

22 March 2021 – Neuss, Germany

### Rating Action / Update:

**Creditreform Rating has confirmed the unsolicited corporate issuer and issue ratings of Électricité de France S.A. at A-. The outlook remains negative.**

Creditreform Rating (CRA) has confirmed the unsolicited, public corporate issuer rating of Électricité de France S.A. (hereafter also referred to as 'EDF' or 'the Company'), as well as the unsolicited corporate issue rating of the long-term local currency senior unsecured notes issued by Électricité de France S.A. at A-. The outlook remains **negative**. We also refer to the previous year's report dating from 29 April 2020, which contains further essential information regarding Électricité de France S.A.

### Current relevant factors for the rating

The following considerations were of specific relevance for the rating assessment:

- Leading position and systemic importance in France
- Partly regulated activities (electricity transport and distribution)
- Geographical diversification and diversification of electricity generation sources
- Largely CO<sub>2</sub>-neutral assets
- Support from the French state, both potential and de facto (consent to scrip dividend)
- Proven access to financial markets
- Aging electricity generation fleet
- Decrease in earnings due to the COVID-19 pandemic, estimated impact on Group EBITDA as of 31 December 2020 amounts to EUR -1,479 million
- Increase in nuclear and pension provisions due to lower discount rates
- Revision of nuclear production for 2020-2022 and complete restructuring of the maintenance contingency plan due to the COVID-19 pandemic
- Significant decrease in return on investment
- Substantial investments, high demand due to the energy transition, ambitious plans for renewable energies
- Operational risks, especially related to nuclear energy
- Lack of transparency on the implementation of the nuclear market reform in France

### ESG-criteria:

CRA generally considers ESG factors (environment, social and governance) within its rating decisions. In the case of Électricité de France S.A. we have not identified any ESG factor with significant influence.

Nonetheless, sustainability issues are central to the EDF Group's strategic and operational development in the short term, but especially in the medium and long term. In 2020, the EDF Group has set itself the ambitious climate target of becoming carbon neutral by 2050. The Company aims to reduce the Group's direct and indirect emissions (scope 1 and 2) by 40-50% between 2017 and 2030, and (scope 3) by 28% between 2019 and 2030. In order to achieve this goal, EDF intends to improve the availability of its power plants, strengthen its hydropower potential by renovating existing plants, and to expand the use of other renewable energies. The Company is also targeting a phasedown for coal-powered electricity generation worldwide by 2030. Even

#### Analysts

Natallia Berthold  
Lead Analyst  
N.Berthold@creditreform-rating.de

Rudger van Mook  
Co-Analyst  
R.vanMook@creditreform-rating.de

Neuss, Germany

though we derive financial risks for the EDF Group from these goals, we see the Company as a whole on a satisfactory path. This also includes the issuance of green bonds and the development of renewable energies, in particular wind, solar and hydropower. The Group aims to double its global production from renewable energy sources from 28 GW to 50 GW by 2030 and plans to phase out a part of its nuclear power production.

We believe EDF is moderately well-positioned compared to similar companies given its low variable costs and low direct CO<sub>2</sub> emissions from nuclear power plants (2019: 55g/kWh, the target is 35g/kWh by 2030) and hydropower, as well as the growing contribution of renewables. Due to the Company's specific goals and active measures to improve sustainability aspects, we currently consider the effects of ESG factors to be limited. However, in addition to the other aspects mentioned above, our overall judgement of the assessment area has contributed positively to the rating.

A general valid description of Creditreform Rating AG, as well as a valid description of corporate ratings for understanding and assessing ESG factors in the context of the credit rating process, can be found [here](#).

## Rating result

Électricité de France S.A. is a leading electricity Company based in France. The Group integrates the businesses of power generation, distribution, transmission, supply and trading, as well as energy services. With a global generation of 501.9 TWh, the Group has one of the largest generation fleets in the world, consisting of an installed capacity of 60% nuclear, 18% hydropower, 10% gas, 6% renewable and 6% fuel and oil. The Group comprises approx. 60 companies in America, Europe and Asia.

The current rating attests Électricité de France S.A. a high level of creditworthiness, representing a low default risk. This rating assessment is based on the Group's scale and diversification profile. Additionally, the Company's business development in 2020, which suffered against the backdrop of the COVID 19 pandemic and an overall economically challenging market situation, was in line with our expectations. The macroeconomic developments, reflecting low market prices for electricity and gas as well as a decline in demand for electricity, led to a reduction in power generation capacity as well as the impairment effect, and thus significantly burdened the Group's operating business in the 2020 financial year. Despite the deterioration of individual financial ratios, we noted that the overall result of the financial analysis remained stable, which is a crucial factor in our rating assessment. Given that the French government (CRA rating for the French Republic: **AA / negative**, 27 November 2020) owns 83.68% of the Company's shares, and based on our rating method for state-affiliated companies, we assume that the French government will continue to provide support if necessary, which has a stabilizing effect on the rating.

## Outlook

The one-year outlook for the rating is **negative**. This assessment is based on our expectation that the Company's business development in 2021, which we expect will deviate from the original planning due to the ongoing negative impact from the COVID-19 pandemic and an overall economically challenging market situation. At the same time, EDF's financial flexibility is limited by its high fixed costs and significant investment plan, which includes high maintenance and modernization expenses for existing nuclear power plants and investments in the new nuclear power plants, renewable energy development and the distribution network. In addition, the further construction delays and cost overruns in the new nuclear projects could increase the

Please note:

The scenarios are based on information available at the time of the rating. Within the forecast horizon, circumstances may occur that could lead to a change of the rating out of the indicated range.

already considerable investment outlay. This could put additional pressure on the Group's cash flow and lead to an increase in debt. We expect that, over time, the financial metrics of the Group will deteriorate, necessitating a downgrade of the corporate issuer rating.

**Best-case scenario: A-**

In our best-case scenario for one year, we assume a rating of **A-**. We believe that, given the Group's current financials, the challenging market environment and remaining uncertainty in relation to further development of the COVID-19 pandemic and the accompanying containment measures, that an update of the unsolicited corporate issuer rating is currently unlikely.

**Worst-case scenario: BBB+**

In our worst-case scenario for one year, we assume a rating of **BBB+**. Further production cuts as well as persistently low electricity prices may put EDF's cash flow under further pressure from 2021 onwards, affecting the Company's ability to cover its investments, which in turn will lead to higher indebtedness. Further significant investments could negatively impact the Group's financial key figures and the Company's credit quality. A change in our assessment of the unsolicited sovereign rating for the French Republic may also lead to a rating change for EDF.

## Business development and outlook

Table 1: Financials | Source: Électricité de France S.A. Consolidated financial statements 2020, standardized by CRA

Électricité de France S.A. Selected key figures of the financial statement analysis Basis: Consolidated financial statements of 31.12. (IRFS)	CRA standardized figures <sup>1</sup>	
	2019	2020
Sales (million EUR)	71,317.00	69,031.00
EBITDA (million EUR)	16,819.00	14,466.00
EBIT (million EUR)	6,799.00	3,628.00
EAT (million EUR)	5,182.00	615.00
EAT after transfer (million EUR)	5,155.00	650.00
Total assets (million EUR)	298,613.50	300,724.50
Equity ratio (%)	17.89	17.68
Capital lock-up period (days)	65.83	62.92
Short-term capital lock-up (%)	51.33	50.40
Net total debt / EBITDA adj. (factor)	12.77	14.10
Ratio of interest expenses to total debt (%)	2.05	2.24
Return on Investment (%)	2.17	1.21

The fiscal year 2020 was dominated by the effects of the COVID-19 pandemic, which led to massive restrictions on the French and global economy. This also had a significant impact on nuclear energy production in France, as well as energy sales and services worldwide, resulting in a significant drop in sales and earnings. Nuclear production in France decreased by 44.1 TWh compared to 2019, bringing it to 335.4 TWh in 2020. As a result of the health restrictions, the duration

<sup>1</sup> For analytical purposes, CRA adjusted the original values in the financial statements in the context of its financial ratio analysis. For example, when calculating the analytical equity ratio, deferred tax assets, goodwill (entirely or partly), and internally-generated intangible assets are subtracted from the original equity, whilst deferred tax liabilities are added. Net total debt takes all balance sheet liabilities into account. Therefore, the key financial figures shown often deviate from the original values of the company.

of outages in Flamanville 1 and 2 as well as in Paluel 2 increased, calling for a revision of the maintenance outage plan. In addition, the two reactors in Fessenheim were shut down.

In the 2020 financial year, the EDF Group generated sales of EUR 69.0 billion (2019: EUR 71.3 billion, absolute -3.2%) with 161,203 employees. The decrease in sales is mainly due to a decline in realized electricity prices in the Italy segment (-21.5%), wholesale prices and Group capacities in the Other Activities segment (-22.0%), market prices for electricity and gas for sale to private and industrial customers in the Other International segment (-10.0%), as well as the impact of the COVID-19 pandemic and low nuclear power output in the UK segment (-5.6%). Overall, the COVID-19 pandemic is estimated to have had a negative impact of EUR 2.3 billion in the Group's sales. All of these negative effects were partially offset by successive increases in the regulated "Blue" tariff (electricity sales tariffs), capacity auction sellers, the results of the French subsidiaries (Generation and Supply segment (+ 1.8%)), the favorable price effects as a result of the revisions of the TURPE 5 transmission tariffs in France), the Regulated Activities segment (+ 0.9%), and generally favorable wind and sun conditions in the EDF Renewables segment (+ 1.1%).

EBITDA amounted to EUR 14.5 billion (2019: EUR 16.8 billion, absolute -14.0%) and EBIT to EUR 3.6 billion (2019: EUR 6.8 billion, absolute - 51.1%). Despite the significant decline in fuel and energy purchases by EUR 2,666 million (-7.6%) due to favorable gas prices, lower gas and electricity volumes, as well as fuel consumption, the main factors behind the retrospective development were the net changes in the fair value of energy and commodity derivatives, excluding trading activities, of EUR -175 million (2019: EUR +642 million); the impairment, primarily of nuclear activities in the UK of EUR 799 million (2019: EUR 403 million); and other expenses amounting to EUR 487 million, of which EUR 405 million was accounted for repair work at the Flamanville 3 (2019: EUR 185 million). In addition, net depreciation and amortization rose by EUR 818 million to EUR 10.8 billion in 2020 (2019: EUR 10.0 billion). This increase was driven by the commissioning of new assets in the core fleet, investments in interconnections and network reinforcements in France, and accelerated depreciation of Hunterston B, Dungeness and Hinkley Point B in the United Kingdom. EDF's EAT after transfer decreased to EUR 650 million (2019: EUR 5,155 million, -87.4%). With regard to the weaker operating outcome, a negative financial result of EUR 1,910 million (2019: EUR +412 million) was a major factor in the Group's strong decline in earnings, which was mainly due to the drop in the fair value of the dedicated assets portfolio and an increase in the discounting costs for nuclear provisions in France. Due to the lower EAT, income taxes fell accordingly from EUR 1,532 million to EUR 945 million. Adjusted for non-recurring effects, the consolidated net profit in 2020 amounted to EUR 1,969 million (2019 without one-off effects: EUR 3,871 million), which corresponds to a decrease of 49.1% compared to the previous year. The payout ratio for the 2020 financial year was 45% (excluding one-off effects). The French state has already committed to a dividend payment.

The Company's total capital and asset structure could be improved, as the Company has a relatively low adjusted equity ratio of 17.68% (2019: 17.89%) and a modest asset coverage ratio of 76.41% (2019: 78.34%).

As of 31 December 2020, EDF's financial liabilities totaled EUR 53.6 billion (2019: EUR 55.6 billion), consisting mainly of bonds in the amount of EUR 50.2 billion (2019: EUR 52.5 billion). The ratio of the analytical key figure Net total debt / EBITDA adj. is high at 14.10 (2019: 12.77), mainly due to the increased nuclear and pension provisions in total debt due at lower discount rates, but also due to the lower EBITDA adj.

As of 31 December 2020, the Group's liquidity, consisting of cash and cash equivalents, amounted to EUR 21.3 billion and available credit lines totaling EUR 11.1 billion, of which EUR

5.5 billion were credit lines indexed according to ESG criteria. For 2021, the Group's planned debt repayments (capital and interest) are expected to be EUR 11.5 billion, including EUR 4.3 billion for bonds (excluding hybrid bonds). We do not expect liquidity constraints in the short term, but the general economic consequences caused by the COVID-19 pandemic could lead to a rise in non-recovery of customer receivables, or cancellations by counterparties.

At the end of 2020, the Group reported a net cash flow from operating activities of EUR 12.9 billion (2019: EUR 14.0 billion), and a net cash flow from investment activities of EUR 12.9 billion (2019: EUR 15.7 billion), with nearly 94% of investments meeting the Group's low-carbon targets. This time, the net cash outflow in 2020 slightly exceeds the net cash flow from operating activities compared to previous years, enabling the Company to retain its current debt level. We do expect the level of indebtedness to increase over the coming year, as we expect an increase in the current investment level, which might put additional pressure on the Group's cash flow.

For the 2021 financial year, the Company is aiming for an EBITDA of EUR 17 billion, while maintaining net financial debt / EBITDA below 3 (EDF's calculation). A reduction in operating costs without inflation should be achieved by 2022 compared to 2019 by a total of EUR 500 million. For the period 2020-2022, EDF plans divestments of EUR 3 billion and a dividend payout ratio based on net income excluding one-off effects of 45-50% for both 2021 and 2022. We consider the Group's expectations to be ambitious, especially as the pandemic and its economic effects continue to pose high risks. Further negative economic risks cannot be ruled out.

The Group's aging nuclear fleet suspends its power generation as a result of operational disruptions, as well as a more frequent occurrence of planned and unexpected outages, making it difficult to plan the availability of nuclear production. The French nuclear fleet needs to be upgraded, a task associated with an extensive investment program (Grand Carénage). The aim of this program is to continue the safe operation of the Group's nuclear power plants for beyond the next 40 years. According to a statement published by the French Autorité de sûreté nucléaire (ASN) in February 2021, it is possible to extend the operating life of EDF's 32 nuclear power plant units of the 900 MW series from 40 to 50 years. The costs of the Grand Carénage program for extending the operating life of the 900 MW series for the period up to 2025 are estimated at EUR 49.4 billion.

The French energy program "Programmation pluriannuelle de l'énergie (PPE)" has set itself the goal of reducing the share of nuclear energy in the country's electricity consumption from currently 72% to 50% by 2035, while at the same time expanding capacity from renewable energies and offshore wind energy. EDF's strategy is fully in line with this goal. By 2035, 14 of the 56 nuclear power plants currently in operation should go offline. Furthermore, electricity generation from coal is to be discontinued in all geographic regions by 2030. In addition, construction of several offshore wind farms in France, China and Morocco was started in 2020. New solar projects are also planned in Abu Dhabi, India, the USA and France. The Hydropower business unit was expanded in 2020 with the commissioning of the new Romanche-Gavet hydroelectric power plant in the Isère area in south-eastern France.

In order to improve the EDF Group's investment and financing capacities, the French government and the European Commission discussed a reform of the French nuclear regulation. Known as "Project Hercules", it provides for a restructuring of the EDF Group. Under the "Hercules" restructuring plan, EDF would be split into three entities: a regulated EDF "blue", which would oversee nuclear power plants and the transportation network, and would possibly be fully-owned by the government; EDF "azure", which would cover its hydropower business and possibly be fully renationalized; and EDF "green", which would bring together commercial

activities, electricity distribution and renewable energies. EDF "green" would be listed on the stock exchange, enabling it to attract investors to the development of wind and solar energy.

However, the project faces several obstacles, it requires EU approval to ensure that a proposed new structure does not constitute state aid, or crimp competition in an electricity market that is still largely dominated by the former monopoly operator. The Group is currently constrained by a mechanism that forces it to sell part of its nuclear electricity to its competitors at unfavorable prices. An important factor of the reform package is an upward revision of the price, which will be beneficial for EDF. The implementation of the reform was planned for the beginning of 2022. The worsening outlook for the French economy, and the need for the government to deal with other consequences of the coronavirus outbreak, could lead to a delay in the planned reform. We believe that it would be possible for EDF - assuming the French government's financial support - to continue its operations in the medium term without reform. However, considering its current indebtedness and low profits, the Company's ability to invest heavily in its nuclear fleet and new renewable energy projects in order to keep up with growing competition is limited without deteriorating its financial profile.

Despite the challenging global market situation due to the COVID-19 pandemic, we believe that EDF is well positioned due to its significance as the leading systemic energy producer and operator of transmission and distribution networks in France, as well as its leading positions in the UK and Italian power generation markets. With an adequate financial profile, good access to the capital markets, and a well-established market position, EDF has a good chance of successfully overcoming obstacles to a change in energy policy, as well as the challenging market conditions, despite potentially subdued operating performance.

## Issue rating

### Issue rating details

The rating objects of this issue rating are exclusively the long-term senior unsecured issues, denominated in euro, issued by Électricité de France S.A. and which are included in the list of ECB-eligible marketable assets. The ECB list of eligible marketable assets can be found on the website of the ECB.

The Notes have been issued within the framework of the Euro Medium Term Note (EMTN) Programme with its latest prospectus from 21 November 2019. This EMTN Programme amounts to EUR 45 billion. The Notes under the EMTN Programme are senior unsecured, and rank at least pari passu among themselves and with all other present and future unsecured and unsubordinated obligations of the issuer. Additionally, the Notes benefit from a negative pledge provision.

### Result corporate issue rating

We have provided the debt securities issued by Électricité de France S.A. with a rating of **A-** with **negative** outlook. The rating is based on the corporate rating of Électricité de France S.A. Other types of debt instruments or issues denominated in other currencies of the issuer have not been rated by CRA. For a list of all currently valid ratings and additional information, please consult the website of Creditreform Rating AG.

## Overview

Table 2: Overview of CRA Ratings | Source: CRA

Rating Category	Details	
	Date	Rating
Électricité de France S.A. (Issuer)	22.03.2021	A- / negative
Long-Term Local Currency (LC) Senior Unsecured Issues	22.03.2021	A- / negative
Other	--	n.r.

Table 3: Overview of 2019 Euro Medium Term Note Programme | Source: Base Prospectus dated 21 November 2019

Overview of 2019 EMTN Programme			
Volume	EUR 45,000,000,000	Maturity	Depending on respective bond
Issuer	Électricité de France S.A.	Coupon	Depending on respective bond
Arranger	BNP Paribas	Currency	Depending on respective bond
Credit enhancement	none	ISIN	Depending on respective bond

All future LT LC senior unsecured Notes that will be issued by Électricité de France S.A. and that have similar conditions to the current EMTN Programme, denominated in euro and included in the list of ECB-eligible marketable assets will, until further notice, receive the same ratings as the current LT LC senior unsecured notes issued under the EMTN Programme. Notes issued under the Programme in any currency other than euro, or other types of debt instruments, have not yet been rated by CRA. For a list of all currently valid ratings and additional information, please consult the website of Creditreform Rating AG. For the time being, other emission classes or Programmes (such as the Commercial Paper Programme) and issues not denominated in euro will not be assessed.

## Appendix

### Rating history

The rating history is available under:

<https://www.creditreform-rating.de/en/ratings/published-ratings.html>

Table 4: Corporate issuer rating of Électricité de France S.A. | Source: CRA

Event	Rating date	Publication date	Monitoring period	Result
Initial Rating	09.12.2016	16.12.2016	Withdrawal of the rating	A- / stable

Table 5: LT LC senior unsecured issues by Électricité de France S.A. | Source: CRA

Event	Rating date	Publication date	Monitoring period	Result
Initial rating	04.10.2018	11.10.2018	Withdrawal of the rating	A- / stable

### Regulatory requirements

The rating<sup>2</sup> was not endorsed by Creditreform Rating AG (Article 4 (3) of the CRA-Regulation).

The present rating is, in the regulatory sense, an unsolicited rating that is public. The analysis was carried out on a voluntary basis by Creditreform Rating AG, which was not commissioned by the Issuer or any other third party to prepare the present rating.

The rating is based on the analysis of published information and on internal evaluation methods for the assessment of companies and issues. The rating object was informed of the intention of creating or updating an unsolicited rating before the rating was determined.

The rating object participated in the creation of the rating as follows:

With Rated Entity or Related Third Party Participation	No
With access to Internal Documents	No
With Access to Management	No

The rating was conducted based on the following information.

#### List of documents

##### Accounting and controlling

- Consolidated Financial Statements 2020
- Management Report 2020
- Annual Results 2020 Presentation
- Appendices of the Presentation 2020

##### Finance

- EMTN Base Prospectus dated 21 November 2019
- Final Terms of the Outstanding Notes
- EDF Green Bond Framework from 20 January 2020

##### Additional documents

- The Transcript of the Investors and Analysts Conference
- 2019 Sustainable Development Indicators
- Press Releases
- Market researches and press articles regarding energy markets development

A management meeting did not take place within the framework of the rating process.

The documents submitted and information gathered were sufficient to meet the requirements of Creditreform Rating AG's rating methodologies.

The rating was conducted based on the following rating methodologies and the basic document.

Rating methodology	Version number	Date
<a href="#">Corporate Ratings</a>	2.3	29.05.2019
<a href="#">Government-related Companies</a>	1.0	19.04.2017
<a href="#">Non-financial Corporate Issue Ratings</a>	1.0	October 2016
<a href="#">Rating Criteria and Definitions</a>	1.3	January 2018

The documents contain a description of the rating categories and a definition of default.

<sup>2</sup> In these regulatory requirements the term "rating" is used in relation to all ratings issued by Creditreform Rating AG in connection to this report. This may concern several companies and their various issues.

The rating was carried out by the following analysts:

Name	Function	Mail-Address
Natallia Berthold	Lead analyst	N.Berthold@creditreform-rating.de
Rudger van Mook	Analyst	R.vanMook@creditreform-rating.de

The rating was approved by the following person (person approving credit ratings, PAC):

Name	Function	Mail-Address
Tobias Stroetges	PAC	T.Stroetges@creditreform-rating.de

On 22 March 2021 the analysts presented the rating to the rating committee and the rating was determined. The rating result was communicated to the Company on 23 March 2021. There has not been a subsequent change to the rating.

The rating will be monitored until Creditreform Rating AG withdraws the rating. The rating can be adjusted as part of the monitoring if crucial assessment parameters change.

In 2011, Creditreform Rating AG was registered within the European Union according to EU Regulation 1060/2009 (CRA-Regulation). Based on this registration, Creditreform Rating AG is allowed to issue credit ratings within the EU and is bound to comply with the provisions of the CRA-Regulation.

#### ESG-factors

You can find out whether ESG factors were relevant to the rating in the upper section of this rating report "Relevant rating factors".

A general valid description for Creditreform Rating AG, as well as a valid description of corporate ratings for understanding and assessing ESG factors in the context of the credit rating process, can be found [here](#).

#### Conflicts of interest

No conflicts of interest were identified during the rating process that might influence the analyses and judgements of the rating analysts involved or any other natural person whose services are placed at the disposal or under the control of Creditreform Rating AG and who are directly involved in credit rating activities or in approving credit ratings and rating outlooks.

In the event of providing ancillary services to the rated entity, Creditreform Rating AG will disclose all ancillary services in the credit rating report.

#### Rules on the presentation of credit ratings and rating outlooks

The approval of credit ratings and rating outlooks follows our internal policies and procedures. In line with our "Rating Committee Policy", all credit ratings and rating outlooks are approved by a rating committee based on the principle of unanimity.

To prepare this credit rating, Creditreform Rating AG has used following substantially material sources:

#### Corporate issuer rating:

1. Annual report

2. Website

3. Internet research

Corporate issue rating:

1. Corporate issuer rating incl. information used for the corporate issuer rating

2. Documents on issues / instruments

There are no other attributes and limitations of the credit rating or rating outlook other than those displayed on the Creditreform Rating AG website. Furthermore, Creditreform Rating AG considers as satisfactory the quality and extent of information available on the rated entity. With respect to the rated entity, Creditreform Rating AG regarded available historical data as sufficient.

Between the time of disclosure of the credit rating to the rated entity and the public disclosure, no amendments were made to the credit rating.

The Basic Data Information Card indicates the principal methodology or version of methodology that was used in determining the rating, with a reference to its comprehensive description.

In cases where the credit rating is based on more than one methodology or where reference only to the principal methodology might cause investors to overlook other important aspects of the credit rating, including any significant adjustments and deviations, Creditreform Rating AG explains this fact in the credit rating report and indicates how the different methodologies or other aspects are taken into account in the credit rating. This information is integrated in the credit rating report.

The meaning of each rating category, the definition of default or recovery and any appropriate risk warning, including a sensitivity analysis of the relevant key rating assumptions such as mathematical or correlation assumptions, accompanied by worst-case scenario credit ratings and best-case scenario credit ratings are explained.

The date at which the credit rating was initially released for distribution and the date when it was last updated, including any rating outlooks, is indicated clearly and prominently in the Basic Data Information Card as a "rating action"; initial release is indicated as "initial rating", other updates are indicated as an "update", "upgrade" or "downgrade", "not rated", "confirmed", "selective default" or "default".

In the case of a rating outlook, the time horizon is provided during which a change in the credit rating is expected. This information is available within the Basic Data Information Card.

In accordance with Article 11 (2) EU-Regulation (EC) No 1060/2009, a registered or certified credit rating agency shall make available, in a central repository established by ESMA, information on its historical performance data including the rating transition frequency and information about credit ratings issued in the past and on their changes. Requested data are available at the [ESMA website](#).

An explanatory statement of the meaning of Creditreform Rating AG's default rates are available in the credit rating methodologies disclosed on the website.

### Disclaimer

Any rating performed by Creditreform Rating AG is subject to the Creditreform Rating AG Code of Conduct, which has been published on the web pages of Creditreform Rating AG. In this Code of Conduct, Creditreform Rating AG commits itself – systematically and with due diligence – to establish its independent and objective opinion as to the sustainability, risks and opportunities concerning the enterprise or the issue under review.

Future events are uncertain, and forecasts are necessarily based on assessments and assumptions. This rating is therefore no statement of fact, but an opinion. For this reason, Creditreform Rating AG cannot be held liable for the consequences of decisions made on the basis of any of their ratings. Neither should these ratings be construed as recommendations for investors, buyers or sellers. They should only be used by market participants (entrepreneurs, bankers, investors etc.) as one factor among others when arriving at corporate or investment decisions. Ratings are not meant to be used as substitutes for one's own research, inquiries and assessments.

We have assumed that the documents and information made available to us by the client are complete and accurate and that the copies provided to us represent the full and unchanged contents of the original documents. Creditreform Rating AG assumes no responsibility for the true and fair representation of the original information.

This report is protected by copyright. Any commercial use is prohibited without prior written permission from Creditreform Rating AG. Only the full report may be published in order to prevent distortion of the report's overall assessment. Excerpts may only be used with the express consent of Creditreform Rating AG. Publication of the report without the consent of Creditreform Rating AG is prohibited. Only ratings published on the Creditreform Rating AG web pages remain valid.

Creditreform Rating AG

### Contact information

Creditreform Rating AG

Europadamm 2-6  
D-41460 Neuss

Phone: +49 (0) 2131 / 109-626  
Telefax: +49 (0) 2131 / 109-627

E-Mail: [info@creditreform-rating.de](mailto:info@creditreform-rating.de)  
Web: [www.creditreform-rating.de](http://www.creditreform-rating.de)

CEO: Dr. Michael Munsch  
Chairman of the Board: Dr. Hartmut Bechtold

HR Neuss B 10522