

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 business 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. The government will continue to provide its solid support to EDF in line with the country's new energy policy as it plays a key role not only in nuclear power but also renewable energy. The improved earnings performance and financial structure is likely to deteriorate in 2020 due mainly to a sharp fall of power generation on the effect resulted from the COVID-19 pandemic. Barring prolonged pandemic and extended outage of nuclear reactors, the earning performance will likely to improve gradually from 2021 reflecting an increase in power generation on the economic recovery and the financial recovery measures. In view of heavy investment needs, there can be some organizational changes within the next few years including the capital relationship with the government, though no schedules have been decided yet. JCR will watch how the relationship with the government will evolve.
- (2) The government has remained its largest shareholder (with an equity stake of 83.6% as of June 2020) and law obliges the government to keep its stake at least 70%. Out of 18 board members, 11 are appointed by the shareholders' meeting which is virtually under government control, with another one representing the government. Furthermore, the government accepted capital increase and script dividends in the recent years. Following the implementation of the National Low Carbon Strategy and new Multi-Year Energy Program, the government made a commitment to increase the ratio of renewable to total electricity production to 40% by 2030, reduce the ratio of nuclear power to 50% by 2035 and attain carbon neutral by 2050. Under the program, 14 nuclear reactors (The decision to shut down two reactors has already been effective in the first half of 2020) are to be shut down by 2035 subject to certain conditions and electricity capacity of renewable will increase sharply. JCR holds that EDF will play a key role in the country's energy policy, as the program needs huge investments of renewable, electricity storage and stable electricity supply of nuclear power. Under its business plan (CAP 2030), EDF has been shifting its focus to low carbon power generation, international business development and expansion of energy services. It has been ramping up energy supply for electric vehicles, expansion of electricity storage and solar power generation capacity.
- (3) EDF supplies around 80% of France's electricity output mainly from its 56 low-carbon nuclear reactors and remains dominant in transmission and distribution with retaining the largest retail provider. The installed consolidated generation capacities stood at 120.1 GW at the end of June 2020. Nuclear power accounted for 59% of the total, followed by hydro power/other renewable energies with 24% and thermal power with 16%. French power generation, distribution and retail are EDF's core business which makes around 60% of total sales with over 70% of total EBITDA (transmission is undertaken by an equity method subsidiary) in 2019. Transmission and distribution are regulated business undertaken by its subsidiaries. It retains the largest market shares in generation, transmission, distribution and retail, although the share in retail is declining due mainly to a partial abolition of the regulated tariffs for corporate customers. Outside France, EDF also does business through its subsidiaries mainly in the UK, Italy and Belgium. It has been constructing one European Pressure Reactor in France and two in the UK through a joint venture

with China General Nuclear Power Corporation. 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, construction costs of both projects were revised upwardly by around 10%. We consider that the revised costs are still manageable.

- (4) EDF's group EBITDA in 2019 increased by 12% due to a rise in market energy price and the regulated tariff amid decreased volume of power generation on the extended outages resulted from operational issues of reactors. The net debt to EBITDA ratio rose from 2.2 at the end of 2018 to 2.5 at the end of 2019. The net D/E ratio also edged up from 0.6 to 0.7. After excluding the impact of IFRS 16, the financial structure practically remained unchanged from the previous year. In the first half of the 2020, which was affected by the impact of the pandemic, sales decreased by 5% from the year earlier due to a sharp fall in power generation amid an increase in regulated sales tariffs, and EBITDA decreased only moderately by 2% (Excluding the impact of the pandemic, sales decreased marginally by 1% and EBITDA increased by 10%). Considering the impact of the pandemic, EDF revised its 2020 annual forecast of nuclear output in France to 300TWh from an initial 375-390TWh in April 2020. However, EDF revised it upwardly to 315-325TWh in July 2020. The revision reflects the current recovery of electricity demand and the progress of the measures. Nonetheless, earnings performance and financial structure in 2020 will deteriorate assuming the current volume forecast, but deterioration will be somewhat mitigated by the additional financial recovery measures including cost reduction, asset disposal, and maintenance of investment volume. In 2021 and 2022, EDF is expected to recover the annual nuclear output in France to 330-360TWh. If the pandemic and the extended outage of reactors will not prolong, earning performance and financial structure is likely to recover by 2022 to the level comparable to before the pandemic. 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 cash flow 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: August 27, 2020

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" (May 29, 2020) in Information about JCR Ratings on JCR's website (<https://www.jcr.co.jp/en/>).

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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.)

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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 1, 2020

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.

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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/>

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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.

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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.

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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.	Issuer(Long-term)(FC)	September 13, 2019	AA	Stable
Electricite de France S.A.	Japanese Yen Bonds 4th Series	January 20, 2017	AA	
Electricite de France S.A.	Japanese Yen Bonds 4th Series	September 1, 2017	AA	
Electricite de France S.A.	Japanese Yen Bonds 4th Series	August 31, 2018	AA	
Electricite de France S.A.	Japanese Yen Bonds 4th Series	September 13, 2019	AA	
Electricite de France S.A.	Japanese Yen Bonds 1st Series	January 20, 2017	AA	
Electricite de France S.A.	Japanese Yen Bonds 1st Series	September 1, 2017	AA	
Electricite de France S.A.	Japanese Yen Bonds 1st Series	August 31, 2018	AA	
Electricite de France S.A.	Japanese Yen Bonds 1st Series	September 13, 2019	AA	
Electricite de France S.A.	Japanese Yen Bonds 5th Series	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 5th Series	September 13, 2019	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	
Electricite de France S.A.	Japanese Yen Bonds 2nd Series (2017)	September 13, 2019	AA	

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

I, Toshihiko Naito, 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.



Toshihiko Naito
General Manager of International Rating Department

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