

Japan Credit Rating Agency, Ltd. (JCR) announces the following credit ratings.

Electricité de France S.A. (security code: -)

<Affirmation>

Foreign Currency Long-term Issuer Rating:	AA
Outlook:	Stable
Bonds:	AA

Rationale

- (1) Electricité de France S.A. (EDF) is the world's leading electricity company engaged in electricity generation, transmission, distribution and retail mainly in France and other major European countries. The ratings primarily reflect the strong support EDF enlists from the French government as an entity that assumes a core role in the country's energy policy, its solid operating base in France and the commitment to contain its net debt. On the other hand, the ratings remain constrained mainly by business risks involved in its overseas operations and the continued high level of investment in comparison to its operating cash flow. The outlook of the ratings is Stable. Given its commitments to a national low carbon strategy and new multi-year energy programme (PPE), the government may continue to provide its strong support to EDF in attaining the targets as it plays a key role not only in nuclear power but also renewable energy at least in the foreseeable future. The earnings performance has been recovering since 2017 with improving financial structure. Barring possible problems pertaining to nuclear generation capacities in France including the issue concerning components manufactured by Framatome and the UK, EDF should be able to sustain its current financial structure as its massive investment will be covered by continuing recovery of earnings and the proceeds from the disposal of assets. In view of heavy investment needs, there can be some organizational changes including the capital structure with the government, though no schedules have been decided yet. JCR will watch how the situation will unfold.
- (2) EDF supplies around 80% of France's electricity output mainly from its 58 low-carbon emitting nuclear reactors and remains dominant in transmission and distribution, as well as retail. Even after the conversion into a limited liability company in 2004, the government has remained its largest shareholder (with an equity stake of 83.7% as of the end June 2019) and law obliges the government to keep its stake higher than 70%. Out of 18 board members, 11 are appointed by the shareholders' meeting which is virtually under government control, with another one representing the French State. Furthermore, the government accepted capital increase and script dividends. The government takes a policy to increase the ratio of renewable energy to total electricity production to 40% by 2030, reduce the ratio of nuclear power to 50% by 2035 and attain carbon neutral by 2050 in France as a whole. Under the plan, 14 nuclear reactors are to be shut down by 2035 subject to certain conditions and electricity capacity of renewable energy will be boosted. JCR holds that EDF will play a central role in the country's energy policy, as the plan needs huge investments and stable electricity supply of nuclear power.
- (3) The installed generation capacities stood at 125.9 GW at the end of June 2019. Nuclear power accounted for 58% of the total, followed by hydro power/other renewable energies with 25% and thermal power with 18%. EDF runs its core business at home, where it makes close to 60% of total sales and more than 70% of total EBITDA. It retains the largest market shares in generation, transmission, distribution and retail, although the share in retail is declining following a partial abolition of the regulated tariffs for corporate customers. Transmission and distribution are regulated business undertaken by its subsidiaries (transmission is undertaken by an equity method subsidiary). Outside France, EDF also does business through its subsidiaries mainly in the UK, Italy and Belgium. It has been constructing one European Pressure Reactor (EPR) in France and two in the UK in partnership with China General Nuclear Power Corporation (CGN). Two reactors in China have started their commercial operations at the end of 2018 and in September 2019 respectively. These projects under construction involved in business risks such as a possible review of the construction costs and commissioning schedules. Since JCR's previous rating review, there has been no major change to the plans except for the EPR in France. Its startup will not be

expected before the end of 2022 due to quality issues of welds. EDF is currently estimating the impact on the schedule and cost. Since adopting its long-term business plan (CAP 2030) in 2015, EDF has been shifting its focus to low carbon power generation, international business development and expansion of energy services. It has been ramping up solar power generation, enhancement of electricity storage capacity and reinforcing nuclear business by Framatome (a subsidiary acquired from Areva) and Edvance.

- (4) EDF's group EBITDA recovered in 2018 and in the first half of 2019. Much of the improvement came from an increased electricity output resulting from the completion of safety inspections of some nuclear reactors required by the regulatory authorities, recovery of electricity prices, and progress on its initiative to cut the cost by EUR 1.1 billion by 2019. The financial structure is also improving following its capital increases, script dividends and progress on disposal of assets (plans to dispose of EUR 10 billion worth of assets by 2020 were completed in 2018, with an additional EUR 2-3 billion worth of disposal scheduled for 2019 and 2020) amid recovering earning performance. The net debt to EBITDA ratio declined from 2.4 at the end of 2017 to 2.2 at the end of 2018. The net D/E ratio also edged down from 0.7 to 0.6 in the same period. After the adoption of IFRS 16, its net debt grew modestly to EUR 37.4 billion at the end of June 2019 from EUR 33.4 billion at the end of 2018. Excluding this accounting impact, these ratios remain unchanged from the end of 2018 to the first half of 2019. EDF will continue to make a significant amount of investment in expansion of renewable energy facilities, the EPR construction, and life extension for the existing nuclear reactors. JCR holds that it will be able to absorb these expenses with the recovery of EBITDA and the proceeds from the disposal of assets.

Toshihiko Naito, Haruna Saeki

Rating

Issuer: Electricité de France S.A.

<Affirmation>

Foreign Currency Long-Term Issuer Rating: AA Outlook: Stable

Issue	Amount (bn)	Issue Date	Due Date	Coupon	Rating
Japanese Yen Bonds – 4th Series (2017)	JPY 107.9	Jan. 26, 2017	Jan. 26, 2027	1.088%	AA
Japanese Yen Bonds – 5th Series (2017)	JPY 3.1	Jan. 26, 2017	Jan. 26, 2037	1.870%	AA
Japanese Yen Bonds – 1st Series (2017) (Green Bonds)	JPY 19.6	Jan. 26, 2017	Jan. 26, 2029	1.278%	AA
Japanese Yen Bonds – 2nd Series (2017) (Green Bonds)	JPY 6.4	Jan. 26, 2017	Jan. 26, 2032	1.569%	AA

Rating Assignment Date: September 10, 2019

The criteria used for identifying matters which serve as assumptions for the assessment of the credit status, and the criteria used for setting of grades indicating the results of the assessments of the credit status are published as "Types of Credit Ratings and Definitions of Rating Symbols" (January 6, 2014) in Information about JCR Ratings on JCR's website (<https://www.jcr.co.jp/en/>).

Outline of methodology for determination of the credit rating is shown as "Sovereign and Public Sector Entities" (November 7, 2014) and "Electric Power" (April 25, 2016) in Information about JCR Ratings on JCR's website (<https://www.jcr.co.jp/en/>).

Japan Credit Rating Agency, Ltd.

Jiji Press Building, 5-15-8 Ginza, Chuo-ku, Tokyo 104-0061, Japan
Tel. +81 3 3544 7013, Fax. +81 3 3544 7026

Information herein has been obtained by JCR from the issuers and other sources believed to be accurate and reliable. However, because of the possibility of human or mechanical error as well as other factors, JCR makes no representation or warranty, express or implied, as to accuracy, results, adequacy, timeliness, completeness or merchantability, or fitness for any particular purpose, with respect to any such information, and is not responsible for any errors or omissions, or for results obtained from the use of such information. Under no circumstances will JCR be liable for any special, indirect, incidental or consequential damages of any kind caused by the use of any such information, including but not limited to, lost opportunity or lost money, whether in contract, tort, strict liability or otherwise, and whether such damages are foreseeable or unforeseeable. JCR's ratings and credit assessments are statements of JCR's current and comprehensive opinion regarding redemption possibility, etc. of financial obligations assumed by the issuers or financial products, and not statements of opinion regarding any risk other than credit risk, such as market liquidity risk or price fluctuation risk. JCR's ratings and credit assessments are statements of opinion, and not statements of fact as to credit risk decisions or recommendations regarding decisions to purchase, sell or hold any securities such as individual bonds or commercial paper. The ratings and credit assessments may be changed, suspended or withdrawn as a result of changes in or unavailability of information as well as other factors. JCR receives a rating fee paid by issuers for conducting rating services in principle. JCR retains all rights pertaining to this document, including JCR's rating data. Any reproduction, adaptation, alteration, etc. of this document, including such rating data, is prohibited, whether or not wholly or partly, without prior consent of JCR.

JCR is registered as a "Nationally Recognized Statistical Rating Organization" with the U.S. Securities and Exchange Commission with respect to the following four classes. (1) Financial institutions, brokers and dealers, (2) Insurance Companies, (3) Corporate Issuers, (4) Issuers of government securities, municipal securities and foreign government securities.

JCR publishes its press releases regarding the rating actions both in Japanese and in English on the same day. In case that it takes time to translate rating rationale, JCR may publicize the summary version, which will be replaced by the full translated version within three business days. (Regarding Structured Finance products, JCR only publicize the summary version in English.)

Copyright © Japan Credit Rating Agency, Ltd. All rights reserved.



INFORMATION DISCLOSURE FORM

Japan Credit Rating Agency, Ltd.

Disclosure Required by Paragraph (a)(1)(ii) of Rule 17g-7

Issuer:	Electricité de France S.A.
Rating Publication Date:	September 13, 2019

1

The Symbol, Number, or Score in the Rating Scale used to Denote Credit Rating Categories and Notches and, the Identity of the Obligor or the Identity and a Description of the Security or Money Market Instrument as Required by Paragraph (a)(1)(ii)(A) of Rule 17g-7

- Please see the news release.

2

The version of the procedure or methodology used to determine the credit rating; as Required by Paragraph (a)(1)(ii)(B) of Rule 17g-7

- Please see the news release.

3

The Main Assumptions and Principles used in Constructing the Procedures and Methodologies used to Determine the Credit Rating as Required by Paragraph (a)(1)(ii)(C) of Rule 17g-7

- The credit rating methodology assumes, in principle, to be applied to assess the likelihood of a given debt payment in light of its issuer's condition and business environment, etc. in the relevant future. There is certain limitation, however, in the time horizon that the rating foresees.
- The credit rating methodology assumes, in principle, that the factors posted in the below are particularly important for such likelihood to be determined, and that the rating determination is made by evaluating each of them not only quantitatively but also employing qualitative analyses.

A) Legal Protection and Support Provided by the Government

The likelihood of a given debt payment is highly conditional to the issuer's legal protection provided by the government, personnel and capital relationship with the government, importance in the government's policy, credit enhancement, and other forms of the government's supporting policy, framework and the strength thereof.

B) Business Bases

The likelihood of a given debt payment is highly conditional to its issuer's business bases - how they can be maintained/ expanded into the future and thereby secure earnings and cash flows in adequacy and in a sustainable way.

C) Financial Grounds and Asset Quality

The likelihood of debt payment is highly dependent on the degree of the issuer's indebtedness and loss absorption capacity in terms of equity capital. Also notable is that a financial institution might see a significant loss of financial grounds as a result of changes in value of the assets under its possession.

D) Liquidity Positions

The likelihood of debt payment is highly dependent on the adequacy of the issuer's cash and other sources of repayment (liquidity positions).

E) Order of Seniority in Debt Payment

The likelihood of debt payment can be different between given debts of the same issuer. The likelihood of debt payment for an individual debt is dependent on the issuer's discretion, and/ or its rank relative to other debts of the same issuer in the order of seniority in principal/ interest payment which is determined by design as financial product or by laws, etc.

4 The Potential Limitations of the Credit Rating as Required by Paragraph (a)(1)(ii)(D) of Rule 17g-7

- The credit rating herewith presented by JCR is its summary opinion with regard to the likelihood of given debt payment and hence not necessarily a perfect representation of such likelihood. The credit rating is not intended to estimate the probability of default or the loss on given default, either.
- The objective of the credit rating herewith presented does not include any concerns other than the likelihood of debt payment, such as risks of price changes, market liquidity, etc.
- The credit rating herewith presented is necessary to be reviewed along with possible changes of the issuer of rated objects in its business performance and/ or circumstances which include regulatory environment, and hence subject to possible alteration.

5 Information on the Uncertainty of the Credit Rating as Required by Paragraph (a)(1)(ii)(E) of Rule 17g-7

- The information used for the determination of credit rating as herewith presented is obtained by JCR from the issuer of rated objects and other sources that JCR trusts in terms of accuracy and reliability but possibly contains errors due to human, non-human or other causes. Consequently, the credit rating determined on the grounds of such information does not constitute, explicitly or implicitly, any representation or warrant of JCR on the information itself or any consequences of its use in terms of accuracy, relevance, timeliness, wholeness, market value, or usefulness for any specific purposes.

6 Use of Due Diligence Services of a Third Party in Taking the Rating Action as Required by Paragraph (a)(1)(ii)(F) of Rule 17g-7

- There is no use of any third-party due diligence service in the determination of the credit rating herewith presented.

7 Use of Servicer or Remittance Reports to Conduct Surveillance of the Credit Rating Required by Paragraph (a)(1)(ii)(G) of Rule 17g-7

- There is no use of any servicer or remittance report to conduct surveillance of the credit rating herewith presented.

8 The Types of Data Relied Upon for the Purpose of Determining the Credit Rating as Required by Paragraph (a)(1)(ii)(H) of Rule 17g-7

- The information posted in the below, which includes data, is used for the determination of the credit rating herewith presented.
- A) Audited financial statements presented by the rating stakeholders
- B) Explanations of business performance, management plans, etc. presented by the rating stakeholders

9 Overall assessment of the Quality of Information Available and Considered in Determining the Credit Rating as Required by Paragraph (a)(1)(ii)(I) of Rule 17g-7

- JCR holds its basic policies for securing the quality of information as a base of due diligence for the determination of credit ratings. The information used as a base for the determination of credit rating herewith presented satisfies such policies, which include the audit by an independent auditor, the publication by the issuer or some independent media or, otherwise, JCR analyst's scrutiny, etc.
- JCR sees no particular weakness in the quality of information used for the determination of the credit rating herewith presented as compared to the information used in other cases of the credit rating for comparable issuers or ratable objects.

10 Information Relating to Conflicts of Interest as Required by Paragraph (a)(1)(ii)(J) of Rule 17g-7

- JCR receives payment of compensation for the determination of the credit rating herewith presented from either one of those parties who are issuer, underwriter, depositor or sponsor.
- JCR did not receive in the last fiscal year in the past payment of compensation from the same party for any kind of JCR's service other than the determination of credit rating, such as one in the ancillary business.

11 Explanation or Measure of the Potential Volatility of the Credit Rating as Required by Paragraph (a)(1)(ii)(K) of Rule 17g-7

A) Legal Protection and Support Provided by the Government

The credit rating is subject to alteration if there is a change in the issuer's legal support by the government, personnel or capital relationship with the government, importance in the government's policy, credit enhancement and other forms of the government's supporting policy, framework and the strength thereof. The resultant alteration of the credit rating is usually by a notch, with possibility of a few notches if and when the change is large.

B) Business Bases

The credit rating is subject to alteration if there is improvement or deterioration of the issuer's business bases, since its revenue, etc. may improve or deteriorate by the change in its business management policies, clients' preferences, competitive situation, or a technological innovation. The resultant alteration of the credit rating is usually by a notch, with possibility of a few notches if and when the change in the business bases is large.

C) Financial Grounds and Asset Quality

The credit rating is subject to alteration if the issuer increases/ decreases its debt/ capital or vice versa and thereby makes its individual debt payment liability less or more bearable and its loss absorption capacity into the future decreased or increased. Also, the changes in the quality of asset under the issuer's holding may affect the credit rating, since such changes could raise or lower the likelihood of future loss of the issuer's financial grounds. The resultant alteration of the credit rating is usually by a notch, with possibility of a few notches if and when the change in the financial grounds and/ or asset quality is large.

D) Liquidity Positions

The credit rating is subject to alteration if there is a change in the issuer's financial management policy or in the relations with fund procurement sources and the change thereby makes its liquidity positions improve or deteriorate. The resultant alteration of the credit rating is usually by a notch, with possibility of a few notches if and when the change is large.

E) Order of Seniority in Debt Payment and Non-Payment Forgiven by Contract

The credit rating is subject to alteration if there is a change in the rated debt's status in the order of seniority relative to other debts caused by the improvement/ deterioration of the issuer's financial condition. The resultant alteration of the credit rating is usually a notch, with possibility of a few notches if and when the change is large. Also, in case of the financial products for which non-payment of interest/ principal is contractually permissible, the credit rating is subject to alteration if and when the likelihood of such non-payment is projected to increase or decrease. The resultant alteration of the credit rating could be by a notch but often as much as a few notches.

F) Creditworthiness of the Government, etc. that Constitute the Framework of Credit Enhancement

The credit rating is subject to alteration if there is a change in the creditworthiness of the government, etc. that constitute the framework of credit enhancement. The resultant alteration of the credit rating is usually a notch, with possibility of a few notches if and when the change on such framework is exceptionally large.

G) Rise and Fall in General Economy and Markets

The credit rating is subject to alteration if there is a rise/ fall in the general economy and/ or the markets inducing the issuer's revenues/ expenses to increase/ decrease and vice versa, etc. The resultant alteration of the credit rating is usually by a notch, with possibility of a few notches if and when the change is exceptionally large.

H) Various Events

The credit rating is subject to alteration on occurrence of various events, such as change in the issuer's major shareholders, M&A and other organizational change, accident, violation of the law, litigation, legal/ regulatory change, natural disaster, etc., which are unforeseeable at the time when the credit rating is determined, causing a significant change on the issuer's business bases, financial grounds, etc. The resultant alteration of the credit rating could be by a notch but more often than not as much as a few notches.

12

Information on the Content of the Credit Rating, Including the Historical Performance of the Credit Rating and the Expected Probability of Default and the Expected Loss in the Event of Default as Required by Paragraph (a)(1)(ii)(L) of Rule 17g-7

- Historical records of the credit rating herewith presented are posted in the end of this paper.
- The credit rating herewith presented by JCR is its summary opinion with regard to the likelihood of given debt payment and hence not necessarily a perfect representation of such likelihood. The credit rating is not intended to estimate the probability of default or the loss on given default, either.
- Facts of the probability of default are posted as Form NRSRO Exhibit 1 on the JCR website under the URL:

<https://www.jcr.co.jp/en/service/company/regu/nrsro/>

13

Information on the Sensitivity of the Credit Rating to Assumptions Made as Required by Paragraph (a)(1)(ii)(M) of Rule 17g-7

A) Legal Protection and Government Support

The credit rating herewith presented could be changed if and when the assumptions made at the time of its determination turn out to be inaccurate with regard to the issuer's legal protection provided by the government, personnel and capital relationship with the government, importance in the government's policy, credit enhancement and other forms of the government's supporting policy, framework and the strength thereof. The resultant change of the credit rating is most likely by one notch, as JCR stipulates, but possibly as much as a few notches if the change in the government's supporting policy is significant.

B) Business Bases

The credit rating herewith presented could be changed if and when the assumptions made at the time of its determination turn out to be inaccurate with regard to the issuer's business bases and powers of earning or cash flow generation, etc. The resultant change of the credit rating is most likely by a notch, as JCR speculates, but possibly as much as a few notches if the development is rapid in improvement or deterioration of the issuer's business bases on some drastic change in the operational environments, etc.

C) Financial Grounds and Asset Quality

The credit rating herewith presented could be changed if and when the assumptions made at the time of its determination turn out to be inaccurate with regard to the issuer's financial grounds and asset quality. The resultant change of the credit rating is most likely by a notch, as JCR speculates, but possibly as much as a few notches if the development is rapid in improvement or deterioration of the issuer's financial grounds and/ or asset quality on some drastic change in its business bases.

D) Liquidity Risks

The credit rating herewith presented could be changed if and when the assumptions made at the time of its determination turn out to be inaccurate with regard to the issuer's liquidity positions. The resultant change of the credit rating is most likely by a notch, as JCR speculates, but possibly as much as a few notches if the development is rapid in improvement or deterioration of the issuer's liquidity positions on some drastic change in its financial management policy or relations with fund procurement sources, etc.

E) Creditworthiness of the Government, etc. that Constitute the Framework of Credit Enhancement

The credit rating herewith presented could be changed if and when the assumptions made at the time of its determination turn out to be inaccurate with regard to the creditworthiness of the government, etc. that constitute the framework of credit enhancement. JCR assumes the resultant change of the credit rating is most likely by a notch. The change could be as much as a few notches should the creditworthiness of said government, etc. change so greatly.

14

Information on the Representations, Warranties, and Enforcement Mechanisms of an Asset-backed Security as Required by Paragraph (a)(1)(ii)(N) of rule 17g-7

- The credit rating herewith presented is not for an ABS product, and hence no relevant issue.

Japan Credit Rating Agency, Ltd.

Jiji Press Building, 5-15-8 Ginza, Chuo-ku, Tokyo 104-0061, Japan
Tel. +81 3 3544 7013, Fax. +81 3 3544 7026

The Historical Performance of the Credit Rating

Issuer Name	Issue Name	Publication Date	Rating	Outlook/Direction
Electricite de France S.A.	Issuer(Long-term)(FC)	June 9, 2009	AA+	Stable
Electricite de France S.A.	Issuer(Long-term)(FC)	August 11, 2010	AA+	Stable
Electricite de France S.A.	Issuer(Long-term)(FC)	March 7, 2012	AA+	Stable
Electricite de France S.A.	Issuer(Long-term)(FC)	January 31, 2013	AA+	Stable
Electricite de France S.A.	Issuer(Long-term)(FC)	July 24, 2013	AA+	Stable
Electricite de France S.A.	Issuer(Long-term)(FC)	September 4, 2014	AA+	Stable
Electricite de France S.A.	Issuer(Long-term)(FC)	October 30, 2015	AA+	Stable
Electricite de France S.A.	Issuer(Long-term)(FC)	October 13, 2016	AA	Stable
Electricite de France S.A.	Issuer(Long-term)(FC)	September 1, 2017	AA	Stable
Electricite de France S.A.	Issuer(Long-term)(FC)	August 31, 2018	AA	Stable
Electricite de France S.A.	Japanese Yen Bonds 4th Series (2017)	January 20, 2017	AA	
Electricite de France S.A.	Japanese Yen Bonds 4th Series (2017)	September 1, 2017	AA	
Electricite de France S.A.	Japanese Yen Bonds 4th Series (2017)	August 31, 2018	AA	
Electricite de France S.A.	Japanese Yen Bonds 1st Series (2017)	January 20, 2017	AA	
Electricite de France S.A.	Japanese Yen Bonds 1st Series (2017)	September 1, 2017	AA	
Electricite de France S.A.	Japanese Yen Bonds 1st Series (2017)	August 31, 2018	AA	
Electricite de France S.A.	Japanese Yen Bonds 5th Series (2017)	January 20, 2017	AA	
Electricite de France S.A.	Japanese Yen Bonds 5th Series	September 1, 2017	AA	
Electricite de France S.A.	Japanese Yen Bonds 5th Series	August 31, 2018	AA	
Electricite de France S.A.	Japanese Yen Bonds 2nd Series (2017)	January 20, 2017	AA	
Electricite de France S.A.	Japanese Yen Bonds 2nd Series (2017)	September 1, 2017	AA	
Electricite de France S.A.	Japanese Yen Bonds 2nd Series (2017)	August 31, 2018	AA	

Attestation Required by Paragraph (a)(1)(iii) of Rule 17g-7

I, Atsushi Masuda, have responsibility to this Rating Action and to the best of my knowledge:

- A) No part of the credit rating was influenced by any other business activities.
- B) The credit rating was based solely upon the merits of the obligor, security, or money market instrument being rated.
- C) The credit rating was an independent evaluation of the credit risk of the obligor, security, or money market instrument.



Atsushi Masuda
General Manager of International Rating Department

Japan Credit Rating Agency, Ltd.

Jiji Press Building, 5-15-8 Ginza, Chuo-ku, Tokyo 104-0061, Japan
Tel. +81 3 3544 7013, Fax. +81 3 3544 7026