

ANALYSIS

Vattenfall AB

Stockholm, Sweden

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Corporate Profile

A leading vertically integrated electric utility in the Northern European market with strong electricity generation positions in Sweden, Germany and Netherlands.

Vattenfall AB (Vattenfall; rated A2/P-1 with a stable outlook) is a large integrated European utility focusing on electricity generation. It holds leading position on the Swedish market and is also strongly represented in Germany, Denmark, Finland, Netherlands and Poland. Vattenfall is fully owned by the Swedish government.

In December 2009 the company finalized post merger integration processes of Nuon NV's generation and supply assets which it acquired and consolidated on 1 July 2009. The transaction involved a two-step process, whereby (i) Vattenfall initially acquired 49% of Nuon's generation and supply activities (for EUR4.8 billion) in July 2009, and (ii) the remaining 51% of the shares were agreed to be acquired after two, four and six years under fixed terms for a consideration of EUR5.03 billion. During the first 9 months of 2010, Nuon contributed c. 15% to Vattenfall's operating profit (excl. items affecting comparability and amortization of surplus value).

This Analysis provides an in-depth discussion of credit rating(s) for Vattenfall AB and should be read in conjunction with Moody's most recent Credit Opinion and rating information available on [Moody's website](http://www.moodys.com).

FIGURE 1

9M2010 Operating Highlights

9 months (SEK m)	External Net Sales		Net Sales*		Operating Profit**		Relative Contribution To Operating Profit, %	
	9M2010	9M2009	9M2010	9M2009	9M2010	9M2009	9M2010	9M2009
Group Total	158,035	140,002	158,035	140,002	30,220	22,177	100%	100%
Electricity Generation	39,335	29,066	63,632	61,410	21,644	19,710	72%	89%
Supply & Trading	10,719	8,612	57,692	44,462	3,612	419	12%	2%
Electricity Networks	33,127	39,101	40,631	51,164	4,927	4,004	16%	18%
Heat	14,045	13,213	23,268	22,161	3,500	1,945	12%	9%
Other	83,260	65,237	91,760	73,139	-3,463	-3,901	-11%	-18%
Eliminations	-22,451	-15,227	-118,948	-112,334	-	-	0%	0%
Group Total	158,035	140,002	158,035	140,002	30,220	22,177	100%	100%
Nordic Countries	42,215	36,884	39,284	37,777	15,897	11,298	53%	51%
Germany and Poland	75,646	85,947	105,787	120,789	11,853	11,837	39%	53%
Netherlands and Belgium	29,171	7,644	34,232	9,527	-607	-390	-2%	-2%
Other	11,003	9,527	58,688	46,219	3,077	568	10%	-3%
Eliminations	-	-	-79,956	-74,310	-	-	0%	0%
Group Total	158,035	140,002	158,035	140,002	30,220	22,177	100%	100%

* Total net sales including sales between segments

** Excluding items affecting comparability.

Source: Vattenfall's Interim Report 3Q2010

Management Strategy

Revised management strategy should allow for balance sheet strengthening over time

In 2010 Vattenfall revised its strategy, with a lower investment programme of SEK165 billion for 2011-15 versus SEK201 billion for the previous five-year period 2010-2014. It may also consider asset disposals in non-core markets (principally Denmark and Poland). The changes were prompted, on the one hand, by the prospects of a slow electricity market recovery and limited growth opportunities, and on the other, by the decrease in value creation over the last few years. Vattenfall's primary objectives under the revised strategy are the generation of a competitive market return, balance sheet strengthening and reduction of CO2 exposure. The company is planning to focus on its core geographical markets in Sweden, Germany and the Netherlands where Vattenfall already has a strong position and has potential to further develop those markets. Whilst the company aims to stay vertically integrated along the value chain, its main focus remains on generation activities, with the specific long-term objective of investing principally in low carbon energy sources. In order to release resources for growth in these low emission technologies, Vattenfall is exploring possibilities to divest some of its non-core assets. Another important medium term target of the company is to improve its operating performance. In particular, Vattenfall is implementing a cost-cutting programme targeting cost reduction of SEK6 billion p.a. and also changing from a region-led, to a business-led, organizational structure which is intended to bring operational improvements, greater performance transparency, reduce costs and increase personnel synergies.

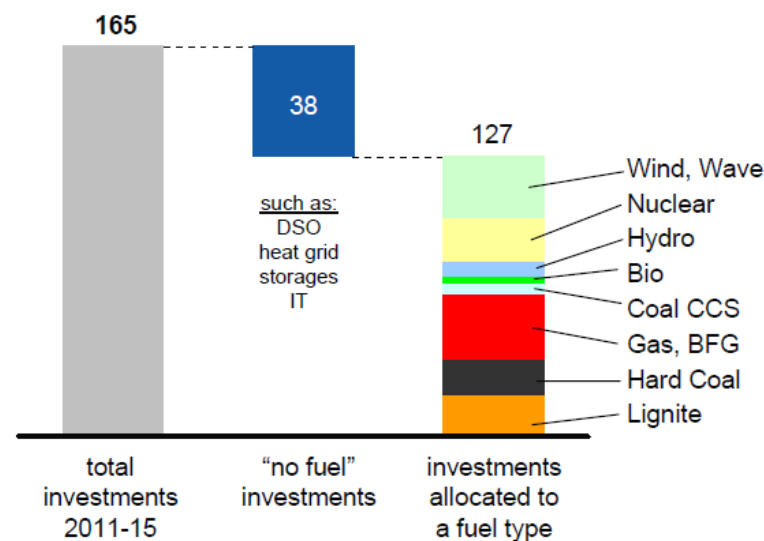
Nuon acquisition now integrated

Vattenfall acquired Nuon's commercial activities on 1 July 2009. The acquisition was consistent with Vattenfall's strategy and established Vattenfall's presence in the Dutch market, with an extra 2.6 million of electricity and 2.1 million of gas customers. It also enlarged Vattenfall's share of low carbon assets. At present, Nuon's operations are fully integrated into Vattenfall and generate a substantial part of the group's revenues and cash flows.

Vattenfall has further adjusted downwards its five-year investment plan

To support one of its strategic objectives of the balance sheet strengthening, Vattenfall has recently revised its investment plan for the coming five years from SEK201 billion for the period 2010-2014 to SEK165 billion for the period 2011-2015. The largest portion of these investments will be used to extend Vattenfall's generation capacity, through new power plants and the refurbishment of existing plants to reduce carbon dioxide (CO₂) emissions, as well as nuclear capacity upgrades and lifetime extensions of generation assets in Sweden and Germany. A significant part will be invested in renewables assets, primarily wind power.

FIGURE 2

Vattenfall's Investment Programme By Technology

Source: Vattenfall's CFO presentation for CMD, September 2010

Successful divestment of German HV transmission grid and other targeted disposals

In line with its disposal plan, Vattenfall disposed of its 50 Hertz German transmission grid in May 2010. Total cash proceeds from the sale amounted to EUR785 million, (c. SEK7.2 billion). Back in 2009, the company disposed its shares in PiteEnergi, Luleå Energi and Jämtkraft for SEK1.1 billion and its regional German utility, Wemag AG for SEK1.8 billion. Vattenfall is considering other potential disposal targets which, if completed, would positively impact its financial profile.

Key Rating Considerations

Vattenfall's A2 long-term issuer and senior unsecured debt ratings reflect the application of Moody's Government-Related Issuer (GRI) rating methodology. At the current rating level, Vattenfall's rating benefits from a one-notch uplift on the basis of moderate probability of state support.

Moody's classifies Vattenfall as a GRI because of its 100% ownership by the Swedish state. Under this GRI methodology, Vattenfall's ratings are the result of the following inputs:

- » Baseline credit assessment (BCA) of 7 (on a scale of 1 to 21, where 1 corresponds to a Aaa rating and 7 to a A3 rating), which is based upon Moody's application of its Methodology for Unregulated Utilities, as set out below.
- » Local currency rating of the Swedish government: Aaa/stable
- » Moderate dependence, due to the high degree of geographic diversification in the revenue base – with European operations contributing over half of revenues at the group level – and, hence, a lower linkage than is normally seen for a utility between its performance and the country's (Sweden's) overall economic performance
- » Moderate support, reflecting Vattenfall's 100% ownership by the Swedish state and the strategic importance of Vattenfall within Sweden, at the same time acknowledging the state's determinedly non-interventionist stance. Moody's believes that the authorities would hesitate to intervene in support of partially or even fully state-owned companies, except in the most extreme circumstances, such as when the firm controls key strategic assets. This could be applied in the case of Vattenfall, which, given its size and importance, is a "flagship company" in Sweden with control over key nuclear and hydrological generating assets, as well as sizeable parts of the network infrastructure.

The Swedish state exercises long-term active ownership over the company and views value creation as a paramount goal for Vattenfall. To this end, the state establishes market requirements for profits and returns based on the risk profile of the company. There are currently no plans for a privatisation of this strategic company.

Baseline Credit Assessment

Moody's Rating Methodology for Unregulated Utilities and Power Companies published in August 2009 sets out how Moody's analyses the credit risk of unregulated utilities and arrives at their ratings. The methodology examines the core factors that Moody's considers most relevant to unregulated utilities, sets out the range of possible outcomes by factor and maps these to a rating range. Each factor is appropriately weighted and in combination contribute to the rating output by the methodology grid.

Based on the company's historic financial profile, the grid output for Vattenfall indicates a BCA of 6 (equivalent to an A2 rating), as summarised and described in the grid and paragraphs below. The ratios used in the grid are three-year historic averages, and they were very strong prior to 2009 due to high power prices and a lack of acquisition opportunities. However, after the purchase of Nuon in 2009 the financial profile of the company became significantly more leveraged, and this affected average metrics in 2009. We expect weaker ratios than those prior to 2009 to feature over the next few years thus justifying our BCA of 7 (equivalent to an A3 rating). Although we expect the company's financial profile to gradually improve again from a 2009 weak point, as we see the benefit of a lower investment programme and possible disposals.

FIGURE 3

Global Unregulated Methodology Grid

Global Unregulated Utilities	Aaa	Aa	A	Baa	Ba	B	Caa
Factor 1: Market assessment, scale and competitive position (25%)							
a) Size and scale		x					
b) Competitive position and market structure			x				
Factor 2: Cash flow predictability of business model (25%)							
a) Fuel strategy and mix			x				
b) Degree of integration and hedging strategy				x			
c) Capital requirements and operational performance						x	
d) Contribution from low-risk/high risk businesses		x					
Factor 3: Financial policy (10%)							
Financial Policy				x			
Factor 4: Financial strength metrics (40%) *							
a) FFO / Interest			6.5				
b) FFO / Net Debt			30.1%				
c) RCF / Net Debt			23.1%				
d) FCF /Net Debt					-1.1%		
Rating:							
a) Indicated BCA from Methodology			A2				
b) Actual BCA Assigned			7				

* 3 year average historical (2007-2009)

Factor 1 - Market assessment, scale and competitive position*Size and scale*

Moody's considers size to be an important differentiator of credit quality for unregulated European utilities, acting as it does as a proxy for the business mix and geographic diversity, flexibility and strength needed to address the challenges of commodity price volatility, security of supply, regulatory and political issues, and increasing competition, which are often features of liberalised markets.

As at 30 September 2010, Vattenfall had assets of SEK529 billion (EUR58 billion). This places it in the Aa category, as a large supra-regional with strong positions in Northern Europe. There are no other companies in this category. Vattenfall ranks after the biggest utilities in EMEA, such as E.ON (A2/stable), Enel (A2/under review for possible downgrade), Iberdrola (A3/negative) and EDF (Aa3/stable), but before Fortum (A2/stable) and EnBW (A2/stable).

Competitive position and market structure

In this sub-factor, we consider the strength of a utility's core generation business and measure its competitive position by examining the generator's share of the annual output of its principal market and comparing it to shares of competitors, as well as by taking into account competitive intensity and local market conditions.

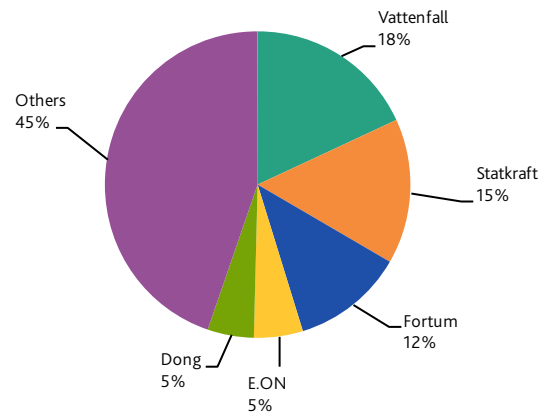
Vattenfall scores A on this factor, reflecting its strong market position in the Nordic and German regions, but recognising the competitive and open nature of these markets, in particular the Nordic market.

Vattenfall is the largest power (electricity and heat) generator in the Nordic region, with c. 18.4 GW of installed capacity and around 20% market share in electricity generation. The Nordic generation market is rather fragmented compared with a number of other European markets. Five major players control around 55% of the market (Vattenfall, Fortum, Statkraft, E.ON, Dong).

FIGURE 4

Major players on the Nordic electricity market (% in total power generation)

Nordics power generation in 2009 amounted to c. 370 TWh, produced by more than 350 companies



Source: The companies' Annual Reports for 2009, ENTSO-E, NordREG

Vattenfall also has a strong position in the German market. The group generated around 65TWh in Germany in 2009, representing a market share of around 12%. As such, it is a similar size to EnBW and together they rank third in terms of size after E.ON and RWE.

Following the acquisition of Nuon, Vattenfall is one of the three largest generators in the Dutch market. In the Polish market, heat production and heat sales are the largest part of its operations, where Vattenfall has a market share of approximately 12%.

Factor 2 – Cash flow predictability of business model

Fuel mix and strategy

Vattenfall scores A on this factor, although it could shift into Aa over time as it continues with its investment strategy focused on low CO₂ emissions. Vattenfall has an overall well-balanced portfolio. For the year 2009, around 50% of its generation was from hydro, nuclear and other non-fossil fuel sources (21.3% hydro, 26.1% nuclear, 1.1% wind, 0.9% biofuels and waste). The large part of thermal sources in the generation mix balances out the volatility associated with the hydro-driven Nordic power sector. Vattenfall's portfolio is "greener" in the Nordic countries, with around 90% of its generation being CO₂-free in 2009; in Central Europe, almost all its generation is exposed to CO₂ emissions, although Vattenfall is active in development of technologies to reduce emissions from coal. Specifically, in September 2008 the company opened the first world's CCS (Carbon Capture and Storage) pilot plant based on oxyfuel technology in Germany. Through its subsidiary, Nuon, Vattenfall is building another CCS pilot plant in the Netherlands and is also planning to construct a large demonstration plant in Germany by 2015.

Longer term, the company's portfolio should reduce its CO2 emissions as greater investments are devoted to such generation sources.

FIGURE 5

Vattenfall's Power Generation Mix.

TWH	2009	2008	2009	2008
Business Group Nordic¹				
Hydro power	29.1	34.4	79.3%	83.9%
Nuclear power	0.0	0.0	0.0%	0.0%
Fossil fuel-based power	7.3	6.2	19.9%	15.1%
Wind power	0.0	0.0	0.0%	0.0%
Biofuel, waste	0.3	0.4	0.8%	1.0%
Total	36.7	41.0	100.0%	100.0%
Business Group Pan Europe²				
Hydro power	0.0	0.0	0.0%	0.0%
Nuclear power	28.3	31.6	94.3%	95.2%
Fossil fuel-based power	0.0	0.0	0.0%	0.0%
Wind power	1.7	1.6	5.7%	4.8%
Biofuel, waste	0.0	0.0	0.0%	0.0%
Total	30.0	33.2	100.0%	100.0%
Business Central Europe³				
Hydro power	2.5	3.0	3.6%	4.2%
Nuclear power	0.0	0.0	0.0%	0.0%
Fossil fuel-based power	65.4	66.9	94.8%	94.0%
Wind power	0.0	0.0	0.0%	0.0%
Biofuel, waste	1.1	1.3	1.6%	1.8%
Total	68.9	71.2	100%	100.0%

Source: Vattenfall's Annual Report 2009;

The above statistics represent's pro rata electricity generation corresponding to Vattenfall's ownership in the respective facilities

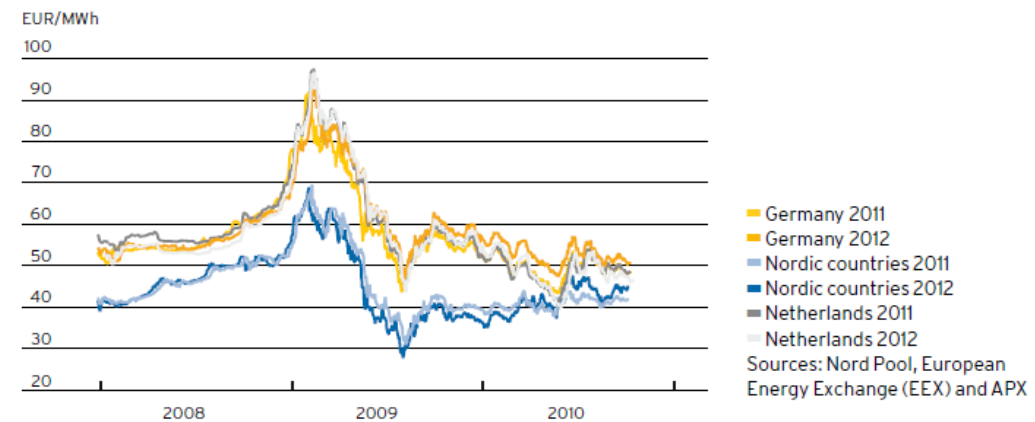
- 1 - Business Group Nordic** conducts operations in Sweden, Finland and Denmark, and includes the business units Hydro, Distribution, Sales, Heat and Services.
- 2 - Business Group Pan Europe** Comprises the three Group-wide business units: Wind, Nuclear and Engineering. Business Group Pan Europe is also responsible for Vattenfall's European business development with focus on efficient energy use and biomass.
- 3 - Business Group Central Europe** conducts operations in Germany and Poland, and includes the business units Mining & Generation, Transmission, Distribution, Sales and Heat.

In the Nordic countries, Vattenfall has a flexible portfolio, with a good mix of base-load, mid-merit and peak-load power. The Nordic power generation is dominated by hydro production (above 50%) and nuclear (above 40%); the rest consists of renewables and fossil fuels. As a result, Vattenfall is fairly well aligned, but somewhat less thermal, with the Nord Pool. Conversely, the company's German portfolio is largely coal-driven. The Nuon acquisition added a mainly gas-driven fleet of assets.

Whilst the Nordic power sector is very "clean", it is also rather volatile. It is highly sensitive to water levels and production can swing by up to plus or minus 30 TWh (total production was around 370 TWh in 2009), directly impacting prices. Vattenfall sticks to its forecast that the crisis-driven drop in

demand in the Nordic sector – around 6% (masking a 20% drop in industrial demand driven by a retraction in energy intensive industry), is unlikely to recover quickly. This could lead to prices being kept at a lower level than the EEX, although there has been a general trend upwards in recent years, as the Nord Pool has been expected to benefit from higher CO2 prices. Overall, Vattenfall believes that demand will recover more quickly in the German market than the Nordic market.

FIGURE 6
Nordic, German and Dutch electricity futures prices



Source: Vattenfall's 3Q2010 interim report

Degree of integration and hedging strategy

In this category, Moody's considers the degree of downstream integration (access to a retail customer base) as well as the extent to which the generator can stabilise future cash flow through forward sales of its production.

Vattenfall scores Baa in the degree of integration and hedging strategy. We consider Vattenfall's "long" position in generation in both the Nordic and German region versus its supply business (around 60-70% of production is sold to end-customers, the balance on the wholesale market). We note however that Vattenfall benefits from low-cost generation assets in its major markets, but with relatively high load factors and with access to the liquid Nord Pool and EEX electricity exchanges which are the primary outlets for wholesale generation. With the acquisition of Nuon, Vattenfall has gained 2.6 million electricity customers and 2.1 million gas customers. Thus, Vattenfall currently holds a "short" generation position in the Netherlands.

Overall, supply activities remain very low-margin in the Nordic and German regions, although they provide some hedge to generation activities. A retail business has in any event more limited benefits in terms of margin protection, in a very transparent and competitive market such as the Nord Pool, than in some other European markets.

Additionally Moody's notes that Vattenfall has an active and prudent hedging programme through both the Nord Pool and EEX, which mitigates the impact of short-term price movements, in particular this is important in the somewhat volatile hydro-driven Nord Pool. As of September 2010, Vattenfall had sold forward 89% of electricity generation for 2010, 73% in 2011 and 54% for 2012 for the Nordic countries; for Central Europe, the hedges for the comparable periods were 97%, 83% and 40%.

Capital requirements and operational performance

In line with most of its European peers, Vattenfall has significant capex requirements in the next few years. However, it recently further reduced its capex budget such that estimated annual capex is, on average, SEK33 billion (SEK165 billion over the five-year period 2011-15), on average around 12% with respect to its projected net PP&E (position, placing it in the Ba category). Further details of Vattenfall's investment plan in line with its strategic objectives are provided in the Strategy section.

Contribution of high/ low risk businesses

Vattenfall scores in the Aa category on this factor, as it has a contribution of around 25-30% of EBITDA from regulated/low risk businesses (Moody's includes network and district heating businesses in this category). The disposal of its German transmission grid in May 2010 led to a reduction of regulated revenues in the third quarter of 2010 versus the previous period, but had a limited impact at the operating profit level, which we do not consider significant enough to change the company's scoring under the methodology. Moody's notes, however, that the scoring could shift to A over time, if Vattenfall continues to shift from the more regulated businesses into more volatile generation.

Vattenfall maintains strong market positions in the regulated networks and in district heating businesses. It is the second-largest network operator in the Nordic region and the fourth-largest distribution system operator in Germany, while it has the largest district heating business in the region. As mentioned above, in 2010 the company sold its "50 Hertz" transmission network in Germany where it was the third-largest transmission system operator.

District heating is not a regulated business, but it has quasi-monopoly characteristics given the high barriers to entry and long-term contracts. Margins could be lower in the heat business in the future given increasing fuel costs and lower subsidies. The profit contribution from the distribution and heat businesses in Poland is still relatively small, although Moody's regards this regulatory environment as slightly more risky (compared with Western Europe), as it is still in process of development.

Regulated network businesses

Regulated networks secure rather stable cash flows for Vattenfall, although regulatory environments have been quite stringent in recent years in Germany and Sweden, which has put pressure on returns.

In Sweden, the present ex-post regulatory framework will be changed into ex-ante regulation from 2012 (four-year tariff periods). The new regulation is to be based on the real electricity network, not a virtual network as under the present regulation. In 2009-2011 the regulator maintains a light-handed regulation and it has not presented any objections to Vattenfall's current pricing strategy. Thus, Vattenfall increased its local network tariffs by 8% in 2009 and by 7.5% in 2010 and regional network tariffs were raised by 13.5% in 2010.

The Finnish market is regulated by the Energy Market Authority (EMA) and the framework is considered stable and predictable based on an ex-ante pricing model (based on a regulated asset base, cost of capital and an efficiency parameter) initially put in place in 2004. Thus, in 2009 Vattenfall's tariffs were increased by 9%, and in 2010 by 7%. The framework is based on a four-year regulatory period and has some flexibility for profit adjustments from one regulatory period to the next.

In Germany, pressure has been exerted on regulated networks generally and the regulatory regime has a much shorter track record than other European peers. Vattenfall has distribution networks in Berlin and Hamburg. The energy law (EnWG) was approved in July 2005. On 1 January 2009 an incentive-

based regulation (ARegV) was implemented providing definitive decisions on the distribution system operators for the next five years. Following earlier cuts, in 2009 Berlin and Hamburg received a 2.4% and 3.9% increase in revenues versus 2008, and a 6.1% and 0.6% increase in 2010 versus 2009, respectively. In 2011 the increases versus this year will be 0.4% for Berlin and 8.4% for Hamburg.

Factor 3 – Financial Policy

Vattenfall has demonstrated a balanced financial policy over a number of years between shareholder and bondholder interests and scores Baa, in line with the majority of the unregulated power utilities in Europe. Vattenfall's financial targets include cash flow interest coverage after maintenance investments between 3.5x and 4.5x, ROE of 15%, ROA of 11% before tax and a dividend payout ratio of between 40% and 60%. Vattenfall has, for a number of years, maintained the target of a long-term rating in the A category.

In assigning a Baa score for this factor, Moody's also takes into account Vattenfall's willingness to pursue strategic growth through capex and acquisitions, although notes that the company is now in the consolidation phase following the Nuon acquisition and recent strategy revision.

Factor 4 – Financial Strength Metrics

Vattenfall's financial profile had been very strong in recent years, prior to the acquisition of Nuon in 2009, driven both by high power prices and lack of suitable acquisition opportunities, leading to financial ratios very strongly positioned for its rating category. In line with our expectations, the 2009 financial ratios were much weaker than in prior years.

FIGURE 7

Key Adjusted Financial Data

(IN SEK BN)	2008	2009
Revenue	164.5	205.4
EBIT	27.5	29.8
Interest Expense	5.3	8.9
FFO	32.3	36.1
RCF	23.9	28.8
Capex	30.9	46.0
FCF	-2.4	-7.2
Total Debt	124.3	240.7
Net Debt	87.8	187.4
FFO Interest Coverage	7.1x	5.0x
FFO / Net Debt	36.8%	19.3%
RCF / Net Debt	27.2%	15.4%
FCF / Net Debt	-2.7%	-3.8%

Source: Vattenfall's "Annual Report 2009" and Moody's adjustments

In absolute terms, 2009 earnings and operating cash flows were higher than in 2008, though these indicators went down relative to net debt levels which more than doubled following the acquisition. Revenue grew by SEK40.8 billion or 24.8% driven mainly by consolidation of Nuon's result in the second half of 2009 (SEK21.4 billion of additional revenue), currency effects (SEK11.0 billion) and higher electricity prices. FFO and RCF went up by 11.8% and 20.5% respectively due to higher electricity prices which were partially offset by decreased volumes and increased operating costs. Nonetheless, financial metrics moved towards the lower end of the band recommended for Vattenfall's current rating category as a result of significantly higher debt levels following the Nuon acquisition, with Retained Cash Flow (RCF) to net debt of 15.4%, FFO to net debt of 19.3% and FFO interest coverage at 5.0x.

9M 2010 numbers reflect a gradually improving profile over 9M 2009

This modest improvement is due to Nuon's contribution (Nuon is consolidated in Vattenfall's accounts from July 2009 onwards) and also due to the benefits of a very low hydro balance in 2010 pushing Nord Pool prices up. Though Q3 is typically Vattenfall's weakest quarter, this year's results were stronger than Q3 2009. These developments, along with Swedish krona appreciation, led to SEK10 billion reduction of Vattenfall's net unadjusted debt to SEK145 billion at the end of Q3 from SEK155 billion at the end of 2009.

Moody's notes that Vattenfall's net debt includes the SEK49.4 billion of debt liabilities to Nuon's minorities as of 31 December 2009. This amount represents the 51% of Nuon still owned by the current Dutch municipal shareholders of Nuon NV, which will be acquired by Vattenfall in 2011, 2013 and 2015. We consider this presentation of debt appropriate given Vattenfall's management control of Nuon, consolidation of all Nuon's cash flows, and also the intention to acquire 100% of the company.

Reported FFO for 9M 2010 was SEK28.4 billion versus SEK25.3 billion last year. Investments by Q3 2010 were much lower than in 2009, SEK29.5 billion for 9M 2010 so far.

Overall group operating profit grew by 11.9% to SEK24.9 billion for the nine-month period, operating margin improved to 19.1% from 15.8%. Moody's also notes, that Vattenfall does benefit from long-term hedges in place, which smooth the impact of market price fluctuations over time; therefore, 2010-2012 results will benefit from hedges put in place in earlier years.

German nuclear tax is expected to reduce the flexibility of Vattenfall's financial profile though wouldn't exert downward rating pressure on its own

In late September 2010, the German government announced its new Energy Concept, one of the core elements of which is nuclear power plants lifetime extension. According to the Nuclear Fuel Tax Act, which still has to go through a number of revisions before coming into force, the government targets to raise c. EUR2.3 billion of tax on nuclear fuel from the industry over the six years 2011-2016. Moody's views its effect as burdensome from a credit perspective in the short to medium-term.

Based on Vattenfall's 7.2% share in total German installed nuclear capacity, the estimated annual nuclear tax for the company is around EUR165 million or SEK1.5 billion (depending on the Swedish krona exchange rate against euro). Such an amount roughly comprises 4-5% of Vattenfall's operating cash flow or 5-6% of its EBIT and thus reduces the financial flexibility available to protect the company's ratings in the event of adverse variances from plan. Moody's notes, however, that the incremental burden of the introduced levy is insufficient on its own to cause negative movements in the rating of the company.

Vattenfall's profile should gradually improve

Vattenfall's 2009 financial profile was positioned at the low end of its rating category, with FFO/Net Debt of 19.3% and RCF/Net debt of 15.4%. Moody's anticipates that thanks to Nuon's contribution, higher electricity prices and the successfully delivered disposal of German HV grid, the company's 2010 financial profile will be slightly more strongly positioned within the recommended ratio band.

Current ratio guidelines for Vattenfall's rating are: RCF/net debt of 15-19% and FFO/net debt in the 20s. The company should ensure a solid positioning within these ranges going forward to maintain a comfortable positioning within the rating category. Should ratios deteriorate beyond the bands indicated for any extended period then downward pressure could occur.

Liquidity

We generally consider Vattenfall's liquidity satisfactory as the company's large balance of cash and liquid assets and available long-term revolving facilities are normally sufficient to cover its next 12 months debt repayments and capex. The company's available cash and short term investments amounted to SEK37.3 billion at Q3 2010 and availability under EUR1 billion (SEK9.6 billion) committed revolving credit facility, maturing in 2013, was SEK9.2 billion. Drawings under the facility are subject to representations that no adverse change in the group's financial condition has occurred. In addition, the company had a SEK100 million overdraft facility. Vattenfall has two commercial paper (CP) programmes and an EMTN programme in place: a Euro CP programme of EUR2 billion (SEK19.2 billion), a domestic CP programme of SEK15 billion and Euro MTN programme of EUR15 billion (SEK144 billion), EUR4.4 billion (SEK42.2 billion) of it unutilized as of Q3. The use of the programmes varies, depending largely on pricing and need.

Vattenfall will probably need to access the debt markets next year. Liquidity sources are strong, but they are unlikely to be sufficient to cover substantial debt refinancing and capex needs. Hence in addition to cash and availability under credit lines, an estimated operating cash flow of around SEK40 billion over the next 12 month could be applied to cover Vattenfall's debt maturities of SEK10 billion, planned capital expenditures of SEK44 billion, dividend payments and a further acquisition of Nuon's minority share for SEK15 billion due in June 2011.

Vattenfall's general policy is to keep no less than 10% of group turnover in cash or committed back-up lines. If the next 90 days of debt maturities exceed this amount, then this establishes the minimum level of cash and committed lines that Vattenfall is required to hold.

Rating Outlook

The outlook is stable. Moody's believes that the company is taking measures to bolster its financial profile in the near to medium term as it consolidates its recent acquisitions and disposals. However, Moody's notes that the company is likely to be positioned at the low end of the rating category level in the near term.

What Could Change the Rating – Up

Moody's notes that positive pressure is unlikely to develop in the near term, given Vattenfall's current financial profile, the recent Nuon acquisition, its substantial investment strategy and its long-term strategy to continue to grow its operations. Moody's notes the company's somewhat reduced financial

flexibility following the transaction, although a smaller investment plan and possible further divestments should help ease the situation.

What Could Change the Rating – Down

If ratios deteriorate beyond the bands indicated for any extended period, possibly due to much lower power prices and volumes or failure to moderate investments, then downward pressure could occur.

In addition to the factors listed above affecting the BCA, the ratings may also be affected by changes in the ratings of the supporting government, or by changes in Moody's assessment of default dependence and support described in the rating rationale, none of which are foreseeable in the medium term.

Rating Positioning and Peer comparison

FIGURE 8

Peer Comparison

	Vattenfall AB		Fortum		Dong		E.on AG		Centrica		RWE AG	
MARKET ASSESSMENT, SCALE & COMPETITIVE POSITION												
Size and Scale	Aa		A		Baa		Aaa		A		Aaa	
Competitive Position and Market Structure	A		Baa		Baa		Aa		Baa		Aa	
CASH FLOW PREDICTABILITY OF BUSINESS MODEL												
Fuel Strategy and Mix	A		Aa		Ba		A		Baa		Baa	
Degree of Integration and Hedging Strategy	Baa		Baa		Baa		A		A		A	
Capital Requirements and Operational Performance	Ba		Baa		B		Ba		B		B	
Contribution from Low/High Risk Businesses	Aa		Aa		A		Aa		Baa		Aa	
FINANCIAL POLICY												
Financial Policy	Baa		Baa		Baa		Baa		Baa		Baa	
FINANCIAL STRENGTH METRICS *												
(CFO Pre-W/C + Interest) / Interest Expense (3 year Avg)	6.5x	A	7.2x	A	6.2x	A	4.6x	Baa	7.9x	A	5.2x	Baa
(CFO Pre-W/C) / Net Debt (3 year Avg)	30.1%	A	28.4%	A	36.4%	A	24.8%	Baa	68.6%	Aa	34.2%	A
RCF / Net Debt (3 year Avg)	23.1%	A	11.8%	Ba	28.9%	A	16.9%	Baa	50.1%	Aaa	21.0%	A
FCF / Net Debt (3 year Avg)	-1.1%	Ba	-2.0%	Ba	-12.9%	Ba	-6.7%	Ba	15.5%	A	2.4%	Baa
Indicated rating	A2		Baa1		Baa1		A3		A3		A2	
BCA / Standalone credit quality	BCA	A3	BCA	A3	BCA	Baa1-Baa3	A2		A3		A2	
Final rating	A2 / Stable		A2 / Stable		Baa1 / Stable		A2 / Stable		A3 / Stable		A2 / Negative	

* 3-year average 2007-2009 metrics

Source: Moody's Methodology for Unregulated Utilities (August 2009), companies' audited accounts;

Appendix – 1 Moody's Adjustments

Moody's makes a number of standard analytical adjustments to the accounts of non-financial corporate debt issuers. Our objective is to better reflect – for analytical purposes – the underlying economics of transactions and events, and to improve the comparability of a company's accounts with those of its peers. Moody's does not perform forensic or audit procedures and these adjustments do not imply that the accounts fail to comply with accounting standards. Indeed, many of Moody's adjustments are inconsistent with IFRS. Our goal is to enhance the analytical value of financial data rather than to assess compliance with laws or regulations governing financial reporting.

The following table shows how the adjustments made by Moody's affected certain key credit metrics for Vattenfall in 2008 and 2009. The adjustments detailed below are already incorporated into our rating analysis for the company.

FIGURE 9

Summary Table

SEK BILLION	As Reported By Vattenfall		As Adjusted By Moody's	
	2009	2008	2009	2008
Interest expense	12.16	7.89	8.94	5.30
Gross debt	213.49	107.35	240.69	123.23
Net debt	155.00	66.00	187.42	86.75
Funds from operations (FFO)	36.7	30.74	36.15	32.30
Dividends paid	6.98	8.07	7.35	8.43
Retained cash flow (RCF) (note 1)	29.72	22.67	28.80	23.87

Note 1: RCF equals FFO minus dividends paid.

Source: Vattenfall Annual Report 2009 and Moody's Adjustments.

FIGURE 10

Moody's Adjustments

SEK Billion 2009	Interest Expense	Dividends Paid	Gross Debt	Net Debt
As reported	12.16	6.98	213.49	155.00
Pensions	-0.35	-	21.20	21.20
Operating leases	0.16	-	5.10	5.10
Capitalised Interest	0.74	-	-	-
Accreted interest from discounted liabilities	-3.40	-	-	-
Hybrid securities (note 1)	-0.37	0.37	-7.69	-7.69
Guarantees	-	-	3.15	3.15
Net provision for nuclear operations (Liability less Asset, note 2)	-	-	6.78	6.78
Cross currency swaps	-	-	-1.35	-1.35
Adding back Loans to minority owners of foreign subsidiaries	-	-	-	1.57
Reclassification of Cash within the Assets held for sale	-	-	-	-0.65

FIGURE 10

Moody's Adjustments

SEK Billion 2009	Interest Expense	Dividends Paid	Gross Debt	Net Debt
Funds blocked as security for trading on energy exchanges	-	-	-	0.80
Funds set aside as security for nuclear accidents	-	-	-	3.52
As adjusted	8.94	7.35	240.68	187.43

Note 1: Basket D (75% equity) treatment by Moody's for €1bn of Capital Securities issued in June 2005 (5.25% coupon fixed until 2015, three month Euribor plus 2.95% thereafter).

Note 2: Vattenfall has a legal obligation to decommission and dismantle its nuclear power plants in Sweden and Germany upon the cessation of production. The company sets aside some assets to cover those liabilities in the future, however, at the end of 2009 nuclear liabilities exceeded the designated assets. Therefore, Vattenfall recognised net nuclear provision of SEK6,776 million and publicly disclosed it in its 3Q2010 report.

Source: Vattenfall Annual Report 2009 and Moody's Adjustments.

FIGURE 11

Calculation of FFO

SEK Billion	2009	2008
CFO as reported	46.25	36.19
Less Working capital (WC) inflow as reported	9.55	5.46
FFO as reported (CFO before working capital outflow)	36.70	30.73
Working capital movement related to taxes (note 1)	0.88	1.51
Working capital movements related to interest receivables and liabilities	-1.37	-0.73
FFO as standardised by Moody's	32.3	31.51
Capitalised Interest	-0.74	-
Two-thirds of lease rental expense reclassified as depreciation	0.31	0.42
Hybrid securities financing cost reclassified (note 2)	0.37	0.36
FFO as adjusted by Moody's	36.15	32.30

Note 1: As Moody's FFO is a proxy Income Statement measure, it is calculated based on current tax and net interest expense rather than paid. The difference between current tax and net interest expense accrued and paid is included in the working capital

Source: Vattenfall Annual Report 2009 and Moody's Adjustments.

Moody's Related Research

Rating Methodologies

- » [Government-Related Issuers: Methodology Update, July 2010 \(126031\)](#)
- » [Unregulated Utilities and Power Companies, August 2009 \(118508\)](#)
- » [Moody's Approach to Global Standard Adjustments in the Analysis of Financial Statements for Non-Financial Corporations – Part II - February 2006 \(96729\)](#)

Industry Outlooks

- » [EMEA Electric and Gas Utilities: Industry Outlook 2010, November 2010 \(128849\)](#)

Special Comments

- » [Moody's Rating Approach for European Infrastructure & Utility Companies in an Environment of Declining Sovereign Credit Quality, November 2010 \(128915\)](#)
- » [Are We Better Off Under IFRS, November 2008 \(111906\)](#)
- » [Moody's Accounting Observations on the 2007 Results of Europe's Electricity Producers, July 2008 \(109531\)](#)
- » [EU Climate Change strategy – Putting Emission-Reduction Targets Into Perspective, May 2008 \(108846\)](#)
- » [Rating European Unregulated Utilities in a Severe Economic Downturn, April 2009 \(115826\)](#)
- » [Margin & Collateral Paid and Received by European Utilities: Whose Cash is it? Moody's response to the accounting differences, June 2009 \(117823\)](#)

To access any of these reports, click on the entry above. Note that these references are current as of the date of publication of this report and that more recent reports may be available. All research may not be available to all clients.

Report Number: 127033

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