S&P Global Ratings

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Vattenfall AB

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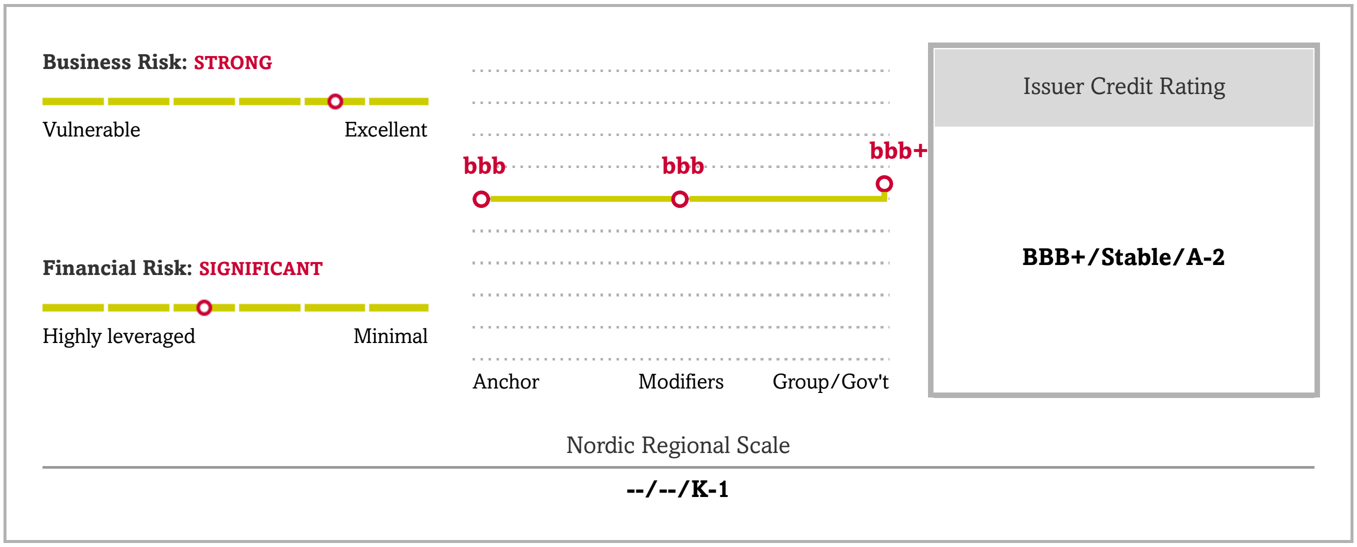
Vattenfall AB



Credit Highlights

Overview

Key Strengths	Key Risks
Roughly 40%-45% of EBITDA stems from relatively stable and low-risk regulated electricity distribution networks and district heating operations.	High sensitivity to low and volatile power prices.
Leading position in the Swedish power generation market, supported by large nuclear fleet and flexible low-cost hydropower generation assets.	New regulation for distribution networks in Sweden from 2020 on will lead to lower allowed revenues.
Increased cash contribution from subsidized, long-term contracted renewables (with wind representing about 20% of our 2018 adjusted EBITDA).	Large renewable capital expenditure (capex) program, which leaves room for significant execution risk.
Positive free cash flow covering 2018-2020 investment needs, supported by increasing contributions from wind, electricity distribution, and district heating operations.	Exposures to nuclear retirement obligation, which represents about 55%-65% of our adjusted debt from 2018 to 2020.

Power price increases since 2016 have been key to the recovery of Swedish power company Vattenfall's earnings. Prices have materially improved since early 2016, when they hit a low. However, S&P Global Ratings remains cautious because it expects price volatility to increase due to higher penetration of renewables and more frequent extreme weather conditions in Europe, and because Vattenfall's large outright production from hydro and nuclear has a significant exposure to fluctuations in both carbon dioxide emission and power prices.

We expect Vattenfall's credit metric headroom to recover by 2019. From 2019, we expect funds from operations (FFO) to debt to be sustainable at above 22% and debt to EBITDA at around 3x-4x because the planned capex will have passed its peak by then. We also expect revenue growth to turn positive, after being in constant decline since 2013.

We expect more stable cash flows from 2019, when new renewable assets are commissioned. A considerable share of Vattenfall's capex has been invested in renewables and we expect this to continue. Vattenfall owns and operates some of the largest wind farms in the world, and aims to expand its presence within the wind sector.

Uncertainty surrounding the regulatory distribution environment in Sweden.Parliament has issued an ordinance that would imply the weighted-average cost of capital (WACC) will fall to as low as 3.0% under current market conditions, compared with the current WACC of 5.85%. This would lead to price decreases, and thus, lower revenues and weaker margins from 2020, when the new regulation comes into effect. On a more positive note, a recent court ruling allows the distribution system operators to recover revenues from earlier periods. Distribution represented 23% of Vattenfall's EBITDA during 2017.

Financial policy supports current ratings. After solid financial performance, Vattenfall has decided it will return to paying regular dividends of 40%-70% of net profits. It has outlined new financial targets of return on capital employed (ROCE) above 8% (>9%) and FFO to debt of 22%-27% (22%-30%).

Reduction in stable heat income from 2019 The City of Hamburg has exercised its legal right to take over the local heating system, effective Jan. 1, 2019. The transaction is likely to close during 2019. The heating networks accounts for roughly 3% of Vattenfall's annual EBITDA. Vattenfall will receive €625 million for its 74.9% share in the company. The risk that other cities could follow Hamburg's lead has not been ruled out.

Outlook: Stable

The stable outlook reflects our assumption that Vattenfall's significant investments in low-risk electricity distribution and district heating networks, and its growing portfolio of wind farms, will translate into solid earnings growth. This should enable the group to maintain a financial risk profile in line with our expectations for the rating. The company's flexibility in making dividend payouts may mitigate any potential operating underperformance. Given the group's significant share of stable cash flows from electricity distribution and district heating, we consider an FFO-to-debt ratio of above 20% appropriate for the rating.

Downside scenario

We could lower the rating if we considered that Vattenfall's position in the power generation business was weakening, for example, if power prices deteriorate or if the planned expansion of the wind portfolio is delayed or unsuccessful. These factors could have negative financial consequences for Vattenfall and, unless countermeasures are implemented, could lead to weakening credit measures, such as FFO to debt falling below 20%. We could also downgrade Vattenfall if we see signs of weakening government support; for example, if the government privatized a significant part of its ownership in Vattenfall. However, we consider this to be unlikely over the near-to-medium term.

Upside scenario

We see an upgrade as unlikely, but it could occur if the financial risk profile strengthened, with FFO to debt increasing toward 25% on a sustainable basis. This could occur if power prices strengthen more than we expect.

Our Base-Case Scenario

Assumptions	Key Metrics

Assumptions

- GDP growth in Sweden of 2.7% in 2018, 2.2% in 2019, and 2.1% in 2020.
- GDP growth in Germany of 2.0% in 2018, 1.8% in 2019, and 1.5% in 2020.
- Nuclear capacity tax abolished as of Jan. 1, 2018.
- Reduction of Swedish hydro real estate tax over a four-year period.
- Increased power prices in the Nordic region has relatively limited near-term impact due to hedges.
- Reduction in Swedish corporate tax rate to 20.6% by January 2021, from 22% today.
- Continued high growth investments in renewables, specifically wind; growth capex comprises almost 50% of total capex.
- Dividends in line with policy of 40%-70% of adjusted profit after tax.

Key Metrics

	2017A	2018E	2019E	2020E
EBITDA* (bil. SEK)	37.9	35.5-36.5	36.5-37.5	37-38
FFO/debt (x)	22.5	20.5-21.5	21.5-22.5	22.5-23.5
Debt* (bil. SEK)	122.5	121-123	121-123	121-123
Debt/EBITDA (x)	3.2	3x-4x	3x-4x	3x-4x

*S&P Global Ratings adjusted.

A--Actual. E--Estimate

Recent developments

Vattenfall's results for the first nine months of 2018 were in line with our forecast; it reported net sales at SEK108.8 billion, up from SEK96.8 billion in 2017. EBITDA, at SEK25.7 billion, was 5% higher than last year. Despite positive effects from lower tax on generation (hydro and nuclear), and higher electricity prices, heat operations were negatively affected by higher fuel and emission prices. Vattenfall's high hedge rate limited earnings for the generation portfolio.

Hydro power generation during the first half of the year increased by 17% compared with the same period last year. After a very dry summer, reservoir levels are now about 10% below normal levels.

Although wind generation is still a fairly small segment for Vattenfall, the company allocates an ample proportion of its capex to wind power generation. At the end of the first half of 2018, it was dedicating approximately 30% of capex to wind power and solar investments.

ROCE increased to 7.9% for the first nine months of 2018, from 7.7% at the end of 2017, mostly because higher nuclear provisions and impairments during 2017.

Base-Case Projections

Annual revenue growth of 1%-3% through 2020. Growth in Swedish distribution income during current regulatory period, improved power prices, and new renewable capacity coming online have led to this turnaround in the revenue trajectory.

Stable EBITDA margins around 26%-28%. Given the increasing mix of regulated and contracted revenues, we expect Vattenfall to maintain stable margins going forward.

2018 is the peak of Vattenfall's capex cycle. We estimate that capex in 2018 will peak at about SEK29 billion and then decline to roughly SEK20 billion by 2021.

Leverage is improving. FFO to debt is forecast to remain solid at around 21%-23% and debt to EBITDA to be 3x-4x.

Dividends expected to return to historical levels. Guidance is that dividends will return to 40%-70% of net sales. Vattenfall paid 21% in 2017.

Company Description

Vattenfall is one of the largest electricity and heat producers in Europe and is 100% owned by the Swedish state. At year-end 2017, Vattenfall posted sales of about SEK135 billion and EBITDA of about SEK40 billion on an S&P Global Ratings' adjusted basis. Following the sale of the German lignite operations in 2016, Vattenfall's business portfolio is now split between liberalized power generation and supply, mainly in Sweden, the Netherlands, and Germany (31% of 2017 underlying EBITDA), electricity distribution networks in Sweden and Germany (23%), and heat business in Germany, Sweden, Denmark, and The Netherlands (21%). The company is also expanding its largely subsidized wind generation network (18%). The group generated almost 127 terawatt-hours (TWh) of electricity and sold about 20 TWh of heat in 2017.

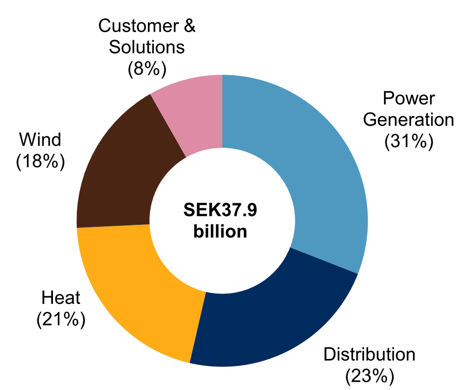
Vattenfall's generation portfolio comprises over 100 hydro plants (37% of installed capacity in 2017), 10 nuclear power plants (23%), fossil-based power primarily including gas, hard coal and oil (31%), and growing capacity from wind (8%).

The group serves about 8.8 million customers through its power supply activities and is one of Europe's largest producers and distributors of heat. Its heating network activities serve another 2.1 million customers, mainly in growing metropolitan areas in northwestern Europe, including Berlin, Amsterdam, and Uppsala.

Its power distribution network activities are in Sweden and Germany (Berlin) and comprised 170,000 (kilometers of network lines in 2017. The regulatory asset base was SEK52 billion at year-end 2017.

Chart 1

Vattenfall Operating Segments 2017 (As % Of Underlying EBITDA)

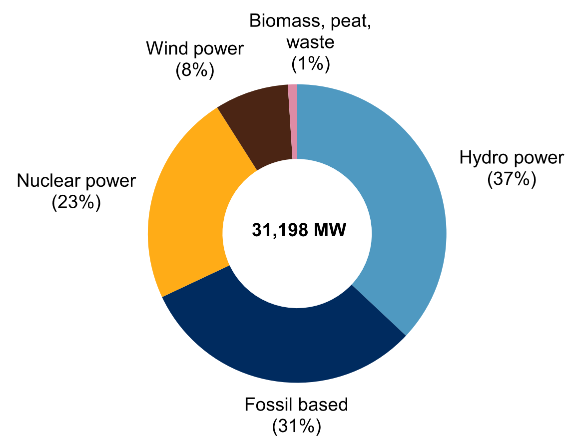


*Pertains to continuing operations excluding lignite operations. Underlying operating profit before depreciation, amortization and impairment losses, excluding items comparability.

Source: 2017 Annual Report

Chart 2

Vattenfall Power Generation Capacity 2017



Source: 2017 Annual Report.

Business Risk: Strong

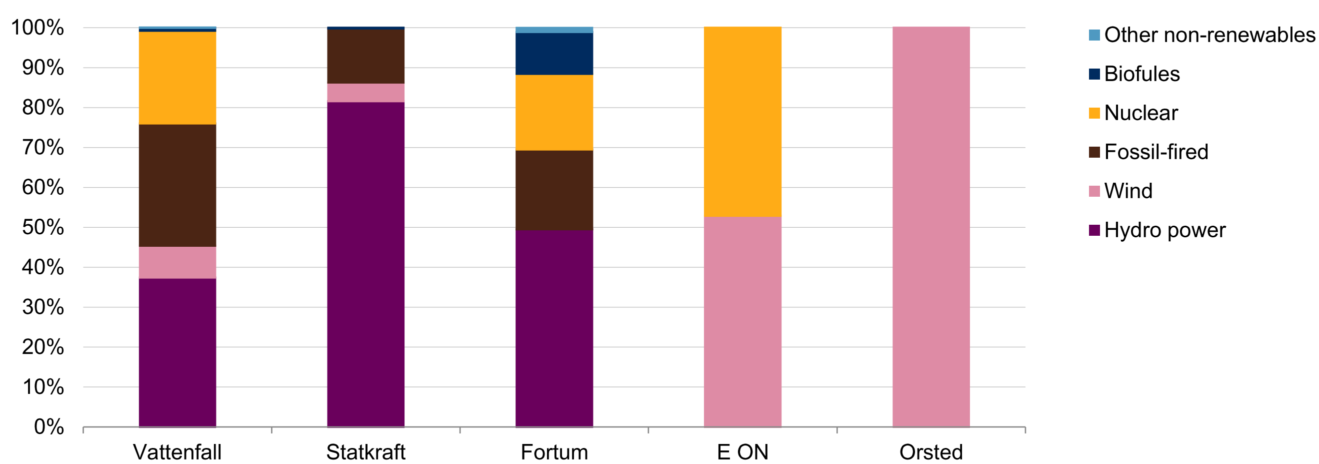
Vattenfall has maintained its position as a leading electricity generator in northern European countries, especially in Sweden, where it generates about 50% of all electricity generated and its market share of electricity sales is nearly 30%. In the Nordics, Vattenfall has an attractive asset mix, primarily consisting of low-cost and flexible hydropower and nuclear power, both of which are well placed on the merit order.

The overall business mix significantly improved after the company divested its lignite assets. Rather than conventional generation dominating the portfolio, regulated activities (distribution and heat) now represent about 45% of EBITDA. This, combined with a significant expansion into wind, has increased the stability of the company's earnings. Wind power represents more than half of growth investments and 80% of wind projects are under known, locked-in subsidy schemes that will last the next 10 years.

A material recovery in Nord Pool power prices, which reached historical lows in early 2016, has affected cash flows in the power generation business. Nordic system spot prices averaged €39 per megawatt hour (/MWh) during the second quarter of 2018, 42% higher than the second quarter of 2017, when they were €27/MWh, and up from €24/MWh in the corresponding period of 2016. These strong price improvements mainly stem from higher fuel and carbon dioxide prices, combined with a lower hydrological balance due to the dry summer. Vattenfall will not capture the full benefit of the recent price increase due to the high Nordic hedge ratio, at 75% in 2018, 65% in 2019, and 33% in 2020.

Chart 3

Vattenfall Installed Power Capacity Breakdown Versus Other Rated Nordic Peers



Source: Company data.

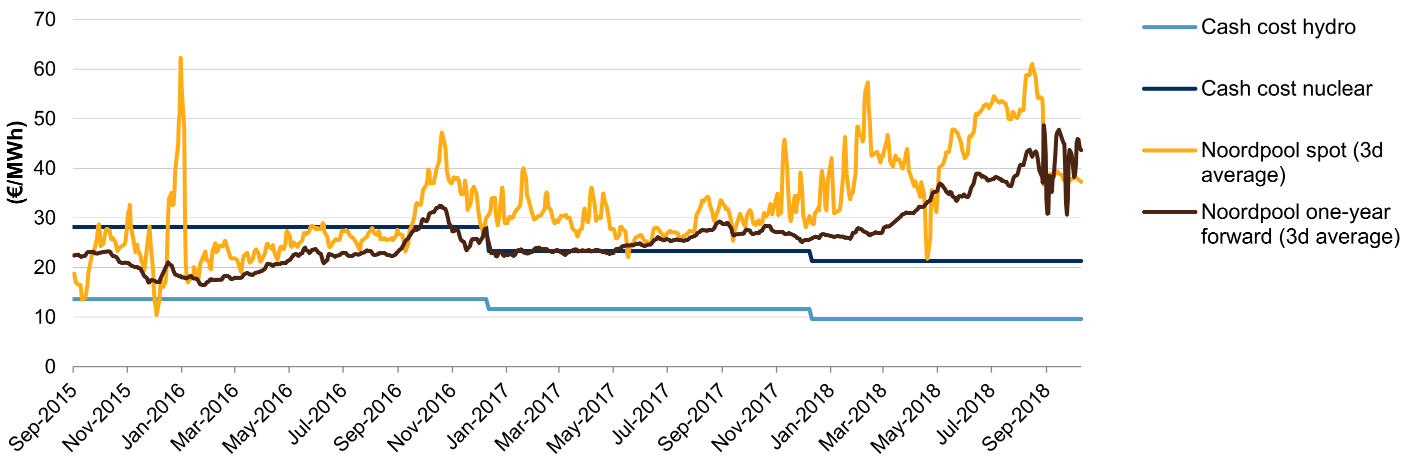
Factors that have boosted the profitability of Vattenfall's Swedish power generation include:

- Recent increases in power prices;

- The reduction of hydro property taxes; and
- The abolishment of nuclear capacity tax as of Jan. 1, 2018.

Chart 4

Noordpool Spot And Forward Prices In Relation To Hydro And Nuclear Cash Costs



Data as of Oct. 31, 2018.

In the short term, we expect EBITDA from the distribution network segment to increase as a result of price increases. That said, the Swedish government has announced that new regulations will come into effect from 2020; these will tighten revenues for distribution network. Details of the new framework have not yet been decided.

Peer comparison

Table 1

Vattenfall AB -- Peer Comparison

Industry Sector: Energy

	Vattenfall AB	Orsted A/S	EnBW Energie Baden-Wuerttemberg AG	Fortum Oyj	E.ON SE
Rating as of Oct. 17, 2018	BBB+/Stable/A-2	BBB+/Stable/A-2	A-/Stable/A-2	BBB/Negative/A-2	BBB/Stable/A-2
	--Fiscal year ended Dec. 31, 2017--				
(Mil. €)					
Revenues	13,768.7	7,992.0	21,974.0	4,520.0	37,965.0
EBITDA	3,859.8	1,675.8	2,277.1	1,358.5	5,082.1
Funds from operations (FFO)	2,804.9	1,002.2	1,704.6	977.1	3,934.7
Net income from cont. oper.	856.9	1,790.5	2,054.1	866.0	3,925.0
Cash flow from operations	2,931.8	(27.4)	(1,225.7)	986.1	7,570.6
Capital expenditures	1,991.9	2,261.5	1,413.5	657.0	3,033.0
Free operating cash flow	939.9	(2,289.0)	(2,639.2)	329.1	4,537.6
Discretionary cash flow	819.1	(2,718.5)	(2,761.1)	(647.9)	3,987.6
Cash and short-term investments	2,737.3	3,859.3	3,213.3	3,897.0	3,378.0
Debt	12,472.9	2,464.6	7,339.9	2,552.2	19,273.7
Equity	10,543.6	8,707.0	6,842.7	13,287.0	6,708.0
Adjusted ratios					
EBITDA margin (%)	28.0	21.0	10.4	30.1	13.4
Return on capital (%)	9.7	7.6	9.4	6.2	13.1
EBITDA interest coverage (x)	5.4	4.0	5.4	5.8	3.7
FFO cash int. cov. (X)	7.2	2.3	5.4	6.5	5.2
Debt/EBITDA (x)	3.2	1.5	3.2	1.9	3.8
FFO/debt (%)	22.5	40.7	23.2	38.3	20.4
Cash flow from operations/debt (%)	23.5	(1.1)	(16.7)	38.6	39.3
Free operating cash flow/debt (%)	7.5	(92.9)	(36.0)	12.9	23.5
Discretionary cash flow/debt (%)	6.6	(110.3)	(37.6)	(25.4)	20.7

Among its Nordic peers, Vattenfall has the strongest market position, followed by Statkraft. Vattenfall is the market leader in the Nordic region (Sweden in particular) and has a strong position in both Germany and the Netherlands. Vattenfall's portfolio is the most geographical diversified among its peers, although it has become less diversified geographically over the past few years. Vattenfall also has the most diverse portfolio by procurement, with a mix between renewables (mainly low cost flexible hydro and windy), low cost nuclear, and thermal (coal and gas).

The company is set to increase its share of renewables following large investments in wind generation. Vattenfall also has the largest share of regulated activities among its peers.

Financial Risk: Significant

We base our assessment of Vattenfall's financial risk profile on our assumption that adjusted FFO to debt will remain around 21%-23% over the near-to-medium term. Although we anticipate that power prices will rise, we do not expect Vattenfall to capture the full benefit in the short term because of its high hedge ratio.

Vattenfall plans capex of SEK46 billion for 2018-2019, of which it will spend about half on growth investments. During the first half of 2018, about 30% of capex went into renewables and 30% into distribution networks. The remainder was split between thermal, nuclear, hydro, and other investments. We expect a similar mix of capex going forward.

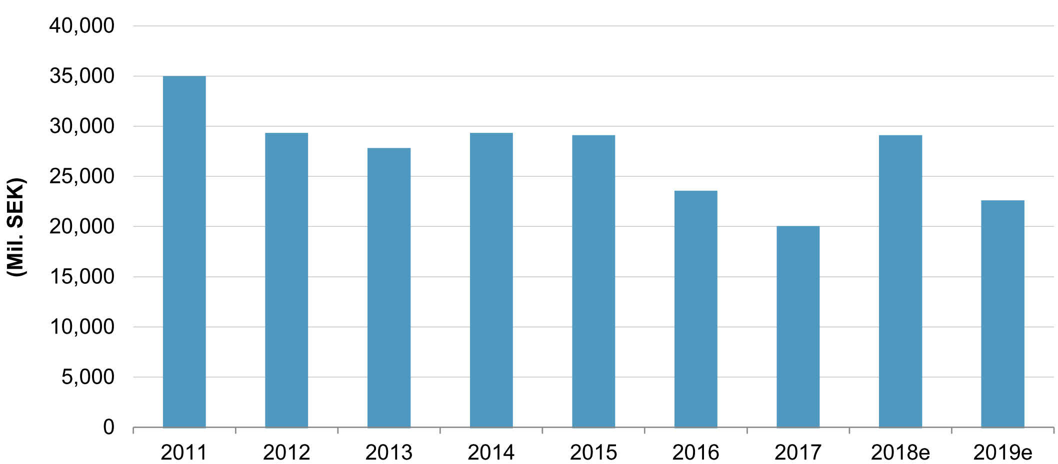
We understand that most growth investments over the next five years will be dedicated to renewables. A significant share will go into wind production under different supportive subsidy schemes and Vattenfall will also invest in stable district heating and electricity distribution. We view this as credit positive.

Relatively high level of asset retirement and pension obligations, representing about 55%-65% of our adjusted debt from 2018 to 2020. At year-end 2017, our S&P Global Ratings-adjusted net debt of SEK123 billion comprised about SEK60 billion of net financial debt, pension deficit of SEK38 billion, and asset-retirement obligations (mainly nuclear liabilities) of SEK34 billion. We expect debt to remain at the current level going forward.

Debt in foreign currency is swapped to Swedish krona or booked as a hedge against net foreign investments, thereby mitigating currency risk. The average remaining debt term at year-end 2017 was 6.9 years, down from 8.1 years, but still a long average to maturity. The group's average cost of debt was unchanged at 4.4%.

Chart 5

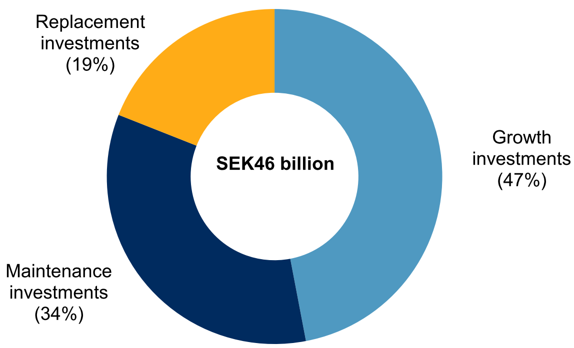
Investment Level Evolution



Source: Annual Reports

Chart 6

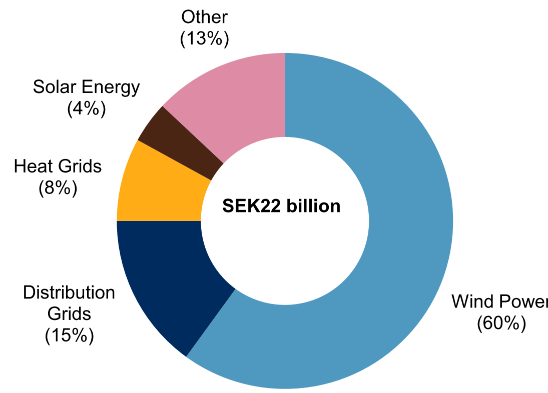
Vattenfall Investment Plan 2018-2019



Source: Capital Markets Day.

Chart 7

Total Growth Investments 2018-2019



Source: Capital Markets Day.

Financial summary

Table 2

Vattenfall AB -- Financial Summary

Industry Sector: Energy

	--Fiscal year ended Dec. 31--				
	2017	**2016**	**2015**	**2014**	**2013**
Rating history	BBB+/Stable/A-2	BBB+/Negative/A-2	BBB+/Negative/A-2	A-/Stable/A-2	A-/Stable/A-2
(Mil. kr)					
Revenues	135,295.0	139,208.0	164,510.0	165,945.0	171,684.0
EBITDA	37,920.5	36,819.5	33,390.0	43,476.0	44,611.5
Funds from operations (FFO)	27,554.1	27,554.5	28,290.5	32,316.5	30,955.6
Net income from continuing operations	8,420.0	(2,491.0)	(16,672.0)	(8,178.0)	(13,668.0)
Cash flow from operations	28,801.1	33,528.0	43,575.5	41,901.5	38,206.5
Capital expenditures	19,573.0	23,024.0	28,232.0	28,202.0	26,463.0
Free operating cash flow	9,228.1	10,504.0	15,343.5	13,699.5	11,743.5
Dividends paid	1,187.0	1,203.5	564.0	343.1	7,068.1
Discretionary cash flow	8,041.1	9,300.5	14,779.5	13,356.4	4,675.5
Debt	122,562.3	122,482.3	136,251.6	158,080.5	165,310.6
Preferred stock	9,559.0	9,582.0	9,273.0	4,692.5	4,417.5
Equity	103,604.0	93,382.0	125,229.0	133,154.5	135,135.5
Debt and equity	226,166.3	215,864.3	261,480.6	291,235.0	300,446.1
Adjusted ratios					
EBITDA margin (%)	28.0	26.4	20.3	26.2	26.0
EBITDA interest coverage (x)	5.4	5.2	4.6	5.2	4.8
FFO cash int. cov. (x)	7.2	10.0	9.1	10.5	7.9
Debt/EBITDA (x)	3.2	3.3	4.1	3.6	3.7

Table 2

Vattenfall AB -- Financial Summary (cont.)

Industry Sector: Energy

	--Fiscal year ended Dec. 31--				
	2017	**2016**	**2015**	**2014**	**2013**
FFO/debt (%)	22.5	22.5	20.8	20.4	18.7
Cash flow from operations/debt (%)	23.5	27.4	32.0	26.5	23.1
Free operating cash flow/debt (%)	7.5	8.6	11.3	8.7	7.1
Discretionary cash flow/debt (%)	6.6	7.6	10.8	8.4	2.8
Net Cash Flow / Capex (%)	134.7	114.5	98.2	113.4	90.3
Return on capital (%)	9.8	3.8	(7.1)	0.4	7.6
Return on common equity (%)	11.1	(3.3)	(15.9)	(7.8)	(11.2)
Common dividend payout ratio (un-adj.) (%)	0.0	(35.4)	(2.0)	0.0	0.0

Liquidity: Strong

We assess Vattenfall's liquidity position as strong, based on our expectation that the group will maintain liquidity sources that exceed liquidity uses by 1.5x over the near term. We also assume that liquidity sources will exceed uses even if EBITDA were to decrease by 30%, and we understand that Vattenfall's credit facilities are free from onerous financial covenants. We also view Vattenfall as having solid relationships with its banks, a high standing in credit markets, and prudent risk management.

Principal Liquidity Sources	Principal Liquidity Uses
According to our calculations, Vattenfall's liquidity sources as of Dec. 31, 2017, comprised: • Available cash and marketable securities of about SEK19.9 billion; • Access to committed credit lines of about SEK19.7 billion; and • Forecasted FFO of about SEK27 billion.	Expected cash outflows include: • Capital expenditures of about SEK29 billion in 2018 and about SEK22.5 billion in 2019; and • Dividends of about SEK2 billion over the coming 12 months.

Debt maturities

Vattenfall has debt maturities of about SEK9.8 billion in the coming 12 months and about SEK10.3 billion in the subsequent 12 months.

Government Influence

The ratings on Vattenfall benefit from one notch of uplift, owing to our view of a moderate likelihood of timely and sufficient extraordinary government support for Vattenfall in case of financial distress. This reflects our assessment of Vattenfall's:

- Strong link with the Swedish government, which owns 100% of Vattenfall through the Ministry of Enterprise and Innovation, and the government's influence on the group's high-level strategic decision-making; and
- Limited role for the state, given the group's strong, but not dominant, market position in Sweden, significant exposure to non-Nordic markets, and its operations in a fully liberalized electricity market, which implies that it could conceivably be replaced by a private-sector entity.

Ratings Score Snapshot

Issuer Credit Rating

BBB+/Stable/A-2

Business risk: Strong

- **Country risk:** Very 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)
- **Financial policy:** Neutral (no impact)
- **Liquidity:** Strong (no impact)
- **Management and governance:** Satisfactory (no impact)
- **Comparable rating analysis:** Neutral (no impact)

Stand-alone credit profile : bbb

- **Related government rating:** AAA
- **Likelihood of government support:** Moderate (+1 notch from SACP)

Issue Ratings--Subordination Risk Analysis

Capital structure

Vattenfall's capital structure consisted of SEK123 billion of unsecured debt as of Dec. 31, 2017.

Analytical conclusions

We rate Vattenfall's senior unsecured debt at the same level as the 'BBB+' long-term issuer credit rating because all the debt is issued by the parent company.

We rate Vattenfall's commercial paper program at 'A-2' (global scale) 'K-1' Nordic regional scale, which aligns with our 'BBB+' long-term issuer credit rating (ICR) on Vattenfall. We assigned dual ratings to Vattenfall's EMTN program (senior unsecured at ICR level and senior subordinated one notch below the ICR), although Vattenfall has not issued any subordinated debt under the program. All senior unsecured debt is rated at ICR level.

Vattenfall's hybrid bonds (SEK19.2 billion), which we assess as having intermediate equity content (50%), are rated 'BB+', two notches lower than the SACP. The difference stems from our deduction from the 'bbb' SACP level of:

- One notch for the notes' subordination; and
- Another notch for payment flexibility to reflect that the deferral of interest is optional.

Reconciliation

Vattenfall's consolidated accounts are prepared under International Financial Reporting Standards. Our key analytical adjustments relate to postretirement benefit obligations, asset-retirement obligations (AROs), surplus cash, hybrid capital, and other debt, including liabilities to owners of noncontrolling interests due to consortium agreements and margin calls received (see table 3):

- We add back SEK34.3 billion to debt to reflect future decommissioning liabilities relating to Vattenfall's proportional share of nuclear and mining operations. We calculate the AROs related to Vattenfall's Swedish nuclear operations net of the group's share of the Swedish nuclear decommissioning fund. Vattenfall's gross pro rata decommissioning liability for its German plants was SEK34.8 billion. Vattenfall's German minority-owned nuclear plants have set aside cash to cover future nuclear decommissioning liabilities. This cash is deposited with Vattenfall and is included in the group's debt (loans from associated companies; about SEK2.8 billion). Consequently, we deduct these funds from our ARO adjustment. The remaining adjustments relate to Vattenfall's mining operations (SEK4.3 billion).We add back SEK37.8 billion to debt related to unfunded postretirement obligations.
- We deduct SEK19.9 billion from gross debt as we see this amount as available surplus cash.
- We add SEK9.6 billion to debt reflecting our classification of hybrid debt as having intermediate equity content (50%).
- We reduce debt by SEK12.5 billion related to margin calls received (SEK 3.3 billion), and liabilities to minority owners (SEK 9.2 billion).
- We add SEK2.2 billion to debt reflecting accrued interest.

- We add SEK3.0 billion to debt related to operating leases.

Reconciliation

Table 3

Reconciliation Of Vattenfall AB Reported Amounts With S&P Global Ratings Adjusted Amounts (Mil. SEK)

	--Fiscal year ended Dec. 31, 2017--								
Vattenfall AB reported amounts									
	Debt	**Shareholders' equity**	**EBITDA**	**Operating income**	**Interest expense**	**EBITDA**	**Cash flow from operations**	**Dividends paid**	**Capital expenditures**
Reported	87,154.0	78,714.0	34,463.0	18,644.0	5,088.0	34,463.0	25,608.0	865.0	19,936.0
S&P Global Ratings adjustments									
Interest expense (reported)	--	--	--	--	--	(5,088.0)	--	--	--
Interest income (reported)	--	--	--	--	--	326.0	--	--	--
Current tax expense (reported)	--	--	--	--	--	(3,557.0)	--	--	--
Operating leases	3,035.3	--	733.5	167.3	167.3	566.2	566.2	--	--
Intermediate hybrids reported as debt	(9,559.0)	9,559.0	--	--	(324.0)	324.0	322.0	322.0	--
Postretirement benefit obligations/deferred compensation	37,804.0	--	23.0	23.0	799.9	(839.2)	220.8	--	--
Surplus cash	(19,919.0)	--	--	--	--	--	--	--	--
Capitalized interest	--	--	--	--	253.0	(253.0)	(253.0)	--	(253.0)
Capitalized development costs	--	--	(110.0)	(66.0)	--	(110.0)	(110.0)	--	(110.0)
Dividends received from equity investments	--	--	166.0	--	--	166.0	--	--	--
Asset retirement obligations	34,345.0	--	--	--	1,087.0	(1,088.9)	2,447.1	--	--
Non-operating income (expense)	--	--	--	1,464.0	--	--	--	--	--
Non-controlling Interest/Minority interest	--	15,331.0	--	--	--	--	--	--	--
Debt - Accrued interest not included in reported debt	2,203.0	--	--	--	--	--	--	--	--
Debt - Other	(12,501.0)	--	--	--	--	--	--	--	--
EBITDA - Income (expense) of unconsolidated companies	--	--	(339.0)	(339.0)	--	(339.0)	--	--	--

Table 3

Reconciliation Of Vattenfall AB Reported Amounts With S&P Global Ratings Adjusted Amounts (Mil. SEK) (cont.)									
EBITDA - Gain/(Loss) on disposals of PP&E	--	--	(639.0)	(639.0)	--	(639.0)	--	--	--
EBITDA - Derivatives	--	--	3,627.0	3,627.0	--	3,627.0	--	--	--
EBITDA - Other	--	--	(4.0)	(4.0)	--	(4.0)	--	--	--
EBIT - Income (expense) of unconsolidated companies	--	--	--	339.0	--	--	--	--	--
EBIT - Other	--	--	--	4.0	--	--	--	--	--
Total adjustments	35,408.3	24,890.0	3,457.5	4,576.3	1,983.2	(6,908.9)	3,193.1	322.0	(363.0)
S&P Global Ratings adjusted amounts									
	Debt	**Equity**	**EBITDA**	**EBIT**	**Interest expense**	**Funds from operations**	**Cash flow from operations**	**Dividends paid**	**Capital expenditures**
Adjusted	122,562.3	103,604.0	37,920.5	23,220.3	7,071.2	27,554.1	28,801.1	1,187.0	19,573.0

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: S&P Global Ratings' National And Regional Scale Mapping Tables, Aug. 14, 2017
- 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
- Criteria - Corporates - Industrials: Key Credit Factors For The Unregulated Power And Gas Industry, March 28, 2014
- General Criteria: Group Rating Methodology, Nov. 19, 2013
- General Criteria: Country Risk Assessment Methodology And Assumptions, Nov. 19, 2013
- Criteria - Corporates - Utilities: Key Credit Factors For The Regulated Utilities Industry, Nov. 19, 2013
- Criteria - Corporates - General: Corporate Methodology, Nov. 19, 2013
- Criteria - Corporates - General: Corporate Methodology: Ratios And Adjustments, Nov. 19, 2013
- General Criteria: Methodology: Industry Risk, 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
- Criteria - Financial Institutions - General: Methodology: Hybrid Capital Issue Features: Update On Dividend Stoppers, Look-Backs, And Pushers, Feb. 10, 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

- S&P Global Ratings' National And Regional Scale Mapping Specifications, June 25, 2018

Business And Financial Risk Matrix

	Financial Risk Profile					
Business Risk Profile	Minimal	Modest	Intermediate	**Significant**	Aggressive	Highly leveraged
Excellent	aaa/aa+	aa	a+/a	a-	bbb	bbb-/bb+
Strong	aa/aa-	a+/a	a-/bbb+	**bbb**	bb+	bb
Satisfactory	a/a-	bbb+	bbb/bbb-	bbb-/bb+	bb	b+
Fair	bbb/bbb-	bbb-	bb+	bb	bb-	b
Weak	bb+	bb+	bb	bb-	b+	b/b-
Vulnerable	bb-	bb-	bb-/b+	b+	b	b-

Ratings Detail (As Of November 8, 2018)

Vattenfall AB		
Issuer Credit Rating		BBB+/Stable/A-2
Nordic Regional Scale		--/--/K-1
Commercial Paper		A-2
Nordic Regional Scale		K-1
Junior Subordinated		BB+
Senior Unsecured		BBB+
Subordinated		BBB
Issuer Credit Ratings History		
07-Jun-2017		BBB+/Stable/A-2
19-May-2016		BBB+/Negative/A-2
26-Feb-2016		BBB+/Watch Neg/A-2
28-Sep-2015		BBB+/Negative/A-2
24-Jul-2015		A-/Watch Neg/A-2
19-May-2016	*Nordic Regional Scale*	--/--/K-1
26-Feb-2016		--/Watch Neg/K-1
02-Sep-2010		--/--/K-1

*Unless otherwise noted, all ratings in this report are global scale ratings. S&P Global Ratings' credit ratings on the global scale are comparable

Ratings Detail (As Of November 8, 2018) (cont.)

across countries. S&P Global Ratings' credit ratings on a national scale are relative to obligors or obligations within that specific country. Issue and debt ratings could include debt guaranteed by another entity, and rated debt that an entity guarantees.

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