

Prospectus dated 29 November 2019



**Electricité de France**

*(incorporated in the Republic of France with limited liability)*

**EUR 500,000,000 8 Year Non-Call Reset Perpetual Subordinated Notes**

**(the “Notes”)**

**Issue price: 99.127 per cent.**

The Euro 8 Year Non-Call Notes (the “Notes”) of Electricité de France (“EDF” or the “Issuer”) will be issued on 3 December 2019 (the “Issue Date”).

The Notes will bear interest (i) from (and including) the Issue Date, to (but excluding) 3 December 2027 (the “First Reset Date”), at a fixed rate of 3.000 per cent. per annum, payable annually in arrears on 3 December in each year with the first interest payment date on 3 December 2020, and (ii) thereafter in respect of each successive five year period, the first successive five year period commencing on (and including) the First Reset Date, at a reset rate calculated on the basis of the mid swap rates for Euro swap transactions with a maturity of five years plus a margin, payable annually in arrears on or about 3 December in each year with the first such interest payment date on 3 December 2028 as further described under “5. Interest” in Section “Terms and Conditions of the Notes.”

Payment of interest on the Notes may, at the option of the Issuer, be deferred in whole or in part, as set out under “5.5 Interest Deferral” in Section “Terms and Conditions of the Notes.”

The Notes do not contain events of default.

Subject to any early redemption described below, the Notes are undated obligations of the Issuer and have no fixed maturity date. However, the Issuer will have the right to redeem the Notes in whole, but not in part, (x) on any date during the period commencing on (and including) 3 September 2027 and ending on (and including) the First Reset Date, or (y) on any Interest Payment Date falling thereafter, as defined and further described under “6.2 Optional Redemption from the First Call Date” in Section “Terms and Conditions of the Notes.”

The Issuer may also redeem the Notes upon the occurrence of a Withholding Tax Event, a Tax Deductibility Event, an Accounting Event, a Rating Methodology Event and a Substantial Repurchase Event, as further described under “6. Redemption and Purchase” in Sections “Terms and Conditions of the Notes.”

This document (including the documents incorporated by reference) constitutes a prospectus (the “Prospectus”) for the purposes of Article 6 of Regulation (EU) 2017/1129 of the European Parliament and of the Council of 14 June 2017 on the prospectus to be published when securities are offered to the public or admitted to trading on a regulated market, as amended or superseded (the “Prospectus Regulation”).

This Prospectus has been approved by the *Autorité des marchés financiers* (the “AMF”) in France in its capacity as competent authority pursuant to the Prospectus Regulation. The AMF only approves this Prospectus as meeting the standards of completeness, comprehensibility and consistency imposed by the Prospectus Regulation. Such approval should not be considered as an endorsement of the Issuer and on the quality of the Notes that are the subject of this Prospectus. Investors should make their own assessment as to the suitability of investing in the Notes.

Application will be made to Euronext Paris for the Notes to be admitted to trading on Euronext Paris on the Issue Date. Euronext Paris is a regulated market for the purposes of the Directive 2014/65/EU of May 15, 2014 (as amended, “MiFID II”), appearing on the list of regulated markets issued by the European Securities and Markets Authority (“ESMA”).

The Notes will be issued in dematerialized bearer form (*au porteur*) in the denomination of €200,000 each. Title to the Notes will be evidenced in accordance with Articles L. 211-3 and R. 211-1 of the French *Code monétaire et financier* by book-entries (*inscription en compte*). No physical documents of title (including *certificats représentatifs* pursuant to Article R. 211-7 of the French *Code monétaire et financier*) will be issued in respect of the Notes. The Notes will, upon issue, be inscribed in the books of Euroclear France (“Euroclear France”) which shall credit the accounts of the Account Holders. “Account Holder” shall mean any intermediary institution entitled to hold, directly or indirectly, accounts on behalf of its customers with Euroclear France, and includes Euroclear Bank S.A./N.V. (“Euroclear”) and the depositary bank for Clearstream Banking S.A. (“Clearstream”).

The Notes have been assigned a rating of BB by S&P Global Ratings Europe Limited (“S&P”), Baa3 by Moody’s Investors Service Ltd. (“Moody’s”) and BBB by Fitch Ratings Ltd (“Fitch”). As of the date of this Prospectus, the Issuer’s long-term and short-term debt has been respectively rated (i) “A3” and “P-2” with stable outlook by Moody’s, (ii) “A-” and “A-2” with negative outlook by S&P and (iii) “A-” and F2 with stable outlook by Fitch. Each of S&P, Moody’s and Fitch is a credit rating agency established in the European Union and registered under Regulation (EC) No. 1060/2009 of September 16, 2009 (as amended, the “CRA Regulation”) and is included in the list of credit rating agencies published by ESMA on its website (<https://www.esma.europa.eu/supervision/credit-rating-agencies/risk>) in accordance with the CRA Regulation. Credit ratings are subject to revision, suspension or withdrawal at any time by the relevant rating organization. A rating is not a recommendation to buy, sell or hold securities and may be subject to suspension, change or withdrawal at any time by the assigning rating agency.

Copies of the documents incorporated by reference herein can be obtained free of charge on the Issuer’s website ([www.edf.com](http://www.edf.com)) and the AMF’s website ([www.amf-france.org](http://www.amf-france.org)).

Prospective investors should have regard to the risk factors described under the Section headed “Risk Factors” beginning on page 7 of this Prospectus, in connection with any investment in the Notes.

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*Active Joint Bookrunners*

**BANCA IMI**

**BNP PARIBAS**

**HSBC**

**ING**

**NATIXIS**

**NATWEST MARKETS**

*Passive Joint Bookrunners*

**BBVA**

**COMMERZBANK**

**LLOYDS BANK CORPORATE  
MARKETS**  
**WERTPAPIERHANDELSBANK**

This Prospectus constitutes a prospectus for the purposes of the Prospectus Regulation and of giving information with regard to the Issuer and its fully consolidated subsidiaries taken as a whole (the “**Group**”, the “**EDF Group**,” the “**EDF group**,” “**we**,” “**us**” and “**our**”) and the Notes which is necessary to enable investors to make an informed assessment of the assets and liabilities, financial position, profit and losses and prospects of the Issuer and the Group, as well as the rights attached to the Notes.

This Prospectus is valid until 3 December 2019. The obligation to supplement the Prospectus in the event of significant new factors, material mistakes or material inaccuracies does not apply when the Prospectus is no longer valid.

This Prospectus is to be read in conjunction with the documents incorporated by reference herein (*see “Documents Incorporated by Reference”*) which have been previously or simultaneously published and which shall be deemed to be incorporated by reference in, and form part of, this Prospectus (except to the extent so specified in, or to the extent inconsistent with, this Prospectus).

No person has been authorized to give any information or to make any representation other than those contained in this Prospectus in connection with the issue or sale of the Notes and, if given or made, such information or representation should not be relied upon as having been authorized by the Issuer or any of the Managers (as defined in “*Subscription and Sale*”). Neither the delivery of this Prospectus nor any offering, sale or delivery made in connection herewith shall, under any circumstances, create any implication that there has been no change in the affairs of the Issuer or those of the Group since the date hereof or the date upon which this Prospectus has been most recently supplemented or that there has been no adverse change in the financial position of the Issuer or that of the Group since the date hereof or the date upon which this Prospectus has been most recently supplemented or that any other information supplied in connection with the issue of the Notes is correct as of any time subsequent to the date on which it is supplied or, if different, the date indicated in the document containing the same.

This Prospectus does not constitute an offer to sell or the solicitation of an offer to buy any Notes in any jurisdiction to any person to whom it is unlawful to make the offer or solicitation in such jurisdiction. The distribution of this Prospectus and the offer or sale of Notes may be restricted by law in certain jurisdictions. The Issuer and the Managers do not represent that this Prospectus may be lawfully distributed, or that any Notes may be lawfully offered, in compliance with any applicable registration or other requirements in any such jurisdiction, or pursuant to an exemption available thereunder, or assume any responsibility for facilitating any such distribution or offering. In particular, no action has been taken by the Issuer or the Managers which would permit an offering of the Notes to retail investors or distribution of this Prospectus in any jurisdiction where action for that purpose is required. Accordingly, no Notes may be offered or sold, directly or indirectly, and neither this Prospectus nor any offering material may be distributed or published in any jurisdiction, except under circumstances that will result in compliance with any applicable laws and regulations and the Managers (each as defined in “*Subscription and Sale*”) have represented that all offers and sales by them will be made on the same terms. Persons into whose possession this Prospectus comes are required by the Issuer and the Managers to inform themselves about and to observe any such restriction. In particular, there are restrictions on the distribution of this Prospectus and the offer or sale of Notes in the United States, the United Kingdom, France, the Republic of Italy and the European Economic Area (*see Section “Subscription and Sale”*).

THE NOTES HAVE NOT BEEN AND WILL NOT BE REGISTERED UNDER THE U.S. SECURITIES ACT OF 1933, AS AMENDED (THE “**SECURITIES ACT**”) OR WITH ANY SECURITIES REGULATORY AUTHORITY OF ANY STATE OR OTHER JURISDICTION OF THE UNITED STATES. SUBJECT TO CERTAIN EXCEPTIONS, NOTES MAY NOT BE OFFERED OR SOLD WITHIN THE UNITED STATES OR TO, OR FOR THE ACCOUNT OR BENEFIT OF, U.S. PERSONS, EXCEPT IN TRANSACTIONS EXEMPT FROM OR NOT SUBJECT TO THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT AND IN COMPLIANCE WITH ANY APPLICABLE STATE SECURITIES LAWS. FOR A DESCRIPTION OF CERTAIN RESTRICTIONS ON OFFERS AND SALES OF NOTES AND ON DISTRIBUTION OF THIS PROSPECTUS, SEE “*SUBSCRIPTION AND SALE*.”

The Managers have not separately verified the information contained or incorporated by reference in this Prospectus. The Managers do not have any fiduciary duties to investors and therefore assume no liability or obligation to investors. None of the Managers makes any representation, warranty or undertaking, express or implied, or accepts any responsibility or liability, with respect to the accuracy or completeness of any of the information contained or incorporated by reference in this Prospectus or any other information provided by the Issuer in connection with the issue and sale of the Notes. Neither this Prospectus nor any information

incorporated by reference in this Prospectus is intended to provide the basis of any credit or other evaluation and should not be considered as a recommendation by the Issuer or the Managers that any recipient of this Prospectus or any information incorporated by reference should subscribe for or purchase the Notes. In making an investment decision regarding the Notes, prospective investors must rely on their own independent investigation and appraisal of the (a) the Issuer, the Group, its business, its financial condition and affairs and (b) the terms of the offering, including the merits and risks involved. The contents of this Prospectus are not to be construed as legal, business or tax advice. Each prospective investor should subscribe for or consult its own advisers as to legal, tax, financial, credit and related aspects of an investment in the Notes. None of the Managers undertakes to review the financial condition or affairs of the Issuer or the Group after the date of this Prospectus nor to advise any investor or potential investor in the Notes of any information coming to the attention of any of the Managers. Potential investors should, in particular, read carefully the Section entitled "*Risk Factors*" of this Prospectus before making a decision to invest in the Notes.

Neither this Prospectus nor any other information supplied in connection with the issue and sale of the Notes (a) is intended to provide the basis of any credit or other evaluation or (b) should be considered as a recommendation by the Issuer or the Managers that any recipient of this Prospectus or any other information supplied in connection with the issue and sale of the Notes should purchase any Notes. Neither this Prospectus nor any other information supplied in connection with the issue and sale of the Notes constitutes an offer or invitation by or on behalf of the Issuer or the Managers to any person to subscribe for or to purchase any Notes.

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**AN INVESTMENT IN THE NOTES MIGHT NOT BE SUITABLE FOR ALL INVESTORS** - The Notes are complex financial instruments that may not be a suitable investment for all investors. Each potential investor in the Notes must determine the suitability of that investment in light of such investor's own circumstances. In particular, each potential investor should:

- (i) have sufficient knowledge and experience to properly assess the Notes, the merits and risks of investing in such Notes and the information contained or incorporated by reference in this Prospectus;
- (ii) have access to and knowledge of appropriate analytical tools to evaluate, in the context of its particular financial situation and sensitivity to the risk, an investment in the Notes and the impact the Notes might have on its overall investment portfolio;
- (iii) have sufficient financial resources and liquidity to bear all the risks of an investment in the Notes, including any currency exchange risk when the currency in which payment of principal or interests is to be made is different from that of the prospective investor;
- (iv) understand thoroughly the terms of the Notes and related risks and be familiar with the behaviour of the financial markets and any relevant indices;
- (v) be able to assess (either alone or with the help of a financial adviser) possible changes in the economy, rates of interest or in other factors that may affect its investment and its ability to bear the applicable risks; and
- (vi) consult its own advisers as to legal, tax and related aspects of an investment in the Notes.

In addition, some potential investors are subject to restricting investment regulations. These prospective investors should consult their legal counsel in order to determine whether an investment in the Notes is authorised by law, whether such investment is compatible with their other borrowings and whether other selling restrictions are applicable to them.

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**PROHIBITION OF SALES TO EEA RETAIL INVESTORS** — The Notes are not intended to be offered, sold or otherwise made available to and should not be offered, sold or otherwise made available to any retail investor in the European Economic Area (“EEA”). For these purposes, a retail investor means a person who is one (or more) of: (i) a retail client as defined in point (11) of Article 4(1) of MiFID II; or (ii) a customer within the meaning of Directive (EU) 2016/97 (as amended, the “**Insurance Distribution Directive**”), where that customer would not qualify as a professional client as defined in point (10) of Article 4(1) of MiFID II. Consequently no key information document required by Regulation (EU) No. 1286/2014 (as amended, the “**PRIIPs Regulation**”) for offering or selling the Notes or otherwise making them available to retail investors in the EEA has been or will be prepared and therefore offering or selling the Notes or otherwise making them available to any retail investor in the EEA may be unlawful under the PRIIPs Regulation.

**MIFID II PRODUCT GOUVERNANCE - PROFESSIONAL INVESTORS AND ELIGIBLE COUNTERPARTIES ONLY TARGET MARKET** —Solely for the purposes of each manufacturer’s product approval process, the target market assessment in respect of the Notes, taking into account the five categories referred to in item 18 of the Guidelines published by ESMA on February 5, 2018, has led to the conclusion that: (i) the target market for the Notes is eligible counterparties and professional clients only, each as defined in MiFID II; and (ii) all channels for distribution of the Notes to eligible counterparties and professional clients are appropriate. Any person subsequently offering, selling or recommending the Notes (a “**distributor**”) should take into consideration the manufacturers’ target market assessment; however, a distributor subject to MiFID II is responsible for undertaking its own target market assessment in respect of the Notes (by either adopting or refining the manufacturers’ target market assessment) and determining appropriate distribution channels.

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In this Prospectus, unless otherwise specified or the context otherwise requires:

- all references to “**EDF**,” the “**Company**,” the “**Issuer**” and “**Électricité de France**” refer to EDF S.A.;
- all references to “**RTE**” refer to Réseau de Transport d’Électricité, a regulated subsidiary of EDF managed independently within the meaning of the French *Code de l’énergie* and accounted for using the equity method;
- all references to “**Enedis**” refer to Enedis S.A., a regulated subsidiary of EDF managed independently within the meaning of the French *Code de l’énergie* and fully consolidated;
- all references to “**Framatome**” refer to Framatome S.A.S., a fully consolidated subsidiary of EDF, since the acquisition by EDF of 75.5% of its capital and voting rights on December 31, 2017; and
- all references to “**€**,” “**EURO**,” “**Euro**,” “**EUR**” or “**euro**” are to the lawful currency of the European Monetary Union.

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## RISK FACTORS

*The Notes are being offered to qualified investors only and are not suitable for retail investors. Investors should not purchase the Notes in the primary or secondary markets unless they are professional investors. An investment in the Notes involves a high degree of risk. Before investing, the Issuer urges you to carefully review the following risk factors, and other information included or incorporated by reference herein, in their entirety and carefully consider the risks and considerations relevant to an investment in the Notes.*

*These risks are, on the date hereof, the risks that the Group believes are specific to the Group and material for an informed investment decision with respect to investing in the Notes. Investors could lose all or part of their investment. All of these factors are contingencies which may or may not occur. Moreover, if and to the extent that any of the risks described below materialize, they may occur in combination with other risks, which would compound the adverse effect of such risks on the Group's business, financial condition, results of operations and prospects. The occurrence of one or more of these risks, alone or in combination with other circumstances, may prevent the Issuer from being able to pay interest, principal or other amounts on the Notes when due and you could lose all or part of your investment. There may be other risks that the Group has not yet identified or does not consider as of the date hereof likely to have a material adverse effect on its business, financial condition, results of operations or growth. The risks described below may relate to the Issuer or the Group.*

*Factors which the Issuer believes may be material for the purpose of assessing the market risks associated with Notes are also described below.*

*In each sub-category below the Issuer sets out first the most material risks, in its assessment, taking into account the expected magnitude of their negative impact and the probability of their occurrence.*

*Words and expressions defined under "Terms and Conditions of the Notes" shall have the same meanings in this Section.*

*Prospective investors should read the detailed information set out elsewhere in this Prospectus and in any documents incorporated by reference herein and reach their own views prior to making any investment decision. In particular, investors should make their own assessment as to the risks associated with the Notes prior to investing in the Notes. Prospective investors should consult their own financial and legal advisers about risks associated with investment in the Notes and the suitability of investing in the Notes in light of their particular circumstances.*

## RISK FACTORS RELATING TO THE ISSUER

The risks presented below concern risks associated with the regulation of energy markets, risks related to the competitive and general context, risks related to the transformation of the EDF Group, risks related to the operational performance of the EDF Group and specific risks related to the EDF Group's nuclear activities.

The risks associated with the regulation of energy markets are described in Section "*Risks associated with the regulation of energy markets*," particularly the regulation of the electricity market, in particular those for electricity, with consideration of (i) competition rules, especially in Europe and France, where most of the Group's activities are conducted and (ii) public policies in the field of energy.

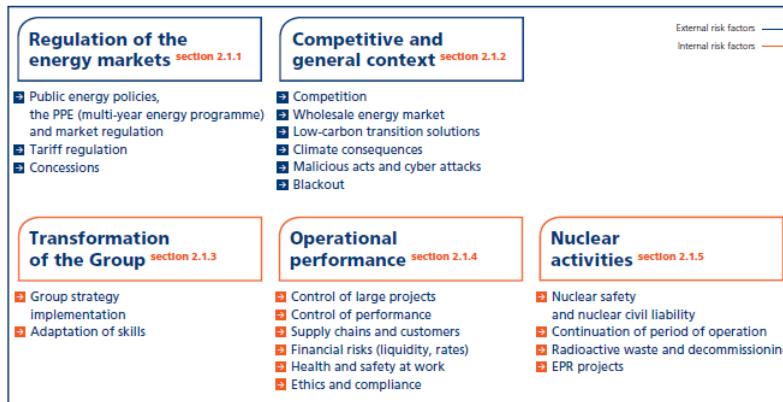
In Section "*Risks related to the competitive and general context*" a description is given of the risks caused by exposure to the energy markets in which the EDF Group operates, as well as the risks caused by changes to competition and new societal expectations, economic circumstances, or general circumstances, and elements of public policy or general regulation in the various countries and territories where the EDF Group exercises its activities. The risks caused by factors internal to the EDF Group are described in Sections "*Risks related to the transformation of the EDF Group*," "*Risks related to the operational performance of the EDF Group*" and "*Specific risks related to the EDF Group's nuclear activities*."

In Section "*Risks related to the transformation of the EDF Group*," a description is given of the risks associated with the implementation of its strategy, the evolution of the EDF Group's portfolio and business model, and its transformation in its industrial, service and sales activities with the associated change management.

In Section “*Risks related to the operational performance of the EDF Group*,” a description is given of the risks associated with the control of its operational activities in its various industrial, services and sales activities.

The last section is devoted to the specific risks related to the EDF Group’s nuclear activities describes the specific risks related to the Group’s nuclear activities, which involves additional risk factors and specific measures, notably with regard to the overriding requirements of nuclear safety and the long-term capital-intensive nature of the nuclear activities.

## THE EDF GROUP'S MAIN SPECIFIC RISKS ARE GROUPED INTO FIVE CATEGORIES



The risks specific to the EDF Group are classified into 5 categories and described in detail in each of the sections concerned for their respective category. They are numbered to facilitate the link between the following table and the detailed descriptions. Risks were grouped by importance in a qualitative approach that takes into account both the potential impact on the EDF Group and the probability of occurrence. Thus, the most important risks (marked with a + sign in the below table) are identified in each category, without assuming the relative importance of the risks between them or the relative importance between categories.

As a general rule, the scope of exposure is France, Europe and international. Where the scope of exposure is more restrictive, it is specified in the table and in the risk description.

Exposure to risk may vary according to duration. The potential impact of these risks may produce effects at very different time horizons, ranging from very short term (less than a year), to medium term (up to a few years) to very long term (up to several decades or more, given the nature of the relevant industrial activities which may span centuries). This time horizon is indicated in the risk description when it is considered relevant.

Estimates of the order of magnitude of the financial consequences caused by the occurrence of certain risks taken in isolation are mentioned for information purposes only in the body of this section "Risk factors relating to the Issuer".

The measures taken by the EDF Group to control the activities and risks to which it is exposed, and to implement appropriate control, prevention and mitigation actions, are described in section 2.2 "Control of Group risks and activities" of the 2018 *Document de Référence*. Additional measures addressing occupational health and safety risks are described in section 3.2.2.1 "A Reference Company in terms of health and safety: the health and safety of our employees and the employees of our service providers, an absolute priority" and those relating to the risks of breach of ethics and compliance are described in section 3.5.1 "Ethics and compliance" of the 2018 *Document de Référence*.

Risk categories	Summary of the main risks specific to the Group	Importance
Regulation of the energy markets, section 2.1.1	<ul style="list-style-type: none"> <li>■ 1A - Evolution of public energy policies and market regulation, Including the Multiannual Energy Programme (PPE or <i>programmation pluriannuelle de l'énergie</i>) in France</li> <li>■ 1B - Evolution of the regulatory framework and tariff regulation</li> <li>■ 1C - Evolution of the regulatory framework for concessions (hydropower field or public distribution) ***</li> <li>■ 1D - Insufficient compensation for missions of general interest*</li> <li>■ 1E - Increased cost caused by energy savings certificates*</li> </ul>	+
Competitive and general context, section 2.1.2	<ul style="list-style-type: none"> <li>■ 2A - Increased competition in energy markets</li> <li>■ 2B - Exposure to wholesale energy and capacity market prices</li> <li>■ 2C - Environment unfavourable to the Group's low-carbon transition solutions</li> <li>■ 2D - Exposure to the physical effects of climate change</li> <li>■ 2E - Increased risks of malicious attack, including cyber attacks</li> <li>■ 2F - Blackout risk</li> <li>■ 2G - Major crisis</li> <li>■ 2H - Impact of Brexit</li> </ul>	+
Transformation of the Group, section 2.1.3	<ul style="list-style-type: none"> <li>■ 3A - Group strategy implementation in line with the defined objectives</li> <li>■ 3B - Adaptation and development of skills according to the Group's evolution, division requirements and new working methods</li> <li>■ 3C - Ability to ensure the Group's long-term social and financial commitments (pensions and other employee benefits)</li> </ul>	+
Operational performance of the Group, section 2.1.4	<ul style="list-style-type: none"> <li>■ 4A - Management of large and complex industrial projects (including nuclear)</li> <li>■ 4B - Control of operational and financial performance</li> <li>■ 4C - Operational continuity of supply chains and contractual relationships with customers and suppliers</li> <li>■ 4D - Exposure to financial risks (liquidity, exchange rates, interest rates, discount rates)</li> <li>■ 4E - Occupational safety or health violations</li> <li>■ 4F - Ethics or Compliance Violations</li> <li>■ 4G - Industrial safety and Impact on environmental heritage including biodiversity</li> </ul>	+
Nuclear activities of the Group, section 2.1.5	<ul style="list-style-type: none"> <li>■ 5A - Nuclear safety in operation, exercise of nuclear civil liability**</li> <li>■ 5B - Safely extending operating life while controlling costs and deadlines** (<i>Grand Carrénage</i> in France*)</li> <li>■ 5C - Management of the final processing of radioactive waste, the decommissioning of reactors and the ability to fulfil the corresponding commitments**</li> <li>■ 5D - In addition to factor 4-A, additional regulatory, industrial and financial factors are taken into account for EPR projects</li> <li>■ 5E - In addition to factor 4-B, consideration of fuel cycle management**</li> </ul>	+

Main scope of exposure: France, Europe and International, with specific notes

\* France

\*\* France and United Kingdom

\*\*\* France and Italy

## RISKS ASSOCIATED WITH THE REGULATION OF ENERGY MARKETS

**Description 1A: The evolution of public energy policies and market regulation in the countries where the EDF Group operates, including the multi-year energy programme (PPE) in France, is likely to lead to profound transformations in the EDF Group's governance or business portfolio. These could hinder the EDF Group's development in relation to its competitors or undermine its ability to meet its commitment to climate protection.**

On 25 January 2019, the French Government presented a draft multi-year energy programme (PPE) which sets out the trajectory for the next 10 years in terms of energy policy, and therefore ecological transition (see section 1.5.2 "Public service in France" of the 2018 *Document de Référence*):

- to fully implement the PPE guidelines, the Government asked EDF's management to propose EDF Group developments that would enable it to meet the challenges facing the Company in the nuclear, renewable energy, energy services and networks sectors. The proposed developments must preserve the EDF Group's integrated nature and make it possible to dedicate adequate resources and financing for each activity;
- the French Government has confirmed the objective of diversifying the electricity mix and reducing nuclear power to 50% of electricity generation in France by 2035: to reduce nuclear power to 50% of the energy mix, 14 reactors could be shut down by 2035 (including the two in Fessenheim). This would represent a quarter of the reactors currently operating in France. The final version of the multi-year programme will identify the sites on which these reactors should be closed;
- accordingly, the early closure of one or more reactors in the EDF fleet might be decided upon, not because of an industrial choice but rather because of a legal decision. Such decisions must lead to EDF being compensated for the harm suffered, as reiterated by the French Constitutional Council in a

decision of 13 August 2015. In this respect, with regard to the Fessenheim nuclear power plant, discussions remain ongoing with the State with a view to signing a protocol defining the principles of compensation, which may not cover the entire loss of revenue.

At the same time, the competent authorities or certain States could, in order to preserve or promote competition on certain energy markets, take decisions that are contrary to the EDF Group's economic or financial interests or that impact its integrated operator model.

The European legal framework organising the liberalisation of the energy sector is relatively recent. It is likely to change in the future ("Climate Energy and Clean Energy Packages") and may adversely affect the EDF Group, in particular resulting in additional costs, be at odds with the EDF Group's development model, modify the competitive context in which the EDF Group operates, modify European regulations on regulated tariffs or affect the profitability of current or future generating units or of other EDF Group activities.

In terms of the governance or delimitation of its scope of activity that may be enforced, EDF could be affected by a limitation or loss of control of certain strategic and operational decisions that could have a negative impact on the outlook and profitability of its various activities (see section 1.5 "Legislative and regulatory environment" of the 2018 *Document de Référence* and section 3.4 "Regulatory environment" of the 2019 Half-Year Management Report). At the same time, EDF may continue, in its capacity as shareholder, to bear certain risks, potential liabilities towards third parties and factors that may affect the profitability of assets.

Although EDF complies and will continue to comply with applicable laws and rules in terms of competition and non-discrimination, competitors have initiated or may initiate litigation for non-compliance with these rules, which could be decided in a way that is detrimental to the EDF Group's interests (see Section 2.4 "Legal proceedings and arbitration" of the 2018 *Document de Référence* and Section 9.1 "Proceedings concerning EDF" of the 2019 Half-Year Management Report).

In the new energies field, EDF relies primarily on its EDF Renewables subsidiary (see section 1.4.1.5.3 "EDF Renewables" of the 2018 *Document de Référence*), which does business in numerous countries. The profitability of these developments is often dependent on the support policies adopted in the various countries. The EDF Group cannot guarantee that the support programmes will not change in some of these countries and adversely impact the profitability of investments made.

Finally, changes in the legislative and regulatory environment in the energy sector in the various countries where the EDF Group operates may constitute an obstacle in terms of the EDF Group's ability to achieve its no. 1 corporate responsibility goal: "Committed to climate action" (see section 3.2.1.1 "EDF group's ambition (CSRG no. 1 of the 2018 *Document de Référence*)").

**Description 1B: A significant portion of the EDF Group's revenues comes from activities subject to regulated purchase or sales tariffs, for which changes in tariff regulations could have an impact on the EDF Group's results. Changes in the regulation of carbon dioxide emissions, including the price of CO2 emission allowances, are likely to affect the EDF Group's profitability and its objectives for low-carbon energy solutions for climate protection.**

In France, a significant portion of the EDF Group's revenues is based on regulated tariffs set by public authorities or regulatory authorities (Regulated Sales Tariff, Tariffs for Using the Public Transmission and Distribution Networks (TURPE)). In France, the law on the New Organisation of the Electricity Market (NOME law or *Nouvelle Organisation du Marché de l'Électricité*) has also introduced the Regulated Access to Electricity from the Existing Nuclear Fleet (ARENH), for the benefit of EDF's competing electricity suppliers. (See section 1.5 "Legislative and regulatory environment" of the 2018 *Document de Référence* and section 3.4 "Regulatory environment" of the 2019 Half-Year Management Report).

In this context, the risks are as follows:

- risk of limiting or even blocking rate increases for the same quality of service;
- risk of stakeholders challenging tariff decisions;
- many options in favour of alternative suppliers that give them arbitrage opportunities on the markets to the detriment of EDF, which therefore exposes EDF symmetrically to major uncertainties that adversely

impact the effectiveness of its energy market risk management (see section 2.2.2.2.1 "Control of energy market risks" of the 2018 *Document de Référence* and section 6.2 of the 2019 Half-Year Management Report).

More generally, in France as in other countries, the EDF Group cannot guarantee that regulated sale or purchase tariffs will always be set at a level enabling it to preserve its short-, medium- and long-term investment capacity and its property interests, by ensuring a fair return on capital invested by the EDF Group in its generation, service, transmission and distribution assets.

There is a risk, potentially caused by inadequate regulation, that CO2 prices remain low hindering sufficient development of low-carbon energy solutions, to the detriment of both an effective transition to combat the global greenhouse effect and the EDF Group's consideration of climate change. This may represent a loss of opportunity to promote the EDF Group's low-carbon energy solutions and call into question the EDF Group's ability to achieve corporate responsibility goal no. 1, committed to climate action (see section 3.2.1.1 "EDF group's ambition (CSRG no. 1)" of the 2018 *Document de Référence*).

**Description 1C: At times, the EDF Group operates its generation, transmission, distribution or supply businesses pursuant to public service concession arrangements and it is not always the owner of the assets it operates. Changes in the regulatory framework, in concession specifications and implementation conditions could have an impact on the EDF Group's results.**

The EDF Group does not always own the assets that it uses for its activities and, in such case, frequently operates them pursuant to a public service concession arrangement.

In France, for example, Enedis does not own all distribution network assets: it operates them under concession agreements negotiated with local authorities (see section 1.4.4.2.2 "Distribution activities" of the 2018 *Document de Référence*), which grant it the exclusive right to engage in expansion actions and operate the public electricity distribution network. These public electricity distribution concession agreements, generally concluded for a period of between 20 and 30 years, are tripartite contracts between the licensing authority, the distribution system operator and the supplier at the regulated rates. Under the law, only Enedis and Local Distribution Companies (LDC) in their service areas (and EDF for areas not connected to the continental metropolitan network) may be appointed to operate the public energy distribution networks and only EDF and LDCs in their service areas may be appointed to provide the supply at the regulated rates. Therefore, at this time, when a concession agreement is renewed, Enedis and EDF do not compete with other operators. However, the EDF Group cannot guarantee that such provisions will not be amended by law in the future (see section 1.5.5 "Public electricity distribution concessions in France" of the 2018 *Document de Référence*). Furthermore, the EDF Group may not obtain the renewal of these contracts under the same financial terms and conditions.

In France, hydropower generation facilities are operated under concessions awarded by the French State for structures of 4.5MW or more and within the framework of prefectoral authorisations for structures of less than 4.5MW (see section 1.5.6.2.4 "Regulations applicable to hydropower facilities" of the 2018 *Document de Référence*). The challenges associated with the renewal of hydraulic concessions in France are specified in section 1.4.1.5.1.4 "Hydropower generation issues" of the 2018 *Document de Référence*.

The EDF Group cannot guarantee that each of the concessions that it currently operates will be renewed, or that any concession will be renewed under the same financial terms and conditions as the initial concession. Furthermore, the EDF Group cannot guarantee that the compensation paid by the government in the event of early termination of a concession's operation will fully compensate the EDF Group's consequent loss of revenue, or that future regulations regarding the limitation of fees will not change in a way that could negatively affect the EDF Group. These factors could have an adverse impact on its activities and financial position.

The EDF Group also operates under electricity distribution or generation concessions in other countries where it does business, particularly in Italy in the field of hydropower generation. Depending on the conditions in each country, the transmission, distribution or generation concessions may not be continued or may not be renewed in its favour with changes to the financial terms and conditions of the concession specifications, which would have an adverse impact on the EDF Group's activities and financial position.

**Description 1D: EDF has certain obligations, in particular public service obligations, that are remunerated by mechanisms that may not provide complete compensation for additional costs incurred in connection with such obligations, or that are subject to change.**

The public service contract entered into by the French government and EDF on 24 October 2005 specifies the objectives and terms for performing the public service obligations that EDF is appointed to perform under law (in particular Articles L. 121-1 et seq. of the French Energy Code), and also sets out the mechanisms under which EDF is compensated for the performance of these obligations (see section 1.5.2 "Public service in France" and section 1.5.3.2 "French legislation: Energy Code - Compensation of Public Electricity Service (CSPE)" of the 2018 *Document de Référence*). The estimated amount of public service energy costs to be offset in France in 2019 for EDF amounts to €7,206.1 million (decision of the Energy Regulation Commission of 12 July 2018 on the assessment of public service energy costs for 2019).

The development of renewable energies connected directly to the distribution network may, in certain regions, saturate the reception capacities of the source substations and networks. This situation may possibly generate local imbalances, or disputes if Enedis must disconnect certain producers or connect them with significant delays. New investments may be required in these regions, with the risk that the costs associated therewith may not be taken into account.

More generally, EDF cannot be certain that the compensation mechanisms provided in the laws and regulations applicable to it for performing these public service obligations will fully compensate additional costs incurred to perform such obligations. Furthermore, EDF cannot guarantee that these compensation mechanisms will never be subject to change or that existing mechanisms will fully cover potential additional costs that may be incurred in relation with new duties imposed on EDF in connection with its public service obligations, in particular when a new public service contract is negotiated.

The occurrence of any of these events may have an adverse impact on EDF's activities and financial position. Such situations could also call into question the EDF Group's ability to achieve its corporate responsibility goal no. 3 in its commitment to supporting fragile populations (see section 3.2.3.1 "EDF's commitment: providing 100% of vulnerable populations with information and support solutions in terms of energy consumption and access to rights (CSRG no. 3)" of the 2018 *Document de Référence*).

**Description 1E: Changes to regulations concerning energy savings certificates (ESC) could impose additional obligations on EDF and generate costs in relation thereto.**

In France, the energy savings certificates (ESC) measure, which is set out in Articles L. 221-1 et seq. of the French Energy Code, imposes energy savings obligations on energy sellers. It sets a three-year energy savings target in terms of volumes for those bound by the obligations and financial penalties in case of failure to meet the targets. The Energy Transition for Green Growth Act of 17 August 2015 amended the ESC scheme for the third period of the scheme by adding to the original obligation a supplementary scheme for energy savings for households in situations of fuel poverty. Decree No. 2017-690 of 2 May 2017 set the overall level of obligations for the 2018-2020 period, with a doubling of objectives compared to the third period (see section 1.5.6.1 "General regulations applicable to the environment, health, hygiene and safety" of the 2018 *Document de Référence*).

An increase in competition between energy suppliers, the economic crisis or a reduction in the main sources of energy savings could cause an additional difficulty in reaching this three-year objective. The EDF Group cannot guarantee that the commercial costs incurred in meeting the three-year target will be fully passed on in energy prices, which would be detrimental to the EDF Group's financial position. Such situations would also call into question corporate responsibility goal no. 1 in its commitment to climate and corporate responsibility goal no. 4 in its commitment to helping each customer consume better (CSRG 1 and CSRG 4, see section 3.2.1.1 "EDF group's ambition (CSRG no. 1)" and section 3.2.4.1 "Innovate so that customers can consume better (CSRG no. 4)" of the 2018 *Document de Référence*).

## **RISKS RELATED TO THE COMPETITIVE AND GENERAL CONTEXT**

**Description 2A: The EDF Group faces stiff competition in the European energy markets and, especially, in the French electricity market, which constitutes its main market.**

In France, the electricity market has been totally open to competition since 1 July 2007. All EDF customers can select their electricity supplier and therefore choose any of EDF's competitors (see section 1.4.2.1 "Presentation of the market in France" of the 2018 *Document de Référence*). In a context of escalating competitive intensity (new customer expectations, new regulations, emergence of new players, mergers between existing operators, changes in market prices, etc.), these changes, at constant consumption and price levels, have had and may have

in the future a negative impact on the EDF Group's sales in France. EDF must therefore adjust its marketing expenses; insufficient adjustment could have a negative impact on its profitability.

Elsewhere in Europe, the EDF Group faces different situations, depending on the local competitive conditions (totally or partially open markets, position of competitors, regulations, etc.). The type of competition faced by the EDF Group, the evolution over time of such competition and its effect on the EDF Group's activities and results vary from one country to another. These factors depend in particular on the level of market depth and its regulations in the country in question and on other factors over which the EDF Group has no control.

In this context, particularly following the development of low-carbon electricity uses and energy services and energy efficiency, the EDF Group may not be able to defend its market share or gain market shares as expected, or it may see its margins decrease, which would have an adverse effect on its activities, its strategy and its financial position.

**Description 2B: In order to sell its output, the EDF Group is exposed, directly or indirectly, to the prices of the European wholesale energy markets and capacity markets in the course of deployment, the levels of which might impact its financial position.**

In conducting its production and marketing activities, the EDF Group does business in energy markets, primarily in Europe. Therefore, the EDF Group is exposed to price fluctuations in the wholesale energy markets (electricity, gas, coal, petroleum products). These fluctuations are particularly significant in the current context of wholesale energy prices in Europe (see section 5.1.2 "Economic environment" of the 2018 *Document de Référence* and section 2 "Economic environment" of the 2019 Half-Year Management Report).

In France, since the end of regulated tariffs for companies, the EDF Group has been exposed to market prices. The degree of exposure depends on the level of subscription to the ARENH mechanism, which is itself dependent on the level of market prices: market exposure in France is thus at a maximum when no ARENH volume is subscribed and it is then estimated at about 80% of the EDF production in France.

Low electricity price levels create strong uncertainty regarding sales, the expected margin and the results. If they persist, they may also affect the profitability of the EDF Group's generating units and, more broadly, the value of assets, mainly in Europe, and the conditions under which they are maintained or even renewed.

Various factors affect these price levels in wholesale energy markets: commodity prices in world markets, the balance between supply and demand, but also tariff, fiscal or subsidy policies allocated to certain means of generation. Therefore, the EDF Group cannot guarantee that it will be able to avoid adverse impacts on the development of its activities, the valuation of its assets and its financial position.

The EDF Group manages its exposure to these risks primarily through purchases and sales on wholesale markets. With the exception of petroleum products markets, these are recent markets that are still under development. Therefore, a lack of liquidity may limit the EDF Group's ability to hedge its exposure to risks in the energy market. Moreover, certain of these markets continue to be partially partitioned by country due to, in particular, a lack of interconnections. Furthermore, these markets may experience significant price increases or decreases that are difficult to foresee, as well as liquidity crises.

Energy market risks are managed in accordance with the "Energy market risks" policy adopted by the EDF Group (see section 2.2.2.1 "Control of energy market risks" of the 2018 *Document de Référence*). The EDF Group hedges its positions on these markets through derivatives, such as futures, forwards, swaps and options traded on organised markets or over the counter. However, the EDF Group cannot guarantee that it is totally protected, in particular against liquidity risks and significant price fluctuations, which could have an adverse impact on its financial position and the valuation of its assets (see note 40 "Management of market and counterparty risks" to the consolidated financial statements for the year ended 31 December 2018).

In addition, the context of wholesale energy market prices in Europe may impact the profitability of certain generating tools, particularly those that are potentially useful for food security, and this applies to all European producers. Capacity markets are currently being set up in several European countries, but with different approaches. In addition, the judgement handed down by the European Court of Justice on 15 November 2018 suspending the capacity market in place in Great Britain, poses a risk to its sustainability and the corresponding revenues for EDF Energy. The EDF Group's exposure to these various evolving capacity markets may affect its financial position.

**Description 2C: The societal, technological and economic context may not be favourable to the EDF Group's low-carbon solutions for the transition to address climate change challenges.**

The EDF Group has made a commitment to significantly reduce its carbon dioxide emissions released directly into the atmosphere, with a target of 30 million tonnes in 2030 instead of 51 million tonnes in 2017. The achievement of this objective, which contributes directly to corporate responsibility goal no. 1 with regard to climate commitment (see CSRG 1 section 3), is primarily determined by the continued societal acceptance of nuclear energy, the successful closure or conversion of fossil fuel-fired power plants and the accelerated development of renewable means of generation in addition to nuclear and hydropower generation. The EDF Group has been particularly active in the development of solar energy in France, electric storage and low-carbon electric mobility, which will make it possible to develop and promote the EDF Group's low-carbon energy solutions, particularly for the transport sector, which still emits a very high level of carbon dioxide in France and Europe.

The external, societal, competitive, social, economic or industrial context could constitute a barrier to these developments. New low-carbon energy solutions can lead to new societal questions (new intrusive technologies, land tenure, new usage conflicts in the use of scarce resources, etc.). Nuclear energy may not be recognised at the societal level as a key factor in enabling the low-carbon transition.

The EDF Group may encounter difficulties in achieving these transformations and may not achieve the desired objectives. It may also have to deal with the emergence of new technologies or disruptive solutions in response to the need for transition.

These situations are likely to directly or indirectly affect the EDF Group's business volumes, margins, the value of its assets, its financial position, its reputation or its outlook, and the achievement of the first corporate responsibility goal and compliance with its climate commitment (see section 3.2.1.1 "EDF group's ambition (CSRG no. 1)" of the 2018 *Document de Référence*).

The time-frame of this risk factor is short/medium term.

**Description 2D: The EDF Group is exposed to physical effects of climate change that could have consequences on its own industrial and tertiary facilities and more generally on the EDF Group's financial position.**

The EDF Group's industrial and tertiary facilities may not be designed to cope with extreme weather events caused by climate change in the context of their expected operating life, notably despite periodic reviews of nuclear and hydropower facilities. The EDF Group's industrial, logistics and tertiary activities are likely to be significantly affected by the possible physical effects of climate change. These effects are difficult to predict and could have an adverse effect on the continued operation of the EDF Group's activities, its operating results, cash flows and overall operating performance. New legislative or regulatory developments caused by climate change may also have a negative impact on EDF's activities.

Such situations may jeopardise the EDF Group's commitment to meeting the challenges of climate change as expressed in its Sustainable Development Policy and may have consequences on its financial position and reputation.

The time-frame of this risk factor is medium/long term.

**Description 2E: The EDF Group is exposed to an increase in the risk of malicious attacks, particularly on its information system.**

The facilities or assets operated by the EDF Group or its employees may be the target of external attacks or malicious acts of any kind. An attack or malicious act committed on these facilities could have consequences such as injury to persons and damage to property, the EDF Group being held liable on the grounds of measures judged to be inadequate and interruptions to operations. In addition, the EDF Group cannot guarantee that laws and regulations regarding the protection of sensitive sites and critical infrastructure will not become more restrictive, which could generate additional investments or costs for the EDF Group.

The EDF Group operates multiple, interconnected and highly complex information systems (databases, servers, networks, applications, etc.) that are essential to the conduct of its commercial and industrial activity, the

preservation of its human, industrial and commercial assets, and the protection of personal data (of customers and employees alike), the control of its industrial processes, particularly hydropower and nuclear, which must adapt to a rapidly changing context (digital transition, development of teleworking, new ways to share work in extended companies with suppliers, changes in regulations, etc.).

The frequency and sophistication of information system hacking and data corruption incidents are increasing worldwide.

A malicious attack may have a negative impact on the EDF Group's operational activity, its financial, legal or property position or its reputation.

**Description 2F: Repeated customer power supply interruptions, or a black out, or a widespread power grid incident, in a territory served by the EDF Group could have consequences for the EDF Group's activities, financial position and reputation, particularly if they were partly attributable to the EDF Group.**

The EDF Group may be faced with repeated power outages or even a black-out, a widespread network incident of considerable scale, or be involved in it, even if the triggering incident occurred on a network not operated by EDF or was attributable to another player.

The causes of power outages can be diverse: local or regional imbalance between electricity generation and consumption, accidental power supply or transmission failure, cascade failures, interconnection problems, delays in investment and the necessary network conversions to meet the needs of energy and ecological transition, difficulty in coordinating players, particularly in a market with insufficient or evolving regulation.

The initial impact of such power failures could be repair costs incurred to re-establish power or restore the network. Power failures may also generate capital expenditures if it were decided, for example, to install additional generation or network capacity. This could also cause a decline in the EDF Group's turnover. Finally, they could have a negative impact on the EDF Group's financial position or reputation with its customers and all its stakeholders, particularly if the power outage were to be partly attributable to it.

**Description 2G: Any major event or crisis of unpredictable scale, whether involving the EDF Group or outside the EDF Group, could have a significant negative impact on the EDF Group's financial position.**

As was the case with storms Klaus (2009) and Xynthia (2010) in France, and Irma (2017) in the Antilles, natural disasters (floods, landslides, earthquakes, etc.), other significant weather changes (droughts, etc.), or any other event on a scale that is difficult to predict (large-scale epidemics, a major industrial accident in the world, etc.) may affect the EDF Group's activities. The national and international feedback from each of these types of events may lead to provisions to strengthen the robustness of the EDF Group's facilities, particularly industrial facilities, and to limit the impact and consequences of such major events.

In the event of an exceptional incident, the measures adopted may generate costs beyond those of repairing the damage caused by the disaster and the loss of earnings from the interruption of the supply and services provided by the EDF Group.

As part of the renewal of the storm insurance coverage, Enedis has signed with Swiss Re a parametric insurance policy covering its aerial distribution network against the consequences of high-intensity storms (see section 2.5.5.3 "Storm cover" of the 2018 *Document de Référence*). Island Energy Systems aerial distribution networks are not covered for property damage. Damage to these networks could have an adverse impact on the EDF Group's financial position in the absence of insurance cover or if cover is inadequate. In addition, renewing or taking out these specific covers may be difficult or costlier due to the impact, frequency and magnitude of natural disasters experienced in recent years by the alternative risk transfer markets.

In the event of a wide-spread health epidemic, depending on the intensity of the crisis, the continuity of electricity supply and the safety of the facilities may no longer be fully guaranteed.

Despite the implementation of a crisis management system taking account of the EDF Group's territorial presence and the economic importance of the EDF Group's energy activities, the EDF Group cannot guarantee that the occurrence of a natural disaster, or any other event of a scale that is inherently difficult to predict, will not have a significant negative effect on its business, assets, financial position and reputation.

**Description 2H: The United Kingdom's exit from the European Union is likely to have an adverse effect on overall economic conditions, the financial markets and EDF's activities.**

In June 2016, a majority of UK citizens voted in favour of withdrawing from the European Union in a national referendum. The consequences of this referendum, and the procedures for the withdrawal of the United Kingdom, are the subject of negotiations within the withdrawal procedure specified by Article 50 of the Treaty on the European Union. Many of the United Kingdom's policies are likely to evolve (monetary, tax, economy, energy, etc.). The impact of these evolutions on the economic and financial environment (notably in terms of growth, exchange rates and inflation) and on the EDF Group may exist from the transition phase or once the course of events is stabilised. These consequences will depend on the content of the negotiations, not only between the United Kingdom and the European Union, but also with other parties involved, such as the Commonwealth, the United States and China.

The referendum created significant uncertainty about future relations between the United Kingdom and the European Union, including in terms of which laws and regulations of European origin the United Kingdom will decide to replace or replicate. Furthermore, the United Kingdom's withdrawal from the European Union may lead to changes in energy policy both within the European Union and the United Kingdom along with changes to laws relating to nuclear activity.

The draft law empowering the British Prime Minister to implement the right of withdrawal in accordance with Article 50 of the Treaty on European Union, which was approved by the House of Commons on 1 February 2017, provides for the joint exit from the European Atomic Energy Community established by the "Euratom" treaty, of which the United Kingdom became a member on 1 January 1973 at the same time as it became a member of the European Economic Community. Specific agreements have been negotiated accordingly in order to allow for continued cooperation in the nuclear field and operational continuity, with the United Kingdom remaining a member of the International Atomic Energy Agency. However, delays in setting up or deploying the new provisions could disrupt the implementation of ongoing or future projects and more generally, the operation of the existing nuclear fleet.

The impact of all these developments on the activity of the EDF Group in the United Kingdom remains limited in the short term. See section 1.4.5.1.1."Strategy" of the 2018 *Document de Référence*. It may however result in the worsening of the economic conditions leading to a restriction of the energy market. Changes in the monetary and economic environment, the deflationary or inflationary context, potential future exchange rate fluctuations, possible new legislation, regulations, tax or customs charges, both for trade in services and products and for the movement of people, new shifts instigated by economic players, may lead to new risks for the EDF Group in the UK market.

This new environment may lead to changes in the conditions of project profitability (see in particular section 1.4.5.1.2.4 " Nuclear New Build Business" of the 2018 *Document de Référence*) and to re-assessment or even removal of investors associated with the EDF Group's future projects in the United Kingdom or Europe. Changes in exchange rates and customs duties may have an impact on the Hinkley Point C (HPC) project, in particular (see section 2.1.5 description of the 5D factor below)

These developments, the uncertainty that they create, as well as the belief that any of them might occur, are likely to weaken European economic activity, threaten the stability of its regulatory environment and cause significant fluctuations in exchange rates (see the risk factor "exchange rate risk" below). This could have a significant adverse effect on global economic conditions, and in particular on the EDF Group's activities, financial position and operating results, particularly in the United Kingdom.

## **RISKS RELATED TO THE TRANSFORMATION OF THE EDF GROUP**

**Description 3A: The EDF Group's development strategy, changes in the scope of activities and synergies within the integrated EDF Group may not be implemented in accordance with the objectives defined by the EDF Group, at the service of customers, EDF Group stakeholders and climate protection.**

The EDF Group, in line with corporate responsibility goal no. 1 to protect the climate (see section 3.2.1.1 "EDF group's ambition (CSRG no. 1)" of the 2018 *Document de Référence*), and goal no. 4, (see section 3.2.4.1 "Innovate so that customers can consume better (CSRG no. 4)" of the 2018 *Document de Référence*) intends to pursue its development as a high-performance and responsible electricity producer, champion of low-carbon growth in France, in its core countries in Europe (United Kingdom, Italy, Belgium) and internationally in

accordance with the CAP2030 strategy. This strategy combines the search for growth drivers with the promotion of existing assets. The strategy and drivers of the EDF Group's transformation are described in section 1.3 "Group Strategy" of the 2018 *Document de Référence*. Weak synergy in the deployment of the EDF Group's integrated model, particularly upstream/downstream or in the enhancement of the complementarity of the divisions and the diversity of the solutions deployed by the EDF Group (see section 1.4 "Description of the Group's activities" of the 2018 *Document de Référence*) could lead to an increase in risks related to physical and market contingencies, and to a loss of gross margin, to the detriment of customers, subsidiaries and the EDF Group's performance. The lack of added value of geographical diversification, or of the diversification and complementarity of the low-carbon industrial solutions proposed by the EDF Group, or the reduction of cross-functional synergies deployed within the integrated EDF Group, could lead to a decrease in the EDF Group's ability to cope with the seasonal nature of the electricity generation and sales activity, the diversity of local expectations and the proximity of its customers and stakeholders, and the efficiency and, therefore, the competitiveness of the low-carbon industrial solutions used to meet them.

In order to provide itself with the resources for its strategy, the EDF Group implements development, conversion, reorganisation and performance plans (see risk factor 4B below entitled "The Group is exposed to the risk of non-control of operational performance and its continuous improvement"). These programmes may be complemented by a strategic analysis of assets which may itself lead to a requirement for additional financial agility, giving rise to disposals or acquisitions.

Focused primarily on its customers and stakeholders, the EDF Group intends to develop and consolidate its offer of integrated service solutions, in particular energy efficiency services, its offer of low-carbon and decentralised power generation solutions, and its offer of diffuse storage solutions, in a sustainable development approach and in close proximity to customers and local communities.

The Solar Plan, the Electric Storage Plan and the Electric Mobility Plan are three major levers for developing and expanding the range of low-carbon energy solutions offered by the EDF Group in addition to the industrial solutions already widely available within the EDF Group, particularly wind, hydro and nuclear power.

Even in the event of protective contractual arrangements, the EDF Group cannot guarantee that these various projects relating to its offer or to the various low-carbon industrial solutions deployed to meet them can be implemented according to the forecast schedules and under satisfactory economic, financial, regulatory, partnership or legal conditions or that they will ensure a long-term response to the needs expressed by our customers and stakeholders and the expected profitability at the outset, which could have a negative impact on the EDF Group's financial position, its commitment to the fight against climate change, and its reputation.

**Description 3B: Skill conversion and development may be insufficient in view of the EDF Group's transformation, business line requirements and new organisational and working methods.**

People development is the corporate responsibility goal no.2 (see section 3.2.2 "Committed to human development" of the 2018 *Document de Référence*). The EDF Group's scope of activity is evolving in a rapidly changing environment and context of energy and digital transition and, consequently, many new business lines are emerging and new working methods are being adopted (extended company, project platform operation, teleworking, etc.). The historical business lines are themselves undergoing dramatic change yet retaining their very high level of technicality, with a similarly high requirement for a culture of safety and security, particularly in the hydropower and nuclear power sectors as well as for electricity networks. The human and socio-organisational dimension is a key factor in the EDF Group's performance. The anticipation of emerging needs and requirements related to new business lines, the necessary functional and geographical adjustments required to facilitate the evolution of the scope of activity, elicits adaptation and constant development of skills and organisations. (See section 3.4.1 "Professional excellence, employment and skills development" and section 3.4.2 "Providing the conditions for well-being: organisation and quality of working life" of the 2018 *Document de Référence*). Obtaining qualifications or authorisations may require several years and sufficient coverage for the transfer of knowledge and experience. The rapid evolution of technology and, therefore, of the business lines, requires flexibility and an increased ability to adapt on both an individual and organisational level, as well as in terms of working methods and acquiring and transmitting individual and collective skills.

The EDF Group considers the dynamic matching of skills to needs over time to be a major challenge and therefore implements the appropriate measures to facilitate change. However, it cannot guarantee that the measures taken will always be sufficient, timely or on satisfactory terms, which could have an impact on its business, financial position and reputation as an employer.

**Description 3C: The EDF Group may be required to meet significant commitments related to pensions and other employee benefits.**

The pension plans applicable in the various countries in which the EDF Group operates involve long-term commitments to pay benefits to the EDF Group's employees (see note 31 "Provisions for employee benefits" to the consolidated financial statements for the financial year ended 31 December 2018 and note 20.3 "Employee benefits" of the 2019 Half-Year Financial Statements). In France, in addition to these pension commitments, the EDF Group also owes obligations for post-employment benefits and long-term benefits for employees currently in service. The ongoing pension reform in France may have an impact on the EDF Group's commitments.

To cover these commitments, the EDF Group has set up outsourced funds or pension funds. At the end of 2018, depending on the case, assets only partially covered these commitments, although, for the EDF Group, the maturity dates of the obligations are relatively smoothed over time. At 31 December 2018, the average duration of employee benefits commitments was 18.8 years in France and 19.5 years in the United Kingdom.

The amounts of these commitments, the provisions booked, the outsourced funds or pension funds set up and the additional contributions required to make up insufficient funding are calculated based on certain actuarial assumptions, including a discount rate subject to adjustment depending on market conditions and, in the event of any employee-related commitments in France, on the rules governing retirement benefits paid out by the general retirement scheme, and amounts owed by the EDF Group. These assumptions and rules may be adjusted in the future, which could increase the EDF Group's current commitments for pensions and other employee benefits and, therefore, require a corresponding increase in provisions.

Furthermore, if the value of outsourced funds or pension funds proves insufficient to meet the corresponding commitments, in particular in the United Kingdom or France, primarily due to calculation assumptions or developments in the financial markets, (see risk factor above, "The Group is exposed to risks related to financial markets"), the EDF Group may be obliged to make additional contributions to the relevant funds, which may have an adverse impact on its financial position.

**RISKS RELATED TO THE EDF GROUP'S OPERATIONAL PERFORMANCE**

**Description 4A: The EDF Group is exposed to risks related to the management of major projects, both nuclear and otherwise.**

As part of its activity and in its capacity as project owner or prime contractor, the EDF Group is called upon to carry out projects that are inherently complex, require significant investments and lengthy procedures for construction and regulatory approvals. A very large number of stakeholders can be involved. Projects may need to be connected to local development projects or may encounter difficulties with respect to local approval. The control of these projects is part of the corporate responsibility goal no. 5 to organise a process of open dialogue and consultation for every new project around the world. (See section 3.2.5.1 "EDF's commitment to organise a worldwide dialogue and consultation process around our projects (CSRG no. 5)" of the 2018 *Document de Référence*).

Such projects may include, but are not limited to, offshore structures for new energies (offshore wind power in France) the installation of new meters throughout a distribution network covering tens of millions of customers in France or the United Kingdom, the implementation of international hydropower projects, or carrying out large-scale nuclear investments over decades, (notably, Grand Carénage, EPR projects and decommissioning projects). Technical, administrative, financing or admissibility issues are likely to affect project time lines, associated costs or profitability.

The additional and specific challenges and risks related to nuclear activities and nuclear projects, are specified in "Specific risks related to the EDF Group's nuclear activities" below.

More generally, the implementation of these projects may be subject to numerous technical, industrial, operational, economic, regulatory or environmental risks that could delay or prevent them. Such situations could have a negative impact on the EDF Group's activities, results, asset values, financial position, reputation and prospects.

**Description 4B: The EDF Group is exposed to the risk of non-control of operational performance and its continuous improvement.**

The EDF Group has set up programmes that aim to continuously improve its operational and financial performance and increase its financial flexibility. The objectives set for these programmes may not be achieved.

Energy, and electricity in particular, is an activity that is very closely linked to economic activity in general and requires responsiveness and flexibility in operational performance, notably to respond effectively to changes in the economic environment and the emerging needs of customers and stakeholders.

The EDF Group's operational and financial performance is a key condition for achieving corporate responsibility goal no. 4, to commit and innovate to optimise customer energy consumption. (See section 3.2.4.1 "Innovate so that customers can consume better (CSRG no. 4)" of the 2018 *Document de Référence*). It makes it possible to achieve sustainable development performance objectives as expressed in the EDF Group's sustainable development policy and also contributes to the achievement of other corporate responsibility goals, no. 1, committed to climate action, (see section 3.2.1.1 "EDF group's ambition (CSRG no. 1) of the 2018 *Document de Référence*"), no. 3, committed to supporting fragile populations, (see section 3.2.3.1 "EDF's commitment: providing 100% of vulnerable populations with information and support solutions in terms of energy consumption and access to rights (CSRG no. 3) of the 2018 *Document de Référence*") and no. 6, committed to biodiversity (see section 3.2.6.1 "EDF's commitment: to launch a positive approach to biodiversity, not to limit itself solely to knowledge in the long term, but to have a positive impact on biodiversity (CSRG no. 6)").

The EDF Group's ability to transform depends on the achievement of operating results.

However, the EDF Group cannot guarantee that the performance improvement programmes that it implements will have the anticipated results or that these results will be obtained according to the forecast schedule, nor that they will be sufficient to jointly cope with regulatory and economic developments and with the EDF Group's commitments.

Failure to achieve the expected operating results, and failure to achieve the objectives of improving operational performance, may lead to a direct deterioration in the EDF Group's financial position, reputation and ability to transform.

**Description 4C: The EDF Group is exposed to the operational continuity of supply chains and contractual relationships with customers and suppliers as well as to fluctuations in the price and availability of materials, equipments or services it purchases in the course of its business activities.**

The EDF Group's needs can arise in markets with limited surface area or increasing tensions, in particular due to the structure and evolution of the industrial offer or the increase in competition from new uses (competition that increases in particular between the growing needs of information systems and the needs of energy players). The climate transition can create further tensions in supply chains. The effect of climate change could have consequences for supply chains. In the event of significant and sustained increases in the prices of raw materials, the EDF Group may experience higher procurement costs for certain critical products or services. Such increases may also lead certain suppliers to reduce supply due to reduced profit margins. Furthermore, the EDF Group's results may be affected by fluctuations in the prices of certain raw materials used to structure electricity and energy services prices. Certain materials, equipment or services could also be subject to increased demand relative to the available industrial supply, which could have an impact on their cost and availability and on the EDF Group's supply capacities in terms of costs, volume and contractual flexibility.

The EDF Group currently depends on a limited number of industrial players with specific skills and the required experience. This situation reduces competition in markets where EDF is a buyer and exposes the EDF Group to the default risk of one or more of these specialised suppliers or service providers. This is notably the case for Orano, Westinghouse, GE and Alstom (see section 2.3 "Dependency factors" of the 2018 *Document de Référence*). Changes to the shareholding or governance of these various providers may also have an impact on the cost, the operational continuity of ongoing contracts and the cost of services provided or delivered products.

The scarcity of raw materials could become critical for the EDF Group in the event of geological, geopolitical, industrial or regulatory constraints. The control of the conditions under which raw or semi-finished materials are extracted, processed or packaged for the EDF Group's needs, may be subject to provisions implementing strong

regulatory requirements, increased vigilance, or the search for alternative solutions with R&D actions or the development of new industrial solutions.

Control of these activities can directly affect that of the financial position and, through its relations with its suppliers, the achievement of corporate responsibility goal no. 2 with respect to people development (see section 3.2.2 "Commitment to human development" of the 2018 *Document de Référence*). Corporate responsibility goal no. 2: adopt industrial groups' best practices in people development: health & safety, gender equality, and social advancement") and section 3.3.3.4 "responsible purchasing" of the 2018 *Document de Référence*.

#### **Description 4D: The EDF Group is exposed to risks in the financial markets.**

As a result of its activities, the EDF Group is exposed to risks in the financial markets:

- liquidity risk: the EDF Group must at all times have sufficient financial resources to finance its day-to-day business activities, the investments necessary for its expansion and the appropriations to the dedicated portfolio of assets covering long-term nuclear commitments, as well as to deal with any exceptional events that may arise. The EDF Group's ability to raise new debt, refinance its existing indebtedness or, more generally, raise funds in financial markets, and the conditions that can be negotiated to this effect, depend on numerous factors including the rating of the EDF Group's entities by rating agencies. The EDF Group's debt is periodically rated by independent rating agencies (see section 6.1.2 "Credit rating" of the 2019 Half-Year Management Report). Any downgrading of EDF's debt rating could increase the cost of refinancing existing loans and have a negative impact on the EDF Group's ability to obtain financing; To meet liquidity needs, the use of hybrid issues could lead to a change in the EDF Group's financial statements, particularly in the event of a change in accounting standards;
- counterparty risk: like all economic operators, the EDF Group is exposed to possible default by certain counterparties (partners, subcontractors, service providers, suppliers or customers). A default by these counterparties may impact the EDF Group financially (loss of receivables, additional costs, in particular if EDF is required to find satisfactory alternatives or take over the relevant activities or pay contractual penalties). The risk may be hedged by the use of margin calls. In the event of high market volatility, the EDF Group may have to mobilise cash. (see section 5.1.6.1.1.2 "Management of Liquidity Risk" of the 2018 *Document de Référence* and section 6.1.1 "Liquidity position and management of liquidity risk" of the 2019 Half-Year Management Report.);
- exchange rate risk: due to the diversity of its activities and their geographical distribution, the EDF Group is exposed to the risks of fluctuations in foreign exchange rates, which may impact currency translation adjustments, balance sheet items and the EDF Group's financial expenses, equity and financial position. As the EDF Group is involved in long-term contracts, an unfavourable currency fluctuation could have consequences on project profitability. In the absence of hedging, currency fluctuations between the euro and the currencies of the various international markets in which the EDF Group operates can therefore significantly affect the EDF Group's results and make it difficult to compare performance levels from year to year. If the euro appreciates (or depreciates) against another currency, the euro value of the assets, liabilities, income and expenses initially recognised in that other currency will decline (or increase). Moreover, insofar as the EDF Group is likely to incur expenses in a currency other than that in which the corresponding sales are made, fluctuations in exchange rates could result in an increase in expenses, expressed as a percentage of turnover, which could affect the EDF Group's profitability and income (see section 5.1.6.1.3 "Management of foreign exchange risk of the 2018 *Document de Référence* and section 6.1.3 "Management of foreign exchange risk" of the 2019 Half-Year Management Report). An adverse fluctuation of 10% in exchange rates related to currencies in which the EDF Group's debts are denominated (USD, GBP, other currencies) would have an impact amounting to around 2% on the EDF Group's indebtedness after hedging instruments;
- equity risk: the EDF Group is exposed to equity risk on securities held primarily as dedicated assets constituted to cover the cost of long-term commitments in relation with the nuclear business, in connection with outsourced pension funds and, to a lesser extent, in connection with its cash assets and investments held directly by the EDF Group (see section 5.1.6.1.5 "Management of equity risks" of the 2018 *Document de Référence* and section 6.1.5 of the 2019 Half-Year Management Report and section 5.1.6.1.6 "Management of financial risk on EDF's dedicated asset portfolio" of the 2018 *Document de Référence*).

*Référence* and section 6.1.6 "Management of financial risk on EDF's dedicated asset portfolio" of the 2019 Half-Year Management Report);

- interest rate risk: the EDF Group is exposed to risks related to changes in interest rates in the various countries in which it operates. These rates depend partly on the decisions of the central banks. Increases in interest rates could affect the EDF Group's ability to obtain financing under optimum conditions or even its ability to refinance itself if the markets are very tight. The EDF Group's exposure to changes in interest rates involves in particular two types of risks: (i) the risk of changes in the value of fixed-rate financial assets and liabilities along with the risk of changes in the EDF Group's discounted liabilities and (ii) the risk of changes in cash flows associated with variable-rate financial assets and liabilities. Downward variations in interest rates could notably affect the value of the EDF Group's long-term commitments in the nuclear field and its commitments in matters of retirement and other specific provisions in favour of the employees, which are discounted with discount rates which depend on interest rates with different time frames. Such changes in provisions could impact the EDF Group's financial position by (i) affecting the financial rating of its debt securities and (ii) generating an obligation to pay for dedicated hedging assets (See risk factor below "Specific risks related to the EDF Group's nuclear activities", in the paragraph "Provisions made by the EDF Group for spent fuel treatment operations, recovery and packaging of waste and for the long-term management of waste may increase significantly if assumptions... are revised") (and see section 5.1.6.1.4 "Management of interest rate risk" of the 2018 *Document de Référence* and section 6.1.4 "Management of interest rate risk" of the 2019 Half-Year Management Report).

The impact on income before tax of a 0.5% fluctuation in interest rates would be around +€290 million<sup>1</sup> (impact on the financial result in relation to the cost of the debt and the accretion expense of the provisions, and on the gross operating surplus in relation to the benefits to the personnel).

As for the financial assets held by the EDF Group and classified as floating-rate bonds and negotiable debt securities, the impact on income before tax of a 1% fluctuation in interest rates would be around €22 million.

Besides, the EDF Group's exchange rate risk relates, in particular, to the value of the EDF Group's long-term nuclear commitments (see note 29 "Provisions related to Nuclear Generation – Back end of the Nuclear Cycle, Plant decommissioning and last cores" to the consolidated financial statements for the fiscal year ended 31 December 2018) and its commitments for pensions and other specific employee benefits (see note 31 to the consolidated financial statements for the fiscal year ended 31 December 2018), which are discounted to their present value using rates that depend on interest rates at various time horizons, and debt instruments held for the management of the dedicated assets constituted to cover these commitments.

For the specific case of nuclear provisions in France, given the decline in rates over the past few years, the discount rate could be reduced over the next few years by applying the method used by the EDF Group, in accordance with regulation on the ceiling discount rate. The importance of this decline will depend on the future rates evolution. An increase in nuclear provisions due to a decrease of the discount rate may require allocations to the dedicated assets and may result in an adverse effect on the EDF Group's results, cash flow generation and net debt.

With regards to the regulations on the ceiling discount rate, the order dated 29 December 2017 changes the statutory discount rate ceiling. The new formula leads, progressively over a period of ten years, from the regulatory ceiling as of 31 December 2016 (4.3%), to a regulatory ceiling equal, in 2026, to the average over the four previous years of the thirty-year constant maturity rate (TEC 30), increased by 100 basis points.

Given past and expected changes in rates, this new formula, which takes into account progressively the transition from the 4.3% regulatory rate to an average rate calculated over four years, including a 100 basis point spread, should lead to a steadier evolution of the regulatory ceiling rate during the next few years, as opposed to the previous formula.

As the case may be, this increase in provisions, including those covered by dedicated assets, does not mean however a mechanical impact on the amount to be allocated to dedicated assets as of the considered dates, as the former depends on:

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<sup>1</sup> This estimate is only indicative. The completeness of the economic effects of a rate increase for the Group is not presented here.

- the profitability of dedicated assets and the resulting hedging rate: there is no need to provide dedicated assets once the hedging rate reaches 110%;
- the period within which the allocation is made, as applicable rules provide for the option to set a maximum three-year time period to proceed with the allocation, subject to approval by the supervisory authority.
- As a reminder, changes in nuclear provisions estimates resulting from a variation of the discount rate are recorded (see notes 1.3.2.2 "Nuclear Provisions" and 29.1.5.1 "Discount rate" to the consolidated financial statements for the financial year ended 31 December 2018 presented in chapter 6 of the 2018 *Document de Référence*):
- as an increase or decrease of the corresponding assets, within the limit of their net book value, when the counterparty to the provision has been initially recorded as an asset;
- as financial income for the period in other cases.

Therefore, any change of the discount rate therefore has a punctual impact on the financial results of the year during which the discount rate change occurred, without equivalence for the following years.

The policy and principles concerning the management of the EDF Group's financial risks are described in section 5.1.6.1 "Management and control of financial risks" of the 2018 *Document de Référence* and section 6.1 "Management and control of financial risks" of the 2019 Half-Year Management Report. The control of financial risks is described in section 2.2.2.2.2 "Control of financial risks" of the 2018 *Document de Référence*.

However, the EDF Group cannot guarantee that it is totally protected, in particular in the event of significant fluctuations in foreign exchange rates, interest rates and the equities markets.

#### **Description 4E: The EDF Group is exposed to occupational health and safety risks.**

Human resources and their related skills are a major challenge for the EDF Group and its service providers. In a very diverse industrial context, adherence to rules and consideration of the various risks that may affect people working in the EDF Group's industrial facilities are crucial to preserving occupational health and safety.

On 29 May 2018, EDF's Chairman and CEO signed a global agreement at the headquarters of the International Labour Organisation in Geneva, with the General Secretaries of two global trade union federations, IndustriAll Global Union and Rosasa Pavanelli for Public Services International (PSI), as a responsible employer, covering human and social rights. This agreement encompasses all EDF's industrial and tertiary activities in 24 countries, in accordance with international labour conventions. It is designed to guarantee the development of a common set of standards for the EDF Group's 160,000 employees and to consolidate social dialogue. This agreement promotes human rights, diversity, health and safety, skills development and social protection for employees and subcontractors wherever the EDF Group operates. This commitment is in line with corporate responsibility goal no. 2 (section 3.2.2 "Committed to human development. Corporate responsibility objective no. 2: to integrate the best practices of industrial groups in terms of human development: health/ safety, gender equality, and internal social advancement" of the 2018 *Document de Référence*).

Although the EDF Group has for many years taken the steps necessary to comply with the health and safety laws and regulations in the various countries in which it operates, and considers that it has taken the measures required to ensure the health and safety of its employees and that of its subcontractors', the risk of occupational illnesses or accidents cannot be excluded. The occurrence of such events may lead to lawsuits against the EDF Group and may result in the payment of damages, which could be significant.

**Description 4F: Prohibited and unethical practices carried out by employees or third parties in the conduct of business could, in certain circumstances, adversely affect the EDF Group's reputation and shareholder value. The EDF Group is involved, and could be involved in the future, in litigations or regulatory investigations which may adversely affect the EDF Group's reputation, as well as its relationship with regulatory bodies and results.**

The globalisation of the EDF Group's activities and the strengthening of regulatory frameworks repressing unethical practices especially in the conduct of business could expose the EDF Group, its employees, or third parties acting on the EDF Group's behalf to criminal and civil sanctions that could adversely affect EDF's reputation and shareholder value.

In France, Act No 2016-1691 of 9 December 2016 on transparency, the fight against corruption and the modernisation of economic life requires companies to take measures to prevent and identify acts of corruption or trading in influence, under the control of a French Anti-Corruption Agency established under the Act and under penalty of administrative or criminal penalties. This law incorporates a system for protecting whistleblowers from possible criminal or disciplinary prosecution and provides, within a corporate framework, an internal alert reporting system (see section 1.5.6.1 "General regulations applicable to the environment, health, hygiene and safety" of the 2018 *Document de Référence*). These regulations could increase compliance costs. Moreover, any failure to comply in any way with these regulations could lead to prosecutions being brought against EDF, which could have a negative impact on the EDF Group's result and reputation.

Notwithstanding the fact that the EDF Group has taken all necessary measures to ensure the compliance of its practices with the regulations in force, a risk of non-compliance cannot be totally ruled out.

As a result of its activities, the EDF Group is involved in several litigation and arbitration cases and regulatory investigations, of which material ones are described in section 2.4 "Legal proceedings and arbitration" of the 2018 *Document de Référence*. In the future, the EDF Group may be involved or exposed to such proceedings. The potential adverse outcome of these proceedings may entail the payment of damages, or result in other civil or criminal adverse consequences (including financial consequences) for the EDF Group. The implementation of class actions in France in 2014 and similar developments in other European jurisdictions, as well as recent or future regulatory changes, may increase litigation risks and related costs, which could have a negative impact on the EDF Group's results and reputation.

**Description 4G: The EDF Group operates facilities for which accidents could, in the event of a failure in industrial safety, have serious consequences on the human or natural environment, particularly in terms of biodiversity and environmental capital.**

The EDF Group operates or has operated facilities which, as part of their day-to-day operations, can, may or may have been the cause of industrial accidents or environmental and health impacts. The EDF Group's facilities may be located in industrial areas where other activities subject to similar risks are conducted, which means that the EDF Group's own facilities may be impacted by accidents occurring at neighbouring facilities owned by other operators and not under the EDF Group's control.

Biodiversity issues concern all the EDF Group's facilities and projects, particularly in France where EDF is a landowner and a manager of natural resources of great importance. The EDF Group is committed to biodiversity through its corporate responsibility goal no. 6 (see section 3.2.6.1 "EDF's commitment: to launch a positive approach to biodiversity, not to limit itself solely to knowledge in the long term, but to have a positive impact on biodiversity (CSRG no. 6)" of the 2018 *Document de Référence*).

Measures taken for industrial safety and the control of these risks may not be fully effective, which could have consequences for people, property and business continuity. Protective measures may be taken on similar facilities. The EDF Group may be held liable.

Insurance policies for civil liability and damages taken out by the EDF Group could prove to be significantly inadequate, and the EDF Group cannot guarantee that it will always be able to maintain a level of cover at least equal to current cover levels and at the same cost.

The risks specific to nuclear facilities are the subject of an additional explanation in section 2.1.5 "Specific risks related to the EDF Group's nuclear activities".

The impact of an industrial safety failure may have a negative impact on the EDF Group's operational activity, its financial, legal or property position or its reputation, and may affect the EDF Group's ability to achieve Corporate Responsibility Goal no. 6 with respect to biodiversity.

## SPECIFIC RISKS RELATED TO THE EDF GROUP'S NUCLEAR ACTIVITIES

The EDF Group is the world's leading nuclear operator in terms of the number of reactors in operation (73 reactors for which the EDF Group is the nuclear operator, among 453 operating reactors in the world)<sup>2</sup>. With 58 reactors in operation in France, nuclear electricity accounted for 47.8% of installed electrical power at the end of 2018, and accounted for 71.6% of total electricity output in France<sup>3</sup> during that year. EDF operates 15 nuclear reactors in the United Kingdom, accounting for 19.3% of electricity output in 2017<sup>4</sup>.

The EDF Group has basic nuclear fuel cycle facilities and carries out activities in research, equipment manufacture and the supply of services to other nuclear operators, since the integration of the New NP subsidiary, now Framatome, within the scope of the EDF Group in 2018.

In addition, the EDF Group holds minority stakes in nuclear power plants in operation in China, the United States, Belgium and Switzerland, which it does not operate. The EDF Group is investing in new reactor projects in France, the United Kingdom and China and carries out its nuclear industrial activity in other countries, notably India and the United Arab Emirates, countries in which nuclear operators signed agreements with the EDF Group in 2018.

The share of nuclear energy, as a low-carbon form of energy and a part of the EDF Group's electricity mix, thus represents a significant industrial asset for the competitiveness and development of the EDF Group.

Given the low impact of the nuclear industry's fossil carbon dioxide emissions over the entire industrial life cycle, the performance and control of nuclear activities directly contribute to achieving corporate responsibility goals: committed to climate action (see CSRG no. 1); committed to human development (see CSRG no. 2); committed to supporting fragile populations (see CSRG no. 3), particularly in the fight against fuel poverty and access to clean, low-carbon and competitive energy, including for the most disadvantaged; committed to helping each customer consume better (see CSRG no. 4); committed to consultation (see CSRG no. 5); and committed to biodiversity (see CSRG no. 6). (see section 3.2 "EDF's corporate social responsibility goals" of the 2018 *Document de Référence*. The control and performance of nuclear activities are at the heart of EDF's sustainable development policy.)

The nuclear activities of EDF are associated with the following issues:

- as with any nuclear operator, the latter's obligations mean giving ongoing priority to nuclear safety, based on technical and organisational provisions in order to guard against a nuclear accident and, in the hypothetical event of an accident occurring, to limit the consequences of such an accident. The nuclear business is carried out under the control of nuclear safety authorities in countries where the EDF Group exercises nuclear operator responsibility; failure to take into account the requisite number 1 priority dedicated to nuclear safety could have a significant or even vital impact on the EDF Group;
- the EDF Group's nuclear activity is subject to detailed and demanding regulations with, particularly in France, a system in place that monitors and periodically re-examines basic nuclear facilities, which focuses, firstly on nuclear safety, protection of the environment and public health, but also on security considerations regarding malicious acts. These regulations may be significantly tightened by national or European authorities (see section 1.5.6.2.2 "Specific regulations applicable to basic nuclear facilities" of the 2018 *Document de Référence*). Furthermore, stricter regulations or possible non-compliance with current or future regulations could result in the temporary or permanent shutdown of one or more of the EDF Group's plants or financial penalties as stated in Article L. 596-4 of the French Environment Code. Cases of non-compliance with regulations or non-compliance with commitments undertaken, may also be used by third parties against EDF and brought before the courts. The increased number of requests

<sup>2</sup> Source: International Atomic Energy Agency , Power Reactor Information System, <https://www.iaea.org/pris>, indicating that there were 453 nuclear reactors in operation in the world on 23 January, 2019.

<sup>3</sup> Source: RTE, [www.rte-france.com/fr/article/bilans-electriques-nationaux](http://www.rte-france.com/fr/article/bilans-electriques-nationaux)

<sup>4</sup> Source: [www.iaea.org/pris](http://www.iaea.org/pris)

emanating from the French Nuclear Safety Authority (NSA) and enhanced controls may increase EDF's compliance costs and risks;

- although the nuclear business can contribute effectively to the security of energy supply and to combating the greenhouse effect, it must also demonstrate its competitiveness and its acceptance over the different time scales in which it operates. Nuclear activity by its very nature requires substantial and long-term investments, sometimes spanning decades. The robustness and efficiency of maintenance and upgrading programmes for the operating fleet, new reactor projects, and the respect of very long-term commitments are inevitably subject to extreme vigilance, with industrial cycles that span a century or even beyond;
- the nuclear fuel cycle is part of this long-term industrial outlook. EDF has a specific responsibility to develop a long-term strategy with the various stakeholders;
- the nuclear business is an industrial activity that brings together a large number of industrial partners in France, Europe and throughout the world. In France, EDF was assigned the role of lead company in the nuclear sector by the public authorities, with the integration of the Framatome subsidiary, which involves specific risks associated with the exercise of this responsibility and the activities of Framatome.

In light of the fact that EDF is the world's largest nuclear operator, exploiting global feedback and making comparisons with best practices internationally<sup>5</sup> represents an ongoing challenge to ensure that the EDF Group is well positioned to be able to sustainably manage the risks associated with being the world leader;

**Description 5A: In addition to the risks relating to industrial performance control set out in category 4 above, the exercise of nuclear operator liability, with the number one priority given to nuclear safety, determines the EDF Group's overall performance in its nuclear activities. As a result, the EDF Group is exposed to nuclear civil liability risks.**

The primary responsibility for nuclear safety lies with the nuclear operator throughout the operating cycle of nuclear reactors. The no. 1 priority given to nuclear safety drives the industrial performance of the nuclear activity as a whole. The nuclear operator's consideration of the design is an element of nuclear safety. Failure to control operating safety could have major or even vital consequences on the value of the EDF Group's industrial assets, its financial position and its development outlook or even on the continuation of its industrial activity.

Any serious event related to the EDF Group's nuclear activities, with a potential or proven impact on the population or on a territory, could lead to a significant increase in the operating constraints of the EDF Group's industrial sites, or even the partial or total interruption of the EDF Group's nuclear activities. Such an event could have a significant negative impact on the EDF Group's activities, financial position, strategy and reputation.

The nuclear civil liability scheme that applies to nuclear facility operators of States Parties to the Paris Convention, and the insurance applicable thereto, are described in section 1.5.6.2.2 ("Specific regulations applicable to basic nuclear facilities" of the 2018 *Document de Référence*) and section 2.5.6 ("Specific insurance for nuclear facility operations" of the 2018 *Document de Référence*). This scheme is based on the principle of the operator's strict liability. Accordingly, if an event occurs that causes nuclear damage, the EDF Group would be automatically liable up to a monetary maximum set by the law applicable in the country, regardless of the source of the event that caused the damage and any safety measures that may have been taken.

The EDF Group cannot guarantee that in countries where it operates nuclear facilities the maximum liability set by law will not be increased or cancelled. For example, the protocols amending the Paris Convention and the Brussels Convention, not yet in force (see section 1.5.6.2.2 "Specific regulations applicable to basic nuclear facilities" of the 2018 *Document de Référence*), provide for these maximum amounts to be increased and a substantial expansion of the damage to be covered. With regard to the new amounts, Act No. 2015-992 of 17 August 2015 on the energy transition for green growth made them applicable as from 18 February 2016. The operator's liability in France now amounts to €700 million in the event of a nuclear accident in a facility and €70 million in the event of a nuclear accident during transport. The entry into force of the other changes laid out in

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<sup>5</sup> *Exploitation of standards and feedback from the International Atomic Energy Agency and the World Association of Nuclear Operators (WANO)*.

these protocols is likely to increase yet again the cost of insurance and the EDF Group cannot guarantee that insurance covering this liability will always be available or that it will always be able to maintain such insurance. The insurance cover for the EDF Group's civil liability as a nuclear operator is described in section 2.5.6.1 "Civil liability of nuclear facility operators" of the 2018 *Document de Référence* and for insurance coverage for transport of nuclear materials in section 2.5.6.2 "Civil liability for transport of nuclear substances" of the 2018 *Document de Référence*.

Property damage to EDF's nuclear facilities is covered by insurance programmes (see section 2.5.6.3 "Damage to nuclear facilities" of the 2018 *Document de Référence*). Despite this cover, any event that may cause significant damage to a nuclear facility of the EDF Group could have an adverse impact on the EDF Group's business and financial position.

Lastly, the EDF Group cannot guarantee that the insurers that cover both its liability as a nuclear plant operator and property damage to its facilities will always have available capacity or that the costs of cover will not significantly increase, particularly in light of the impacts on the insurance market of events such as the nuclear accident in Japan that occurred in March 2011.

**Description 5B: The EDF Group may not be able to obtain authorisation to continue the operation of its reactors beyond the period currently planned, or it may not even be authorised to exploit them up to the end of this period. In addition to the control of complex projects specified in risk factor 4B described above, the EDF Group may not be able to control the costs and deadlines of its operations to upgrade the fleet in operation (major refit in France).**

The fleet of nuclear reactors that the EDF Group currently operates in France is highly standardised (see section 1.4.1.1.1 "EDF's nuclear fleet in France" of the 2018 *Document de Référence*). This enables the EDF Group, in particular, to achieve economies of scale, to apply improvements made to its newest reactors to all reactors and, in the event of a reactor malfunction, to anticipate the measures to be taken in other reactors. But this standardisation has a potential parallel risk of the dysfunction being common to several reactors or to a generation or series of reactors (see section 1.4.1.1.2 "Operation and technical performance of the nuclear fleet of the 2018 *Document de Référence*). The EDF Group cannot guarantee that it will not be required to make significant or costly repairs or modifications to all or some of its plants, or that events will not occur that may have an impact on the operation of its plants or their output or cause a temporary or permanent shutdown of all or some of its plants.

During the periodic reviews carried out during the ten-yearly inspections and following the Fukushima accident in Japan, the EDF Group drew up a major work programme, called "Large refit", the principle of which was approved by the Board of Directors. The potential risks of the latter include a possible delay in the appraisal of the authorisations required to start operations, in particular as regards the authorisations expected from the French Nuclear Safety Authority (ASN). Such uncertainties may also concern the manufacture and delivery on site of new equipment or work carried out on-site in a situation where a large number of industrial operations are being carried out at the same time.

The ASN decides on the measures taken by the operator and may give additional instructions for each reactor and for each authorisation stage. Solutions are being studied to demonstrate the capacity of non-replaceable equipment such as the containment building and reactor vessels, to ensure their operation up to 60 years. These studies, which are based on data available in France but also internationally<sup>6</sup> make it possible to confirm the safety margins available for the operating periods under investigation but may also lead to the need to identify additional protective measures, if necessary, to be taken on the existing fleet, which could have consequences on its performance.

In order to postpone the construction of new units and related investments, and to continue to benefit from low-carbon generation and cash flows from its existing fleet, the EDF Group has been aiming for several years to extend the operating life of its nuclear fleet in France beyond 40 years, a period already exceeded in France for five reactors. The fourth ten-yearly inspection of the 900MWe reactor series (VD4-900), like the previous ones, includes, on the one hand, a verification of the compliance of the facilities with the current reference design and,

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<sup>6</sup> Six reactors in the US are being investigated for an extended operating life of 80 years: the Nuclear Regulatory Commission (NRC) staff has defined subsequent license renewal (SLR) to be the period of extended operation from 60 years to 80 years. <https://www.nrc.gov/reactors/operating/licensing/renewal/subsequent-license-renewal.html>.

on the other hand, a safety reassessment. This makes it possible to increase the level of safety by taking into account, on the one hand, international best practices and, on the other hand, the condition of the facilities, the experience acquired during operation and the evolution of the knowledge and rules applicable to similar facilities.

The ASN shall examine the extended operation of each reactor on the basis of a report on the conclusions of the periodic re-examination, taking into account the results of the inspections and re-qualification tests. The first concluding report on the fourth re-examination of the 900 reactor series should be available in February 2020 for Tricastin 1. The president of the ASN confirmed that the generic opinion would be issued in 2020 and that the enforceable and applicable requirements for EDF would be submitted in 2021 by the ASN. The ASN will rely on the following key elements: the Response Note to the Objectives, which was sent to the ASN on 28 February 2018 and which takes stock of the provisions proposed by EDF as part of the fourth periodic re-examination of the 900 reactor series, the result of the public consultation on the generic phase of the re-examination, which was launched in the second half of 2018 under the supervision of the High Committee for Transparency and Information on Nuclear Safety, the conclusions of the standing "reactors" group currently scheduled for 2020 and the first concluding report of the fourth periodic re-examination to be submitted by EDF in February 2020 for the first reactor concerned.

In 2016, all the technical, economic and governance conditions necessary for the amortisation period of France's nuclear fleet with the EDF Group's industrial strategy to match were met (see notes 1.3.2 "Management judgements and estimates" and 1.3.2.1. "Depreciation period of nuclear power plants in France" to the financial statements as of 31 December 2018). The consolidated financial statements dated 31 December 2018 incorporate the extension from 40 to 50 years of the amortisation period of the 900MW PWR units (except Fessenheim), without prejudice to any decisions which might be made by the French Nuclear Safety Agency following each ten-year inspection regarding authorisations to continue operations, reactor by reactor.

The accounting period of the other series of France's nuclear fleet (1,300MW and 1,450MW), which are more recent, currently remains at 40 years, because the conditions for an extension have not been met. The subsequent extension of these other series remains an industrial objective of the EDF Group that may not be achieved.

In the United Kingdom, in-service inspection and upgrading programmes for reactors in operation, in particular advanced gas reactors (AGR) with specific technology, may result in prolonged downtime.

The current planned operating period for the reactors in EDF Energy's existing nuclear fleet ranges from 41 to 47 years for advanced gas reactors (AGRs) and is 40 years for the pressurised water reactor (PWR). Since EDF Energy acquired them, the operating lifespan of the AGR power plants has been extended by 10 years on average and the objective is to increase the operating life of the PWR power plant by 20 years after the currently planned 40 years (see section 1.4.5.1.2.1 "Nuclear generation" of the 2018 *Document de Référence*). However, in light of the nuclear safety rules applicable in the United Kingdom, the EDF Group cannot guarantee that EDF Energy will obtain the necessary authorisations at the appropriate time to operate its existing nuclear reactors until the end of their currently projected operating life, or that such authorisations will not be obtained subject to conditions that entail significant expenditures or investments for the EDF Group.

For nuclear reactors where EDF is not in charge of operation but has financial interests (United States, Belgium, Switzerland, China), the EDF Group is financially exposed to the same risks. The EDF Group may be required to contribute up to the amount of its share to costly repairs or modifications to be carried out on these units or to events that may have an impact on their operating lifespan, production or availability. As in France and the United Kingdom, the nuclear safety authorities in these countries may take decisions that require additional works or controls, in particular as regards exploiting feedback from international experience and anticipating potentially precursory events.

Furthermore, despite the quality of operations and the changes made by the EDF Group to its nuclear facilities, it cannot be ruled out that some of these facilities will be subject to special operating conditions to reinforce the operating safety margins at the initiative of the nuclear operator responsible for nuclear safety or at the request of the Nuclear Safety Agency.

Finally, a potential serious nuclear accident not involving the EDF Group but with widespread consequences worldwide could lead the Safety Authorities to require new reactor upgrades applicable to the EDF Group's reactors, and to those in which the EDF Group has a stake.

The EDF Group cannot guarantee that it will receive the expected operating lifespan extension from the competent authorities. Furthermore, such extensions could also be obtained under certain conditions, the financial impact of which, in particular in terms of investments, could affect the EDF Group's strategy with respect to extending the operating life of its reactors or the EDF Group's ability to pursue its global investment strategy. These events could have a significant negative impact on the EDF Group's financial position.

**Description 5C-1: The amount of dedicated assets in France allocated by the EDF Group to cover the costs of its long-term nuclear business commitments (radioactive waste and decommissioning) might need to be revised upwards or require additional expenditures.**

In France, as of 30 June 2019, the market value of EDF's portfolio of dedicated assets was €30.258 billion, compared to €27.689 billion on 31 December 2018 (see sections 1.4.1.1.7 "Assets available to cover long-term nuclear commitments (outside the operating cycle)" of the 2018 *Document de Référence* and 1.5.6.2.2 "Specific regulations applicable to basic nuclear facilities" of the 2018 *Document de Référence* and note 45.3 "Valuation of EDF's dedicated assets" to the consolidated financial statements for the financial year ended 31 December 2018, see note 24.1 "Valuation of EDF's dedicated assets" of the 2019 Half-Year Financial Statements).

In the event of a significant change in the provisions determining the reference base of the dedicated assets, it might prove necessary to make additional allocations to adjust the value of these assets, which could have a material adverse impact on EDF's financial position. Moreover, stricter regulations at the national level (in particular those that impact the base for determining the dedicated assets to be constituted by EDF) or European level may lead to more stringent requirements regarding the constitution of dedicated assets and have a significant impact on EDF's financial position.

Lastly, although these assets are constituted and managed in accordance with strict prudential rules, the EDF Group cannot guarantee that price fluctuations in the financial markets or changes in valuation will not have a material adverse impact on the value of these assets (see section 5.1.6.1.6 "Management of financial risk on EDF's dedicated asset portfolio" of the 2018 *Document de Référence* for a sensitivity analysis and section 6.1.6. "Management of financial risk on EDF's dedicated asset portfolio" of the 2019 Half-Year Management Report), which could require EDF to allocate additional amounts to restore the value of these assets; such events could have a material adverse effect on the EDF Group's financial position.

In the United Kingdom, funds to finance nuclear commitments are managed by an independent organisation created by the UK government (Nuclear Liabilities Fund – NLF). Operators therefore have no assets to manage for this purpose (see section 1.4.5.1.2.1 "Nuclear generation" of the 2018 *Document de Référence*).

The unavailability or insufficient amount of dedicated assets to hedge the expenditure schedules of the EDF Group's long-term commitments could have a negative impact on the EDF Group's financial position and reputation.

**Description 5C-2: The provisions allocated by the EDF Group for final processing and storage of radioactive waste may be insufficient, particularly for long-lived waste from spent fuel reprocessing and decommissioning.**

The EDF Group's liability may be alleged, in particular as a nuclear power operator or producer of radioactive waste within the meaning of applicable legislation on waste, in the event of an accident or any damage to third parties or the environment from spent fuel or waste, even if they are handled, transported, kept, warehoused or stored by contractors other than the EDF Group (especially, in France, the ORANO EDF Group and the French National Agency for the Management of Radioactive Waste (ANDRA)), in particular in the event of a breach by such contractors.

In France, the EDF Group is responsible for all radioactive waste produced during the operation of its nuclear facilities, during the reprocessing of spent fuel from its reactors, and during the decommissioning operations of its nuclear facilities. (See section 1.4.1.1.4 "The nuclear fuel cycle and related issues - Storing conditioned ultimate waste" of the 2018 *Document de Référence*).

The long-term management of radioactive waste has been the subject of various studies under programme laws no. 91-1381 of 30 December 1991 on research on radioactive waste management and no. 2006-739 of 28 June 2006 on the sustainable management of radioactive materials and waste. The EDF Group cannot guarantee that all long-life high- and medium-level waste will constitute "final radioactive waste" within the meaning of Article

L. 542-1-1 of the French Environment Code and, therefore, that such waste may be directly stored in deep geological layers, especially as the nuclear order of 10 February 2016 adopted pursuant to Law no. 2015-992 on the Energy Transition for Green Growth empowers the administrative authority to reclassify radioactive material as radioactive waste and radioactive waste as radioactive material. Nor can the EDF Group guarantee the time-frame within which the authorisations allowing such storage will be granted by the public authorities, nor what the technical guidelines will be, which is likely to create uncertainties regarding the fate of waste, liability and the resulting costs for EDF.

EDF has allocated provisions for the long-term management of waste, assessed on the assumption of geological storage, which is the international solution of reference for the ultimate storage of long-lived high-level radioactive waste and on the basis of a reasonable version of the work carried out in 2006 by a working group comprising ANDRA, the public authorities and radioactive waste producers (see note 29.1.2 "Provisions for waste removal and conditioning – Provisions for long-term radioactive waste management" to the consolidated financial statements for the year ended 31 December 2018). Following new calculations of the costs of deep storage under the supervision of the DGEC in conjunction with EDF, the Minister of Ecology, Sustainable Development and Energy, in an order of 15 January 2016, set the new reference cost at €25 billion under the economic conditions of 31 December 2011. This cost was taken into account in the EDF Group's financial statements at the end of 2015 (see note 29.1.2 "Provisions for waste removal and conditioning – Provisions for long-term radioactive waste management" to the consolidated financial statements for the year ended 31 December 2018). The current estimate is based on the preliminary design assumptions and will be regularly revised based on the progress of the project, as stated in the Ministerial order. Opinion no. 2018-AV-0300 from the French Nuclear Safety Authority dated 11 January 2018 relative to the safety options file presented by Andra for the Cigeo project to store radioactive waste in a deep geological layer specifies that the project has achieved satisfactory overall technological maturity at the stage of the safety options file. The reservations that remain and the supplementary investigation being carried out for Andra to obtain approval for the construction of the geological storage area starting in 2022 could lead to a revision of the provisions for long-term waste management.

The act no. 2006-739 dated 28 June 2006 provided for a dedicated storage centre for Low-Level Long-Life waste (FAVL), such as graphite. ANDRA submitted a progress report in July 2015 under the national plan for the management of radioactive materials and radioactive waste (PNGMDR). This report assesses several storage concepts and allows for the possibility of storage of graphite waste on the Soulaines site. A global industrial plan for the management of all FAVL radioactive waste is planned by the PNGMDR before the end of 2019. (See section 1.4.1.1.4 "The nuclear fuel cycle and related issues" of the 2018 *Document de Référence*). Provisions may have to be adjusted accordingly.

In the United Kingdom, when British Energy was restructured, agreements were entered into with the authorities concerning the management of certain radioactive waste from existing nuclear power plants (see section 1.4.5.1.2.1 "Nuclear generation" of the 2018 *Document de Référence*). Under the terms of these agreements, the liability and certain costs associated with the management of certain radioactive waste are transferred to the British government. However, EDF Energy Nuclear Generation Ltd. remains financially, technically and legally liable for the management, storage and processing of waste that does not come within the scope of the aforementioned agreements.

For nuclear power plants which EDF does not operate, but in which it has financial interests (United States, Belgium, Switzerland, China), the EDF Group is exposed financially in proportion to its shareholding to contributing to future expenditures related to the management of spent fuel and waste.

In addition to these technical and industrial sensitivity factors, the amount of provisions currently set aside may change in the coming years. Determining the amount of these provisions is sensitive to assumptions made in terms of costs, inflation rate, long-term discount rate and payment schedules. Pursuant to the French Environmental Code, the amount of these provisions may be controlled by the administrative authority formed jointly by the Ministry for the Economy and the Ministry of Energy, which verifies in particular the adequacy of the provisioned expenses and imposes a cap on the discount rate for the provisions. Given these sensitivity factors, changes in certain parameters may require significant adjustments of the provisions booked. In such case, any insufficiency of provisions for long-term nuclear commitments may have a material adverse impact on the EDF Group's financial position (see note 29.1.5 "Discounting of provisions related to nuclear generation and sensitivity analyses" to the consolidated financial statements for the financial year ended 31 December 2018).

Note 29.1.5.2 "Analyses of sensitivity to macro-economic assumptions" of note 29.1 "Nuclear provisions in France" to the consolidated financial statements as of 31 December 2018 indicates the connection between "costs based on year-end economic conditions", which represent estimated amounts as at 31 December 2018, and "provisions made at present value". Concerning the long-term management of waste and the recovery and packaging of waste, the expenses at year-end economic conditions are evaluated at €32,164 million and the corresponding provision is €10,597 million, as the discounting effect is very significant due to distant waste storage maturities. Note 29.1.5.2 "Analyses of sensitivity to macro-economic assumptions" to the consolidated financial statements as of 31 December 2018 indicates the analyses of sensitivity of provisions and EDF Group's results to a discount rate change, for the different types of provisions.

Failure to control the costs and time-frames for completion with respect to the solutions for the treatment and ultimate storage of waste for which the EDF Group is liable would have a negative impact on the EDF Group's financial position and reputation.

**Description 5C-3: The provisions allocated by the EDF Group for the decommissioning of nuclear facilities may be insufficient. In particular, in addition to the control of complex projects specified in risk factor 4 - A above, the decommissioning of the existing nuclear fleet could present difficulties that are not currently envisaged or could be significantly more costly than currently provided for.**

Ongoing operations in France (see section 1.4.1.1.6 "Decommissioning of nuclear power plants" of the 2018 *Document de Référence*) concern plants that were built and operated before the current nuclear fleet and the Superphenix plant ("first generation" plants). These operations cover four different reactor technologies: heavy water reactor (Brennilis), sodium-cooled fast reactor (Superphenix at Creys-Malville), graphite-moderated and gas-cooled reactor (UNGG reactors at Chinon, Saint Laurent and Bugey) and the ("PWR" at Chooz). These operations were firsts for EDF and with the exception of the PWR, they concern reactor technologies for which international feedback is low or non-existent. They therefore require the development of new methods and technologies which involve greater risk than technologies for which feedback is already available. The decommissioning of the PWR at Chooz does benefit from some feedback (essentially American and of a limited nature) but it has the innovative specific feature of being located in a cave, which also makes it an unusual operation for which experience is not immediately transferable and which includes specific risks.

The feedback from the PWR at Chooz will enable consolidation, as far as possible, of the studies and estimates on the future costs of decommissioning the nuclear fleet currently in operation (power plants of the "second generation"). Nevertheless, neither EDF, nor any other operator, has yet undertaken a decommissioning programme on a scale comparable to that of the EDF Group's current PWR fleet and the estimates therefore involve risks that are associated in particular with this scale effect.

The time-frame and cost of the work is also dependent on administrative authorisations and the timely availability of radioactive waste storage centres or other facilities required for the conditioning or storage of waste packages.

In addition to these technical and industrial sensitivity factors, the amount of provisions currently set aside may change in the coming years. Determining the amount of these provisions is sensitive to assumptions made in terms of costs, inflation rates, long-term discount rates and payment schedules. The amount of these provisions, in accordance with the French Environment Code, is subject to control by the administrative authority, which verifies in particular the adequacy of the provisioned expenses and imposes a cap on the discount rate for the provisions.

Given these sensitivity factors, changes in certain parameters may require significant adjustments of the provisions booked and, therefore, the EDF Group cannot guarantee that the provisions booked will equal the costs actually incurred at the relevant time, which would have an adverse impact on the EDF Group's financial position (see note 29.1.5 "Discounting of provisions related to nuclear generation and sensitivity analyses" to the consolidated financial statements for the financial year ended 31 December 2018). The EDF Group regularly conducts an update of the key assumptions underlying the provisions (see note 29.1.3 "Decommissioning provisions for nuclear power plants" to the consolidated financial statements for the financial year ended 31 December 2018).

With regards to the provision for decommissioning the nuclear electricity generation fleet in France, the costs at year-end economic conditions are evaluated at €27,331 million and the corresponding provision is €15,985 million. As for the last core provision, costs based on year-end economic conditions are estimated at €4,346

million and provision at present value amounts are valued €2,526 million, as the discounting effect is very significant due to distant waste storage maturities. Note 29.1.5.2 "Analyses of sensitivity to macro-economic assumptions" to the consolidated financial statements for the fiscal year ended on 31 December 2018 indicates the analyses of sensitivity of provisions and EDF Group's results to a discount rate change, for the different types of provisions.

The provisions of Framatome and SOCODEI in relation to the basic nuclear facilities in France stand respectively at €77.5 million and €45.5 million (see note 30 "other provisions for decommissioning" to the consolidated financial statements for the fiscal year ended 31 December 2018).

In the United Kingdom, under the agreements concluded in connection with the restructuring of British Energy, the costs of decommissioning EDF Energy Nuclear Generation Group Ltd.'s existing nuclear power plants will be paid by the Nuclear Liabilities Fund. If the assets of this Fund prove insufficient, these costs will be borne by the UK Government (see section 1.4.5.1.2.1 "Nuclear Generation" of the 2018 *Document de Référence*).

For nuclear power plants which EDF does not operate, but has financial interests in (China, United States, Belgium, Switzerland), the EDF Group is exposed financially in proportion to its contribution to future decommissioning costs.

Failure to control the costs, the time-frame for completion and the associated provisions with respect to the decommissioning of nuclear facilities for which the EDF Group is liable would have a negative impact on the EDF Group's financial position and reputation.

**Description 5D: in addition to the risk of controlling complex projects (risk factor 4A described above), the success of EPR projects depends on specific industrial, regulatory and financial factors.**

The success of EPR projects determines the performance and reputation of the nuclear industrial sector, and through it, those of the EDF Group.

The Flamanville 3 project is a major industrial, regulatory and financial challenge for the EDF Group.

On-time completion remains conditional, notably on the implementation of the action plan for the 53 welding operations to be carried out on the pipes of the main secondary circuit of the Flamanville EPR, on the success of the start-up tests still to be carried out, as well as on obtaining the various permits that have yet to be issued by the ASN. Within this framework, EDF has requested the amendment of the construction authorisation decree, as a precautionary measure, with the Ministry of Ecological and Solidarity Transition on 11 March 2019 with a view to extend the deadline for commissioning the reactor until 11 April 2023.

The EDF Group might have to cope with new uncertainties. It might not obtain the expected permits or they might be compromised by judicial decisions.

Furthermore, EDF has proposed a specific process to the ASN justifying ten further welding operations to ensure the high level of safety of the facility throughout its operational lifespan. This number was reduced to eight as two of the welding operations initially concerned have since been found to be compliant.

The ASN is expected to issue an opinion on EDF's strategy for the Flamanville 3 welding operations in May 2019. If the ASN's assessment of this strategy is negative, the completion schedule for delivering the work-site would not be met. Any delay in this schedule would result in an increase in the cost of construction beyond the current target<sup>7</sup>. Despite the mobilisation of the teams, the completion schedule remains tight (see section 1.4.1.2.1 "Flamanville 3 EPR Project" of the 2018 *Document de Référence*).

Studies of the EPR 2 Project are continuing in order to establish a competitive reactor for the renewal of the existing nuclear fleet. Failure to meet the competitiveness target, the absence of an appropriate regulatory framework or the failure to obtain the necessary permits to continue the reactor's development could have an impact on the EDF Group's financial position (see section 1.4.1.2.2 "Other "New Nuclear projects" "EPR 2" of the 2018 *Document de Référence*).

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<sup>7</sup> €10.9 billion in 2015, excluding interim interest.

In China, the EDF Group has a 30% stake in TNPJVC (Taishan Nuclear Power Joint Venture Company Limited) alongside its Chinese partner CGN. Taishan 1 was the first EPR reactor to be coupled to the grid on 29 June 2018. It was commissioned on 13 December 2018. The Taishan 2 reactor is continuing its start-up tests with a view to commissioning in 2019. CGN's work with the competent Chinese authorities to obtain a buyback tariff may fail to result in a buyback tariff that meets the expected profitability objectives (see sections 1.4.1.2.2 "Other "New Nuclear projects" -Taishan EPR" and 1.4.5.3.6.1 "Activities in China" of the 2018 *Document de Référence*).

In the United Kingdom, control of the design and bringing the manufacturing and the major milestones of the construction site under control will determine the profitability of the Hinkley C project and the financing of any future projects in the United Kingdom. The EDF Group has a 66.5% stake in the Hinkley Point C Project, alongside its Chinese partner CGN with 33.5% (see sections 1.4.1.2.2 "Other "New Nuclear projects" and section 1.4.5.1.2.4 " Nuclear New Build Business" of the 2018 *Document de Référence*). The project's completion costs were estimated in July 2017 at £19.6 billion 2015<sup>8</sup>. This estimate depends on the success of operational action plans, particularly those in partnership with the suppliers. In addition, the risk of a postponement of commercial commissioning is estimated at 15 months for unit 1 and nine months for unit 2. The additional cost of this potential deferral has been estimated at approximately £0.7 billion 2015. The IRR for the project is sensitive to exchange rates and could be reduced if the pound sterling continues to drop in relation to the euro. Furthermore, the conditions for carrying out the project may be affected by the terms and conditions for deploying Brexit (see risk 2H described above), in particular on customs duties, the movement of persons and trade in products and services. Finally, the governance of the project could be affected in the event of misalignment between shareholders. Changes to these different factors could have an impact on the EDF Group's financial position.

EDF has also signed two other agreements with CGN relating to studies on two nuclear construction projects in the United Kingdom: Sizewell C and Bradwell B (see section 1.4.5.1.2.4 " Nuclear New Build Business" of the 2018 *Document de Référence*). EDF's ability to make a final investment decision on Sizewell C and to finance this project beyond the development phase could depend on the control of the Hinkley Point C project, the existence of investors and financiers and an appropriate regulatory and financing framework.

On 10 March 2018, the Chairman and Chief Executive Officer of EDF and the Chairman and Chief Executive Officer of NPCIL (Nuclear Power Corporation of India Limited), which already operates 22 reactors in India, signed an Industrial Way Forward Agreement for the construction of six EPR-type reactors at the Jaitapur site in India. Jaitapur is set to be the biggest nuclear project in the world, with a total power capacity of around 10GW. EDF submitted a non-binding offer on 14 December 2018. As part of this offer, EDF, in association with GE and its subsidiary Framatome, will be the engineering contractor for the entire project and supplier of the EPR technology. EDF will undertake all engineering studies and all component procurement activities for the first two reactors. (See section 1.4.1.2.2 "Other New Nuclear projects - projects under development" and section 1.4.5.3.6.2 "South-East and Southern Asia of the 2018 *Document de Référence*").

A fundamental element for the success of an EPR project and for the operating safety of EPR reactors in which the EDF Group is involved is accounting for the needs of the final operator, who is responsible for operating safety, from the beginning of the design phase and throughout the design and implementation of the EPR project.

Framatome is now a EDF Group subsidiary and as such can expose the EDF Group through its activities for other nuclear operators or customers in France and abroad. Exposure may be financial or involve the EDF Group's reputation. Framatome's industrial performance remains strategic for EDF Nuclear Operator in France and the United Kingdom. The successful completion of an EPR project depends on quality and compliance with contractual clauses in Framatome's production of studies, components or services for each EPR Project.

The success and value creation resulting from Framatome's integration into the EDF Group implies a converging framework for nuclear projects, and the development of resulting synergies. Failure to achieve these objectives could jeopardise the competitiveness of the nuclear sector in France and that of the EDF Group in its international development, and the success of all EPR Projects.

These projects require obtaining administrative authorisations, licences, permits and, in certain cases, setting up additional partnerships, particularly for financing. These are large-scale and long-duration projects involving

<sup>8</sup> Excluding interim interest and excluding exchange -rate effects in relation to a reference exchange rate for the project of £1 = €1.23. At 31 December 2018, the exchange rate was €1.12=£1

numerous industrial partners and significant investments, for which the financing and pricing conditions may still be subject to confirmation. Given the economic or institutional climate, obtaining such funding may be delayed.

Failure to comply with the EDF Group's contractual commitments, or the EDF Group's potential exposure in the event of a major incident in the execution of these projects or the operation of these reactors, could have a major impact on the EDF Group's exposure, legal and financial position or the EDF Group's reputation.

Finally, consultation and dialogue with all stakeholders, including institutional, local, national and international, industrial and financial stakeholders, on EPR projects contribute directly to the achievement of corporate responsibility goal no. 5 (see section 3.2.5.1 "EDF's commitment to organise a worldwide dialogue and consultation process around our projects (CSRG no. 5)" of the 2018 *Document de Référence*).

**Description 5E: In addition to the control of industrial performance specified in risk factor 4B of category 4, Operational Performance, set out above, the EDF Group is exposed in its nuclear activities to the requirement to control the nuclear fuel cycle.**

The EDF Group's operating costs include nuclear fuel purchases.

EDF is supplied with uranium, conversion and enrichment services, fuel assembly supplies and spent fuel reprocessing operations for its nuclear fleet in France and the United Kingdom.

Prices and volumes are subject to fluctuations due to factors that are *inter alia* political and economic and that the EDF Group cannot control (in particular, the profitability outlook of mining investments, imbalances between supply and demand or supply shortages associated with, for example, an operating accident in a uranium mine or a combined cycle plant, delays in commissioning new mines or events leading to institutional instability in a uranium-producing country).

The storage and transport of new or spent nuclear fuel is an industrial activity that requires specific safety and security measures. These requirements could become more stringent, generating additional difficulties and costs for the EDF Group.

In the event of the collapse of this industrial logistics system, the EDF Group could reduce or even interrupt all or part of the electricity generation at the affected sites, either due to the non-delivery of new assemblies or to the saturation of intermediate storage facilities, which could have a negative impact on the EDF Group's financial position (see section 1.4.1.1.4 "The nuclear fuel cycle and related issues" of the 2018 *Document de Référence*).

In France, EDF has booked provisions for spent nuclear fuel management operations (transport, processing, conditioning for recycling) (see note 29.1.1 to the consolidated financial statements for the financial year ended 31 December 2018) based on the price and volume conditions of the master agreement signed with Orano in December 2008 and broken down in the successive implementation agreements. The implementation agreement for the period from 2016-2023 was signed in February 2016 (see section 1.4.1.1.4 "The nuclear fuel cycle and related issues"). The amount of provisions currently booked to cover the period not covered by the current agreement should be reassessed if the terms under which this agreement is renewed prove more onerous than those currently applicable.

Note 29.1.5.2 "Analyses of sensitivity to macro-economic assumptions" of note 29.1 "Nuclear provisions in France" to the consolidated financial statements as of 31 December 2018 shows the connection between "costs based on year-end economic conditions", which represent estimated amounts as at 31 December 2018, and "provisions made at present value". As regards spent fuel management, the costs based on year-end economic conditions are estimated at €18,737 million euros and the corresponding provision is €10,698 million.

However, the EDF Group cannot guarantee that its contracts, in France and abroad, will completely protect it from sudden or significant price increases. The EDF Group cannot guarantee that when these long-term contracts expire, it will be able to renew them, in particular at an equivalent price. This could have an adverse impact on the EDF Group's financial position.

## RISK FACTORS RELATED TO THE NOTES

*The following paragraphs describe some of the risks that the Issuer believes are material to the Notes in order to assess the market risk associated thereto. They do not describe all the risks of an investment in the Notes.*

### Risks for the Noteholders as creditors of the Issuer

#### *French insolvency law.*

Under French insolvency law, holders of debt securities issued by a French company (as the Issuer) are automatically grouped into a single assembly of holders (the “**Assembly**”) in the event of the opening in France of safeguarding proceedings (*procédure de sauvegarde*), accelerated financial safeguarding proceedings (*procédure de sauvegarde financière accélérée*), accelerated safeguarding proceedings (*procédure de sauvegarde accélérée*) regarding, or a judicial restructuring (*procédure de redressement judiciaire*) of, the Issuer, in order to defend their common interests.

The Assembly comprises holders of all debt securities issued by the Issuer (including the Notes), whether or not under a debt issuance programme (such as the Euro Medium Term Note Programme of the Issuer) and regardless of their governing law.

The Assembly deliberates on the draft safeguarding plan (*projet de plan de sauvegarde*), draft accelerated financial safeguarding plan (*projet de plan de sauvegarde financière accélérée*), draft accelerated safeguarding proceedings plan (*projet de plan de procédure de sauvegarde accélérée*), or draft restructuring plan (*projet de plan de redressement*) applicable to the Issuer, once and if the relevant creditors’ committees have adopted the aforementioned draft, and may further agree to:

- increase the liabilities (*charges*) of holders of debt securities (including the Noteholders) by rescheduling due payments and/or writing-off receivables in the form of debt securities, partially or totally;
- establish an unequal treatment between holders of debt securities (including the Noteholders) as appropriate under the circumstances; and/or
- convert debt securities (including the Notes) into securities that give, or may give rights, to share capital.

Decisions of the Assembly will be taken by a two-third majority (calculated as a proportion of the debt securities held by the holders expressing a vote). No quorum is required to hold the Assembly.

For the avoidance of doubt, the provisions relating to the representation of the Noteholders described in the Terms and Conditions of the Notes set out in this Prospectus will not be applicable in these circumstances.

A receiver (*administrateur judiciaire*) is permitted to take into account the existence of voting or subordination agreements entered into by a holder of notes, or the existence or an arrangement providing that a third party will pay the holder’s claims, in full or in part, in order to reduce such holder’s voting rights within the Assembly. The receiver must disclose the method used to compute such voting rights and the holder, or, as the case may be, the receiver, may dispute such computation before the president of the competent commercial court (*tribunal de commerce*). These provisions could apply to a Noteholder who has entered into a hedging arrangement in relation to the Notes.

It should be noted that Directive (EU) 2019/1023 on preventive restructuring frameworks, on discharge of debt and disqualifications, and on measures to increase the efficiency of procedures concerning restructuring, insolvency and discharge of debt and amending Directive (EU) 2017/1132 dated 20 June 2019 shall be transposed by the Member States before 17 July 2021. Depending on how it will be transposed into French law, it may modify French insolvency law described above and impact the situation of investors in the Notes in the event that the Issuer or its Subsidiaries were to be subject to the relevant French insolvency proceedings.

The commencement of insolvency proceedings against the Issuer, or one or several of the Issuer’s subsidiaries, would have a material adverse effect on the market value of Notes issued by the Issuer. Any decisions taken by

the Assembly or a class of creditor, as the case may be, could negatively impact the Noteholders and cause them to lose all or part of their investment, should they not be able to recover amounts due to them from the Issuer.

### **Risks related to the trading markets of the Notes**

#### *Liquidity risks/trading market/market value for the Notes.*

Application will be made to Euronext Paris for the Notes to be admitted to trading on Euronext Paris. However, the Notes may not have an established trading market when issued and admitted to trading. There can be no assurance that any market for the Notes will develop or continue or, if one does develop, that it will be maintained, that any market for the Notes will be liquid or that holders will be able to sell their Notes when desired, or at all, or at prices they find acceptable. The liquidity of, and trading market for, the Notes may also be adversely affected by general declines in the market for similar securities. If an active trading market for the Notes does not develop or is not maintained, the market or trading price and liquidity of the Notes may be adversely affected.

EDF, and EDF's debt, have credit ratings which are the subject of review from time to time by the independent credit rating agencies which assign such credit ratings. In particular, since the publication of a press release by Moody's on 10 May 2018, S&P on 10 October 2019 and Fitch on 25 July 2018, EDF's long-term and short-term ratings have been respectively set at "A3" (stable outlook) and "P-2" by Moody's, "A-" (negative outlook) and "A-2" by S&P and "A-" (stable outlook) and "F2" by Fitch.

The development or continued liquidity of any secondary market for the Notes and their market value will be affected by a number of factors such as general economic conditions, the financial condition, the creditworthiness of the Issuer and/or the Group, and the value of any applicable reference rate, as well as other factors such as the complexity and volatility of the reference rate, the method of calculating the return to be paid in respect of such Notes, the outstanding amount of the Notes, any redemption features of the Notes and the level, direction and volatility of interest rates generally. Such factors may favourably or adversely affect the market value of the Notes. The price at which a Noteholder will be able to sell the Notes may be at a discount, which could be substantial, from the issue price or the purchase price paid by such Noteholder and accordingly such Noteholder may suffer a significant financial loss.

The absence of liquidity may have a significant material adverse effect on the value of the Notes. In addition, investors may not be able to sell Notes readily or at prices that will enable investors to realize their anticipated yield, and in extreme circumstances such investors could suffer loss of their entire investment. No investor should purchase Notes unless the investor understands and is able to bear the risk that certain Notes will not be readily sellable, that the value of Notes will fluctuate over time and that such fluctuations will be significant.

#### *Exchange rates risks and exchange controls.*

The Issuer will pay principal and interests on the Notes in Euro. This may result in certain risks relating to currency or currency unit conversions if an investor's financial activities are denominated principally in a currency or a currency unit (the "**Investor's Currency**") other than Euro. Such risks include, without limitation, (i) significant exchange rate fluctuations between Euro and the Investor's Currency (including changes due to devaluation of the Euro, or reevaluation of the Investor's Currency) and (ii) the imposition or modification of exchange controls by authorities with jurisdiction over the Investor's Currency, as such authorities have imposed from time to time, and may in the future impose, which could adversely affect an applicable exchange rate and result in investors receiving receive less interest or principal than expected, or no interest or principal at all. An appreciation in the value of the Investor's Currency relative to the Euro would decrease (a) the Investor's Currency-equivalent yield on the Notes, (b) the Investor's Currency-equivalent value of the principal payable on the Notes and (c) the Investor's Currency-equivalent market value of the Notes. This may result in a significant loss on any capital invested from the perspective of an investor whose domestic currency is not the Euro.

## **Risks relating to the structure of the Notes**

### ***The Notes are deeply (i.e., lowest ranking) subordinated obligations of the Issuer.***

Pursuant to Condition 3.1 (*Deeply Subordinated Notes*), the Issuer's obligations under the Notes are direct, unconditional, unsecured and deeply subordinated obligations (*titres subordonnés de dernier rang*) of the Issuer and rank and will rank (i) subordinated to present and future *prêts participatifs* granted to the Issuer, Ordinary Subordinated Obligations and Unsubordinated Obligations of the Issuer, (ii) *pari passu* among themselves and *pari passu* with all other present and future deeply subordinated obligations (*engagements subordonnés de dernier rang*) of the Issuer (including the Parity Securities) and (iii) senior only to the Equity Securities.

Condition 3.2 (*Payment on the Notes in the event of the liquidation of the Issuer*) provides that in the event of any judgment rendered by any competent court declaring the judicial liquidation (*liquidation judiciaire*) of the Issuer, or in the event of a transfer of the whole of the business of the Issuer (*cession totale de l'entreprise*) subsequent to the opening of a judicial recovery procedure (*redressement judiciaire*), or if the Issuer is liquidated for any other reason, the rights of Noteholders to payment under the Notes will be subordinated to the full payment of the unsubordinated creditors under the Issuer's Unsubordinated Obligations, of the ordinary subordinated creditors under the Issuer's Ordinary Subordinated Obligations and, of lenders in relation to *prêts participatifs* granted to or to be granted to the Issuer, if and to the extent that there is still cash available for those payments.

Thus, the Noteholders face a significantly higher performance risk than holders of unsubordinated and ordinary subordinated obligations of the Issuer. In the event of liquidation of the Issuer, the Notes shall rank in priority only to any payments to holders of Equity Securities. In the event of incomplete payment of creditors ranking senior to the Noteholders, the obligations of the Issuer and the respective Noteholders' interests will be terminated.

### ***No limitation on issuing or guaranteeing debt ranking senior to, or pari passu with, the Notes.***

Condition 4 (*No Negative Pledge*) provides that there will be no negative pledge in respect of the Notes, as a result there are no restrictions in the Terms and Conditions of the Notes on the amount of debt which the Issuer may issue or guarantee, nor any negative pledge provisions. The Issuer, and its subsidiaries and affiliates, may incur additional indebtedness or grant guarantees in respect of indebtedness of third parties, including indebtedness or guarantees that rank *pari passu* with, or senior in priority of payment to, the Notes. An increase of the outstanding amount of such securities or other liabilities may if such outstanding amount were to exceed the assets of the Issuer materially reduce the amount (if any) recoverable by Noteholders on a winding-up of the Issuer and Noteholders could suffer loss of their entire investment if the Issuer were liquidated (whether voluntarily or not). If the amount of interests due under such securities or other liabilities increases it significantly increase the likelihood of a deferral of interest payments under the Notes and as a result Noteholders could suffer a significant reduction in the return of the Notes.

### ***The Notes are undated securities.***

Pursuant to Condition 6.1 (*No Fixed Maturity Date*), the Notes are undated securities, with no specified maturity date. Subject to any early redemption described in this Prospectus, the Issuer is under no obligation to redeem or repurchase the Notes at any time, and the Noteholders have no right to require redemption of the Notes. Therefore, prospective investors should be aware that they may be required to bear a material financial risks of an investment in the Notes for an indefinite period of time and may not recover their investment in a foreseeable future. The only means through which a Noteholder can realise value from the Notes prior to an early redemption is to sell them at their then market price in an available secondary market. As a result, in the absence of a secondary market for the Notes, an investor may not recover all or part of their investment in the foreseeable future. Noteholders should therefore be aware that the principal amount of the Notes may not be repaid and that they may lose the value of their capital investment.

### ***The Issuer can defer interest payments on the Notes.***

As provided by Condition 5.5 (*Interest Deferral*), on any applicable Interest Payment Date, the Issuer may elect to defer payment of all or part of the interest accrued to that date, and the Issuer shall not have any obligation to make such payment and any failure to pay shall not constitute a default by the Issuer for any purpose. Any interest not paid on an Interest Payment Date and deferred shall, so long as the same remains

outstanding, constitute Arrears of Interest and shall be payable as outlined in the Terms and Conditions of the Notes.

Any deferral of interest payments or the perception that the Issuer will need to exercise its optional deferral right would have a significant adverse effect on the market price of the Notes. In addition, as a result of the interest deferral provisions, the market price of the Notes may be more volatile than the market prices of other interest bearing debt securities that are not subject to such interest deferral provisions. As a result, the market value of the Notes may be more sensitive generally to adverse changes in the Issuer's financial condition and investors may receive less interest than initially anticipated or at a later date than initially anticipated.

The Notes may trade, and/or the prices for the Notes may appear, in trading systems with accrued interest. Purchasers of Notes in the secondary market may pay a price which reflects such accrued interest on purchase of the Notes. If one or several interest payments are deferred, a purchaser of Notes in the secondary market may not be entitled to the accrued interest (or part thereof) reflected in the purchase price of the Notes, which would cause the relevant Noteholders to lose all or part of the value of their investment in the Notes.

***There are no events of default or cross default under the Notes.***

Unlike unsubordinated debt securities, the Terms and Conditions of the Notes do not provide for events of default or cross default allowing acceleration of the Notes upon occurrence of certain events (as provided by Condition 9 (*Enforcement events, no events of default and no cross default*)). Accordingly, if the Issuer fails to meet any obligations under the Notes, including the payment of any interest, investors will have no right of acceleration of principal. Upon a payment default, the sole remedy available to Noteholders for recovery of amounts owing in respect of any payment of principal or interest on the Notes will be the institution of proceedings to enforce such payment. Notwithstanding the foregoing, the Issuer will not, by virtue of the institution of any such proceedings, be obliged to pay any sum or sums sooner than the same would otherwise have been payable by it, therefore, investors may lose all or part of their investment. As a result, the value of the Notes or liquidity on the secondary market may be negatively affected.

***Early right of redemption of the Issuer.***

Condition 6.2 (*Optional Redemption from the First Call Date*) provides that the Issuer may redeem the Notes in whole, but not in part, at their Specified Denomination, together with all interest accrued (including Arrears of Interest and any Additional Interest Amount) to the date fixed for redemption (i) on any date during the period commencing on (and including) 3 September 2027 and ending on (and including) the First Reset Date, or (ii) on any Interest Payment Date falling thereafter.

The Issuer may also, at its option, redeem the Notes in whole, but not in part, upon the occurrence of a Withholding Tax Event, a Tax Deductibility Event, an Accounting Event, a Rating Methodology Event and a Substantial Repurchase Event, as further described in Conditions 6.3 (*Redemption for Taxation Reasons*), 6.4 (*Optional Redemption due to Accounting Event*), 6.5 (*Optional Redemption due to Rating Methodology Event*) and 6.6 (*Optional Redemption on Substantial Repurchase Event*).

In the event of an early redemption at the option of the Issuer, such early redemption of the Notes will be made at (i) 101 per cent. of the Specified Denomination of the Notes in the case where the redemption of such Notes occurs before 3 September 2027 as a result of an Accounting Event, Rating Methodology Event or a Tax Deductibility Event; or (ii) the Specified Denomination in case of (a) an Accounting Event, Rating Methodology Event or a Tax Deductibility Event where such redemption occurs on or after 3 September 2027 or (b) a Substantial Repurchase Event, a Tax Gross-up Event or a Withholding Tax Event, in each case together with any accrued interest and any Arrears of Interest (including any Additional Interest Amounts thereon) up to the Early Redemption Date.

The optional redemption feature may negatively affect the market value of the Notes. During any period when the Issuer may elect to redeem the Notes, the market value of the Notes generally will not rise substantially above the price at which they can be redeemed. Should the Notes at such time be trading above or well above the price set for redemption, the negative impact on the Noteholders' anticipated returns would be significant. The Issuer may also be expected to redeem the Notes when prevailing market interest rates are lower than the interest rates on the Notes. There can be no assurance that, at the relevant time, Noteholders will be able to reinvest the redemption proceeds at an effective interest rate as high as the return that could have been received on the Notes had they not been redeemed. Potential investors should consider reinvestment risk as they may not be able to

reinvest the redemption proceeds in a comparable investment at an effective interest rate as high as that of the Notes.

For a description of certain risks which may result in the occurrence of an Accounting Event, see the risk factor entitled “*The current IFRS accounting classification of financial instruments such as the Notes as equity instruments may change, which may result in the occurrence of an Accounting Event*” below.

***Changes in equity credit criteria may lead to the early redemption of the Notes.***

Each of Standard & Poor’s, Moody’s and Fitch or any other rating agency may change its methodologies for rating securities with features similar to the Notes in the future. This may include the relationship between ratings assigned to an issuer’s senior securities and/or ratings assigned to an issuer on a standalone basis (which reflect the Issuer’s credit profile without factoring in any potential support from the State) and ratings assigned to securities with features similar to the Notes, sometimes called “notching.” If the rating agencies were to change their practices for rating such securities in the future and the ratings of the Notes were to be subsequently lowered, this may have a negative impact on the trading price of the Notes.

If an amendment, clarification or change in the equity credit criteria of Standard & Poor’s, Moody’s and Fitch or any other rating agency of equivalent international standing solicited by the Issuer to grant a corporate credit rating to the Issuer or to the Notes, results in a lower equity credit for the Notes than the then respective equity credit assigned to the Notes at the date of their issue, or if equity credit is not assigned on the issue date, at the date when the equity credit is assigned for the first time, the Issuer may, at its option, redeem all of the Notes (but not some only), as set forth under Condition 6.5 (*Optional Redemption due to Rating Methodology Event*). The redemption of the Notes by the Issuer or the perception that the Issuer will exercise its optional redemption right might negatively affect the market value of the Notes. During any period when the Issuer may elect to redeem the Notes, the market value of the Notes generally will not rise substantially above the price at which they can be redeemed. Should the Notes at such time be trading above or well above the price set for redemption, the negative impact on the Noteholders' anticipated returns would be significant.

***The current IFRS accounting classification of financial instruments such as the Notes as equity instruments may change, which may result in the occurrence of an Accounting Event.***

In June 2018, the IASB (International Accounting Standards Board) published the discussion paper DP/2018/1 on “Financial Instruments with Characteristics of Equity,” (the “**DP/2018/1 Paper**”). The Discussion Paper was open for comment until 7 January 2019. The IASB Board met on 25 September 2019 to discuss the direction of the project. While the final timing and outcome are uncertain, if the proposals set out in the DP/2018/1 Paper (as may be amended) are implemented, the current IFRS accounting classification of financial instruments such as the Notes as equity instruments may change and this may result in the occurrence of an Accounting Event. In such an event, the Issuer may have the option to redeem, in whole but not in part, the Notes (pursuant to Condition 6.4 (*Optional Redemption due to Accounting Event*)).

The implementation of any of the proposals set out in the DP/2018/1 Paper or any other similar such proposals that may be made in the future, including the extent and timing of any such implementation, if at all, is uncertain. Accordingly, no assurance can be given as to the future classification of the Notes from an accounting perspective or whether any such change may result in the occurrence of an Accounting Event, thereby providing the Issuer with the option to redeem the Notes pursuant to the Terms and Conditions of the Notes.

The redemption of the Notes by the Issuer or the perception that the Issuer will exercise its optional redemption right might negatively affect the market value of the Notes. During any period when the Issuer may elect to redeem the Notes, the market value of the Notes generally will not rise substantially above the price at which they can be redeemed. Should the Notes at such time be trading above or well above the price set for redemption, the negative impact on the Noteholders' anticipated returns would be significant.

***Interest rate risk.***

Interests on the Notes before the First Reset Date, which are calculated at a fixed rate of 3.000 per cent. *per annum*, involve the risk that subsequent changes in market interest rates may adversely affect the market value of the Notes. In particular, a Noteholder, which pays interest at a fixed rate, is exposed to the risk that the market value of such Note could fall as a result of changes in the market interest rate. While the nominal interest rate of the Notes specified herein is fixed during the term of such Notes, the current interest rate on the capital markets

(“**market interest rate**”) typically varies on a daily basis. As the market interest rate changes, the market value of the Notes would typically change in the opposite direction. If the market interest rate increases, the market value of the Notes would typically fall, until the yield of such Notes is approximately equal to the market interest rate. If the market interest rate falls, the market value of the Notes would typically increase, until the yield of such Notes is approximately equal to the market interest rate. There can be no assurance regarding the future level of market interest rates. The degree to which the market interest rate may vary is uncertain and presents a significant risk to the market value of the Notes if an investor were to dispose of the Notes.

Following the First Reset Date, the interest rate on the Notes will be reset as from the First Reset Date and then every five year period thereafter and shall be calculated on the basis of the mid swap rates for Euro swap transactions with a maturity of five years plus the applicable margin. These mid swap rates are not pre-defined for the lifespan of the Notes. Higher mid swap rates for Euro swap transactions mean a higher interest under the Notes and lower mid swap rates for Euro swap transactions with a maturity of five years mean a lower interest under the Notes. The degree to which the mid swap rates for Euro swap transactions with a maturity of five years may vary is uncertain. Each reset interest rate may be different from the initial Interest Rate and may negatively impact the return under the Notes and result in a reduced market value of the Notes if an investor were to dispose of the Notes.

***The regulation and reform of “benchmarks” may adversely affect the value of Notes linked to or referencing such “benchmarks.”***

The Euro Interbank Offered Rate (“EURIBOR”) and other interest rate indices which are deemed to be benchmarks are the subject of recent national, international and other regulatory guidance and proposals for reform. Some of these reforms are already effective while others are still to be implemented. These reforms may cause such ‘benchmarks’ and other sources of interest rates, including those which derive or contain such benchmarks or interest rates such as the five-year mid swap rate for Euro swap transactions (which will be the reference rate for the Notes following the First Reset Date), to perform differently than in the past, or to disappear entirely, or have other consequences which cannot be predicted. Any such consequence could have a material adverse effect on the Notes.

Regulation (EU) 2016/1011 of June 8, 2016 on indices used as benchmarks in financial instruments and financial contracts or to measure the performance of investment funds (as amended, the “**Benchmark Regulation**”) entered into force on January 1, 2018.

The Benchmark Regulation applies to “contributors,” “administrators” and “users” of “benchmarks” in the EU, and will, among other things, (i) require benchmark administrators to be authorized or registered (or, if non-EU-based, to be subject to an equivalent regime or otherwise recognized or endorsed) and to comply with extensive requirements in relation to the administration of “benchmarks” (or, if non EU based, to be subject to equivalent requirements) and (ii) prevent certain uses by EU supervised entities of “benchmarks” of administrators that are not authorized/registered (or, if non EU based, deemed equivalent or recognized or endorsed). The scope of the Benchmark Regulation is broad and, in addition to so-called “critical benchmark” indices, this regulation applies to many interest rate and foreign exchange rate indices, equity indices and other indices (including “proprietary” indices or strategies) where used to determine the amount payable under or the value or performance of certain financial instruments traded on a trading venue or via a systematic internaliser, financial contracts and investment funds, which could also include the five year mid swap rate for Euro swap transactions.

Notwithstanding the provisions of Condition 5.6 (*Benchmark discontinuation*) which seek to offset any adverse effects for the Noteholders, the Benchmarks Regulation could have an adverse effect on their market value and return if the methodology or other terms of EURIBOR as a “benchmark” are changed in order to comply with the requirements of the Benchmarks Regulation. Such changes could, among other things, have the effect of reducing, increasing or otherwise affecting the volatility of the published rate or level of the “benchmark”.

More broadly, any of the international, national or other proposals for reform or the general increased regulatory scrutiny of “benchmarks” could increase the costs and risks of administering or otherwise participating in the setting of a “benchmark” and complying with any such regulations or requirements. Such factors may discourage market participants from continuing to administer or contribute to certain “benchmarks,” trigger changes in the rules or methodologies used in certain “benchmarks” or lead to the disappearance of certain “benchmarks.” Any of the foregoing changes and their potential consequences, as a result of

international, national or other reforms, or investigations, could have a material adverse effect on the value of, and return on, the Notes.

***If the Screen Page is discontinued and it is not possible to obtain the Relevant Reset Rate by determining the Reference Bank Rate, the Issuer will appoint a Rate Determination Agent to determine whether a Replacement Rate is available.***

Pursuant to Condition 5.6 (*Benchmark discontinuation*), if a Benchmark Event occurs, the Issuer shall use its reasonable endeavours to appoint an Independent Adviser (as defined in Condition 5.6). The Independent Adviser shall endeavour to determine a Successor Rate or Alternative Rate to be used in place of the Original Reference Rate.

The Successor Rate or Alternative Rate in accordance with the Terms and Conditions of the Notes may have no or very limited trading history and accordingly its general evolution and/or interaction with other relevant market forces or elements may be difficult to determine or measure. In addition, the Successor Rate or Alternative Rate may perform differently from the discontinued benchmark. This could significantly affect the performance of an alternative rate compared to the historical and expected performance the relevant benchmark. There can be no assurance that any adjustment factor applied to the Notes will adequately compensate for this impact. This could in turn impact the rate of interest on, and trading value of, the Notes and Noteholders may receive lower return on the Notes than anticipated at the time of the issue.

### **Risks related to specific provisions governing Noteholders' rights under the Notes**

#### ***Modification of the Terms and Conditions of the Notes.***

Condition 10 (*Representation of the Noteholders*) contains provisions regarding collective decisions of Noteholders to consider matters affecting their interests generally, which may be adopted either through a general meeting (the “**General Meeting**”) or by consent following a written consultation (the “**Written Resolution**”). These provisions permit defined majorities to bind all Noteholders, including Noteholders who did not attend, were not represented at the relevant meeting or did not consent or respond to the Written Resolution, and Noteholders who voted in a manner contrary to the majority. Collective decisions may deliberate on proposals relating to the modification of the conditions of the Notes subject to the limitation provided by French law and the Terms and Conditions of the Notes. If a decision is adopted by a majority of Noteholders and such modifications were to impair or limit the rights of the Noteholders, this may have a negative impact on the market value of the Notes.

While it is not possible to assess the likelihood that the Terms and Conditions will need to be amended by way of a General Meeting or Written Resolution during the life of the Notes, if such a General Meeting were to take place or such a Written Resolution were to be taken, it is possible that a majority of Noteholders could adopt a decision that would modify the Terms and Conditions in a way that could impair or limit the rights of the Noteholders. However, the likelihood of a majority of Noteholders adopting a decision that would have a significant adverse effect on the Noteholders should not be overplayed.

## GENERAL DESCRIPTION OF THE NOTES

*This overview is a general description of the Notes and is qualified in its entirety by the remainder of this Prospectus. It does not, and is not intended to, constitute a summary of this Prospectus within the meaning of Article 7 of the Prospectus Regulation or any implementing regulation thereof. For a more complete description of the Notes, including definitions of capitalized terms used but not defined in this Section, please see “Terms and Conditions of the Notes.”*

<b>Issuer</b>	Electricité de France
<b>Securities</b>	EUR 500,000,000 8 Year Non-Call Reset Perpetual Subordinated Notes (the “ <b>Notes</b> ”).
<b>Maturity</b>	Subject to any early redemption described below, the Notes are undated obligations of the Issuer and have no fixed maturity date, but may be redeemed at the option of the Issuer under certain circumstances.
<b>Form of the Notes and Specified Denomination</b>	The Notes will be issued in dematerialized bearer form ( <i>au porteur</i> ) in the denomination of €200,000 (the “ <b>Specified Denomination</b> ”).
<b>Issue Date</b>	3 December 2019.
<b>Status / Ranking</b>	<p>The Notes are deeply (<i>i.e.</i>, lowest ranking) subordinated notes (“<b>Deeply Subordinated Notes</b>”) issued pursuant to the provisions of Article L. 228-97 of the French <i>Code de commerce</i>. The principal and interest on the Notes constitute direct, unconditional, unsecured and deeply subordinated obligations (<i>titres subordonnés de dernier rang</i>) of the Issuer and rank and will rank:</p> <ul style="list-style-type: none"> <li>- subordinated to present and future <i>prêts participatifs</i> granted to the Issuer, Ordinary Subordinated Obligations and Unsubordinated Obligations of the Issuer;</li> <li>- <i>pari passu</i> among themselves and <i>pari passu</i> with all other present and future deeply subordinated obligations (<i>engagements subordonnés de dernier rang</i>) of the Issuer (including the Parity Securities);</li> <li>- senior only to the Equity Securities.</li> </ul>

“**Equity Securities**” means (a) the ordinary shares (*actions ordinaires*) of the Issuer and (b) any other class of the Issuer’s share capital (including preference shares (*actions de préférence*)).

“**Ordinary Subordinated Obligations**” means obligations of the Issuer, whether in the form of notes or otherwise, the principal and interest of which constitute direct, unconditional, unsecured and subordinated obligations of the Issuer and rank and will rank or are expressed to rank *pari passu* among themselves and *pari passu* with all other present or future ordinary subordinated obligations, behind Unsubordinated Obligations but in priority to *prêts participatifs*, if any, and deeply subordinated obligations.

“**Parity Securities**” means, at any time, any Deeply Subordinated Notes of the Issuer and any securities which rank and will rank or are expressed to rank *pari passu* with the Notes (including the notes with the following ISIN Codes: FR0011401736, FR0011401751, FR0011401728, US268317AF12/USF2893TAF33, FR0011697010, FR0011697028, FR0011700293, US268317AM62/ USF2893TAM83 and FR0013367612).

“**Unsubordinated Obligations**” means obligations of the Issuer, whether in the form of notes or otherwise, the principal and interest of which constitute direct, unconditional and unsubordinated obligations of the Issuer and rank and will rank

*pari passu* without preference or priority among themselves and (save for certain obligations required to be preferred by French law) equally and rateably with all other present or future unsubordinated obligations of the Issuer.

**Payment on the Notes in the event of the liquidation of the Issuer**

If any judgment is rendered by any competent court declaring the judicial liquidation (*liquidation judiciaire*) of the Issuer or for the sale of the whole of the business (*cession totale de l'entreprise*) following an order of judicial reorganization (*redressement judiciaire*) in respect of the Issuer or in the event of the liquidation of the Issuer for any other reason (other than pursuant to a consolidation, amalgamation or merger or other reorganization outside the context of an insolvency and where the successor, absorbing or resulting entity acquires all the assets and liabilities of the Issuer and assumes all the obligations of the Issuer under the Notes), the payments of the creditors of the Issuer shall be made in the order of priority set out below (in each case subject to the payment in full of priority creditors) and no payment of principal and interest (including any outstanding Arrears of Interest and/or Additional Interest Amount) on the Notes may be made until all holders of other indebtedness (other than Parity Securities) have been paid in full.

This means that:

- unsubordinated creditors under the Issuer's Unsubordinated Obligations;
- ordinary subordinated creditors under the Issuer's Ordinary Subordinated Obligations; and
- lenders in relation to any *prêts participatifs* granted to the Issuer,

will be paid in priority to deeply subordinated creditors (including Noteholders).

**Interest**

Each Note will bear interest on its principal amount at a fixed rate of 3.000 per cent. *per annum* from (and including) 3 December 2019 (the “**Issue Date**”) to (but excluding) 3 December 2027 (the “**First Reset Date**”), payable annually in arrears on 3 December in each year, with the first interest payment date on 3 December 2020.

Thereafter, in respect of each successive five year period each Note will bear interest on its principal amount at a reset rate calculated on the basis of the mid swap rates for Euro swap transactions with a maturity of five years displayed on Reuters screen “ICESWAP2” (or such other screen as may replace that screen), plus the Relevant Margin *per annum*, subject in each case to a minimum of zero (0) per cent. *per annum*, payable annually, in arrears on or about 3 December in each year, with the first such interest payment date on 3 December 2028.

“**Relevant Margin**” means, (i) from and including the First Reset Date, to but excluding 3 December 2029 (the “**First Step-up Date**”), 3.198 per cent, (ii) from and including the First Step-up Date to but excluding 3 December 2047 (the “**Second Step-up Date**”), 3.448 per cent or (iii) from and including the Second Step-up Date, 4.198 per cent.

**Interest Deferral**

On any interest payment date, in relation to the Notes (the “**Interest Payment Date**”), the Issuer may, at its option, elect to defer payment of all or part of the interest accrued to that date and any failure to pay shall not constitute a default by the Issuer for any purpose.

Any interest not paid on an applicable Interest Payment Date shall constitute “**Arrears of Interest**.” Arrears of Interest (including any Additional Interest Amount as defined below) on all outstanding Notes shall become due and payable in full on whichever is the earliest of:

- (A) the tenth Business Day following the occurrence of a Compulsory Arrears of Interest Payment Event; or
- (B) the date of any redemption of the Notes in accordance with the provisions relating to redemption of the Notes; or
- (C) the date upon which a judgment is made by a competent court for the voluntary or judicial liquidation of the Issuer (*liquidation amiable* or *liquidation judiciaire*) or for the sale of the whole of the business (*cession totale de l'entreprise*) following an order of judicial reorganization (*redressement judiciaire*) in respect of the Issuer or in the event of the liquidation of the Issuer for any other reason (other than pursuant to a consolidation, amalgamation or merger or other reorganization outside the context of an insolvency and where the successor, absorbing or resulting entity acquires all the assets and liabilities of the Issuer and assumes all the obligations of the Issuer under the Notes).

Each amount of Arrears of Interest shall bear interest, in accordance with Article 1343-2 of the French *Code civil*, as if it constituted the principal of the Notes at a rate which corresponds to the Interest Rate from time to time applicable to the Notes and the amount of such interest (the “**Additional Interest Amount**”) with respect to Arrears of Interest shall be due and payable pursuant to this paragraph and shall be calculated by the Calculation Agent applying the Interest Rate to the amount of the Arrear of Interest and otherwise *mutatis mutandis*.

The Additional Interest Amount accrued up to any Interest Payment Date shall be added in accordance with Article 1343-2 of the French *Code civil*, for the purpose only of calculating the Additional Interest Amount accruing thereafter, to the amount of Arrears of Interest remaining unpaid on such Interest Payment Date so that it will itself become Arrears of Interest.

“**Compulsory Arrears of Interest Payment Event**” means:

- (i) a payment in any form (including dividend or other payments as applicable) on any Equity Securities or any Parity Securities having been resolved upon by the shareholders or other competent body of the Issuer or having been made by the Issuer; or
- (ii) the acquisition, repurchase or redemption, either directly or indirectly, of any Equity Securities or any Parity Securities of the Issuer except in cases where, with respect to Equity Securities, such acquisition, repurchase or redemption was:
  - (a) resulting from the hedging of convertible securities of the Issuer, stock options or other employee benefit plans; or
  - (b) made in connection with the satisfaction by the Issuer of its obligations under any existing or future liquidity agreement (*contrat de liquidité*) managed by an investment services provider to repurchase its share capital from such investment services provider,

save for, in each case, any compulsory dividend, other distribution, payment, repurchase, redemption or other acquisition required by the terms of such securities; and in the case of Parity Securities, any repurchase or other acquisition in whole or in part in a public tender offer or public exchange offer at a consideration per Parity Security below its par value.

## Taxation

All payments in respect of the Notes shall be made free and clear of, and without withholding or deduction for or on account of, any present or future taxes, duties, assessments or governmental charges of whatever nature imposed, levied,

collected, withheld or assessed by or on behalf of France or any political subdivision or any authority thereof or therein having power to tax unless such withholding or deduction is required by law.

If applicable law should require that payments of principal or interest be subject to such withholding or deduction, the Issuer will, to the fullest extent then permitted by law, pay such additional amounts (“**Additional Amounts**”) as shall result in receipt by the Noteholders of such amounts as would have been received by them had no such withholding or deduction been required except that no such Additional Amounts will be payable in certain circumstances.

## **Redemption**

Subject to any optional redemption described below, the Notes are undated securities with no specified maturity date.

### **Optional Redemption from the First Call Date**

The Issuer may, subject to having given not more than 45 nor less than 30 calendar days’ prior notice to the Noteholders, redeem the Notes in whole, but not in part, at their Specified Denomination, together with all interest accrued (including any Arrears of Interest together with any Additional Interest Amount) to the date fixed for redemption, in relation to the Notes, on any date during the period commencing on (and including) 3 September 2027 and ending on (and including) the First Reset Date, or (ii) on any Interest Payment Date falling thereafter.

### **Other Optional Redemption Events**

The Issuer may, subject to having given not more than 45 (or 60 in case of the Tax Gross-up Event described below) nor less than 30 calendar days’ prior notice to the Noteholders, redeem the Notes in whole, but not in part, at the Early Redemption Price if:

- at any time, by reason of a change in any French law or published regulation the Issuer would, on the occasion of the next payment of principal or interest, not be able to make such payment without having to pay Additional Amounts (a “**Tax Gross-up Event**”);
- the Issuer would on the next payment of principal or interest in respect of the Notes be prevented by French law from making payment to the Noteholders of the full amounts then due and payable, notwithstanding the undertaking to pay Additional Amounts (such event, together with a Tax Gross-Up Event, being a “**Withholding Tax Event**”);
- at any time, the French tax regime of any payments under the Notes is modified and results in payments of interest being no longer deductible in whole or in part (unless reasonably avoidable by the Issuer) (a “**Tax Deductibility Event**”);
- at any time, a recognized accountancy firm, acting upon instructions of the Issuer, has delivered a letter or report to the Issuer, stating that as a result of a change in accounting principles (or the application thereof) since the Issue Date, the Notes may not or may no longer be recorded as “equity” in the audited annual or the semi-annual consolidated financial statements of the Issuer pursuant to IFRS or any other accounting standards that may replace IFRS for the purposes of preparing the annual audited consolidated financial statements of the Issuer (an “**Accounting Event**”);
- at any time, the Issuer has received written confirmation from any rating agency from whom the Issuer is assigned solicited ratings either directly or via a publication by such agency, that an amendment, clarification or change has occurred in the equity credit criteria of such rating agency, which amendment, clarification or change results in a lower equity credit for the Notes than the then respective equity credit assigned on the Issue Date, or if equity credit is not assigned on the Issue Date, at the date when the equity credit is assigned for the first time (a “**Rating Methodology**

Event"); or

- at any time the Issuer and/or any subsidiary of the Issuer has, severally or jointly, purchased more than 75 per cent. of the initial aggregate principal amount of the Notes (a "Substantial Repurchase Event").

"Early Redemption Price" means:

- 101 per cent. of the Specified Denomination of the Notes in the case where the redemption of such Notes occurs before 3 September 2027 in relation to the Notes as a result of an Accounting Event, Rating Methodology Event or a Tax Deductibility Event; or
- the Specified Denomination in case of:
  - an Accounting Event, Rating Methodology Event or a Tax Deductibility Event where such redemption occurs on or after 3 September 2027 in relation to the Notes; or
  - a Substantial Repurchase Event, a Tax Gross-up Event or a Withholding Tax Event,

in each case together with any accrued interest and any Arrears of Interest (including any Additional Interest Amounts thereon) up to the Early Redemption Date.

#### **Purchases and cancellation**

The Issuer shall have the right at all times to purchase the Notes in the open market or otherwise (including by way of tender or exchange offers) at any price, subject to the applicable laws and/or regulations. The Notes purchased by the Issuer may be held and resold in such amount as may be permitted by and in accordance with applicable laws and regulations. All Notes purchased by or on behalf of the Issuer, to the extent that the Issuer is not permitted to hold and resell such Notes in accordance with applicable laws and regulations, and all Notes cancelled at the option the Issuer, shall be cancelled by transfer to an account in accordance with the rules and procedures of Euroclear France.

#### **Negative Pledge**

There will be no negative pledge in respect of the Notes.

#### **Enforcement Events, no Events of Default and no Cross Default**

There will be no events of default in respect of the Notes. There will be no cross default under the Notes.

However, each Note shall become immediately due and payable at its Specified Denomination, together with accrued interest thereon, if any, up to the date of payment, and together with any Arrears of Interest (including any Additional Interest Amounts thereon), in the event that a judgment is made by a competent court for the judicial liquidation of the Issuer (*liquidation judiciaire*) or for the sale of the whole of the business (*cession totale de l'entreprise*) following an order of judicial reorganization (*redressement judiciaire*) in respect of the Issuer or in the event of the liquidation of the Issuer for any other reason (other than pursuant to a consolidation, amalgamation or merger or other reorganization outside the context of an insolvency and where the successor, absorbing or resulting entity acquires all the assets and liabilities of the Issuer and assumes all the obligations of the Issuer under the Notes).

#### **Representation of Noteholders**

The Noteholders will be grouped automatically for the defense of their respective common interests in a masse governed by the provisions of the French *Code de commerce* subject to certain exceptions and provisions (the "Masse"). The Masse will be a separate legal entity and will act in part through a representative and in part through a general meeting of the Noteholders. The Issuer is entitled in lieu of holding a General Meeting to seek approval of a resolution from the Noteholders

by way of a Written Resolution.

**Admission to trading**

Application has been made for the Notes to be admitted to trading on the regulated market of Euronext Paris. Such admission to trading is expected to occur as of the Issue Date or as soon as practicable thereafter.

**Selling Restrictions**

There are restrictions on the offer and sale of the Notes and the distribution of offering material, including in the United States of America, the United Kingdom, France and to EEA retail investors.

**Governing law**

The Notes will be governed by, and construed in accordance with French law.

**Settlement**

Euroclear France

**Fiscal Agent, Principal Paying Agent and Calculation Agent**

Société Générale

## DOCUMENTS INCORPORATED BY REFERENCE

The following documents (in the French language only) are hereby incorporated by reference in, and form part of, this Prospectus, with the exception of the items mentioned below as being excluded from this Prospectus:

- (a) the [2018 universal registration document \(“URD”\)](#) filed with the AMF under no. D.19-0727 on July 29, 2019 prepared by the Issuer;
- (b) the Issuer’s half-year management report as at June 30, 2019 (*rappport semestriel d’activité*) (the “[2019 Half-Year Management Report](#)”), which contains the condensed consolidated half-year financial statements of the Issuer as at, and for the period ending on June 30, 2019 (the “[2019 Half-Year Financial Statements](#)”) and the statutory auditors’ review report on the 2019 interim condensed consolidated financial statements; and
- (c) the 2018 Document de Référence filed with the AMF under no. D.19-0157 on March 15, 2019 prepared by the Issuer (hereafter the “[2018 Document de Référence](#)”) which (a) contains, *inter alia*, the audited consolidated financial statements of the Issuer for the year ended December 31, 2018 and the statutory auditors report on such financial statements and (b) incorporates by reference the annual consolidated financial statements of the Issuer for the year ended December 31, 2017 and the statutory auditors report on such financial statements (as included in the [2017 Document de Référence](#) filed with the AMF under no. D.18-0133 on March 15, 2018 (the “[2017 Document de Référence](#)”)), with the full exception of
  - Chapter 8.1.2 of the 2018 Document de Référence relating to the EDF Chairman and Chief Executive Officer’s declaration of responsibility regarding the content of the 2018 Document de Référence.

Each document incorporated by reference herein is current only as of the date of such document, and the incorporation by reference of such document shall not create any implication that there has been no change in our affairs since the date thereof or that the information contained therein is current as of any time subsequent to its date. Any statement contained in the documents incorporated by reference herein will be modified or superseded for all purposes to the extent that a statement contained in this Prospectus modifies or is contrary to that previous statement (whether expressly, by implication or otherwise). Any statement so modified or superseded will not be deemed a part of this Prospectus, except as so modified or superseded.

The attention of international investors is drawn to the fact that the 2017 Document de Référence includes the statutory auditors’ special report on agreements involving members of the Board of Directors for the financial year ended December 31, 2017 in Section 7.5.4. This report corresponds to French law specific requirements and is addressed to EDF’s shareholders only. In addition, the procedures and practices followed by the statutory auditors in France in respect to such report may differ from those generally accepted and applied by auditors in other countries on issues that could appear to be similar as those covered by such report.

Attention is also drawn to the statutory auditors’ report included in Section 6.4 of the 2017 Document de Référence, which includes the statutory auditors’ verifications on the information on corporate governance prepared in accordance with Article L. 225-235 of the French *Code de commerce* (see Section 4.7 of the 2017 Document de Référence which refers to Section 6.4 therein), and the 2018 Statutory Auditors’ Limited Review Report. Such reports shall be construed in accordance with French law and French auditing professional standards. The statutory auditors’ report included in Section 6.4 of the 2017 Document de Référence includes, for the information of the reader, the key audit matters relating to risks of material misstatement that were of most significance for purpose of issuing their audit opinion on the consolidated financial statements taken as a whole as required under French law in any auditors’ reports, whether qualified or not.

The documents incorporated by reference herein are available on EDF’s website ([www.edf.com](http://www.edf.com)) and may be obtained free of charge during normal business hours at EDF’s registered office (22-30 avenue de Wagram, 75008, Paris, France, +33 (0)1 40 42 22 22). The URD, the 2018 Document de Référence and the 2017 Document de Référence are also available on the AMF’s website ([www.amf-france.org](http://www.amf-france.org)).

Free English translations of the URD, the 2018 Document de Référence, the 2017 Document de Référence, the 2019 Half-Year Management Report and the 2019 Half-Year Financial Statements are available on the website of the Issuer for information purposes only. No materials from EDF’s website or any other source other than those specifically identified above are incorporated by reference into this Prospectus.

The information incorporated by reference that is not included in the cross-reference table below is considered as additional information and is not required by the relevant schedules of the Commission Delegated Regulation 2019/980 supplementing the Prospectus Regulation. The non incorporated parts of the documents incorporated by reference in this Prospectus shall not form part of this Prospectus and are either not relevant for the investors or covered by elsewhere in this Prospectus.

The cross-reference tables below set out the relevant page references for the information incorporated herein by reference:

#### **Annex VII of Commission Delegated Regulation no. 2019/980**

<b>Rule</b>	<b>2018 Document de Référence (DR) / 2019 Half-Year Management Report (HYMR) / 2019 Half-Year Financial Statements (HYFS)</b>
<b>1. PERSONS RESPONSIBLE, THIRD PARTY INFORMATION, EXPERTS' REPORTS AND COMPETENT AUTHORITY APPROVAL</b>	
1.1.	Names of persons responsible for the information given in N/A the registration document
1.2.	A declaration by those responsible for the registration N/A document that the information contained in the registration document is, to the best of their knowledge, in accordance with the facts and contains no omission likely to affect its import
1.3.	Where a statement or report attributed to a person as an N/A expert is included in the registration document, provide such person's name, business address, qualifications and material interest if any in the issuer. If the statement or report has been produced at the issuer's request, provide a statement that such statement or report has been included in the registration statement with the consent of the person who has authorised the contents of that part of the registration document for the purpose of the prospectus.
1.4.	Where information has been sourced from a third party, N/A provide a confirmation that this information has been accurately reproduced and that as far as the issuer is aware and is able to ascertain from information published by that third party, no facts have been omitted which would render the reproduced information inaccurate or misleading. In addition, the issuer shall identify the source(s) of the information.
<b>2. STATUTORY AUDITORS</b>	
2.1.	Names and addresses of the Issuer's auditors for the period Chapter 8, Section 8.2 (page 519) (DR) covered by the historical financial information (together with their membership in a professional body).
2.2.	If auditors have resigned, been removed or not been re-appointed during the period covered by the historical financial information, details if material.
<b>3. RISK FACTORS</b>	
3.1.	A description of the material risks that are specific to the Chapter 1, Section 1.3 (pages 12-17) and Issuer and that may affect the Issuer's ability to fulfil its Section 1.5 (pages 85-102) (DR) obligations under the securities, in a limited number of

categories, in a section headed 'Risk Factors'.	Chapter 2, Section 2.2 (pages 111-148), Section 2.5.5.3 (page 146) and Section 2.5.6 (pages 146-147) (DR)
In each category the most material risks, in the assessment of the Issuer, offeror or person asking for admission to trading on a Regulated Market, taking into account the negative impact on the Issuer and the probability of their occurrence, shall be set out first. The risk factors shall be corroborated by the content of the registration document.	Chapter 3, Section 3.2 (pages 158-179), Section 3.3.3.4 (pages 192-194), Section 3.4.1 (pages 195-198), Section 3.4.2 (page 199) and Section 3.5.1 (pages 206-210) (DR)
	Chapter 5, Section 5.1.6.1 (pages 299-306) (DR)

#### 4. INFORMATION ABOUT THE ISSUER

<b>4.1. <u>History and development of the Issuer:</u></b>	Chapter 1, Section 1.1 (pages 8-9) (DR).
4.1.1 Legal and commercial name of the Issuer	Chapter 7, Section 7.1.1 (page 502) (DR)
4.1.2 Place of registration of the Issuer, its registration number and legal entity identifier (LEI)	Chapter 7, Section 7.1.2 (page 502) (DR) Chapter 8, Section 8.3 (page 519) (DR)
4.1.3 Date of incorporation and the length of life of the Issuer	Chapter 7, Section 7.1.3 (page 502) (DR)
4.1.4 Domicile and legal form of the Issuer, the legislation under which the Issuer operates, its country of incorporation, the address, telephone number of its registered office and website of the Issuer.	Chapter 7, Section 7.1.4 (page 502) (DR)
4.1.5 Details of any recent events	Chapter 5, Section 5.2 (page 310), Chapter 6, Section 6.1, note 50 (page 425) and Section 6.3, note 42 (page 489) (DR)
4.1.6 Credit ratings assigned to the Issuer at the request or with the cooperation of the Issuer in the rating process. A brief explanation of the meaning of the ratings if this has previously been published by the rating provider.	Chapter 5, Section 5.1.6.1.2 (page 301) (DR)

#### 5. BUSINESS OVERVIEW

<b>5.1. <u>Principal activities:</u></b>	
5.1.1 A description of the Issuer's principal activities, including (a) the main categories of products sold and/or services performed; (b) an indication of any significant new products or activities; (c) the principal markets in which the Issuer competes.	Chapter 1, Section 1.4 (pages 18-84)
5.1.2 Basis for any statements made by the Issuer regarding its competitive position	Chapter 1, Section 1.4.2.1.2 (pages 46-47) and Section 1.4.5.1.2.3 (pages 64-65) (DR)

#### 6. ORGANISATIONAL STRUCTURE

6.1 Brief description of the group and of the Issuer's position within it. This may be in the form of, or accompanied by, a diagram of the organisational structure if this helps to	Chapter 1, Section 1.2 (pages 10-12) (DR)
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clarify the structure.

6.2 If the issuer is dependent upon other entities within the Chapter 2, Section 2.3 (pages 136-137) group, this must be clearly stated together with an (DR) explanation of this dependence.

## 7. TREND INFORMATION

7.1 A description of (a) any material adverse change in the prospects of the Issuer since the date of its last published audited financial statements; (b) any significant change in the financial performance of the Group since the end of the last financial period for which financial information has been published to the date of the registration document.

If neither of the above are applicable, include an appropriate statement to the effect that no such changes exist.

## 8. PROFIT FORECASTS OR ESTIMATES

8.1 Where the Issuer includes on a voluntary basis a profit forecast or a profit estimate, a statement setting out the principal assumptions upon which the Issuer has based its forecast, or estimate and a statement that the profit forecast or estimate has been compiled and prepared on a basis which is both (a) comparable with the historical financial information; (b) consistent with the issuer's accounting policies.

If a profit forecast or profit estimate has been published and is still outstanding, but no longer valid, a statement to that effect and an explanation of why such profit forecast or estimate is no longer valid.

8.2 A statement that the profit forecast or estimate has been compiled and prepared on a basis which is both (a) comparable with the historical financial information; (b) consistent with the issuer's accounting policies.

## 9. ADMINISTRATIVE, MANAGEMENT AND SUPERVISORY BODIES

9.1 Names, business addresses and functions in the Issuer of members of the administrative, management or supervisory bodies

9.2 Administrative, Management and Supervisory bodies' conflicts of interests

## 10. MAJOR SHAREHOLDERS

10.1 To the extent known to the Issuer, state whether the Issuer is directly or indirectly owned or controlled and by whom and describe the nature of such control, and describe the measures in place to ensure that such control is not abused

10.2 A description of any arrangements, known to the Issuer, the operation of which may at a subsequent date result

in a change in control of the Issuer

## **11. FINANCIAL INFORMATION CONCERNING THE ISSUER'S ASSETS AND LIABILITIES, FINANCIAL POSITION AND PROFITS AND LOSSES**

### **11.1. Historical Financial Information:**

11.1.1 Audited historical financial information covering the Chapter 6, Section 6.1 (pages 314-429) and latest two financial years (or such shorter period as the Section 6.2 (pages 430-432) for the year Issuer has been in operation) and the audit report in ended 31 December 2018 (DR) respect of each year.

Chapter 6, Section 6.1 (pages 296-408) and Section 6.2 (pages 409-412) for the year ended 31 December 2017 (DR)

11.1.2 If the Issuer has changed its accounting reference date N/A during the period for which historical financial information is required, the audited historical financial information shall cover at least 24 months, or the entire period for which the Issuer has been in operation, whichever is shorter.

11.1.3 The financial information must be prepared according to Chapter 6, Section 6.1 (pages 314-429) for International Financial Reporting Standards as endorsed the year ended 31 December 2018 (DR) in the Union based on Regulation (EC) No 1606/2002.

If Regulation (EC) No 1606/2002 is not applicable, the financial information must be prepared in accordance with either: (a) a Member State's national accounting standards for issuers from the EEA, as required by the Directive 2013/34/EU; (b) a third country's national accounting standards equivalent to Regulation (EC) No 1606/2002 for third country issuers. If such third country's national accounting standards are not equivalent to Regulation (EC) No 1606/2002, the financial statements shall be restated in compliance with that Regulation.

Chapter 6, Section 6.1 (pages 296-408) for the year ended 31 December 2017 (DR)

Pages 42-96 at 30 June 2019 (URD)

11.1.4 Where the audited financial information is prepared according to national accounting standards, the financial information required under this heading must include at least the following:

(a) balance sheet

Chapter 6, Section 6.1 (page 316) and Section 6.3 (pages 434-435) for the year ended 31 December 2018 (DR)

Chapter 6, Section 6.1 (page 298) and Section 6.3 (pages 414-415) for the year ended 31 December 2017 (DR)

Page 44 at 30 June 2019 (URD)

(b) the income statement

Chapter 6, Section 6.1 (page 314) and Section 6.3 (pages 433) (DR)

Chapter 6, Section 6.1 (page 296) and Section 6.3 (page 413) for the year ended 31 December 2017 (DR)

(c) cash flow statement; and	Chapter 6, Section 6.1 (page 317) and Section 6.3 (pages 436) for the year ended 31 December 2018 (DR)
(d) the accounting policies and explanatory notes.	Chapter 6, Section 6.1 (page 299) and Section 6.3 (pages 416) for the year ended 31 December 2017 (DR)
	Chapter 6, Section 6.1 (pages 323-429) and Section 6.3 (pages 439-489) for the year ended 31 December 2018 (DR)
	Chapter 6, Section 6.1 (pages 304-408) and Section 6.3 (pages 419-464) for the year ended 31 December 2017 (DR)
	Pages 50-96 at 30 June 2019 (URD)
11.1.5 If the Issuer prepares both stand-alone and consolidated financial statements, include at least the consolidated financial statements in the registration document	Chapter 6 (pages 314-500) for the year ended 31 December 2018 (DR)
	Chapter 6 (pages 296-474) for the year ended 31 December 2017 (DR)
	Pages 41-96 at 30 June 2019 (URD)

11.1.6 The balance sheet date of the last year of audited financial information statements may not be older than 18 months from the date of the registration document N/A

**11.2. Auditing of historical annual financial information:**

11.2.1 The historical annual financial information must be independently audited. The audit report shall be prepared in accordance with the Directive 2014/56/EU and Regulation (EU) No 537/2014. Where Directive 2014/56/EU and Regulation (EU) No 537/2014 do not apply: (a) the historical financial information must be audited or reported on as to whether or not, for the purposes of the registration document, it gives a true and fair view in accordance with auditing standards applicable in a Member State or an equivalent standard. (b) if audit reports on the historical financial information contain qualifications, modifications of opinion, disclaimers or an emphasis of matter, such qualifications, modifications, disclaimers or emphasis of matter must be reproduced in full and the reasons given.

11.2.2 Indication of other information in the registration document which has been audited by the auditors. N/A

11.2.3 Where financial information in the registration document is not extracted from the issuer's audited financial statements state the source of the data and N/A

state that the data is not audited.

**11.3 Legal and arbitration proceedings:**

Information on any governmental, legal or arbitration Chapter 2, Section 2.4 (pages 138-145) (DR) proceedings

Chapter II, Section 9 (pages 37-40) (URD)

**11.4 Significant change in the Issuer's financial or trading position:**

**11.4.1** A description of any significant change in the financial Chapter 6, Section 5.2 (page 310) and position of the group which has occurred since the end Section 6.7 (page 495) (DR) of the last financial period for which either audited financial information or interim financial information Chapter II, Section 2 (pages 11-16) and have been published, or provide an appropriate negative Section 11 (page 40) (URD) statement.

**12. MATERIAL CONTRACTS**

12.1 A brief summary of all material contracts Chapter 7, Section 7.6 (page 515) (DR)

**13. DOCUMENTS AVAILABLE**

13.1 A statement that for the term of the registration Chapter 8, Section 8.3 (page 519) (DR) document the documents can be inspected

When reading the information incorporated by reference herein, investors should take into account the information set forth under "*Recent Events*" in this Prospectus, which may modify or supersede the information incorporated by reference.

## TERMS AND CONDITIONS OF THE NOTES

*The terms and conditions of the Notes will be as follows:*

The issue of the €500,000,000 8 Year Non-Call Reset Perpetual Subordinated Notes (the “**Notes**”) of Electricité de France (the “**Issuer**”) has been authorized by resolutions of the Board of Directors (*Conseil d’administration*) of the Issuer held on 14 December 2018 and a decision of Mr. Jean-Bernard Lévy, Chief Executive Officer (*Président-Directeur Général*) of the Issuer, dated 26 November 2019. The Issuer has entered into an agency agreement (the “**Agency Agreement**”) dated 29 November 2019 with Société Générale as fiscal agent, principal paying agent and calculation agent. The fiscal agent and principal paying agent, the calculation agent and the paying agent for the time being are respectively referred to in these Conditions as the **Fiscal Agent**, the **Principal Paying Agent**, the **Calculation Agent** and the **Paying Agent** (which expression shall include the Principal Paying Agent), each of which expression shall include the successors from time to time of the relevant persons, in such capacities, under the Agency Agreement, and are collectively referred to as the **Agents**. Copies of the Agency Agreement are available for inspection at the specified offices of the Paying Agent. References to **Conditions** are, unless the context otherwise requires, to the numbered paragraphs below.

### 1. DEFINITIONS

For the purpose of these Conditions, the following definitions shall apply:

**Account Holder(s)** has the meaning ascribed to such term in Condition 2 below.

**Accounting Event** means that a recognized accountancy firm, acting upon instructions of the Issuer, has delivered a letter or report to the Issuer, stating that as a result of a change in the accounting principles (or the application thereof) since the Issue Date, the Notes may not or may no longer be recorded as "equity" in the audited annual or the semi-annual consolidated financial statements of the Issuer pursuant to IFRS or any other accounting standards that may replace IFRS for the purposes of preparing the annual audited consolidated financial statements of the Issuer.

**Actual/Actual (ICMA)** means:

- if interest is required to be calculated for a period that is equal to or shorter than the Interest Rate Accrual Period to which it applies, the number of calendar days in the relevant period divided by the number of calendar days in the Interest Rate Accrual Period in which the relevant period falls;
- if interest is required to be calculated for a period of more than one year, the sum of (a) the number of calendar days of the relevant period falling in the Interest Rate Accrual Period in which it begins divided by the total number of calendar days in such Interest Rate Accrual Period and (b) the number of calendar days of the relevant period falling in the next Interest Rate Accrual Period divided by the total number of calendar days in such next Interest Rate Accrual Period (including the first such day but excluding the last).

**Business Day** means a day on which TARGET 2 System is operating.

**Compulsory Arrears of Interest Payment Event** means that:

- (i) a payment in any form (including dividend or other payments as applicable) on any Equity Securities or any Parity Securities having been resolved upon by the shareholders or other competent body of the Issuer or having been made by the Issuer; or
- (ii) the acquisition, repurchase or redemption, either directly or indirectly, of any Equity Securities or any Parity Securities of the Issuer except in cases where, with respect to Equity Securities, such acquisition, repurchase or redemption was:
  - 1) resulting from the hedging of convertible securities of the Issuer, stock options or other employee benefit plans; or

2) made in connection with the satisfaction by the Issuer of its obligations under any existing or future liquidity agreement (*contrat de liquidité*) managed by an investment services provider to repurchase its share capital from such investment services provider,

save for, in each case, any compulsory dividend, other distribution, payment, repurchase, redemption or other acquisition required by the terms of such securities; and in the case of Parity Securities, any repurchase or other acquisition in whole or in part in a public tender offer or public exchange offer at a consideration per Parity Security below its par value.

**Deeply Subordinated Notes** has the meaning ascribed to such term in Condition 3.1 below.

**Early Redemption Date** means the effective date of redemption of the Notes made in accordance with Condition 6.

**Early Redemption Price** means:

- (i) 101 per cent. of the Specified Denomination of the Notes in the case where the redemption of such Notes occurs before 3 September 2027 as a result of an Accounting Event, Rating Methodology Event or a Tax Deductibility Event; or
- (ii) the Specified Denomination in case of:
  - (a) an Accounting Event, Rating Methodology Event or a Tax Deductibility Event where such redemption occurs on or after 3 September 2027; or
  - (b) a Substantial Repurchase Event, a Tax Gross-up Event or a Withholding Tax Event,

in each case together with any accrued interest and any Arrears of Interest (including any Additional Interest Amounts thereon) up to the Early Redemption Date.

**Equity Securities** means (a) the ordinary shares (*actions ordinaires*) of the Issuer and (b) any other class of the Issuer's share capital (including preference shares (*actions de préférence*)).

**First Call Date** means 3 September 2027.

**First Reset Date** means 3 December 2027.

**Fitch** means Fitch Ratings Ltd (or any of its successors).

**Fixed Coupon Amount** means EUR 6,000 per EUR 200,000 Specified Denomination until the First Reset Date.

**IFRS** means the International Financial Reporting Standards as adopted in the European Union, as amended from time to time.

**Interest Amount** has the meaning ascribed to such term in Condition 5.2 below.

**Interest Payment Date** means 3 December in each year from and including 3 December 2020, subject to Interest Deferral.

**Interest Period** means the period beginning on (and including) the Issue Date and ending on (but excluding) the first Interest Payment Date and each successive period beginning on (and including) an Interest Payment Date and ending on (but excluding) the next succeeding Interest Payment Date.

**Interest Rate Accrual Period** means the period from and including an Interest Payment Date (or the Issue Date as the case may be) to but excluding the next Interest Payment Date.

**Issue Date** has the meaning ascribed to such term in Condition 2 below.

**Moody's** means Moody's Investors Service Ltd. (or any of its successors).

**Noteholder** means, on a given date, the person whose name appears in the account of the relevant Account Holder as being entitled to such Notes.

**Ordinary Subordinated Obligations** means obligations of the Issuer, whether in the form of notes or otherwise, the principal and interest of which constitute direct, unconditional, unsecured and subordinated obligations of the Issuer and rank and will rank or are expressed to rank *pari passu* among themselves and *pari passu* with all other present or future ordinary subordinated obligations, behind Unsubordinated Obligations but in priority to *prêts participatifs*, if any, and deeply subordinated obligations.

**Parity Securities** means, at any time, any Deeply Subordinated Notes of the Issuer and any securities which rank and will rank or are expressed to rank *pari passu* with the Notes (including the (i) €1,250,000,000 reset perpetual subordinated notes with a first call date on 29 January 2020 (ISIN: FR0011401736) issued on 29 January 2013, (ii) €1,250,000,000 reset perpetual subordinated notes with a first call date on 29 January 2025 (ISIN: FR0011401751) issued on 29 January 2013, (iii) GBP1,250,000,000 reset perpetual subordinated notes with a first call date on 29 January 2026 (ISIN: FR0011401728) issued on 29 January 2013, (iv) \$3,000,000,000 Reset Perpetual Subordinated Notes with a first call date on 29 January 2023 (ISIN: US268317AF12 (Rule 144A) / USF2893TAF33 (Reg S)) issued on 29 January 2013, (v) €1,000,000,000 reset perpetual subordinated notes with a first call date on 22 January 2022 (ISIN: FR0011697010) on 22 January 2014, (vi) €1,000,000,000 reset perpetual subordinated notes with a first call date on 22 January 2026 (ISIN: FR0011697028) issued on 22 January 2014, (vii) GBP750,000,000 reset perpetual subordinated notes with a first call date on 22 January 2029 (ISIN: FR0011700293) issued on 22 January 2014, (viii) \$1,500,000,000 Reset Perpetual Subordinated Notes with a first call date on 22 January 2024 (ISIN: US268317AM62 (Rule 144A) / USF2893TAM83 (Reg S)) issued on 22 January 2014 and (ix) €1,250,000,000 Reset Perpetual Subordinated Notes with a first call date on 4 October 2024 (ISIN: FR0013367612) issued on 4 October 2018).

**Rating Agency** means any of the following: Moody's, Standard & Poor's, Fitch or any other rating agency of equivalent international standing solicited from time to time by the Issuer to grant a rating to the Issuer and/or the Notes and in each case, any of their respective successors to the rating business thereof.

**Rating Methodology Event** means that the Issuer has received written confirmation from any Rating Agency from whom the Issuer is assigned solicited ratings either directly or via a publication by such agency, that an amendment, clarification or change has occurred in the equity credit criteria of such Rating Agency, which amendment, clarification or change results in a lower equity credit for the Notes than the then respective equity credit assigned on the Issue Date, or if equity credit is not assigned on the Issue Date, at the date when the equity credit is assigned for the first time.

**Reference Bank Rate** means the percentage rate determined on the basis of the five year mid swap rate for Euro swap transactions provided by at least four leading swap dealers in the interbank market selected by the Issuer to the Calculation Agent at its request at approximately 11:00 a.m. (London time), on the Reset Rate Determination Date. If at least three quotations are provided, the Reference Bank Rate will be the arithmetic mean of the quotations, eliminating the highest quotation (or, in the event of equality, one of the highest) and the lowest quotation (or, in the event of equality, one of the lowest). If two quotations are provided, the Reference Bank Rate will be the arithmetic mean of the quotations. If one quotation is provided, the Reference Bank Rate will be such quotation. If the Reference Bank Rate is unavailable or the Calculation Agent determines that no Reference Bank is providing offered quotations, the Relevant Reset Rate will be equal to the last Relevant Reset Rate available on the Screen Page as determined by the Calculation Agent, or, in the case of the first Relevant Reset Rate, the rate of -0.073 per cent. *per annum*.

**Relevant Margin** means, (i) from and including the First Reset Date, to but excluding 3 December 2029 (the **First Step-up Date**), 3.198 per cent, (ii) from and including the First Step-up Date to but excluding 3 December 2047 (the **Second Step-up Date**), 3.448 per cent or (iii) from and including the Second Step-up Date, 4.198 per cent.

**Relevant Period** means each successive five year period from (and including) the First Reset Date (where the first Relevant Period commences on (and includes) the First Reset Date and ends on (but excludes) the fifth anniversary of the First Reset Date).

**Relevant Reset Rate** means:

- (i) the five year mid swap rate for Euro swap transactions displayed on Reuters screen ICESWAP2 (or such other screen as may replace that screen on Reuters, or such other service as may be nominated by the person providing or sponsoring the information appearing there for the purposes of displaying comparable rates) at or around 11.00 a.m. (London time) on the Reset Rate Determination Date (the **Screen Page**); and
- (ii) if the correct mid swap rate does not appear on the Screen Page, the five year Euro mid swap rate shall instead be the Reference Bank Rate.

**Reset Rate** means the applicable Relevant Reset Rate plus the Relevant Margin.

**Reset Rate Determination Date** means, in respect of the first Relevant Period, the second Business Day prior to the First Reset Date and, in respect of each Relevant Period thereafter, the second Business Day prior to the first day of each such Relevant Period.

**Specified Denomination** has the meaning ascribed to such term in Condition 2 below.

**Standard & Poor's** means S&P Global Ratings Europe Limited (or any of its successors).

**Substantial Repurchase Event** means that the Issuer and/or any subsidiary of the Issuer has, severally or jointly, purchased more than 75 per cent. of the initial aggregate principal amount of the Notes.

**TARGET 2 System** means the Trans-European Automated Real-Time Gross Settlement Express Transfer System, or any successor thereto.

**Unsubordinated Obligations** means obligations of the Issuer, whether in the form of notes or otherwise, the principal and interest of which constitute direct, unconditional and unsubordinated obligations of the Issuer and rank and will rank *pari passu* without preference or priority among themselves and (save for certain obligations required to be preferred by French law) equally and rateably with all other present or future unsubordinated obligations of the Issuer.

## 2. FORM, DENOMINATION AND TITLE

The Notes are issued on 3 December 2019 (the **Issue Date**) in dematerialized bearer form (*au porteur*) in the denomination of €200,000 each (the **Specified Denomination**). Title to the Notes will be evidenced in accordance with Articles L. 211-3 and R. 211-1 of the French *Code monétaire et financier* by book-entries (*inscription en compte*). No physical document of title (including *certificats représentatifs* pursuant to Article R. 211-7 of the French *Code monétaire et financier*) will be issued in respect of the Notes.

The Notes will, upon issue, be inscribed in the books of Euroclear France (**Euroclear France**), which shall credit the accounts of the Account Holders. For the purpose of these Conditions, **Account Holders** shall mean any intermediary institution entitled to hold, directly or indirectly, accounts on behalf of its customers with Euroclear France, and includes Euroclear Bank S.A./N.V. (**Euroclear**) and the depositary bank for Clearstream Banking, S.A. (**Clearstream, Luxembourg**).

Title to the Notes shall be evidenced by entries in the books of Account Holders and will pass upon, and transfer of Notes may only be effected through, registration of the transfer in such books.

### 3. STATUS OF THE NOTES

#### 3.1 Deeply Subordinated Notes

The Notes are deeply (*i.e.*, lowest ranking) subordinated notes (**Deeply Subordinated Notes**) issued pursuant to the provisions of Article L. 228-97 of the French *Code de commerce*. The principal and interest on the Notes constitute direct, unconditional, unsecured and deeply subordinated obligations (*titres subordonnés de dernier rang*) of the Issuer and rank and will rank:

- subordinated to present and future *prêts participatifs* granted to the Issuer, Ordinary Subordinated Obligations and Unsubordinated Obligations of the Issuer;
- *pari passu* among themselves and *pari passu* with all other present and future deeply subordinated obligations (*engagements subordonnés de dernier rang*) of the Issuer (including the Parity Securities);
- senior only to the Equity Securities.

#### 3.2 Payment on the Notes in the event of the liquidation of the Issuer

If any judgment is rendered by any competent court declaring the judicial liquidation (*liquidation judiciaire*) of the Issuer or for the sale of the whole of the business (*cession totale de l'entreprise*) following an order of judicial reorganization (*redressement judiciaire*) in respect of the Issuer or in the event of the liquidation of the Issuer for any other reason (other than pursuant to a consolidation, amalgamation or merger or other reorganization outside the context of an insolvency and where the successor, absorbing or resulting entity acquires all the assets and liabilities of the Issuer and assumes all the obligations of the Issuer under the Notes), the payments of the creditors of the Issuer shall be made in the order of priority set out below (in each case subject to the payment in full of priority creditors) and no payment of principal and interest (including any outstanding Arrears of Interest and/or Additional Interest Amount) on the Notes may be made until all holders of other indebtedness (other than Parity Securities) have been paid in full.

This means that:

- unsubordinated creditors under the Issuer's Unsubordinated Obligations;
- ordinary subordinated creditors under the Issuer's Ordinary Subordinated Obligations; and
- lenders in relation to any *prêts participatifs* granted to the Issuer;

will be paid in priority to deeply subordinated creditors (including Noteholders).

In the event of liquidation of the Issuer, the Notes shall rank in priority only to any payments to holders of Equity Securities. In the event of incomplete payment of unsubordinated creditors, the obligations of the Issuer in connection with the Notes shall be terminated.

### 4. NO NEGATIVE PLEDGE

There will be no negative pledge in respect of the Notes.

### 5. INTEREST

#### 5.1 General

Unless previously redeemed in accordance with Condition 6 and subject to the further provisions of this Condition (in particular, but not limited to Condition 5.5), the Notes shall bear interest on their principal amount at a rate described in (a) and (b) below (such rate of interest, the **Interest Rate**):

- (a) from and including the Issue Date to but excluding the First Reset Date, at a rate of 3.000 per cent. *per annum*, payable annually in arrears on each Interest Payment Date up to, and including, the First Reset Date. The Fixed Coupon Amount payable in respect of each Note on each Interest Payment Date up to and including the First Reset Date shall be EUR 6,000 per Note; and
- (b) from and including the First Reset Date, the rate of interest for each Note for each Relevant Period shall be a reset rate equal to the Relevant Reset Rate plus the Relevant Margin *per annum*, subject in each case to a minimum of zero (0) per cent. *per annum*, payable annually in arrears on each Interest Payment Date from and including 3 December 2027;

provided, however, that if any Interest Payment Date would otherwise fall on a date which is not a Business Day, the relevant payment will be postponed to the next Business Day and no interest shall accrue nor be payable as a result of such postponement.

Promptly after the determination of the Relevant Reset Rate, the Calculation Agent shall determine the Interest Rate for each Note and calculate the relevant Interest Amount (as defined below).

The Calculation Agent will cause the relevant Interest Rate and the relevant Interest Amount (as defined below) payable per Note to be notified to the Issuer, the Fiscal Agent and Principal Paying Agent and, if required by the rules of Euronext Paris or any other stock exchange on which the Notes are listed from time to time, to such stock exchange, and to the Noteholders in accordance with Condition 11 without undue delay, but, in any case, not later than on the fifth (5th) Business Day after its determination.

## 5.2 Calculation of the Interest Amount

The amount of interest (the **Interest Amount**) payable on each Note on each Interest Payment Date following the First Reset Date shall be calculated by multiplying the product of the applicable Reset Rate and the Specified Denomination of such Note by the Actual/Actual (ICMA) day count fraction and rounding the resulting figure, if necessary, to the nearest cent (half a cent being rounded upwards).

## 5.3 Notifications, etc. to be binding

All notifications, opinions, determinations, certificates, calculations, quotations and decisions given, expressed, made or obtained for the purposes of the provisions of this Condition 5 will (in the absence of wilful default, bad faith or manifest error) be binding on the Issuer, the Calculation Agent, the Fiscal Agent and all Noteholders.

## 5.4 Calculation Agent

The Agency Agreement provides that the Issuer may at any time terminate the appointment of the Calculation Agent and appoint a substitute Calculation Agent provided that so long as any of the Notes remain outstanding, there shall at all times be a Calculation Agent for the purposes of the Notes having a specified office in a major European city. In the event of the appointed office of any bank being unable or unwilling to continue to act as the Calculation Agent or failing duly to determine any Interest Rate or Interest Amount for any Interest Period, the Issuer shall appoint the European office of another leading bank engaged in the Euro-zone or London interbank market to act in its place. The Calculation Agent may not resign its duties or be removed without a successor having been appointed. The Calculation Agent shall act as an independent expert and not as agent for the Issuer or the Noteholders.

Notice of any change of Calculation Agent or any change of specified office shall promptly be given as soon as reasonably practicable to the Noteholders in accordance with Condition 11 and, so long as the Notes are admitted to trading on Euronext Paris and if the rules applicable to such stock exchange so require, to such stock exchange.

## 5.5 Interest Deferral

### (a) Optional Interest Payment

Interest which accrues during an Interest Period ending on but excluding an Interest Payment Date will be due and payable on that Interest Payment Date unless the Issuer, by notice to (x) the Noteholders in accordance with Condition 11 and (y) the Fiscal Agent pursuant to Condition 5.5(c) below elects to defer payment of all or part of the interest accrued to that date, and the Issuer shall not have any obligation to make such payment and any failure to pay shall not constitute a default by the Issuer for any other purpose.

Any interest not paid on a Notes and deferred in accordance with this Condition 5.5(a) shall so long as the same remains outstanding constitute **Arrears of Interest** and shall be payable as outlined below.

### (b) Compulsory Payment of Arrears of Interest

Arrears of Interest (together with any Additional Interest Amount) may, at the option of the Issuer be paid in whole or in part at any time but all Arrears of Interest (together with the corresponding Additional Interest Amount) in respect of all Notes for the time being outstanding shall become due in full on whichever is the earliest of:

- (i) the tenth Business Day following the occurrence of a Compulsory Arrears of Interest Payment Event; or
- (ii) the date of any redemption of the Notes in accordance with the provisions relating to redemption of the Notes; or
- (iii) the date upon which a judgment is made by a competent court for the voluntary or judicial liquidation of the Issuer (*liquidation amiable* or *liquidation judiciaire*) or for the sale of the whole of the business (*cession totale de l'entreprise*) in respect of the Issuer or in the event of the liquidation of the Issuer for any other reason (other than pursuant to a consolidation, amalgamation or merger or other reorganization outside the context of an insolvency and where the successor, absorbing or resulting entity acquires all the assets and liabilities of the Issuer and assumes all the obligations of the Issuer under the Notes).

Each amount of Arrears of Interest shall bear interest, in accordance with Article 1343-2 of the French *Code civil*, as if it constituted the Nominal Amount of the Notes at a rate which corresponds to the Interest Rate from time to time applicable to the Notes and the amount of such interest (the **Additional Interest Amount**) with respect to Arrears of Interest shall be due and payable pursuant to this provision and shall be calculated by the Calculation Agent applying the Interest Rate to the amount of the Arrears of Interest and otherwise *mutatis mutandis* as provided in the foregoing provisions hereof.

The Additional Interest Amount accrued up to any Interest Payment Date shall be added, in accordance with Article 1343-2 of the French *Code civil*, for the purpose only of calculating the Additional Interest Amount accruing thereafter, to the amount of Arrears of Interest remaining unpaid on such Interest Payment Date so that it will itself become Arrears of Interest.

### (c) Notice of Deferral and Payment of Arrears of Interest

The Issuer shall give not less than five (5) nor more than thirty (30) Business Days' prior notice to the Noteholders in accordance with Condition 11 and to the Fiscal Agent:

- (i) of any Interest Payment Date on which the Issuer elects to defer interest as provided in Condition 5.5(a) above; and

- (ii) of any date upon which amounts in respect of Arrears of Interest and/or Additional Interest Amounts shall become due and payable as provided in Condition 5.5(b) above.

So long as the Notes are admitted to trading on the regulated market of Euronext Paris and the rules of such stock exchange so require, notice of any such deferral shall also be given as soon as reasonably practicable to such stock exchange.

(d) **Partial Payment of Arrears of Interest and Additional Interest Amount**

If amounts in respect of Arrears of Interest and Additional Interest Amounts are paid in part:

- (i) all unpaid amounts of Arrears of Interest shall be payable before any Additional Interest Amounts;
- (ii) Arrears of Interest accrued for any period shall not be payable until full payment has been made of all Arrears of Interest that have accrued during any earlier period and the order of payment of Additional Interest Amounts shall follow that of the Arrears of Interest to which they relate; and
- (iii) the amount of Arrears of Interest or Additional Interest Amounts payable in respect of any Note in respect of any period, shall be *pro rata* to the total amount of all unpaid Arrears of Interest or, as the case may be, Additional Interest Amounts accrued in respect of that period to the date of payment.

**5.6 Benchmark discontinuation**

If a Benchmark Event occurs in relation to the Original Reference Rate at any time when any Interest Rate (or any component part thereof) remains to be determined by reference to such Original Reference Rate, then the following provisions shall apply and prevail over the other fallbacks specified in the definition of “*Relevant Reset Rate*” in Condition 1.

(a) **Independent Adviser**

The Issuer shall use reasonable endeavours to appoint an Independent Adviser, as soon as reasonably practicable, to determine a Successor Rate, failing which an Alternative Rate (in accordance with Condition 5.6(b)) and, in either case, an Adjustment Spread, if any (in accordance with Condition 5.6(c)) and any Benchmark Amendments (in accordance with Condition 5.6(d)).

An Independent Adviser appointed pursuant to this Condition 5.6 shall act in good faith as an expert and (in the absence of manifest error or fraud) shall have no liability whatsoever to the Issuer, the Fiscal Agent, the Paying Agents, the Calculation Agent or the Noteholders for any determination made by it pursuant to this Condition 5.6.

(b) **Successor Rate or Alternative Rate**

If the Independent Adviser determines in good faith that:

- (I) there is a Successor Rate, then such Successor Rate shall (subject to adjustment as provided in Condition 5.6(c)) subsequently be used in place of the Original Reference Rate to determine the relevant Interest Rate (or the relevant component part(s) thereof) for all relevant future payments of interest on the Notes (subject to the further operation of this Condition 5.6); or
- (II) there is no Successor Rate but that there is an Alternative Rate, then such Alternative Rate shall (subject to adjustment as provided in Condition 5.6(c)) subsequently be used in place of the Original Reference Rate to determine the relevant Rate(s) of Interest (or the relevant component part(s) thereof) for all relevant future payments of interest on the Notes (subject to the further operation of this Condition 5.6).

(c) Adjustment Spread

If the Independent Adviser determines in good faith (i) that an Adjustment Spread is required to be applied to the Successor Rate or the Alternative Rate (as the case may be) and (ii) the quantum of, or a formula or methodology for determining, such Adjustment Spread, then such Adjustment Spread shall be applied to the Successor Rate or the Alternative Rate (as the case may be) for each subsequent determination of a relevant Interest Rate (or a relevant component part thereof) by reference to such Successor Rate or Alternative Rate (as applicable).

(d) Benchmark Amendments

If any Successor Rate, Alternative Rate or Adjustment Spread is determined in accordance with this Condition 5.6 and the Independent Adviser determines in good faith (A) that amendments to the Terms and Conditions of the Notes (including, without limitation, amendments to the definitions of Day Count Fraction, Business Days or Relevant Screen Page) are strictly necessary to ensure the proper operation of such Successor Rate, Alternative Rate and/or Adjustment Spread (such amendments, the "**Benchmark Amendments**") and (B) the terms of the Benchmark Amendments, then the Issuer shall, subject to giving notice thereof in accordance with Condition 5.6(e), without any requirement for the consent or approval of Noteholders, vary the Terms and Conditions of the Notes to give effect to such Benchmark Amendments with effect from the date specified in such notice.

In connection with any such variation in accordance with this Condition 5.6(d), the Issuer shall comply with the rules of any stock exchange on which the Notes are for the time being listed or admitted to trading.

(e) Notices, etc.

The Issuer shall, after receiving such information from the Independent Adviser, notify the Fiscal Agent, the Calculation Agent, the Paying Agents, the Representative and, in accordance with Condition 11, the Noteholders, promptly of any Successor Rate, Alternative Rate, Adjustment Spread and of the specific terms of any Benchmark Amendments, determined under this Condition 5.6. Such notice shall be irrevocable and shall specify the effective date of the Benchmark Amendments, if any.

(f) Fallbacks

If, following the occurrence of a Benchmark Event and in relation to the determination of the Interest Rate on the immediately following Reset Rate Determination Date, no Independent Adviser has been appointed or no Successor Rate or Alternative Rate (as applicable) is determined pursuant to this provision, the Original Reference Rate will continue to apply for the purpose of determining such Rate of Interest on such Reset Rate Determination Date, with the effect that the fallback provisions provided in Condition 1 will continue to apply to such determination.

In such circumstances, the Issuer will be entitled (but not obliged), at any time thereafter, to elect to re-apply the provisions of this Condition 5.6, *mutatis mutandis*, on one or more occasions until a Successor Rate or Alternative Rate (and, if applicable, any associated Adjustment Spread and/or Benchmark Amendments) has been determined and notified in accordance with this Condition 5.6 (and, until such determination and notification (if any), the fallback provisions provided elsewhere in these Terms and Conditions, including, for the avoidance of doubt, the fallbacks specified in Condition 1 will continue to apply).

(g) Definitions

In this Condition 5.6:

**"Adjustment Spread"** means either a spread (which may be positive or negative), or the formula or methodology for calculating a spread, in either case, which the Independent Adviser determines and which is required to be applied to the Successor Rate or the Alternative Rate (as the case may be) to reduce or eliminate, to the fullest extent reasonably practicable in the circumstances, any economic prejudice or benefit (as the case may be) to Noteholders as a result of the replacement of the Original Reference Rate with the Successor Rate or the Alternative Rate (as the case may be) and is the spread, formula or methodology which:

- a) in the case of a Successor Rate, is formally recommended, or formally provided as an option for parties to adopt, in relation to the replacement of the Original Reference Rate with the Successor Rate by any Relevant Nominating Body;
- b) in the case of an Alternative Rate (or in the case of a Successor Rate where (a) above does not apply), is in customary market usage in the international debt capital market for transactions which reference the Original Reference Rate, where such rate has been replaced by the Alternative Rate (or, as the case may be, the Successor Rate); or
- c) if no such recommendation or option has been made (or made available), or the Independent Adviser determines there is no such spread, formula or methodology in customary market usage, the Independent Adviser, acting in good faith, determines to be appropriate.

**"Alternative Rate"** means, in the absence of Successor Rate, an alternative benchmark or screen rate which the Independent Adviser determines in accordance with this Condition 5.6 and which is customary market usage in the international debt capital markets for the purposes of determining rates of interest (or the relevant component part thereof) for a commensurate interest period (if there is such a customary market usage at such time) and in the same Specified Currency as the Notes.

**"Benchmark Event"** means, with respect to an Original Reference Rate:

- a) the Original Reference Rate ceasing to exist or be published;
- b) the later of (i) the making of a public statement by the administrator of the Original Reference Rate that it will, on or before a specified date, cease publishing the Original Reference Rate permanently or indefinitely (in circumstances where no successor administrator has been appointed that will continue publication of the Original Reference Rate) and (ii) the date falling six (6) months prior to the specified date referred to in (b)(i);
- c) the making of a public statement by the supervisor of the administrator of the Original Reference Rate that the Original Reference Rate has been permanently or indefinitely discontinued;
- d) the later of (i) the making of a public statement by the supervisor of the administrator of the Original Reference Rate that the Original Reference Rate will, on or before a specified date, be permanently or indefinitely discontinued and (ii) the date falling six (6) months prior to the specified date referred to in (d)(i);
- e) the making of a public statement by the supervisor of the administrator of the Original Reference Rate that means the Original Reference Rate will be prohibited from being used or that its use will be subject to restrictions or adverse consequences, in each case within the following six (6) months;

- f) it has or will prior to the next Interest Determination Date, become unlawful for the Issuer, the party responsible for determining the Rate of Interest (being the Calculation Agent or such other party specified in the applicable Final Terms, as applicable), or any Paying Agent to calculate any payments due to be made to any Noteholder using the Original Reference Rate (including, without limitation, under Regulation (EU) 2016/1011 (the “**Benchmarks Regulation**”), if applicable);
- g) that a decision to withdraw the authorisation or registration pursuant to Article 35 of the Benchmarks Regulation of any benchmark administrator previously authorised to publish such Original Reference Rate has been adopted; or
- h) the making of a public statement by the supervisor of the administrator of the Original Reference Rate that, in the view of such supervisor, such Original Reference Rate is no longer representative of an underlying market or its methodology has materially changed.

**“Independent Adviser”** means an independent financial institution of international repute or an independent adviser of recognised standing with appropriate expertise, at all times acting in good faith and in a commercially reasonable manner, appointed by the Issuer at its own expense under Condition 5.6(a).

**“Original Reference Rate”** means the Reset Rate.

**“Relevant Nominating Body”** means, in respect of a benchmark or screen rate (as applicable):

- a) the central bank for the currency to which the benchmark or screen rate (as applicable) relates, or any central bank or other supervisory authority which is responsible for supervising the administrator of the benchmark or screen rate (as applicable); or
- b) any working group or committee sponsored by, chaired or co-chaired by or constituted at the request of (i) the central bank for the currency to which the benchmark or screen rate (as applicable) relates, (ii) any central bank or other supervisory authority which is responsible for supervising the administrator of the benchmark or screen rate (as applicable), (iii) a group of the aforementioned central banks or other supervisory authorities or (iv) the Financial Stability Board or any part thereof.

**“Successor Rate”** means a successor to or replacement of the Original Reference Rate which is formally recommended by any Relevant Nominating Body. If, following a Benchmark Event, more than one successor or replacement rates are recommended by any Relevant Nominating Body, the Independent Adviser will determine, among those successor or replacement rates, the one which is the most appropriate, taking into consideration, without limitation, the particular features of the relevant Notes.

## 6. REDEMPTION AND PURCHASE

### 6.1 No Fixed Maturity Date

Subject to any early redemption described below, the Notes have no fixed Maturity Date on which they will be redeemed.

### 6.2 Optional Redemption from the First Call Date

The Issuer may, at its option, subject to having given not more than 45 nor less than 30 calendar days’ prior notice to the Noteholders in accordance with Condition 11 (which notice shall be irrevocable), redeem the Notes in whole, but not in part, at their Specified Denomination, together with all interest accrued (including Arrears of Interest and any Additional Interest Amount) to the date fixed for redemption (i) on any date during the period commencing on (and including) First Call Date and ending on (and including) the First Reset Date, or (ii) on any Interest Payment Date falling thereafter.

### 6.3 Redemption for Taxation Reasons

- (a) If by reason of a change in French law or published regulation becoming effective after the Issue Date, the Issuer would on the occasion of the next payment of principal or interest due in respect of the Notes, not be able to make such payment without having to pay additional amounts as specified in Condition 8 below (a **Tax Gross-up Event**), the Issuer may, at its option, at any time, subject to having given not more than sixty (60) nor less than thirty (30) calendar days' notice to the Noteholders (which notice shall be irrevocable), in accordance with Condition 11, redeem all, but not some only, of the Notes (but not some only) at the Early Redemption Price provided that the due date for redemption of which notice hereunder may be given shall be no earlier than the latest practicable date on which the Issuer could make payment of principal and interest without withholding for French taxes.
- (b) If the Issuer would on the next payment of principal or interest in respect of the Notes be prevented by French law from making payment to the Noteholders of the full amount then due and payable, notwithstanding the undertaking to pay additional amounts contained in Condition 8 below (a **Withholding Tax Event**), then the Issuer shall forthwith give notice of such fact to the Fiscal Agent and the Issuer may, at its option, upon giving not less than seven calendar days' prior notice to the Noteholders in accordance with Condition 11, redeem all, but not some only, of the Notes then outstanding, at the Early Redemption Price on the latest practicable date on which the Issuer could make payment of the full amount payable in respect of the Notes, or, if that date is passed, as soon as practicable thereafter.
- (c) If an opinion of a recognized law firm of international standing has been delivered to the Issuer and the Fiscal Agent, stating that by reason of a change in French law or regulation, or any change in the official application or interpretation of such law, becoming effective after the Issue Date, the tax regime of any payments under the Notes is modified and such modification results in payments of interest payable by the Issuer in respect of the Notes being no longer deductible in whole or in part (a **Tax Deductibility Event**), so long as this cannot be avoided by the Issuer taking reasonable measures available to it at the time, the Issuer may redeem the Notes in whole, but not in part, at the Early Redemption Price, on the latest practicable date on which the Issuer could make such payment with interest payable being tax deductible in France or, if such date is past, as soon as practicable thereafter. The Issuer shall give the Fiscal Agent notice of any such redemption not less than 30 nor more than 45 calendar days before the date fixed for redemption and the Fiscal Agent shall promptly thereafter publish a notice of redemption in accordance with Condition 15 (*Notices*).

### 6.4 Optional Redemption due to Accounting Event

If an Accounting Event has occurred, then the Issuer may, subject to having given not less than 30 nor more than 45 calendar days' notice to the Fiscal Agent and, in accordance with Condition 11, the Noteholders (which notice shall be irrevocable) redeem all, but not some only, of the Notes at any time, at the Early Redemption Price. Prior to the giving of any such notice of redemption, the Issuer shall deliver or procure that there is delivered to the Fiscal Agent in order to be made available to the Noteholders (i) a certificate signed by two duly authorized representatives of the Issuer confirming that the Issuer is entitled to effect such redemption and setting out the facts showing that the conditions precedent to the right to effect such redemption have been met and (ii) a copy of the letter or report referred to in the definition of "Accounting Event".

### 6.5 Optional Redemption due to Rating Methodology Event

If a Rating Methodology Event has occurred, then the Issuer may, subject to having given not less than 30 nor more than 45 calendar days' notice to the Fiscal Agent and, in accordance with Condition 11, the Noteholders (which notice shall be irrevocable) redeem all, but not some only, of the Notes at any time, at the Early Redemption Price. Prior to the giving of any such notice of redemption, the Issuer shall deliver or procure that there is delivered to the Fiscal Agent in order to be made available to the Noteholders (i) a certificate signed by two duly authorized representatives of the Issuer confirming that the Issuer is entitled to effect such redemption and setting out the facts showing that the conditions precedent to the right to effect such redemption have been met and (ii) evidence of the written confirmation referred to in the definition of "Rating Methodology Event".

## **6.6 Optional Redemption on Substantial Repurchase Event**

If a Substantial Repurchase Event has occurred, then the Issuer may, subject to having given not less than 30 nor more than 45 calendar days' notice to the Fiscal Agent and, in accordance with Condition 11, the Noteholders (which notice shall be irrevocable) redeem all, but not some only, of the Notes at any time, at the Early Redemption Price.

## **6.7 Purchases**

The Issuer shall have the right at all times to purchase Notes in the open market or otherwise (including by way of tender or exchange offers) at any price, subject to the applicable laws and/or regulations. The Notes purchased by the Issuer may be held and resold in such amount as may be permitted by and in accordance with applicable laws and regulations.

## **6.8 Cancellation**

All Notes purchased by or on behalf of the Issuer, to the extent that the Issuer is not permitted to hold and resell such Notes in accordance with applicable laws and regulations, and all Notes cancelled at the option of the Issuer, shall be cancelled by transfer to an account in accordance with the rules and procedures of Euroclear France, together with all rights relating to payment of interest and other amounts relating to the Notes. Any Notes so cancelled may not be re-issued or resold and the obligations of the Issuer in respect of any such Notes shall be discharged.

# **7. PAYMENTS**

## **7.1 Method of Payment**

Payments of principal and interest in respect of the Notes shall be made by transfer to the account denominated in the relevant currency of the relevant Account Holders for the benefit of the Noteholders. All payments validly made to such Account Holders will be an effective discharge of the Issuer in respect of such payments.

All payments are subject in all cases to (i) any applicable fiscal or other laws, regulations and directives in the place of payment, but without prejudice to the provisions of Condition 8 and (ii) withholding or deduction imposed or required pursuant to FATCA, which refers to (1) sections 1471 to 1474 of the United States Internal Revenue Code or any associated regulations or other official guidance; (2) any treaty, law, regulation or other official guidance enacted in any other jurisdiction, or relating to an intergovernmental agreement between the United States and any other jurisdiction, which (in either case) facilitates the implementation of (1) above; or (3) any agreement pursuant to the implementation of (1) or (2) above with the United States Internal Revenue Service, the United States government or any governmental or taxation authority in any other jurisdiction ("FATCA").

## **7.2 Payments on Business Days**

If any due date for payment in respect of any Note is not a Business Day, the Noteholders shall not be entitled to payment until the next following Business Day nor to any interest or other sum in respect of such postponed payment.

## **7.3 Fiscal Agent, Paying Agent and Calculation Agent**

The names of the initial Agents and their specified offices are set out below:

### **Fiscal Agent, Principal Paying Agent and Calculation Agent**

Société Générale  
BP 81236  
32, rue du Champ de Tir  
43312 Nantes Cedex 3

The Issuer reserves the right at any time to vary or terminate the appointment of the Fiscal Agent, Principal Paying Agent or Paying Agent and/or appoint additional or other Paying Agents or approve any change in the office through which any such Agent acts, provided that there will at all times be a Fiscal Agent and a Principal Paying Agent having a specified office in a European city. Notice of any such change or any change of specified office shall promptly be given as soon as reasonably practicable to the Noteholders in accordance with Condition 11 and, so long as the Notes are admitted to trading on Euronext Paris and if the rules applicable to such stock exchange so require, to such stock exchange.

## **8. TAXATION**

All payments of principal and interest by or on behalf of the Issuer in respect of the Notes shall be made free and clear of, and without withholding or deduction for, any taxes, duties, assessments or governmental charges of whatever nature imposed, levied, collected, withheld or assessed by or within France or any authority therein or thereof having power to tax unless such withholding or deduction is required by law.

If French law should require that payments of principal or interest in respect of any Note be subject to deduction or withholding in respect of any present or future taxes, duties, assessments or governmental charges whatsoever, the Issuer will, to the fullest extent then permitted by law, pay such additional amounts as shall result in receipt by the Noteholders of such amounts as would have been received by them had no such withholding or deduction been required, except that no such additional amounts shall be payable with respect to any Note, to, or to a third party on behalf of, a Noteholder who is liable to such taxes, duties, assessments or governmental charges in respect of such Note by reason of his having some connection with France other than the mere holding of the Note.

In addition, as stated in paragraph 7.1 above, payments of principal or interest in respect of any Note will be paid net of any withholding or deduction imposed or required pursuant to FATCA.

References in these Conditions to (i) **principal** shall be deemed to include any premium payable in respect of the Notes, all redemption amounts and all other amounts in the nature of principal payable pursuant to Condition 6 or any amendment or supplement to it, (ii) **interest** shall be deemed to include all Interest Amounts and all other amounts payable pursuant to Condition 5 or any amendment or supplement to it and (iii) **principal** and/or **interest** shall be deemed to include any additional amounts that may be payable under this Condition.

## **9. ENFORCEMENT EVENTS, NO EVENTS OF DEFAULT AND NO CROSS DEFAULT**

There are no events of default in respect of the Notes. There is no cross default under the Notes.

However, each Note shall become immediately due and payable at its Specified Denomination, together with accrued interest thereon, if any, up to the date of payment, and together with any Arrears of Interest (including any Additional Interest Amounts thereon), in the event that a judgment is made by a competent court for the judicial liquidation of the Issuer (*liquidation judiciaire*) or for the sale of the whole of the business (*cession totale de l'entreprise*) following an order of judicial reorganization (*redressement judiciaire*) in respect of the Issuer or in the event of the liquidation of the Issuer for any other reason (other than pursuant to a consolidation, amalgamation or merger or other reorganization outside the context of an insolvency and where the successor, absorbing or resulting entity acquires all the assets and liabilities of the Issuer and assumes all the obligations of the Issuer under the Notes).

## **10. REPRESENTATION OF THE NOTEHOLDERS**

Noteholders will be grouped automatically for the defense of their common interests in a *masse* (in each case, the **Masse**) which will be governed by the provisions of Articles L.228-46 *et seq.* of the French *Code de commerce* as amended by this Condition 10.

## 10.1 Legal Personality

The Masse will be a separate legal entity and will act in part through a representative (the **Representative**) and in part through collective decisions of the Noteholders (the **Collective Decisions**).

The Masse alone, to the exclusion of all individual Noteholders, shall exercise the common rights, actions and benefits which may accrue with respect to the Notes.

## 10.2 Representative

The names and addresses of the initial Representative of the Masse are the following:

### **Association de représentation des masses de titulaires de valeurs mobilières (ARM)**

Centre Jacques Ferronnier  
32 rue Champ de Tir  
CS 30812  
44308 Nantes Cedex 3  
France

In connection with its functions or duties, the Representative will be entitled to a remuneration of €500 *per annum* payable on the Issue Date and on the anniversary of the Issue Date in each year.

In the event of death, liquidation, dissolution, retirement, resignation or revocation of the Representative, such Representative will be replaced by the Alternate Representative or another Representative may be appointed. Collective Decisions in relation to the appointment or replacement of the Representative shall be published in accordance with Condition 11.3.

All interested parties will at all times have the right to obtain the names and addresses of the initial Representative and the alternate Representative at the registered office of the Issuer.

## 10.3 Powers of the Representative

The Representative shall (in the absence of any Collective Decision to the contrary) have the power to take all acts of management necessary in order to defend the common interests of the Noteholders, with the capacity to delegate its powers.

All legal proceedings against the Noteholders or initiated by them, must be brought by or against the Representative.

The Representative may not be involved in the management of the affairs of the Issuer.

## 10.4 Collective Decisions

Collective Decisions are adopted either (i) in a general meeting (the **General Meeting**) or (ii) by unanimous consent of the Noteholders following a written consultation (the **Written Unanimous Resolutions**, as further described in Condition 10.4(a) below), or (iii) by consent of one or more Noteholders holding together at least seventy-five (75) per cent. of the principal amount of the Notes outstanding, following a written consultation (the **Written Majority Resolutions**, as further described in Condition 10.4(b) below and together with the Written Unanimous Resolutions, the **Written Resolutions**).

In accordance with Article R.228-71 of the French *Code de commerce*, the rights of each Noteholder to participate in Collective Decisions will be evidenced by entries in the books of the relevant Account Holder or the Issuer or the Registration Agent (as the case may be) of the name of such Noteholder as of 0:00 Paris time, on the second (2<sup>nd</sup>) business day in Paris preceding the date set for the Collective Decision.

Collective Decisions must be published in accordance with Condition 11.3.

The Issuer shall hold a register of the Collective Decisions and shall make it available, upon request, to any subsequent holder of any of the Notes.

(a) General Meeting

A General Meeting may be called at any time, either by the Issuer or by the Representative. One or more Noteholders, holding together at least one-thirtieth (1/30) of the principal amount of the Notes outstanding, may address to the Issuer and the Representative a demand for the General Meeting to be called. If such General Meeting has not been called within two (2) months after such demand, the Noteholders may commission one of them to petition the competent court in Paris to appoint an agent (*mandataire*) who will call the General Meeting.

General Meetings may deliberate validly on first convocation only if the Noteholders present or represented hold at least one fifth (1/5) of the principal amount of the Notes then outstanding. On second convocation, no quorum shall be required. The decisions of the General Meeting shall be taken by a simple majority of votes cast by Noteholders attending such General Meeting or represented thereat.

Notice of the date, time, place and agenda of any General Meeting will be published in accordance with Condition 11.3 not less than fifteen (15) calendar days prior to the date of the General Meeting on first convocation and not less than five (5) calendar days prior to the date of the General Meeting on second convocation.

Each Noteholder has the right to participate in a General Meeting in person, by proxy, by correspondence or by visioconference or by any other means of telecommunications allowing the identification of participating Noteholders.

Each Noteholder or Representative thereof will have the right, during the fifteen (15) calendar day period on the first convocation and five (5) calendar day period on the second convocation preceding the holding of each General Meeting, to consult or make a copy of the text of the resolutions which will be proposed and of the reports, if any, which will be presented at the General Meeting, all of which will be available for inspection by the relevant Noteholders at the registered office of the Issuer and at any other place specified in the notice of the General Meeting.

The General Meeting is chaired by the Representative. In the event of the absence of a representative at the start of a General Meeting and if no Noteholder is present or represented at the General Meeting, the Issuer may, notwithstanding the provisions of Article L.228-64 of the French *Code de commerce*, designate a provisional chairman until a new Representative has been appointed.

(b) Written resolution and electronic consent

Pursuant to Article L. 228-46-1 of the French *Code de commerce*, the Issuer shall be entitled in lieu of the holding of a General Meeting to seek approval of a resolution from the Noteholders by way of a Written Unanimous Resolution or a Written Majority Resolution.

(i) Written Unanimous Resolution

Written Unanimous Resolutions shall be signed by or on behalf of all Noteholders and shall not have to comply with formalities and time limits referred to in Condition 10.4(a). Pursuant to Articles L. 228-46-1 and R. 225-97 of the French *Code de commerce*, approval of a Written Unanimous Resolution may also be given by way of electronic communication allowing the identification of Noteholders (**Electronic Consent**). Any Written Unanimous Resolution shall, for all purposes, have the same effect as a resolution passed at a General Meeting of such Noteholders. Such Written Unanimous Resolution may be contained in one document, or in several documents in like form each signed by or on behalf of one or more of such Noteholders, and shall be published in accordance with Condition 11.3.

(ii) Written Majority Resolution

Notices seeking the approval of a Written Majority Resolution, which shall include the text of the proposed resolutions together with any report thereon, will be published as provided under Condition 10.4(a) no less than fifteen (15) calendar days prior to the date fixed for the passing of such Written Majority Resolution (the **Written Majority Resolution Date**). Notices seeking the approval of a Written Majority Resolution will contain the conditions of form and time limits to be complied with by the Noteholders who wish to express their approval or rejection of such proposed Written Majority Resolution. Noteholders expressing their approval or rejection before the Written Majority Resolution Date will undertake not to dispose of their Notes until after the Written Majority Resolution Date.

Written Majority Resolutions shall be signed by one or more Noteholders holding together at least seventy-five (75) per cent. of the nominal amount of the Notes outstanding. Approval of a Written Majority Resolution may also be given by Electronic Consent. Any Written Majority Resolution shall, for all purposes, have the same effect as a resolution passed at a General Meeting of such Noteholders. Such Written Majority Resolution may be contained in one document, or in several documents in like form each signed by or on behalf of one or more of such Noteholders, and shall be published in accordance with Condition 11.3.

(c) Exclusion of certain provisions of the French *Code de commerce*

The Masse will be governed by the provisions of the French *Code de commerce* with the exception of Articles L.228-48, L.228-59, the second sentence of Articles L.228-65 II, R.228-63, R.228-67 and R.228-69.

The provisions of Article L.228-65 I. 1° and 4° of the French *Code de commerce* (respectively providing for a prior approval of the General Meeting of the Noteholders of any change in corporate purpose or form of the Issuer or of an issue of bonds benefiting from a security (*sûreté réelle*)) and the related provisions of the French *Code de commerce* shall not apply to the Notes.

The provisions of Article L.228-65 I. 3° of the French *Code de commerce* (providing for a prior approval of the Noteholders in relation to any proposal to merge or demerge the Issuer in the cases referred to in Articles L. 236-13 and L. 236-18 of the French *Code de commerce*) shall apply to the Notes only to the extent that such proposal does not relate to a merger or demerger with another entity of the EDF Group.

## 10.5 Expenses

The Issuer shall pay all the reasonable and duly documented expenses relating to the operations of the Masse, including the reasonable and duly documented expenses relating to the calling and holding of Collective Decisions and, more generally, all reasonable and duly documented administrative expenses resolved upon by Collective Decisions, it being expressly stipulated that no expenses may be imputed against interest payable under the Notes.

## 10.6 Single Masse

The holders of Notes of the same series, and the holders of Notes of any other series which have been assimilated with the Notes in accordance with Condition 13, shall, for the defense of their respective common interests, be grouped in a single Masse. The Representative appointed in respect of the Notes will be the single Representative of the single Masse.

For the avoidance of doubt, in this Condition 10 the term "**outstanding**" shall not include those Notes purchased by the Issuer, or on its behalf, or by any of its subsidiaries pursuant to applicable laws and regulations.

## **11. NOTICES**

- 11.1 So long as such Notes are admitted to trading on Euronext Paris, notice by the Issuer to the Noteholders will be valid if published at the option of the Issuer (i) in a leading daily newspaper of general circulation in France (which is expected to be *Les Echos*), or (ii) in a leading daily newspaper of general circulation in Europe (which is expected to be the *Financial Times*).
- 11.2 If any such publication is not practicable, notice shall be validly given if published by the Issuer in another leading daily English language newspaper with general circulation in Europe. Any such notice shall be deemed to have been given on the date of such publication or, if published more than once or on different dates, on the date of the first publication.
- 11.3 Notices required to be given to the Noteholders may be given by delivery of the relevant notice to Euroclear France, Euroclear, Clearstream, Luxembourg and any other clearing system through which the Notes are for the time being cleared in substitution for the publication of a notice required by Conditions 11.1 and 11.2 above; except that (i) so long as the Notes are admitted to trading on Euronext Paris and the rules of such regulated market so require, notices shall also be published in a leading daily newspaper of general circulation in France (which is expected to be *Les Echos*), and (ii) notices relating to the convocation and decision(s) of the General Meetings pursuant to Condition 10 shall also be published in a leading daily newspaper of general circulation in Europe.

## **12. PRESCRIPTION**

Claims against the Issuer for the payment of principal and interest in respect of the Notes shall become prescribed and become void unless made within five years (in the case of both principal and interest) from the due date for payment thereof.

## **13. FURTHER ISSUES**

The Issuer may, from time to time without the consent of the Noteholders, issue further Notes to be assimilated (*assimilables*) and form a single series with the Notes, provided that such further notes and the Notes shall carry rights identical in all respects (or in all respects except for the first payment of interest thereon) and that the terms of such further notes shall provide for such assimilation. In the event of such assimilation, the Noteholders and the holders of any assimilated notes will, for the defense of their common interests, be grouped in a single Masse having legal personality.

## **14. GOVERNING LAW AND JURISDICTION**

### **14.1 Governing Law**

The Notes are governed by, and shall be construed in accordance with, French law.

### **14.2 Jurisdiction**

Any claim against the Issuer in connection with any Notes may be brought before the Paris Commercial Court (*Tribunal de commerce de Paris*).

The following paragraph in italics does not form part of the Conditions.

***Considerations regarding redemption and repurchase of the Notes:***

*The Issuer intends (without thereby assuming a legal obligation) at any time that it will (a) redeem or (b) repurchase the Notes only to the extent the aggregate principal amount of the Notes to be redeemed or repurchased does not exceed the net proceeds received by the Issuer or any Subsidiary of the Issuer prior to or on the date of such redemption or repurchase from the sale or issuance by the Issuer or such Subsidiary to third party purchasers (other than group entities of the Issuer) of securities which are assigned by Standard & Poor's at the time of sale or issuance, an aggregate "equity credit" (or such similar nomenclature used by Standard & Poor's from time to time) that is equal to or greater than the "equity credit" assigned to the Notes to be redeemed or repurchased at the time of their issuance (but taking into account any changes in hybrid capital methodology or another relevant methodology or the interpretation thereof since the issuance of the Notes), unless*

- (i) *the credit rating or the stand-alone credit profile assigned by Standard & Poor's to the Issuer is at least the same as or higher than the credit rating or stand-alone credit profile assigned to the Issuer on the date when the most recent additional hybrid security was issued (excluding refinancings without net new issuance) and the Issuer is of the view that such rating would not fall below this level as a result of such redemption or repurchase, or*
- (ii) *in the case of a repurchase or a redemption, taken together with other relevant repurchases or redemptions of hybrid securities of the Issuer, such repurchase or redemption is less than (x) 10 per cent of the aggregate principal amount of the Issuer's outstanding hybrid securities in any period of 12 consecutive months or (y) 25 per cent of the aggregate principal amount of the Issuer's outstanding hybrid securities in any period of ten consecutive years, provided that such repurchase or redemption has no materially negative effect on the Issuer's credit profile, or*
- (iii) *if the Notes are not assigned an "equity credit" (or such similar nomenclature then used by Standard & Poor's at the time of such redemption or repurchase), or*
- (iv) *the Notes are redeemed pursuant to a Rating Methodology Event, Accounting Event, Withholding Tax Event, Tax Gross-up Event or a Tax Deductibility Event, or*
- (v) *in the case of a repurchase, such repurchase relates to an aggregate principal amount of Notes which is less than or equal to the excess (if any) above the maximum aggregate principal amount of the Issuer's hybrid capital to which Standard & Poor's then assigns equity content under its prevailing methodology, or*
- (vi) *such redemption or repurchase occurs on or after 3 December 2047.*

*Terms used but not defined in the above paragraphs shall have the same meaning as that in the Conditions.*

## **DESCRIPTION OF THE ISSUER**

For a general description of the Issuer and the EDF Group, please refer to the documents incorporated by reference and the cross-reference table of the section "*Documents Incorporated by Reference*" of this Prospectus.

The profit forecast and estimates set forth in Section 11 (*Outlook*) of the 2019 Half-Year Management Report as, when applicable, updated by the press release of the Issuer dated 9 October 2019, and then confirmed by the press release of the Issuer dated 14 November 2019, reproduced in the section "*Recent Events*" of this Prospectus, have been prepared and consolidated on a basis which is comparable with the 2019 financial information and consistent with EDF group's accounting policies, as described in the consolidated financial statements of the Issuer for the year ended on 31 December 2018 and updated in the 2019 Half-Year Financial Statements (in particular concerning the application of IFRS 16 accounting standard).

## RECENT EVENTS

### **6 September 2019 - The second EPR reactor at China's Taishan nuclear power plant about to enter into commercial operation**

Unit 2 of the Taishan nuclear power plant will enter into commercial operation on Saturday the 7th of September 2019, following statutory functional test of continuous operation at full power for 168 hours, which started on Saturday the 30th of August at 17:15 local time. This step marks the achievement of all prerequisite conditions for the second reactor's safe operation just nine months after Unit 1 was commissioned.

Comprising two 1750-MW EPR reactors, Taishan nuclear power plant is the biggest cooperation project to have taken place between China and France in the energy sector. Taishan's two reactors are capable of supplying the Chinese power grid with up to 24 TWh of CO2-free electricity a year, tantamount to the annual electricity consumption of 5 million Chinese users, whilst at the same time preventing the emission of 21 million tons of CO2 a year.

The Taishan project is led by TNPJVC, a joint-venture founded by CGN (51%), EDF (30%) and the Chinese utility Guangdong Energy Group (19%). The EDF Group and its subsidiary Framatome supplied the EPR technology for the plant. The project capitalised on 35 years of strategic cooperation between EDF and CGN, as well as operating experience from the Flamanville 3 EPR and the complementarity between the French and Chinese nuclear sectors.

Experience acquired through the commissioning of the first reactor on 13 December 2018 allowed to reduce by 3 months the period between the fuel loading and the plant's entry into commercial operation, whilst sustaining identical safety conditions. This performance demonstrates the potential to optimise future EPR construction sites. Since it was commissioned, reactor No.1 has achieved excellent operational results. The Taishan project is providing EPR reactors around the world with its experience in project management and technological expertise. The first reactors to benefit from this experience are the two Hinkley Point C units currently being built in the UK. The two companies are also partners in the Sizewell C EPR project, as well as in the Bradwell B project which is based on Hualong technology.

Jean-Bernard Lévy, the EDF Chairman and CEO stated: "Start-up of the world's second EPR at the Taishan site, combined with the excellent operational performances achieved at Unit 1, are testament to the quality of the reactor design and confirm the industrial feasibility of projects undergoing development. The success of the Taishan project is the result of a long and fruitful cooperation between EDF and CGN and more widely in the French and Chinese nuclear sectors. Safe and competitive, EPR technology is an increasingly important asset to make the global energy mix totally carbon free."

Construction of the Taishan nuclear power plant: latest key milestones

- **10 April 2018:** authorisation for fuelling of Unit 1
- **6 June 2018:** first chain reaction in Unit 1
- **29 June 2018:** Unit 1 connected to the grid for first time
- **13 December 2018:** start of commercial operation of Unit 1
- **12 April 2019:** authorisation for fuelling of Unit 2
- **30 May 2019:** first chain reaction in Unit 2
- **23 June 2019:** Unit 2 connected to the grid for first time
- **7 September 2019:** start of commercial operation of Unit 2

Key figures for the Taishan Nuclear Power Plant:

- 2 1750-MW EPR reactors, the most powerful in the world
- The plant will be able to generate up to 24TWh of electricity per year, tantamount to the power consumed by 5 million Chinese users
- The plant will prevent the emission of around 21 million tonnes of CO<sub>2</sub> per year.
- More than 200 French engineers were involved throughout the project's duration
- More than 15 000 workers were mobilised during the busiest periods of the construction phase
- Nearly 800 people will be required to operate both reactors
- Nearly 40 French companies were involved in the construction of the reactor. Revenue generated for the French sector is estimated at around €2.4 billion.

The site covers a surface area of 400 hectares.

#### **10 September 2019 - Deviation in technical standards governing the manufacture of nuclear-reactor components by Framatome**

Framatome has informed EDF of a deviation from technical standards governing the manufacture of nuclear-reactor components. Relating to standards associated with the manufacturing process, the deviation concerns an excursion from temperature ranges in certain areas during manufacturing operations, more specifically involving detensioning heat treatment on some steam generator welds. It concerns in-service components as well as new components which have not yet been installed on any sites.

From the time it was informed of the deviation, EDF – along with Framatome – has been conducting indepth investigations to identify all affected components and reactors, as well as to ascertain their fitness for service. On the 9th of September 2019, EDF informed the French nuclear regulatory authority of its initial investigations. EDF will provide additional information as characterisation work progresses. Additional information will be posted on the EDF website (<https://www.edf.fr/groupe-edf/nosenergies/nucleaire/non-qualites-de-fabrication>) in due time.

#### **18 September 2019 - Update on Framatome's deviation from technical standards governing the manufacture of nuclear-reactor components**

On the 9 of September 2019, EDF informed France's nuclear regulatory authority of its initial investigations concerning the deviation from a post-weld detensioning heat-treatment process applied to certain nuclear-reactor components.

EDF and Framatome have since identified 16 steam generators installed on six operating reactor units: reactors no. 3 and 4 at Blayais, reactor no. 3 at Bugey, reactor no. 2 at Fessenheim, reactor no. 4 at Dampierre-en-Burly and reactor no. 2 at Paluel.

At this stage of the technical investigations being carried out on these components, EDF believes that the observed deviations do not adversely affect the components' fitness for service and do not require immediate action.

The components that are not yet in service are the 4 steam generators and the pressuriser at the Flamanville-3 EPR, as well as 3 new steam generators that have not yet been installed and that were manufactured for the purpose of replacing the steam generators on reactor units no. 5 and 6 at Gravelines.

EDF and FRAMATOME are continuing to conduct their technical investigations with extreme diligence and will keep the nuclear regulatory authority informed on a regular basis.

## 25 September 2019 - Update on Hinkley Point C project

The Hinkley Point C project successfully delivered J-0, the completion of the nuclear island “common raft” for its first unit in June 2019, in line with the schedule announced in September 2016.

Following this major milestone a detailed review of the project’s costs, schedule and organisation was performed. The review has concluded that:

- The next milestone of completing the common raft for Unit 2 in June 2020, which was announced earlier this year, is confirmed;
- The previously communicated risk of COD delay of unit one and two (of 15 months and nine months respectively) has increased<sup>9</sup>
- The project completion cost<sup>10</sup> is now estimated between £21.5bn and £22.5bn, an increase of £1.9bn to £2.9bn<sup>11</sup> compared to the previous estimate. The range depends on the effectiveness of action plans to be delivered in partnership with contractors.

Cost increases reflect challenging ground conditions which made earthworks more expensive than anticipated, revised action plan targets and extra costs needed to implement the completed functional design, which has been adapted for a first-of-a-kind application in the UK context.

Under the terms of the Contract for Difference, there is no impact for UK consumers or taxpayers.

EDF’s project rate of return for Hinkley Point C (IRR)<sup>12</sup> is now estimated between 7.6% and 7.8%.

The management of the project remains mobilised to begin generating power from Unit 1 at the end of 2025. To achieve this, operational action plans overseen by the project management are being put in place. These involve the EDF Group’s engineering teams in Great Britain and France, buildings and ancillary works contractors, and suppliers of equipment and systems throughout the supply chain.

## 30 September 2019 - Closure of Fessenheim nuclear power plant

EDF has submitted an application to the regulator and to France’s minister in charge of the energy and solidarity transition, in which it has requested approval for the termination of operations and permanent shutdown of both reactors at Fessenheim nuclear power plant (NPP). The shutdown of reactor no. 1 is planned for the 22nd of February 2020, whilst the shutdown of reactor no. 2 is planned for the 30th of June of the same year.

This submission follows on from the signing, on the 27th of September 2019, by the State and by EDF, of a protocol agreement whereby the State will compensate EDF for the early closure of Fessenheim NPP, resulting from the limitation of nuclear power output set by a law passed on the 17th of August 2015, pertaining to the energy transition in support of green growth.

According to the terms of this protocol, compensation will comprise:

- Initial instalments to compensate for expenses incurred by the closure of the plant (post-operational expenditure, BNI taxes, dismantling and staff redeployment costs), which will be paid over a 4-year period following closure of the plant. These payments are expected to amount to a total of nearly 400 million Euros

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<sup>9</sup> As previously communicated in July 2017, if this risk were to materialise, it would entail an additional cost of around £0.7bn in 2015 sterling. Under this assumption the IRR for EDF would be lower by 0.3%.

<sup>10</sup> In 2015 sterling, excluding interim interest and excluding forex effect versus the reference exchange rate for the project of 1 sterling = 1.23 euro.

<sup>11</sup> Additional costs net of action plans.

<sup>12</sup> EDF equity IRR calculated at the exchange rate 1 sterling = 1.15 euro and including the capped compensation mechanism in place between shareholders

- Subsequent payments in compensation for any loss of earnings, i.e. income from future power generation, based on Fessenheim's previous output figures, up until 2041, calculated "ex post" on the basis of nuclear output selling prices, including observed market prices.

With these arrangements in place, EDF has been able to rationalise the redeployment of the station's personnel, within the scope of the agreement signed on the 17th of May 2018 between the company and the trade-union organisations.

**Jean-Bernard Lévy, EDF Chairman and Chief Executive Officer** "I would like to celebrate the efforts of Fessenheim personnel and contract staff, who have continued to operate our facility safely while maintaining extremely high levels of performance. I have already ensured them that the company holds them in high esteem and that they will continue to receive all the company's support during the redeployment process."

**9 October 2019 - Flamanville EPR: EDF has adopted a scenario for upgrading the main secondary system penetration welds with robots and has adjusted the construction schedule and estimated cost accordingly<sup>(1)</sup>.**

**The second hot functional test phase has started on site.**

In the letter of 19 June 2019, the Nuclear Safety Authority (ASN) asked EDF to repair the eight containment penetration welds for Flamanville EPR, not compliant with the break preclusion principle<sup>(2)</sup>. Within this framework, EDF has assessed three repair scenarios.

This work resulted in discussions with the ASN, who sent EDF a letter on 4 October concerning technical feasibility of these three scenarios.

The penetration weld rework scenario preferred by EDF is the use of remote-operated robots, designed to conduct high precision operations inside the piping concerned. This technology has been developed for nuclear power plants in operation and shall be qualified for penetration weld rework. The aim is to qualify this scenario with validation by the ASN by the end of 2020, date on which EDF will be able to initiate the repair works. The second scenario, based on extraction and realignment works in the Safeguard Auxiliary Buildings, is kept at this stage as a fall-back solution.

Based on this penetration weld repair strategy, the EDF Board of Directors approved continuation of the Flamanville EPR construction at a meeting held on the 8th of October 2019.

Within this context, the Group has had to adjust the schedule and the estimated construction cost<sup>(1)</sup> for Flamanville EPR accordingly<sup>(3)</sup>.

The provisional schedule for implementation of the preferred penetration weld repair scenario, if the target for validation by the ASN is complied with, results in the date of fuel loading at the end 2022 and reassessment of the construction cost at 12.4 billion Euros<sup>(1)</sup> representing an increase of 1.5 billion Euros. These additional costs will be presented mainly as other income and expenses<sup>(4)</sup> and not as CAPEX.

In addition, due to postponement of the date of fuel loading, no revenue that should have been deducted from net investments<sup>(5)</sup> will be generated by the plant during test phase in 2020. In this context, the Group has adjusted its net total investment target<sup>(6)</sup> to around 15.5 billion Euros for 2020, instead of the initial target of around 15 billion Euros.

The process of realignment of the 58 welds on the secondary system with quality deviations or not in compliance with the break preclusion principle requirements defined by EDF is being continued on site.

At the same time, the second hot functional test phase was started on 21 September 2019 and will last until the end of 2019. These tests are performed on the plant in normal operating conditions.

(1) In 2015 Euros and excluding interim interest.

(2) Break preclusion principal is a very high standard of quality going beyond the nuclear pressure equipment regulations. It involves reinforcement of the design, manufacturing and in-service monitoring requirements for certain items of equipment. This reinforcement shall be sufficient to consider that rupture of this equipment is highly unlikely. (This standard is applied so that the consequences of rupture of this piping do not need to be completely studied for plant safety case).

(3) The issue of deviation from the technical manufacturing baseline for Framatome reactor components (stress-relieving heat treatment process for the welds with electrical resistance) (see EDF press release of 18 September 2019), which concerns the four steam generators and pressuriser at Flamanville 3 EPR, is not covered in this press release.

(4) IAS 16 section 22 concerning abnormal costs presented for self-constructed assets. These costs will affect 2020, 2021 and 2022. For 2020, impact on net income Group share is estimated, all things being equal, at -0.4 billion Euros, without affecting current net income.

(5) IAS 16 section 17.

(6) Excluding acquisitions and "2019-2020 Group disposals".

## **14 October 2019 - Inauguration of the "La Coche" hydro plant (Savoie): 20% of additional power in support of energy storage**

**The new La Coche power plant (Savoie) was inaugurated by Jean-Bernard Lévy, the EDF Group's Chairman and Chief Executive. The event was attended by members of local government and by representatives of the local and regional authorities. The new plant will increase the total capacity of the La Coche pumped-storage hydro facility by 20%. Amounting to 150 million Euros in capital expenditure, this investment confirms the Group's commitment to the development of hydro power, which is the world's main source of renewable energy whilst accounting for 12.4% of France's electrical output.<sup>1</sup>**

The commissioning of this new facility, combined with upgrades being made to the existing pumped-storage plant, is also helping to further develop electrical power storage technologies, an area which is being strongly supported by the EDF Group via its Storage Plan.

The second biggest hydro project in France after the one currently underway at Romanche-Gavet (Isère), this new facility features France's most powerful Pelton wheel (240 MW). It comes in addition to La Coche's underground power plant, which is already in operation. Commissioned in 1976, this pumped-storage plant pumps water from the Aigueblanche dam towards the La Coche impoundment, where it stores energy that is constantly available to meet demand spikes. It therefore plays a strategic role in balancing the power grid, more specifically supporting the integration of variable renewable-energy sources. With this new plant, La Coche's hydro facilities will now generate as much power as that annually used by 270 000 inhabitants (tantamount to the size of a city like Strasbourg) thanks to a renewable, flexible and storable energy source.

Of the 150 million Euros spent on this asset, 84 million Euros have gone towards supporting regional businesses including nearly 30 million Euros for Savoie. 500 local jobs have been created or maintained in the region thanks to project-related investments whilst 11 jobs have been created to support labour-market integration. Innovation has been an outstanding feature of the project. EDF-designed robots have been used for work being performed in inaccessible areas so as to keep workers safe and to protect the environment. Furthermore, the Pelton wheel is a product of additive manufacturing, which entails adding material by means of laser metal deposition.

Jean-Bernard Lévy, Chairman and Chief Executive of the EDF Group: *"This new power plant bears testimony to EDF's long-term presence across all of our regions, as well as its commitment to the development of renewable energy sources in line with our CAP 2030 strategy, which seeks to double the Group's global installed renewable capacity by 2030. This facility also forms part of the Group's Electrical Storage Plan, which aims to develop 10 GW of additional storage capacity world-wide by 2035".*

### **France's most powerful Pelton wheel**

Measuring 3.6 metres in diameter and weighing 15 tons, the Pelton wheel is the generation facility's key component. It is rotated by water that is jetted at a rate of nearly 500 km/h by five surrounding injectors, causing it to drive the main generator. The main generator's impressively sized components are housed inside an 80-cm thick reinforced-concrete enclosure. Featuring a special liner, the wheel is more resistant to abrasion from sediment-loaded water. It is also easier to maintain and replace than "reversible" pumped-storage Francis turbines used by the underground plant.

(1)The customers were counted at the end of 2018 per delivery site; a customer can have two delivery points: one for electricity and another for gas

## 25 October 2019 - Update on EDF's nuclear plants

### 1. Discrepancies in relation to the technical framework for the production of nuclear reactor components by Framatome

Following on from yesterday's publication by the ASN (French nuclear safety authority) of the briefing note entitled "Production discrepancies at Framatome: stress relief heat treatment for welding", EDF acknowledges that the reactors involved can continue to function as they are, and that they do not need to be shut down in order for the checks required to deal with the discrepancies to be carried out. EDF has continued to discuss the technical issues of this case with the Autorité de Sécurité Nucléaire (French nuclear safety authority) over the last few weeks. Physical checks have been carried out on the seals in question in the new steam generators currently being assembled at Gravelines 5 and steam generators for the Blayais 4 reactor, which has been shut down for fuel reloading. These same checks will be carried out on the seals in question in the steam reactors at Blayais 3 (May 2020), Bugey 3 (April 2020), Dampierre 4 (January 2020) and Paluel 2 (26 October 2019), during their next scheduled shutdown for fuel reloading, without any need to expect these shutdowns to last any longer to carry out these checks. When it comes to Fessenheim 2, additional elements confirming the integrity of the equipment in question will be submitted to the ASN in due course. For the Flamanville 3 EPR equipment, these checks will be carried out after the hot tests currently under way.

### 2. Outlook for nuclear production in France for 2019

The 2019 industrial campaign was hailed as being particularly complex, with the completion of seven ten-year inspections. The overlapping of some intensive operations planned for the second half of the year affecting all plants is resulting in extensions to scheduled shutdowns, including in particular for the reactors at Flamanville 2 and Paluel 4. Combined with the fortuitous shutdown of Flamanville 1 to carry out maintenance work on the diesel generators and weather conditions resulting in greater modulations than planned for the reactors, this situation has led EDF to review its forecast annual output for 2019 to approximately 390 TWh, compared with an initial hypothesis of approximately 395 TWh. The financial targets for 2019 and ambitions for 2020<sup>1</sup> remain unchanged.

<sup>1</sup>See Press releases dated 15 February 2019 and 9 October 2019

### 4 November 2019 - United Kingdom: EDF Group accelerates its development of battery storage and electric vehicle (EV) charging infrastructure by acquiring Pivot Power

EDF Group is announcing the acquisition of a British start up called Pivot Power, specialising in battery storage and infrastructure for electric vehicle charging. This move will allow EDF, already the largest low carbon electricity producer in the UK, to become a leader in battery storage.

Now a wholly owned subsidiary of EDF Renewables, Pivot Power has an extensive portfolio of projects across more than 40 locations throughout the country. There are plans to install batteries connected directly to the high-voltage transmission system - with a total capacity of up to 2 GW. The first two storage projects at Kemsley (Kent) and Cowley (Oxford) have land, planning and grid connection agreements in place and are expected to be commissioned in 2020. As part of its projects, Pivot Power will develop a private wire infrastructure to enable, among other opportunities, the development of mass rapid charging points across the UK.

Each of Pivot Power's projects has the potential to host a battery capable of exporting 50 MW of power and to provide support for hundreds of rapid EV chargers, potentially suitable for large retail sites, logistics centres, bus depots and park and ride sites.

Battery storage and EV rapid charging infrastructure are two significant enablers for the UK's goals to reach net zero by 2050. Battery storage integration in the electricity transmission grid will also provide flexible capacity which will enhance the reliability of the network and boost the integration of renewable electricity. Providing the nationwide connections to power rapid charging stations supports the uptake of electric vehicles instead of the internal combustion engine.

As part of the Electricity Storage Plan, this acquisition contributes to EDF's target of being the leader in Europe with 10 GW of additional storage by 2035. The acquisition is also in line with the EDF Electric Mobility Plan, to become the leading electric mobility company by 2022 in the UK, France, Italy and Belgium. Beyond this 2022 date, the Group's goal is to provide power for 600,000 electric vehicles and providing 75,000 charging points.

Bruno Bensasson, EDF Group's Senior Executive Vice President, Renewable Energies and Chairman & CEO of EDF Renewables, said: "Following PowerFlex Systems recent acquisition in the United States, this new acquisition of smart electricity storage and electric vehicle charging systems player is strengthening our expertise globally. Thanks to the skills developed within this specific field of new uses of electricity, the Pivot Power team will be a great addition to EDF. This is another positive step in the rollout of the Group's Electricity Storage and Mobility Plans."

Simone Rossi, EDF Energy CEO said: "Battery storage and electric vehicles are two key technologies which will help lower carbon emissions, alongside generation from renewables and nuclear. The acquisition of Pivot Power shows EDF is investing in a wide range of projects to deliver the huge shift to low carbon energy the UK will need to reach net zero by 2050."

Matt Allen, co-founder and CEO of Pivot Power, said: "Pivot Power's purpose from the start has always been to accelerate the UK's transition to a cost-effective, reliable, low-carbon energy system and in parallel fast-track the rapid adoption of clean transport. EDF Renewables shares our vision and of course brings the expertise, resources and platform to make this a reality."

### **11 November 2019 - Earthquake in Drôme-Ardèche: assessment of the reactors in the Rhône valley**

Further to the earthquake recorded on 11 November 2019, EDF has continued to operate Bugey, Saint-Alban and Tricastin nuclear power plants.

Initial inspections at Cruas-Meysse NPP have not highlighted any apparent damage. However, vibration was recorded requiring additional preventive testing. Erring on the side of caution, EDF has decided to suspend operation of Cruas-Meysse units 2, 3 and 4 on a temporary basis in order to perform these tests.

These units will be successively shut down from 18.00 this evening, apart from unit 1, which is already shut down for scheduled maintenance.

The Nuclear Safety Authority and Ardèche Prefecture have been informed of the situation

### **14 November 2019 - Update on the outlook for nuclear annual output for 2019**

Following the earthquake in southern France on 11 November 2019, EDF is continuing to carry out checks on the reactors of Cruas power plant (Ardèche) with the objective to complete them within a week time. The results will be submitted for instruction to the ASN (French nuclear safety authority) and, as of today, EDF anticipates a gradual return to service for the reactors at Cruas plant during the first half of December.

This situation has led EDF to adjust its assumption for 2019 nuclear annual output, which should be between 384 and 388TWh.

All the financial targets for the EDF Group remain unchanged.

### **14 November 2019 - Quarterly Financial Information - 3rd quarter 2019**

#### **Quarterly Financial Information at 30 September 2019 Sales up 2.9%<sup>(1)</sup> Confirmation of 2019 targets and 2019-2020 ambitions**

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<b>Group sales</b>	€50.9bn
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+2.9% org.<sup>(1)</sup>

#### **Highlights**

- **New developments in renewable energies**

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<sup>(1)</sup> Organic change at comparable scope and exchange rates.

- Record level of EDF Renewables' portfolio of projects under construction: 4.7GW gross (x2 vs end of December 2018)
- Wind power & Offshore: launch of construction of the first French offshore wind farm in Saint-Nazaire (480MW)
  - acquisition of a 300MW portfolio of wind projects in Germany
- Solar: commissioning of 2 solar power plants in Benban, Egypt (130MWp) with a 25-year PPA
- **Storage and Electric Mobility Plans**
  - Acquisition of the British start up Pivot Power, specialised in battery storage and infrastructure for electric vehicle charging (portfolio of projects with a potential capacity of up to 2GW)
  - Acquisition of PowerFlex Systems in the United States, a company combining solar energy generation and storage with smart charging solutions for electric vehicles or building load
  - Nissan and the EDF group partner up to accelerate adoption of electric vehicles (smart charging solutions)
- **Regulatory developments**
  - ARENH: volume ceiling maintained for 2020 and price unchanged at this stage
  - Energy savings certificates (CEE): one-year extension until 2021 of the 4<sup>th</sup> period (draft decree from the French Ministry of Ecological and Solidarity Transition submitted to the French State Council)
  - Capacity mechanism in the United Kingdom: positive decision by the European Commission with the British government reinstating the Capacity mechanism
- **Customers and services**
  - Sales offensive : 460,000 residential electricity customers under market offers signed-up in France
    - more than 1.5 million residential gas customers in France
  - Dalkia: continued commercial development with the renewal or signing of new contracts (energy network at La Grande Motte and energy facilities for the Regional Council of Nouvelle Aquitaine)
- **Nuclear**
  - Taishan (EPR in China): commercial commissioning on 7 September 2019 of the unit 2 generation of more than 10TWh since the commissioning by the unit 1
  - Hinkley Point C <sup>(2)</sup>: project completion costs revised to £21.5 - 22.5bn <sup>(3)</sup>
  - Flamanville 3 <sup>(4)</sup>: estimated construction cost revised to €12.4bn <sup>(5)</sup> with fuel loading expected at end-2022
    - start of the second hot functional test phase on site
  - Fessenheim <sup>(6)</sup>: protocol agreement whereby the State will compensate EDF for the early closure of the power plant. This compensation will comprise initial instalments for a total of nearly €400m
- **Enedis**
  - Linky : installation of the 21 millionth smart meter at end September

**2019 targets  
Including  
IFRS 16  
impact**

- EBITDA <sup>(7)</sup>: €16.0 - 16.7 bn
- Reduction in operating expenses <sup>(8)</sup>: ~ €1.1bn vs. 2015

<sup>2</sup> See press release of 25 September 2019.

<sup>3</sup> In 2015 pound sterling, excluding interim interest and excluding foreign exchange compared to a reference exchange rate for the project of 1 pound = 1.23 euros.

<sup>4</sup> See press release of 09 October 2019.

<sup>5</sup> In 2015 euros, excluding interim interest.

<sup>6</sup> See press release of 30 September 2019.

<sup>7</sup> On the basis of the scope and exchange rates at 01/01/2019 and of an assumption of a 384-388TWh range for France nuclear output.

<sup>8</sup> Sum of personnel expenses and other external expenses. At comparable scope, IFRS 16 standard and exchange rates. At constant pension discount rates. Excluding change in operating expenses of the service activities.

- Cash flow excluding HPC and Linky: >€600m<sup>(9)</sup>
- Total net investments<sup>(10)</sup> excluding acquisitions and “Group 2019-2020 disposals”: ~€15bn in 2019  
~€15.5bn in 2020
- Group 2019-2020 disposals: €2 to 3 bn
- Net financial debt/EBITDA<sup>(7) (10)</sup>: ≤2.7x
- Dividend: Target payout ratio of Net income excluding non-recurring items<sup>(11)</sup>: 45 – 50%  
*The French State has committed to script dividends relating to FY2019 and FY2020*

### Change in EDF group sales

(in millions of Euros)	9M 2018 <sup>(12)</sup> restated	9M 2019	%	% organic
France - Generation and supply activities	18,942	20,079	+6.0	+5.7
France - Regulated activities	11,571	11,437	-1.2	-1.2
EDF Renewables	1,090	1,163	+6.7	+1.4
Dalkia	2,760	2,903	+5.2	+4.6
Framatome	2,290	2,346	+2.4	+1.2
United Kingdom	6,466	6,392	-1.1	-1.2
Italy	5,736	5,659	-1.3	-3.6
Other international	1,667	1,938	+16.3	+15.1
Other activities	2,055	2,159	+5.1	+8.9
<i>Inter-segment eliminations</i>	(3,301)	(3,135)	-5.0	-5.0
<b>Total Group</b>	<b>49,276</b>	<b>50,941</b>	<b>+3.4</b>	<b>+2.9</b>

Group sales amounted to €50.9 billion, up 2.9% in organic terms compared to the first nine months of 2018.

This trend was mainly driven by the Generation and supply activities in France, in connection with favourable market conditions, the growth of the Group’s energy services activities, the strong performance of EDF Trading and activities in Belgium and Brazil, as well as by better use of the Group’s gas capacities.

### Change in Group sales<sup>(13)</sup> by segment

#### France – Generation and supply activities

(in millions of Euros)	9M 2018	9M 2019	% organic
Sales	18,942	20,079	+5.7

Sales in France - Generation and supply activities amounted to €20.1 billion, up 5.7% in organic terms compared to the first nine months of 2018.

<sup>9</sup> The impact of IFRS 16 on cash-flow corresponds to the increase in EBITDA, less the financial interests on the IFRS 16 net financial debt.

<sup>10</sup> For 2020: In accordance with the scenario adopted by the Group concerning the construction costs and schedule of the Flamanville 3 project (see press release of 09 October 2019).

<sup>11</sup> Adjusted for the remuneration of hybrid bonds accounted for in equity.

<sup>12</sup> Edison’s Exploration and Production (E&P) business was classified as a discontinued operation within the meaning of IFRS 5 as of 1 January 2019. The comparative figures for 2018 have been restated to reflect the impact of the presentation of the E&P activities that are being sold.

<sup>13</sup> Breakdown of sales across the segments, before inter-segment eliminations.

Nuclear output amounted to 288.2TWh, down 1.8TWh compared to the first nine months of 2018 due to a higher number of planned outages and extended outages.

Hydropower output <sup>(14)</sup> stood at 27.5TWh, down 27.6% (-10.5TWh) compared to the first nine months of 2018 due to less favourable and lower-than-normal hydrological conditions.

The positive weather effect on sales is estimated at +€48 million compared to the first nine months of 2018 in connection with temperatures closer to normal than in 2018.

The change of regulated sale tariffs for electricity <sup>(15)</sup> (for the part excluding the distribution component) had a positive effect of approximately €126 million, considering the 2019 tariff increase on 1 June and a negative comparison effect related to the end of the tariff catch-up until the 1 August 2018 (in relation with 2012 and 2013 tariff increases).

Downstream market conditions <sup>(16)</sup> had a positive impact estimated at €588 million. The negative impact of the loss of market share was more than offset by the positive energy and capacity price effects, as well as by sales growth in gas.

The balance of purchases and sales on the wholesale market had a negative impact estimated at -€73 million compared to the first nine months of 2018. This impact is due primarily to the lower nuclear and hydroelectric output. Moreover, the decline in sales to end customers was not fully offset by the increase in ARENH sales. At the same time, the positive effect of the increase in the price of capacity certificates on the wholesale markets should be noted.

The increase in the price of energy savings certificates led to an increase in sales for an estimated +€155 million, without equivalent in the margin.

The resale of purchase obligations benefited from a positive price effect, mainly in the first quarter of 2019, for an estimated €47 million (EBITDA neutral effect with the CSPE compensation mechanism for expenses related to purchase obligations).

Finally, sales benefited from other favourable developments in the amount of €126 million.

#### France – Regulated activities <sup>(17)</sup>

(in millions of Euros)	9M 2018	9M 2019	% organic
Sales	11,571	11,437	-1.2

Sales in France - Regulated activities amounted to €11.4 billion, down 1.2% in organic terms compared to the first nine months of 2018.

The drop in volumes delivered, in connection with climatic conditions, had an estimated negative impact of €82 million compared to the first nine months of 2018.

The change in tariffs <sup>(18)</sup> had a negative impact estimated at €91 million, mainly due to the effect of the optimisation of the distribution tariff by suppliers.

<sup>14</sup> Hydropower, excluding island activities before deduction of pumped volumes. For information, after deduction of pumped-storage hydropower volumes: 32.7TWh over 9M 2018 and 23.0TWh over 9M 2019.

<sup>15</sup> Price effects on customers at regulated sales tariffs, excluding the Energy Savings Certificates (ESCs) component in the tariff “stacking”. Tariff change at 1 August 2018 of -0.5% (including the end of the tariff catch up) and +7.7% on 1 June 2019.

<sup>16</sup> Excluding the EEC component in the market offering.

<sup>17</sup> Regulated activities including Enedis, Électricité de Strasbourg and island activities.

<sup>18</sup> Including adjustment of the tariffs of the low voltage customers domain  $\leq 36kVA$  of 1.16% and indexation of TURPE 5 distribution of +3.04% and TURPE 5 Transmission of 2.16% as of 1 August 2019 (vs. respectively -0.21% and +3% in 2018).

In addition, sales benefited from other positive effects for an estimated €39 million, notably with the growth of connection services.

### Renewable Energies

#### EDF Renewables

(in millions of Euros)	9M 2018	9M 2019	% organic
Sales	1,090	1,163	+1.4

Sales for EDF Renewables amounted to €1.2 billion, up 1.4% in organic terms compared to the first nine months of 2018.

Sales growth was driven by generation, which benefited from positive price effects, whereas the generated volumes were down -0.6TWh (-5.4%) compared to September 2018 due to disposals carried out at the end of 2018 and beginning of 2019.

Gross installed capacity during the first nine months amounted to 1GW, mostly in solar energy. Net installed capacity, at 8.2GW, was broadly stable compared to the end of December 2018.

#### Group Renewables<sup>(19)</sup>

(in millions of Euros)	9M 2018	9M 2019	%	% organic
Sales <sup>(20)</sup>	3,292	2,932	-11	-15

Sales from all Group Renewable activities amounted to €2.9 billion, an organic decrease of 15% compared to the first nine months of 2018, mainly due to lower hydro generation in France.

### Energy Services

#### Dalkia

(in millions of Euros)	9M 2018	9M 2019	% organic
Sales	2,760	2,903	+4.6

Dalkia's sales amounted to nearly €2.9 billion, up 4.6% in organic terms compared to the first nine months of 2018.

This improvement mainly reflects the growth in sales of services, mainly in France and, to a lesser extent, the positive trends in the indices for revising service contracts and the rise in fuel prices.

#### Group Energy Services<sup>(21)</sup>

(in millions of Euros)	9M 2018	9M 2019	%	% organic
Sales	3,671	3,977	+8	+5

<sup>19</sup> Group Renewables includes EDF Renewables and the Group hydraulic generation, as well as the renewable activities of Luminus and Edison.

<sup>20</sup> For renewable energy generation optimised within a larger portfolio of generation assets, in particular relating to the French hydro fleet, sales are estimated, by convention, as the valuation of the output generated at spot market prices (or at purchase obligation tariff) without taking into account hedging effects, and include the valuation of the capacity, if applicable.

<sup>21</sup> Group Energy Services include Dalkia; Citelum, CHAM and service activities of EDF Energy, Edison, EDF Luminus and EDF SA. They consist in particular of street lighting, heating networks, decentralised low-carbon generation based on local resources, energy consumption management and electric mobility.

Sales in Group Energy Services amounted to €4.0 billion, up 5% in organic terms compared to the first nine months of 2018. In particular, it benefited from sustained growth of the service activities in the United Kingdom and Belgium.

#### Framatome

(in millions of Euros)	9M 2018	9M 2019	% organic
Sales	2,290	2,346	+1.2
Sales EDF group contribution	1,330	1,296	-4.7

Framatome's sales amounted to €2.3 billion, up 1.2% in organic terms compared to the first nine months of 2018.

This growth stemmed mainly from service activities in the Installed Base, particularly in Canada.

Large projects activity is being ramped up thanks to the construction of the Hinkley Point C project, which is taking over from Taishan following the commissioning of its two EPRs.

In addition, on the commercial front Framatome won in October with Rosatom the contract for the main instrumentation and control system for the Hanhikivi-1 nuclear power plant in Finland and for the PAKS2 nuclear power plant in Hungary. Framatome also completed the acquisition of FoxGuard Solutions, a specialist in the fields of cybersecurity and industrial computing in the US.

In November, Framatome and CNEIC/CJNF (CNNC Group) signed a letter of intent concerning the supply of components for manufacturing fuel assemblies reloads in China.

#### United Kingdom

(in millions of Euros)	9M 2018	9M 2019	% organic
Sales	6,466	6,392	-1.2

In the United Kingdom, sales of €6.4 billion were down by 1.2% in organic terms compared to the first nine months of 2018.

Nuclear output amounted to 36.8TWh, down by 9.1TWh compared to the first nine months of 2018 due to the Hunterston B and Dungeness B outages.

Sales decrease mainly driven by the fall in nuclear generation, the suspension of the capacity market and the SVT price cap (Standard Variable Tariff) since 1 January 2019.

Downstream, the resilience of supply activities should be noted: the residential customer portfolio is stable in a still very competitive competitive environment and the volumes sold in the business customer segment are increasing.

#### Italy

(in millions of Euros)	9M 2018 <sup>(22)</sup>	9M 2019	% organic
Sales	5,736	5,659	-3.6

In Italy, sales amounted to €5.7 billion, down by 3.6% in organic terms compared to the first nine months of 2018.

(22) Edison's Exploration and Production (E&P) business was classified as a discontinued operation within the meaning of IFRS 5 as of 1 January 2019. The comparative figures for 2018 have been restated to reflect the impact of the presentation of the E&P activities that are being sold.

In gas activities, sales were down (-€525 million in organic terms) due in particular to lower prices across all markets (this change has no effect on the margin) and to a drop in the volumes sold on the wholesale markets. This change was partially offset by an increase in volumes sold to industrial customers.

Sales in Electricity activities (+€305 million in organic terms) were up thanks to higher sales volumes and to favourable price effects in the residential and industrial customers segments.

#### Other international

(in millions of Euros)	9M 2018	9M 2019	% organic
Sales	1,667	1,938	+15.1

Sales in Other international amounted to €1.9 billion, down 15.1% in organic terms compared to the first nine months of 2018.

In Belgium, sales were up €83 million in organic terms (+6.6%). This improvement reflects in particular an increase in electricity and gas prices, which was partially offset by a drop in the volumes sold to residential customers due to mild weather. In addition, renewable and service activities continued to develop. Net wind capacity increased to 503MW, or +14.3% compared to the end of December 2018.

In Brazil, sales increased by €144 million in organic terms due on the one hand to the positive effect of the contractual revision of EDF Norte Fluminense's power purchase agreement tariff that occurred at the end of 2018, and on the other hand to the impact of the change (without impact on EBITDA) of the ICMS<sup>(23)</sup> tax.

#### Other activities

(in millions of Euros)	9M 2018	9M 2019	% organic
Sales	2,055	2,159	+8.9
<i>Including EDF Trading Group</i>	832	846	+6.7

Sales in Other activities amounted to nearly €2.2 billion, up 8.9% in organic terms compared to the first nine months of 2018.

EDF Trading's sales were up €56 million organically (+6.7%). It benefited from volatility since the beginning of the year and from favourable positions on the European electricity and gas markets. Trading and optimisation activities on LNG (Liquefied Natural Gas) and LPG (Liquefied Petroleum Gas) activities also contributed to this performance.

The favourable context of the LNG (Liquefied Natural Gas) business and better use of the Group's capacities led to an increase in gas sales of more than €391 million in organic terms (+64.3%).

#### 19 November 2019 - Interim dividend distribution for fiscal year 2019, with option of payment in new shares

At its meeting today, the Board of Directors of EDF declared a 2019 interim dividend of €0.15 per share and offered, under the conditions set by the fourth resolution at the Combined Shareholders' Meeting of 16 May 2019, the option for shareholders to receive the 2019 interim dividend in cash or in new shares of the Company.

The share price for the new shares which will be issued as payment of the 2019 interim dividend is set by the Board of Directors at €8.16. This price is equal to the average opening price on the Euronext Paris market for the twenty trading days preceding 19 November 2019, reduced by the net amount of the interim dividend, with a 10% discount, rounded up to the nearest cent. The new shares will be issued with immediate dividend rights and

<sup>23</sup> Tax on the Movement of Goods and Services in Brazil.

will confer the same rights ("jouissance courante") and restrictions as existing common shares, as described in the Company's Articles of Association and the 2018 reference document Report available on the Company's website.

The ex-dividend date for the 2019 interim dividend is set for 26 November 2019. The period for exercising the option will begin on 28 November 2019, and will end on 11 December 2019, both dates inclusive<sup>(1)</sup>.

Any shareholder who does not exercise this option within the specified time period will receive the whole of the interim dividend due to them in cash. The date for the payment in cash is set for 17 December 2019.

For shareholders who elect to receive the 2019 interim dividend in shares, the date for the delivery of shares is set for 17 December 2019. If the amount of the 2019 interim dividend for which the option of payment in shares is exercised does not correspond to a whole number of shares, the shareholder will receive the number of shares immediately below, plus a balancing cash adjustment.

*(1) Subsequent to regulatory changes and the harmonisation of European standards on the payment process for optional dividends, the date of the end of the option period may vary from one financial intermediary to the next. For pure registered shareholders, BNP Paribas Securities Services, as the institution in charge of the securities service of the EDF company, has set this date at 9 December 2019 at the latest in order to supervise and centralise the responses of pure registered shareholders.*

## **20 November 2019 - EDF notifies the exercise of its put option on its participation in CENG**

Pursuant to the set of agreements concluded with Exelon in 2014<sup>(1)</sup>, EDF notified Exelon today of the exercise of its put option on 49.99% of the membership interests of CENG.

CENG owns five nuclear reactors across three nuclear power plants located in the states of New York and Maryland for a total capacity of 4041 MW (company-owned capacity).

This put option can be exercised by EDF from January 1<sup>st</sup> 2016 to June 30 2022. The transaction price will follow from the determination of the fair market value of CENG shares pursuant to the contractual provisions of the put option agreement.

The closing of the transaction is conditional upon obtaining the required regulatory approvals.

The disposal of CENG shares is part of the disposal plan of non-core assets announced by EDF Group.

*(1) EDF Press Release of April 1<sup>st</sup> 2014 « EDF and Exelon finalize agreement on CENG »*

## **26 November 2019 - EDF Intends to Issue a new Euro-denominated Hybrid Notes and to Launch a Tender Offer on Several Outstanding Hybrid Notes**

EDF (the "Company") is today announcing its intention to issue a new Euro-denominated tranche of perpetual 8 year non-call hybrid notes (the "New Notes") with a first redemption at the option of the Company in December 2027.

At the same time, the Company is also launching tender offers (the "Tender Offers") to purchase the following hybrid notes (together, the "Targeted Hybrid Notes"):

1. EUR 1,000 million Reset Perpetual Subordinated Notes with a first redemption at the option of the Company on 22 January 2022 (ISIN: FR0011697010) of which EUR 661.8 million is currently outstanding, which are admitted to trading on Euronext Paris (the "Euro Notes"); and
2. USD 3,000 million Reset Perpetual Subordinated Notes with a first redemption at the option of the Company on 29 January 2023 (144A / Reg S ISIN: US268317AF12 / USF2893TAF33) of which USD 3,000 million is currently outstanding, which are admitted to trading on the regulated market of the Luxembourg Stock Exchange (the "US Notes").

The Company will also consider exercising its option to redeem on January 29, 2020 in whole the €1,250,000,000 Reset Perpetual Subordinated Notes (ISIN: FR0011401736) of which €338,200,000 is currently outstanding.

The Company can redeem the New Notes for cash at any time during the 90 days before the first interest reset date, which is expected to be in eight years (with a first call date of December 2027) and on every coupon payment date thereafter. Although the proposed New Notes are perpetual, they can be called at any time for withholding tax, tax deductibility, tax gross-up, rating methodology, accounting, or substantial repurchase event.

The total amount expected to be bought back via the Tender Offers will be calibrated so that EDF's aggregate outstanding nominal amount of hybrid capital does not decrease by more than 10%, taking into account the EUR 500 million new issue and the expected call of the EUR 338 million rump in January next year.

The results of the Tender Offers on the Euro Notes and on the US Notes will be announced on 11th, December 2019 and 30th, December 2019, respectively (subject in each case to change as a result of any extension, withdrawal, termination or amendment of the Tender Offers).

The New Notes are scheduled to be admitted to trading on Euronext Paris. It is also expected that the rating agencies will assign the New Notes a rating of Baa3/BB/BBB (Moody's/ S&P/ Fitch) and an equity content of 50%.

## **28 November 2019 - The EDF Group launches the construction of Neart na Gaoithe 450 MW offshore wind farm along with new Irish partner, ESB**

The EDF Group is announcing the construction of the Scottish Neart na Gaoithe (**NnG**) offshore wind farm project and the new partnership with the Irish electricity company ESB which is taking a 50% stake in the project. The 450 MW NnG project confirms a wider commitment to renewables in the United Kingdom where EDF already has a strong footprint.

Neart na Gaoithe<sup>24</sup> will consist of 54 turbines and will be located in the North Sea approximately, 15km off the coast of Fife in south-east Scotland. When fully operational, the NnG offshore wind farm will generate the equivalent electricity to power over 375,000 households each year, which corresponds to 4% of Scotland's electricity consumption. This fully consented offshore wind project has a 15 year Contract for Difference (**CfD**) at £114.39/MWh in 2012 pound sterling, and grid connection agreements in place.

With all of the financial agreements now in place, EDF Renewables is launching full construction of the project and can announce some of the tier one contractors. These include:

- Siemens Gamesa Renewable Energy (**SGRE**) is the wind turbine generators supplier. It will provide the 8 MW turbine model ;
- Saipem is the turbine foundations supplier and installer ;
- GE Renewable Energy Grid Solutions will carry out the supply the two electrical substations, plus electrical design work ;
- Prysmian SRL will supply and install the export cables, both offshore and onshore ;
- Deme Offshore has won the contract for engineering, procuring, constructing and installing the inter-turbines cables with offshore installation;
- Fred Olsen Windcarrier will be delivering the transportation and installation of the turbines with offshore installation.

Construction of components is now underway, offshore construction will start in June 2020 and full commissioning will be complete in 2023.

NnG will contribute to the local Scottish economy providing new jobs and manufacturing opportunities. Some foundations jackets will be built by the Scottish engineering firm BiFab. The wind turbine generators will be assembled at the Port of Dundee. Eyemouth Harbour has been selected as preferred supplier to operate and service the wind farm over its 25-years lifetime. More precisely, this activity will create around 50 permanent jobs, located nearby the wind farm.

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<sup>24</sup> Gaelic for 'strength of the wind'.

EDF Renewables is also announcing its partnership with the leading Irish energy company ESB that is taking a 50% stake in the project. This operation will result in the consolidation of the project by equity method. ESB operates across the electricity market on the island of Ireland, from generation, through transmission and distribution to the supply of customers with an expanding presence across Great Britain. In 2017, ESB opened an office in Scotland and is spearheading further development of renewable energy projects, in particular onshore and offshore wind.

The EDF Group, via its subsidiary EDF Renewables, is a significant global player in the offshore wind market with a 5 GW portfolio of projects under operations and development, including 103 MW of offshore wind farms already operational in the United Kingdom (Teesside with 62MW and Blyth with 41,5MW both in north-east England).

In total, the Group currently operates more than 13 GW of gross wind and solar capacity around the world, including nearly 1 GW in the United Kingdom, and in addition of the 23 GW of hydroelectricity. The NnG project is consistent with the CAP 2030 strategy which aims to double EDF's renewable energy globally between 2015 and 2030 increasing to 50 GW.

Bruno Bensasson, EDF Group's Senior Executive Vice President, Renewable Energies and Chairman and CEO of EDF Renewables said: *"These are two major milestones achieved by EDF Renewables demonstrating our strong capabilities in developing large offshore projects. We are pleased to get work underway with our new partner ESB and all Scottish companies and stakeholders involved. The 450 MW NnG project will play an important role in de-carbonising the UK electricity system."*

Simone Rossi, CEO of EDF Energy added: *"The UK has committed to achieving Net Zero emissions by 2050 and the UN's latest emissions gap report underlines the need for urgent action. NNG is our largest offshore windfarm in the UK to date. We are determined to play our part in reducing the country's carbon emissions, while also generating jobs and economic opportunities for communities."*

Pat O'Doherty, Chief Executive of ESB said: *"Our 50 percent stake in Neart na Gaoithe fits entirely with ESB's Brighter Future strategy to build a balanced low carbon generation portfolio of scale. Offshore wind is one of the main technologies underpinning the clean electricity systems that will power our societies into the future. This investment in the Neart na Gaoithe project builds on significant ESB involvement in offshore wind off the Irish coast as ESB develops its experience to assist Ireland deliver its Climate Action Plan. We look forward to pooling our expertise with EDF Renewables in delivering this major project."*

## **28 November 2019 - EDF raises US \$ 2 billion at 50 year as part of its EMTN program**

On 27 November 2019, EDF (A- S&P / A3 Moody's / A- Fitch) successfully raised US \$ 2 billion with a 50 year maturity and a fixed coupon of 4.50%.

The bonds were issued under a pure Reg-S format with no distribution to US investors. This transaction benefits from a very diversified investor base at the long end of the credit curve.

Following this transaction, the average maturity of the EDF group's gross debt is extended by c. one year, to 15.2 years (proforma as of June 30th, 2019).

## REASONS FOR THE OFFER AND USE OF PROCEEDS

The net proceeds of the issue of the Notes will be used for general corporate purposes of the Issuer, including the financing of (i) the repurchase of the EUR 1,000 million Reset Perpetual Subordinated Notes with a first redemption at the option of the Company on 22 January 2022 (ISIN: FR0011697010) of which EUR 661,800,000 is currently outstanding (the **EU Tender Offer**) and (ii) the purchase of the US\$3,000,000,000 Reset Perpetual Subordinated Notes with a first redemption at the option of the Company on 29 January 2023 (ISIN: US268317AF12 (Rule 144A) / USF2893TAF33 (Reg S)) of which USD 3,000,000,000 is currently outstanding in a US tender offer (the **US Tender Offer**).

The Issuer will also consider exercising its option to redeem on 29 January 2020 in whole the EUR 1,250,000,000 Reset Perpetual Subordinated Notes (ISIN: FR0011401736) of which EUR 338,200,000 is currently outstanding (the **2020 Non-Call Notes**).

The purpose of the issue of the Notes, the EU Tender Offer, the US Tender Offer and the potential redemption of the 2020 Non-Call Notes is to proactively manage the Issuer's hybrid debt portfolio, to extend the maturity of its hybrid debt portfolio and to optimise its cost of financing by taking advantage of currently favourable market conditions. The intent of the Issuer is to reduce its hybrid debt portfolio by no more than €1.0 Billion.

## SUBSCRIPTION AND SALE

Banca IMI S.p.A., BNP Paribas, HSBC Bank plc, ING Bank N.V., Belgian Branch, Natixis and NatWest Markets N.V., (the “**Active Joint Bookrunners**”), Banco Bilbao Vizcaya Argentaria, S.A., Commerzbank Aktiengesellschaft and Lloyds Bank Corporate Markets Wertpapierhandelsbank GmbH (the “**Passive Joint Bookrunners**,” together with the Structuring Advisor and Active Joint Bookrunner and the Active Joint Bookrunners, the “**Managers**”) have, pursuant to a subscription agreement dated 29 November 2019 (the “**Subscription Agreement**”), each jointly and severally agreed with the Issuer, subject to the satisfaction of certain conditions, to subscribe for the Notes at an issue price equal to 99.127 per cent. of the principal amount of the Notes, less any applicable commission. In addition, the Issuer will pay certain costs incurred by it and the Managers in connection with the issue of the Notes.

### United States

The Notes have not been and will not be registered under the U.S. Securities Act of 1933 as amended (the “**Securities Act**”) and may not be offered or sold within the United States or to, or for the account or benefit of, U.S. persons except in certain transactions exempt from the registration requirements of the Securities Act. Terms used in this paragraph have the meanings given to them by Regulation S under the Securities Act (“**Regulation S**”).

Each Manager has agreed that, except as permitted by the Subscription Agreement, it will not offer, sell or deliver Notes, (i) as part of their distribution at any time or (ii) otherwise until 40 days after the completion of the distribution of the Notes, as determined, and certified to the Issuer and each Manager, by the Fiscal Agent, within the United States or to, or for the account or benefit of, U.S. persons, and it will have sent to each dealer to which it sells Notes during the distribution compliance period a confirmation or other notice setting forth the restrictions on offers and sales of the Notes within the United States or to, or for the account or benefit of, U.S. persons. Terms used in the preceding sentence have the meanings given to them by Regulation S.

The Notes are being offered and sold outside the United States to non-U.S. persons in reliance on Regulation S.

In addition, until 40 days after the later of commencement of the offering and the date of closing of the offering of any identifiable Notes, an offer or sale of Notes within the United States by any dealer (whether or not participating in the offering of such Notes) may violate the registration requirements of the Securities Act.

This Prospectus has been prepared by the Issuer for use in connection with the offer and sale of the Notes outside the United States. The Issuer and the Managers reserve the right to reject any offer to purchase the Notes, in whole or in part, for any reason. This Prospectus does not constitute an offer to any person in the United States. Distribution of this Prospectus by any non-U.S. person outside the United States to any U.S. person or to any other person within the United States, is unauthorized and any disclosure without the prior written consent of the Issuer of any of its contents to any such U.S. person or other person within the United States, is prohibited.

### Prohibition of Sales to EEA Retail Investors

Each Manager has represented and agreed that it has not offered, sold or otherwise made available and will not offer, sell or otherwise make available any Notes to any retail investor in the EEA. For the purposes of this provision: a retail investor means a person who is one (or more) of: (i) a retail client as defined in point (11) of Article 4(1) of MiFID II; or (ii) a customer within the meaning of the Insurance Distribution Directive, where that customer would not qualify as a professional client as defined in point (10) of Article 4(1) of MiFID II.

Consequently no key information document required by the PRIIPs Regulation for offering or selling the Notes or otherwise making them available to retail investors in the EEA has been prepared and therefore offering or selling the Notes or otherwise making them available to any retail investor in the EEA may be unlawful under the PRIIPs Regulation.

## **United Kingdom**

Each Manager has represented and agreed that:

- it has only communicated or caused to be communicated and will only communicate or cause to be communicated an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the FSMA) received by it in connection with the issue or sale of the Notes in circumstances in which Section 21(1) of the FSMA does not apply to the Issuer; and
- it has complied and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to the Notes in, from or otherwise involving the United Kingdom.

## **France**

Each Manager has represented and agreed that it has only offered or sold and will only offer or sell, directly or indirectly, any Notes to the public in France pursuant to an exemption under Article 1(4) of the Prospectus Regulation and Article L. 411-2 1° of the French *Code monétaire et financier* and that the Prospectus or any other offering material relating to the Notes and such offers, sales and distributions have been and will be made in France only to qualified investors (*investisseurs qualifiés*) (with the exception of individuals) as defined Article 2(e) of in the Prospectus Regulation.

## **Republic of Italy**

The offering of the Notes has not been registered pursuant to Italian securities legislation and, accordingly, no Notes may be offered, sold or delivered, nor may copies of the Prospectus or of any other document relating to the Notes be distributed in the Republic of Italy, except:

- (i) to qualified investors (*investitori qualificati*), as defined pursuant to Article 2 of Prospectus Regulation and any applicable provision of Legislative Decree No. 58 of 24 February 1998, as amended (the **Financial Services Act**) and Italian CONSOB regulations; or
- (ii) in other circumstances which are exempted from the rules on public offerings pursuant to Article 1 of the Prospectus Regulation, Article 34-ter of CONSOB Regulation No. 11971 of 14 May 1999, as amended from time to time, and the applicable Italian laws.

Any offer, sale or delivery of the Notes or distribution of copies of the Prospectus or any other document relating to the Notes in the Republic of Italy under (i) or (ii) above must:

- (a) be made by an investment firm, bank or financial intermediary permitted to conduct such activities in the Republic of Italy in accordance with the Financial Services Act, CONSOB Regulation No. 20307 of 15 February 2018 (as amended from time to time) and Legislative Decree No. 385 of 1 September 1993, as amended (the **Banking Act**); and
- (b) comply with any other applicable laws and regulations or requirement imposed by CONSOB, the Bank of Italy (including the reporting requirements, where applicable, pursuant to Article 129 of the Banking Act and the implementing guidelines of the Bank of Italy, as amended from time to time) and/or any other Italian authority.

## **General**

Save as stated herein, no action has been taken in any jurisdiction that would permit an offer of any of the Notes to retail investors, or possession or distribution of this Prospectus or any other offering material, in any country or jurisdiction where action for that purpose is required.

Each Manager has agreed that it will, to the best of its knowledge, comply with all relevant laws, regulations and directives in each jurisdiction in which it purchases, offers, sells or delivers Notes or has in its possession or distributes this Prospectus or any other offering material and neither any of the Issuer nor any other Manager shall have responsibility therefor.

## GENERAL INFORMATION

### 1. Admission to trading

For the purpose of the admission to trading of the Notes on Euronext Paris, and pursuant to articles L.412-1 and L.621-8 of the French *Code monétaire et financier* and the Prospectus Regulation, the AMF has approved this Prospectus under approval number no. 19-550 on 29 November 2019.

The Prospectus has been approved by the AMF, as competent authority under the Prospectus Regulation. The AMF only approves this Prospectus as meeting the standards of completeness, comprehensibility and consistency imposed by the Prospectus Regulation. Such approval should not be considered as an endorsement of the Issuer and of the quality of the Notes that are the subject of this Prospectus. Investors should make their own assessment as to the suitability of investing in the Notes.

This Prospectus is valid until 3 December 2019. The obligation to supplement the Prospectus in the event of significant new factors, material mistakes or material inaccuracies does not apply when the Prospectus is no longer valid.

Application has been made for the Notes to be admitted to trading on Euronext Paris as of 3 December 2019.

The estimated costs for the admission to trading of the Notes are €21,250 (including AMF fees).

### 2. Corporate authorizations

The Issuer has obtained all necessary corporate and other consents, approvals and authorizations in the Republic of France in connection with the issue of the Notes. The issue of the Notes has been authorized by a resolution of the Board of Directors (*Conseil d'administration*) of the Issuer dated 14 December 2018, and a decision of Mr. Jean-Bernard Lévy, Chief Executive Officer (*Président-Directeur Général*), to issue the Notes, dated 26 November 2019.

### 3. Legal and arbitration proceedings

Save as disclosed in this Prospectus, neither the Issuer nor any of its fully consolidated subsidiaries is or has been involved in any governmental, legal or arbitration proceedings (including any such proceedings which are pending or threatened of which the Issuer is aware), during a period covering at least the previous 12 months which may have, or have had in the recent past, significant effects on the financial position or profitability of the Issuer or any of its fully consolidated subsidiaries.

### 4. No material adverse change and no significant change in the financial or trading position

Since December 31, 2018, and save as disclosed in this Prospectus, there has been no material adverse change in the prospects of the Issuer.

Since September 30, 2019, and save as disclosed in this Prospectus, there has been no significant change in the financial position or financial performance of the Issuer and its fully consolidated subsidiaries.

### 5. Statutory auditors

The 2017 Consolidated Financial Statements and the 2018 Consolidated Financial Statements have been audited by Deloitte & Associés and KPMG SA, independent auditors of the Issuer, as set forth, respectively, in the 2017 Statutory Auditors' Report and the 2018 Statutory Auditors' Report. The 2019 Half-Year Financial Statements have been subject to a limited review by Deloitte & Associés and KPMG SA, as set forth in the 2019 statutory auditors' limited review report. Both Deloitte & Associés and KPMG SA, are members of the *Compagnie nationale des commissaires aux comptes*.

## **6. No conflict of interest**

As far as the Issuer is aware and save for the commission payable to the Managers, no person involved in the issue of the Notes has an interest material to the issue.

At the date of this Prospectus, as far as the Issuer is aware, there are no conflicts of interest material to the issue or offer of the Notes between the duties of the members of the Board of Directors (*Conseil d'administration*) of Electricité de France and their private interests and/or their other duties.

## **7. Clearing**

The Notes have been accepted for clearance through Euroclear France (acting as central depositary), Euroclear and Clearstream. The International Securities Identification Number (“**ISIN**”) for the Notes is FR0013464922 and the Common Code for the Notes is 208775774.

The address of Euroclear France is 66, rue de la Victoire, 75009 Paris, France. The address of Euroclear is Euroclear Bank SA/NV, 1 boulevard du Roi Albert II, B-1210 Brussels, Belgium, and the address of Clearstream is Clearstream Banking, 42 avenue John Fitzgerald Kennedy, L-1855, Grand Duchy of Luxembourg.

## **8. Legal Entity Identifier**

The Legal Entity Identifier (LEI) of the Issuer is 549300X3UK4GG3FNMO06.

## **9. Documents available**

So long as any of the Notes are outstanding, the following documents can be inspected on the website of EDF ([www.edf.com](http://www.edf.com)):

- (i) the articles of association (*statuts*) of the Issuer;
- (ii) a copy of this Prospectus and any document incorporated by reference therein; and
- (iii) any reports, letters and other documents, historical financial information, valuations and statements prepared by any expert at the Issuer’s request any part of which is included or referred to in this Prospectus.

In addition, for as long as any Notes remain outstanding, copies of this Prospectus and any document incorporated by reference therein will be available for viewing on the Issuer’s website ([www.edf.com](http://www.edf.com)) and may be obtained, free of charge, during normal business hours from Electricité de France, 22-30, avenue de Wagram, 75008 Paris, France.

For so long as any Notes remain outstanding, this Prospectus, the URD, the 2018 Document de Référence, the 2017 Document de Référence will be available on the website of the AMF ([www.amf-france.org](http://www.amf-france.org)).

## **10. Websites**

Any websites mentioned or referred to in this Prospectus are for information purposes only and the information to such websites does not form any part of this Prospectus unless that information is incorporated by reference into the Prospectus.

## **11. Credit Ratings**

The Notes have been assigned a rating of BB by S&P Global Ratings Europe Limited (“**S&P**”), Baa3 by Moody’s Investors Service Ltd. (“**Moody’s**”) and BBB by Fitch Ratings Ltd (“**Fitch**”).

As of the date of this Prospectus, the Issuer’s long-term and short-term debt has been respectively rated (i) “A3” and “P-2” with stable outlook by Moody’s, (ii) “A-” and “A-2” with negative outlook by S&P and (iii) “A-” and F2 with stable outlook by Fitch.

Each of S&P, Moody's and Fitch is a credit rating agency established in the European Union and registered under Regulation (EC) No. 1060/2009 of September 16, 2009 (as amended, the "CRA Regulation") and is included in the list of credit rating agencies published by ESMA on its website (<https://www.esma.europa.eu/supervision/credit-rating-agencies/risk>) in accordance with the CRA Regulation. Credit ratings are subject to revision, suspension or withdrawal at any time by the relevant rating organization. A rating is not a recommendation to buy, sell or hold securities and may be subject to suspension, change or withdrawal at any time by the assigning rating agency.

## **12. Yield**

Being undated securities, there is no explicit yield to maturity for the Notes.

The yield in respect of the Notes from the Issue Date to the First Reset Date is 3.125 per cent. *per annum* and is calculated on the Issue Date on the basis of the issue price of the Notes.

It is not an indication of any future yield.

## **13. Net proceeds**

The estimated net amount of proceeds of the Notes amounts to €492,635,000.

## **14. Forward-looking statements**

This Prospectus, including the document incorporated by reference therein, contains certain forward-looking statements and information relating to the Issuer that are based on beliefs of its management, as well as assumptions made by and information currently available to the Issuer on the date of this Prospectus or, if included in any document incorporated by reference herein, on the date of such document. When used in this Prospectus, words such as "anticipate," "believe," "could," "should," "seeks," "estimate," "expect," "intend," "might," "plan," "project," "outlook," "target," "objective" and similar expressions, as they relate to the Issuer and/or its management, and the Group's strategy, plans or intentions, are intended to identify forward-looking statements. Such statements reflect the current views of the Issuer with respect to future events and are subject to certain risks, uncertainties and assumptions. Many factors, a number of which are outside of our control, could cause the actual results, performance or achievements of the Group to be materially different from any future results, performance or achievements that may be expressed or implied by such forward-looking statements, including, among others, risks relating to the regulation of energy markets; changes in the economic and commercial environment; risks relating to the transformation of the Group; risks relating to the overall performance of the Group; risks relating to the nuclear activities of the Group; changes in applicable laws and regulations; as well as changes with respect to the factors set forth under "*Risk Factors*" in this Prospectus. Any forward-looking statements are qualified in their entirety by reference to these factors. Should one or more of these or other risks or uncertainties materialize, or should underlying assumptions prove incorrect, actual results may vary materially from those described in this Prospectus as anticipated, believed, estimated, expected, intended, planned or projected, and therefore the Issuer cautions you against relying on any of these forward-looking statements. The Issuer does not intend or assume any obligation to update or revise these forward-looking statements after the date of this Prospectus in light of developments which differ from those anticipated. The Issuer does not undertake any obligation to update or revise the forward-looking statements included in this Prospectus or incorporated by reference herein, whether as a result of new information, future events or otherwise. The Issuer cautions you that the foregoing list of important factors may not contain all of the material factors that are important to you. These forward-looking statements do not constitute profit forecasts or estimates under the Commission Delegated Regulation 2019/980 supplementing the Prospectus Regulation.

## **15. Stabilization**

In connection with the issue of the Notes, BNP Paribas (the "Stabilizing Manager") (or any person acting on behalf of the Stabilizing Manager) may over-allot Notes or effect transactions with a view to supporting the market price of the Notes at a level higher than that which might otherwise prevail. However, stabilization may not necessarily occur. Any stabilization action may begin on or after the date on which adequate public disclosure of the terms of the offer of the Notes is made and, if begun, may cease at any time, but it must end no later than the earlier of thirty (30) calendar days after the Issue Date and sixty (60) calendar days after the date of the allotment of the Notes. Any stabilization action or over-allotment must be conducted by the relevant

Stabilizing Manager (or any person acting on behalf of the Stabilizing Manager) in accordance with all applicable laws and regulations.

## **16. Benchmark Regulation**

Amounts payable under the Notes from and including the First Reset Date (in respect of the Notes) are calculated by reference to the five year mid swap rate for Euro swap transactions displayed on Reuters screen ICESWAP2, which are provided by ICE Benchmark Administration Limited (the “Administrator”). As at the date of this Prospectus, the Administrator appears on the register of administrators and benchmarks established and maintained by the ESMA pursuant to Article 36 of the Benchmark Regulation.

## **17. Potential conflicts of interest**

The Managers and their affiliates (including their parent companies) have and/or may in the future engage, in the ordinary course of business, in investment banking, commercial banking and/or other financial advisory and commercial dealings with the Issuer and its affiliates and in relation to securities issued by the Issuer or any entity of the Group. They have or may, in the ordinary course of their business, (i) engage in investment banking, trading or hedging activities including in activities that may include prime brokerage business, financing transactions or entry into derivative transactions, (ii) act as underwriters in connection with offering of shares or other securities issued by any entity of the Group or (iii) act as financial advisers to the Issuer or other companies of the Group. In the context of these transactions, the Managers have or may hold shares or other securities issued by entities of the Group. Where applicable, it has or will receive customary fees and commissions for these transactions.

The Managers or their affiliates may have a lending relationship with the Issuer and routinely hedge their credit exposure to the Issuer in a manner consistent with their customary risk management policies. Typically, the Managers and their affiliates would hedge such exposure by entering into transactions which consist of either the purchase of credit default swaps or the creation of short positions in securities, including potentially the Notes. Any such positions could adversely affect future trading prices of the Notes. The Managers and their affiliates may also make investment recommendations and/or publish or express independent research views in respect of such securities or financial instruments and may hold, or recommend to clients that they acquire, long and/or short positions in such securities and instruments.

Each of the Issuer, the Managers and their affiliates may from time to time be engaged in transactions involving an index or related derivatives which may affect the market price, liquidity or value of the Notes and which could be deemed to be adverse to the interests of the Noteholders.

Potential conflicts of interest may arise between the Calculation Agent and the Noteholders, including with respect to certain discretionary determinations and judgments that such Calculation Agent may make pursuant to the Terms and Conditions of the Notes that may influence the amount receivable upon redemption of the Notes. In particular, whilst the Calculation Agent will, as the case may be, have information barriers and procedures in place to manage conflicts of interest, it may in its other banking activities from time to time be engaged in transactions involving an index or related derivatives which may affect amounts receivable by Noteholders during the term and on the maturity of the Notes or the market price, liquidity or value of the Notes and which could be deemed to be adverse to the interests of the Noteholders.

## PERSONS RESPONSIBLE FOR THE INFORMATION CONTAINED IN THE PROSPECTUS

The Issuer hereby certifies, after having taken all reasonable care to ensure that such is the case, that the information contained in this Prospectus is, to its knowledge, in accordance with the facts and contains no omission likely to affect its import.

### Électricité de France

22-30 avenue de Wagram

75008 Paris

France

Duly represented by Mr. Jean-Bernard Lévy

Chief Executive Officer

Signed in Paris, on 29 November 2019



*This Prospectus has been approved on 29 November 2019 under the approval number n° 19-550 by the AMF, in its capacity as competent authority under Regulation (EU) 2017/1129.*

*The AMF has approved this Prospectus after having verified that the information it contains is complete, coherent and comprehensible.*

*This approval is not a favourable opinion on the Issuer and on the quality of the Notes described in this Prospectus. Investors should make their own assessment of the opportunity to invest in such Notes.*

*It is valid until 3 December 2019 and shall be completed until such date by a supplement to the Prospectus in the event of new material facts or substantial errors or inaccuracies.*

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