

CREDIT OPINION

17 September 2025

Update



RATINGS

Vattenfall AB

STOCKHOLM, Sweden
A3
LT Issuer Rating
Stable

Please see the <u>ratings section</u> at the end of this report for more information. The ratings and outlook shown reflect information as of the publication date.

Contacts

Mark Remshardt +49.69.70730.808 VP-Sr Credit Officer mark.remshardt@moodys.com

Marco Wang +44.20.7772.1048 Senior Ratings Associate marco.wang@moodys.com

Andrew Blease +33.1.5330.3372

Associate Managing Director
andrew.blease@moodys.com

Vattenfall AB

Update following affirmation of A3 rating

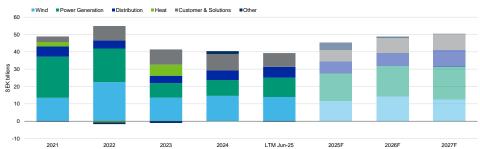
Summary

<u>Vattenfall AB</u>'s credit profile is supported by the high share of contracted and regulated earnings, estimated at 40-45% of underlying EBITDA over the period to 2029; the group's scale and geographical diversification across well-developed markets in Europe; its low carbon exposure; and its prudent financial policy, evidenced by a track record of moderate dividend payouts and reflected in strong leverage metrics, expressed as Moody's-adjusted funds from operations (FFO)/net debt of around 50% as of the last 12 months to June 2025 (LTM June 2025).

These factors are balanced by Vattenfall's exposure to wholesale prices through merchant power generation and trading, which accounted for around 29% of its underlying EBITDA as of LTM June 2025, partly mitigated by hedging; some execution risks associated with its large capital expenditure (CAPEX) programme, at SEK170 billion over 2025-29 focused on renewables (RES) generation and electricity grids; and its retail operations being mostly in very competitive markets.

With the sale of its district heating business in Berlin in 2024 and the remaining district heating businesses under review; and a gradual shift of remuneration for renewable wind projects from state support schemes to power purchase agreements (PPAs), introducing counterparty risk, we expect a moderately weaker business risk profile for Vattenfall, balanced by a strong financial profile over the coming years.

Exhibit 1
Earnings through 2027 are likely to increase moderately, with contributions from all segments Underlying EBITDA



Moody's forecasts are Moody's opinion and do not represent the views of the issuer. Sources: Company information and Moody's Ratings forecasts

Vattenfall's A3 rating incorporates a one-notch uplift from its Baseline Credit Assessment (BCA) of baa1, taking into account the presence of the <u>Government of Sweden</u> (Aaa stable) as the company's 100% shareholder.

Credit strengths

- » Solid earnings contribution from regulated and contracted businesses
- » Size and diversification of its operations
- » Prudent financial policy, reflected in moderate leverage and significant profit retention
- » 100% state ownership, which supports credit quality

Credit challenges

- » High exposure of earnings to wholesale power markets, mitigated by hedging
- » Large CAPEX programme, which carries some execution risk
- » Gradual weakening of business risk as RES remuneration becomes increasingly based on PPAs in lieu of state support schemes and lower contribution from contracted district heating

Rating outlook

The stable outlook reflects our expectation that Vattenfall will record solid cash earnings over 2025-29, allowing the company to fund most of its CAPEX from its own cash flow; and that the company will maintain a prudent financial policy, enabling it to at least meet our guidance of FFO/net debt of 25%, as required for the BCA of baa1.

Factors that could lead to an upgrade

We currently do not expect upward pressure on the BCA, given Vattenfall's planned sizable capital expenditures, its current financial policy target and the lack of visibility regarding the impact of the planned new nuclear capacity on Vattenfall's credit profile.

Factors that could lead to a downgrade

We could downgrade Vattenfall's BCA if its credit metrics are likely to remain persistently below the above-mentioned guidance, with FFO/net debt below 25%; or if the share of higher-risk cash flow were to increase above our expectations without a commensurate strengthening of the company's financial profile. A change in our government support assumption could also result in a downgrade of Vattenfall's ratings.

We may review the guidance for Vattenfall's ratings once we have more visibility on the risks associated with the company's involvement in the building of new nuclear capacities in Sweden.

Key indicators

Exhibit 2

Vattenfall AB

	2020	2021	2022	2023	2024	LTM Jun-25	Moody's 12-18 month forward view
(FFO + Interest Expense) / Interest Expense	8.4x	10.6x	5.4x	5.4x	6.1x	6.8x	6.0x - 6.5x
FFO / Net Debt	27.1%	150.6%	49.8%	24.3%	57.6%	50.5%	34.0% - 35.0%
RCF / Net Debt	22.8%	130.7%	15.1%	20.6%	46.7%	37.4%	26.0% - 27.0%

All data based on adjusted financial data, which follow our Financial Statement Adjustments in the Analysis of Nonfinancial Corporations methodology. LTM = Last 12 months. Moody's forecasts are Moody's opinion and do not represent the views of the issuer.

For definitions of Moody's most common ratio terms, please see the accompanying User's Guide.

Sources: Moody's Financial Metrics™ and Moody's Ratings forecasts

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the issuer/deal page on https://ratings.moodys.com for the most updated credit rating action information and rating history.

Profile

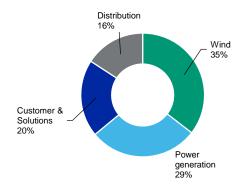
Vattenfall AB is a Swedish, 100% state-owned integrated utility. With 25.8 gigawatts (GW) of installed electric capacity and around 96 terawatt hours (TWh) of electricity output as of LTM June 2025, Vattenfall is one of the largest European energy groups. The company's generation portfolio primarily includes hydro (11.5 GW), onshore and offshore wind (6.4 GW), and nuclear power (5.7 GW), with 8.5 GW of the hydro and all of the nuclear capacity located in Sweden. In addition, Vattenfall has gas and biomass plants in Sweden and the Netherlands (Aaa stable), largely dedicated to combined heat and power generation.

In addition to its power and heat generation operations, Vattenfall owns Sweden's largest electricity distribution network. The company's retail base includes around 8.0 million electricity and 2.3 million gas customers.

Exhibit 3

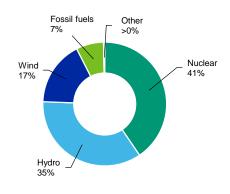
Vattenfall has a diversified business mix

Underlying EBITDA breakdown (LTM June 2025)



Total underlying EBITDA of SEK38.7 billion. LTM = Last 12 months. Sources: Company information and Moody's Ratings

Nuclear and hydro account for the bulk of generation Breakdown of output (LTM June 2025)



Total output of 96.3 TWh. LTM = Last 12 months. Percentages are rounded. Sources: Company information and Moody's Ratings

Detailed credit considerations

Strategic shift towards fossil-free energy, underpinned by high investment spending on renewables and grids

Vattenfall's strategy is to shift towards an increasingly fossil-free business model by driving growth in RES while maintaining hydro and nuclear power as baseload capacity. This includes investments in both centralised and decentralised solutions.

In line with this strategy, the company plans investments of SEK170 billion over 2025-29. Around SEK104 billion of this amount is earmarked for growth CAPEX, primarily for expansion in onshore and offshore wind (SEK72 billion). Other growth projects include development of electricity grids and district heating networks to connect new customers and areas. Maintenance CAPEX is mainly related to investments in distribution networks and modernisation of the heat portfolio, coupled with safety investments in Swedish nuclear and hydropower plants.

Given Vattenfall's pipeline of offshore and onshore wind projects; its focus on efficient and smart grid solutions for the electricity distribution grid; and its announcement to review the strategic importance of its remaining district heating business, we expect most investments to continue to be directed towards RES, often combined with battery storage, and grids.

■ Nuclear Power ■ Wind Power ■ Heat Supply ■ Electricity distribution Hydro Power 40 35 30 SEK billions 25 20 15 10 5 0 2022 2024 LTM Jun-25 2025F 2026F 2027F

Exhibit 5
CAPEX is mainly spent on RES and the electricity distribution grid

"Other" relates mainly to e-mobility, solar and battery capacity.

Moody's forecasts are Moody's opinion and do not represent the views of the issuer.

LTM = Last 12 months.

Sources: Company information and Moody's Ratings forecasts

Power Generation (PG) segment: In 2025, EBITDA could rise moderately, supported by higher output from nuclear plants, coupled with a stronger trading result, offset by lower spot prices in the Nordics

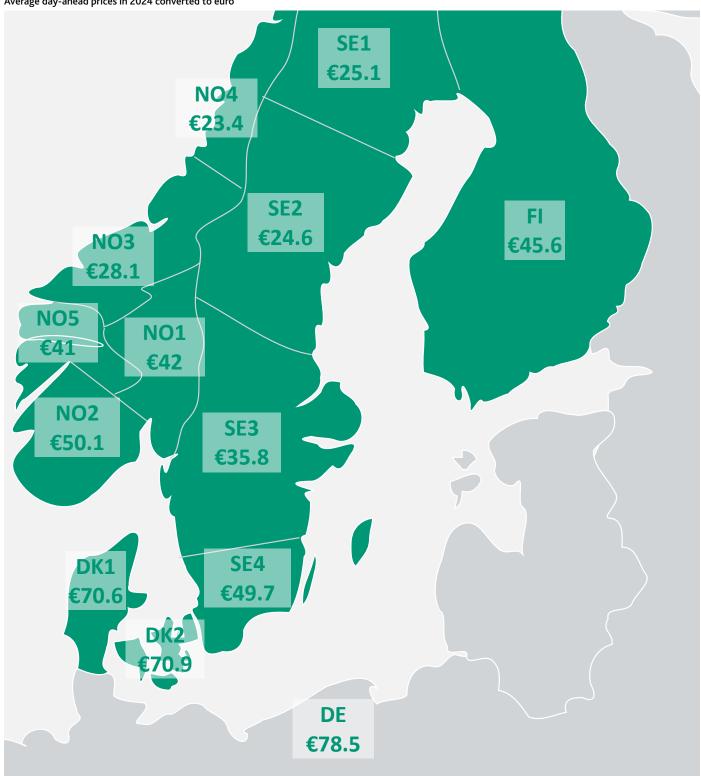
The PG segment comprises electricity generation from nuclear and hydro plants as well as trading, including the marketing of output from third-party RES producers. Specifically, all generation-related hedging operations, including those for the Wind segment and the few remaining thermal plants related to Heat¹, are captured within the PG segment.

Key earnings drivers for the PG segment include the following:

- » A high share of Vattenfall's generation fleet is predominantly fixed cost in nature (around 76% of the output as of the last 12 months that ended June 2025 was derived from nuclear and hydro plants), leading to significant exposure to wholesale power prices.
- » Vattenfall's Swedish installed generation capacity is concentrated (around 54%) in the north (price areas SE1 and SE2), in areas marked by exposure to hydrology and transmission capacity constraints.
- » Securing prices for Swedish output through price futures relies on proxy hedging through the Nordpool system price (NPSYS) because there are no bespoke products for the Swedish price areas, resulting in exposure to base risk².

Vattenfall hedges around 50% of the expected Nordic output for year t+1 and 30%-40% of the output for year t+2. In the first HY 2025, this resulted in slightly lower earnings than in 2024. As of the end of June 2025, the company had hedged 55% of its 2025 output against NPSYS at an average price of €48/megawatt hour (MWh), slightly above the average price of €46/MWh in 2024. However, this increase was offset by a decrease in the average SE1/SE2 spot price over the same period to €13/MWh from €25/MWh in 2024. This led to an overall achieved price of €39 in HY 2025 compared with €42/MWh in 2024.

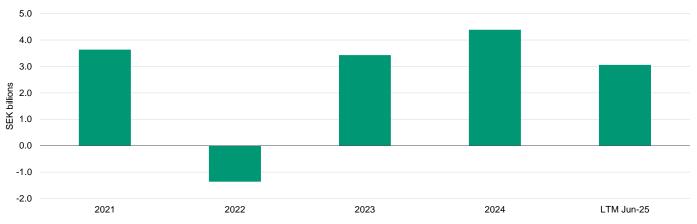
Exhibit 6
Good hydrology in 2024 led to SE1/SE2 prices being among the lowest in Scandinavia
Average day-ahead prices in 2024 converted to euro



Sources: Nordpool and Moody's Ratings

Because hedging for all of Vattenfall's power generation is captured within the PG segment, the company's trading operations, which are inherently volatile, have a significant impact on the segment earnings. As of LTM June 2025, the PG segment's underlying EBIT was SEK6.1 billion, including a SEK3.1 billion profit from trading.

Exhibit 7
Trading activities are volatile
Underlying EBIT contribution of realised trading activities



LTM = Last 12 months.

Sources: Company information and Moody's Ratings

Power prices in the Nordic markets are fundamentally a function of power prices in continental Europe, primarily in <u>Germany</u> (Aaa stable), although there is no exact correlation. As of early September 2025, one-year forward prices in Germany were around €87/MWh, more than double the forward price of NPSYS of around €42/MWh.

Exhibit 8

Vattenfall's earnings in the PG segment are sensitive to changes in power prices

Underlying EBITDA in SEK billions; one-year forward power price in €/MWh

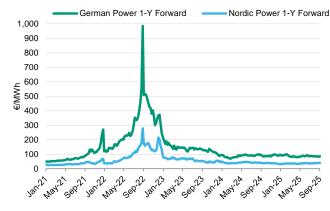


Sources: Company information, FactSet and Moody's Ratings

Exhibit 9

Power prices peaked in August 2022 but have remained relatively stable since early 2024

One-year forward, in €/MWh



Sources: FactSet and Moody's Ratings

In 2025, PG earnings will be supported by a slightly higher price of €48/MWh of NPSYS-hedged generation in the Nordics; however, spot prices in SE1/SE2 fell to an average of around €14/MWh through the eight months that ended August 2025, €11/MWh below the 2024 average, affecting earnings from Swedish hydro plants. In contrast, nuclear production (in SE3) in HY 2025 benefited from a slight increase in continental power prices.

We expect the result from trading to decline in 2025 as price volatility in Europe has somewhat decreased and hedging arrangements from the high price years of 2022-23 are likely to run off. Assuming higher nuclear availability³ at around 82% following longer outages

in 2024, which would support an aggregate output of hydro and nuclear plants of around 76 TWh, similar to the levels seen in 2021/22 and around 5% above the output recorded in 2024, PG's EBITDA could surpass that of 2024. However, given the exposure to hydrology and Nordic spot prices, predicting this segment's results remain difficult.

Beyond 2030, the PG segment could grow from new nuclear capacity. In November 2023, the Swedish Parliament approved new capacity of 2.5 GW, which could either be large blocks or small modular reactors (SMR), at the site of the decommissioned Ringhals 3 and 4 blocks, with the aim of having these on the grid by 2035. On 27 March 2025, the Swedish government announced that it would support new nuclear projects with loans and two-way Contracts for Difference (CfD), having received positive signals from the EU Commission that such support would be compliant with EU State Aid rules. Accordingly, in April 2025, Vattenfall announced the setup of a dedicated subsidiary, Videberg Kraft AB, to serve as the vehicle to apply for state funding and house the new projects. On 21 August 2025, the company announced that two suppliers, GE Vernova and Rolls-Royce SMR, had been shortlisted to provide SMR. The company also confirmed that the application process for government support was underway. Shortly thereafter, the Swedish Prime Minister said that the government would take a minority ownership stake in the project.

Our current view of Vattenfall's credit profile does not include these new nuclear capacities, given the early stage of project discussions and the lack of a final investment decision.

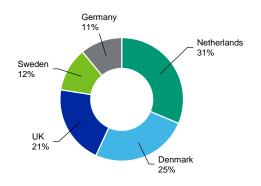
Wind segment: Moderate capacity growth and relatively stable EBITDA through 2027

As of the end of June 2025, Vattenfall's installed RES capacity, excluding hydro, was around 6.7 GW, comprising 4.4 GW of offshore wind, 2.0 GW of onshore wind, and around 0.3 GW in solar and batteries. The RES portfolio is spread over five European countries (see Exhibit 10).

Exhibit 10

Vattenfall's RES capacity benefits from geographical diversification

Breakdown of installed capacity (Q2 2025)

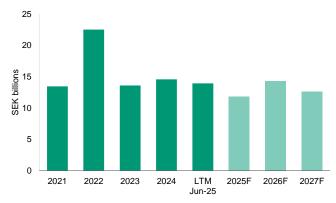


Total capacity of 6.7 GW.
Sources: Company information and Moody's Ratings

Exhibit 11

Wind earnings are likely to remain broadly steady on the back of expected declining power prices, partly offset by some capacity additions

Underlying EBITDA in SEK billions



Underlying EBITDA as reported.

Moody's forecasts are Moody's opinion and do not represent the views of the issuer.

LTM = Last 12 months.

Sources: Company information and Moody's Ratings forecasts

Key earnings drivers for the Wind segment include the following:

- » Capacity growth, primarily focused on wind offshore and onshore;
- » Cost inflation and supply-chain bottlenecks;
- » Type of remuneration, currently mostly through government support schemes but with a growing share of PPAs for new projects;
- » Partnerships, mainly for offshore wind, to share risks and allow for a more diversified capital allocation.

According to Vattenfall, its development pipeline amounts to nearly 16 GW, including almost 3 GW of wind projects (mature stage) and nearly 7 GW of solar capacity, complemented by 5.7 GW of battery storage capacity. In addition, various wind onshore projects, mainly in Sweden, and some solar projects in Germany are under construction and could add more than 500 megawatts (MW) through 2027.

The principal offshore wind projects currently in a mature stage of development include the 1.6 GW Nordlicht 1 and 2 wind farms⁴ in the German North Sea; the 2 GW Zeevonk wind farm in the Dutch North Sea (50% owned by Copenhagen Infrastructure Partners); and the 750 MW Muir Mhor (Scotwind) project off the coast of Scotland, 50% owned by Norwegian RES developer Fred. Olsen Seawind

The Nordlicht projects are slated for commissioning in 2028/29, while Zeevonk and Scotwind are likely to be commissioned over 2030-32. Nordlicht and Zeevonk will be remunerated on a merchant basis, mitigated by PPA contracts, whereas Scotwind will rely on a CfD, assuming a successful bid in one of the next CfD auctions. Although the construction of offshore wind farms is risky compared with other well-established RES technologies, Vattenfall has a good operational track record in its RES portfolio.

Vattenfall's assets largely benefit from a variety of government support schemes (feed-in tariffs, CfDs with different designs), which provide long-term earnings stability and reduce the company's exposure to wholesale power price volatility. Wind farms in Sweden and in the UK have merchant power price exposure, mitigated by renewable obligation certificate schemes. Merchant price exposure, mitigated by long-term PPAs, will be a growing source of earnings for RES projects, as a result of partly insufficient strike prices in government CfD auctions, greater flexibility to structure terms and conditions compared with government support schemes, and growing demand from corporates eager to reduce their carbon exposure.

As of LTM June 2025, underlying EBITDA decreased to SEK13.9 billion from SEK14.6 billion in 2024, driven by lower electricity volumes and the absence of a positive one-off effect from a service agreement related to the Norfolk offshore wind projects⁵ in HY 2024. Through 2027, earnings are likely to remain relatively stable as incremental onshore wind and solar capacity comes online. Meanwhile, merchant price exposure will continue to make up only a relatively small share of capacity, with the remaining output protected by support schemes, PPAs and hedging.

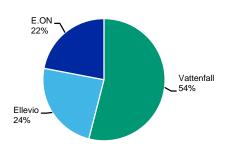
Distribution (DIS) segment: Network earnings are likely to grow significantly through 2027

Through its unbundled subsidiary Vattenfall Eldistribution AB, Vattenfall is Sweden's largest owner and operator of electricity distribution grids (DSO), operating under an evolving regulatory framework set by the Swedish regulator Energimarknadsinspektionen (Ei). Because of the energy transition, future market growth is likely to occur in the regional market.

Exhibit 12

Vattenfall has a significant market share of regional electricity grids in Sweden

Regional market shares

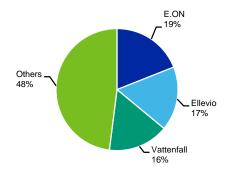


Market shares based on throughput volume and excluding grid losses. Source: Vattenfall Corporate Factbook (September 2024)

Exhibit 13

Local grids remain a highly fragmented market

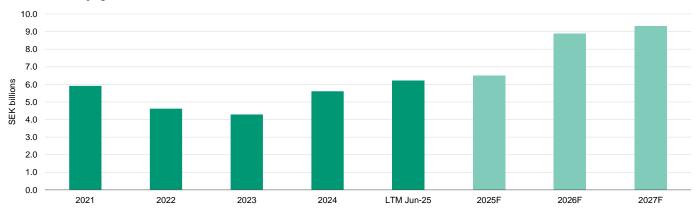
Local market shares



Market shares based on the number of connections. Source: Vattenfall Corporate Factbook (September 2024) The regulatory framework applicable for the DSO is an incentive-based revenue cap regime, based on a TOTEX approach, which includes qualitative factors and a sharing mechanism for the outperformance of controllable cost targets. Deviations between regulatory assumptions and actual costs and volumes are trued up in the next regulatory period (RP). In 2024, the fourth four-year RP commenced, with Ei setting the return rate, measured as pretax real weighted average cost of capital (WACC), at 4.53%, up from 2.35% over 2020-23. The WACC returns, together with the regulatory depreciation, which in Sweden is generally below the one used in accounting, provide the bulk of cash flow for the DSO and are driven by the evolution of the regulated asset base (RAB). In 2024, Vattenfall's RAB was around SEK91 billion, up from SEK89 billion in 2023, driven by investments and the indexing of the RAB to reflect asset replacement values.

Underlying EBITDA as of LTM June 2025 amounted to SEK6.2 billion, up from SEK5.8 billion in 2024, driven by higher revenue from increased tariffs for local grids and lower costs for grid losses. Given the continued high level of planned investments of around SEK8.1 billion (average 2025-29, against SEK10.1 billion in 2024); the increase in WACC; and the depreciation based on a higher RAB, we expect DIS earnings to increase through 2027. However, new assets only accrue to the RAB with a six-month delay after commissioning, which means that earnings, especially from projects with a longer completion period, commence with a time lag to investments. In addition, the projected increase in EBITDA in 2026 is driven by a downward adjustment of forecast transmission costs following the Swedish transmission operator Svenska kraftnät's announcement of a reduced fee, resulting from the use of congestion revenue that allow a lower transmission tariff.

Exhibit 14
Earnings from distribution will grow gradually as the RAB increases
Distribution underlying EBITDA



Moody's forecasts are Moody's opinion and do not represent the views of the issuer. LTM = Last 12 months.

 $Sources: Company\ information\ and\ Moody's\ Ratings\ forecasts$

The regulated earnings from the DIS segment carry a lower risk than Vattenfall's generation and supply activities. However, because this segment contributes a relatively modest share of underlying EBITDA, specifically 16% over LTM June 2025, the positive effect on our view of Vattenfall's credit quality is limited.

Customers & Solutions (C&S) segment: Sales of energy and heat will remain earnings drivers as cash flow contributions from energy solutions are likely to grow slowly

C&S' operations include supply of electricity and gas to residential, commercial and industrial customers; energy solutions and e-mobility charging; and, since 1 January 2024, Vattenfall's remaining heating activities following the disposal of the district heating operations in Berlin (see <u>Credit Opinion published on 17 July 2024</u> for details of the transaction). As of the end of June 2025, the company had 12 million customers, with operations in the Nordic countries, the Netherlands, Germany, the <u>UK</u> and <u>France</u> (both Aa3 stable).

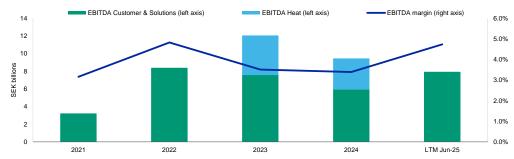
Key earnings drivers of the C&S segment include the following:

- » Growth in sales volumes of electricity and gas, mainly driven by higher customer numbers (be it own customers or indirectly through sales to resellers);
- » Gross margin development, which displays relative long-term stability but is exposed to short-term fluctuations as energy price movements are only captured in tariffs with a time lag, especially in the B2C segment;
- » Heating results are driven by weather and temperature, and the ability to adjust tariffs for fuel price changes under the prevailing quasi-regulated regimes (however, earnings effects from the sale of co-generated electricity are allocated to the PG segment).

As of LTM June 2025, the C&S segment contributed SEK7.9 billion, down from SEK9.5 billion in 2024, or around 20%, to Vattenfall's underlying EBITDA. This decrease was primarily driven by lower wholesale prices and increased regulatory costs (grid fees within customer tariffs) in Germany, slightly offset by a higher result from the district heating operations in Sweden. We do not expect energy solutions and e-mobility to be significant contributors to earnings over the next few years as ramp-up costs are likely to absorb a large share of incremental revenue.

In March 2025, Vattenfall announced that the company plans to review the heating business to determine whether it will remain core to the group's activities. While not disclosed by Vattenfall, we estimate that the contribution of heat earnings to underlying group EBITDA was 8%-9% as of LTM June 2025.

Exhibit 15
EBITDA in the C&S business is highly exposed to commodity prices, reflected in heating tariff adjustments and end-customer prices



Underlying EBITDA as reported; before 2023, the C&S business does not include the heating results. In 2023 and 2024, the split assumes that all of the depreciation and amortisation are attributable to Heat.

LTM = Last 12 months.

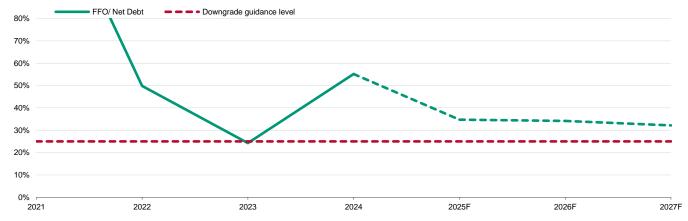
Sources: Company information and Moody's Ratings

Earnings from this segment are difficult to predict, given the high exposure to commodity prices; price-driven competition, specifically in the reseller segment; and weather-related consumption. However, given some stickiness in the retail segment including heating, we estimate average earnings of SEK8 billion-SEK9 billion through 2027.

Credit metrics will remain strong, despite substantial investments

Vattenfall's Moody's-adjusted FFO/net debt was 50.5% over LTM June 2025, slightly below 57.6% in 2024. In the first half of 2025, earnings declined compared ton the same period a year earlier, although this was offset by a lower impact from non-cash items, resulting in a stable Moody's-adjusted FFO of SEK37.5 billion over LTM June 2025, compared against SEK37.4 billion in 2024. However, a negative reversal in margin calls adversely affected working capital, leading to an increase in Moody's-adjusted net debt to SEK74 billion, while CAPEX and dividend pay-outs in aggregate remained on comparable levels at SEK37.7 billion over LTM June 2025 and SEK36.4 billion in 2024. As of June 2025, Vattenfall's Moody's-adjusted gross debt of around SEK139 billion included SEK70 billion in adjustments related to pension and nuclear liabilities for the decommissioning of power plants in Sweden and Germany.

Exhibit 16
Vattenfall's FFO/net debt is likely to remain comfortably above the guidance



All data based on adjusted financial data, which follow our Financial Statement Adjustments in the Analysis of Nonfinancial Corporations methodology. Moody's forecasts are Moody's opinion and do not represent the views of the issuer.

Sources: Moody's Financial Metrics™ and Moody's Ratings forecasts

In 2025, we expect FFO to be below the 2024 level, at around SEK32 billion-SEK33 billion and largely explained by the absence of capital gains from disposals, increasing gradually to SEK37 billion-SEK38 billion through 2027, driven by earnings from the DSO segment but also by higher power prices in the Nordics reflected in current NPSYS futures. Accordingly, cash earnings will likely cover a significant share of planned investments (SEK37 billion on average over 2025-29). In addition, Vattenfall has a track record of moderate dividend payouts, reflecting a supportive shareholder. Consequently, we expect the company's credit metrics to remain solidly within our guidance through at least 2027.

ESG considerations

Vattenfall AB's ESG credit impact score is CIS-3

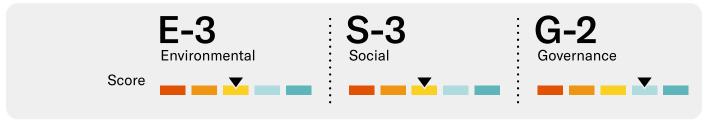
Exhibit 17
ESG credit impact score



Source: Moody's Ratings

Vattenfall's **CIS-3** indicates that its ESG attributes are overall considered as having a limited impact on the current rating, with greater potential for future negative impact over time. The score reflects moderately negative environmental and social risks, partly offset by neutral-to-low governance risks.

Exhibit 18 ESG issuer profile scores



Source: Moody's Ratings

Environmental

Vattenfall is **E-3**, reflecting its low carbon transition risk with power generation comprised mainly of renewables and nuclear. As a large hydro operator, Vattenfall is, however, exposed to a degree of resource risks. The issuer profile score also incorporates a degree of physical climate risks related to its network operations in Sweden where flooding is a risk factor. As a nuclear operator with around 5.5 GW of capacity, Vattenfall's nuclear operations are also exposed to both a degree of physical climate risk and waste and pollution given the costs associated with nuclear decommissioning and nuclear waste treatment.

Social

Vattenfall is **S-3**, reflecting the risk that demographics and societal trends could include concerns over affordability, including the expectation from the public that state-owned utilities should act as a public service. These pressures could turn into adverse political intervention or adverse regulatory decisions for its grid operations, or both.

Governance

Vattenfall is **G-2**, reflecting on one hand our view that, as a government-owned company, the independence of Vattenfall's board is relatively weak and that management may face competing priorities. However, we note that its board has a track record of creditor friendly decisions. Governance risks are also balanced by other considerations associated with government ownership, including transparent reporting and oversight.

ESG Issuer Profile Scores and Credit Impact Scores for the rated entity/transaction are available on Moodys.com. In order to view the latest scores, please click here to go to the landing page for the entity/transaction on MDC and view the ESG Scores section.

Government support considerations

Given the 100% ownership by the Swedish government, Vattenfall is considered a government-related issuer under our Government-Related Issuers methodology. Although Vattenfall is the largest electric utility in Sweden, the company has a broader European footprint, leading us to assess the default dependence with its owner and supporter, the Swedish government, as moderate.

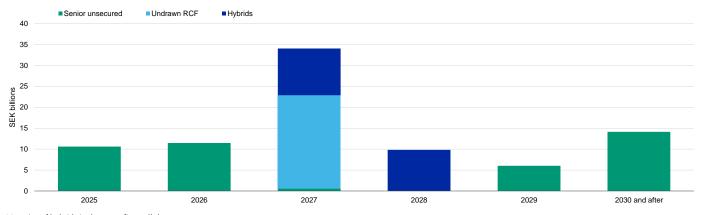
Although we recognise Vattenfall's strategic importance to Sweden, we also acknowledge the state's determinedly noninterventionist stance. The authorities would hesitate to intervene (such as through a direct capital injection) except in the most extreme circumstances, that is, where there is a threat to key strategic Swedish assets such as nuclear and hydropower plants, and the network infrastructure. Thus, we assume a moderate probability of support in case of financial distress at Vattenfall.

Liquidity analysis

As of the end of June 2025, Vattenfall's liquidity was supported by SEK64.7 billion of unrestricted cash and short-term investments, and a committed revolving credit facility (RCF) of €2 billion (SEK22.3 billion). The RCF, which is undrawn, expires in October 2027.

Vattenfall's investments of around SEK33 billion-SEK40 billion over the next 12-18 months, dividend payouts in 2026 of an estimated amount of SEK7 billion-SEK8 billion, and debt repayments of around SEK22 billion over 2025-26 can comfortably be covered by the said sources and operating cash flow, measured as FFO, of estimated SEK32-SEK33 billion per year.

Exhibit 19 Vattenfall has a fairly well-spread debt maturity profile As of 30 June 2025



Maturity of hybrids is shown at first call dates. Sources: Company information and Moody's Ratings

Structural considerations

Vattenfall's capital structure includes a mix of senior unsecured bonds, bank debt and hybrid securities. Given the features of the hybrids, we treat them as 50% debt and 50% equity for financial leverage calculations.

Because debt is almost entirely raised at the Vattenfall level, we do not apply any notching of senior debt for reasons of structural subordination.

Methodology and scorecard

Vattenfall is rated in accordance with the Unregulated Utilities and Unregulated Power Companies and the Government-Related Issuers methodologies.

Exhibit 20 **Rating factors** Vattenfall AB

Unregulated Utilities and Unregulated Power Companies Industry Grid	Curre LTM Ju		Moody's 12-18 month forward view		
Factor 1 : SCALE (10%)	Measure	Score	Measure	Score	
a) Total Assets (USD billions)	\$55.3	Α	\$55 - \$60	А	
Factor 2 : BUSINESS PROFILE (35%)	•				
a) Market Diversification	Baa	Baa	Baa	Baa	
b) Cash Flow Stability	Baa	Baa	Baa	Baa	
Factor 3 : LEVERAGE AND COVERAGE (40%)	•				
a) (FFO + Interest Expense) / Interest Expense	6.8x	Baa	6.0x - 6.5x	Baa	
b) FFO / Net Debt	50.5%	A	34.0% - 35.0%	Baa	
c) RCF / Net Debt	37.4%	A	26.0% - 27.0%	Baa	
Factor 4 : FINANCIAL POLICY (15%)					
a) Financial Policy	Baa	Baa	Baa	Baa	
Rating:	·				
Indicated Outcome before Notching Adjustments		Baa1		Baa1	
Notching adjustments		0	·	0	
a) Scorecard-Indicated Outcome		Baa1		Baa1	
b) Baseline Credit Assessment				baa1	
Government-Related Issuer					
a) Baseline Credit Assessment	·	-		baa1	
b) Government Local Currency Rating				Aaa	
c) Default Dependence				Moderate	
d) Support		-	-	Moderate	
e) Actual Rating Assigned	•		-	A3	

All data based on adjusted financial data, which follow our Financial Statement Adjustments in the Analysis of Nonfinancial Corporations methodology. LTM = Last 12 months. Moody's forecasts are Moody's opinion and do not represent the views of the issuer.

Sources: Moody's Financial Metrics™ and Moody's Ratings forecasts

14

Appendix

Exhibit 21

Peer comparison

Vattenfall AB

		/attenfall AB A3 Stable		Statkraft AS A3 Stable			EnBW Energie Baden-Wuerttemberg AG Baa1 Stable			Iberdrola S.A. Baa1 Stable		
	FY	FY	LTM	FY	FY	LTM	FY	FY	LTM	FY	FY	LTM
(in € millions)	Dec-23	Dec-24	Jun-25	Dec-23	Dec-24	Jun-25	Dec-23	Dec-24	Mar-25	Dec-23	Dec-24	Jun-25
Revenue	25,310	21,472	20,896	8,636	7,180	6,676	44,431	34,524	33,308	49,335	44,739	44,845
EBITDA	4,051	5,192	4,479	4,716	3,078	2,457	6,058	5,572	4,595	14,146	15,074	16,185
Total Assets	52,855	48,654	47,142	28,308	27,704	26,634	64,719	64,278	62,909	149,652	157,911	157,472
Total Debt	16,587	12,750	12,435	5,341	6,880	7,110	26,593	29,034	28,354	55,703	62,404	61,197
Net Debt	12,081	5,657	6,642	1,391	4,269	4,516	12,411	15,127	18,201	52,684	58,322	58,832
FFO / Net Debt	24.3%	57.6%	50.5%	163.0%	44.7%	41.9%	49.6%	31.0%	25.9%	20.6%	19.6%	20.7%
RCF / Net Debt	20.6%	46.7%	37.4%	48.1%	18.2%	17.1%	46.1%	26.6%	22.7%	11.7%	13.2%	13.4%
(FFO + Interest Expense) / Interest Expense	5.4x	6.1x	6.8x	12.8x	7.2x	6.8x	7.2x	5.8x	6.0x	4.8x	4.9x	4.7x
Debt / Book Capitalization	53.1%	39.2%	38.9%	26.3%	31.5%	34.1%	59.7%	59.1%	58.4%	46.9%	49.6%	49.2%

All data based on adjusted financial data, which follow our Financial Statement Adjustments in the Analysis of Nonfinancial Corporations methodology. LTM = Last 12 months. Source: Moody's Financial Metrics™

Exhibit 22 Moody's-adjusted net debt reconciliation Vattenfall AB

(in SEK millions)	2020	2021	2022	2023	2024	LTM Jun-25
As reported debt	104,775.0	126,408.0	176,765.0	121,109.0	84,598.0	79,246.0
Pensions	43,824.0	40,328.0	27,812.0	28,092.0	27,890.0	27,890.0
Hybrid Securities	(9,652.0)	(10,210.5)	(10,965.5)	(10,493.5)	(10,940.0)	(10,588.0)
Non-Standard Adjustments	37,794.0	40,233.0	53,930.0	46,011.0	44,811.0	42,351.0
Moody's-adjusted debt	176,741.0	196,758.5	247,541.5	184,718.5	146,359.0	138,899.0
Cash & Cash Equivalents	(47,505.0)	(165,793.0)	(168,268.0)	(50,179.0)	(81,417.0)	(64,715.0)
Moody's-adjusted net debt	129,236.0	30,965.5	79,273.5	134,539.5	64,942.0	74,184.0

All data based on adjusted financial data, which follow our Financial Statement Adjustments in the Analysis of Nonfinancial Corporations methodology. LTM = Last 12 months. Source: Moody's Financial Metrics™

Exhibit 23
Moody's-adjusted EBITDA reconciliation
Vattenfall AB

(in SEK millions)	2020	2021	2022	2023	2024	LTM Jun-25
As reported EBITDA	49,122.0	80,719.0	25,186.0	46,318.0	66,783.0	48,140.0
Capital Development Costs	-	-	(277.0)	-	-	-
Interest Expense - Discounting	(2,165.0)	(2,033.0)	(2,009.0)	(2,133.0)	(1,629.0)	(1,629.0)
Unusual Items	(1,519.0)	(21,162.0)	-	-	(8,087.0)	1,649.0
Non-Standard Adjustments	701.0	910.0	2,857.8	2,258.9	2,316.3	2,333.0
Moody's-adjusted EBITDA	46,139.0	58,434.0	25,885.8	46,443.9	59,383.3	50,493.0

All data based on adjusted financial data, which follow our Financial Statement Adjustments in the Analysis of Nonfinancial Corporations methodology. LTM = Last 12 months. Source: Moody's Financial MetricsTM

Exhibit 24 Overview of select historical Moody's-adjusted financial data Vattenfall AB

(in SEK millions)	2020	2021	2022	2023	2024	LTM Jun-25
INCOME STATEMENT						
Revenue	158,847	180,119	239,644	290,168	245,570	235,574
EBITDA	46,139	58,434	25,886	46,444	59,383	50,493
EBIT	27,888	40,993	8,146	25,495	39,193	30,140
Interest Expense	4,713	4,843	9,007	7,496	7,391	6,427
Net income	15,338	28,460	(1,634)	10,500	27,036	19,812
BALANCE SHEET						
Net Property Plant and Equipment	249,060	252,828	276,901	263,031	273,707	273,785
Total Assets	463,188	782,358	791,616	588,591	558,497	526,555
Total Debt	176,741	196,759	247,542	184,719	146,359	138,899
Cash & Cash Equivalents	47,505	165,793	168,268	50,179	81,417	64,715
Net Debt	129,236	30,966	79,274	134,540	64,942	74,184
Total Liabilities	355,859	591,438	670,742	464,632	376,361	348,615
CASH FLOW						
Funds from Operations (FFO)	35,032	46,620	39,495	32,636	37,392	37,484
Cash Flow From Operations (CFO)	41,961	102,176	1,407	(24,219)	62,289	40,955
Dividends	5,627	6,135	27,553	4,917	7,070	9,749
Retained Cash Flow (RCF)	29,405	40,485	11,942	27,719	30,322	27,735
Capital Expenditures	(22,311)	(26,132)	(25,800)	(42,679)	(31,057)	(29,706)
Free Cash Flow (FCF)	14,023	69,909	(51,946)	(71,815)	24,162	1,500
INTEREST COVERAGE						
(FFO + Interest Expense) / Interest Expense	8.4x	10.6x	5.4x	5.4x	6.1x	6.8x
LEVERAGE						
FFO / Net Debt	27.1%	150.6%	49.8%	24.3%	57.6%	50.5%
RCF / Net Debt	22.8%	130.7%	15.1%	20.6%	46.7%	37.4%
Debt / EBITDA	3.8x	3.4x	9.6x	4.0x	2.5x	2.8x
Net Debt / EBITDA	2.8x	0.5x	3.1x	2.9x	1.1x	1.5x

All data based on adjusted financial data, which follow our Financial Statement Adjustments in the Analysis of Nonfinancial Corporations methodology. LTM = Last 12 months. Source: Moody's Financial MetricsTM

Ratings

Exhibit 25

Category	Moody's Rating
VATTENFALL AB	
Outlook	Stable
Issuer Rating	A3
Senior Unsecured	A3
Jr Subordinate	Baa2
Commercial Paper	P-2
Source: Moody's Patings	

Source: Moody's Ratings

Endnotes

- 1 In 2024, the Heat segment was merged into the Customers & Solutions (C&S) segment, and the related continental hedges for co-generated electricity in Dutch heat plants are not significant to PG earnings.
- 2 There are over-the-counter (OTC) derivative markets for the Nordpool price areas available for smaller volumes.
- 3 As of Q2 2025, Vattenfall has revised its nuclear availability definition to reflect technical availability excluding unplanned outages (Unit Capability Ratio).
- 4 In March 2025, Vattenfall made the final investment decision and announced that it would buy back the 49% held by German chemicals giant BASF SE (A3 stable) for a consideration of €181 million. This includes an €80 million cash payment, with the remainder being a PPA option.
- 5 These three wind farms with a total capacity of 4.2 GW were sold to RWE AG (Baa2 stable) in December 2023 for GBP963 million, with the transaction closed in the first quarter of 2024.

© 2025 Moody's Corporation, Moody's Investors Service, Inc., Moody's Analytics, Inc. and/or their licensors and affiliates (collectively, "MOODY'S"). All rights reserved. CREDIT RATINGS ISSUED BY MOODY'S CREDIT RATINGS AFFILIATES ARE THEIR CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES, AND MATERIALS, PRODUCTS, SERVICES AND INFORMATION PUBLISHED OR OTHERWISE MADE AVAILABLE BY MOODY'S (COLLECTIVELY, "MATERIALS") MAY INCLUDE SUCH CURRENT OPINIONS. MOODY'S DEFINES CREDIT RISK AS THE RISK THAT AN ENTITY MAY NOT MEET ITS CONTRACTUAL FINANCIAL OBLIGATIONS AS THEY COME DUE AND ANY ESTIMATED FINANCIAL LOSS IN THE EVENT OF DEFAULT OR IMPAIRMENT. SEE APPLICABLE MOODY'S RATING SYMBOLS AND DEFINITIONS PUBLICATION FOR INFORMATION ON THE TYPES OF CONTRACTUAL FINANCIAL OBLIGATIONS ADDRESSED BY MOODY'S CREDIT RATINGS. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS, NON-CREDIT ASSESSMENTS ("ASSESSMENTS"), AND OTHER OPINIONS INCLUDED IN MOODY'S MATERIALS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. MOODY'S MATERIALS MAY ALSO INCLUDE QUANTITATIVE MODEL-BASED ESTIMATES OF CREDIT RISK AND RELATED OPINIONS OR COMMENTARY PUBLISHED BY MOODY'S ANALYTICS, INC. AND/OR ITS AFFILIATES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS DO NOT COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MOODY'S ISSUES ITS CREDIT RATINGS, ASSESSMENTS AND OTHER OPINIONS AND PUBLISHES OR OTHERWISE MAKES AVAILABLE ITS MATERIALS WITH THE EXPECTATION AND UNDERSTANDING THAT EACH INVESTOR WILL, WITH DUE CARE, MAKE ITS OWN STUDY AND EVALUATION OF EACH SECURITY THAT IS UNDER CONSIDERATION FOR PURCHASE, HOLDING, OR SALE.

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS, AND MATERIALS ARE NOT INTENDED FOR USE BY RETAIL INVESTORS AND IT WOULD BE RECKLESS AND INAPPROPRIATE FOR RETAIL INVESTORS TO USE MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS OR MATERIALS WHEN MAKING AN INVESTMENT DECISION. IF IN DOUBT YOU SHOULD CONTACT YOUR FINANCIAL OR OTHER PROFESSIONAL ADVISER.

ALL INFORMATION CONTAINED HEREIN IS PROTECTED BY LAW, INCLUDING BUT NOT LIMITED TO, COPYRIGHT LAW, AND NONE OF SUCH INFORMATION MAY BE COPIED OR OTHERWISE REPRODUCED, REPACKAGED, FURTHER TRANSMITTED, TRANSFERRED, DISSEMINATED, REDISTRIBUTED OR RESOLD, OR STORED FOR SUBSEQUENT USE FOR ANY SUCH PURPOSE, IN WHOLE OR IN PART, IN ANY FORM OR MANNER OR BY ANY MEANS WHATSOEVER, BY ANY PERSON WITHOUT MOODY'S PRIOR WRITTEN CONSENT. FOR CLARITY, NO INFORMATION CONTAINED HEREIN MAY BE USED TO DEVELOP, IMPROVE, TRAIN OR RETRAIN ANY SOFTWARE PROGRAM OR DATABASE, INCLUDING, BUT NOT LIMITED TO, FOR ANY ARTIFICIAL INTELLIGENCE, MACHINE LEARNING OR NATURAL LANGUAGE PROCESSING SOFTWARE, ALGORITHM, METHODOLOGY AND/OR MODEL.

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS ARE NOT INTENDED FOR USE BY ANY PERSON AS A BENCHMARK AS THAT TERM IS DEFINED FOR REGULATORY PURPOSES AND MUST NOT BE USED IN ANY WAY THAT COULD RESULT IN THEM BEING CONSIDERED A BENCHMARK.

All information contained herein is obtained by MOODY'S from sources believed by it to be accurate and reliable. Because of the possibility of human or mechanical error as well as other factors, however, all information contained herein is provided "AS IS" without warranty of any kind. MOODY'S adopts all necessary measures so that the information it uses in assigning a credit rating is of sufficient quality and from sources MOODY'S considers to be reliable including, when appropriate, independent third-party sources. However, MOODY'S is not an auditor and cannot in every instance independently verify or validate information received in the credit rating process or in preparing its Materials.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability to any person or entity for any indirect, special, consequential, or incidental losses or damages whatsoever arising from or in connection with the information contained herein or the use of or inability to use any such information, even if MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers is advised in advance of the possibility of such losses or damages, including but not limited to: (a) any loss of present or prospective profits or (b) any loss or damage arising where the relevant financial instrument is not the subject of a particular credit rating assigned by MOODY'S.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability for any direct or compensatory losses or damages caused to any person or entity, including but not limited to by any negligence (but excluding fraud, willful misconduct or any other type of liability that, for the avoidance of doubt, by law cannot be excluded) on the part of, or any contingency within or beyond the control of, MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers, arising from or in connection with the information contained herein or the use of or inability to use any such information.

NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY, TIMELINESS, COMPLETENESS, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OF ANY CREDIT RATING, ASSESSMENT, OTHER OPINION OR INFORMATION IS GIVEN OR MADE BY MOODY'S IN ANY FORM OR MANNER WHATSOEVER.

Moody's Investors Service, Inc., a wholly-owned credit rating agency subsidiary of Moody's Corporation ("MCO"), hereby discloses that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by Moody's Investors Service, Inc. have, prior to assignment of any credit rating, agreed to pay Moody's Investors Service, Inc. for credit ratings opinions and services rendered by it. MCO and all MCO entities that issue ratings under the "Moody's Ratings" brand name ("Moody's Ratings"), also maintain policies and procedures to address the independence of Moody's Ratings' credit ratings and credit rating processes. Information regarding crudian affiliations that may exist between directors of MCO and rated entities, and between entities who hold credit ratings from Moody's Investors Service, Inc. and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at ir.moodys.com under the heading "Investor Relations — Corporate Governance — Charter and Governance Documents - Director and Shareholder Affiliation Policy."

Moody's SF Japan K.K., Moody's Local AR Agente de Calificación de Riesgo S.A., Moody's Local BR Agência de Classificação de Risco LTDA, Moody's Local MX S.A. de C.V, I.C.V., Moody's Local PE Clasificadora de Riesgo S.A., and Moody's Local PA Calificadora de Riesgo S.A. (collectively, the "Moody's Non-NRSRO CRAs") are all indirectly wholly-owned credit rating agency subsidiaries of MCO. None of the Moody's Non-NRSRO CRAs is a Nationally Recognized Statistical Rating Organization.

Additional terms for Australia only: Any publication into Australia of this document is pursuant to the Australian Financial Services License of MOODY'S affiliate, Moody's Investors Service Pty Limited ABN 61 003 399 657AFSL 336969 and/or Moody's Analytics Australia Pty Ltd ABN 94 105 136 972 AFSL 383569 (as applicable). This document is intended to be provided only to "wholesale clients" within the meaning of section 761G of the Corporations Act 2001. By continuing to access this document from within Australia, you represent to MOODY'S that you are, or are accessing the document as a representative of, a "wholesale client" and that neither you nor the entity you represent will directly or indirectly disseminate this document or its contents to "retail clients" within the meaning of section 761G of the Corporations Act 2001. MOODY'S credit rating is an opinion as to the creditworthiness of a debt obligation of the issuer, not on the equity securities of the issuer or any form of security that is available to retail investors.

Additional terms for India only: Moody's credit ratings, Assessments, other opinions and Materials are not intended to be and shall not be relied upon or used by any users located in India in relation to securities listed or proposed to be listed on Indian stock exchanges.

Additional terms with respect to Second Party Opinions and Net Zero Assessments (as defined in Moody's Ratings Rating Symbols and Definitions): Please note that neither a Second Party Opinion ("SPO") nor a Net Zero Assessment ("NZA") is a "credit rating". The issuance of SPOs and NZAs is not a regulated activity in many jurisdictions, including Singapore. JAPAN: In Japan, development and provision of SPOs and NZAs fall under the category of "Ancillary Businesses", not "Credit Rating Business", and are not subject to the regulations applicable to "Credit Rating Business" under the Financial Instruments and Exchange Act of Japan and its relevant regulation. PRC: Any SPO: (1) does not constitute a PRC Green Bond Assessment as defined under any relevant PRC laws or regulations; (2) cannot be included in any registration statement, offering circular, prospectus or any other documents submitted to the PRC regulatory authorities or otherwise used to satisfy any PRC regulatory disclosure requirement; and (3) cannot be used within the PRC for any regulatory purpose or for any other purpose which is not permitted under relevant PRC laws or regulations. For the purposes of this disclaimer, "PRC" refers to the mainland of the People's Republic of China, excluding Hong Kong, Macau and Taiwan.

REPORT NUMBER

1458901