

Research

Research Update:

Energy Co. Electricite de France Outlook Revised To Stable On Supportive Financial Policy Moves; Affirmed At 'A-/A-2'

Primary Credit Analyst:

Claire Mauduit-Le Clercq, Paris + 33 14 420 7201; claire.mauduit@spglobal.com

Secondary Contacts:

Pierre Georges, Paris (33) 1-4420-6735; pierre.georges@spglobal.com

Beatrice de Taisne, CFA, London (44) 20-7176-3938; beatrice.de.taisne@spglobal.com

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Rating Action Overview

- During the presentation of its 2018 full-year results, French power company Electricite de France (EDF) announced a scrip dividend program for the next three years; a €2 billion-€3 billion disposal program, on top of the already-achieved €10 billion; and, more importantly, stronger signs of progress on regulation of its French nuclear fleet and the group reorganization, as requested by the French state.
- In addition, we note the more favorable market power price environment, which supports EDF's earnings growth and limits cash burn in the coming two years.
- EDF's reinforced commitment to its stated financial policy and to maintaining the rating are also credit positive.
- We are revising our outlook on EDF to stable from negative, and affirming our 'A-/A-2' ratings.
- We also revised to stable from negative our outlooks on EDF's U.K. subsidiaries EDF Energy PLC and EDF Energy Customers PLC. See the ratings list for more details.
- The stable outlook reflects our expectation of a contained debt trajectory thanks to slightly increasing EBITDA and protective cash flow measures over 2019-2021, absent any significant cost overruns on new nuclear projects and material upward revaluation of the group's nuclear provisions.

Rating Action Rationale

The rating actions reflect our forecast of EDF's significant cash savings over the three coming years, alongside the more-favorable power price environment. These factors should alleviate the pressure on EDF's stand-alone credit profile (SACP), which we continue to assess at 'bbb-'. We attribute these results primarily to the French state's supportive decision to elect for scrip for the balance of its 2018 dividends as well as for dividends relating to fiscal years 2019 and 2020. We estimate that this translates to savings of around €2 billion for EDF over the next three years, making this measure a cornerstone of the efforts to protect the group's cash flows and credit quality. We also believe that the French state's decision regarding EDF's financial policy supports our assessment that EDF continues to benefit from a

high likelihood of extraordinary government support if needed. As such, we apply a three-notch uplift to EDF's SACP. As of Dec. 31, 2018, the French state owns 83.5% of EDF's shares.

The group also announced a €2 billion-€3 billion disposal program to be executed over 2019-2021, on top of the already-achieved €10 billion. This is another remedy to better protect the group's credit quality in a highly capital-intensive period (estimated at about €15 billion per year), notably due to investments on the French power distribution network, increased ambitions in renewables, life extension of its French nuclear reactors, and new nuclear builds in France and the U.K. These cash-protective measures now lead us to project that EDF's discretionary cash flow generation (post disposals) over 2019-2021 will remain only slightly negative--a clear improvement from our previous assumptions.

Importantly, we view positively management's clear commitment to the current rating and the stated focus on two structural pillars for the group's credit quality: The potential regulation on its French nuclear activities and, if it materializes, the ensuing organizational changes. EDF confirmed receipt of the French state's mandate to propose a potential reorganization aimed at facilitating the funding of its large investment needs by year-end 2019. We understand this would come hand-in-hand with progress being made on the regulatory front. Redefining the Regulated Access to Incumbent Nuclear Electricity's (ARENH's) tariff-setting mechanism--which currently sets a partial cap on prices for the output of the existing nuclear fleet--is one of EDF's options, and this step-change could eventually help reposition the economics of EDF's French nuclear fleet. We believe this will, however, be a lengthy process that requires the fulfilment of several key milestones, starting with the passing of the French energy policy PPE decree law and full approval from the European Commission. While we expect the former to happen during the summer of 2019, we lack visibility on the pace and outcome of the latter. In our view, the updated French energy policy is broadly neutral for EDF, provided we receive visibility on the timing of the energy mix transition and that there is no disruption to its current strategic plan (see "France's New Energy Plan: Implications For The Power Market And EDF's Credit Quality," published Dec. 5, 2018, on RatingsDirect).

Finally, the higher power prices sustained over the past 12 months, notably underpinned by a revision of the carbon market and a rebound in the carbon price, should also provide some relief to the organic free cash flow generation. Average one-year-forward power prices in France have been around €50 per megawatt hour (/MWh) since mid-2018, versus €38/MWh on average in 2017 and even much lower in 2016. Yet EDF is likely to benefit from this better price environment more than we previously anticipated, due to the asymmetry of ARENH-based regulation (more exposure to downside price versus the €42/MWh ARENH price, and capped to upward price movements above the ARENH price). We understand that, under the current mechanism, only a quarter of the French production could eventually benefit from power prices above the ARENH price. We revised our sensitivity price analysis and consider that an increase of €1/MWh will translate in an EBITDA increase of less than €120 million on its

French production. The hedging policy also limits potential EBITDA upside from higher power prices with a two to three year lag. EDF disclosed that the average hedged strike price for 2019 was €43/MWh.

The group's financial risk profile remains constrained, in our view, by relatively high leverage (with S&P Global Ratings-adjusted debt to EBITDA above 4.0x over 2019-2021), with significant nonfinancial liabilities from pensions and the nuclear operations, and a sizable investment plan leading to negative cash flows. At year-end 2018, EDF had adjusted debt of €70 billion, comprising about €33 billion of net financial debt, €13 billion of pension deficit, €12 billion of asset retirement obligations (mostly related to nuclear), and about €4.5 billion of operating lease adjustments. We notably see material inflationary risks associated with the nuclear provisions, stemming from actuarial assumptions but also potential future cost revisions. These nuclear provisions include dismantling of assets, as well as nuclear waste management and storage solutions. Ultimately, given the material amount of provisions (€51 billion), we believe this will continue to constrain any major improvement in the group's adjusted credit metrics.

Our assessment of EDF's business risk profile as strong reflects the group's significant size as one of the largest integrated utilities in the world; its position as the dominant player in France in energy generation, distribution, and supply; the largely carbon-free emitting generation fleet, mostly comprising nuclear and hydro; and strong positions in the U.K. and Italian power generation markets. The substantial share of regulated networks in the portfolio (32% of 2018 EBITDA) and a portfolio of contracted renewables that contributes a relatively small share (about 6%) of earnings also support our assessment.

Constraints on our assessment of EDF's business risk profile include EDF's large merchant operations and exposure to volatile power prices, exacerbated by the largely fixed-cost nature of its nuclear and hydro operations, which together account for about 80% of the group's annual output. In addition, EDF relies heavily on nuclear operations, which implies more technology concentration than peers. We also note the pronounced headwinds the group faces in the U.K., with currently weak market fundamentals on the supply activities and the low income from the capacity market mechanism.

Outlook

The stable outlook on EDF reflects our expectations of a contained debt trajectory over 2019-2020, on the back of slightly increasing EBITDA, and protective cash flows measures amid heavy investments. We anticipate that the group's S&P Global Ratings-adjusted funds from operations (FFO) to debt will stay around 18%-20%, and that debt to EBITDA will trend down toward 4x by 2021, notably thanks to a continuously supportive power price environment.

These developments should be absent of any material cost deviation of new nuclear projects, namely Flamanville and HPC. Finally, we expect to gain

increased visibility on the group's organization and medium-term cash flows by end-2019, once the PPE decree is finalized and developments materialize on potential regulation of existing nuclear assets in France. If and when implemented, we believe such regulatory changes would likely provide strong support to the group's stand-alone credit quality.

Downside scenario

We could consider a negative rating action if we see clear progress made on the regulation of its existing French nuclear fleet (or on changes in market design), resulting in persisting high structural exposure of the group's cash flows to market volatility given the still-material investment phase.

Rating pressure would also stem from FFO to debt falling below 17% and debt to EBITDA exceeding 4.5x (throughout the cycle and under current market design), levels we deem as commensurate with our 'A-' rating. This could notably arise from cost inflation on EDF's Flamanville and HPC nuclear projects, material upward revaluation of the group's nuclear provisions, or a sharp deteriorating price environment, although with a lag of two to three years due to hedges in place.

Separately, a downgrade of France by more than one notch would trigger a downgrade of EDF. Moreover, although not our base case, a lower likelihood of extraordinary government support to EDF could also lead us to lower the ratings on EDF and its subsidiaries.

Upside scenario

Rating upside potential is highly dependent on the nature and the effective implementation of EU-backed regulation, allowing the group to better cover the economic cost of its existing French nuclear fleet. This potential would increase on the back of substantial EBITDA growth from lasting higher power prices in France and Europe, as well as new projects coming online in a timely manner without substantial cost overruns.

An upgrade would also be contingent on the smooth closure of reactors without cost revaluation, and the absence of any material upward revision of the group's nuclear liabilities.

Company Description

EDF is an integrated energy company operating in a wide range of electricity-related businesses: generation, distribution, supply, and energy trading. It is France's dominant electricity operator and has strong positions in the U.K. through EDF Energy, and in Italy through fully-owned Edison, making it the world's leading electricity player. The company also manages the low- and medium-voltage public distribution network in France through its subsidiary Enedis, with a regulated asset base of about €51 billion at year-end 2018. French regulated activities accounted for 32% of 2018 EBITDA

(versus 36% in 2017). With worldwide installed capacity of 127 gigawatts (GW) as of Dec. 31, 2018, and global energy generation of 584 TWh, EDF has the largest generating capacity of all the major European utilities. The EDF group supplies electricity, gas, and associated services to more than 37 million customer accounts worldwide (of which more than two-thirds are in France). It has a significant proportion of nuclear and hydroelectric power in its generation mix, which represented respectively 78% and 9% of electricity output in 2018. Notably, EDF operates 58 nuclear reactors in France and 15 in the U.K., with a total capacity of 78 GW. French generation and supply activities accounted for 41% of 2018 EBITDA (versus 35% in 2017) while the U.K. and Italy each accounted for 5% (versus 8% and 7% respectively in 2017).

Our Base-Case Scenario

In our base case for EDF, we assume:

- Power prices of €43/MWh in France in 2019, then rising to €45/MWh by 2020; and in the U.K., climbing from £45/MWh in 2019 to £50/MWh in 2020.
- Assumed nuclear fleet availability in 2019 and 2020 to remain below 395 TWh due to planned outages for maintenance and upgrade. We expect Fessenheim reactors to be closed by 2022, with EPR 3 Flamanville projected to be commissioned by then.
- Pressure on EBITDA in French supply activities because of increased competition and loss of market share.
- Further pressure on EBITDA in the U.K., due to the introduction of cap on supply margin and the shutdown of the capacity market, expected to reopen during H219.
- Regulated activities to benefit from tariff increase from second half of the year, as per the Commission de Régulation de l'Energie's recommendations and as per EDF's own assumption.
- A dividend payout ratio of 45%-50%, with the French state electing for scrip dividends for the remaining FY 2018 dividends as well as for the entire FY2019 and FY2020 dividends.
- Asset disposals of about €2 billion-€3 billion throughout 2021.
- Net investments of about €15 billion per year over 2018-2020, including capital expenditures (capex) linked to new nuclear build Hinkley Point C in the U.K. and deployment of smart meters Linky in France.
- An increase in nuclear obligations in 2019 of about €1 billion to reflect the expected lowering of the discount rate by 0.1%.

Based on these assumptions, we arrive at the following S&P Global Ratings-adjusted credit measures:

- EBITDA slightly rising to about €15.5 billion in 2019, with a lower pick-up than in 2018 due to time lag of hedges in place for its generation earnings

- FFO-to-debt calculation remaining above 18% and debt to EBITDA stabilizing around 4.2x over 2019–2021.
- Debt trending up, albeit at a slower pace than in our previous projections.

Liquidity

We base our assessment of EDF's liquidity as strong on our projection that EDF's liquidity sources will exceed liquidity uses by more than 1.5x over the next 12–24 months. Our assessment is further supported by EDF's consistently substantial cash balances, solid relationships with banks, and ample and proven access to capital markets, even under dire conditions.

Principal liquidity sources as of year-end 2018:

- About €23.8 billion cash and highly liquid marketable securities;
- €11.4 billion in available committed credit lines, out of which €8.2 maturing in 2024 and €3.2 billion in 2019; and
- Estimated FFO of about €14.1 billion in the next 12 months.

Principal liquidity uses as of the same date:

- Short-term debt of about €4.5 billion;
- Estimated capex of about €15 billion; and
- Annual cash dividends of about €960 million, including €560 million dividends on hybrids and about €200 million dividends to minorities.

Environmental, Social, And Governance

Having one of the largest nuclear generation fleets (60 GW capacity and 80% of output), EDF's carbon footprint is markedly advantageous. The ambitious strategic goals of renewables capacity embedded in the Cap 2030 and Solar Plan (30 GW capacity by 2035) support EDF's focus on diversifying its energy mix and concentrating on low-carbon sources. This is offset, however, by concerns about environmental and social risks relating to the future long-term storage of nuclear waste. We capture EDF's large end-of cycle liabilities (€40 billion), of both decommissioning and nuclear waste storage, in our asset retirement obligation debt adjustment, but the amount continues to be subject to a degree of uncertainty.

Social factors are important to our assessment of EDF's standing vis-à-vis the French state. We believe there remains support for the nuclear industry in France, given its economic and social stakes. The French updated energy policy, defined by the PPE proposals over 2019–2028, sets as a key objective to reduce the share of nuclear in the power mix to 50% by 2035 (from 75% today). This would require EDF to start decommissioning its plants as per the currently approved 50-year life, partly from 2027, progressively until 2035. At the same time, it could require sizeable investments in renewables. This

strategy will not alleviate pressure on the group's free cash flow from sizable investments plan over an extended period.

The major area of governance risks relates to EDF's board oversight and ability to manage risks and avoid cost overruns at multibillion EUR new-built nuclear projects. Its first-in-kind EUR project in France (Flamanville) suffered a €8 billion cost overrun, while the company embarked on 2 new EUR projects at a cost of about €20 billion in the U.K. (Hinkley Point C), for which cost revisions of about £1.6 billion have been announced. Positively, we would highlight the supportive financial stance of the French government, as demonstrated in the past years through the form of capital increase or the election of scrip dividends.

Issue Ratings - Subordination Risk Analysis

Capital structure

At year-end 2018, EDF's capital structure consists of about €69 billion of senior unsecured debt and about €10.7 billion of hybrid securities unsecured debt issued by EDF and its financing subsidiaries. The group also has debt of about €15 billion at subsidiaries.

Analytical conclusions

As a result, we do not see any material structural subordination risk on the senior unsecured debt instruments issued by the group and rate them 'A-', in line with the issuer credit rating on EDF.

In our analysis, we do not expect the French state to provide extraordinary support on the hybrid instruments. We therefore rate them 'BB', two notches below our analysis of EDF's 'bbb-' SACP, reflecting the subordinated nature of these instruments and the optionality to defer the coupon. If we revised our assessment of the SACP (down or up), we would not expect to change our approach related to the notching differential, nor our approach to assessing the hybrid's equity content. This is because the issuer credit rating would remain investment grade, all else being equal.

Ratings Score Snapshot

Issuer Credit Rating: A-/Stable/A-2

Business risk: Strong

- Country risk: Low
- Industry risk: Intermediate
- Competitive position: Strong

Financial risk: Significant

- Cash flow/Leverage: Significant

Anchor: bbb

Modifiers

- Diversification/Portfolio effect: Neutral (no impact)
- Capital structure: Neutral (no impact)
- Liquidity: Strong (no impact)
- Financial policy: Neutral (no impact)
- Management and governance: Fair (no impact)
- Comparable ratings analysis: Negative (-1 notch)

Stand-alone credit profile: bbb-

- Group credit profile: a-
- Related government rating: AA (unsolicited)
- Likelihood of government support: High (+3 notches from SACP)

Related Criteria

- Criteria - Corporates - General: Reflecting Subordination Risk In Corporate Issue Ratings, March 28, 2018
- General Criteria: Methodology And Assumptions: Assigning Equity Content To Hybrid Capital Instruments Issued By Corporate Entities And Other Issuers Not Subject To Prudential Regulation, Jan. 16, 2018
- General Criteria: Methodology For Linking Long-Term And Short-Term Ratings , April 7, 2017
- General Criteria: Guarantee Criteria, Oct. 21, 2016
- General Criteria: Rating Government-Related Entities: Methodology And Assumptions, March 25, 2015
- Criteria | Corporates | General: Methodology And Assumptions: Liquidity Descriptors For Global Corporate Issuers, Dec. 16, 2014
- Criteria - Corporates - Industrials: Key Credit Factors For The Unregulated Power And Gas Industry, March 28, 2014
- General Criteria: Methodology: Industry Risk, Nov. 19, 2013
- General Criteria: Country Risk Assessment Methodology And Assumptions, Nov. 19, 2013
- General Criteria: Group Rating Methodology, Nov. 19, 2013
- Criteria | Corporates | General: Corporate Methodology, Nov. 19, 2013
- Criteria - Corporates - Utilities: Key Credit Factors For The Regulated Utilities Industry, Nov. 19, 2013

- Criteria | Corporates | General: Corporate Methodology: Ratios And Adjustments, Nov. 19, 2013
- General Criteria: Methodology: Management And Governance Credit Factors For Corporate Entities And Insurers, Nov. 13, 2012
- General Criteria: Criteria Clarification On Hybrid Capital Step-Ups, Call Options, And Replacement Provisions, Oct. 22, 2012
- General Criteria: Stand-Alone Credit Profiles: One Component Of A Rating, Oct. 1, 2010
- General Criteria: Use Of CreditWatch And Outlooks, Sept. 14, 2009
- Criteria - Insurance - General: Hybrid Capital Handbook: September 2008 Edition, Sept. 15, 2008

Related Research

- France's New Energy Plan: Implications For The Power Market And EDF's Credit Quality, Dec. 5, 2018

Ratings List

Outlook Action; Ratings Affirmed

	To	From
Electricite de France S.A.		
Issuer Credit Rating	A-/Stable/A-2	A-/Negative/A-2
Senior Unsecured	A-	A-
Junior Subordinated	BB	BB
Commercial Paper	A-2	A-2
EDF Energy Customers PLC		
Issuer Credit Rating	BBB-/Stable/--	BBB-/Negative/--
EDF Energy PLC		
Issuer Credit Rating	BBB-/Stable/A-3	BBB-/Negative/A-3

Certain terms used in this report, particularly certain adjectives used to express our view on rating relevant factors, have specific meanings ascribed to them in our criteria, and should therefore be read in conjunction with such criteria. Please see Ratings Criteria at www.standardandpoors.com for further information. Complete ratings information is available to subscribers of RatingsDirect at www.capitaliq.com. All ratings affected by this rating action can be found on S&P Global Ratings' public website at www.standardandpoors.com. Use the Ratings search box located in the left column. Alternatively, call one of the following S&P Global Ratings numbers: Client Support Europe (44) 20-7176-7176; London Press Office (44) 20-7176-3605; Paris (33) 1-4420-6708; Frankfurt (49) 69-33-999-225; Stockholm

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