Research Update:

Electricite de France Upgraded To 'BBB+'; Outlook Stable

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Rating Action Overview

- In our view, Electricité de France S.A.'s (EDF's) operations have strongly performed since mid-2023, with a strong recovery at its 56-reactor domestic fleet, smooth reactor life extensions to date, and ramp-up of its credit-supportive domestic power distribution near-monopoly regulated operations.
- We believe the clarification of key aspects of the economics and state-package protections of the French new nuclear build are also credit supportive as EDF embarks on next phase of its massive investment cycle.
- These positives more than offset EDF's key other exposures: the last third of spending at its U.K. newbuild Hinkley Point C (HPC) nuclear power station; and growing exposure to the broad renewal of France's nuclear back-end fuel-recycling facilities renewal owned by Orano, under the Aval du Futur program.
- We thus believe EDF is in a position to limit negative discretionary cash flow (DCF) at or under €8 billion annually until 2029 and DCF to debt below 8%. We understand the group could activate asset disposals to mitigate the declining trend of market power prices. This should allow it to operate comfortably, at least up to 2030, within the 15%-20% funds from operations (FFO) to debt range commensurate with the 'bb' stand-alone credit profile (SACP).
- We therefore raised all our long-term ratings by a notch, including our issuer credit rating on EDF to 'BBB+', reflecting our improved view on its SACP, as well as continued assessment of a very high likelihood of timely and sufficient extraordinary support from the French government. We affirmed the 'A-2' short-term issuer credit rating.
- The stable outlook balances the potential downside risks associated with EDF's nuclear activities, with mitigants such as support from the state.

Rating Action Rationale

In our view, EDF has improved it overall operational performance since mid-2023. Ongoing management of its 56-reactor domestic fleet has recovered well, as illustrated by the fleet's availability, above-expectation production despite increasing modulation, and better-controlled planned and unplanned outages.

EDF has also made steady progress on its cost-competitive nuclear life-extension program, Grand Carénage, for its 32 900megawatt (MW) units (approximately 45% of current domestic capacity). In September 2025, France's independent public audit office (Cour des Comptes) assessed the program's levelized cost of electricity (LCOE) at about€45 per megawatt hour (/MWh). In our base case, EDF invests €4 billion-€5 billion annually in the Grand Carénage program through most of next decade, extending by then to 60 years both the 900MW and the 1,300MW units (totaling over 90% of its existing domestic nuclear capacity). This was supported by the Autorité de Sûreté Nucléaire et de Radioprotection (Nuclear Safety and Radiation Protection Authority; ASNR)

Enedis, EDF's domestic power-distribution system operator (DSO) operations, Europe's largest, is ramping up its regulated asset base (RAB) and EBITDA via growing capital expenditure (capex). Enedis' regulated operations (beyond EDF's modest power-DSO operations in the U.K.) in our base case should represent about 30% of consolidated EBITDA from 2027, supporting our view on EDF's credit profile.

EDF was able to contain risks on the two U.K.-based Sizewell C reactors in construction (see "Sizewell C Ltd.'s HMG Term Facility Assigned 'BBB+' Rating; Outlook Stable," Nov. 4, 2025). EDF is only the fourth-largest shareholder, with a 12.5% stake, into the project company, Sizewell C; the U.K. government owns 44.5% and provides considerable funding and liquidity to Sizewell C, in addition to support provided by the RAB-in-construction financing model. We believe that, as supplier of design and key services to Sizewell C, EDF's risk exposure is consistent with our current credit view.

We believe EDF's business risk rests comfortably within the satisfactory category, taking into account newbuild construction risk. Aided by strong prices on past hedging, stronger operations translated into a solid financial performance in 2025 for the third year running. This supports our forecast that future EBITDA would be close to €25 billion per year even as captured prices sink. Indeed, we see wholesale pricing on the French wholesale market as increasingly challenging for merchant generators; as of Jan. 1, 2026, EDF's domestic fleet is almost 90% merchant, factoring in long-term contracts with industrial customers.

The company and the French government have clarified key aspects of the Nouveau Nucléaire Français (France's New Nuclear Program; NNF) that temper its credit impact. EDF confirmed high-level features of the state's support package, which was submitted Nov. 19, 2025, to the EU for approval. We expect the approval to be obtained, and EDF will take a final investment decision on the heavily capital intensive NNF. Credit-supportive features include:

- A heavily subsidized loan covering 50%-60% of NNF capex, with no principal repayment expected until the commissioning of the plants that we assume inthe early 2040s;
- A revenue contract for difference (CfD) under which we expect EDF to receive close to €100/MWh in 2024 terms from the state over the first 40 years of operations; and
- A protective risk-sharing arrangements with the state on cost overruns.

In December 2025, ASNR issued a favorable opinion of the new nuclear reactors (EPR2) program's technical feasibility and EDF officialized an overnight NNF cost of €72.8 billion in 2020 terms, that we translate into some €84 billion in 2026 terms or €100 billion in nominal terms. We estimate that at end-2026, some €76 billion in 2026 terms will be left to cash out. On that basis--very moderate relative to U.K. newbuilds—, and last January's Cour des Comptes estimate of the

NNF's LCOE assuming a 4% Weighted Average Cost of Capital, the LCOE appears about in line with the CfD level of €100/MWh in 2024 terms. While we see significant overrun risks emerging along the project's life, our base case includes some headroom for such developments, beyond amounts covered by the CfD.

External credit-weakening factors add to heavy and rising capex and risks on newbuilds to limit further rating upside. These factors include notably:

- Pressures on French wholesale power market prices, weighing on EDF's unregulated earnings as hedges lapse
- Fluid domestic politics, raising fiscal pressures and lessening visibility on the adoption of the Pluriannual Energy Programme 3 (PPE3), France's energy policy.
- Growing exposure to Aval du Futur from the early 2030s, after being limited this decade to modest cash outflows for preliminary studies. In September 2025, the Cour des Comptes quoted a €30 billion 2024-2040 capex budget. We factor in our SACP a large portion of this capex as having to be advanced by EDF to Orano, prompting an increase in EDF's all-in cost for fuel supplies of up to €3.5/MWh within about a decade.

We believe EDF is in a position to limit negative DCF to €8 billion per year, DCF to debt below about 8%, and maintain 15%-20% FFO to debt until at least 2029. Our base case includes no parent-company dividends, modest asset disposals, and a life-extension-driven reduction this year of at least €3.4 billion in asset retirement obligations. We benchmark EDF's credit metrics against our standard volatility calibration, tempered by the strong contribution from regulated operations and the cost benefits of state funding, which by 2030 grows to slightly over 10% of EDF's adjusted debt.

From that perspective, we assess that EDF's FFO-to-debt and DCF-to-debt metrics, while eroding from currently strong levels, compare well with those of European integrated peers with a 'bbb+' SACPs, mitigated by our view that EDF's capex program is even more rigid than peers' dividends.

Our view of a very high likelihood of extraordinary government support continues to support a four-notch uplift to the rating from EDF's SACP. This four-notch uplift stands as long as we continue to rate France 'A' or above. The very high likelihood of support derives from our view of EDF's very strong link with France's central government and of its very important role for the country's energy policies, further enhanced in 2025 relative to Aval du Futur.

EDF's nuclear generation will remain crucial for France's power mix over the coming decades. Since Europe's 2021-2022 gas and power price crisis, we view EU state aid as less of an issue for energy-market systemic utilities which support the bloc's security of supply (from both sovereignty and grid-resilience perspectives), affordability, and energy transition. Despite delays in drafting and approving PPE3, we see strong support among France's political parties for the view that nuclear is key to achieve these goals and the state has assigned EDF the primary role in achieving these objectives.

EDF generates about four times more low-carbon electricity than any other utility in Europe and is a key pillar of France's exports--the world's largest (which we believe will break a record in 2026 for the third year in a row). EDF's modulation strongly supports France's grid stability. For at least a decade EDF's nuclear capacity will represent about 66% of Europe's and about 10 times the next-largest company's. Across technologies, EDF generates about 16.5% of the EU's electricity. EDF's heavy investment needs in domestic nuclear add to government incentives to protect its creditworthiness and access to debt markets.

For hybrids, we keep only one of the four notches of uplift we assign to the senior debt ratings, resulting in a one-notch upgrade. We do not expect EDF's total portfolio of hybrids outstanding to decrease significantly below €10 billion and we expect EDF's commitment to these long-term instruments in the capital structure to remain intact.

Outlook

The stable outlook balances the potential downside risks associated with EDF's nuclear activities, with mitigants such as support from the state. It also reflects:

- Our expectations of domestic nuclear generation within 345-375 terawatt hours (TWh), steady progress in the fourth 10-year inspections program, and planned outage of the FLA-3 reactor to allow for full-year production in 2028.
- Increasingly negative DCF of €5 billion-€8 billion annually over 2027-2029, so that metrics only gradually erode, with FFO to debt declining toward 15%-20%.
- Our expectations of the NNF government support package financing 50%-60% of capex at a very low rate during construction, a fixed rate during operations set at the point of the final investment decision, a CfD at around €100/MWh in 2024 terms covering all production for forty years, and protective risk-sharing arrangements.

The ratings can withstand moderate overruns or delays at HPC throughout the remaining time of construction and NNF.

Downside scenario

A downgrade could stem from an SACP revision to 'bb-', without the mitigant of strengthening state support. This could materialize if Aval du Futur is much more costly than anticipated, or more severe industrial challenges with nuclear newbuilds or with the current domestic fleet lead to a significant negative deviation from our base case for DCF to debt and FFO to debt consistently below 15%.

Upside scenario

Barring a change in our views on extraordinary government support, upgrade potential is remote, given EDF's ongoing heavy exposure to operating and financial risks from four major nuclear programs, and notably HPC, the NNF, and Aval du Futur.

Company Description

EDF is an integrated power company with major operations across generation, distribution, supply, and trading, fully owned by the French central government since June 2023. It is France's dominant electricity operator and has strong positions in the U.K. through EDF Energy, and in Italy through 97.45%-owned Edison, making it the world's largest electricity player outside China with 2024 net installed capacity of 124.64 gigawatts (GW), and global power generation of 520.3TWh, 78% of which is nuclear and more than 11% hydro.

Overall, about 93% and nearly all generation outside Italy is low carbon; EDF is the world's largest low-carbon generator. In Europe, EDF's low-carbon generation is about 5x that of the second largest, Vattenfall.

Absent significant outages, French operations contribute almost 90% to EDF's generation and supply EBITDA, equivalent to approximately 60% of the company's consolidated EBITDA. EDF's renewables operations, with global net installed capacity of 16.3GW (on Dec. 31, 2024; two-thirds is wind), of which 75% is outside France, typically contributes about 5% of EBITDA, slightly less than Dalkia (energy services and heating and cooling networks) and EDF's other activities. These include gas activities and EDF Trading, which provide market optimization and risk management services via wholesale energy market operations.

EDF owns and manages France's low-medium voltage public distribution network primarily through fully owned Enedis, with a regulated asset base including Linky of €63 billion (on Jan. 1, 2025), Europe's largest.

French regulated activities typically account for about 20%-25% of consolidated EBITDA. Our analysis mirrors EDF's accounting treatment at equity of 50.1%-owned RTE Reseau de Transport d'Electricité (France's monopoly high-voltage transmission power grid, Europe's largest; A/Negative/A-1) as it doesn't control it.

Our Base-Case Scenario

Assumptions

- Domestically, nuclear output of about 355TWh annually through 2026-2027, including FLA-3 and annual hydro output of at least 40TWh.
- Domestic wholesale power prices of about €50-€60/MWh through 2026-2027, and Great-Britain prices slightly higher.
- Cash dividends limited to hybrid coupons and dividends to minority interests. No new equity issuance nor repurchases.
- Annual capex growing toward €28 billion by 2029, including 100% of those on HPC and domestic nuclear newbuilds.
- Financing of Orano's Aval du Futur back-end investment program imply moderate amounts for EDF until 2029.
- Moderate disposals over 2026-2027. Upfront payments from customers are adjusted as debt.
- An approximately €3 billion reduction in 2026 in our debt adjustment for unfunded nuclear obligations including the effect of life extensions, and broad stability on employee obligations relative to end-2024 levels.

Key metrics

Electricite de France S.A.—Key Metrics

Period ending	Dec-31-2023	Dec-31-2024	Dec-31-2025	Dec-31-2026	Dec-31-2027	Dec-31-2028
(Bil. €)	2023a	2024a	2025e	2026f	2027f	2028f
EBITDA	43.7	31.6	28-30	25-27	22-24	22-24
Funds from operations (FFO)	36.4	24.2	23-24	20-21	18-19	17-18
Cash flow from operations (CFO)	29.4	26.7	27-28	24-25	21-22	22-23
Capital expenditure (capex)	20.2	23.5	24-25	26-27	26-27	27-28
Discretionary cash flow (DCF)	8.4	2.3	-0.8	-2.1	-5.6	-6.5

Electricite de France S.A.—Key Metrics

Debt	87.5	89.5	89-91	88-90	89-91	96-98
Adjusted ratios						
Debt/EBITDA (x)	2.0	2.8	3.0-3.5	3.0-3.5	3.5-4.0	4.0-4.5
FFO/debt (%)	41.6	27.0	25-27	22-24	20-22	17-19

All figures are adjusted by S&P Global Ratings, unless stated as reported. a--Actual. e--Estimate. f--Forecast. EUR--euro.

Liquidity

We regard EDF's liquidity as adequate. Our assessment balances the company's strong cash position supporting a 1.2x coverage of uses by sources, its very proactive refinancing strategy and execution, solid relationships with banks, and track record of ample access to senior and hybrid markets (including under some stress as in 2022) as a strategic entity for the French government, with its large and inflexible capex program and significant debt maturities in absolute term.

Principal liquidity sources

Specifically, we expect the following principal liquidity sources for the 12 months from Sept. 30, 2025:

- Cash and cash equivalents of about €39 billion.
- Our estimate of about €16 billion availability under committed credit lines maturing more than one year out and €9.6 billion available under committed credit lines for the subsequent one year.
- Estimated cash FFO approaching €22 billion.
- Estimated working capital inflow of around €2 billion.
- Proceeds from sales of assets of around €700 million.

Principal liquidity uses

For the same period, we expect the following principal liquidity uses:

- Debt maturities nearing €4.5 billion within the next 12 months and debt worth €7-7.5 billion maturing within the subsequent 12 months.
- Estimated capex of €25 billion-€26 billion within the next 12 months.
- Dividend payments of about €1.5 billion limited to minority interests and hybrid holders.

Environmental, Social, And Governance

ESG factors are a moderately negative consideration in our credit rating analysis of EDF. In our view, EDF's governance mostly flags risks related to the uncertainties regarding its ability to proactively identify, manage, and resolve for the existing aging nuclear fleet and for the very heavy newbuild programs.

Regarding existing reactors, we consider the ups and downs of availability as reflective of the inherent complexity of managing aging nuclear generation assets. Regarding newbuild nuclear reactor projects in France and the U.K., which are key to France's low-carbon strategy, we also factor in inherent risks of cost overruns and delays, significantly mitigated to date only in the case of Sizewell C. Each of them stands among Europe's very largest industrial projects across sectors outside data centers (of which EDF is planning several). FLA-3 and HPC are respectively over a decade or at least over 5 years late on original planning and we see risks for overnight construction costs on new reactors to approach or exceed (as HPC will) €12 million-€15 million per MW of capacity in 2025 money, even excluding capital remuneration and dismantlement liabilities.

- On HPC, over 2022-2024, EDF announced both about £10 billion of additional capex in current monies, most of which it will fully bear, and a delay of about three years to 2029-2030 in its commissioning base case. In addition to several billion euros of additional carrying cost, this delay shortens by at least 18 months HPC's protective 35-year contract for difference with the U.K. government. EDF wrote off about €13 billion on its U.K. assets, principally HPC, over 2022-2024.
- Despite first grid connection in December 2024, and 100% capacity reached in December 2025, FLA-3's first full-year contribution will be 2028 at the earliest, given the one-year outage planned for September 2026 to repair the vessel head an outage planned in the context of the first full visit post commissioning. EDF has not impaired FLA-3, which for accounting purposes is part of the cash-generating unit that includes the entire domestic fleet.

Environmental aspects also relate to EDF's exposure to nuclear fuel recycling and end storage.

We adjust EDF's debt for net asset retirement obligations by €13.2 billion at year-end 2024, almost all nuclear (plant dismantling and fuel recycling and end storage). Total gross provisions related to nuclear power generation increased by about €13.1 billion over 2023-2024 to €72.3 billion; they represented €5.5 billion of the €7.7 billion nonrecurring charges EDF expensed over 2023-2024 (newbuilds contributed €800 million and Italian operations €1.1 billion). In addition, most of EDF's 16.6 billion 2022-2024 impairments were nuclear related. The total adds to about €22 billion of negative profit and loss items.

Environmental considerations primarily reflect the company's prominent low-carbon operations, enabling France to post one of Europe's lowest-carbon energy-sector footprints. With the world's largest nuclear generation fleet and well over 90% of global production decarbonized, EDF's carbon intensity is minimal, and its scope 1 emissions mostly derive from French islands, Edison, and Dalkia.

However, environmental and social risks related to the future long-term storage of nuclear waste offset EDF's low-carbon footprint. Half of EDF's €4.4 billion 2023 nonrecurring charges were due to a new fuel recycling contract with Orano; whereas the €8.7 billion 2024 increase was broadly equally split between domestic and U.K. operations.

Regarding Cigéo, our base case includes no hike in EDF's asset retirement obligations beyond the €1.3 billion recorded over 2023-2024 and the €9.51 billion end-2024 provision. Andra's scope excludes the fuel to be burnt in NNF reactors. First delivery of spent fuel to site has been pushed back to 2040-2050 from the 2031 date envisaged until recently.

In addition, we factor into our assessment the French government's support of EDF's strategic role in the French energy transition, its public mission embedded in its power network activities, and its social role as a major employer in France. Yet we also see as a great social challenge the negative track record of project management and third-party reports pointing to persistent industrial risks both in supply chain and in the ability of the industry to scale up massively technical skilled workforce. Another potential risk comes from deliveries of enriched uranium and reprocessed uranium from Rosatom subsidiaries.

Issue Ratings--Subordination Risk Analysis

Capital structure

EDF has limited debt at subsidiaries or secured debt across the group, relative to its overall gross consolidated debt.

Analytical conclusions

We do not notch down EDF's senior unsecured debt, as the holding company issues most of the company's debt.

Rating Component Scores

Rating Component Scores

Component	
Foreign currency issuer credit rating	BBB+/Stable/A-2
Local currency issuer credit rating	BBB+/Stable/A-2
Business risk	Satisfactory
Country risk	Low risk
Industry risk	Intermediate risk
Competitive position	Satisfactory
Financial risk	Aggressive
Cash flow/leverage	Aggressive (standard volatility table)
Anchor	bb
Modifiers	
Diversification/portfolio effect	Neutral/Undiversified
Capital structure	Neutral
Financial policy	Neutral
Liquidity	Adequate
Management and governance	Moderately negative
Comparable rating analysis	Neutral
Stand-alone credit profile	bb
Related Government Rating	A+/stable
Likelihood of Government Support	Very High (+ 4 notches)

Related Criteria

- General Criteria: Hybrid Capital: Methodology And Assumptions, Oct. 13, 2025
- Criteria | Corporates | General: Sector-Specific Corporate Methodology, July 7, 2025
- Criteria | Corporates | General: Methodology: Management And Governance Credit Factors For Corporate Entities, Jan. 7, 2024
- Criteria | Corporates | General: Corporate Methodology, Jan. 7, 2024
- General Criteria: Environmental, Social, And Governance Principles In Credit Ratings, Oct. 10, 2021
- General Criteria: Group Rating Methodology, July 1, 2019
- Criteria | Corporates | General: Corporate Methodology: Ratios And Adjustments, April 1, 2019
- Criteria | Corporates | General: Reflecting Subordination Risk In Corporate Issue Ratings, March 28, 2018
- General Criteria: Methodology For Linking Long-Term And Short-Term Ratings, April 7, 2017

- 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
- General Criteria: Methodology: Industry Risk, Nov. 19, 2013
- General Criteria: Country Risk Assessment Methodology And Assumptions, Nov. 19, 2013
- General Criteria: Principles Of Credit Ratings, Feb. 16, 2011

Related Research

Full Analysis: Electricité de France S.A., July 10, 2025

- Greening Up Without Blackouts: Boosting European Power Grids' Resilience May Dent Credit Quality, July 2, 2025
- One Outlook Revision To Negative On French Utilities After Sovereign Outlook Action, March 6, 2025
- For A Resilient Global Infrastructure Sector, The Immediate Impact From Tariffs Will Be Limited, May 14, 2025
- Industry Credit Outlook: EMEA Utilities, Jan. 13, 2023
- Is Europe Ready for a Nuclear Renaissance? , Dec. 9, 2024
- ESG Credit Brief: Power Generators, Dec. 4, 2024
- ESG Credit Brief: Networks, Dec. 4, 2024
- Some European Power Markets Will Suffer As Renewables Put Pressure On Prices, Sept. 12, 2024
- The Energy Transition, Geopolitics, And Cannibalization Are Shaping Europe's Power Prices, Sept. 12, 2024
- Utilities Power Handbook 2024: Western European Regulated Power, Sept. 10, 2024
- Power Sector Update Shows European Offshore Wind Is Racing Ahead, Sept. 10, 2024
- European Electricity Producers' Credit Quality And Revenue-Support Contracts: It's Complicated, July 10, 2024
- Europe's Power Producers Continue Their Balancing Act As Electricity Prices Stay Low, July 10, 2024

Ratings List

Ratings List

Upgraded; Outlook Action		
	To	**From**
Electricite de France S.A.		
Issuer Credit Rating	BBB+/Stable/A-2	BBB/Positive/A-2
EDF Energy Customers Ltd.		

Ratings List		
Issuer Credit Rating	BB/Stable/--	BB-/Positive/--
EDF Energy Ltd.		
Issuer Credit Rating	BB/Stable/B	BB-/Positive/B
Upgraded		
	To	**From**
Electricite de France S.A.		
Senior Unsecured	BBB+	BBB
Junior Subordinated	BB-	B+
Ratings Affirmed		
Electricite de France S.A.		
Commercial Paper	A-2	