C/2026/2619

7.5.2026

STATE AID – FRANCE

State aid SA.119469 (2025/N) - Support for the construction and operation of six new nuclear reactors in France

Invitation to submit comments pursuant to Article 108(2) of the Treaty on the Functioning of the European Union.

(Text with EEA relevance)

(C/2026/2619)

By means of the letter dated 31 March 2026 reproduced in the authentic language on the pages following this summary, the Commission notified France of its decision to initiate the procedure laid down in Article 108(2) of the Treaty on the Functioning of the European Union concerning the abovementioned aid measures.

Interested parties may submit their comments within one month of the date of publication of this summary and the following letter, to:

European Commission,
Directorate-General Competition
State Aid Greffe
1049 Bruxelles/Brussel
BELGIQUE/BELGIË
Stateaidgreffe@ec.europa.eu

These comments will be communicated to France. Confidential treatment of the identity of the interested party submitting the comments and/or of parts of the comments submitted may be requested in writing, stating the reasons for the request.

France plans to support the construction and operation of six new nuclear reactors in France for a total capacity of 9 990 Megawatts (the 'Project').

The aid package currently comprises:

1. A subsidised loan at a preferential rate, covering 60 % of the estimated construction costs of the Project and part of the potential cost overruns, with a repayment period of 35 years, starting four years after the commissioning of each reactor (Measure 1). The costs of construction are currently estimated at EUR_{2020} 73 billion.

2. A direct price support in the form of a two-way contract for difference ('CfD') running for 40 years (Measure 2).

3. A risk-sharing mechanism based on "legitimate grounds" acting as a protection for the beneficiary from certain risks for the duration of the CfD (Measure 3).

The direct beneficiary of the measures is a Special Purpose Vehicle specifically set up for the Project (the 'SPV') and its parent company, Électricité de France ('EDF'), a 100 % State-owned company. The SPV will be dedicated to the financing of the Project while EDF will implement the Project and own the reactors. Further, EDF will act as the operator of the reactors and will be responsible for the sale of the electricity on behalf of the SPV.

The Commission has concluded in the opening decision on the existence of aid within the meaning of Article 107(1) of the Treaty on the Functioning of the European Union (TFEU). Regarding the compatibility of the measures with Article 107(3)(c) of the TFEU, the Commission also concludes on the existence of a market failure and on the necessity of aid for the development of an economic activity.

Nevertheless, the Commission has doubts on the following elements of the compatibility assessment:

— The appropriateness and proportionality of the three measures;

— The avoidance of undue negative effects on competition and trade;

— The compliance with relevant provisions of EU law.

TEXT OF THE LETTER

The Commission wishes to inform France that, having examined the information supplied by your authorities on the measure referred to above, it has decided to initiate the procedure laid down in Article 108(2) of the Treaty on the Functioning of the European Union ('TFEU').

1. PROCEDURE

(1) Following pre-notification contacts, the French authorities notified to the Commission, pursuant to Article 108(3) TFEU, on 19 November 2025, a support measure for the construction and operation of six new nuclear reactors in France (the 'Project').

(2) The Commission sent further questions on 16 January, 19 February and 26 March 2026 to which the French authorities replied on 4 February, 2 March and 27 March 2026.

(3) By letter dated 1 December 2025, the French authorities agreed to exceptionally waive their rights deriving from Article 342 TFEU, in conjunction with Article 3 of Regulation 1/1958 ([1]) and to have this decision adopted and notified in English.

2. DESCRIPTION OF THE CONTEXT

2.1. Electricity generation in France

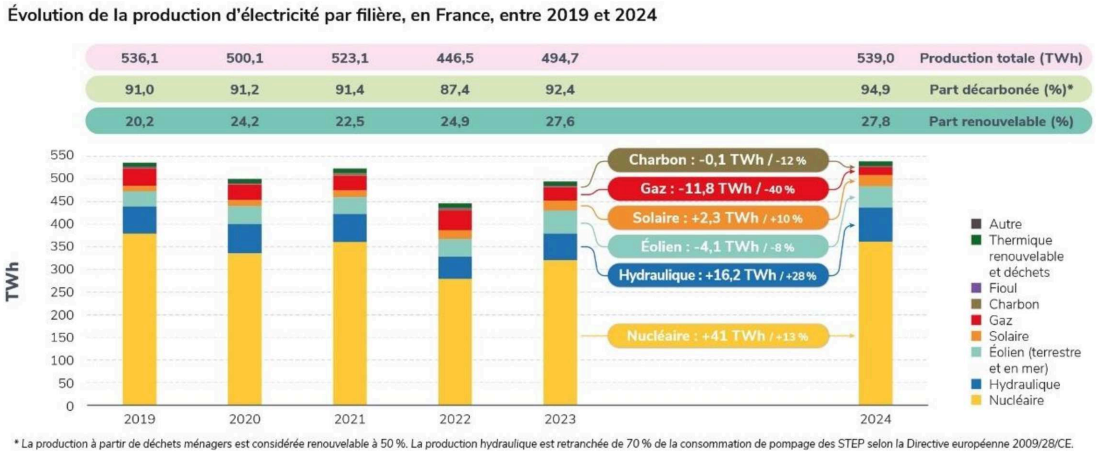
(4) In 2024, the electricity generation in France amounted to 539 TWh, which corresponds to the levels observed in the period 2014-2019.

(5) The French electricity market is heavily dominated by nuclear power. In 2024, nuclear generation accounted for 361.7 TWh (67.1 % of total production), followed by renewables with 150 TWh (27.8 %) and fossil thermal generation with 20 TWh (3.7 %). ([2])

(6) Since 2019 the share of decarbonised electricity production has steadily increased compared to fossil-based generation (see Figure 1).

Figure 1

Evolution of electricity production in France



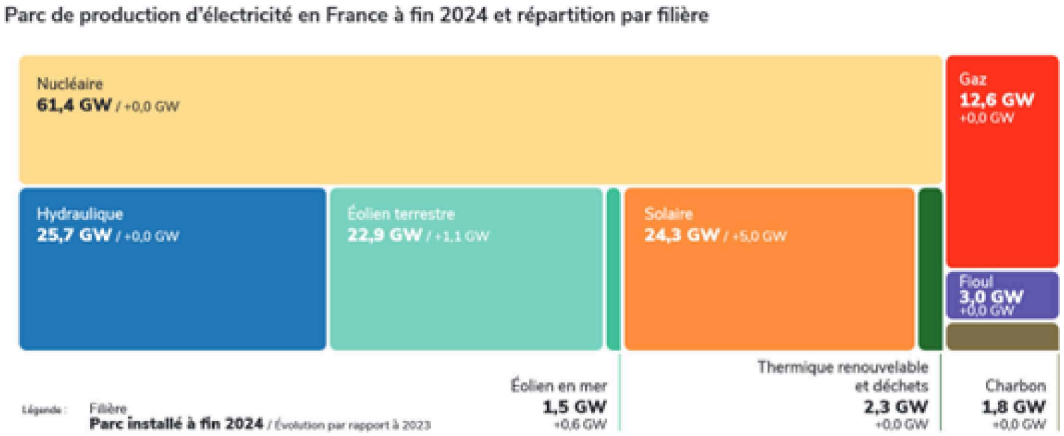
Source: Annual Electricity Review 2024, RTE

([1]) Regulation No 1 determining the languages to be used by the European Economic Community (OJ 17, 6.10.1958, p. 385).
([2]) Data published by the French transmission system operator ('TSO'), Réseau de Transport d'Électricité ('RTE'). See Annual Electricity Review 2024, available at: https://analysesetdonnees.rte-france.com/en/annual-review-2024/keyfindings.

(7) The power generation fleet reached 155.5 GW of installed capacity in December 2024 including 61.4 GW of nuclear installed capacity, 25.7 GW of hydropower, 24.4 GW of wind and 24.3 GW of solar capacities (see Figure 2). ([3])

Figure 2

Power generation fleet in France in 2024

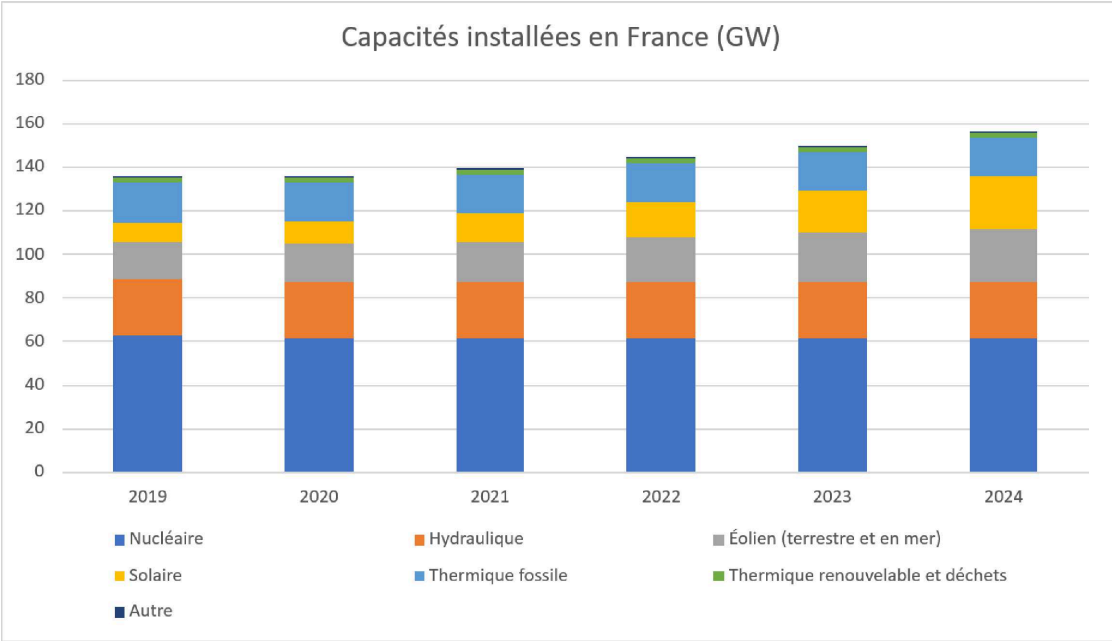


Source: *Annual Electricity Review 2024, RTE*

(8) The evolution of installed power generation capacities in France shows gradual growth mainly driven by new wind and solar installations and the Flamanville 3 reactor connection to the grid in December 2024 (see Figure 3).

Figure 3

Evolution of installed power generation capacities in France



Source: *French authorities*

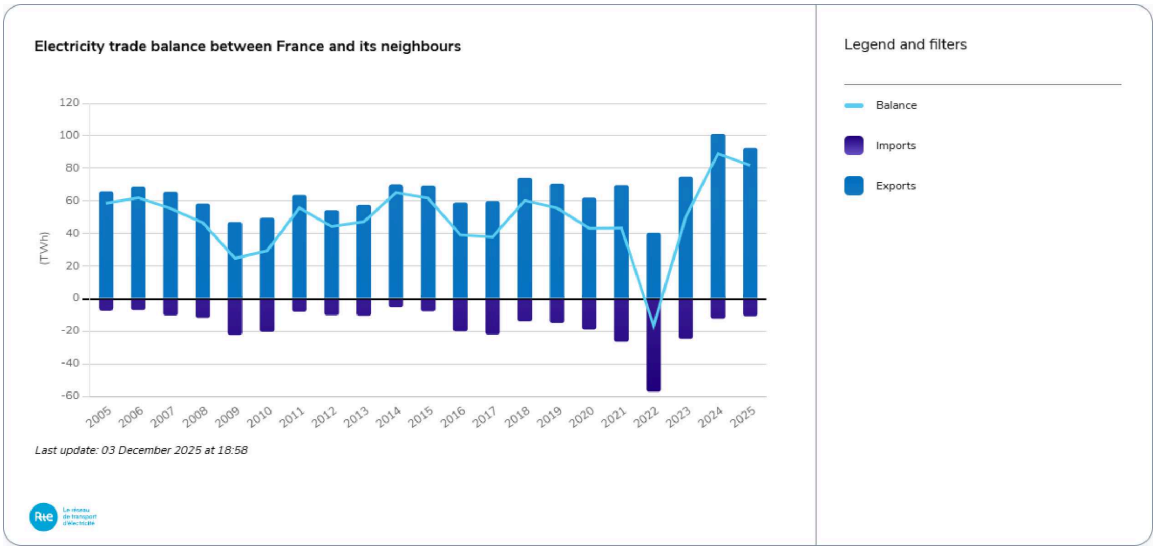
([3]) Source: French authorities. These figures do not include 1.6 GW of installed capacity of the Flamanville nuclear reactor which was connected to the grid on 21 December 2024.

(9) France's electricity consumption reached 450.7 TWh in 2024.

(10) France has been a net electricity exporter since 1980, with the only exception in 2022, when it became a net importer mainly due to vast maintenance works on its nuclear fleet. As a result of high level of production, France's gross electricity exports reached their highest historical level in 2024 at 101.3 TWh, with a positive net trade balance of 89 TWh (see Figure 4). The main countries of destination for the exported electricity were Germany (27.2 TWh), Italy (22.3 TWh) and the United Kingdom (20.1 TWh). ([4])

Figure 4

Electricity trade balance



Source: *Annual Electricity Review 2024, RTE*

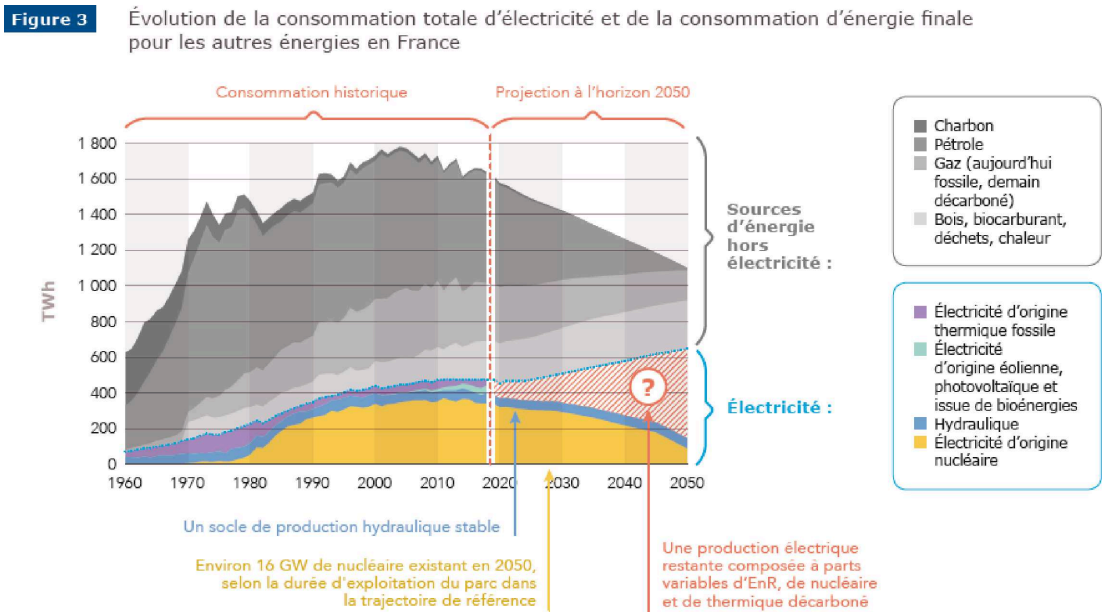
2.2. Expected low-carbon capacity gap

(11) The French authorities expect that demand for electricity in France and Europe will rise in the coming decades. In the 'Futurs Energétiques 2050' report ([5]), published in 2022, RTE (Réseau de Transport d'Électricité, the French transmission system operator ('TSO')), highlighted that France would face a sharp increase in electricity consumption by 2050, of up to approximately 645 TWh in a baseline scenario, representing an increase of around 45 % compared to current consumption (see Figure 5). This would mean a missing output of roughly 106 TWh compared to France's electricity production in 2024. The expected growth in consumption is linked to the increasing electrification mainly in transport, heating, industry and buildings and to the emergence of new technologies, particularly in the digital sector. In the 'Futurs Énergétiques 2050' report, RTE stressed that, with regard to the electricity mix, France faces the dual challenge of the necessary increase in decarbonised electricity production capacity and the eventual closure of the majority of installations that today meet this need.

([4]) *Annual Electricity Review 2024*, RTE, available at: *https://analysesetdonnees.rte-france.com/en/annual-review-2024/keyfindings*.
([5]) Study on the evolution of the electricity system, Futurs Énergétiques 2050, available at: https://rte-futursenergetiques2050.com/.

Figure 5

Projected consumption development



Source: Futurs Énergétiques 2050, RTE

(12) In its 'Bilan prévisionnel 2023-2035' ([6]), that follows up on the Futurs Énergétiques 2050 report, RTE estimated that electricity consumption in France will need to reach between 580 and 640 TWh by 2035 to meet the French carbon-neutrality objectives.

(13) The European Network of Transmission System Operators for Electricity ('ENTSO-E') similarly expects electricity demand in Europe to increase by 43 % to 61 % by 2050 compared to 2019, depending on the scenarios considered. ([7])

(14) In the French National Resource Adequacy Assessment 2025 ('NRAA25') ([8]), RTE states that, without further measures, France would face adequacy concerns already from 2026 to 2036, leading up to 19.8 hours of loss of load expectation (LOLE) in 2030 – 2031. France intends to address these short- to mid-term adequacy concerns by 2036 through the Capacity Remuneration Mechanism ('CRM') approved in December 2025. ([9]) However, the CRM does not aim to deal with the long-term low-carbon capacity gap after 2036 (see section 2.5).

2.3. Alternative options for securing a low-carbon electricity mix

(15) The French authorities have examined several options to ensure a low-carbon electricity mix that can address the projected increase in electricity demand over the coming decades and achieve carbon neutrality by 2050.

([6]) Available at: https://analysesetdonnees.rte-france.com/bilan-previsionnel2023.
([7]) See ENTSO-E's Ten-year network development Plan, published in 2024, TYNDP 2024 Scenarios Report, available at: https://2024.entsos-tyndp-scenarios.eu/.
([8]) Available at: https://www.ecologie.gouv.fr/sites/default/files/documents/NRAA2025.pdf.
([9]) Commission decision of 22 December 2025 in case SA.117564 (2025/N) – Réforme du mécanisme de capacité, C(2025) 9150 final.

(16) In the 'Futurs Énergétiques 2050' report, RTE examined various options, structured around two main categories of scenarios:

(a) Scenarios combining nuclear and renewables ('N' scenarios), where new nuclear reactors are built alongside expanded renewable capacity ([10]) (i.e. mixes that maintain a significant nuclear base over time).

(b) Scenarios considering a 100 % renewable mix over time, i.e. 2050 for the 'M0' scenario ([11]) and 2060 for the 'M1' ([12]) and 'M23' ([13]) scenarios.

(17) The 'Futurs Énergétiques 2050' report shows that sustained development of renewable energy is essential, irrespective of the scenario envisaged, with, in all cases, a sharp acceleration in development rates, compared with those observed in the past.

(18) However, the 'N' scenarios are likely to limit the risk of not achieving climate objectives, compared to the 'M' scenarios which involve greater difficulties as they require (i) a very strong pace of development of renewable energy sources, (ii) the development of dispatchable capacity in the mix, and (iii) the adaptation of transmission and distribution networks.

(19) The report concludes that maintaining a substantial share of nuclear electricity is of economic, climate, sovereignty and security of supply interest not only for France but also for its neighbours.

(20) In light of the above, to cope with the anticipated increase in electricity consumption, the French authorities have decided on an electricity mix based on the two pillars of low-carbon production available, i.e. nuclear, with the strengthening of the production of the existing fleet and the construction of new reactors, and further rollout of renewable energy generation, taking into account the development times specific to each sector.

2.4. **Objectives and background**

(21) The French authorities explain that the Project will contribute to the three overarching objectives of the French and Union energy policy, namely 1) strengthening energy security, 2) reducing emissions and 3) strengthening competitiveness by lowering energy costs.

(22) First, the Project will contribute to security of supply and energy sovereignty in France and in the EU. The Project will enhance energy security by expanding domestic generation capacity based on a fuel source that is less exposed to supply risks, while also addressing the anticipated rise in electricity demand driven primarily by the electrification of energy consumption.

(23) The Project will also provide an essential flexibility solution that will allow for the large-scale integration of renewable energy in the electricity mix. The evolution of the electricity mix will be influenced by a reduction in dispatchable thermal resources at both French and Union levels and the development of intermittent renewable energies, in particular wind turbines and photovoltaic. The 'Futurs Énergétiques 2050' report shows the economic advantage of scenarios including new nuclear reactors, even when compared to fully economically optimised renewable generation mix, due to the dispatchable nature of nuclear energy, which reduces the need for additional flexibility in the electricity system.

([10]) Specifically, scenario N1 provides for the commissioning of 8 EPR2 by 2050 (thus corresponding to the implementation of the programme of 6 EPR2 reactors, followed by the construction of 2 additional EPR2 reactors). Scenarios N2 and N03 expect 14 EPR2 to become operational by 2050. Scenario N03 provides in addition for the development of small modular reactors (SMRs) and an extension of some existing nuclear reactors beyond 60 years.

([11]) Phasing out of existing nuclear capacities by 2050. 100% of renewable energy by 2050.

([12]) Phasing out of existing nuclear capacities by 2060. 100% renewable energy by 2060 (mainly solar), spread widely across the country and driven by local stakeholders or authorities.

([13]) Phasing out of existing nuclear capacities by 2060. 100% renewable energy by 2060, based on large-scale farms (onshore and offshore wind farms and solar farms).

(24) Second, the Project will contribute to achieving the decarbonisation objectives in the Union and in France.

(25) In its study on the analysis of the effects of the Project on French and European energy policy objectives ('Compass Lexecon Report No 1') ([14]), commissioned by Électricité de France S.A. (hereinafter 'EDF'), Compass Lexecon estimated that the Project would make it possible to avoid, over the period 2035-2050, the cumulative direct emission of almost 2 million tonnes of CO_2 in France and of an additional 3 million tonnes in the rest of Europe. The Project is therefore a lever for achieving the objective of carbon neutrality in 2050.

(26) Third, the French authorities argue that the Project will be beneficial to the electricity system and will allow to achieve the objective of decarbonising the Union economy by 2050 at a lower cost for consumers than a 100 % renewable mix scenario. The Project will contribute to reducing the cost of electricity production, which will in turn benefit households and businesses. The Compass Lexecon Report No 1 estimates that the full unit cost of electricity for French consumers will fall by EUR 3,3/MWh in 2045 and EUR 3,9/MWh in 2050 as a result of the Project. The Project will also contribute to reducing the volatility and price of wholesale electricity.

(27) According to France, a set of structural market failures prevents the development of new nuclear capacity without State intervention. France explains that the business model of constructing and operating nuclear power plants ('NPP') requires very high capital investments and faces many major risks over a very long period (including political, macroeconomic and technical risks). A very significant up-front investment is needed for the long construction phase, whereas revenues are generated only after the commissioning of the plant, albeit for an expected operating period of 60 years. During operations, revenues are exposed to volatile electricity market prices and to the potential impact of international events and national policy decisions. At the end of operation, costs related to the decommissioning of the installations and the long-term management of waste must be added. France argues that these characteristics, which are largely specific to NPP projects, set strong constraints on private investors and make it essential for these projects to receive financial support from the State.

(28) For these reasons, France considers that State aid is necessary to address the identified market failures and to enable the construction of new nuclear capacity essential for meeting its decarbonisation and energy security and sovereignty objectives.

2.5. **Alternative options to support nuclear energy**

(29) The French authorities submit that they assessed various potential support mechanisms for nuclear investment, ranging from a regulated asset base model ([15]) to a repayable advance.

(30) The authorities concluded that a regulated asset base model, while conceivable, could present risks and there is a lack of precedent in the Union applicable to new NPPs. ([16]) A repayable advance mechanism was also considered but was found unsuitable due to the high budgetary impact for the State. ([17]) Other possible options such as tax reliefs and CRM were discarded. Tax reliefs were not suitable due to their high budgetary impact and inability to provide long-term investment certainty in volatile market conditions. The option of relying on a CRM was also considered unsuitable as this mechanism aims at compensating the readiness of plants to supply electricity during a limited timeframe, which would thus have expired long before the end of the envisaged operation of the units. Thus, potentially relying on a CRM would not guarantee the profitability of the Project.

([14]) Compass Lexecon, Analysis of the effects of the Project on French and European energy policy objectives, Report for EDF, Fabien Roques, Yves Le Thieis, Mael Demortier, Hugo de Sevin, June 2025.

([15]) The Regulated asset base model (or RAB) is a financing model for regulated typically large-scale infrastructure projects, providing support for their design, construction, commissioning and operation. In this model, private or corporatised state-owned companies act as the infrastructure manager: they own, invest in and operate infrastructure assets according to the provisions of an agreement with the regulator. The infrastructure manager receives charges revenue from users and/or subsidies to fund its operations and recoup investment costs as decided with the regulator.

([16]) For instance, it could be argued in this regard that it shifts the risks further away from the investor with less manoeuvrability to limit overspending.

([17]) France explains that a repayable advance is accounted differently compared to a loan under the LOLF (Organic Law on Finance Acts of 1 August 2001): a repayable advance is directly accounted for in the general budget of the State and its payment reduces the budget balance while a loan is budgeted in a financial aid account.

(31) Subsidised loans were viewed as providing strong incentives capable of reducing financing costs, while direct price support was considered necessary to ensure stable revenues. The latter was designed to be granted through a two-way Contracts-for-Difference ('CfD'), to comply with the requirements set out in Article 19d(2) of Regulation (EU) 2024/1747 (the 'Electricity Regulation') ([18]) concerning direct price support for new investments.

3. DESCRIPTION OF THE PROJECT

3.1. General description of the Project

(32) The Project consists of the construction and operation of six high-power nuclear reactors of technology 'EPR2' (*Evolutionary Pressurised Reactor 2)* with a total installed capacity of 9 990 MW.

(33) These reactors will be built by EDF, on or near sites owned by it, where nuclear reactors are already in operation, namely the Penly, Gravelines and Bugey sites. The four reactors at Penly and Gravelines will have a capacity of 1 685 MW each and the two reactors at Bugey will have a capacity of 1 625 MW each. The new-built reactors are expected to be commissioned between 2038 and 2044 and have a lifetime of 60 years.

(34) The envisaged aid package comprises the following measures:

(a) 'Measure 1': a loan from the *Fonds d'épargne*, which is managed by the *Caisse des Dépôts et consignations* ('CDC'), ([19]) at a rate subsidised by the State, covering 60 % of the estimated construction costs of the Project ([20]) (see section 5.1). The loan will have a repayment period of 35 years.

(b) 'Measure 2': a 40-year direct price support in the form of a two-way CfD (see section 5.2).

(c) 'Measure 3': a risk-sharing mechanism based on a closed list of 'legitimate grounds' (see section 5.3, and, in particular, recital (158)).

(35) For the purpose of carrying out the Project, a Special Purpose Vehicle ('SPV') will be set up in France under French law, managed and 100 % -owned by EDF. EDF is 100 % owned and controlled by the French State.

(36) EDF and the SPV will establish a partnership contract, ([21]) under which the SPV will bear the construction costs and the operating and post-operating costs of the reactors. In return, EDF will transfer the electricity production of the units to the SPV, which will own it and, as such, will receive all the revenues generated from the sale of the electricity produced. The SPV will not have any activities other than those related to the Project. It will allow legal and accounting traceability of all the financial flows of the Project.

([18]) Regulation (EU) 2024/1747 of the European Parliament and of the Council of 13 June 2024 amending Regulations (EU) 2019/942 and (EU) 2019/943 as regards improving the Union's electricity market design, OJ L, 2024/1747, 26.6.2024.

([19]) The CDC was established by the Finance Law of 1816 as an 'établissement spécial' placed 'under the supervision and guarantee of the legislature'. Its tasks - including the administration of public and private funds composed of compulsory deposits - are governed by statutory and regulatory rules, its Director-General is appointed by the President of the Republic, and its other directors by the government. This was also noted by the Union courts, see judgment of the Court of Justice of 19 December 2013, in case C-262/12, *Vent De Colère and Others,* ECLI:EU:C:2013:851, paras. 29-33, as well as judgment of the General Court of 12 December 1996, T-358/94, *Air France v Commission*, ECLI:EU:T:1996:194, paragraphs. 55-69, espec. para. 61.

([20]) If the amount needed exceeds the amount available from the Fonds d'épargne, the loan from the CDC will be complemented by a loan financed from the State budget (see recital (124)), as will part of the potential cost overruns (see recital (127)).

([21]) The principle of this type of contract is to make available to the co-contracting party a share of the energy produced (in this case, all), in return for the payment of an identical share of the fixed and variable costs (in this case, all) throughout the lifetime of the reactors.

(37) EDF will be the holder of the licence to operate the NPPs of the Project ([22]) and the owner of the NPPs. As such, EDF will be the decision-maker concerning the construction of the six reactors, the operation of the NPPs and the scheduling of production, including the supply of that production in electricity markets as described in recital (97) and the appointment of reactors to produce in accordance with the merit-order principle of the electricity market.

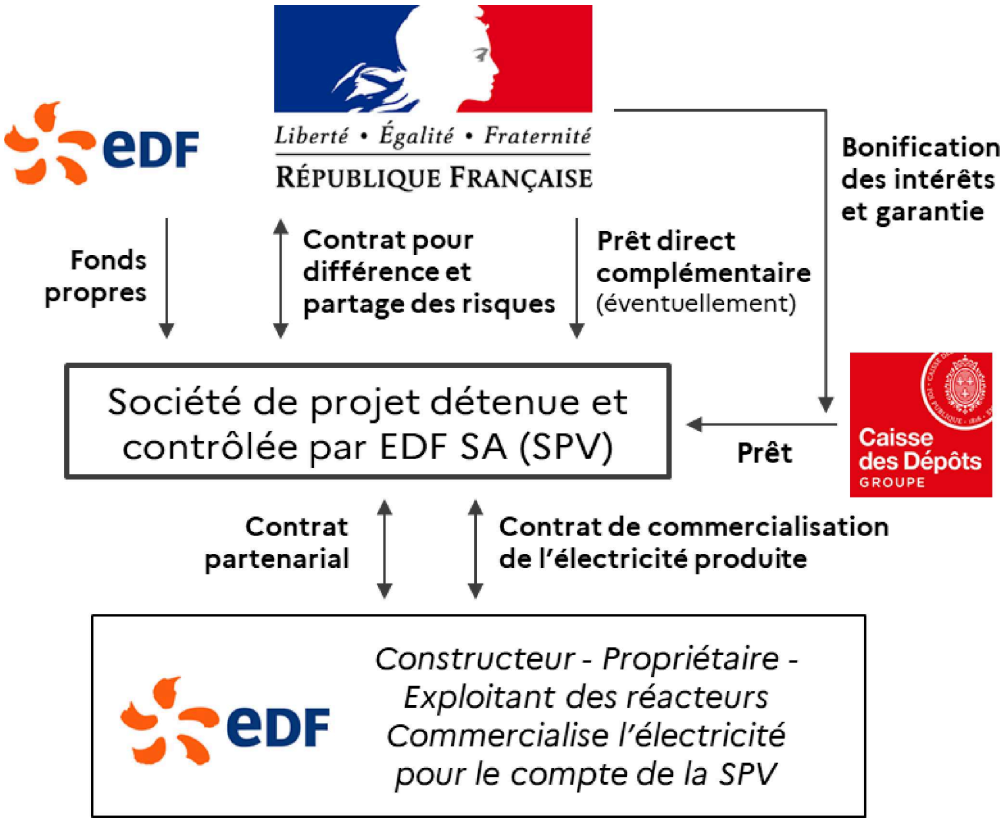
(38) EDF will contribute a share of the financing of the Project to the SPV, in the form of a shareholder loan corresponding to 40 % of the construction costs of the Project ([23]), and a share of the potential cost overruns (see section 3.5). The remainder of the construction cost estimate under the baseline scenario will be covered by the subsidised loan. EDF will also contribute to the SPV the remainder of the financing requirement during the construction phase (Working Capital Requirement, VAT, interest on EDF's shareholder loan).

(39) The repayment of EDF's share of the financing, that is the shareholder loan and a share of the potential cost overruns, will follow the repayment of the subsidised loan first at each loan repayment date. Once the external creditors have been repaid and the CfD has expired, EDF will be allowed to terminate the partnership contract and to assume direct ownership of the entire production of the Project and of the associated revenues. The overcompensation control mechanism described in section 3.7 will continue to apply to EDF. The French authorities have indicated that the terms and conditions of the shareholder loan will be updated at the time of the Final Investment Decision ('FID').

(40) The diagram in Figure 6 below describes the contractual relations envisaged for the implementation of the Project (including the aid measures):

Figure 6

Project structure



Source: French authorities

([22]) Within the meaning of Article L. 593-7 of the Environmental Code.
([23]) Based on the reference estimate which will be agreed in the FID.

3.2. **The EPR2 technology**

(41) EPR2 is a pressurised light water reactor of Generation 3+, designed as an evolution of the EPR model.

(42) According to the French authorities, the EPR2 technology is flexible and capable of load-following to a certain extent. The reactors can modulate their power output to adapt to electricity market price signals or to RTE's requests. This allows to ensure the stability of the electricity grid and address price volatility, especially in a decarbonised electricity mix with a significant share of renewables. The potential for modulation has been taken into account from the outset in the design of the EPR2 reactors.

(43) In 2012, EDF launched design studies to define a standardised reference for EPR2 reactors. France explains that the development of EPR2 reactors is part of a strategy to scale up EPR production, building on the experience of the first EPR reactor built in Flamanville.

(44) The French authorities claim that the serial deployment of the new EPR2 reactors aims at streamlining their construction. The reactors are designed to be deployed as part of a program involving the sequential construction of three pairs of reactors, which is intended to allow for better control of construction costs and schedule.

(45) The French authorities explained that the Project will meet the technical screening criteria of section 4.27 of the Delegated Regulation (EU) 2021/2139, ([24]) including also notably in connection with radioactive waste management.

3.3. **Current state of development and planning of the project**

(46) The Project has been in the detailed design phase since mid-2024. This phase consists of translating safety, technical and regulatory requirements into actionable plans and documents in order to prepare for construction.

(47) In accordance with the French legislation, the construction of each pair of reactors is subject to the prior issuance of several authorisations, including:

(a) an environmental authorisation enabling preparatory works to be carried out, and

(b) an authorisation for the creation of a nuclear installation, which allows the start of construction works on nuclear parts of EPR2 units.

(48) The issuance of these authorisations by the competent administrative authorities is subject to compliance with French and Union environmental regulations. In accordance with those regulations, each authorisation application file is subject to an environmental assessment carried out by the competent authority, on the basis, *inter alia*, of an environmental impact assessment drawn up by EDF, as well as the opinion of the French Environmental Authority.

(49) The application for authorisation for the creation of the reactors was submitted to the Minister for nuclear safety in 2023 for the Penly site and will be submitted in 2026 for the Gravelines site. It is expected to be submitted in 2028 for the Bugey site.

(50) The French authorities have notified the construction of the reactors on the Penly and Gravelines sites to the Commission, pursuant to Article 41 of the Euratom Treaty. France will notify the construction of the reactors on the Bugey site at a later stage.

([24]) Commission Delegated Regulation (EU) 2021/2139 of 4 June 2021 supplementing Regulation (EU) 2020/852 of the European Parliament and of the Council by establishing the technical screening criteria for determining the conditions under which an economic activity qualifies as contributing substantially to climate change mitigation or climate change adaptation and for determining whether that economic activity causes no significant harm to any of the other environmental objectives.

(51) Preparatory works (cliff removal, construction of the offshore platform) have started at the Penly site, following the grant on 3 June 2024 of the environmental authorisation for the site ([25]).

(52) EDF has launched the contractual processes necessary to finalise the detailed design studies, consolidate the estimate for the Project and prepare the supply chain.

(53) In particular, EDF has already initiated detailed studies or has entered contractual commitments on aspects such as: the civil engineering of the reactors at the Penly site; the manufacture and supply of the nuclear steam supply and the turbo-alternator group; high priority components of the plant's cooling system, such as safety pipes, normal cooling pipes, seawater filtration systems; elements to protect the site against terrorist attacks; elements of security systems such as main emergency diesel generators, low-power classified cold units, safety injection system equipment; elements of the plant's computerised driving system, i.e. standard control and human machine interface; mineralizers and tanks, material buffers.

(54) Other major contracts to be concluded by EDF concern: the main secondary circuit (including prefabrication and assembly); mechanical components (prefabrication of nuclear and conventional islands); electricity (prefabrication and assembly); main civil engineering aspects of the reactors at the Gravelines and Bugey sites; heating ventilation and air conditioning (HVAC) systems; mechanic assembly elements.

(55) All contracts concluded under the Project include a clause enabling EDF to terminate them without compensation in the event of failure to adopt the FID.

(56) France indicates that EDF's objective is to take the FID by the end of 2026 and commission the first reactor at the Penly site before the end of 2038. In this respect, France recalls that the Project is an investment project initiated and carried out by EDF. Since the Project is carried out based on an investment decision by EDF for which the State does not plan to conclude a contract with EDF that would fall within the scope of the Union public procurement directives. France considers that the Union public procurement rules are not applicable in this regard.

(57) As regards the various contracts that will be concluded going forward for the implementation of the Project, France submits that none of the components of the aid package is conditional on EDF awarding all or part of the contracts to certain undertakings, or on EDF maintaining in force the contracts already concluded, which EDF remains entirely free to amend or terminate. Neither the granting of the aid nor its design depend on the identity of the co-contractors or the manner in which these contracts are awarded. France thus submits that the process by which EDF awards the various contracts is not an aspect inextricably linked to the object of the aid package.

(58) The current timeline foresees the first concrete pouring for the first reactor at Penly site by the end of 2028. The first pair of reactors is scheduled to enter trial operation by 2038-2039 and the second and third ones are to follow respectively in 2039-2040 and 2043-2044. France indicates that this timeline will be updated and then audited in 2026. This updated timeline will become the reference timeline used for the purposes of the three aid measures (the 'reference timeline'), after its validation in the FID.

3.4. **Revenues and costs of the Project**

(59) France submitted a financial model based on a discounted cash-flow analysis, which projects the Project's future revenue and cost streams to calculate its net present value ('NPV'). The financial model also determines the strike price of the two-way CfD, set at a level where the Project's NPV is zero, thereby ensuring that the target rate of return is achieved.

(60) The financial model assumes different construction timeframes for each reactor ranging from […]* months (approx. [5-10] years) for the first reactor at the Penly site to […] months (approx. [5-10] years) for the second reactor at the Bugey location. Each reactor will be designed for 60 years of operation. Their trial operation phases will start from 2038 for the first reactor at the Penly site and from 2044 for the second reactor at the Bugey site.

([25]) Decree n° 2024-505 of 3 June 2024.

(61) The Project will benefit from a two-way CfD concluded between the State and the SPV with a duration of 40 years for each reactor from its date of commissioning. The SPV will generate market revenues by selling its output (see section 3.8) and the CfD mechanism will adjust these revenues - either topping them up or clawing them back - so that the plant effectively receives the target price per MWh for the reference baseload output volume (see section 5.2.3). After the CfD expiry, the power plants will rely solely on market revenues.

(62) The target price is initially estimated at EUR_{2024} [90-120]/MWh, and will be reviewed prior to the commissioning of the first reactor, and then at each review period (see section 5.2.6).

(63) The total construction costs ([26]) of the Project, according to the latest estimate of November 2024, amount to EUR_{2020} 72.8 billion and are detailed in Table 1.

Table 1

Estimate of the construction costs of the Project - November 2024

Coûts de construction				
En Md€20	Paire 1	Paire 2	Paire 3	Total
EPCC	[20-25]	[15-20]	[15-20]	[55-60]
Palier	[1-5]	[1-5]	[1-5]	[7-12]
Démantèlement	[0-2]	[0-2]	[0-2]	[1-4]
Total CAPEX	**[25-30]**	**[20-25]**	**[20-25]**	**[70-75]**
Total OPEX	**[0-2]**	**[0-2]**	**[0-2]**	**[1-4]**
Total Coûts de construction	**[25-30]**	**[20-25]**	**[20-25]**	**72,8**

Source: French authorities

(64) The construction costs include:

(a) the construction and engineering costs corresponding to the Engineering, Procurement, Construction and Commissioning (EPCC) costs;

(b) the owner's costs (authorisation costs, taxation, first nuclear fuel load, etc.);

(c) provisions for uncertainties, contingencies and schedule and opportunity risks and costs; and,

(d) provisions for decommissioning expenditure after the operational phase: in accordance with French law, the costs of deconstruction and of the last core (i.e. the last nuclear fuel load) must be provisioned at the time of commissioning of each reactor.

(65) The construction costs include EUR_{2020} [1-5] billion of costs incurred by EDF between 2012 and 2025. France explains that these costs correspond to engineering costs and studies related to the Project and that they are necessary expenditure to define a standardised reference of the EPR2 reactor for the Project. France therefore considers that these costs duly fall within the construction costs of the Project. France, however, indicates that no remuneration for the intellectual property and development of the EPR/EPR2 technology is included in the construction costs.

(66) The costs of the Project in the operation and post-operation phases are estimated at EUR_{2020} [120-155] billion according to the latest estimate of November 2024.

([26]) These correspond to overnight costs. Overnight refers to a situation where it would be possible to buy and build these plants ready to produce their first kWh instantly, without any cost of financing.
* Confidential information.

(67) These costs include operation and maintenance ('O&M') costs, fuel costs and other costs, as well as a provision for risks and contingencies.

(68) The estimate of the O&M costs (EUR_{2020} [70-100] billion ([27])) is based on EDF's experience of the nuclear fleet in operation, adjusted to reflect the specific characteristics of the Project. It takes into account the costs of the reactors' shutdowns and tests, preventive maintenance, major component replacements and operational engineering, recurrent maintenance, staff costs, various operating purchases, tax costs in the operation phase and post-operation costs (release of on-site and off-site operation teams).

(69) The fuel costs, estimated at EUR_{2020} [40-80] billion, include all costs upstream and downstream of the nuclear fuel cycle (purchase of uranium, conversion, enrichment, assembly manufacture, transport of irradiated fuel, spent fuel treatment and waste disposal) from the supply of refills and miscellaneous consumables throughout the operational life of each reactor.

(70) Charging costs are estimated at EUR_{2020} [5-8]/MWh and constitute the bulk of variable operating costs. The cost associated with the purchase of the first core is included in the construction costs. To the cost of the recharges referred to above is added EUR_{2020} [3-7]/MWh, corresponding to the additional cost of nuclear fuel resulting from the investments linked to the sustainability and renewal of plants downstream of the French fuel cycle.

(71) The other costs amount to EUR_{2020} [5-10] billion and correspond to tax costs in the post-operation phase.

(72) The costs and their indexing assumptions will be updated and audited at the beginning of 2026. The reference estimate used for the purposes of the Project (the 'reference estimate') will be definitively validated in the FID.

3.5. **Cost overruns**

(73) The financing of potential cost overruns during the construction phase, regardless of who is responsible for such cost increases, is organised as follows:

(a) EDF will finance all cost overruns up to $EUR_{current}$ 15 billion.

(b) Cost overruns between $EUR_{current}$ 15 billion and $EUR_{current}$ 30 billion will be financed at 90 % by the State and at 10 % by EDF.

(c) Nothing is yet decided in case cost overruns exceed $EUR_{current}$ 30 billion.

(74) The part of the cost overruns that is financed by the State will take the form of a subsidised loan under the same financial conditions as for the rest of the subsidised loan (see section 5.1).

(75) These financing modalities set out which party will advance the funds to pay for cost overruns in the construction phase, whereas the risk-sharing mechanism described in section 5.3 sets out which party will eventually bear these costs, i.e. whether these additional costs will be compensated by the State or borne by EDF. Under the risk-sharing mechanism, if cost overruns materialise for a reason considered to be legitimate, the SPV will be entitled to receive a compensation to offset the impact of these cost overruns on the Internal Rate of Return ('IRR') of the Project, under the conditions and limits described in section 5.3. Any financial compensation paid by the State to the SPV under the risk-sharing mechanism for cost overruns based on legitimate grounds will be deducted from the total cost overruns taken into account for these financing modalities.

([27]) Including EUR [20-40] billion of CAPEX O&M. These O&M costs correspond to investments made during the decennial safety reviews and / or to replace major components in order to reach the estimated lifespan of the asset.

(76) France considers that since EDF will finance a significant share of the potential cost overruns (see recital (73)), cost overruns not linked to legitimate grounds will be borne by EDF and a materiality threshold applies to cost overruns linked to legitimate grounds (see recital (165)), EDF is highly exposed to the financial cost of cost overruns, and therefore has an incentive to limit them.

3.6. **Expected rate of return**

(77) The financial model, discussed in section 3.4, aims at estimating the target price necessary to close the funding gap of the Project ([28]), given a defined set of projected costs and a discount rate ([29]). The discount rate is, thus, one of the central elements of the analysis. In particular, the model is calibrated so that the Project earns its cost of equity (i.e., the IRR is equal to the cost of equity), meaning that the NPV of the Project is nil.

(78) The French authorities calculated the cost of equity for EDF between [6-8] % and [7-9] %, with the target return set at [6.5-8.5] %.

(79) The French authorities explain that the cost of equity calculations are based on the methodology used in Commission's decision in case SA.58207 (2021/N) ([30]).

(80) To estimate the cost of equity, the French authorities used a standard Capital Asset Pricing Model ('CAPM') ([31]), expressed by the formula shown below:

$$R_e = RfR + Beta * MRP$$

Where:

(a) RfR is the risk-free rate, i.e., the return expected from investing in riskless assets;

(b) *MRP* is the market risk premium; and

(c) Beta (or levered beta) is a measure of the idiosyncratic, non-diversifiable risk of the Project.

(81) The formula is applied to compute a range of potential target returns on equity (RoEs) under a low and high scenario.

(82) For the risk-free rate, the French authorities used a 12-month average of the 30-year French Treasury bonds for the high range and of the 10-year French Treasury bonds for the low range. According to this methodology, the low range of the risk-free rate is [2-4] % and the high range is [2-4] %.

(83) For the market risk premium, the French authorities adopted the Fernandez's approach ([32]) for the low range and the Damodaran's approach ([33]), based on the credit rating, for the high range. According to this methodology, the lower range of the market risk premium from the risk-free rate is [5-7] % and the higher range is [5-7] %.

([28]) The funding gap is the difference between the Net Present Value of the factual scenario (i.e., the Project) and the Net Present Value of the counterfactual scenario (i.e., no alternative investment).

([29]) Under the assumption that in the absence of aid there would be no alternative investment (i.e., the NPV of the counterfactual scenario would be nil), the funding gap is equal to the NPV of the Project.

([30]) Commission decision of 30 April 2024 in case SA.58207 (2021/N) – on the measure which Czechia is planning to implement to support the construction and operation of a new nuclear power plant at the Dukovany site, C(2024) 2858 final.

([31]) The CAPM is a financial model that describes a linear relationship between an investment's expected return and its systematic risk. It is used to estimate the required rate of return on an asset, based on the risk-free rate, the asset's beta (which measures its sensitivity to market movements), and the market risk premium.

([32]) See in this respect, Fernandez Pablo, Garcia de la Garza, Diego and Fernández Acín, Lucía, '*Survey: Market Risk Premium and Risk-Free Rate used for 54 countries in 2025' (May 19, 2025)*, available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5260463.

([33]) '*Country and Equity Risk Premiums*' dated 1 January 2025 from Prof. Damodaran's website, provided by the French authorities.

(84) For the unlevered beta ([34]), the French authorities have applied the Hamada approach ([35]) to unlever the betas of comparable companies (using net debt/equity for the unlevering process). Regarding the latter, the French authorities have chosen a total of seven comparable companies ([36]) and have chosen as the lower range the 2-year weekly average and as the upper range the 5-year weekly average. According to this methodology, the lower band for unlevered beta is [0.4-0.7] and the higher band is [0.4-0.7].

(85) For the gearing (debt-to-total capital ratio), the French authorities employed an average of the annual gearing of the Project between the first year of debt drawdown and the end of production of the last plant. The average debt ratio used for the calculation of the cost of equity for both low and high scenarios is [25-35] %.

(86) Table 2 below summarises the main parameters and range of the cost of equity.

Table 2

Cost of Equity assumptions and range

Approach	Low range	High range
Risk Free Rate	[2-4] %	[2-4] %
Equity Risk Premium	[5-7] %	[5-7] %
Beta Unlevered	[0,4-0,7]	[0,4-0,7]
Gearing	[25-35] %	[25-35] %
Beta Levered	[0,5-1]	[0,5-1]
Tax rate	[20-30] %	[20-30] %
Cost of Equity	**[6-8] %**	**[7-9] %**

Source: the French authorities

(87) The French authorities have set the target shareholder post-tax rate of return at [6.5-8.5] %, at the lower end of the cost of equity range. The aid was therefore defined in such a way that the IRR of EDF would be [6.5-8.5] % over the entire duration of the project, including the post-operation and decommissioning phase, on the basis of the financial model and the cost of equity.

(88) France finally indicates that, in the absence of any aid, the IRR of the Project would amount to [1-3] % and would be insufficient to justify an investment decision by EDF.

3.7. **Overcompensation control mechanism**

(89) The French authorities will establish a gain-sharing mechanism to prevent the risk of overcompensation. That mechanism offers guarantees additional to those resulting from the two-way CfD, which prevents, over the period in which it is put in place, any risk of overcompensation of the producer through the revenues from the sale of its generation capacity on the electricity markets, by limiting its gains in situations of high market prices.

([34]) Unlevered beta (a.k.a. asset beta) is the beta of a company without the impact of debt. It measures the systematic risk of a company's assets relative to the market, independent of the company's financial leverage. Source: Corporate Finance Institute.

([35]) The Hamada approach is based on the Hamada formula or equation. *Hamada's equation is an equation used as a way to separate the financial risk of a levered firm from its business risk. The equation combines the Modigliani–Miller theorem with the capital asset pricing model. It is used to help determine the levered beta and, through this, the optimal capital structure of firms (source: Wikipedia, Hamada's equation - Wikipedia).* The inverse of the Hamada formula is used to unlever the betas, starting from levered betas. Please also refer to the Corporate Finance Institute.

([36]) RWE, CEZ, Fortum, Engie, Iberdrola, Uniper, Centrica.

(90) The mechanism for controlling overcompensation applies throughout the lifetime of the reactors, until the end of the dismantling of the last reactor. The aim is to assess every 5 years the internal shareholder rate of return on the Project at that date (the 'actual IRR') and to check that it does not exceed a maximum authorised internal shareholder profitability threshold (the 'overcompensation threshold'). The first check will take place at the end of the first year of the CfD following the last commissioning of the Project.

(91) If the actual IRR exceeds the overcompensation threshold, the mechanism provides for a sharing of the excess gain as follows: 60 % for the State and 40 % for EDF. The overcompensation threshold is set at [7-9] % (nominal after tax), which corresponds to the upper end of the range of the cost of equity assessed by the French authorities (see section 3.6).

(92) The amount of the excess gain to be shared would correspond, when the mechanism applies, to the present value (discounted at [7-9] %) of all past actual cash flows, as well as future cash flows corresponding to the period after the definitive shutdown of the reactors (post-operation). France explains that these future cash flows must be taken into account since they are not covered by any income.

(93) For the purposes of the periodic assessment, past cash flows and future cash flows corresponding to the post-operation period will be based on the most recent version of the business plan, duly updated at the end of the financial year preceding the assessment (the 'Assessment Date') using, for the years prior to the date of assessment, the actual revenue figures (including the positive or negative result of any future hedges), including any compensation paid directly by the State under legitimate grounds (see section 5.3), the costs actually observed since the start of the Project (irrespective of whether or not they can be offset under the legitimate grounds), and the amounts of overcompensation identified in previous checks and already shared between the State and EDF in the form of a flat-rate payment.

(94) The actual IRR will be the rate of return achieved at the Assessment Date, i.e. the rate that cancels, at this date, the discounted sum of cash flows detailed in recital (93). The determination of the actual IRR will reflect the actual performance of the Project from its launch to the Assessment D. It will not take into account the forecasted cash flows after the Assessment Date until the end of the operation of each reactor. If the actual IRR exceeds the overcompensation threshold, overcompensation is deemed to have taken place, and the amount of overcompensation will be shared between the State and EDF.

(95) Payments relating to overcompensation may take the form of a lump sum payment or, if applicable with regard to the remaining duration of the CfD, of an adjustment to the Strike Price for the following review period. The gain-sharing carried out at each review period is definitive for both parties.

3.8. **Trading of the electricity produced**

(96) The electricity produced by the new units will be owned by the SPV under the partnership contract, while EDF will sell it on behalf of the SPV. The SPV will thus benefit from all revenues from the sale of electricity, as well as from related income streams, including from the participation in the CRM and the provision of ancillary services.

(97) It is planned that EDF will sell the electricity produced through the same channels as the rest of its production, in particular, its nuclear and hydropower production, which are:

(a) Modality 1: on wholesale electricity markets, through transparent and open processes: organised exchanges, over-the-counter ('OTC'), or in the context of open, transparent and non-discriminatory auctions organised by EDF or delegated to third-party companies;

(b) Modality 2: under conditions replicating the functioning of the wholesale markets, in the form of internal asset transfers allowing EDF's positions to be balanced on purchase and sale under market conditions, as is currently the case for EDF's production fleet;

(c) Modality 3: via long-term contracts allowing buyers to access a share of production at a price reflecting long-term market price expectations by market participants or at a price reflecting production costs and operating risks;

The French authorities have indicated that the conditions for possible long-term contracts remain to be defined. Such contracts could cover periods of between 10 and 15 years, which is longer than for contracts available on the electricity futures markets on organised exchanges. They could be concluded either OTC or through auctions.

(98) France explains that during the CfD period, 60 % of the baseload production covered by the CfD will be traded on wholesale markets (meaning through modalities 1 and 3, and not through modality 2), through transparent and open processes.

(99) France further explains that modality 2 corresponds to EDF's internal asset transfers to balance symmetric buy-and-sell positions between its electricity supply and generation activities. These internal transactions are used by EDF to supply its entire consumer portfolio, and to sell the electricity produced by its various production sectors. The internal asset transfers are valued at the wholesale market price, at the date of the transaction, for the relevant maturities. These internal asset transfers will be traced via appropriate accounting, similar to that put in place for the existing nuclear fleet as part of the implementation of the universal nuclear payment ([37]). The methodology applied by EDF to construct this appropriate accounting is approved by the CRE.

(100) EDF will define and implement the strategy for the trading of the electricity produced by the reactors and the associated risk management, where appropriate in conjunction with its subsidiary EDF Trading for sales on wholesale markets.

3.9. **The national legal basis, transparency and cumulation**

(101) The French authorities explained that the aid package will be put in place based on various contracts and agreements with the beneficiary, including a contract for difference between the State and the SPV, a loan contract between the State and the SPV and between the CDC and the SPV, as well as, possibly, a quadripartite ad-hoc contract (State-CDC-SPV-EDF).

(102) The French authorities explained that a termination clause will be included, possibly in the quadripartite ad-hoc contract, relating to consequences if the termination of the Project was decided unilaterally by one of the parties after the FID. This clause will define the conditions and level of compensation for the costs incurred by the party that is not responsible for the termination of the Project. The French authorities consider that this clause will not involve State aid.

(103) The State guarantee covering the CDC loan will be authorised by a finance law.

(104) France has confirmed that the aid will only be granted after the notification of the Commission decision approving the measures.

(105) France explained that information on the measures will be published on the Union's Transparency Award Module.

(106) France further submitted that the measures cannot be cumulated with any other aid for the same eligible costs.

3.10. **Administration of the measures**

(107) The authority responsible for the measures is the Minister(s) responsible for energy and the economy, which currently fall within the remit of the Ministry for the Economy, Finance and Industrial, Energy and Digital Sovereignty.

([37]) These principles and the associated methodology were specified by regulation see Decree No 2025-909 of 5 September 2025, available at: https://www.legifrance.gouv.fr/jorf/id/JORFTEXT000052200431.

(108) The subsidised loan will be administered by CDC, except as regards the loan for cost overruns referred to in recital (74) which will be administered by the State, similarly to the State guarantee, the two-way CfD and the 'Risk-sharing mechanism'. All three measures will be financed with funds from the State budget.

3.11. **The beneficiary**

(109) The direct beneficiary of the measures is the SPV, an entity specifically set up by EDF as mentioned above, dedicated to financing the Project. The French authorities consider that the aid will also benefit EDF, as the parent company of the SPV.

(110) EDF, a 100 % State-owned company, is the parent company of the EDF Group. EDF is the owner and operator of the entire nuclear power fleet in France, which is composed of 57 reactors spread over 18 sites, with a capacity of each reactor between 900 and 1 630 MW. France submits that EDF has taken the initiative to develop the Project as owner, manufacturer and operator. EDF has defined all its specifications, and will build the reactors on its own sites, along the lines of its integrated activity as operator of the nuclear fleet in France. EDF will develop the Project relying on its expertise in project steering, construction and operation engineering, piloting and monitoring of suppliers, as well as that of its subsidiaries, particularly Arabelle Solutions, which will supply the turboalternator group, and Framatome, which designs and manufactures the EPR2 Nuclear Steam Supply System.

(111) The EDF Group is mainly active, in France and abroad, in the electricity markets, in particular the production and wholesale supply of electricity, trading, transmission, distribution retail and supply of electricity. The EDF Group is also active in the gas and energy services markets.

4. **MARKET STRUCTURE AND IMPACT OF THE PROJECT**

(112) Regarding the wholesale electricity market, the French authorities explain that electricity is offered at mostly regional, but also national trading platforms. The day-ahead and intraday markets are operated by EPEX SPOT and Nordpool. The forward market includes OTC and EEX Exchange trades but could include other forward market electricity exchanges.

(113) In 2024, EDF accounted for 77 % of France's total electricity generation and over 55 % of its installed capacity. Other significant market actors are the ENGIE group, operating approximately 12 GW of installed capacity in France, and TotalEnergies, operating approximately 4 GW of installed capacity in France ([38]).

(114) The French authorities stress that, for the purposes of analysing the effects of the Project on the market, EDF's market position must be examined prospectively, within the time horizon relevant to the Project, that is after 2035 (since the planned commissioning of the first reactors under the Project is expected for 2038). France explains that over that period EDF's market share will decrease substantially as a result of the forthcoming gradual closure of the second-generation reactors of the existing fleet. The French authorities anticipate that the gradual closure of the existing fleet will ultimately lead to the loss for EDF of its main electricity generation asset, which in 2024 accounted for 61 370 MW of installed capacity and 361.7 TWh of production, or 87.2 % of EDF's total production in mainland France. The initially assumed operating period of the existing fleet was 40 years, but work is underway to prolong their lifetime ([39]). The current hypothesis assumes an operating period extended to 60 years. Nevertheless, the French authorities indicate that at this stage more precise information on the retirement of the current nuclear fleet is still unavailable.

([38]) Source: French authorities.

([39]) The operating life prolongation of the reactors in the existing fleet is being assessed by EDF with its 'Grand Carénage' programme, within the framework of the requirements and under the supervision of the Nuclear Safety and Radiation Protection Authority. See https://www.edf.fr/groupe-edf/innover/rd-un-savoir-faire-mondial/la-rd-et-le-grand-carenage.

(115) The French authorities contend that even if, for a certain initial period, the existing fleet and the new reactors of the Project will be simultaneously active (while noting that the new reactors will themselves enter into service only gradually, over the period 2038-2044), the Project will ultimately constitute a partial replacement of EDF's existing nuclear fleet.

(116) As a result, the French authorities argue that EDF's market shares in the production and wholesale electricity markets will decrease significantly. This effect will be reinforced by the fact that, in parallel with the attrition of its main generation asset, i.e. EDF's existing nuclear power plants, electricity demand is expected to increase substantially (see section 2.2) and interconnection capacity is also expected to increase, with the consequence of increased trades of electricity with neighbouring countries.

(117) According to a study by Compass Lexecon on the effects of the Project on competition in electricity markets (the 'Compass Lexecon Report No 2') ([40]), carried out for EDF, EDF's market share in the area of power generation and wholesale electricity market (as a percentage of production) between 2035 and 2050 can be expected to be significantly lower than in the year 2025 ([41]):

(a) by retaining a geographic production and wholesale market covering the markets comprising France, Germany and Belgium, EDF would have a market share of approximately [20-30] % in 2035 and less than [20-30] % in 2050, in the absence of the Project;

(b) although the French authorities do not consider relevant to view EDF's market concentration on a national basis, they nonetheless informed the Commission that the Compass Lexecon Report No 2 estimates that EDF's market share exclusively in the French market will decrease from circa [50-60] % in 2035 to [25-35] % in 2050 in the absence of the Project.

(118) In addition, the Compass Lexecon Report No 2 estimates that the increment in market share resulting from the Project will be small in the geographic market covering France, Germany and Belgium, that is zero in 2035 and below [0-5] percentage points in 2050. In a market limited to France, such increment would be of five percentage points by 2050, leading EDF to hold a market share of [30-40] % in 2050.

(119) The French authorities, therefore, argue that the proposed aid will not have the effect of strengthening EDF's market share or increasing the concentration of the market for the production and wholesale of electricity, irrespective of its geographical dimension.

(120) In addition to examining its market share, France explains that EDF's 'pivotality' index confirms the absence of market power. A producer is called 'pivotal' when the available production capacity of the other producers and the import capacity are not sufficient to satisfy demand at a given moment, making that unit or undertaking potentially capable of influencing the market price by reducing its capacity.

(121) According to the Compass Lexecon Report No 2, in a production and wholesale market covering France, Germany and Belgium, EDF would be pivotal around [0-5] % of hours in 2035 and less than [0-5] % of hours in 2050 (including with the Project). In a market with only a national geographic dimension, EDF's pivotality is estimated at around [5-10] % by 2050 including with the Project.

(122) Thus, the French authorities claim that both the prospective analysis of EDF's market shares and the study of its future pivotality confirm that EDF will have no market power if the Project is implemented, which makes it possible to rule out any potential significant effects of the aid on competition and trade (irrespective of the geographical dimension of the market chosen).

([40]) Compass Lexecon, Analysis of the effects of the NNF Program on competition in electricity markets, Report for EDF, Fabien Roques, Mael Demortier, 19 December 2024. Compass Lexecon was commissioned by EDF to study the effects of its programme on competition and trade in the internal market.

([41]) Compass Lexecon Report No 2 assumes an operating life of 60 years for existing nuclear reactors.

5. DETAILED DESCRIPTION OF THE AID PACKAGE

(123) The French authorities explain that each of the three measures envisaged aims to cover a different set of risks and market failures (see recital (27)), so that only the combination of the three measures makes it possible to cover all of the risks and market failures identified. Specifically, in France's view:

(a) The subsidised loan (measure 1) is intended to provide the SPV with the necessary debt financing to secure the funding needed to carry out the Project.

(b) The two-way CfD (measure 2) is intended to ensure the stability and predictability of revenues and a pre-defined level of profitability. Moreover, it is the appropriate complement to the subsidised loan (measure 1), in that it enables the SPV to obtain income, which will enable it to repay the loan.

(c) The risk-sharing mechanism (measure 3) is intended to cover those risks which cannot be left to the SPV since they are entirely outside its control and may have significant consequences for the Project.

5.1. **Measure 1: Subsidised loan**

5.1.1. *General principles*

(124) As a first measure, France intends to provide a loan at a preferential rate of 3 % per year, with no interest accruing during construction (the 'subsidised loan'), to finance the development of the reactors.

(125) The subsidised loan will cover 60 % of the construction costs of the Project (see recital (64)) in constant euro, as estimated in the reference estimate, and a portion of cost-overruns. The subsidised loan would amount to EUR_{2020} 44 billion based on the current estimate.

(126) The part of the subsidised loan covering 60 % of the estimated construction costs will be sourced from the Fonds d'épargne, managed by the CDC (the 'CDC loan'), and from the State budget (the 'State loan') if the amount needed exceeds the amount available from the Fonds d'épargne.

(127) As explained in recital (73), cost overruns between $EUR_{current}$ 15 billion and $EUR_{current}$ 30 billion will be financed at 90 % by the State, with a State loan. The same conditions apply to the initial CDC loan and to the additional State loan for financing the cost overruns.

(128) The first drawdown of the subsidised loan will take place once the contracts described in section 3.9 are signed and have entered into force. The subsidised loan will be repaid from the SPV's revenues from the sale of the electricity, as well as from other related income streams, and from the CfD settlements.

5.1.2. *Detailed parameters*

(129) The subsidised loan will be divided in six tranches, one for each new reactor.

(130) During the construction phase of each of the nuclear reactors, the interest rate would be 0 %. From the date of commissioning of each nuclear reactor, the loan tranche associated with the corresponding reactor shall be remunerated at a fixed rate of 3 % per year. Interests will be paid by the SPV annually (and not capitalised). For the CDC loan, the applicable interest rate would be the applicable Livret A rate plus a margin. This interest rate would be financed by the State and the final rate for the SPV for the CDC loan would therefore be 0 % during construction and 3 % thereafter.

(131) The repayment of the subsidised loan associated with each nuclear reactor would be as follows:

(a) for a period of 4 years after the commissioning of each nuclear reactor, the SPV will not repay the principal amount of the loan. Only annual interests are due during this period;

(b) at the end of the deferral period, the principal is amortised using the straight-line method over 35 years through annual payments.

(132) In total, the maturity of each tranche of the subsidised loan would therefore be 39 years, starting from the commissioning of each nuclear reactor.

(133) The subsidised loan is structured as an instrument without recourse to EDF and the rest of the EDF Group in the event of default. EDF's contributions to the SPV rank below the subsidised loan.

(134) France explains that in order to maintain the risk-sharing between the State and EDF without exposing the Fonds d'épargne or the CDC, a State guarantee covering the entire CDC loan (principal, interest and other accessories) will be provided. This guarantee is granted free of charge so that the nominal shareholder rate of return after the target tax is not altered (compared with a scenario in which the State would have granted a direct loan to the SPV). If the SPV were to be in default, the State would be liable to reimburse the CDC loan and would become subrogated to the rights of the CDC for the same amount. The State would then hold claims against the SPV, covering both the CDC and State loans.

(135) The French authorities indicate that the applicable rules concerning the distribution of dividends have not yet been defined.

5.2. **Measure 2: Contract for Difference**

5.2.1. *General Principles*

(136) As a second measure, the French authorities intend to provide a two-way CfD to bring predictability on the revenues of the units and thereby reduce the market risk. The CfD is capability-based, meaning that the CfD settlement formula is based on potential baseload electricity production, defined as the reference output volume, rather than on actual electricity production.

(137) The CfD is concluded between the State and the SPV and covers 100 % of the electricity produced by the six reactors of the Project. Each reactor is covered by a CfD with a duration of 40 years, starting from its commissioning date.

(138) In the event of a delay of more than 5 years in the commissioning of a reactor compared to the date laid down in the reference timeline for a reason other than legitimate grounds, the duration of the CfD for that reactor shall be reduced by the duration of the delay beyond 5 years.

(139) The French authorities stated that they will ensure that the terms of the CfD are designed in such a way as to avoid distortions of competition and trade on the internal market resulting from the distribution, where appropriate, of any revenue generated by the contract to undertakings, in accordance with Article 19d(2), point (d) and (e) of the Electricity Regulation.

5.2.2. *Remuneration under the CfD*

(140) France explained that the revenues of the units over the duration of the direct price support mechanism will be the sum of annual settlements with the CfD counterparty and the market revenues. The CfD settlement ([42]) corresponds to the difference between the CfD strike price, defined for 'baseload' electricity production, and the reference price for the year, multiplied by the reference output volume for the year in question. Other income linked, for instance, to the participation of the reactors in the CRM or to the sale of guarantees of origin, are deducted from the CfD settlement, in accordance with the following formula:

$$CR = (f - p') * k - Rc$$

Where:

CR is the CfD settlement (in EUR);

f is the CfD strike price (in EUR/MWh);

p' is the reference price (in EUR/MWh);

k is the reference output volume (in MWh);

Rc is the sum of other revenues (in EUR), for their actual value.

(141) The CfD settlement, positive or negative, is added to the revenues linked to the actual production of the reactors. These actual revenues are calculated in accordance with the following formula:

$$R = \sum p_h * q_h + R_{c^{actual}}$$

Where:

R are the revenues linked to the actual production of the reactors (in EUR);

ph is the price at which the electricity produced was effectively valued at each time step *h* of the year, taking into account the participation of the reactors in ancillary services, such as system services, and the adjustment mechanism (in EUR/MWh);

qh is the effective electricity output volume of the reactors under the CfD at each time step *h* of the year (in MWh);

Rc actual is the sum of other revenues derived from the effective participation of the reactors in the CRM and, where applicable, from the sale of guarantees of origin, as well as any other revenues related to contracts or mechanisms not known at the time of definition of the CfD terms (in EUR).

(142) The CfD settlement is calculated for each year and gives rise to a payment from the State to the SPV, in the case of a positive value, and from the SPV to the State, in the case of a negative value.

(143) Depending on certain specific market conditions, the CfD settlement formula will be adjusted as follows.

(144) Where the reference price is lower than the variable cost of production of the reactors in the year in question, the formula will be adjusted so that the CfD settlement is limited to the coverage of the fixed costs of the reactors, in accordance with the following formula:

$$if\ p' < c,\ CR = (f - p') * k - Rc$$

where *c* is the variable production cost of the reactors (in EUR/MWh).

([42]) Referred to as 'remuneration supplement' to the market revenues of each reactor in the notification.

(145) Where the actual production of electricity is less than a defined fraction of the reference output volume for the year in question and the reference price is higher than the strike price, the formula will be adjusted so as to limit the amounts transferred by the SPV to the State under the CfD settlement as follows:

$$if\ p' > f\ et\ q < \beta * k,$$

$$CR = (f - p') * (q + (1 - \beta) * k) - Rc$$

Where:

$\beta = 1 - \frac{X}{\frac{p'}{f} - 1}$ is the parameter used to define the fraction of the reference output volume from which the adjusted formula is applicable, with X a percentage to be defined inferior or equal to 10 %;

q is the actual electricity production of the reactors over the year in question (in MWh).

(146) The maximum losses for the SPV resulting from the application of the formula of the CfD settlement, adjusted as described in recitals (140), (144) and (145), will be limited to a percentage X of the reference remuneration ([43]). X will be inferior or equal to 10 % and will be defined at a later stage.

5.2.3. *Strike price, target price and projected shape value*

(147) The CfD's strike price, defined for a 'baseload' electricity production, is equal to the difference between the target price and a projected shape value. This shape value corresponds to the additional value that the operator can expect to receive by programming, for instance, the shutdowns taking into account the market prospects and technical constraints of the reactors, by valuing on the markets the possibility for the reactors to adapt their power according to supply and demand, compared to a production that would be constant throughout the year. In addition, this shape value takes into account the expected revenues from the participation of the reactors in the system services and the adjustment mechanisms described in recitals (144) and (145).

(148) The Target price is determined to achieve the target IRR of [6.5-8.5] % over the entire duration of the Project on the basis of the business plan and the respective cost of equity. As an indication, it was initially valued at EUR_{2024} [90-120]/MWh and will be indexed annually ([44]).

(149) The projected shape value, deducted from the target price for determining the strike price, was initially estimated by the French authorities at EUR_{2024} [1-3]/MWh, on the basis of the 2023 CRE report on the production cost of the existing nuclear fleet ([45]). The sum of the projected shape value and the projected revenues from the CRM and the guarantees of origin was initially estimated at EUR_{2024} [3-7]/MWh. The strike price, reduced by these estimated revenues, was therefore estimated at EUR_{2024} [85-115]/MWh.

5.2.4. *Reference output volume*

(150) The reference output volume is defined annually as the expected volume of electricity production of the reactors in that year, defined as the product of the nominal power of those reactors, their expected availability rate (*Kd*) and utilisation rate (*Ku*) over the year in question and the number of hours in the year.

(151) As an indication, the reference output volume is initially estimated at 66.7 TWh/year on average (between 2044 and 2098) for all the reactors in the Project, taking into account a rated output of 9 990 MW, an average availability rate of 88 % and an average utilisation rate of [86-92] %.

([43]) The reference remuneration corresponds here to the product of the reference output volume by the strike price.
([44]) The project cost indexation assumptions are currently being finalized as part of the audit of the Project's estimate.
([45]) Available at: https://www.ecologie.gouv.fr/sites/default/files/documents/CRE_Rapport_couts_nucleaire_2023.pdf.

5.2.5. *Reference price*

(152) The reference price is defined as the annual arithmetic average of spot prices at each time step, published on the eve of the delivery day (D-1) on the European daily market for France, for the year in question. It will be calculated after the end of the year in question on the basis of the quotations observed on the electricity markets.

(153) The CfD provides for the possibility of forward sales of all or part of the reference output volume. The following term shall be deducted from the CfD settlement to take account, if appropriate, of the sale on the forward market of part of the reference output volume:

$$For\ a\ \vartheta \in [0\ ;\ 1]\ AM = (p'_{terme} - p') * \vartheta * k$$

Where:

— *AM* is the adjustment deducted from the CfD settlement and added to the actual revenues *R* to take into account the sale on the futures market of the quantity ϑk (in EUR);

— *p'terme* is the reference price for hedging on the futures market for the year in question (in EUR/MWh);

— ϑ is the part of the reference output volume sold forward for the year in question (in %). The share ϑ of the reference output volume is defined for each delivery year. It will be reviewed prior to the commissioning of the first reactor, and then at each revision period.

5.2.6. *Update of the parameters*

(154) The following parameters of the CfD formula may be reviewed prior to the commissioning of the first reactor, and then every five years:

(a) The reference output volume, to take into account, on the one hand, the impact of legitimate grounds on the reactor availability rate (Kd), as well as the planned maintenance program during that review period and, on the other hand, the impact of legitimate grounds on the reactors utilisation rate (Ku), as well as the balance of the electricity system leading to a deviation from maximum theoretical use outside outage periods.

(b) The target price, to take account of the updating, in the financial model, of (i) the indexing conditions, (ii) the adjustments linked to compensation based on legitimate grounds, where appropriate, and (iii) the revision of the reference output volume under the conditions defined above. It may also be revised to take account of changes in energy policy choices affecting the cost of reprocessing and recovering spent fuel or the cost of managing radioactive waste.

(c) The projected shape value, to take account of the evolution of the functioning of the electricity markets, consistent where appropriate with the revision of the utilisation rate (*Ku*) underlying the reference output volume of the reactors.

(d) The variable cost of production.

(e) The utilisation rate (*Ku*) to take account of developments in the French and European electricity systems.

(f) The definition and calculation of the reference price, to take account of developments in the functioning of the electricity markets.

(155) The 5-year period specified as the review period may be reduced in the event of an unforeseen event or an uncertain context justifying updating some of the CfD parameters without waiting for the next review period (in particular in the initial phase after the start of operations).

5.3. **Measure 3: Risk-sharing mechanism**

(156) As a third measure, France intends to introduce a risk-sharing mechanism, allowing the SPV to be protected against certain risks, based on so-called 'legitimate grounds'.

(157) Legitimate grounds refer to risks linked to the occurrence, before the end of the two-way CfD for the reactor(s) concerned, of events or changes in circumstances outside the control and will of EDF and its contractual partners or the SPV, which cannot be anticipated. All other risks are not considered legitimate grounds.

(158) The legitimate grounds cover the following closed list of risks:

(a) Changes of Law: amendments made to the various legislative or regulatory texts of national law, Union law or international law, to the extent that they relate to the design, construction, operation, permanent shutdown or decommissioning of nuclear electricity generating installations or to waste management.

(b) Safety, security, cybersecurity: significant changes in nuclear safety and nuclear security requirements. In the field of nuclear safety, changes related to the improvement of technical and scientific knowledge and national and international feedback for continuous improvement are not covered. The definition of legitimate grounds for cybersecurity is still under discussion.

(c) Network: delays in connection to the grid as well as unavailability of the grid due to malfunctions or damages to the grid operator's facilities, under the same conditions as applied to successful bidders for offshore wind farms.

(d) Permits / administrative authorisations: judicial suspensions or annulments, repeals or withdrawals ordered by the administration, and delays in the issue of a closed list of authorisations (e.g. creation and commissioning of the basic nuclear installations, environmental permits etc.) that are not attributable to EDF. Only delays exceeding a defined number of months for each authorisation will be covered.

(e) Environmental and archaeological aspects of the sites: the discovery of archaeological remains on the Bugey site or waste on land not yet acquired by EDF around that site and the discovery of protected species which were not identifiable when the fauna and flora inventories were done for the application for the environmental authorisation or for the authorisation for creation of the reactors.

(f) Climate events and natural disasters: unforeseeable, irresistible natural disasters or climate events of exceptional magnitude.

(g) Terrorist and geopolitical risks: acts of terrorism, foreign sanctions or export control measures to the extent that they affect any element necessary for the implementation of the Project, except for nuclear fuel.

(159) If a risk covered by the above legitimate grounds materialises, the SPV will be entitled to a compensation, agreed between the State and EDF, to offset the impact of this risk on the project's IRR (taking into account a materiality threshold (see recital (165)) and the partial compensation of some of the risks). The effect on the Project's IRR of risks other than those relating to legitimate grounds is not offset.

(160) The State will decide on the form of this compensation from the following two options:

(a) Either by adjusting the strike price of the CfD (upwards or downwards depending on the negative or positive impact of the risk);

(b) Or through a financial compensation (which would not bear interest and would not be repayable) paid by the State to the SPV.

(161) EDF will inform the French authorities of the occurrence of a risk based on legitimate grounds, and the State and EDF will agree on the classification of the event in question and on the additional costs, delays and economic effects on construction, operation, permanent shutdown and decommissioning, including favourable ones, to be taken into account.

(162) The compensation by an adjustment of the strike price is – except for risks affecting the production volume of the reactors – carried out prior to the commissioning of the reactors and every 5 years thereafter, as part of the periodic review of certain parameters of the contract.

(163) In the case of risks covered by a legitimate ground affecting the production volume of the reactors, compensation by an adjustment of the strike price is carried out the year following the invocation of the risk, or even possibly during the year in which the risk is invoked.

(164) Costs, delays, production losses and loss of revenue that are (i) insurable on reasonable economic terms, or (ii) already included in the provisions of the estimate, or (iii) already covered by a third party, in particular in the context of contracts with suppliers (taking into account, in the field of security, the operator's liability and, more generally, EDF's usual practices in dealing with its suppliers) will not be compensated.

(165) For each event falling under one or more legitimate grounds, a materiality threshold will be applied to the costs, delays and loss of revenue (net of provisions and costs already covered by third parties) eligible for compensation under the relevant legitimate grounds. If the financial impact of an event exceeds the threshold that gives rise to compensation, the value of that threshold is deducted from the compensation.

(166) The French authorities confirm that EDF undertakes to make its best efforts to mitigate the impact of the legitimate grounds on the Project. To this end, EDF will have to take reasonable measures as soon as possible to mitigate such an impact. Otherwise, or in the event of an aggravation caused by EDF, the additional costs and other economic effects linked to the legitimate grounds shall be borne by the State only for the part not resulting from that defect or aggravation.

6. **ASSESSMENT OF THE MEASURE**

6.1. **Existence of aid**

(167) According to Article 107(1) TFEU, any aid granted by a Member State or through State resources, in any form whatsoever, that distorts or threatens to distort competition by favouring certain undertakings or the production of certain goods, is incompatible with the internal market, in so far as it affects trade between Member States.

(168) A measure constitutes State aid within the meaning of Article 107(1) TFEU, if it fulfils four cumulative conditions. First, the measure must be imputable to the State and funded through State resources. Second, the measure must confer an advantage to a beneficiary. Third, the measure must favour certain undertakings or economic activities (i.e. there must be a degree of selectivity). Fourth, the measure must have the potential to affect trade between Member States and to distort competition in the internal market.

(169) The Commission notes that France has identified the SPV as the direct beneficiary of the aid while stating that the aid will also benefit EDF, as the parent company of the SPV (see recital (109)).

(170) Several separate legal entities may be considered to form one economic unit for the purposes of the application of State aid rules. That economic unit is then considered to be the relevant undertaking ([46]).

(171) A number of factors must, depending on the case, be examined in order to determine whether separate legal entities may be regarded as forming a single economic unit for the purposes of the application of the rules on State aid, such as the capital, organic, functional and economic links between those entities, and the contracts on the basis of which the aid measure was granted, as well as the type of aid measure granted and the context in which it was granted. It is therefore a global assessment of several factors specific to each individual case. ([47])

([46]) Commission Notice on the notion of State aid as referred to in Article 107(1) of the Treaty on the Functioning of the European Union, OJ C 262, 19.7.2016, pp. 1–50, point 11.

([47]) Judgment of the Court of Justice of 16 December 2010, *AceaElectrabel Produzione SpA v Commission*, C-480/09 P, ECLI:EU:C:2010:787, paragraphs 47 to 55; Judgment of the Court of Justice of 10 January 2006, *Cassa di Risparmio di Firenze SpA and Others*, C-222/04, ECLI: EU:C:2006:8, paragraph 112; Judgment of the General Court of 20 December 2023, *Ryanair DAC and Malta Air ltd. v European Commission*, Case T-216/21, ECLI:EU:T:2023:822.

(172) As explained in section 3.1, while the SPV and EDF constitute two separate legal entities, the SPV will be wholly owned and controlled by EDF, and thus, EDF will be directly involved in the management of the SPV (see recital (35)). Thus, it appears that the SPV and EDF form a single economic unit, as they will maintain capital and organic links, due to EDF being the only shareholder of the SPV. In addition, the two entities will be engaged in the same economic activity (nuclear electricity generation) at the same sites, which are on or near sites already owned by EDF, and will be closely cooperating for the implementation of the Project. This cooperation will be formalised by the partnership contract, which will contain legally binding arrangements concerning the rights and obligations of the parties for the implementation of the Project (see recital (36)), and by the provision of technical expertise by EDF (see section 3.2). They will thus also maintain functional links. Furthermore, at this stage, the electricity trading activity of the new units will be coordinated and implemented by EDF, on behalf of the SPV, possibly consolidating EDF's market power (see recital (37)). Accordingly, those entities form a single economic unit for the purposes of the application of the rules on State aid. Therefore, as stated above in recital (109), the Commission considers that the beneficiary of the aid is the economic unit including the SPV and its parent entity, EDF.

6.1.1. *A single intervention comprising several measures*

(173) Different State aid measures can be considered as a 'single intervention' ([48]). This is the case, in particular, where consecutive interventions are so closely linked to each other, especially having regard to their chronology, their purpose and the circumstances of the undertaking at the time of those interventions, that they are inseparable ([49]). For instance, a series of State interventions which take place in relation to the same undertaking in a relatively short period of time, are linked to each other, or were all planned or foreseeable at the time of the first intervention, may be assessed as one intervention.

(174) In the present case, the Commission considers that all three notified measures have the same subject matter and objective, namely, to enable the construction and operation of six EPR2 nuclear reactors at the sites of Penly, Gravelines and Bugey. Further, the measures coincide chronologically, as they were planned (and were thus foreseeable when negotiated) together ([50]). While they will be established based on different contractual bases (see section 3.9), they are linked with each other and presuppose each other, in the sense that none of them would exist in the absence of the others.

(175) In particular, all the measures were negotiated together and are designed in a way that each measure has a direct impact on the others. Only jointly do the measures create the financial preconditions that enable the construction and operation of the plants. The grantor of the three measures is the French State and the measures are closely related chronologically, are interdependent and have been structured by the French authorities together as a package. For example, lowering the commercial risks through measure 3 (risk-sharing mechanism based on legitimate grounds) and lowering initial funding requirements through measure 1 (the subsidised loan) impact the amount of aid needed under measure 2 (the CfD). Moreover, the risk-sharing mechanism under measure 3 addresses the risk arising with the longevity of exposure to the market and to political decisions, which the subsidised loan or CfD cannot address alone. Ultimately, the beneficiary's FID will depend on the approval of this aid package by the European Commission. In other words, the three measures at issue are closely linked and it would have been impossible to separate them.

(176) The Commission considers therefore that the three measures should be examined together as a single intervention, as they are interdependent and have mutually enhancing effects for the performance of the Project.

([48]) Commission Notice on the notion of State aid as referred to in Article 107(1) of the Treaty on the Functioning of the European Union, OJ C 262, 19.7.2016, p. 1–50, point 81.

([49]) Judgment of 19 March 2013, *Bouygues and Bouygues Télécom v Commission and Others*, Joined Cases C-399/10 P and C-401/10 P, EU:C:2013:175, paragraph 104; Judgment of 13 September 2010, *Greece and Others v Commission*, Joined Cases T-415/05, T-416/05 and T-423/05, EU:T:2010:386, paragraph 177; Judgment of 15 September 1998, *BP Chemicals v Commission*, T-11/95, EU:T:1998:199, paragraphs 170 and 171.

([50]) Judgement of 15 December 2021, *Oltchim SA v Commission*, T-565/19, EU:T:2021:904, paragraphs 93 to 197.

(177) Finally, the Commission takes note of the position of the French authorities that the envisaged termination clause defining the conditions and level of compensation in case of unilateral termination of the Project (see recital (102)) will not involve State aid. The Commission considers that additional information on the terms and conditions would be required in this regard to conclude on the absence of aid. Should this clause ultimately involve aid, it would be considered part of the single intervention and its compatibility with the State aid rules would have to be assessed accordingly.

6.1.2. *Imputability to the State and financing through State resources*

(178) For measures to be capable of being categorised as aid within the meaning of Article 107 TFEU, they must be granted directly or indirectly through State resources. This means that both advantages which are granted directly by the State and those granted by a public or private body designated or established by the State are included in the concept of State resources within the meaning of Article 107(1) TFEU.

(179) The measures envisaged to support the Project, described in recital (34), which form part of a single intervention, are imputable to the State. All three measures have been decided by the State. Moreover, the granting authority for all three measures is the French State acting through the Ministry for the Economy, Finance and Industrial and Digital Sovereignty or through other relevant State authorities (see section 3.10).

(180) Further, all three measures that form part of the single intervention are financed from resources under the control of the State. As explained above in recitals (124)-(127), 60 % of the construction costs of the Project and a portion of the cost overruns will be financed through a subsidised loan (i.e. a loan provided by CDC, which will be guaranteed and subsidised by the State and potentially complemented by an additional preferential loan provided directly by the State) with resources coming directly from the State budget (see recital (108)). The rates of the CDC loan are subsidised by the State and a non-remunerated State guarantee is provided for the entirety of the CDC loan. These two elements further corroborate the conclusion that measure 1 relies on the granting of State resources. ([51]) Besides, an additional preferential loan may be provided directly by the State with State resources from the State budget (see recital (108)). The two-way CfD will be established in the form of an administrative contract between the French authorities and the SPV (see recital (137)). The CfD and any compensation under the risk-sharing mechanism will also be financed from the State budget (see recital (108)).

(181) In the light of the above, the Commission considers that the intervention as a whole is granted through State resources and is imputable to the State within the meaning of Article 107(1) TFEU.

6.1.3. *Selective economic advantage*

(182) A measure is deemed selective if it favours only certain undertakings or the production of certain goods. An advantage, within the meaning of Article 107(1) TFEU, is any economic benefit, which an undertaking would not have obtained under normal market conditions, i.e., in the absence of State intervention. ([52])

(183) The measures described in sections 5.1 to 5.3 target selectively the Project, namely the construction and operation of six high-power nuclear reactors of technology EPR2 in the sites of Penly, Gravelines and Bugey. They are provided to the SPV and ultimately to EDF as beneficiaries, thereby favouring them as compared to other undertakings in the energy sector. The measures are therefore selective.

([51]) For completeness, it is recalled, as regards CDC as such, that, as noted by the Union courts, in the light of its characteristics, the CDC is a public body whose conduct is imputable to the French State and whose resources constitute State resources. See judgment of the Court of Justice of 19 December 2013, in case *Vent De Colère and Others*, C-262/12, ECLI:EU:C:2013:851, paras. 29-33, as well as judgment of the General Court of 12 December 1996, *Air France v Commission*, T-358/94, ECLI:EU:T:1996:194, paragraphs. 55-69, espec. para. 61.

([52]) Judgment of the Court of Justice of 11 July 1996, *SFEI and Others*, C-39/94, EU:C:1996:285, paragraph 60; Judgment of the Court of Justice of 29 April 1999, *Spain v Commission*, C-342/96, EU:C:1999:210, paragraph 41.

(184) Besides, the measures described in sections 5.1 to 5.3 would, even if taken separately, clearly confer an economic advantage to the beneficiary. Measure 1 concerns a subsidised loan, i.e. by CDC, backed by a non-remunerated State guarantee and subsidised by the State, potentially complemented by an additional preferential loan, provided directly by the State. This represents a clear advantage as such financing, largely subsidised and with a long maturity of 39 years (see recitals (131) and (132)), would not have been provided by a market operator. Measure 2 provides a stable long-term remuneration for electricity produced by the new units that would not be available on the market, or at least not for such a duration of 40 years for each reactor from its date of commissioning (see recital (61)), ensuring a steady flow of revenues for the beneficiary for the duration of the CfD that other operators not benefitting from a similar support measure do not receive. Measure 3 provides financial protection in case of adverse effects due to a list of grounds, thereby reducing investment risk and transferring it to the State and conferring an economic benefit that could not have been obtained under normal market conditions.

(185) It follows from the above that all the measures that form part of the single intervention, taken as a whole, allow the Project to be realised and provide for a target return on investment (see recital (87)). The Commission preliminarily agrees with the French authorities, who submit that the measures, taken as a whole, aim to enable an investment which, due to the specific risks and the long project duration, would not have been undertaken by a private investor under normal market conditions, that is to say in the absence of State intervention (see recitals (27)-(28)). Hence, the single intervention comprising the measures described in sections 5.1 to 5.3 confers a selective economic advantage to the beneficiary within the meaning of Article 107(1) TFEU.

6.1.4. *Threat of distortion of competition and trade*

(186) The electricity market has been liberalised and electricity producers are engaged in trade between Member States so that an advantage granted to the producers of nuclear electricity is likely to distort competition and affect trade between Member States. Electricity from nuclear sources is generally sold on the internal market for electricity where it enters in competition with all sources of electricity, including those in other Member States.

(187) Therefore, the advantage granted to the beneficiaries of the single intervention is likely to distort competition and affect trade between Member States. As the measures grant advantages to electricity generation as a competitive activity, that conclusion would, again, be the same if the measures were looked at individually.

6.1.5. *Conclusion on the existence of aid*

(188) On the basis of the above-mentioned elements, the Commission considers that the measures constitute State aid within the meaning of Article 107(1) TFEU, and that this would also be the case for the three measures individually.

6.2. **Compatibility of the measures with Article 107(3)(c) TFEU**

(189) Article 107(3)(c) TFEU provides that the Commission may declare compatible '*aid to facilitate the development of certain economic activities or of certain economic areas, where such aid does not adversely affect trading conditions to an extent contrary to the common interest*'. Therefore, compatible aid under that provision of the Treaty must contribute to the development of an economic activity. Furthermore, the aid should not distort competition in a way contrary to the common interest. The Commission must thus verify:

(a) Whether the aid measure facilitates the development of an economic activity by:

— identifying the economic activity supported by the aid; and

— showing that the aid effectively facilitates the development of the economic activity,

— without that activity breaching any relevant Union rules.

(b) Whether the aid measure does not unduly affect trading conditions to an extent contrary to the common interest by:

— identifying the market(s) affected by the aid;

— identifying the positive effects of the aid measure on the internal market;

— assessing how the aid measure minimises the distortions on competition and trade by evaluating the necessity of the aid, its appropriateness and its proportionality;

— identifying the outstanding distortions of trading conditions that cannot be avoided (despite the aid being necessary, appropriate, proportionate); and

(c) Weighing up the positive effects of the aid with the negative effects on competition and trade in the internal market.

6.2.1. *Positive condition: development of an economic activity*

(190) Under Article 107(3)(c) TFEU, the measure must contribute to the development of an economic activity.

6.2.1.1. Contribution to the development of an economic activity

(191) As mentioned in section 2.4, the objective of the measures subject to this decision is to enable investments in new nuclear power generation and ensure its operation for a prolonged period, thereby contributing to the decarbonisation of the electricity system in France and in Europe and to the security of electricity supply. Specifically, the notified aid package targets directly the development, construction, commissioning and operation of the new nuclear capacity consisting in six new nuclear units (see recital (32)).

(192) The Court of Justice has recognised the development of new nuclear capacity as an economic activity in the sense of Article 107(3)(c) TFEU ([53]) and has established that Article 107 TFEU may be applied to investments in nuclear power stations ([54]).

(193) The Commission therefore considers that the Project facilitates the development of an economic activity, namely generation of nuclear-based energy, as required by Article 107(3)(c) TFEU.

6.2.1.2. Incentive effect

(194) State aid can only be considered to facilitate an economic activity if it has an incentive effect. An incentive effect occurs when the aid induces the beneficiary to change its behaviour towards the development of the economic activity pursued by the aid, and if this change in behaviour would not otherwise occur without the aid.

(195) The Commission preliminarily agrees with the submissions by France that, in the absence of aid, an investor would not have the necessary incentives to invest in the development of new reactors. New nuclear projects are highly capital intensive and are exposed to significant risks over a very long duration. The high input costs of investment represent a barrier to entry into the industry. In addition, their revenues are subject to the volatility of the electricity market and to potentially changing international and domestic environments, which may further undermine the profitability of the investment (see recital (27)).

(196) The Commission considers that, while EDF had carried out preparatory works in the years prior to the notification (see, in particular, recitals (43) and (46)-(54)), the Project would not go ahead absent State support in view of the current uncertain and fast-changing market conditions and the market failures associated with nuclear power development (i.e., scale of the capital requirement, longevity of exposure to market pricing signals, and longevity of exposure to international events and national political decisions).

([53]) Judgement of 22 September 2020, *Austria v Commission*, C-594/18 P EU:C:2020:742, paragraph 63.
([54]) Judgement of 22 September 2020, *Austria v Commission*, C-594/18 P EU:C:2020:742, paragraph 32.

(197) The Commission further preliminarily considers that without the aid the funding gap of the Project would not be closed. The French authorities have estimated the IRR of the Project without aid at [1-3] %, which admittedly would be insufficient to justify an investment decision on behalf of EDF.

(198) Furthermore, without State intervention, the investor would need to bear significant additional risks that are otherwise mitigated by the notified measures, such as the market price risk and the regulatory risk, which suggests that the investor would expect a comparatively higher return to implement the Project without aid.

(199) The Commission therefore considers preliminarily that aid for the Project has an incentive effect as it induces the beneficiary to engage in economic activity it would not carry out without the aid.

6.2.1.3. Compliance with relevant provisions of EU law

(200) The Court of Justice has consistently held that '*State aid which contravenes provisions or general principles of EU law cannot be declared compatible with the internal market*' ([55]). According to settled case law, *'when the Commission applies the State aid procedure, it is required, in accordance with the general scheme of the Treaty, to ensure that provisions governing State aid are applied consistently with specific provisions other than those relating to State aid and, therefore, to assess the compatibility of the aid in question with those specific provisions. However, such an obligation is imposed on the Commission only where the aspects of aid are so inextricably linked to the object of the aid that it is impossible to evaluate them separately. The obligation is not imposed, however, where the conditions or factors of an aid scheme, even though they form part of the aid, may be regarded as not being necessary for the attainment of its object or for its proper functioning*' ([56]).

(201) The Court of Justice summarised in its judgment in the *Paks II* case the circumstances in which the Commission must consider other provisions of Union law in its State aid assessment. Specifically, the Court of Justice stated that *'the Commission must take into account infringements of provisions of EU law other that those related to State aid where such infringement arises from the economic activity financed, from the aid or from its object as such or from aspects inextricably linked to the object of the aid. Thus, where the modalities of an aid measure are so indissolubly linked to its object that it is impossible to evaluate them separately, their effect on the compatibility or incompatibility of that aid viewed as a whole must therefore of necessity be determined in the framework of the procedure prescribed in Article 108 TFEU. Such modalities are therefore among the factors which the Commission is required to examine and, as the case may be, to approve […]*' ([57]).

(202) In the case at issue in the *Paks II* judgment, 'the direct award of the contract for the construction of the two new nuclear reactors [was found to be] an aspect that [was] inextricably linked to the object of the aid measure' ([58]).

(203) The Commission considers that it does not have to examine France's compliance with public procurement rules in the present State aid case. On the basis of the available information and the submissions of the French authorities (see recital (56)), the Commission preliminarily understands that France will not enter into a contract with EDF involving the procurement of supply, works or services for its benefit within the meaning of the Union public procurement rules, which are therefore not applicable in this regard. Moreover, in the case at hand, in contrast to the facts underlying the *Paks II* judgment, EDF does not intend to award an EPC contract to an external supplier.

([55]) Judgment of 15 April 2008, *Nuova Agricast*, C-390/06, EU:C:2008:224, paragraphs 50 and 51.
([56]) See Judgment of 3 December 2014, *Castelnou Energía*, Case T 57/11, EU:T:2014:1021, paragraphs 181-184 and case-law cited therein. See also Judgement of 30 November 2022, *Austria v Commission*, T-101/18 EU:T:2022:728, paragraph 30 and Judgement of 31 January 2021, *Commission v. Braesch e.a.*,C-284/21 P, EU:C:2023:58, paragraph 97.
([57]) Judgment of 11 September 2025, *Austria v Commission (Paks II)*, C-59/23 P, ECLI:EU:C:2025:686, paragraphs 53 and 54.
([58]) *Idem*, paragraph 72.

(204) As regards the award by EDF of various contracts for the implementation of the Project to subcontractors, the Commission agrees with the position of the French authorities that it does not constitute an aspect intrinsically linked to the aid's object (see recital (57)), as the award modalities of such contracts are not specifically necessary for the achievement of the aid's objective ([59]) or its functioning.

6.2.1.3.1. Compliance with Union environmental law

(205) According to settled case-law, State aid that supports an activity that breaches Union environmental rules cannot be found compatible with the internal market. For nuclear energy specifically, the Court of Justice clarified that for the sector '*covered by the Euratom Treaty, State aid for an economic activity falling within that sector that is shown upon examination to contravene rules of EU law on the environment cannot be declared compatible with the internal market pursuant to that provision*' ([60]).

(206) The Court of Justice also clarified that the provisions of the TFEU as well as Union environmental law, including the principle of protection of the environment, the precautionary principle, the 'polluter pays' principle and the principle of sustainability cannot be regarded as precluding, in all circumstances, the grant of State aid for the construction or operation of a nuclear power plant ([61]). That reasoning is fully applicable to the Project and the measures at stake. This is all the more the case since France has opted for nuclear energy, *inter alia*, to reach and maintain carbon neutrality.

(207) Moreover, as the French authorities have specified, the Project development will be preceded by an extensive and open environmental impact assessment process conducted in compliance with Union secondary legislation requirements (see recitals (47) and (48)).

(208) At this stage, the Commission has no indications that the Project, or the economic activity financed by the State aid, violates provisions of Union environmental law.

6.2.1.3.2. Compliance with energy law provisions

(209) As explained in recital (201), the Commission must take into account possible infringements of provisions of Union law other that those related to State aid where those infringements may arise from the aid measure itself or from its object. It is therefore necessary to assess the compliance of measure 2, i.e. the two-way CfD, with the relevant provisions of Union law.

(210) The requirements set in Article 19d(2) of the Electricity Regulation apply to all two-way CfDs, regardless whether they are mandatory under Article 19d(1) of the Electricity Regulation ([62]) or voluntarily introduced by a Member State. Hence, these requirements apply to newly introduced two-way CfDs in relation to investments aiming to incentivise nuclear newbuild, as in the present case. As explained in more detail in section 6.2.2.6.1, the Commission considers that, since some of the details of the envisaged two-way CfD are still unknown, the French authorities have not yet demonstrated compliance with the design principles set out in Article 19d(2) of the Electricity Regulation.

([59]) The objective of the aid notified by France is to support the activity of nuclear energy production in order to address, *inter alia*, security of supply concerns and shape the general structure of its energy supply so as to reach and maintain carbon neutrality, an objective which is pursued by means of the Project. The object of the aid is the construction and operation of six high-power new nuclear reactors, based on a pre-defined technology, i.e. EPR2, at the sites of Penly, Gravelines and Bugey, supported by the aid package for the benefit of the SPV, and its owner, EDF.

([60]) Judgment of 22 September 2020, *Austria v Commission*, C-594/18 P, EU:C:2020:742, paragraph 45.

([61]) *Idem*, paragraphs 48 and 49.

([62]) The requirement set out in Article 19d(1) to implement direct price support schemes for investment in new power-generating facilities in the form of two-way contracts for difference or equivalent schemes with the same effects only applies to contracts concluded on or after 17 July 2027.

(211) Although the French authorities have stated that the terms of the CfD will be designed in a way that would avoid distortions of competition and trade resulting from the distribution of potential revenues generated by the CfD to undertakings, they have not explained in the notification what will happen with those revenues that flow back to the State. Without this information, the Commission cannot assess whether the measure is in compliance with the principles set out in Article 19d(2), points (d) and (e) of the Electricity Regulation.

(212) Based on the above, the Commission cannot confirm, at this stage, that the design of the two-way CfD, as proposed by the French authorities, fully complies with the design principles set out in Article 19d(2) of the Electricity Regulation. Therefore, the Commission has doubts on the compliance of the proposed measure with relevant provisions of Union law.

6.2.1.4. Conclusion

(213) For the reasons explained in section 6.2.1.3, the Commission cannot conclude, at this stage, that the Project fulfils the first (positive) condition of the compatibility assessment i.e. that the aid facilitates the development of an economic activity without breaching relevant Union rules, because it has doubts on the compliance of the proposed measures with provisions of energy law.

6.2.2. *Negative condition: the aid cannot unduly affect trading conditions to an extent contrary to the common interest*

6.2.2.1. Identification of the market affected by the aid

(214) The aided investment concerns the construction and operation of six new nuclear reactors at the Penly, Bugey and Gravelines sites, which will produce electricity for supply into the national and interconnected Union electricity market.

(215) The aid therefore affects primarily the market for electricity generation and wholesale supply, irrespective of the underlying generation technology. Other related markets that could be affected include the capacity remuneration market or the balancing and ancillary services market. Finally, the aid may also affect downstream markets such as the retail market, since changes in wholesale supply and the competitive positioning of large vertically integrated operators such as EDF could translate directly into the retail market, affecting the competitive landscape between suppliers.

(216) As regards the geographical market, the Commission notes that there is cross-border trade from France to neighbouring countries through available interconnectors (see recital (10)). Recent calculations by the Commission indicate that the wholesale market in France does not show a high degree of price convergence with neighbouring regions ([63]). Other related markets, such as the retail market, are national (France).

(217) Therefore, the Commission preliminarily considers that the relevant geographical market for the assessment of the notified measures is at least national (France), and the wholesale supply market may extend to other countries, in which case the cross-border trade opportunities and interconnection capacity would be taken into account in the specific analysis.

6.2.2.2. Identification of the positive effects of the aid

(218) The transition towards climate neutrality involves the decarbonation of the energy mix as well as an increased electrification. In this context, electricity demand in France is expected to significantly increase by 2050 (see recital (11)). At the same time, France expects gradual closure of the second-generation nuclear reactors in the coming decades, even though the exact timing of such a closure is not yet clear (see recitals (11) and (114)). These developments are expected to lead to adequacy issues in the mid-long term (see section 2.2).

([63]) See Annex III of the Communication from the Commission amending the Guidelines on certain State aid measures in the context of the system for greenhouse gas emission allowance trading post-202, OJ C 196 of 5.1.2026. For the purposes of these Guidelines, geographic areas across Member States are defined, *inter alia,* by a sufficiently high price convergence.

(219) The installation of new nuclear generation capacities allows to maintain the necessary generation at the supply side while contributing to the decarbonisation of the energy system. The measure therefore has positive effects on the market as it helps decarbonise the electricity system and the energy mix and will increase security of supply. Since France is connected to neighbouring countries, these positive effects may also benefit countries importing electricity from France. By ensuring secure supplies when strengthening low-carbon sources, nuclear generation also contributes, jointly with the development of renewable energies, to achieving Union and France's decarbonisation objectives.

6.2.2.3. Necessity of State intervention

(220) To determine whether an aid measure is necessary, the Commission must assess whether the measure is targeted towards a situation where it can bring about a material improvement that the market alone cannot deliver. Aid which merely improves the financial situation of the beneficiary but is not necessary for the attainment of the intended objective cannot be considered to be compatible with the internal market. The Commission must therefore assess whether State aid is necessary to achieve the objective of promoting new nuclear investment in France.

(221) Following consideration of the different options to achieve its policy objectives set out in section 2.3, and exercising its right to choose between different energy sources under Article 194 TFEU, France has concluded that new nuclear capacity is a necessary component of its long-term energy transition strategy. In particular, the Project is essential to facilitate the development of the economic activity detailed in section 3.1 and under recitals (191)-(193), contributing to the objectives identified in section 2.4.

(222) The French authorities maintain that the construction of nuclear power plants is unlikely to take place absent State aid support.

(223) Indeed, it remains unlikely that market forces alone would be capable of ensuring the timely delivery of the nuclear capacity necessary to facilitate the development of the economic activity in question, namely the development of new electricity generation capacity from nuclear energy sources in France.

(224) According to the case law, Article 107(3)(c) TFEU does not make Member States' intervention through State aid conditional upon the existence of a market failure, but such a failure may be a relevant factor for declaring State aid compatible with the internal market ([64]).

(225) For new nuclear energy investments, the market failure arises principally due to three aspects: (i) the scale of the funding requirement, (ii) the long duration of exposure to uncertain market pricing signals, which are themselves distorted by interventions, and (iii) the heightened exposure to political and regulatory risk over a multi-decade horizon. The Commission considers also that the combination of those parameters is unique to nuclear technology and this has been recognised in previous Commission decisions as justifying targeted public intervention. ([65])

(226) First, the scale of capital requirements for nuclear investments is particularly high. While the levelized cost of energy is not necessarily higher for nuclear generation than for other technologies ([66]), the long lifetime and large production capacity of nuclear power plants could only be compared to the largest hydropower projects. These capital needs, reaching several billions of Euros, are further exacerbated by frequent and significant investment cost increases for new-build nuclear generation facilities. In particular, the first wave of Generation III investments in OECD countries have been affected by construction delays and escalating expenses.

([64]) Judgment of 22 September 2020, *Austria v Commission*, C-594/18 P EU:C:2020:742, paragraph 67.

([65]) See Commission decision C(2024) 8924 final of 18.12.2025 on the measure SA.109707 (2024/C) (ex 2024/N), aid measures for the first nuclear power plant in Poland, OJ C, C/2025/1389, 4.3.2025, footnote 146 and further references cited therein.

([66]) See 'IEA Projected Costs of Generating Electricity 2020', available at: https://iea.blob.core.windows.net/assets/ae17da3d-e8a5-4163-a3ec-2e6fb0b5677d/Projected-Costs-of-Generating-Electricity-2020.pdf, p.46.

(227) Second, electricity market structures do not encourage private nuclear investments given their long operation times, i.e. 60 years. Power price forecasts beyond 5 to 10 years carry significant uncertainty, particularly given the rapid development of RES, changing demand patters, and evolving Union energy-market design. Nuclear power plants face long-term exposure to volatile wholesale prices that are largely unrelated to their fixed-cost structure. Even small downward shifts in expected prices over the investment horizon can wipe out a project's return. Hence, the market does not provide the stable and predictable revenue framework required to secure private financing for a multi-decade asset.

(228) Finally, nuclear investments remain uniquely exposed to societal and political risks. Safety and environmental requirements continuously evolve and a single policy change or external event can materially affect a project's economics. Only State participation can credibly mitigate such risks in a transparent and accountable manner.

(229) Those market failures in relation to investment in new nuclear power generation sources can be observed in all markets and remain a concern also for the Project.

(230) Therefore, there are clearly identified market failures with respect to investments in new nuclear energy capacities in France. In light of the expected lack of sufficient electricity generation in the mid to long term, of those market failures, and of the strategic goals of France's energy policy, i.e. ensuring security of supply and long-term decarbonisation of electricity generation, support for the construction of new nuclear power sources in France appears necessary.

(231) Based on the above, the Commission considers, at this stage, that State intervention is necessary to ensure the development of new nuclear capacities in France, which is in turn necessary to achieve the goal of ensuring security of supply and long-term decarbonisation of electricity generation.

6.2.2.4. Appropriateness

(232) The Commission must determine in its assessment whether the notified aid measures represent an appropriate policy instrument to address their stated objective, namely, to promote the development of nuclear power generation to decarbonise the energy system and compensate for a future supply gap.

(233) The French authorities identify the specific risks and market failures that affect new nuclear reactor construction projects (see recital (27)) and explain that each of the three measures envisaged aims to cover a different set of risks and market failures, so that only the combination of the three measures makes it possible to cover all of the risks and market failures identified (see recital (123)).

(234) France considers that the notified measures put in place to achieve the objective pursued by the Project minimise the risk of distortions of competition. France argues that the two-way CfD is a more appropriate instrument than other possible instruments, and is in line with the requirements set out in Article 19d(2) of the Electricity Regulation concerning direct price support for new investments (see recital (31)). In addition, the CfD envisaged for the Project, which does not link the remuneration of the SPV to the actual production, provides an incentive for the operator to optimise the plants' production capacity in order to respond to market signals and to the needs of the electricity system (see recitals (136) and (139)).

(235) The Commission acknowledges that, given the scale, duration, and technological complexity of the Project, only one of the three measures mentioned above under recital (123) is unlikely to address all relevant market failures. For example, the subsidised loan may address the market failure linked to the scale of the funding required but will not address the risk linked to the volatility of the market price for electricity. Similarly, the two-way CfD does not address the market failure linked to the heightened exposure to political and regulatory risk over a multi-decade horizon. Finally, the risk-sharing mechanism adresses neither the market failure linked to the scale of the funding required nor that linked to market price volatility. Some degree of complementarity between different measures may therefore be justified and the Commission has recently approved similar aid packages in nuclear generation.

(236) While the Commission recognises that risk mitigation is necessary for nuclear investments of this nature, a generation project must retain a degree of market and operational exposure that reflects its role within a competitive electricity market and avoids excessive risk transfer to the State.

(237) The Commission notes that the proposed measures address multiple categories of risk, such as market price risk, funding risk, risk of policy changes. The appropriateness of the aid instruments depends on ensuring that the investor retains meaningful exposure to construction, operational, and market risks and remains incentivised to manage them efficiently.

(238) The Commission notes that the modalities of the financing of the Project maintain a degree of risk exposure for EDF. With its participation in the financing of the Project via a shareholder loan amounting to 40 % of the construction costs, EDF appears to bear a sizeable risk if the project fails (see recital (38)). Regarding cost overruns, EDF is financially responsible for the first EUR 15 billion (see recital (73)). Similarly, regarding the risk-sharing mechanism where insurable costs have been excluded, EDF remains financially exposed through a system of materiality thresholds (see recital (165)).

(239) Yet, at this stage, the level of information provided by the French authorities is not sufficient for the Commission to conclude without any doubt that the proposed package achieves an appropriate balance between reducing risks to enable the investment and maintaining incentives for efficient behaviour. For example, elements such as the cost of financing in the absence of aid or justification for the duration of the different components of the aid package have not been provided. The Commission considers that, at this stage, it is unclear whether the balance between the measures proposed by France is appropriate.

(240) In addition, as concerns Measure 3, the Commission has doubts whether the list of legitimate grounds does not cover risks that are not specific to the nuclear sector. Notably, the environmental and archaeological risk seems to be part of a normal business risk taken by any investor. Some of the risks covered are also not clearly defined. For example, in the field of nuclear safety, changes related to the improvement of technical and scientific knowledge and to national and international feedback for continuous improvement are not covered (see recital (158)(b)). However, the French authorities have not provided examples of changes in safety requirements that would not derive from the continuous improvement of technical knowledge and that, therefore, would constitute legitimate grounds. The legitimate grounds for cybersecurity are also not yet defined (see recital (158)(b)).

(241) Regarding the proposed two-way CfD, the Commission preliminarily observes that the design aims to preserve partial market-risk exposure by limiting the CfD duration to 40 years - shorter than the expected 60-year lifetime of the new reactors - and by using a remuneration formula that seems to encourage, in principle, efficient operational behaviour. However, essential elements, such as the definition of the reference price are not yet sufficiently specified. Depending on their exact definition, this or other unspecified design features could materially affect the operator's exposure to market signals and therefore its incentives for efficient market participation.

(242) The Commission therefore invites interested parties to comment on the appropriateness of the aid instruments proposed by France.

6.2.2.5. Proportionality

(243) To assess the proportionality of a measure, the Commission must verify that the measure is limited to the minimum that enables the attainment of the objective pursued.

(244) To assess the proportionality of the aid in the present case, the Commission needs to take into account the combination of the measures proposed by the French authorities, namely the subsidised loan backed by a corresponding State guarantee, the CfD and the risk-sharing mechanism.

6.2.2.5.1. The aid package

(245) The Commission considers that the level of information provided by the French authorities is not sufficient to conclude without any doubt that the proposed package does not go beyond what it necessary to reach the objectives of the Project and whether the balance between the measures proposed by France, is proportionate.

(246) Regarding the 40-year proposed duration of the CfD, the Commission notes that, it allows for stable revenues necessary to ensure loan repayment, especially in the initial phase after the start of operations in light of technical challenges observed in comparable projects. The Commission further considers that the design of the CfD seems to include features maintaining the right incentives, in principle, for the NPPs to operate and participate adequately in the electricity markets.

(247) Yet many elements lack a sufficient level of detail as described in section 6.2.2.6.1. Additionally, several key elements of the CfD have not yet been sufficiently specified. For instance, the strike price and operating costs will be indexed at conditions that have not been defined by the French authorities at this stage, as described in recital (72). Therefore, the Commission cannot exclude the possibility that this indexation mechanism or other insufficiently specified design features may affect the proportionality of the measure.

(248) Moreover, the Commission doubts whether the State guarantee on the CDC loan (measure 1) should be provided without charging a fee. The Commission considers that, beyond the costs stemming from interest charges, a guarantee fee may increase incentives to ensure the new reactors start commercial operations as early as possible and repay the debt. Similar considerations apply as regards the subsidised loan, which is proposed as an instrument without recourse to EDF in the event of default (see recital (133)).

(249) As set out in section 5.3, the risk-sharing mechanism (measure 3) may trigger compensatory adjustments, in the form of an adjustment to the strike price, or lump-sum payments. While the French authorities acknowledge that such adjustments could reduce the residual risk borne by EDF and thus affect its allowed level of remuneration, the design of the mechanism remains insufficiently defined. In particular, the scope of certain events that would qualify as legitimate grounds (see recital (240)), the materiality thresholds for triggering compensation, the magnitude and duration of potential adjustments, and the methodology for quantifying the financial impacts need to be further clarified. In the absence of such detail, the Commission cannot exclude the possibility that the mechanism may, in practice, shift an excessive portion of costs and risks to the State, affecting the proportionality of the measure. At this stage, the Commission cannot verify that the measure retains sufficient exposure for EDF to normal commercial and operational risks. Further specification will therefore be required to ensure that the measure does not lead to disproportionate risk mitigation or undermine the proportionality of the overall support package.

6.2.2.5.2. The target return

(250) The aid package described in section 5 consists of risk-mitigating measures provided by the State and therefore lowers the overall risks associated with the Project for the SPV. The lowering of the risks should therefore be duly reflected in the final determination of the State aid for the realisation of the Project and the target return to the beneficiary. The French authorities consider that all the measures ensure that the right balance is drawn between the risks of the Project and the returns for the beneficiaries.

(251) As described in section 3.6, the French authorities have estimated the [6-8] % - [7-9] % range of the cost of equity, and the [6.5-8.5] % target, by calibrating the relevant parameters using a bottom-up approach relying on the CAPM methodology. Notably, France has calibrated the risk-free rate, beta, and market risk premium components under two sets of scenarios and underlying sources to arrive to the above-mentioned range.

(252) The Commission nevertheless has doubts regarding the estimation of the cost of equity submitted by the French authorities, as outlined in section 3.6.

(253) Firstly, the Commission will need to conduct a thorough assessment of the shareholder loan's (see recitals (38) and (39)) terms and details, which are presently unclear. Specifically, the Commission will assess whether this instrument should be classified as equity, as is the case in the financial model submitted by the French authorities. The Commission indeed understands that the French authorities consider the shareholder loan provided by EDF to be equity for the purposes of the SPV. This classification has implications for the definition of the SPV's capital structure, which in turn affects the project's gearing and the calibration of the cost of equity or capital.

(254) Secondly, the Commission has doubts on the way some of the cost of equity parameters (see section 3.6) were estimated, for example the beta, market risk premium and the gearing of the Project.

(255) Lastly, the Commission notes that the cost of equity analysis is not supported by a benchmarking analysis against projects and investments with a risk profile similar to that of the Project. This analysis is needed to corroborate the cost of equity level.

6.2.2.5.3. Financial model and the Project's costs and revenues

(256) The French authorities use a financial model to estimate the strike price of the CfD, given the target IRR set at the level of the cost of equity, which will close the funding gap by yielding an NPV equal to zero. The financial model relies on several assumptions and parameters, including on operating costs and capital expenditures (see section 3.4).

(257) The French authorities have indicated that the costs of the Project will be audited and therefore updated later this year (see recital (72)). Additionally, input parameters of the financial model have been provided either at a very aggregated level, such as the CAPEX and OPEX, or without being sufficiently justified, such as the projected revenues from the shape value, capacity mechanism and guarantees of origin. Given that these assumptions and parameters, in particular the cost parameters, have an important impact on the model's results, the Commission cannot assess at this stage whether it sufficiently ensures that support is proportionate.

(258) The Commission further notes that EUR_{2020} [2-5] billion spent on in-house technology development between 2012 and 2025 are included into the Project's CAPEX (see recital (65)). It is not clear whether these expenditures are exclusively earmarked for the Project and unrelated to other activities pursued by EDF since 2012 and therefore whether they can be fully included in the construction costs of the Project. On the other hand, the Commission notes that the technology is owned by EDF, in contrast to cases of other projects for new nuclear generation, for which the purchase of the technology from market actors was included in the overall cost. The Commission does not have sufficient information regarding the technology costs to determine to which extent they can be included in the financial model.

6.2.2.5.4. Overcompensation control mechanism

(259) France intends to introduce an overcompensation control mechanism designed to limit excess profits that could arise from more favourable than expected market conditions, such as lower costs or higher revenues, both during and after the CfD period. As explained in section 3.7, the mechanism would operate on the basis of a regular assessment of the actual IRR of the Project and could trigger the sharing between the State and EDF of the adjustments to the Project's profitability in order to ensure that the beneficiary is not overcompensated.

(260) The Commission, however, has concerns regarding the proportionality of the overcompensation mechanism.

(261) First, the Commission will have to carefully assess the underlying assumptions and updates to the financial model foreseen by the French authorities at each Assessment Date, as described in section 3.7, which at this stage are not clear.

(262) Second, the Commission notes that the mechanism allows an increase in the IRR from the target [6.5-8.5] % to [7-9] % with no sharing of additional profits with the State within that band. The Commission wonders whether allowing the beneficiary to retain all additional profits between the target IRR of [6.5-8.5] % and [7-9] % is proportionate given the extensive risk-mitigating measures already in place, while keeping incentives for the aided entity to act like a market operator when selling electricity. This is related to the assessment of the proportionality of the range of the cost of equity (see section 6.2.2.5.2).

(263) In light of the above, the Commission cannot conclude at this stage that the mechanism effectively prevents overcompensation or ensures that support remains limited to the minimum necessary.

6.2.2.5.5. Conclusion on proportionality

(264) For the reasons outlined in the preceding sections, the Commission has doubts as to whether the combination of the proposed support measures and the corresponding aid package is proportionate for ensuring the development of the Project. The Commission therefore invites interested parties to comment on the proportionality of the aid measures proposed by France.

6.2.2.6. Avoidance of undue negative effects on competition and trade

(265) For the aid to be compatible with the internal market, the negative effects of the aid measure in terms of distortions of competition and impact on trade between Member States must be limited and outweighed by the positive effects. In particular, it is important to avoid any potential undue negative effects on competition and trade.

6.2.2.6.1. The design of the 2-way Contract for Difference

(266) As described in section 5.2, the French authorities propose to provide a direct price support in the form of a two-way CfD. According to the French authorities, the CfD will be capability-based, meaning that remuneration is linked to the reactors' capability to generate electricity instead of their actual output.

(267) The Commission considers that the CfD must be designed in a manner that does not distort the beneficiary's efficient operation decisions, which should remain guided by market price signals in order to yield system-optimal outcomes. Specifically, the CfD should not distort the operator's incentives to generate electricity when the day ahead and intraday market price exceeds its short-term variable costs, nor should it discourage reduction in output when prices fall below that level. Similarly, the beneficiary must retain incentives to schedule maintenance during periods that would lead to minimal costs while accounting for the maintenance costs themselves and the foregone market revenues. Although nuclear units typically operate with stable generation profiles and high availability, the future electricity system, characterised by a higher share of renewables with low marginal costs, may exhibit more frequent periods of low or negative prices. Reducing output during such periods could be an efficient response that should not be distorted by the CfD.

(268) The Commission has preliminarily assessed the CfD settlement term which aims both at ensuring revenue stability for the power plant and preventing overcompensation. The French authorities have designed a two-way CfD that seems to include design features to achieve the above-mentioned goals. As a capability-based CfD, the remuneration maintains efficient operational and maintenance incentives, such as an incentive to reduce the production of the units in case of prolonged low prices. The reference price preliminarily seems to drive the right incentive, in principle, to produce when the market prices are high and to reduce production when market prices are below the production price of the asset.

(269) Yet, the Commission considers that some essential design elements of the CfD remain insufficiently detailed, preventing the Commission from fully assessing it. In particular, the definition of the reference price lacks specific details. For example, the French authorities have not defined how working days with low liquidity will be excluded from the reference price, nor how the reference price will be determined in periods when the plant is not trading. Similarly, France has stated that the reference price would be adjusted to consider possible repurchase at market conditions of volumes already covered on the forward market, but without providing sufficient details. Such features are critical to fully evaluate the CfD.

(270) The Commission also notes that the adjustment formula described in recital (144) introduces a component *c* equal to the variable costs of production of the reactors throughout the year. The French authorities have not defined these variable costs nor the way they would be computed. In addition, the Commission notes that the computation of these variable costs is in EDF's hands. Because the level of these costs is instrumental to the level of remuneration obtained by the SPV through the settlement term of the CfD, it is important to make sure that EDF would have incentives to communicate the correct level of variable costs. There is a risk that, for instance, EDF may want to deflate *c* to compensate production losses through an increase of the amounts received through CfD settlements. At this stage, it is unclear whether the operator would have the incentives to communicate the correct level of variable costs.

6.2.2.6.2. The sale of electricity and the risk of spillover of aid

(271) The sale of the electricity produced by the new units will be controlled by EDF, which is 100 % State-owned. The French authorities submit that at least 60 % of the Project's output will be sold following modalities 1 and 3 described in section 3.8, through transparent and open processes (see recital (98)). These modalities include sales on organised markets, over-the-counter sales, as well as bilateral long-term contracts concluded through transparent and open processes.

(272) The French authorities explain that the remaining 40 % of the Project's output can be sold by EDF via modality 2, i.e. via internal asset transfers valued at wholesale market prices, allowing EDF's positions to be balanced on purchase and sale, or following modalities 1 and 3 without transparent and open processes.

(273) The sale of electricity on organised markets implies that the generator should earn the return of a normal market operator. In addition, the generator contributes liquidity to the market. However, the envisaged extent of sales on organised markets appears too limited.

(274) For the electricity sold outside organised markets, the Commission doubts that the return of a market operator will be ensured. In case of electricity sold by auctions, the respective framework - including product definitions, lot sizes, eligible parties, minimum conditions, etc. - has not been detailed by the French authorities. Moreover, the notification is explicit that some of the production would be sold at 'production cost and operating risks', which may be below the market value. These concerns are amplified by the incomplete specification of the trading strategy, which may allow electricity sales - such as through bilateral contracts - to be influenced by objectives different from those of a non-subsidised market operator. Furthermore, sales outside organised markets are likely to have a negative impact on market liquidity.

(275) These considerations would seem to apply by analogy also as regards transfers carried out by EDF for the balancing of its portfolios. The French authorities have not described the modalities of such internal transfers. The Commission cannot exclude at this stage that these transfers entail the risk of aid spilling over to the final consumers e.g. via bilateral contracts concluded at non-competitive prices.

(276) In sum, as EDF receives aid for the operation of the new units producing electricity, the Commission doubts that the envisaged sales modalities ensure that EDF will behave as a non-subsidised market operator, maximising returns, and sell production in a way that is not distorting wholesale and retail markets in terms of liquidity and pricing. The Commission further doubts that the envisaged sales modalities ensure that no aid is passed on to electricity consumers.

(277) These concerns are further amplified given EDF's size on the market, as will be discussed in the following section.

6.2.2.6.3. Effects on market structure

(278) The Commission notes that the French electricity generation market is already highly concentrated, with EDF holding 77 % of the net electricity production and over 55 % of the total generation capacity in France (see section 4). The Herfindahl–Hirschman Index (HHI) indicates a highly concentrated market. ([67])

(279) The Commission considers that such market concentration could impact efficient market competition as it may constitute a barrier to entry for new market players and pose a liquidity risk by limiting the number of supply offers available. In such a market context, any addition of new capacity linked to the incumbent operator inherently carries the risk of reinforcing or entrenching existing market power. All planned new nuclear generation capacity in France, that is the six units subject to this decision, will be owned and operated by one market actor, EDF.

(280) The French authorities argue that EDF's market share is expected to decline over the coming decades due to the gradual retirement of ageing second generation of nuclear power plants (see recital (114)). The Commission notes that these projected reductions over several decades are subject to significant uncertainty and depend on the evolution of market entry, new capacity additions, possible lifetime extension of the current nuclear fleet and regulatory developments. In its 'PPE3 energy plan' ([68]), France has set, as priorities for nuclear energy, the increase in the available power of existing reactors and the prolongation of their operation first beyond 50 years, then beyond 60 years and even longer if possible. It is also relevant to note that nuclear generation provides stable, large-scale, baseload output, which can amplify the competitive influence of operators controlling such assets, especially considering the size of EDF's portfolio. EDF does not only own and control the whole nuclear generation in France, but also other electricity generation assets.

(281) In addition, the Commission doubts that the analysis of EDF's market power should be based solely on a geographic area larger than France as proposed by the French authorities (see recital (117)(a)) and refers to its preliminary conclusions in recitals (216) and (217).

(282) France has not proposed any measures with the aim to mitigate EDF's market power, as it claims that the Project will not have the effect of strengthening EDF's market share. However, in light of the elements described in recital (279), the Commission considers that the notified measures might result in a market position of EDF that could unduly distort competition and preclude market entry by other actors.

(283) The trading strategy, described in section 6.2.2.6.2, should be assessed also against this background.

(284) The Commission is concerned that EDF's trading strategy may significantly harm liquidity and market outcomes, and that all the more given the size of the notified project as well as EDF's size on the market. As described above, it is envisaged for EDF to sell a significant share of the production, and thus a significant share of market production, outside of organised markets.

6.2.2.6.4. Conclusion on the effects on competition and trade

(285) In sum, the Commission has doubts on the impact that the notified measures will have on competition and trade in the markets.

([67]) See 'Les marchés de détail de l'électricité et du gaz naturel' available at https://www.cre.fr/fileadmin/Documents/Rapports_et_etudes/2025/Observatoire_T4_2024.pdf and 'Fonctionnement des marchés de détail français de l'électricité et du gaz naturel en 2023 et 2024' available at: https://www.cre.fr/fileadmin/Documents/Rapports_et_etudes/2025/Rapport_Fonctionnement_marches_de_detail_2023-2024.pdf.

([68]) The PPE3 (Programmation pluriannuelle de l'énergie) was published on 13 February 2026 and outlines France's energy policy to address the challenges of energy consumption and production for the period 2026–2035, available at: https://www.economie.gouv.fr/files/files/2026/ppe3.pdf?v=1772011320.

(286) As regards the two-way CfD, the Commission considers that, while its proposed design seems to include a number of features driving the right incentives in principle, it is not yet sufficiently detailed as regards other essential elements, for example, certain parameters for the definition of the reference price and for the adjustments thereof, so as to allow the Commission to fully assess it.

(287) Moreover, the Commission questions whether in the sale of electricity, the aided entity acts like a market economy operator, with possible spillovers of aid and effects on market structure. The Commission notes that the proposed trading framework contains pro-competitive features, notably sales on organised markets, to an extent, however, that appears too limited. The Commission also notes that other, potentially significant elements of the trading strategy reach final customers directly, such as through OTC contracts, which can impact market liquidity, or via transfer between its own portfolios. This also carries the risk that aid is passed on to final consumers or specific market participants. More detailed features of the trading strategy are not yet defined, for example pricing methodology and auction rules. As EDF intends to include the production of the new units in its global trading, the Commission questions that there are sufficient safeguards to ensure that EDF's existing market power is not consolidated or indirectly reinforced.

(288) For the reasons set out above, the Commission therefore raises doubts on the impact that the notified measures and their design will have on competition and trade in the electricity markets.

7. **COMMISSION'S DOUBTS AND GROUNDS FOR OPENING THE FORMAL INVESTIGATION PROCEDURE**

(289) The Commission considers at this stage that the notified measures are part of a single intervention which involves State aid within the meaning of Article 107(1) TFEU and supports the development of the economic activity of nuclear electricity generation. The Commission also considers, as of yet, that State support for the Project is necessary and has an incentive effect.

(290) At the moment, based on the information submitted by France, the Commission does not have sufficient elements to conclude on whether the conditions for the compatibility of the aid with the internal market in accordance with Article 107(3)(c) TFEU are met, in particular whether the aid is appropriate and proportionate, and whether undue negative effects on competition and trade are avoided. Furthermore, the Commission cannot confirm, at this stage, that the design of two-way CfD, as proposed by the French authorities, fully complies with the design principles set out in Article 19d(2) of the Electricity Regulation and, thus, that the proposed measures do not infringe relevant provisions of Union law.

In the light of the foregoing considerations, the Commission, acting under the procedure laid down in Article 108(2) of the TFEU, requests France to submit its comments and to provide all such information as may help to assess the aid, within one month of the date of receipt of this letter. The Commission requests the French authorities to forward a copy of this letter to the potential recipient of the aid immediately.

The Commission wishes to remind France that Article 108(3) of the TFEU has suspensory effect and to draw the French authorities' attention to Article 16 of Council Regulation (EU) 2015/1589 ([69]), which provides that all unlawful aid may be recovered from the recipient.

The Commission warns France that it will inform interested parties by publishing this letter and a meaningful summary of it in the Official Journal of the European Union. It will also inform interested parties in the EFTA countries which are signatories to the EEA Agreement, by publication of a notice in the EEA Supplement to the Official Journal of the European Union and will inform the EFTA Surveillance Authority by sending a copy of this letter. All such interested parties will be invited to submit their comments within one month of the date of such publication.

([69]) Council Regulation (EU) 2015/1589 of 13 July 2015 laying down detailed rules for the application of Article 108 of the Treaty on the Functioning of the European Union, OJ L 248 of 24.9.2015, p.9.