain State aid measures in the context of the system for greenhouse gas emission allowance trading post 2021" coordinated by DG COMP.

DG ENER also invested in structured external communication actions, to increase public awareness, understanding and support of the policy initiatives within its remit. To this aim, it developed an External Communication Strategy 2020-24, bringing together the most relevant tools to target specific audiences with key messages. All College adoptions for which DG ENER was chef de file were accompanied by communication materials. Moreover, it successfully conducted the annual EU Sustainable Energy Week, turning it into a virtual event and shifting its core theme to a recovery angle ("Beyond the crisis: clean energy for green recovery and growth").

Finally, in terms of communication, DG ENER organised with EASME on 22-26 June the first digital **European Sustainable Energy Week 2020** (EUSEW). The theme was 'Beyond the crisis: clean energy for green recovery and growth'. It gathered over 4,600 online participants in four plenary sessions, the first European Youth Energy Day, 31 policy sessions, 10 virtual Energy Fair stands, 28 webinars organised as side events, and more than 130 Energy Days taking place in 38 countries.

1.2 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

Prioritising energy efficiency in all stages of the energy chain from generation to final consumption helps to decarbonise the whole energy system in a cost-effective way, a key prerequisite of reaching the Union's climate objectives. It also helps improving access to affordable, secure, reliable and clean energy for all Europeans.

Buildings and products

In the area of energy efficiency of buildings, the year 2020 was marked by several developments which culminated with the adoption of the **Renovation Wave Communication** on 14 October, containing a strategic action plan for the years to come and accompanying delegated and implementing acts on the **smart readiness indicator**. The preparatory work included extensive **stakeholder consultation**, also by means of a public consultation and an extensive inter-service coordination work including 26 other services for a comprehensive strategy drawing on all relevant policy instruments.

The revision of the **Energy Performance of Buildings Directive** has been under preparation since mid-2020, including planning, the launch of a tender for the support study and the drafting of the inception impact assessment. In parallel, the work on the **enforcement and implementation** of the Energy Performance of Buildings Directive

continued. Member States had to transpose the Directive by 10 March 2020. Infringement proceedings have been launched in relation to several Member States that have not declared full transposition, and the transposition check has started.

As regards the **national long term renovation strategies** (LTRS), so far 15 Member States have submitted their strategies and the preparations of a staff-working document analysing the LTRS submitted until 15 November will be published by end of February 2021.

In the area of **energy efficiency of products**, 2020 was dominated by unforeseen developments with **two new court cases** being launched against various acts from the 2019 package of new product regulations. The need to clarify and correct several of the measures from 2019 resulted in the **Omnibus Ecodesign regulation** and **Energy labelling regulation**, amending 14 existing regulations.

The further development of the European Product Registry for Energy Labelling - **EPREL** - continued to be a key focus. Cooperation with national **market surveillance** authorities continued, and with national and industry experts on energy labelling to prepare and coordinate the **communication campaigns preparing for the rescaling of energy labels taking effect as of March 2021**.

Energy efficiency

As regards energy efficiency, the Commission launched the **review and revision process of the Energy Efficiency Directive (EED)** in the summer 2020 in accordance with the Better Regulation guidelines. The aim is to revise the EED by June 2021, as announced in the European Green Deal and in order to make the Directive fit to contribute to reaching the increased climate target of at least 55% for 2030, as proposed in the Climate Target Plan. The revision of the EED should contribute to reaching the higher climate target and close the gap of national contributions to the EU 2030 energy efficiency target of at least 32.5%. It should also contribute to the various policy initiatives of the European Green Deal, in particular the Renovation Wave and the energy system integration strategy. Work on the **implementation and enforcement of the existing Energy Efficiency Directive (EED)** continued in 2020. Some remaining issues concerning the transposition of the EED were followed under infringement proceedings pursuant to Article 258 TFEU.

The Commission adopted the **2019** (COM(2020)326 final) and **2020 Progress Reports** (COM(2020)954) **on the progress achieved towards national energy efficiency targets for 2020** and on implementation of the EED on the basis of 2018 Eurostat data and Member States annual energy efficiency progress reports under Article 24(1) of the EED of 2019 and 2020 respectively.

In the context of monitoring the achievement of the EU energy efficiency targets for 2020, the Commission services convened a Member States' Task Force to mobilise efforts to reverse the risk of not meeting the EU target for 2020 due to growing energy consumption trends in the EU over the recent years. Within the Task Force, Member States and the

Commission services were sharing best practices on increasing the effectiveness of current energy efficiency measures and introducing further short-term policy measures.

Significant progress was made concerning the financing of energy efficiency, including under the **Smart Finance for Smart Buildings initiative**, launched by the Commission as part of the Clean Energy for All Europeans package. The number of projects receiving **project development assistance (PDA)** increased, in particular under the **European Local Energy Assistance (ELENA) facility**, helping project promotors prepare bankable projects.

In collaboration with the United National Environmental Programme Financial Initiative (UNEP FI), the Commission steered the work of the **Energy Efficiency Financial Institutions Group (EEFIG)**. A working group was set up, focussing on taxonomy and green tagging – it provided expert input on energy efficiency to the Technical Experts Group on Sustainable Finance, in particular for the buildings sector, and analysed the existing green tagging practices.

In its work on energy efficiency but also regarding the general objective of competitiveness, DG ENER is supported by the **Executive Agency for SMEs (EASME)**. All energy efficiency activities entrusted to EASME (Horizon 2020 Energy Efficiency calls and Other Actions) were implemented according to the 2020 Agency's work programme, including all payments. The central evaluation of the **Horizon 2020 Energy Efficiency Calls 2020** led to 63 new energy efficiency projects supported with a budget of EUR 123 million. In addition, the dedicated call to identify beneficiaries related to the **Concerted Action** supporting the transposition and implementation of the recast Renewables Directive (CA-RES IV) was launched with one proposal has been successfully evaluated and proposed for funding for the total grant amount of nearly EUR 5 million.

1.3 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

In cooperation with other Commission services, DG ENER co-drafted the **Strategic Plan of Horizon Europe**, which sets the key research and innovation (R&I) strategic orientations for 2020-2024. DG ENER co-defined the Work Programme 2021-22 of the Horizon Europe **Cluster 5 on 'Climate, energy, and mobility'** and worked on the definition of the **co-funded Clean Energy Transition Partnership** and of its Strategic Research and Innovation Agenda (SRIA). Early 2021 will also mark the closure of the Horizon 2020 Green Deal Call, which DG ENER co-prepared to support the main priorities of the European Green Deal.

In order to align national and EU R&I priorities, DG ENER reinforced the Strategic Energy Technologies Plan (SET Plan), by strengthening its synergies with the Research, Innovation

and Competitiveness dimension of the NECPs and by launching a joint exercise, together with the EU German Presidency, to ensure that the work of the Implementation Working Groups (IWGs) fully contributes to the main EU energy policies. DG ENER also published its first **Competitiveness Progress Report** in October 2020, reinforcing the nexus between Research, Innovation and Competitiveness, and based on an evidence-based methodology to assess the contribution of the clean energy sector to the EU economy.

During the whole year, DG ENER informed the policy debate with knowledge on innovative energy solutions, including smart energy networks, digitalisation and storage of energy, safe and flexible integration of renewables, energy efficient buildings, and energy intensive industries. DG ENER continued working with DG CNECT on R&I projects that use digital technologies to increase the capacity of the system to integrate energy coming from renewables as well as to run energy grids in an efficient way. Cooperation between R&I projects in areas of smart grids, storage or digitalisation, such as the 'Bridge' initiative, was key to promote sector integration, demonstrate solutions for flexibility markets of the future, and to develop common data exchange, interoperability and governance requirements to enable such markets.

On hydrogen, DG ENER together with DG RTD and DG MOVE supervised the activity of the **Fuel Cells and Hydrogen Joint Undertaking, whose aim is to support research, technological development and demonstration activities in fuel cells and hydrogen.** In addition, DG ENER collaborated with DG RTD to launch the new **Clean Hydrogen Partnership** and a **100 MW electrolyser call** - in the context of the EU Green Deal Call - to support technological advancement in this area.

DG ENER finalised the preparation of the **Strategic Agenda for Medical Ionising Radiation Applications (SAMIRA)** Action Plan, in collaboration with DG SANTE, DG RTD, the JRC and ESA. The action plan, adopted on 5 February 2021, contributes to the Commission's "Europe's Beating Cancer Plan" flagship initiative with new action to secure the supply of radioisotopes for cancer diagnosis and care, and to enhance the quality and safety of radiation technology for medical applications. It will also provide orientation with respect to the EU research and innovation action in this field.

On the **international level**, DG ENER continued strengthening the R&I collaboration on the development and deployment of clean energy innovative technologies. The involvement in strategic fora such as the **Clean Energy Ministerial** (CEM) and the **Mission Innovation** (MI) remained cornerstones of this effort. DG ENER contributed to the design of MI 2.0, which new roadmap was adopted at the end of 2020. It also actively contributed to the 11th Clean Energy Ministerial meeting, which theme was 'Supporting the Recovery, Shaping the Future', and cooperated with CEM members to raise the ambition of CEM in view of the next phase, to be launched in June 2022.

Fostering digital technologies for the EU energy system

DG ENER continued working with DG CNECT on R&I projects that use **digital technologies** to increase the capacity of the system to integrate energy coming from renewables as well

as to run energy grids in an efficient way. Cooperation between R&I projects in areas of smart grids, storage or digitalisation, such as the 'Bridge' initiative, was key to promote sector integration, demonstrate solutions for flexibility markets of the future, and to develop common data exchange, interoperability and governance requirements to enable such markets.

Developing nuclear fusion energy technologies (ITER)

In 2020, the **ITER Project** reached 72.7% of the total construction work leading to the beginning of the first experiments ("First Plasma"). An important milestone was achieved in July 2020 with the official launch of the assembly phase. The ITER Members discussed the potential impact of the pandemic on the project's schedule and estimated cost at the 27th ITER Council meeting (18-19 November), and will reconsider the situation at their next meeting in summer 2021.

A political agreement was reached on the amending Decision 2007/198/Euratom establishing the European Joint Undertaking for ITER and the Development of Fusion Energy, which sets the rules for the continued support the ITER Project (EUR 5.61 billion) under the Multiannual Financial Framework 2021-2027.

During 2020, the European collaboration with Japan under the **Broader Approach Agreement** further advanced with the signature of a Joint Declaration extending the Broader Approach cooperation into a new phase and the completion of the assembly of the JT-60SA tokamak in Naka, thus complementing the ITER project and accelerating the realisation of fusion energy.

In 2020, DG ENER continued to supervise the **Joint Undertaking Fusion for Energy (F4E)** to enhance its technical, procedural and planning preparedness. The Governing Board of F4E decided to renew the mandate of the Director, Johannes Schwemmer, for three more years.

1.4 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

As the ambition level of energy policies rises, the need to communicate, persuade and engage all levels of governance, companies, consumers and civil society became ever more important. Bottom-up, local initiatives have a clear potential to accelerate the uptake of clean energy technologies and test new approaches to efficiently implement the clean energy transition on the ground. Delivering the European Green Deal requires not only legislation but also an enabling framework to accelerate the uptake of EU legislation at local and regional levels. To this effect, a series of non-legislative actions have been taken in 2020 as follows:

Citizens' Rights and Energy Poverty

The Commission published a Recommendation on Energy Poverty to help Member States implement their obligations in this respect under the recast Electricity Directive and organised the 12th Citizens' Energy Forum with focus on consumer engagement, empowerment and protection including just transition and energy poverty.

A second edition of the **Energy Poverty Observatory** will extend the initiative another four years with a new focus on delivering technical assistance at the regional and local level. The new consortium will open a new chapter involving also the Covenant of Mayors that is developing its energy poverty activity.

Coal Regions in Transition

The Commission continued to implement the initiative for **coal regions in transition** focusing on **'just transition' in the EU coal regions**. The Commission organised two large-scale technical meetings, launched three toolkits and a dedicated webinar on transition, and rolled out technical assistance to seven EU coal regions. The initiative was extended to peat and oil shale and became part of the **Just Transition Platform** accompanying the **Just Transition Mechanism** and **Fund**. In addition, DG ENER created a sister initiative in the Western Balkans and Ukraine and concluded an administrative agreement with the World Bank providing technical assistance to three Polish coal regions and the Polish government on just transition related to the decline of coal. Discussions advanced with the European Investment Bank (EIB) on a joint technical assistance facility for clean energy and energy efficiency projects in coal regions.

Clean Energy for EU Islands Initiative

The Commission continued to assist Member States in channelling public and private investments in clean energy transition on islands. The Commission and 14 Member States signed the Memorandum of Split establishing a long-term cooperation framework for the clean energy transition on the EU islands. The Commission steered the work of the dedicated Secretariat for the Initiative to successful completion of the assignment and completed tendering for a new Secretariat to support the second stage of the Initiative.

Covenant of Mayors Europe and Global Covenant of Mayors

The European Covenant of Mayors opened a new phase of its deployment, with a new contract, kicked off in July 2020, focusing on the upgrade of the Covenant to the new 2030 and 2050 climate and energy objectives ('Covenant 2.0'). Despite the cancellation of the high-level Ceremony of the Covenant, due to the COVID-19 pandemic, over 15 events were organised, focusing on awareness raising and capacity building on local energy and climate action, including during the EU Sustainable Energy Week and European Week of Cities and Regions. One notable, large-scale event was the Covenant of Mayors Investment Forum, organised in February 2020. Work to establish a business dimension to complement the Covenant progressed well. The first phase of **Global Covenant of Mayors** was

successfully completed in Asia, Americas and Africa. Expanding its role, the Commission started to co-fund its central secretariat in addition to nine regional ones worldwide.

Smart cities and communities

At local and regional level, DG ENER kept on enhancing the role of **smart cities and communities** by strengthening strategic partnerships between businesses, municipalities and the financing sector. This was reflected in and linked to the ongoing collaboration between the Covenant of Mayors and the Smart Cities Marketplace[8]. The latter managed to match a total of roughly EUR 600 million of investment with the interest of its Investor Network[9]. The **Smart Cities Marketplace** was launched on the Europa domain in November 2020. It is a new platform created by a merge of the Marketplace of the European Innovation Partnership on Smart Cities and Communities (EIP-SCC) and the Smart Cities Information System (SCIS).

European Energy Youth Network

The Commission launched the **European Energy Youth Network** informally on 21 June 2020 at the first EU Youth Energy Day. It is a bottom-up initiative facilitating the connection between existing youth-led initiatives happening at European, national and regional level on climate and energy. This has leveraged synergies between existing initiatives and fora such as the European Youth Forum, the European Youth Parliament, and the Assembly of European Regions Youth Regional Network. It has also mobilised an important and under-represented stakeholder group, in alignment with the European Green Deal objectives. The European Youth Energy Network actively participated to the launch of the Euroepan Climate Pact in December 2020 and submitted a commitment.

1.5 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

Building on the progress of the Energy Union and advances in the implementation of the European Energy Security Strategy, in 2020 DG ENER contributed to developing and implementing the external dimension of the European Green Deal in the energy field via continued close cooperation with EU's key international partners and a reinforced promotion of the values, objectives and best practices enshrined in the "Clean Energy for all Europeans" package.

In particular, DG ENER further strengthened the trans-Atlantic energy co-operation. DG ENER prepared the ground for relaunching the **EU-US Energy Council** and stepped up relations on clean energy with the new administration following US elections. DG ENER hosted the **EU-Canada High Level Energy Dialogue** via a series of videoconferences

[8] https://smart-cities-marketplace.ec.europa.eu
[9] https://smart-cities-marketplace.ec.europa.eu/matchmaking/investor-network

from May to September 2020 based on post-COVID recovery plans and the European Green Deal. High Level contacts with Norway as a major energy producing partner continued. Active cooperation under the **EU–Japan energy dialogue**, including on innovations for the clean energy transition was also pursued. Cooperation on LNG, notably with the US and Japan, focused on promoting at global level a more liquid, transparent and flexible LNG market.

With large emitters, the Commission advanced clean energy transition cooperation. DG ENER further reinforced cooperation on clean energy policies including energy business cooperation with **China** under the annual high-level Energy Dialogue and the Energy Cooperation Platform, and further strengthened the implementation of the **EU-India Clean Energy and Climate Partnership** as well as seeking to reinforce ties with Southeast Asian partners, with the Republic of Korea, and Taiwan.

DG ENER further developed strategic cooperation with Algeria and Egypt, with a view to facilitating European investments in clean energy, and will engage with Turkey in line with the Council decisions.

DG ENER pursued regional cooperation via attendance and support to the Cairo based East Med Gas Forum to facilitate the development of a sustainable regional gas market in the East Mediterranean and engage on a policy dialogue in the decarbonisation of gas. With Gulf countries, the Commission pursued the energy dialogue at regional level via the **EU-GCC (Gulf Cooperation Council) Energy Expert Group** and the **EU-GCC Clean Energy Technologies Network**.

DG ENER continued its work towards the completion of the last pipeline section of the **Southern Gas Corridor**. It reinforced co-operation in all relevant sub-sectors towards decarbonisation of the energy systems with Ukraine and the other Eastern Partner countries. In particular, it continued to support **Ukraine**'s regulatory approximation to the EU energy acquis and integration to EU energy and gas markets based on the Association Agreement (and its Annex XXVII on energy) and the MoU on energy partnership. DG ENER also monitors the implementation of the agreement on gas transit to the EU via Ukraine concluded at the end of 2019. In the framework of the **Eastern Partnership**, work focused on the definition of the future priorities and new set of deliverables (2021-2025), reinforced the role of renewable energy and prepared the path for cooperation on hydrogen and methane emissions reduction.

In 2020, the Commission reinforced energy cooperation with Central Asian countries in the framework of the new strategy on Central Asia. In the context of the **Europe-Asia Connectivity Strategy** and the **Asia-Europe Meeting (ASEM)**, DG ENER promoted sustainable energy connectivity with relevant partners, in particular Japan and the Association of Southeast Asian Nations (ASEAN). DG ENER maintained strong engagement with the **Republic of Korea**, in particular on the European Green Deal, while in October 2020, South Korea announced its commitment to achieve carbon neutrality by 2050 as part of a "Green New Deal" that closely mirrors commitments made by the EU. Engagement

was stepped up with **ASEAN**, paving the way for a bilateral clean energy dialogue to be established in 2021. Similarly, DG ENER positively responded to **Indonesia**'s request to exchange good practice on renewable energy legislation, with potential for sustained engagement in 2021.

The Commission continued to **develop energy cooperation with the African Union** and African countries, and, in line with the Communication for a Comprehensive Strategy with Africa, developed a draft Africa-EU Green Energy Initiative. Technical cooperation with **South Africa** on green hydrogen and just transition from coal continued throughout 2020.

In Latin America, it launched energy relations with Cuba, became Permanent Observer at Latin American Energy Organization (OLADE), and pursued bilateral co-operation with Brazil, Argentina and Mexico.

The Commission continued to underpin the **EU's leading role in the framework of international fora** like the G7, G20, the Clean Energy Ministerial and the Mission Innovation Initiative and the International Partnership for Hydrogen in the Economy (IPHE). In the framework of the newly established Energy Efficiency Hub hosted at the IEA, DG ENER worked to ensure its successful launch in line with EU's priorities. On Hydrogen, DG ENER also engaged in the **Clean Energy Ministerial (CEM) Hydrogen initiative**, including on the global ports consortium and global aspirational goals. In addition, it co-led with France and US on the **International Partnership for Hydrogen and Fuel Cells in the Economy (IPHE)** t to define emission criteria for hydrogen production.

The Commission continued to interact with the **Russian Federation** in line with the five principles laid out by the Council. Therefore, DG ENER had first technical and non-politicised exchanges on prospects for gas decarbonisation (Work-Stream under the EU-RUS Gas Advisory Council), supported study activities on the clean energy transition under the EU G-20 climate diplomacy tool.

DG ENER pursued the development of city-level energy diplomacy with selected countries (e.g. Canada, US, China) by leveraging the Global Covenant of Mayors and its partners.

DG ENER engaged in the process of the **Energy Charter Treaty modernisation** in line with the negotiating directives given by the Council. It continued to support the reform process in the **Energy Community** aiming at encouraging investments and further integrating energy markets in the region as well as completing the Treaty amendment process. This includes the establishment of 2030 energy and climate targets as well as the preparation of integrated National Energy and Climate Plans.

In general terms, DG ENER continued its efforts to strengthen the role of the private sector and the implication of International Financing Institutions and promoting the inclusion of energy in Free Trade Agreements. In addition, DG ENER continued to advocate for an increase of the **use of the euro** in international energy trading and markets at all levels.

DG ENER actively promoted the **highest levels of nuclear safety outside the EU**. A priority action in 2020 was the follow-up of the **European Nuclear Regulator's Group (ENSREG) peer review** and recommendations further to the stress tests of the Astravets Nuclear Power Plant (NPP) conducted in Belarus in 2018. It involved multiple preparatory exchanges at technical level between the Belarusian nuclear regulator, GAN, and the EU peer review team composed of experts from ENSREG and the Commission. **Civil nuclear safety cooperation** with **Iran** under Annex III of the **Joint Comprehensive Plan of Action (JCPOA)** continued in spite of the US's withdrawal, though at a lower rate due to the impact of the COVID-19 pandemic on planned cooperation activities.

DG ENER continued its close collaboration with international organisations in the nuclear field such as the International Atomic Energy Agency (IAEA) and the OECD Nuclear Energy Agency (NEA), and represented the Commission at the International Framework for Nuclear Energy Cooperation (IFNEC) Executive Committee Meetings. It submitted, in coordination with the Member States, the Euratom Report on the implementation of the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management, in preparation for the seventh Review Meeting of the Contracting Parties to the Convention, currently postponed to 2022.

2. Modern and efficient administration and internal control

This section explains *how* DG ENER delivered on the achievements described in the previous section. It is divided into two subsections.

The first subsection reports the control results and other relevant information that supports management's assurance on the achievement of the financial management and internal control objectives[10]. It includes any additional information necessary to establish that the available evidence is reliable, complete and comprehensive. It covers all activities, programmes and management modes relevant to DG ENER.

The second subsection deals with the other aspects of a modern and efficient administration: human resources, digital transformation and information management and sound environmental management.

2.1 Financial management and internal control

Assurance is provided on the basis of an objective examination of evidence of the effectiveness of risk management, control and governance processes.

This examination is carried out by management, who monitors the functioning of the internal control systems on a continuous basis, and by internal and external auditors. The results are explicitly documented and reported to the Director-General. The following reports have been considered:

- the reports by Authorising Officers by Sub-Delegation (AOSDs);
- the reports from Authorising Officers in other Directorates-General managing budget appropriations in cross-delegation;
- the reports on control results from entrusted entities in indirect management as well as the result of the Commission supervisory controls on the activities of these bodies;
- the contribution of the Internal Control Coordinator, including the results of internal control monitoring at the Directorate-General level, including the results of the annual risk assessment exercise;
- the reporting on the implementation of DG ENER's Anti-Fraud Strategy;
- the reports on recorded exceptions, non-compliance events and any cases of 'confirmation of instructions' (Art 92.3 Financial Regulation);
- the reports of the ex-post audit;
- the limited conclusion of the Internal Auditor on the state of control and the

[10] Art 36.2 FR: a) effectiveness, efficiency and economy of operations; b) reliability of reporting; c) safeguarding of assets and information; d) prevention, detection, correction and follow-up of fraud and irregularities; and e) adequate management of risks relating to the legality and regularity of underlying transactions

observations and recommendations reported by the Internal Audit Service (IAS);

- the observations and the recommendations reported by the European Court of Auditors (ECA).

These reports result from a systematic analysis of the evidence available. This approach provides sufficient guarantees as to the completeness and reliability of the information reported and results in a complete coverage of the budget delegated to the Director-General of DG ENER.

This section covers the control results and other relevant elements that support management's assurance. It is structured into (a) Control results, (b) Audit observations and recommendations, (c) Effectiveness of internal control systems, and resulting in (d) Conclusions on the assurance.

2.1.1 Control results

This section reports and assesses the elements identified by management which support the assurance on the achievement of the internal control objectives[11]. The DG's assurance building and materiality criteria are outlined in AAR Annex 5. Annex 6 outlines the main risks together with the control processes to mitigate them and the indicators used to measure the performance of the relevant control systems. Annexes 7 and 8 provide details regarding the different elements used for building assurance.

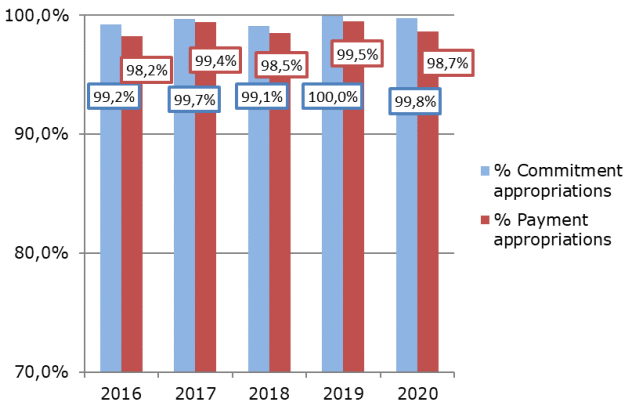
Overview of the 2020 budget execution

The total payments of DG ENER in 2020 amount to EUR 864.91 million, the vast majority being operational as the administrative part only accounts for 0.13%.

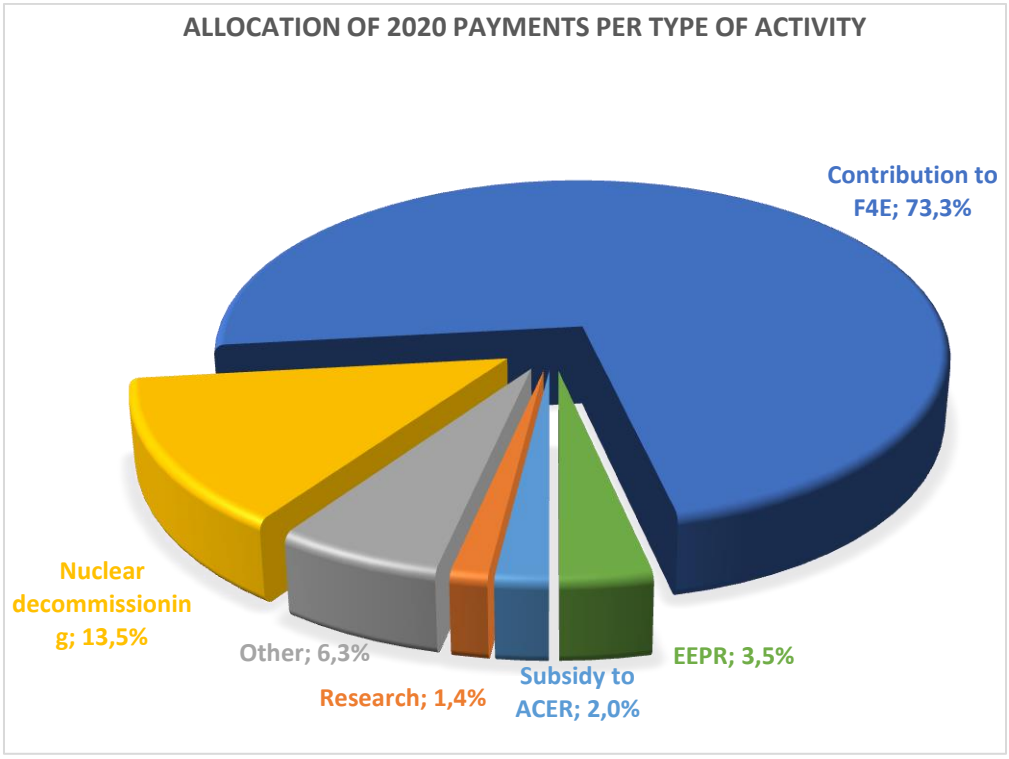
The following chart shows the execution of DG ENER's appropriations[12] over time. In 2020 DG ENER absorbed 99.8% of the commitment appropriations and 98.7% of the payment appropriations.

[11] 1) Effectiveness, efficiency and economy of operations; 2) reliability of reporting; 3) safeguarding of assets and information; 4) prevention, detection, correction and follow-up of fraud and irregularities; and 5) adequate management of the risks relating to the legality and regularity of the underlying transactions, taking into account the multiannual character of programmes as well as the nature of the payments (FR Art 36.2). The 2nd and/or 3rd Internal Control Objective(s) (ICO) only when applicable, given the DG's activities.

[12] This chart is based on C1 credits only (commitment appropriations voted in the current budget (C1), budget modifications and other current year commitment appropriations, modifications due to amending budgets and transfers (C1)) while tables 1 and 2 of Annex 3 include all authorised appropriations.



The chart below provides an overview of DG ENER implementation of its programmes and activities under direct management (11.2% of the expenditure) and indirect management (88.8% of the expenditure).



DG ENER's management factually concludes that the control results, presented in the sections that follow are complete and reliable and provide reasonable assurance about the achievement of the internal control objectives.

Table 2.1 below provides a summary of the payments made by type of activities. It shows that:

- Based on the main indicator results available, overall suitable controls were in place in 2020 and worked as intended;

- DG ENER does not need to introduce a reservation on the Seventh Research Framework Programme (FP7) overpayments following the newly introduced de-minimis rule[13], as the payments of DG ENER to FP7 in 2020 are 0.78% of the total payments and the exposure is less than EUR 5 million (i.e. only EUR 1.58 million);
- No new reservation is introduced in this AAR as DG ENER has reasonable assurance that overall suitable controls are in place and work as intended (taking into account also the multiannual character of the main programmes); the risks are mitigated and/or monitored; improvements and reinforcements are being implemented.

Table 2.1: Overview table: types of activities and main indicators (figures in EUR)

Risk-types / Activities	Grants / Procurements	Cross-sub-delegations to other DGs	Subsidies / funds to EE (EU Agency, EA, JU) Delegation Agreements with EE	Available ICO indicator(s)	Independent info from auditors (IAS, ECA) on assurance or on new/overdue critical recommendations available?	Reservation
EEPR grants	30.157.800			RER: 0.8%	N	N
FP7 grants	6.703.645			RER: 4.07%	N	N
H2020 grants	5.607.415			RER: 2.80%	N	N
Contribution to F4E JU			633.593.734	Audit / supervision activities	N	N
Nuclear decommissioning (CPMA / EBRD / SIEA)			116.869.996	Audit / supervision activities / mgnt decl.	**N**	N
Subsidy to ACER			17.297.383	Audit / supervision activities	N	N
Other operational expenditure	53.421.570		130.000	Estimated RER <2%	N	N
Administrative expenditure	1.124.823			Estimated RER <2%	N	N
Totals (coverage)	***97.015.254***	***0***	***767.891.113***			
AAR Annex 3	*864.906.366*					

Disclosure of specific situations

The 2018 Financial Regulation[14] introduced additional reporting requirements[15] for the AAR:

- DG ENER had no cases of 'confirmation of instructions' in 2020 (2018 FR art. 92.3)
- There is one case of financing not linked to costs (2018 FR art. 125.3) in DG ENER: In the frame of energy projects being part of the Nuclear Decommissioning Assistance Programme (NDAP) in Kozloduy, the Commission decided that an increase of the EU contribution to certain projects could only be given provided that these projects were successfully completed within a defined deadline.

[13] As from 2019, a 'de minimis' threshold for financial reservations is introduced. Quantified AAR reservations related to residual error rates above the 2% materiality threshold, are deemed not substantial for segments representing less than 5% of a DG's total payments and with a financial impact below EUR 5 million. In such cases, quantified reservations are no longer needed.

[14] Regulation (EU, Euratom) 2018/1046 on the financial rules applicable to the general budget of the Union, repealing Regulation (EU, Euratom) No 966/2012 (2012 Financial Regulation).

[15] Article 92.3, Article 125.3, Article 130.4, Article 181.6 and Article 193.2

- There has not been any case of flat rates >7% for indirect costs in 2020 (2018 FR art. 181.6)[16]
- One grant agreement signed in 2020 derogated from the principle of non-retroactivity pursuant to Article 193.2 of the Financial Regulation. Costs incurred prior to the date of submission of the grant application were not eligible.
- There are no Financial Framework Partnerships with a duration of more than 4 years which entered into force during the reporting year 2020 (2018 FR art. 130.4).

Impact of the COVID-19 Crisis

In 2020, the effort focussed on maintaining the necessary level of financial performance to allow DG ENER to continue to operate and develop its policy agenda in the difficult environment that arose from the COVID-19 crisis, and from the need to operate the financial circuits in an environment where teleworking was the dominant working mode.

The crisis affected the contractual relations between DG ENER and its external partners. Initiatives taken in this respect included the adoption of provisional procedures to allow continuity of operations in contract and document management, at accompanying the implementation of the Qualified Electronic Signature system and at ensuring its robustness. Additional efforts were made to assess, monitor and address the risks stemming from the crisis. Mitigation measures were also put in place in respect of NDAP. As explained in Annex 7, specific measures were taken to ensure the continuity of the EU support and its alignment with its policies regarding peripheral regions.

Concerning the execution of its ex-post audits, DG ENER relies on the Common Implementation Centre for research programmes and on its own audit capacity for the European Energy Programme for Recovery (EEPR) programme. In both cases, the outlook of audit implementation is broadly positive. The travel restrictions significantly affected the ex-post financial control activity. DG ENER adopted a remote desk approach to ensure the continuity of operations and maintain the necessary degree of protection of the EU financial interests.

2.1.1.1 Control Effectiveness

A) Legality and regularity of the transactions

DG ENER is using internal control processes to ensure the adequate management of the risks relating to the legality and regularity of the underlying transactions it is responsible for, taking into account the multiannual character of programmes and the nature of the payments concerned. Details are provided in Annex 7.

[16] According to H2020 Rules for Participation, indirect eligible costs of H2020 grants are determined by applying a flat rate of 25% of the total direct eligible costs. It is the basic act that derogates from the FR. This applies to all H2020 grants, although in some cases the 25% could be directly embedded within a unit cost (e.g. unit cost for clinical studies).

The overall control objective is to ensure that the residual error rate affecting the relevant expenditure of 2020 remains below 2%. For the expenditure under the Horizon 2020 (H2020) programme, 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%.

DG ENER's portfolio consists of segments with a relatively low error rate, i.e. the directly managed grants under the EEPR programme and under CEF programme support actions, the directly managed procurements, co-delegation, cross sub-delegation, indirectly managed expenditure and payments made to EU Agencies. These low error rates mirror the inherent lower risk profile of these activities, the management mode, the adoption of reinforced governance provisions, the nature of the beneficiaries, and confirm the performance of the related control systems

It also comprises one segment with a relatively high error rate, i.e. the directly managed research grants. The error rates are due to the high complexity of the programme, to the nature of the funded activities and to type of beneficiaries. These error rates are largely mitigated by efforts made to reinforce the related controls systems.

The assessment on legality and regularity for the directly managed FP7 programme shows a level of detected error that appears to be 'persistently high' over the years in terms of potential financial impact (exposure). This programme however represents a very limited share of the total activity. The impact on the amount at risk and on the overall materiality at DG level is therefore minimal. The estimated residual error rate for the directly managed H2020 funds remains within the estimated band of 2-5% for this programme. Considering the limited exposure of DG ENER to this programme, the situation does not impair the assurance.

The residual error rate of the EEPR programme is estimated at 0.80%[17]. There is no indication of significant issues regarding other directly managed grants or procurements (administrative or operational, including procurements related to Nuclear Safeguards).

Overall, on one hand, 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. On the other hand, the ex-post controls had a positive deterrent effect within the programmes, which would foster system improvements and a better compliance with regulatory provisions. In order to maintain a reasonable level of assurance, mitigation measures were taken to ensure the continuation of ex-post financial controls during the COVID-19 crisis. More details on these measures and on the quantified benefits from the ex-ante and ex-post controls exercised by DG ENER are disclosed in Annex 7.

[17] The increase of the residual error rate mirrors the change in calculation methodology where the error rate is calculated in function of the amount effectively audited.

Regarding indirect management, the key elements considered for the assurance are the delegation of the implementation of the Euratom contribution to the ITER project to the Fusion for Energy (F4E) Joint Undertaking (JU) and the NDAP.

In February 2021, F4E JU informed DG ENER of a significant deficiency that had affected its control systems in 2020. Faced with the sanitary crisis, the Joint Undertaking extended the use of electronic signature processes to cover all contractual acts, including newly awarded contracts. In that context, 13 legal commitments were electronically signed by officials who had not been formally empowered to do so, therefore breaching F4E's Financial Regulation.

While the JU is an autonomous EU body and has the full responsibility for the design and operation of its controls, DG ENER maintains a robust oversight of its operations and of its work to implement the Euratom contribution to ITER. The supervisory controls deployed by the Commission under indirect management do not aim at a daily monitoring of all transactions carried out by the entrusted entities and there was thus no possibility for DG ENER to prevent the occurrence of this issue, or to detect it before receiving the information from the JU.

DG ENER took action as soon as it became aware of the breach. Based on the analysis of the situation and on the description of the corrective actions already deployed that had been provided by the JU, DG ENER invited F4E to undertake complementary actions in order to provide a more thorough understanding of the impact of this event, to fully resolve the control weaknesses and to ensure full transparency in this respect. It will closely monitor the evolution of the situation and take action where relevant.

The reports received from entities implementing indirectly managed expenditure (NDAP, Euratom contribution to ITER and subsidy to the Agency for the Cooperation of Energy Regulators (ACER) provide the necessary assurance.

DG ENER's relevant expenditure, estimated overall risk at payment, estimated future corrections and risk at closure are disclosed in Table 2.2 and its accompanying notes below, and further explained in section 2.1.1 of Annex 7.

The estimated overall risk at payment for 2020 expenditure amounts to EUR 3.95 million, representing 0.45% of the DG's total relevant expenditure for 2020. This is the AOD's best, conservative estimation 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. The conservatively estimated future corrections for 2020 expenditure amount to EUR 1.40 million. This is the amount of errors that the DG conservatively estimates will be identified and corrected by controls planned to be carried out in subsequent years.

The difference between those two amounts results in the estimated overall risk at closure of EUR 2.55 million representing 0.29% of the DG's total relevant expenditure for 2020, which is a bit higher than the 0.1% in 2019. This evolution mirrors the higher relevant expenditure of FP7 and H2020 in 2020 [18]. This amount is a conservative estimate and is not considered material as regard assurance building.

In the context of the protection of the EU budget, the DGs' estimated overall risk at payment, estimated future corrections and risk at closure are consolidated at Commission level in the AMPR.

[18] The estimated overall risk at closure is calculated by multiplying the difference of the average error rate and the adjusted average recoveries and corrections with the relevant expenditure for the year, therefore higher amount of relevant expenditure, even without any increase in the difference between the two rates would give a higher overall amount at risk.

Table 2.2 - Estimated risk at closure

Activities	Payments made As per AAR Annex 3, table 2	Minus new prefinancing As per ABAC DWH BO report on prefinancing	Plus cleared prefinancing As per ABAC DWH BO report on prefinancing	Relevant expenditure = (2) - (3) + (4)	Average error rate (%) Detected	Average error rate (%) Estimated	Estimated overall amount at risk at payment = (5) x (6)	Average recoveries and corrections (adjusted ARC; %) Based on 7Y-avg adjusted historic recovery orders (as per ABAC DWH BO report on corrective capacity) Not applicable to pre-financing, administrative expenditure and disbursements to F4E and ACER.	Estimated future corrections = (5) x (8)	Estimated overall amount at risk at closure = (7) - (9)
(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**		**(7)**	**(8)**	**(9)**	**(10)**
EEPR grants	30.157.800		10.540.837	40.698.637	1,67%		679.667	0,87%	354.078	**325.589**
FP7 grants	6.703.645		32.239.650	38.943.295	5,45%		2.122.410	1,38%	537.417	**1.584.992**
H2020 grants	5.607.415	4.170.728	1.702.604	3.139.291	2,95%		92.609	0,15%	4.709	**87.900**
Contribution to F4E JU	633.593.734	633.593.734	568.429.587	568.429.587		0,00%	0	0,00%	0	**0**
Nuclear decommissioning (CPMA / EBRD / SIEA)	116.869.996	115.139.142	156.825.297	158.556.151		0,50%	792.781	0,24%	380.535	**412.246**
Subsidy to ACER	17.297.383	17.297.383	15.948.805	15.948.805		0,00%	0	0,00%	0	**0**
Other operational expenditure	53.551.570	7.869.148	5.897.184	51.579.606		0,50%	257.898	0,24%	123.791	**134.107**
Administrative expenditure	1.124.823	3.750	61.049	1.182.122		0,50%	5.911	0,00%	0	**5.911**
Total	**864.906.366**	**778.073.885**	**791.645.013**	**878.477.494**			**3.951.275**		**1.400.530**	**2.550.745**

Notes:

- See Annex 7 for the details of the calculation of the RER for each programme
- Column (1) Differentiated for the relevant portfolio segments at a level which is lower than the DG total;
- Column (2) Payments made or equivalent, e.g. expenditure registered in the Commission's accounting system, accepted expenditure or cleared pre-financing. In any case, this means after the preventive (ex-ante) control measures have already been implemented earlier in the cycle. In all cases of Co-Delegations (Internal Rules Article 3), "payments made" are covered by the Delegated DGs. For Cross-SubDelegations (Internal Rules Article 12), they remain with the Delegating DGs;
- Column (3) 'Minus new pre-financing': new pre-financing (PF) actually paid by out the DG itself during the financial year (i.e. excluding any PF received as transfer from another DG);
- Column (4) 'Plus cleared pre-financing': PF actually cleared during the FY, based on accepted invoices (i.e. their 'delta' in FY actuals, not their 'cut-off' based estimated 'consumption');
- Column (5) 'Relevant expenditure': For the purpose of equivalence with the ECA's scope of the Commission funds with potential exposure to legality & regularity errors (see the ECA's Annual Report methodological Annex 1.1), our concept of "relevant expenditure" includes the payments made, subtracts the new pre-financing paid out, and adds the previous pre-financing actually cleared during the FY. This is a separate and 'hybrid' concept, intentionally combining elements from the budgetary accounting and from the general ledger accounting;
- Column (6)
    - The calculated weighted average error rate for the total relevant expenditure in this reporting year is 0.45%
    - For low-risk types of expenditure, where there are indications that the error rate might be close to zero (e.g. administrative expenditure, contributions to financial instruments, etc.) a 0.5% error rate was used as a conservative estimate. A 0% error rate was used for expenditure considered as risk-free (e.g. operating subsidies paid to agencies and to EU bodies). For these subsidies, the responsibility of the DG is limited to the calculation, but its use falls within the remit of the beneficiary entity. The correctness of the calculation is ensured by a re-check at the time of the final payment.
- Column (8) 'Average recoveries and corrections %': Average recoveries and corrections %': the average, adjusted and weighted average of corrections is 0.16%
- The seven-year historic average of recovery orders corresponds to 2.21% (as per ABAC DWH BO report on corrective capacity). The percentage has then been adjusted downwards to only take into account recoveries from the last seven years with a recovery context type 'irregularity' and 'error'. This percentage is further adjusted by deducting certain recoveries of pre-financing made in previous years, which under today's rules should be considered as being of recovery context type 'none' (instead of 'irregularity'). This percentage does not apply to pre-financing, administrative expenditure or payments made to ACER, which are generally not subject to ex-post recoveries. Overall, this percentage is the best available indication of the expected corrective capacity of the ex-post control systems implemented by the DG over the past years. The adjusted recovery rate is 0.24%. It should not be confused with the actual corrections, integrated in the DG's calculation of the residual error rate. For FP7, the correction rate used in this column corresponds to the difference between the overall detected error rate (5.45%) and DG ENER's residual error rate (4.07%). For H2020 payments, the correction rate used in this column corresponds to the difference between the R&I family detected error rate (2.95%) and DG ENER's residual error rate including draft audit reports (2.80%). For EEPR the correction rate used is equal to the difference of between the detected rate (1.67%) and the residual error rate of 0.8%.

Conclusion as regards legality and regularity

The AOD's conservative estimation of the amount of *relevant expenditure* during the year not in conformity with the applicable contractual and regulatory provisions at the time of closure (amount at risk at closure) is not considered material as regard assurance building.

Regarding directly managed expenditure, the residual error rate for the FP7 programme is above the materiality threshold but this programme represents a very limited share of the total activity. The amount at risk is, in accordance with the de-minimis rule, not material concerning the assurance building. The residual rate for H2020 remains within the healthy range and for the EEPR programme is below the materiality threshold remains within the healthy range (see Annex 5).

Regarding co-delegations and, cross-sub delegations, there are no indications of any element that would impair the assurance.

Regarding indirectly managed expenditure, DG ENER assessed the potential impact of the issue signalled by F4E JU concerning electronic signatures. Based on the information available at the time of this report, the issue had, as of 31 December 2020, no material impact on the payments made by the Commission to the JU since these payments are made in the form of a subsidy corresponding to the Euratom contribution to F4E's funding, as set in the Council Decision establishing the Joint Undertaking. The oversight operated by DG ENER functioned properly and DG ENER will closely monitor the follow-up given to this issue. At this stage, there is no impact on the assurance, as the issue may not be consequential beyond the need for the JU to fully resolve the observed control weaknesses and to ensure that a full assurance is given in this respect.

No other particular events, issues or weaknesses, issues that could have a material impact on the assurance have been identified.

B) Fraud prevention, detection and correction

DG ENER has developed and implemented its own Anti-Fraud strategy (AFS) since 2012, based on the guidance provided by OLAF. The AFS was revised in 2020 in accordance with the 2019 Commission Anti-Fraud Strategy (2019 CAFS). Its implementation is monitored and reported to the senior management at least thrice yearly.

The revision of the AFS was preceded by a targeted fraud risk assessment and the analysis of the accomplishment of the previous strategy. During 2020, DG ENER also performed a specific risk assessment for the COVID-19 crisis, focusing on the fraud-related impact of the lockdowns, sanitary measures and the Commission's recovery efforts.

The AFS is accompanied by an Action Plan which details the concrete actions DG ENER is taking for implementing the main objectives of the AFS. The actions planned for 2020 were completed.

In 2020, all OLAF requests were responded to within the deadlines and one fraud suspicion was sent to OLAF for assessment (the case was closed in January 2021 after OLAF found that no further action was necessary). There were, as of end 2020, two OLAF cases with financial recommendations. One case was closed in early 2021. The other one will be closed as soon as a waiver is issued, due to the bankruptcy of the entity involved.

On the basis of the available information, DG ENER has reasonable assurance that the anti-fraud measures in place are effective.

C) Other control objectives: safeguarding of assets and information, reliability of reporting

The general control "Safeguarding of assets and information" and "Reliablity of reporting" are relevant for DG ENER.

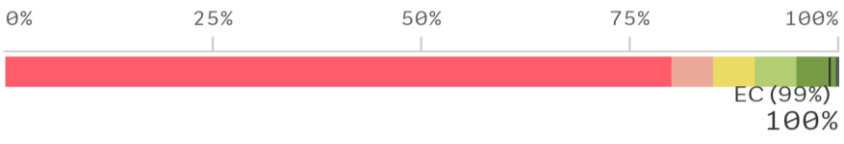
Safeguarding of assets relates to the management of assets and information within 'Euratom Safeguards' activity and to the assurance to give with regard to specific off-balance sheet items. DG ENER's current procedures and controls are considered as robust and effective.

DG ENER assessed the reliability of the reporting it receives from the entrusted entities (F4E JU, EBRD, CPMA and SIEA). The information received is compliant with the applicable guidance. DG ENER concludes that overall the information and reporting are reliable and adequate for drawing assurance conclusions.

2.1.1.2 Efficiency

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

As far as the **'timely payments' indicator** is concerned (i.e. payment accepted amount in time/ payment accepted amount in EUR), despite the pandemic DG ENER managed to achieve 100% which is above the Commission average.

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

As regards expenditure under indirect management, DG ENER maintains a continuous risk management process for two of its programmes (NDAP and ITER/F4E) and updated its risk assessment supporting the control strategy for decentralised agencies. In addition, DG ENER relies on indicators related to the efficiency of its supervisory controls.

For the NDAP, the performance was assessed as generally appropriate. DG ENER found the entrusted bodies effective and efficient in the discharge of their duties.

The supervisory controls towards F4E JU and the administration of the Euratom contribution were efficient and delivered the expected results. For both activities, DG ENER found the quality of the management information reported in 2020 sufficient for concluding on assurance.

2.1.1.3 Economy = the estimated cost 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 2020 remains stable and relatively low (see Annex 7, in particular Table Y).

The increasing relative costs reported regarding expenditure under direct management should be looked at considering two aspects. On one hand, FP7 is in its final stage and the amount of payments made is decreasing at a faster pace than the control activity. On the other hand, these controls cover more than the modest amount of expenditure for H2020, which is directly managed by DG ENER. For the EEPR programme, costs increase but remain under control due to the focus on a limited number of large size projects.

The costs related to financial and supervisory controls for F4E JU, NDAP and ACER are stable and remain low, largely under 1%.

In 2020, the costs exposed by the entities to which DG ENER entrusted tasks under indirect management were as follows:

Entity	Amount	Related programme
EBRD	EUR 1.9 million	NDAP multi donor funds
CPMA	EUR 1.27 million	NDAP Lithuanian implementation scheme
SIEA	EUR 0.45 million	NDAP Slovak implementation scheme
F4E	EUR 43.46 million	Euratom contribution to ITER
EIB	EUR 55,000	CEF Delegated Instrument – Energy segment

Except for F4E JU, these amounts correspond to fees that are calculated in proportion to the value of the operations managed (including both the payments made in 2020 to the entity and ongoing projects funded by earlier contributions). For F4E JU, the reported amount is based on a yearly assessment of actual cost.

Details of the estimated cost related to shared/pooled control activities carried out by REA and hosted by DG RTD (Common Implementation Centre; Common Audit Service) for the Research and Innovation family are reported in the AARs of REA and RTD.

2.1.1.4 Conclusion on the cost-effectiveness of controls

Based on the most relevant key indicators and control results, 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.

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

The strong controls are instrumental to maintain the programme on track in terms of schedule and budget. Tangible results are visible.

In conclusion, DG ENER considers that the current control system 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).

2.1.2 Audit observations and recommendations

This section sets out the observations, opinions and conclusions reported by auditors – including the limited conclusion of the Internal Auditor on the state of internal control. Summaries of the management measures taken in response to the audit recommendations are also included, together with an assessment of the likely material impact of the findings on the achievement of the internal control objectives, and therefore on management's assurance.

Internal Audit Service (IAS)

In 2020, the IAS announced a new audit on DG ENER support to and monitoring of existing energy acquis. The preliminary phase is still ongoing and the kick-off meeting (to define audit objectives and planned scope, audit methodology to be followed and timing) is not yet scheduled.

In addition, following DG ENER request, the IAS started a consulting engagement on the adequacy of the governance and supervision arrangements for the Energy Community Secretariat for effective supervision and oversight by DG ENER. This engagement is still in its preliminary phase.

The implementation of the IAS audit recommendations is ongoing, according to the approved action plans.

European Court of Auditors (ECA)

In 2020, DG ENER was a lead service for two special reports issued by ECA.

Name of the Special report	Date of publication	Outline of the conclusions
SR 01/2020: EU action on Ecodesign and Energy Labelling: important contribution to greater energy efficiency reduced by significant delays and non-compliance	January 2020	The audit recommendations cover improvements to the regulatory process for product-specific regulations; to the measurement of policy impacts, and actions to facilitate exchange of information between Market Surveillance Authorities and improve compliance with the policy.
SR 03/2020: The Commission contributes to nuclear safety in the EU, but updates required	February 2020	ECA concluded that the Commission contributed well to nuclear safety in the EU. The audit recommendations focus on the Commission's role in monitoring the transposition of the Euratom directives, the legal framework under which it issues the opinions on nuclear investments, and the approach to prepare the opinions and carry out verifications of radioactivity monitoring facilities.

DG ENER was furthermore associated to four other Special Reports: SR 18/2020: The EU's Emissions Trading System; SR 11/2020: Energy efficiency in buildings; SR 12/2020: The European Investment Advisory Hub and SR 22/2020: Future of EU agencies.

ECA published in 2020, for the first time, two separate Annual Reports: one focusing on traditional compliance aspects, including the annual statement of assurance, and a separate report covering the performance of the EU budget. The recurring ECA financial audits on the Declaration of Assurance (DAS) and on the administrative and operational annual accounts of DG ENER were reviewed under Chapter IV of ECA's Annual Report on compliance - "Competitiveness for Growth and Jobs". No important or critical shortcomings were identified.

The Director-General is regularly informed of the conclusions and the main recommendations stemming from the work of the auditors. The timely implementation of all recommendations is regularly monitored throughout the year and reported at DG ENER's Control Board meetings.

Annex 8, section 2.1.2. provides a comprehensive overview of ECA audits and the follow-up of recommendations.

Conclusion on audit observations and recommendations

Overall, the internal and external audit work contributes significantly to the continuous improvement of DG ENER systems and operations. The IAS, ECA and the Discharge Authority findings and recommendations are subject to a systematic follow up by the Directorate-General. The current residual risk from the audit recommendations remaining open in DG ENER does not impair the declaration of assurance. In its conclusion on the

state of internal control in DG ENER[19], the IAS stated that the internal control systems in place for audited processes are effective.

DG ENER fosters an active and positive working relationship with ECA. Commissioner Simson and Director-General Juul Jørgensen visited ECA in January 2020 and met with the Deans of Chamber I and II as well as with other members of ECA. This fruitful meeting offered a good opportunity to strengthen this partnership at the beginning of the new Commission mandate, to exchange on main policy orientations and on the way the Commission takes ECA recommendations into account and to review on-going activities. DG ENER wishes to reiterate such meetings with ECA as a good practice.

2.1.3 Assessment of the effectiveness of internal control systems

The Commission has adopted an Internal Control Framework based on international good practice, to ensure the achievement of its policy and management objectives. Compliance with the internal control framework is a compulsory requirement.

DG ENER uses the organisational structure and the internal control systems suited to achieving its policy and internal control objectives in accordance with the internal control principles and has due regard to the risks associated with the environment in which it operates.

In 2020, DG ENER continued to develop and adapt its organisational structure, internal processes and systems suited to achieving its policy and necessary to ensure operational efficiency and alignment with the Internal Control Framework of the Commission. In particular, DG ENER prepared a reorganisation to better align its structure with the new initiatives and objectives set up by the Commission. The new organisational structure took effect in January 2021.

DG ENER has due regard to the risks associated with the environment in which it operates and performs regular and targeted risk assessment to evaluate the impact of such risks. To enhance management oversight of internal control and risk management, DG ENER established a Control Board and a joint IT steering committee for Brussels and Luxembourg at senior management level. As part of its DG wide ENER4Future exercise, DG ENER streamlined its risk management processes, aiming at simplifying it while improving its pluri-annual dimension.

DG ENER identified ten risks concerning its operations in 2021 that will be monitored through the Control Board. Action plans to reduce or mitigate these risks were adopted and being implemented by the responsible Directorates. Many of these risks relate to the impact of the COVID-19 crisis that induced delays in the ongoing (ITER, NDAP) or new Energy programmes, about to be launched under the MFF 2021-2027. Based on the methodology and information sources described in Annex 8, DG ENER has assessed the performance of its internal control system during the reporting year and has concluded that

[19] Ares(2021)1222517

it is effective; all components and principles are present and functioning well overall. There are ongoing improvements in the areas of business continuity planning following recommendations issued by the IAS. These improvements – which include finding and equipping alternative locations to the EUFO building to ensure the continuity of critical business and IT activities - aim to reinforce the Business Continuity/Disaster Recover preparations for DG ENER's Luxembourg site. The relevant controls for the Brussels site are present and functioning.

Overall, the assessment established that the internal control system of DG ENER provides reasonable assurance concerning the achievement of operational objectives, the legality and regularity of the underlying transactions and that the resources have been used for their intended purpose and in accordance with the principles of sound financial management.

2.1.4 Conclusions on the assurance

This section reviews the assessment of the elements already reported above (in Sections 2.1.1, 2.1.2 and 2.1.3), and the sub-conclusions already reached. It draws an overall conclusion to support the declaration of assurance and whether it should be qualified with reservations.

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.

The information on financial management and internal control stems from management and auditors as listed in section 2.1.2. These reports result from a systematic analysis of the evidence available. This approach provides sufficient guarantees as to the completeness and reliability of the information reported and results in a comprehensive coverage of the budget delegated DG ENER.

Overall, 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 resources assigned in 2020 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 authorising officer is that the overall amount at risk at closure is not material and corresponds to about 0.29%[20] of the relevant 2020 expenditure.

[20] For directly managed FP7 expenditure, based on the de minimis rule no reservation is necessary, despite a residual error rate above 2%. The overall FP7 payments are only 0.78% of the total payments of DG ENER for 2020, with a financial impact of EUR 1.58 million.

Concerning the directly managed expenditure, DG ENER implements appropriate ex-ante and ex-post controls, to the extent that they remain cost-effective and supports the other programme objectives and financial management.

Regarding indirectly managed expenditure, DG ENER considers, at this stage, that its assurance is not materially impaired by the issue signalled by F4E JU as regards electronic signatures.

There is no indication of any other element that would impair the assurance. The information received from F4E JU, from the executive agencies INEA and EASME, from the NDAP entrusted entities and from ACER is considered as adequate and reliable.

DG ENER updated its Anti-Fraud Strategy in 2020, based on a specific assessment of its fraud risk. The relevant actions stemming from the previous antifraud strategy are considered as fully implemented, and two actions from the new action plan were already implemented last year.

DG ENER assessed its internal control systems and concluded that the internal control framework is implemented and functioning as intended. Some improvements were identified, most notably concerning the process of accounting for pre-financing, the completion of business continuity preparations in Luxembourg and the IT governance structure. DG ENER identified the necessary corrective actions, which will be implemented in 2021. Risk management processes work as intended and contribute to the good operation of the control systems.

In relation to the recommendations issued in 2020 by ECA, none is considered to have a material impact on the declaration of assurance of DG ENER. All accepted recommendations issued by ECA have led to specific action plans addressing the underlying issues. The current residual risk from the audit recommendations remaining open for DG ENER does not impair the declaration of assurance.

Therefore, under the prevailing risk environment and from a managerial point of view, DG ENER's authorising officer by delegation can sign the Declaration of Assurance.

Overall Conclusion

In conclusion, 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, in her capacity as Authorising Officer by Delegation has signed the Declaration of Assurance.

2.1.5 Declaration of Assurance

I, the undersigned,

Director-General of DG ENERGY, in my capacity as authorising officer by delegation

Declare that the information contained in this report gives a true and fair view[21].

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 limited conclusion and observations of the Internal Audit Service and the lessons learnt from the reports of the 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 or those of the Commission.

Brussels, 31 March 2021

(signed)

Ditte Juul Jørgensen

AOD

[21] True and fair in this context means a reliable, complete and correct view on the state of affairs in the DG.

2.2 Modern and efficient administration – other aspects

For an extensive reporting on all components, refer to Annex 9.

2.2.1 Human resource management

In 2020, DG ENER continued working on the implementation of the Green Deal Agenda, and fulfilling its legal obligations, in particular in the nuclear domain. It also monitored the implementation of Energy Union in all its dimensions.

Year 2020 was marked by the adaptation of the working methods to the challenges posed by the COVID-19 pandemic (telework by default; travel restrictions, specially challenging for staff of Euratom side carrying out essential missions; requirements of access to secure IT environment) and by the ENER-4-FUTURE transformation process launched following the Staff Survey 2018.

The ENER-4-FUTURE transformation process was carried out with strong involvement of the internal steering team set up in 2019 (composed of representatives of staff from all directorates and function groups) and inclusive consultations with all staff. DG ENER has now a new set of values and principles, a revised mission statement and a management charter, all of which have been established in consultation and agreement among management and staff. The revised organisational chart (into force since 16 January 2021) and working methods will allow a more effective deployment of staff to meet the Green Deal policy priorities and make best use of efficiencies and synergies identified in the review exercise.

In parallel, DG ENER kept addressing specific HR needs: meeting quantitative targets of female appointments and gender balance. A dedicated DG ENER Equality Network provided guidance and ensured monitoring on gender and other equality issues.

To maintain the high level of staff engagement and to minimise the negative impact of telework by default, DG ENER increased the communication with staff and launched a long-term strategy to improve the management culture in the DG. Training for managers and outreach focused specifically on well-being and work-life balance were put in place and there was regular activities throughout the year to ensure staff engagement and well-being. DG ENER also compiled lessons learned from working in the first phase of confinement to establish best practices and make necessary adaptations.

Replacement of outgoing staff mainly in the nuclear domain, due to retirements but also to the difficulty to recruit staff in Luxembourg, has continued requiring a careful management. In 2021, an EPSO AST specialised competition on nuclear safeguards will be launched to partially address this challenge.

2.2.2. Digital transformation and information management

The Digital Strategy adopted by the Commission in 2018 is a unique opportunity to exploit the potential of digitalisation to create innovative solutions for a more trustworthy, effective, efficient, transparent and secure Commission. In 2020, DG ENER reviewed its approach and current infrastructure/service offering for data management based on the sharing and reusability principles set forward in the Digital Strategy and the Data Strategy, and decided to redesign and implement in 2021 a new local data infrastructure in line with the corporate data platform. DG ENER actively participated in the work of the corporate Local Data Correspondents Network. The high value data assets have been captured in the corporate asset inventory and the in-depth analysis of each asset (in terms of their content and procedures) has started. In the context of COVID-19 outbreak, DG ENER used extensively its modern communication and collaboration tools (Skype for Business and Signal; digital conferences with Member States and other stakeholders via the Webex platform; new Microsoft Teams platform in pilot mode).

The awareness campaign on information security launched in 2019 brought some results in 2020. The use of security markings in ARES was assessed by DG ENER. The result of this internal assessment showed an increased use of markings and their consistency with the sensitivity degree of the documents registered.

Information Management

In October 2016, the Commission adopted the European Commission corporate strategy on Information Management stating that data and information are to be considered as strategic assets by DGs and should be complete, reliable, relevant and easy to retrieve (data, information and knowledge should be shared as widely as possible within the Commission, unless there are legal requirements or clear justifications for access to be restricted).

DG ENER developed a dashboard on information management indicators[22]. The regular monitoring carried out by the CAD (Centre d'Administration des Documents) team combined with the efforts of filling by the operational units resulted in reaching by end of 2020 the target of registered documents not filed beyond expectations (0.93%).

In 2020, due to the COVID-19 context an effective use of paperless workflows became a priority. Internal mail distribution and financial workflows were adapted. DG ENER implemented the use of Qualified Electronic Signature (QES) for documents requiring a blue-ink signature in collaboration with DIGIT and SG.

Data Protection

In line with the new transparency requirements, DG ENER converted all existing notifications into records (introducing new legal elements) or archived them if obsolete.

[22] Regulary updated and and accessible to all staff on Document Management Collaborative Space - https://myintracomm-collab.ec.europa.eu/networks/eDomecME/SitePages/Home.aspx

Under the current data protection rules, DG ENER notified to the Data Protection Officer (DPO) eight business processes, which required the processing of personal data.

Privacy statements have been regularly updated or newly created. Privacy statements are brought to the attention of data subjects at the moment of collection of personal data and inform the data subjects how to exercise their rights.

External processing agreements are in line with the Commission's (DG BUDG) general templates and instructions.

DG ENER Data Protection Coordinator (DPC) provided two information sessions for staff in charge of IT projects; and regularly advised all staff on data protection matters. Furthermore, a data protection devoted intranet page was created and regularly updated with hands-on information[23].

In 2020, DG ENER reported to the European Commission's DPO on the state of compliance in DG ENER with the new data protection rules as established in Regulation (EU) 2018/1725 by providing duly completed questionnaire on the implementation of Commission's Data Protection Action Plan[24].

The current data protection legislation allows international transfers of personal data in principle if the EU standards for the protection of the rights and freedoms of the data subject are guaranteed also after the transfer. Moreover, the invalidation of the EU-U.S. Privacy Shield (the Schrems II judgement) poses concrete challenges for services transferring personal data to third countries or using international cloud services. DG ENER will assess its processing activities in light of the requirements of the Schrems II ruling and will coordinate with relevant Commission services and Commission IT governance bodies, as well as the Commission's DPO, to be able to draw from horizontal approaches to similar situations. DG ENER and other Commission services, coordinated by the DPO, replied to a request from the European Data Protection Supervisor (EDPS) to all EU institutions to identify and map their international transfers and to report certain categories of transfers and are awaiting the EDPS' reaction. The goal is to minimise the risks linked to ongoing and future international transfers of personal data, notably by informing all data subjects of the legal situation in which such transfers take place, in order for operations undertaken by the Commission services to comply with EU data protection law.

2.2.3 Sound environmental management

The Commission's Political Guidelines for the period 2019-2024 recognise the importance of European Union leading role in reducing environmental impacts. DG ENER implements its own activities through the European Commission's environmental management (EMAS). The key priorities are: efficient use of natural resources (mainly energy, water and paper), reduction of the overall CO_2 emissions, waste prevention, recycling and re-use, and

[23] e.g. models on privacy statement on various types of processing, info on how to carry out compliant data processing operations and information on data protection training etc.
[24] C(2018)7432 final

sustainable mobility. Due to the COVID-19 crisis, staff awareness on EMAS could not be promoted on the spot in DG ENER's premises and the initial output was replaced by EMAS tips to apply at home.

The ENER Goes Green Network fosters DG ENER response to its own challenges as regards climate change. The network proposed specific actions to reduce environmental footprint at and outside work and show leadership within the Commission and beyond (i.e. commuting habits, management of office waste, organisation of office space, energy supplies, and upscaling the DG ENER building).

Regarding buildings, DG ENER contributed to the end of the year energy saving action by closing DM24 building during the Christmas and New Year's holiday period. DG ENER reassessed the needs regarding the opening hours of the buildings and decided to leave the building open during weekends (but without heating and air conditioning) and to close the garages during weekends. The COVID-19 crisis also accelerated the re-equipment of meeting rooms allowing hybrid meetings. In collaboration with the Directorate-General for Interpretation (SCIC), one meeting room was equipped with videoconferencing facilities.

2.2.4 Example(s) of initiatives to improve economy and efficiency of financial and non-financial activities.

DG ENER analysed lessons learned from exceptional measures taken under the COVID-19 pandemic and quickly reacted by adapting its contractual procedures to ensure business continuity and legality in these specific circumstances: e.g. simplified electronic exchange of contracts and grants were temporary accepted instead of blue-ink signed paper documents. This approach also benefited contractors and beneficiaries of EU funds, enabling a smooth disbursement of the due funds. It allowed to continue operations until a solution for electronic signature – currently in use – was developed at corporate level.

In 2020, the "Payment scheme" function in ABAC was systematically used to improve accuracy of payment forecasts and decreased number of clerical mistakes. This was complemented by data quality checks. The use of payment schemes results in more accurate payment forecast while avoiding double encoding work.

DG ENER linked its budget IT tool VIGIE with the new public procurement management tool (PPMT) to simplify the entry of information, to ensure the Director-General's approval of procurement procedures in PPMT and to further improve the monitoring of budgetary execution. The use of the new public procurement management tool (PPMT) became mandatory in 2020 for all open calls for tenders. This avoids the duplication of information between the two tools and allows to monitor more accurately the budget execution.

Knowledge sharing on decommissioning practices between the different segments of the Nuclear Decommissioning Assistance Programme resulted in significant efficiency gains between the Bohunice and Kozloduy segments. These exchanges resulted in timesavings for the Member States and for the operators, and the cost savings for the Kozloduy programme are estimated at EUR 8.4 million.