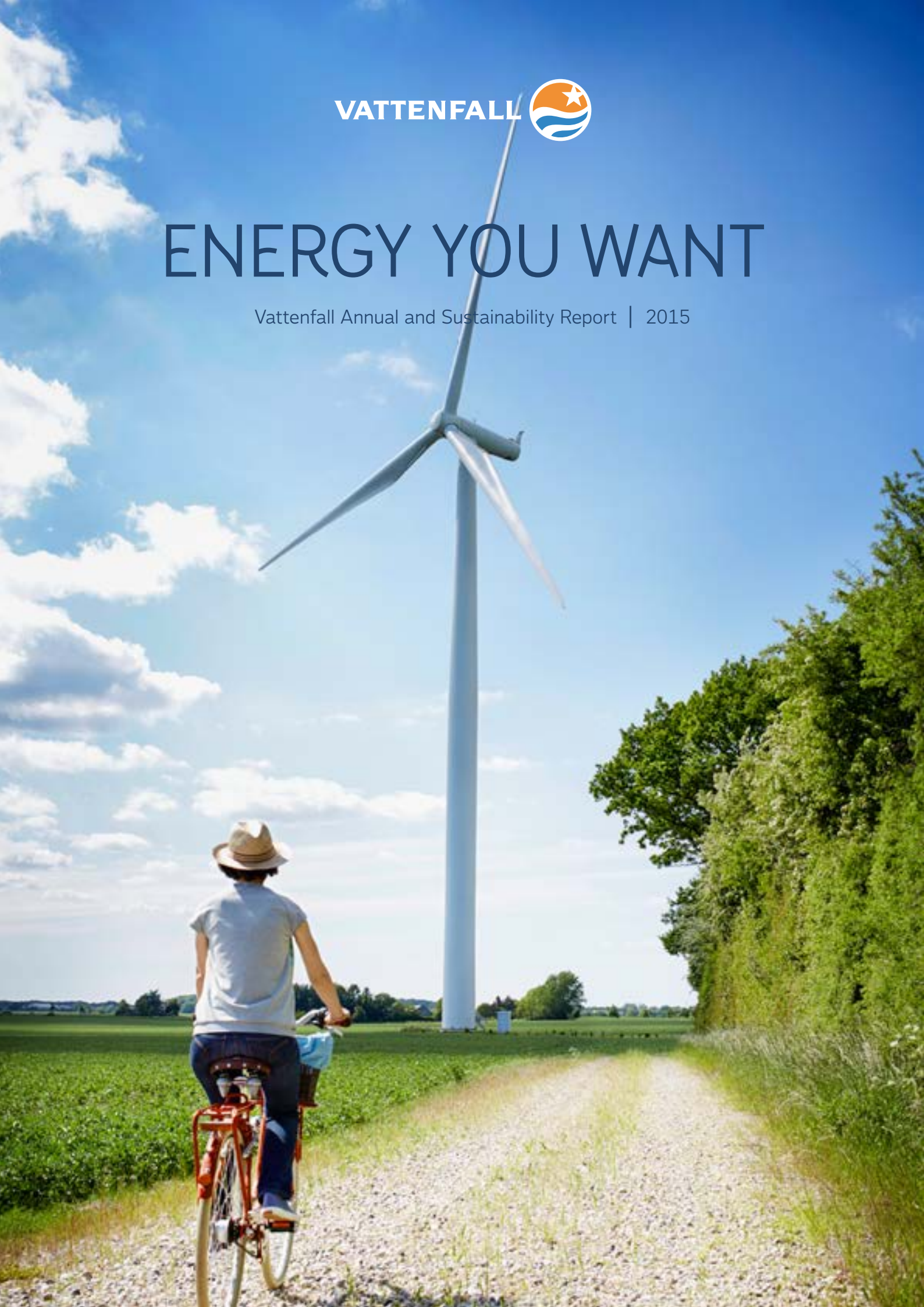




# ENERGY YOU WANT

Vattenfall Annual and Sustainability Report | 2015



### About the Annual and Sustainability Report

Vattenfall's 2015 Annual and Sustainability Report provides financial, sustainability and corporate governance information for a broad target group in an effort to support stakeholders in their dialogue with Vattenfall.

The report's front half is structured into three overall sections.

- The Overview section presents an overview of Vattenfall and its results, the CEO's message, important events in 2015 and Vattenfall's business landscape.
- The Strategic direction section includes information about Vattenfall's markets, strategy and targets.
- The Developments during the year section describes Vattenfall's financial and non-financial performance and results in 2015, also for its operating segments.

### Review of report

The Board of Directors and President of Vattenfall AB (publ), corporate identity number 556036-2138, herewith submit the Annual and Sustainability Report for 2015, encompassing pages 4-5, 9-10, 31-33, and 56-153. The administration report, encompassing pages 4-5, 9-10, 31-33, and 56-78, has been audited in the manner described in the Audit Report on page 152. The pages referred to in the GRI index have been reviewed as described in the Limited Assurance Report on page 153.

### Reporting in accordance with GRI G4 "Core" option

Vattenfall has been reporting in accordance with the Global Reporting Initiative's (GRI) Guidelines since 2003. For 2015 Vattenfall continues to adhere to the G4 Guidelines, "Core"

option. Vattenfall's aim is to communicate sustainability performance by describing how Vattenfall addresses economic, environmental and social challenges and opportunities. Vattenfall uses the GRI framework as a base for reporting with the ambition that the report shall reflect how sustainability is embedded in the overall strategy as well as in the daily work.

The GRI Index on pages 165-170 provides an overview of the aspects, indicators and industry-specific supplementary information that is included in Vattenfall's sustainability reporting. Information on the reporting boundaries and omissions is also provided. Vattenfall also adheres to the UN Guiding Principles on Business and Human Rights. Vattenfall uses the Annual and Sustainability Report as its Communication on Progress for the UN Global Compact (UNGC), and a cross reference between the UNGC and GRI is provided in the GRI Index.

### Taking sustainability reporting to the next level

During 2016, Vattenfall will work towards enabling reasonable assurance of the entire Annual and Sustainability Report and evaluate whether an increased level of assurance will contribute to strengthening Vattenfall's overall sustainability performance. Vattenfall will also increase transparency in the governance report to meet the coming requirements of the new EU Directive on non-financial disclosures.



Further information about Vattenfall's operations and sustainability work can be found at [www.vattenfall.com/sustainability](http://www.vattenfall.com/sustainability)

### Forecasts and forward-looking statements

This document contains forward-looking statements that are based on Vattenfall's current expectations. Even if Vattenfall's management believes that these expectations are reasonable, no guarantee can be made that these expectations will prove to be correct. The forward-looking statements herein pertain to risks and uncertainties that could have a material impact on future earnings. The statements are based on certain assumptions, including such that pertain to financial conditions in general in the company's markets and the level of demand for the company's products. The outcome may vary significantly compared with what is presented in the forward-looking statements, depending on, among other things, changed conditions regarding the economy, markets and competition, legal requirements, and other political actions and variations in exchange rates, as well as other factors referred to in the administration report.

This English version of Vattenfall's Annual and Sustainability Report is a translation of the Swedish original, which is the binding version.

Rounding differences may occur in this document.





Vattenfall is active in all parts of the energy value chain: from electricity and heat production to distribution, asset optimisation and trading, energy services and sales. The company has impacts on people, communities and the environment, and in many cases has deep roots in the communities where its operations are conducted. Vattenfall's approximately 28,600 employees work every day to provide society with reliable energy in a safe and sustainable way.

Taking the lead in, and profiting from, the transformation to a sustainable energy system across the value chain in northern Europe is a central part of Vattenfall's long-term strategy.



Vattenfall's Annual and Sustainability Report for 2015 reflects the Group's strategy and operations. The report revolves around the four strategic objectives:

- Leading towards Sustainable Consumption
- Leading towards Sustainable Production
- High Performing Operations
- Empowered and Engaged Organisation

## Overview

Vattenfall at a glance	4
Results 2015	5
CEO's message	6
Important events	9
Vattenfall's business landscape	11

## Strategic direction

The energy market	13
Strategy	18
Investment plan	24
Targets and target achievement	26
Stakeholder dialogue	28

## Developments during the year

Financial performance	31
Responsible sourcing and purchasing	34
Operating Segments	36
Our people	52

## Corporate governance

Corporate governance report	56
Board of Directors	66
Executive Group Management	68
AGM Proposal	69

## Risks and risk management

	70
--	----

## Financial information

Consolidated accounts, including comments	79
Notes to the consolidated accounts	90
Parent Company accounts	135
Notes to the Parent Company accounts	140
Audit Report	152
Limited Assurance Report	153
Non-financial notes	154
Five-year overview sustainability	157
Quarterly overview	158
Ten-year overview	159
Definitions and calculations of key ratios	160
Facts about Vattenfall's markets	162
GRI Index	165
Glossary	171
Contacts and financial calendar	173

# VATTENFALL AT A GLANCE

“Energy You Want” – Vattenfall’s vision is to be a dedicated partner to its customers and society at large, providing convenient and innovative energy solutions. Vattenfall aims to be a leader in sustainable production, ensuring reliable and cost-efficient energy supply. Vattenfall is committed to be climate neutral by 2050.

Vattenfall has approximately 6.2 million electricity customers, 3.2 million electricity network customers and 2.1 million gas customers. The Group is one of Europe’s largest generators of electricity and heat. Electricity generation and sales of heat amounted to 173.0 TWh and 22.6 TWh, respectively, in 2015. Vattenfall’s main markets are Denmark, Finland, Germany, the Netherlands, Sweden and the UK. The Group has approximately 28,600 employees. The Parent Company, Vattenfall AB, is 100%-owned by the Swedish state, and its headquarters are located in Solna, Sweden.

Sales of electricity, TWh:

# 197.2

Sales of heat, TWh:

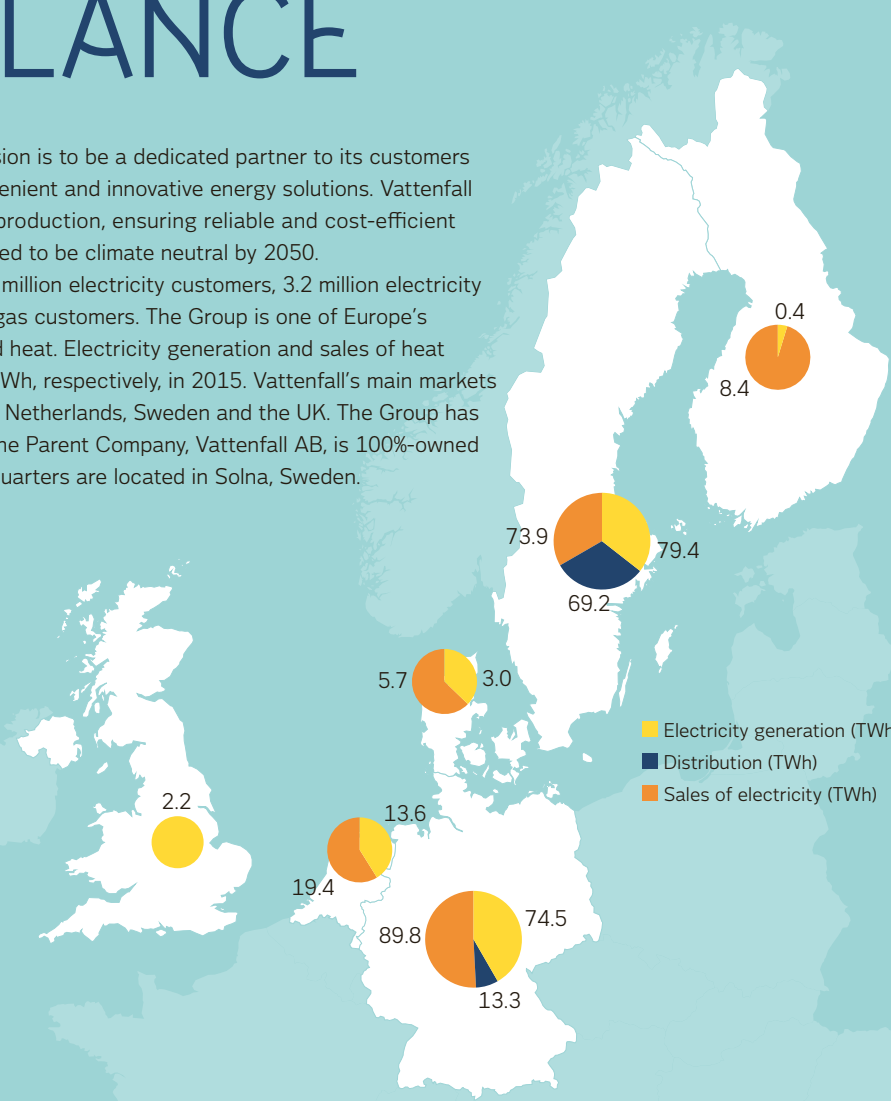
# 22.6

No. of electricity customers:

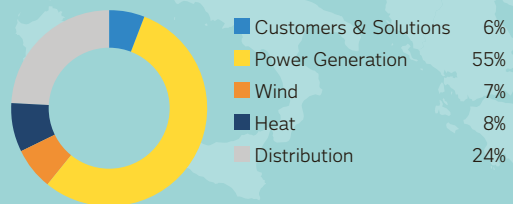
# 6,225,000

Sales of gas, TWh:

# 50.7



Operating segments – percentage share of underlying operating profit<sup>1</sup>



1) Excluding Other and Eliminations.

## Results 2015

- Net sales amounted to SEK 164,510 million (165,945).
- Underlying operating profit amounted to SEK 20,541 million (24,133).
- Operating profit amounted to SEK -22,967 million (-2,195) and was negatively affected by SEK 43.5 billion (26.3) in items affecting comparability, of which SEK 36.8 billion (23.8) consisted of impairment losses.
- Profit after tax for the year amounted to SEK -19,766 million (-8,284). Profit was charged with SEK 32.3 billion (20.4), net, in items affecting comparability.
- Electricity generation amounted to 173.0 TWh (172.9).

Key data	2015	2014	Change, %	2015 (EUR m) <sup>1</sup>	2014 (EUR m) <sup>1</sup>
Net sales, SEKm	164,510	165,945	-0.9	17,902	18,058
Operating profit before depreciation, amortisation and impairment losses (EBITDA), SEKm	32,754	41,038	-20.2	3,564	4,466
Operating profit (EBIT), SEKm	-22,967	-2,195	-	-2,499	- 239
Underlying operating profit <sup>2</sup> , SEKm	20,541	24,133	-14.9	2,235	2,626
Profit for the year, SEKm	-19,766	-8,284	-	-2,151	- 901
Funds from operations (FFO), SEKm	29,009	32,131	-9.7	3,157	3,496
Net debt, SEKm	64,201	79,473	-19.2	6,986	8,648
Adjusted net debt, SEKm	137,585	158,291	-13.1	14,972	17,225
Return on capital employed, %	- 8.2	-0.7			
Net debt/equity, %	55.4	61.9			
FFO/adjusted net debt, %	21.1	20.3			
Adjusted net debt/EBITDA, times	4.2	3.9			
Electricity generation, TWh	173.0 <sup>3</sup>	172.9	0.1		
– of which, hydro power	39.5	34.3	15.2		
– of which, nuclear power	42.2	49.9	-15.4		
– of which, fossil-based power	84.0 <sup>3</sup>	82.7	1.6		
– of which, wind power	5.8	4.1	41.5		
– of which, biomass, waste	1.5	2.0	-25.0		
Sales of electricity, TWh	197.2	199.0	-0.9		
Sales of heat, TWh	22.6	24.1	-6.2		
Sales of gas, TWh	50.7	45.5	11.4		
CO <sub>2</sub> emissions, Mtonnes	83.8	82.3	1.8		
Number of employees, full-time equivalents	28,567	30,181	-5.3		
Work related accidents, number (LTIF) <sup>4</sup>	2.3	2.7	-14.8		

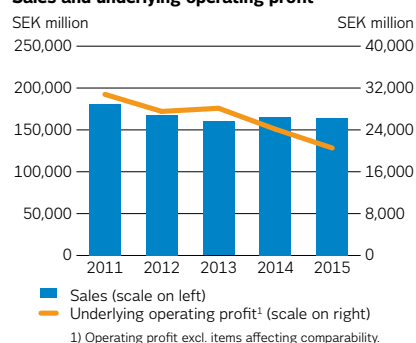
1) Exchange rate SEK 9.1895=EUR 1. Values in EUR are shown only to facilitate comparisons between SEK and EUR.

2) Underlying operating profit is defined as operating profit excluding items affecting comparability. For a specification of items affecting comparability, see page 81. The value has been adjusted compared with the value presented in Vattenfall's 2015 year-end report.

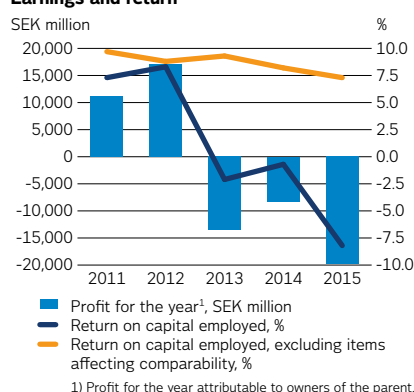
3) The value has been adjusted compared with the value presented in Vattenfall's 2015 year-end report.

4) Lost Time Injury Frequency (LTIF) is expressed in terms of the number of lost time work injuries (per 1 million hours worked), i.e., work-related accidents resulting in absence longer than one day, and accidents resulting in fatality. Pertains to Vattenfall's employees.

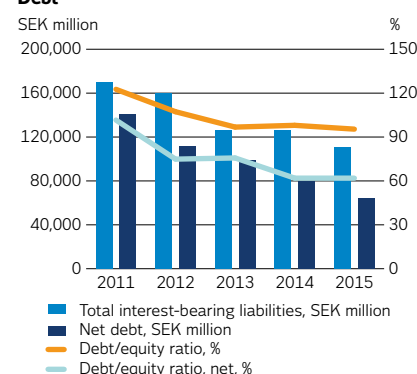
### Sales and underlying operating profit



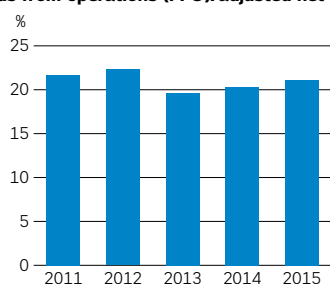
### Earnings and return



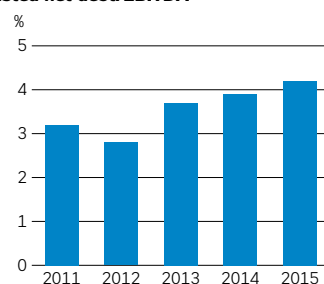
### Debt



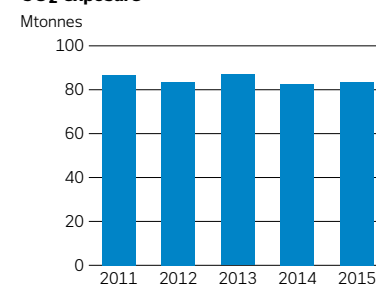
### Funds from operations (FFO)/adjusted net debt



### Adjusted net debt/EBITDA



### CO<sub>2</sub> exposure



»With important natural resources like hydro and wind power, I am certain that Sweden can transition to a 100% renewable system. While there are several alternative paths we can take to secure our future energy supply, cost efficiency and competitiveness will certainly be crucial factors.«



# HIGH PACE OF CHANGE IN VATTENFALL

I have now been CEO of Vattenfall for more than a year and can affirm that the high pace of change I encountered when I started has not slowed during the past year – neither for our company nor for the industry as a whole. On the contrary.

A paradigm shift is currently under way in which large-scale electricity generation and the traditional model for electricity distribution are being challenged by more decentralised and individualised solutions. Customers are becoming an increasingly integrated part of the value chain, which is a fantastic development. While this is presenting challenges to today's conventional energy companies, new business opportunities are also being created. Added to this is the current, accelerating transformation towards an entirely renewable energy system. This is a shift that we support to the highest degree, but which is also a challenge to achieve with today's overcapacity and low energy prices.

#### **Partner with simple and innovative energy solutions**

In 2015 we further refined our strategy with the goal to be a leader in this transformation. The sustainability perspective continues to permeate Vattenfall's strategic objectives: Leading towards Sustainable Consumption, Leading towards Sustainable Production, High Performing Operations, and Empowered and Engaged Organisation. Leading towards Sustainable Consumption – where we work together with customers towards the goal of providing the energy-smart solutions that we see are wanted by today's and tomorrow's customers. In fact, Vattenfall expanded its customer base during the year. Leading towards Sustainable Production – where we are transforming our production portfolio primarily towards low CO<sub>2</sub>-emitting production and over time contributing to an entirely renewable energy

system spearheaded by the vision that Vattenfall will be a climate neutral company by 2050. Empowered and Engaged Organisation – which is rooted in our company culture and focus on the customer, where safety, high-performing people and competent leaders are natural features. High Performing Operations – which entails that we, through continuous reviews of our cost structure and investment plan, ensure our adaptation to today's considerably lower energy prices and maintain satisfactory financial key ratios at the same time that sustainability is an integral part of the entire value chain. With a changed production mix we are achieving more diversified risk exposure to future movements in energy prices.

The year was characterised by continued transformation. For our customers this has entailed investments in customer-centric products and services, including system solutions for energy efficiency and e-mobility. We have also continued to take actions to strengthen our balance sheet, whereby we are currently carrying out our cost-cutting programme for 2015–2016, conducting a critical review of investments, and at the same time pursuing our strategy by divesting the parts of the portfolio that are not regarded as core businesses in the new Vattenfall. Our portfolio transformation is a direct consequence of our strategy, which is grounded in the shift to an entirely new energy system. In Denmark, through the sale of a combined heat and power station in northern Jutland, we have divested our last fossil-based production plant in the country. Vattenfall's production mix will change dramatically if



we carry out the planned divestment of our lignite operations. This would result in a production mix in which specific carbon emissions are among the lowest among our peer energy companies in Europe.

Vattenfall is developing new business opportunities in several important energy solutions. Our first UK solar power project, with a capacity of 5 MW and an annual output sufficient to supply 1,441 British households, will be operational at the end of March 2016. Our investments in wind power have made us not only a major operator of onshore wind power generation in northern Europe, but also the second-largest producer of offshore wind power in the world – something we can be very proud about.

In 2015 Vattenfall installed 445 MW of renewable capacity. We inaugurated the DanTysk offshore wind farm in Germany and the Clashindarroch onshore wind farm in the UK. A number of measures to reduce our energy need helped us exceed the year's energy efficiency improvement target of 440 GWh and achieve a reduction by 1,066 GWh. Vattenfall's CO<sub>2</sub> emissions increased in 2015, mainly owing to the commissioning of the Moorburg coal-fired plant in Hamburg, Germany. While the decision to invest in this plant was made under vastly different market conditions than what we are seeing now, the power plant is today nevertheless one of the most efficient in Europe.

Vattenfall supports and adheres to numerous international guidelines and standards for sustainability in its operations. As an example, we support the UN Global Compact's principles and through this have taken a clear stance on issues such as human rights, social responsibility and environmental responsibility.

As a company we can be satisfied with what we have achieved in the area of sustainability during the year, at the same time that much work remains. I am convinced that our strategy will drive our current transformation and development at an increasingly faster pace towards a long-term sustainable company.

#### **Consequences of changed market conditions**

Our biggest challenge in 2015 continued to be the impact that today's very low electricity prices are having on Vattenfall's profitability and on the valuation of our assets. Unfortunately, combined with new regulatory requirements this led to the recognition of further impairment losses during the summer. We ascertained that Germany's decision to gradually cut its carbon emissions created an elevated risk for the value of our lignite assets, compelling us to recognise impairment of these as a result. Added to this, the investments needed to maintain current safety standards at our Swedish nuclear plants entailed that we no longer saw conditions for profitable power generation and were therefore forced to decide on the early closure of two reactors, Ringhals 1 and 2. Continued falling prices and a tax on installed nuclear capacity corresponding to 7 öre (SEK 0.07) per kilowatt-hour have put Swedish nuclear power in a critical situation. The remaining reactors will be needed for many years into the future if we are to be able to

shift to an entirely renewable energy system in a responsible and cost-effective manner. Also hydro power, which is the foundation of our long-term power generation, is now being hurt by the combination of low prices and very high taxes.

Despite continued successful adjustment of our cost structure and cost savings of approximately 30% over the last five years compared with the cost base in 2010, the impairment losses recognised during the year once again led to a negative result after tax for the year as a whole. At the same time, during the year we managed to successfully broaden our partnerships with strategic investors to also include financial investors. Today four wind farms in Sweden are jointly owned with the insurance company Skandia, and one of our largest wind farms – Ormonde in the UK – is now jointly owned with AMF, a Swedish pension fund. By entering into partnerships for our growth investments we attain higher investment capacity despite the tough market conditions and can further leverage our expertise to build and operate wind farms.

#### **Outlook for 2016 and the path forward**

The climate agreement reached at COP21 in Paris was fundamental for establishing the political framework needed for energy systems of the future. A central starting point, of course, is the overarching commitment to limit the increase in global warming to 2°C as well as a joint ambition to limit the increase to 1.5°C. An important aspect for the energy sector is that the agreement may spur development of the EU Emissions Trading System (EU ETS), with ties to other trading systems.

The ongoing change of our energy system is dramatic – but also very exciting. The entire system will be transformed, where the roles between producers and customers become more diffuse and where entirely new business opportunities will arise. I am confident, however, that the foundation that we have now laid in our new strategy and the adaptations we have made and must continue to make will leave us well prepared to secure our position as a reliable partner to our customers and society. Vattenfall will offer innovative energy solutions, be among the leaders in sustainable generation, and at the same time guarantee secure and cost-effective electricity and heat in the new energy landscape.



Magnus Hall  
President and CEO



# IMPORTANT EVENTS 2015

## Q1 2015

### Concession for the Horns Rev III wind farm

In February Vattenfall won the concession to build and operate the Horns Rev III offshore wind farm (400 MW) off the Danish west coast, to be commissioned in 2019.

### Issuance of hybrid bonds

In March Vattenfall issued hybrid bonds of SEK 6 billion and EUR 1 billion (approximately SEK 15 billion combined). In November, Vattenfall issued a hybrid bond of USD 400 million.

### Outsourcing of IT operations to Computer Science Corporation (CSC)

Vattenfall signed a five-year contract outsourcing IT network services and workplace management to Computer Sciences Corporation (CSC).

## Q2 2015

### Changed direction for operational lifetime of Ringhals 1 and 2

In April Vattenfall announced its intention to close down the Ringhals 1 and 2 nuclear reactors about five years earlier than previously planned.

### Inauguration of new wind farms

The DanTysk offshore wind farm in Germany (288 MW), west of Sylt Island in the North Sea, and the Clashindarroch onshore wind farm (36.9 MW) in northeast Scotland, were inaugurated.

### Extension of Kentish Flats wind farm of 50 MW

Extension was begun of the Kentish Flats offshore wind farm in the UK with an additional 15 wind turbines (50 MW), to a combined total of 45 turbines (150 MW). The new turbines were operational at the end of 2015.

### Sale of combined heat and power plant in Denmark

Vattenfall agreed to sell the Nordjylland Power Station to the Danish district heating company Aalborg Forsyning for an enterprise value of approximately DKK 823 million (corresponding to approximately SEK 1 billion). Through this sale Vattenfall has divested all of its fossil-based power plants in Denmark.

### Impairment losses and increased provisions

Vattenfall recognised SEK 36.3 billion in impairment of asset values as a result of a further worsening of market conditions and higher business risks. Provisions for nuclear and power and mining operations in Germany increased by SEK 3.9 billion due to new calculations of future costs. Read more in Note 14 to the Consolidated accounts, Impairment losses and reversed impairment losses.

## Q3 2015

### Bidding process initiated for German lignite assets

On 22 September Vattenfall published an invitation to potential bidders to state their interest in Vattenfall's lignite assets in Germany. Read more about Vattenfall's lignite operations on pages 44–45.

### Revaluation of shares in Vattenfall Eldistribution AB

To better reflect the asset value, the Parent Company Vattenfall AB revalued its shareholding in Vattenfall Eldistribution AB to SEK 38 billion.

### Final payment for shares in N.V. Nuon Energy

Vattenfall made the scheduled payment of EUR 2,071.3 million for the remaining 21% of the shares in N.V. Nuon Energy, corresponding to approximately SEK 19 billion.

### Decision to invest in new wind farm in the UK

Vattenfall decided to invest approximately SEK 1.2 billion in Ray Wind Farm (16 wind turbines with combined capacity of 54 MW) in Northcumberland in northeast England.

### Largest onshore wind farm in Denmark completed

Vattenfall's largest repowering project in the Nordic region was completed. A total of 22 new wind turbines with combined capacity of 67.2 MW are now in operation at the Klim onshore wind farm in Denmark.

### Changed ratings

The rating agency Moody's affirmed Vattenfall's long-term A3 rating, but changed its outlook from stable to negative. The rating agency Standard & Poor's changed its long-term rating of Vattenfall from A- to BBB+ and changed its outlook to negative.

## Q4 2015

### **Decision to close Ringhals 1 and 2**

In October an extraordinary general meeting of Ringhals AB decided to decommission the Ringhals 1 and 2 nuclear reactors in 2020 and 2019, respectively.

### **Inauguration of Moorburg power plant**

In November the Moorburg power plant was officially inaugurated in Hamburg, Germany. The Moorburg plant's two units, with total installed capacity of 1,654 MW, were commissioned in 2015.

### **Strategic partnership for UK wind farm**

In December Vattenfall signed a partnership agreement with the Swedish pension company AMF under which AMF will take a 49% ownership stake in Vattenfall's Ormonde offshore wind farm (150 MW) in northwest UK. The purchase consideration was approximately GBP 237 million (corresponding to approximately SEK 3 billion). Vattenfall will continue to operate the wind farm as majority shareholder.

### **Expert opinion confirms that nuclear power provisions in Germany are correctly calculated**

Vattenfall made provisions of approximately EUR 3 billion for the decommissioning of its partly owned nuclear power plants in Germany. Read more about Vattenfall's nuclear operations on pages 42–43.

### **Vattenfall Eldistribution raises electricity network fee and increases investment in electricity networks**

Vattenfall announced an 11% increase in the electricity network fee in Sweden, effective 1 January 2016, to be able to accelerate the pace of investment and the quality of the electricity networks. In conjunction with this, Vattenfall Eldistribution will improve the compensation to customers affected by electricity interruptions.

### **Agreement on standby capacity reserve for German lignite-fired power plants**

Within the framework of an agreement between the German government and Germany's lignite operations, Vattenfall has agreed to transfer two production units at the Jämschwalde power plant (500 MW each) to a standby capacity reserve in 2018 and 2019. Read more about Vattenfall's lignite operations on pages 44–45.

### **Large heat buffer turned on in the Netherlands**

One of the largest heat buffers in the world was put into operation in Diemen, the Netherlands, which enables Vattenfall to run its nearby gas-fired Diemen power plant more flexibly.

### **New Head of Communications at Vattenfall**

Karin Lepasoon was appointed as new Head of Communications and will take up her new position on 1 April 2016.



# VATTENFALL'S BUSINESS LANDSCAPE

Vattenfall is a dedicated partner to its customers and society at large, striving to provide reliable, convenient and innovative energy solutions that customers need.

## Production

Vattenfall produces electricity and heat from hydro power, nuclear power, coal, natural gas, wind power, solar power, biomass, and waste. The objective is to be a leading developer and operator of wind power while operating large scale low CO<sub>2</sub>-emitting production with high efficiency.

## Energy services and micro-generation

Vattenfall offers energy services, such as charging solutions for electric vehicles, smart plugs and solar panels. Furthermore, Vattenfall provides wholesale market services as well as access to marketplaces for customers that enable them to buy and sell electricity.

## District heating

District heating is a growing business, driven by cities' climate ambitions. Vattenfall conducts district heating activities in Sweden, Germany and the Netherlands.



## Electricity distribution

To ensure security of supply of energy, well functioning electricity distribution networks are key. There is also a need to develop smart grid solutions to improve the networks. Vattenfall enables customers with own electricity generation, so called prosumers, to feed power into the network. Vattenfall operates electricity distribution networks in Sweden and Germany. Electricity distribution is a regulated monopoly business monitored by national regulators.

## Industry partnerships

Competitive and stable energy supply is a prerequisite for successful industrial operations, and hence for sustainable economic development of society. Vattenfall has a legacy of strong long-term business relationships with electricity-intensive industries.

## Sales of electricity and gas

Vattenfall supplies electricity and gas to private and business customers in Sweden, Germany, the Netherlands, Finland, Norway, Denmark and France.

Vattenfall creates value for its customers, employees and the communities in which the company operates. The company does this by offering energy services, producing and distributing electricity and heat to customers, and by providing jobs for employees and suppliers. Vattenfall is a significant taxpayer and also indirectly supports economic growth, for example through long-term contracts with business customers.

In all parts of its operations Vattenfall strives to ensure that any negative impacts on its surroundings will be minimal. Vattenfall aspires to act responsibly and strives to influence its business partners to do the same, in compliance with Vattenfall's Code of Conduct for Suppliers.

➔ Read more about Vattenfall's supply chain on pages 34–35.



## Creating value for stakeholders

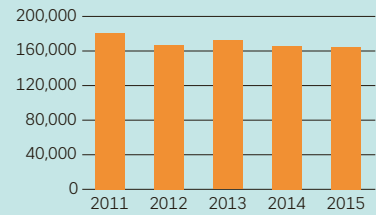
### Customers

Vattenfall creates value for households and business customers by providing reliable energy and services that enable the shift to more sustainable consumption.

CUSTOMER SATISFACTION INDEX

69

Net sales (SEK million)



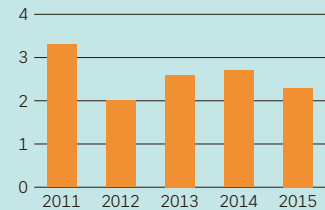
### Employees

Vattenfall strives to build an empowered and engaged organisation and ensure a safe workplace in which all employees can realise their potential. Diversity, inclusion and equal opportunity are key for providing employees with the tools they need to develop themselves and thereby the company.

GENDER DIVERSITY  
(FEMALE MANAGERS, %)

19

LTIF<sup>1</sup>



1) LTIF (Lost Time Injury Frequency) is expressed in terms of the number of lost time work injuries (per 1 million hours worked), i.e., work-related accidents resulting in absence longer than one day, and accidents resulting in fatality. Pertains only to Vattenfall employees.

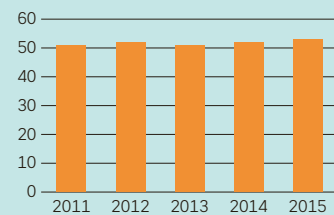
### Society (political decision-makers, regulators, NGOs, media, citizens and customers)

Vattenfall creates value for society in several ways, notably through significant direct and indirect tax payments and investments in sustainable production. Vattenfall takes responsibility for local communities in which it operates and maintains ongoing dialogues with its stakeholders.

TAX PAYMENTS

SEK 8.2 BILLION<sup>1</sup>

Vattenfall Reputation Index



1) Pertains to production taxes and duties, and property taxes totalling SEK 8,212 million in 2015. Read more in Note 10 to the consolidated accounts, Cost of goods sold.

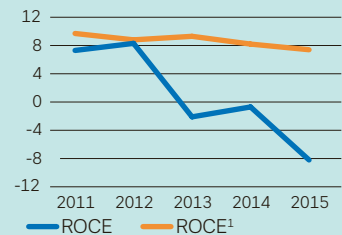
### Owner and capital providers

Vattenfall aims to create value for its owner and capital providers by realising its strategy, which combines a customer-centric business model and production portfolio transformation with cost and capital efficiency improvements. A long-term target is to pay dividends equivalent to 40%–60% of profits after tax.

FFO/ADJUSTED NET DEBT, %

21.1

ROCE (%)



1) Based on underlying operating profit, i.e., operating profit excl. items affecting comparability.

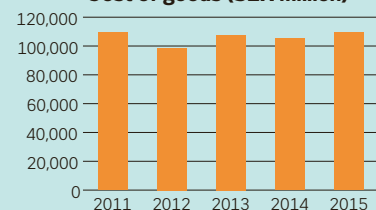
### Suppliers

In its procurement activities, Vattenfall creates value for almost 33,000 suppliers and sub-contractors. Vattenfall works to minimise negative impacts throughout the supply chain by promoting adherence to its Code of Conduct for Suppliers.

NUMBER OF SUPPLIERS

33,000

Cost of goods (SEK million)

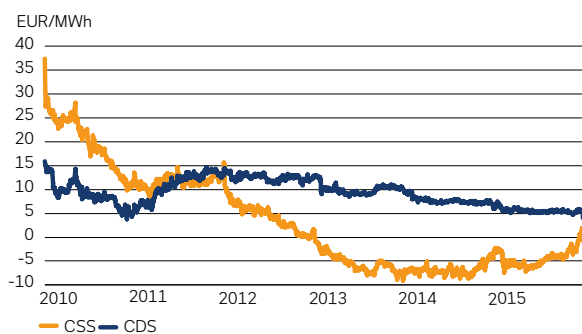


# THE ENERGY MARKET

The transformation of Europe's energy markets continues at a high pace, but market conditions remain challenging. While the transformation is presenting major challenges to established utilities, new business opportunities are emerging in renewable energy and in the end customer market.



Trend in operating margin for coal- and gas-based electricity generation



The operating margin for gas-based electricity generation including the cost for CO<sub>2</sub> emission allowances (Clean Spark Spread) has decreased considerably during the last six years. After a constant downward trend in 2012 and 2013, reaching into the negative range, the CSS was basically stable at a low, negative level in 2014 and recovered slightly in 2015.

At the same time, the operating margin for hard coal-based electricity generation, including the cost for CO<sub>2</sub> emission allowances (Clean Dark Spreads) has been more stable, reaching roughly 5 EUR/MWh towards the end of 2015.

**Transformation of the European energy market**

The energy sector has experienced fundamental changes following the financial crisis in 2008/2009, characterised by depressed profit margins. This shift has been particularly dramatic within large scale electricity generation. The market changes, with weak demand development, structural over-supply, changed customer attitudes and rapid technology development, combined with a heavy reliance on depressed electricity prices, have made it necessary for energy companies to adapt.

**Changed customer attitudes setting trends for long-term market development**

Consumers are becoming more active and engaged in their energy consumption, which also affects the way consumers think about their energy requirements. Rapid technological advancements in digitalisation, such as increasingly connected devices and capacity development in mobile phones and mobile applications, have increased consumer awareness of how much energy is being consumed, as well as how and where that energy is produced and how much they are consuming. In addition, a growing number of consumers want to produce their own energy (thus becoming so-called prosumers) and control their own energy consumption – hence large expansion in decentralised generation has been seen.

Private and business consumers alike are becoming increasingly energy-conscious and are taking action on

energy efficiency, launching initiatives to reduce emissions and increasing the share of renewable supply. Today 60% of the Fortune 100 and Global 100 companies have set a renewable energy goal, a greenhouse gas reduction goal, or both. Home energy management is today considered a EUR 3 billion market in Europe, and an increasing share of consumers are willing to pay a premium for renewable energy.

**Adapting to current market conditions**

The transformation of Europe’s energy markets has presented the established energy companies with great challenges. Profitability has come under strong pressure – in some cases leading to operating losses – resulting from low electricity prices, overcapacity and the addition of renewable production, mainly wind power. Power plants have been forced offline prematurely or been mothballed, impairing the value of companies’ assets. Adapting to these market conditions will be key to surviving long-term.

Consumers in mature markets such as Europe will expect more from their energy companies in the future than reliable electricity supply at a reasonable price. This is noticeable already today. The traditional business model has to be complemented with new, customer-centric business models.

Given the distressed financial situation among energy companies, energy infrastructure and assets are changing ownership at record rates, with pension funds and infrastructure funds stepping in as partial owners of assets, notably

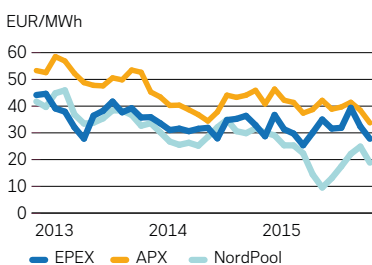
**Wholesale price trend 2015**

Average Nordic electricity prices were 29% lower in 2015 than in 2014, mainly due to very large hydro power supply. In Germany and in the Netherlands, average spot prices were 3% lower than in 2014, mainly due to lower fuel prices.

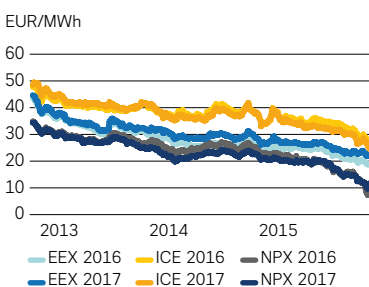
Electricity futures prices were 14%-18% lower in the Nordic countries in 2015, mainly owing to continued expectations for a high hydrological balance. In Germany and the Netherlands, electricity futures prices were 9%–11% lower, mainly owing to continued expectations for lower commodity prices.

Oil prices (Brent crude) were an average of 46% lower in 2015 compared with 2014, mainly owing to greater supply, weak demand and the stronger US dollar. For the same reasons, coal prices also weakened and were 30% lower than in 2014. Gas prices were 18% lower in 2015 than in 2014, while prices for CO<sub>2</sub> emission allowances were 29% higher.

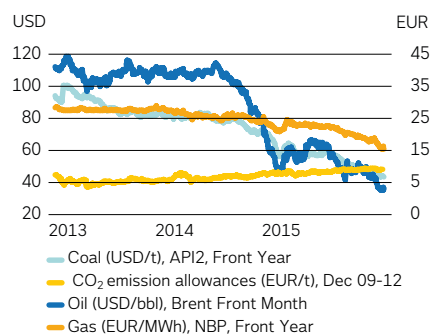
**Electricity spot prices in the Nordic countries, Germany and the Netherlands, monthly averages**



**Electricity futures prices in the Nordic countries, Germany and the Netherlands**



**Price trend for oil, coal, gas and CO<sub>2</sub> emission allowances**





## Market trends in the energy landscape

- CUSTOMER AWARENESS
- REGIONAL AND LOCAL ENERGY SOLUTIONS
- DEMAND FOR LOW CO<sub>2</sub>-EMITTING GENERATION
- NEW LEVEL OF REQUIREMENTS ON ELECTRICITY NETWORKS



in wind power, solar energy and distribution. The drivers are strong from both sides; most energy companies are seeking to increase their exposure to renewable energy at the same time that they are experiencing capital constraints, and financial investors are attracted to stable and long-term cash flows with infrastructure profiles. The resulting partnerships are mutually beneficial, where Vattenfall can use its skills and know-how to develop attractive investment opportunities.

### Regulatory frameworks

Climate change and sustainability issues are high on the political agenda globally. In line with this the EU has agreed on new 2030 targets at the EU level, namely:

- a binding EU target of a minimum 40% reduction in greenhouse gas emissions by 2030 compared with 1990 and a reform of the existing EU Emissions Trading System (ETS)
- a binding EU target that at least 27% of energy consumed in the EU shall come from renewable energy sources by 2030
- a non-binding EU target for improving energy efficiency by a minimum of 27% by 2030

This framework is then translated to a large number of national initiatives that have an impact on the energy business, and Vattenfall. A selection of political and regulatory issues in Vattenfall's main markets is provided on the following page.

Several of Vattenfall's main markets are also affected by additional national targets. Germany and the UK have their own binding targets for CO<sub>2</sub> emissions and renewable energy sources that go further than the existing EU targets. In Germany, "Energiewende" has successfully ushered in large amounts of wind and solar power, and at the same time, after a referendum in 2011, it was decided to fully phase out nuclear power before 2023. In addition, Germany aims to reduce CO<sub>2</sub> emissions by 40% by 2020 in comparison to 1990. Within this framework, an agreement was made between the German government and Germany's lignite generators on a capacity reserve (2,700 GW) in 2018-2019, and then to decommission the country's nuclear power plants entirely.

The integration of the European energy market continues. Driving this integration is both the ambition to reduce CO<sub>2</sub> emissions and the goal in Europe to become less dependent on energy imports. The need to secure system stability and electricity supply with an increasing amount of intermittent energy is becoming more urgent. The development of more supportive legislation for decentralised generation, including support schemes, will be in focus in the coming years.

## Major political and regulatory issues in Vattenfall's markets

Vattenfall's operations are governed to a high degree by political regulations and frameworks. Below is a selection of political and regulatory issues in Vattenfall's main markets.

### GLOBAL

#### **COP21**

The 2015 United Nations Climate Change Conference, or COP21, was held in Paris with 195 participating countries. The result was a global agreement on measures to reduce climate change, entailing the following, among other things: keeping the earth's temperature increases below 2°C, with the ultimate goal to limit the increases to 1.5°C; five-year revisions of national action plans; putting a climate fund in place to help developing countries adapt to climate change and transition to clean energy.

---

### EU

#### **European Emissions Trading System (ETS)**

Reform of the ETS is ongoing with the purpose of further improving the EU ETS and make it prepared for the 4th trading period, which starts in 2021. Includes measures against CO<sub>2</sub> leakage and measures to align the emissions cap with the target of a 40% CO<sub>2</sub>-reduction by 2030 compared to 1990 levels. A vote is expected in the European Parliament in November 2016.

---

#### **Reference Document on Best Available Techniques (BREF)**

Will set the frame for future emission thresholds (non-CO<sub>2</sub>) for large combustion plants (LCP). This is a cornerstone of the Industrial Emissions Directive (IED). Many power plants will have to undergo major adaptation to meet the thresholds of the emission ranges for NO<sub>x</sub>, mercury and particulates.

---

#### **Renewable Energy Sources (RES) Directive**

Push for more harmonised framework for the period after 2021. Favours a more regional approach and more RES in transport and heating.

---

#### **Financial regulation: MiFID II**

One key objective of the Market in Financial Instruments Directive (MiFID II) is to create a more secure market for financial services. Set-up of a licensed entity is one consequence if Vattenfall falls under MiFID. MiFID II is currently delayed to January 2018. However, the largest impact relates to the Capital Requirements Directive (CRD IV), which sets higher capital requirements.

---

### SWEDEN

#### **Parliamentary Energy Commission**

The commission will present, by January 2017, a proposal for Sweden's energy policy framework 2025-2050 with the target of a carbon-neutral Sweden by 2050.

---

#### **Implementation of the Water Framework Directive (WFD)**

The implementation of the WFD will establish new requirements for environmental adaptation of hydro power plants. A national strategy exists that could limit the loss of hydro generation capability to 1.5 TWh (of which about 0.5 TWh for Vattenfall).

---

#### **Consumer-centric market**

Includes subsidies for micro generation and support for e-mobility. The TSO (transmission system operator) and the regulator will continue to investigate a hub solution and the legal framework for a Supplier Centric Market in Sweden. The assignments are to be reported in June 2016 and February 2017, respectively.

---

#### **Revenue framework for distribution**

A new model for revenue framework for distribution for the regulatory period 2016-2019 suggests a change of calculation of capital cost. The legal process, DSO (distribution system operator) vs. the regulator, regarding what capital cost to use will be finalised in the Administrative Court in late 2016.

---

### GERMANY

#### **Energy Only Market 2.0, including Capacity Remuneration Mechanisms (CRM)**

Includes discussions on a capacity reserve, climate reserve and grid reserve. In summer 2015 the federal government decided not to introduce a broad capacity market but to create a capacity reserve outside the market (up to 5% of average annual peak demand).

---

#### **Nuclear exit liabilities**

Political decision on who will assume the cost of nuclear power decommissioning.

---

### THE NETHERLANDS

#### **RES policy framework**

The SDE+ is the key support scheme for renewable energy production. The Ministry of Economy is drafting a new SDE+ schedule for 2016. No policy in place for the period after 2023.

---

#### **Coal deal**

The Dutch parliament passed a motion stating that, by the end of 2016, the government should have a plan to phase out all remaining coal plants in the Netherlands.

---

### UK

#### **Growth of RES**

Offshore wind capacity to double if cost reductions continue. Reduced subsidy support for renewables, which increases uncertainty for onshore wind.

---

## The European competitive landscape

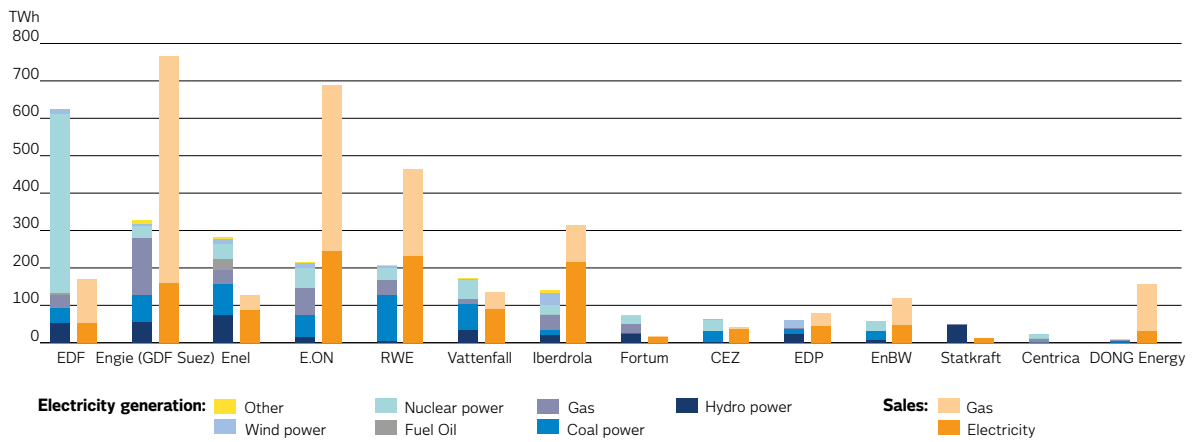
The largest utilities in Europe, in terms of revenues, are EDF, Engie, Enel, and E.ON, which operate in most parts of the value chain in Europe but also have substantial operations outside of Europe. Vattenfall can be classified as a medium-sized regional player. The majority of the European energy companies are electricity supply companies, many of which are municipal-owned. Furthermore, there are a number of regulated transmission system operators and electricity distribution companies.

The competitive landscape is being transformed through the emergence of niche players, companies from other

sectors, such as telecom and IT companies, and also by consumers that are increasingly seeking to become electricity producers (so-called prosumers). Economic support systems and rules for own-produced electricity from wind power and solar panels are important drivers in this process.

With 6.2 million electricity customers, 3.2 million electricity network customers and 2.1 million gas customers, Vattenfall is well positioned to take a leading role in the transformation to a sustainable energy system across the value chain in northern Europe.

Europe's largest producers of electricity (energy mix) and sales of electricity and gas



Source: The companies' annual reports for 2014.







# STRATEGY

“Energy You Want”- Vattenfall's vision is to be a dedicated partner to its customers and society at large, providing convenient and innovative energy solutions. Vattenfall aims to be a leader in sustainable production, ensuring reliable and cost-efficient energy supply. Vattenfall is committed to be climate neutral by 2050.

# ENERGY YOU WANT

Vattenfall wants to take a leading role in meeting customers' demands on the energy companies of the future. This is the foundation of Vattenfall's strategy, which is contributing to a sustainable energy system across the value chain in northern Europe.

The market conditions remain challenging, with weak demand development, structural oversupply, changed customer attitudes and rapid technological development. Vattenfall will embrace the new business environment by becoming a truly customer-centric company and by transitioning to a production portfolio that is sustainable for the long-term.

### Vattenfall's strategic objectives

Vattenfall will increase its efforts to develop customer-centric energy solutions. The objective is to provide the best solutions in terms of availability, price and convenience, as well as environmental and social impact. Vattenfall also needs to continue to focus on improving cost and capital efficiency and to pursue partnerships, to meet the absolute need to invest,

and to transform its production portfolio. The commitment of being climate neutral by 2050 and by 2030 in the Nordic countries entails a stepwise phase-out of fossil-based fuels in order for Vattenfall to meet its climate and sustainability ambitions. Sustainability is the basis of Vattenfall's strategy, which is reflected in the four strategic objectives as well as in Vattenfall's long-term targets.

To fulfil its vision, "Energy You Want", Vattenfall's overarching strategy for the years ahead is based on four strategic objectives:

- Leading towards Sustainable Consumption
- Leading towards Sustainable Production
- High Performing Operations
- Empowered and Engaged Organisation

#### LEADING TOWARDS SUSTAINABLE CONSUMPTION

- **A leading customer company**  
Customers & Solutions Business Area and Operating Segment
- **High quality networks**  
Distribution Business Area and Operating Segment
- **Leading market services**  
Markets Business Area and Power Generation Operating Segment

#### LEADING TOWARDS SUSTAINABLE PRODUCTION

- **Wind champion**  
Wind Business Area and Operating Segment
- **Efficient generation**  
Generation Business Area and Power Generation Operating Segment
- **Community partner**  
Heat Business Area and Operating Segment

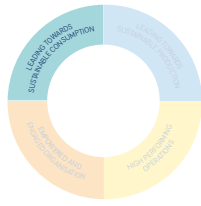


#### EMPOWERED AND ENGAGED ORGANISATION

- **Safe, healthy, engaging**
- **High performance culture**
- **Competent and talented people**

#### HIGH PERFORMING OPERATIONS

- **Strong performance**
- **Sustainable value chain**
- **Operational excellence**



To be Leading towards Sustainable Consumption entails:

- A LEADING CUSTOMER COMPANY
- HIGH QUALITY NETWORKS
- LEADING MARKET SERVICES

## Leading towards Sustainable Consumption

By offering customers tools for more sustainable and efficient energy consumption, Vattenfall not only contributes to a changing society but also gains competitive advantages and business opportunities. Reliable and efficient electricity networks are a prerequisite, and Vattenfall is continuously working to improve security of supply.

### ● A leading customer company

Vattenfall's long-term ambition is to be a leading customer company supplying a wide range of energy solutions and services to private and business customers. More focus is on developing new products and services for customers within e-mobility and energy management, including smart homes and new ways of interacting with customers, giving them control over their energy consumption and production. Vattenfall aims to become a full solutions provider – a smart integrator. To be successful, Vattenfall needs to accelerate the digital transformation and pursue partnerships that complement Vattenfall's competence.

### ● High quality networks

Vattenfall's long-term objective is to become an efficient electricity distributor with quality of supply exceeding stakeholders' expectations and an enabler of sustainable energy utilisation. Making the electricity network smarter will benefit customers directly, but will also enable the development of other services for customers. By achieving its long-term objectives Vattenfall will be recognised as the leading electricity distribution operator in the markets in which the company operates.

Vattenfall must meet customer and regulatory demands on quality of supply. Underperforming quality of supply has a high impact on Vattenfall's customers, thus on society and on Vattenfall's reputation. Vattenfall will increase network investments in the coming 10-year period. Demand for increased quality of supply in Sweden will increase the company's investments from an already quite high level.

Distribution will continue to be a cornerstone in the future energy system. Vattenfall is actively developing smart grid applications and technologies to increase efficiency in networks and to integrate decentralised generation, enabling customers to actively manage their energy use.

### ● Leading market services

To become a trusted provider of wholesale market services Vattenfall will continue to meet the challenges of a transforming portfolio through active management of generation assets and an extension of the trading platform. Furthermore, Vattenfall will continue to develop and provide customer solutions for market services and offer access to marketplaces for customers interested in buying and selling electricity.

For actions and developments during 2015, see:

- ➔ Customers & Solutions Operating Segment, pages 38-39
- Distribution Operating Segment, pages 50-51
- Heat Operating Segment, pages 48-49



To be Leading towards Sustainable Production entails:

- WIND CHAMPION
- EFFICIENT GENERATOR
- COMMUNITY PARTNER

## Leading towards Sustainable Production

Reliable production of electricity and heat is essential to modern society. At the same time, these operations have major impacts on communities and the surrounding environment, locally and globally, through emissions and use of resources. Vattenfall is working actively to take responsibility for its environmental impacts. This is key to be Leading towards Sustainable Production and is crucial to secure licences to operate.

Key priorities for Vattenfall are to grow its renewable generation and reduce the company's CO<sub>2</sub> exposure. One of Vattenfall's current long-term targets is to reach an emissions level of 65 Mtonnes per year by 2020. Furthermore, Vattenfall is committed to be climate neutral by 2050 and by 2030 in the Nordic countries. A decisive measure for reaching this target is the planned divestment of Vattenfall's lignite operations, which would lower emissions to a level of around 23 Mtonnes. Vattenfall's new emissions target, which starting in 2016 pertains to absolute CO<sub>2</sub> emissions, is approximately 21 Mtonnes by 2020. The commitment of being climate neutral entails a stepwise phase-out of fossil-based fuels in order for Vattenfall to meet its climate and sustainability ambitions.

In a world with finite natural resources, efficiency improvement efforts are crucial for ensuring a long-term sustainable production portfolio. Improved efficiency generates lower emissions as well as lower costs and therefore improves Vattenfall's competitiveness. Vattenfall strives to improve its resource use along the entire value chain, from fuel, energy use, water and chemicals, to waste and by-products. Read more about Vattenfall's work with waste and water management on pages 155-156. One of the most important areas of improvement is energy efficiency. KPIs related to resource efficiency have been set locally within the business.

### ● Wind champion

Vattenfall's objective is to be a leading developer and operator of wind power in northwestern Europe. Vattenfall's ambition is to lead the industry into a profitable but highly competitive future, to double its wind power portfolio in three years, and to create attractive options for continuous growth, aiming at adding 400 to 600 MW of gross capacity per year. Growth in wind power will be the key driver in transitioning to a production portfolio that is sustainable for the long-term, and is reflected in one of Vattenfall's long-term targets.

In addition, Vattenfall will build up new businesses with focus on solar power and battery storage solutions for integration of renewables.

### ● Efficient generation

Vattenfall's objective is to be a significant operator of safe and efficient large-scale low CO<sub>2</sub>-emitting production. Hydro power will continue to play an important role in this transformation thanks to its low marginal costs and high flexibility. Vattenfall will increase focus on improved efficiency in its large scale production and take advantage of new business opportunities that arise in the new energy landscape. Vattenfall will develop internationally recognised expertise and capabilities in decommissioning and dismantling of nuclear reactors. Vattenfall will maintain safe, reliable and efficient nuclear and hydro power generation.

### ● Community partner

Vattenfall's long term objective within the heat business is to provide heat for comfort and climate and to be a partner of choice for customers and communities.

Cities and communities strive for climate neutrality, a sustainable way to manage population growth, low CO<sub>2</sub>-emitting energy production, e-mobility and energy efficiency solutions. Vattenfall aims to be successful in sustainable communities and cities by developing long-standing relationships and new business models through partnerships and cooperation.

District heating driven by the climate ambitions of the cities where Vattenfall operates represents a continuing growth trend. The company will continue to grow in both on-grid and decentralised heating solutions. Vattenfall is shifting away from coal towards low-emitting gas CHP (combined heat and power), heat storage and power to heat. Vattenfall will act as a provider of flexibility and stability to the power markets.

Vattenfall will develop new business models for services that control and stabilise the grid network, as such services are expected to increase due to the growing amount of intermittent capacity. Vattenfall is also commencing market testing in order to grow in decentralised generation in Germany.

For actions and developments during 2015, see:

- ➔ Power Generation Operating Segment, pages 40-41
- Wind Operating Segment, pages 46-47





To ensure High Performing Operations entails:

- **STRONG PERFORMANCE**
- **SUSTAINABLE VALUE CHAIN**
- **OPERATIONAL EXCELLENCE**

## High Performing Operations

Vattenfall will continue to focus on improving cost and capital efficiency and to pursue financial partnerships in order to be able to invest and transform. Strong and sustainable financial performance is a fundamental precondition for Vattenfall's ability to transform to more sustainable consumption and production.

### ● **Strong performance**

Vattenfall's ambition is to be a company with strong and sustainable financial performance, which entails strengthening the balance sheet, reducing operational costs, continuously reviewing the investment plan in order to finance the transformation. Active pursuits of financial partnerships will play a key role in Vattenfall's future growth.

### ● **Sustainable value chain**

The value chain covers not only Vattenfall's own operations, but also its suppliers, exposing Vattenfall to risks that are outside of the company's direct control. With nearly 33,000

suppliers, ensuring responsible sourcing and purchasing is a prerequisite for creating a sustainable value chain. KPIs will be introduced based on actions that lead to better control, knowledge and transparency. In addition, audits and engagement with suppliers will be strengthened in the procurement of goods and services.

### ● **Operational excellence**

Compared to the cost base in 2010, Vattenfall has already cut its annual costs by approximately 30%, but will continue its efforts to reduce operational costs to finance the transformation. Among other measures, Vattenfall is looking at opportunities to outsource parts of its administration and IT operations to external service providers. Vattenfall will continuously work to optimise working capital and cash flow from operations. Furthermore, processes within the whole company will continue to be sharpened and streamlined in an effort to achieve further savings.

For actions and developments during 2015, see:

- ➔ Financial development, pages 31-33



To ensure an Empowered and Engaged Organisation entails:

- SAFE, HEALTHY, ENGAGING
- HIGH PERFORMANCE CULTURE
- COMPETENT AND TALENTED PEOPLE

## Empowered and Engaged Organisation

To achieve its strategic objectives, Vattenfall strives to create an organisational structure, culture and leadership that reflect the company's transformation and new business environment. Vattenfall needs to continuously develop its people and its business, and is committed to improving diversity and inclusion in all countries and all businesses.

### ● A safe, healthy and engaging working environment

With 28,600 employees and a large number of contractors and hired-in personnel, Vattenfall is responsible for ensuring a safe and healthy workplace. Health and safety are crucial and are a guiding principle in the daily operations, with the ambition to have zero injuries and no work-related illnesses. Vattenfall strives to ensure a motivating and safe workplace for all employees, contractors and hired-in personnel, which requires a systematic and preventative approach in all operations. Vattenfall believes that increased awareness and knowledge about safety, and focus on proactive measures are prerequisites for achieving a safe and healthy work environment.

### ● High performance culture

Strong performance will be the direct result of empowered and engaged employees who are actively supported by management. Employees should know what is expected of them, how they contribute to the success of the business, their potential and development path and how their performance will be rewarded. The company's leaders play an important role in

instilling trust and commitment, and in helping employees perform to their utmost by providing support through continuous feedback on performance and encouraging dialogue on strategy and vision. Regular goal and performance reviews provide all employees an opportunity, together with their respective managers, to set personal goals, development plans and visualise their contribution to Vattenfall's performance.

### ● Competent and talented people

Vattenfall is committed to creating a work environment that attracts, engages and develops people with key competencies and encourages them to perform to the best of their potential and to act with high integrity. Individual development plans are an important component for fostering a high performance culture within the organisation. The development plans serve as a foundation for ensuring that every employee has the right conditions to perform and develop. Diversity and equal opportunity are key building blocks of a successful company, and Vattenfall strives to incorporate these into its day-to-day activities.

Vattenfall's leadership development activities will focus on strengthening and supporting leaders to be accountable, visible and courageous.

For actions and developments during 2015, see:

- ➔ Our people, pages 52-55

# VATTENFALL'S INVESTMENT PLAN

The majority of Vattenfall's growth investments in the years 2016-2017 will be made in renewable energy, mainly wind power. Vattenfall's investment plan for the two-year period 2016-2017 amounts to SEK 47 billion.

In recent years Vattenfall has gradually scaled back its investment plans, especially with respect to growth in non-renewable generation. This is the result of the prevailing market conditions characterised by a surplus of production capacity, weak demand and low electricity prices. Due to this, Vattenfall has limited its investment plan to cover only the next two years. The plan will be continuously evaluated and optimised to be able to finance the transformation set forth in the strategy.

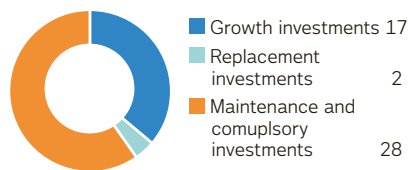
Vattenfall has decided on an investment plan of SEK 24 billion for 2016 and has a forecast investment plan of SEK 23 billion for 2017. In total for the two-year period 2016-2017 this amounts to an investment plan of SEK 47 billion (41), of which SEK 34 billion (30.8), or 73%, pertains to investments in electricity and heat production. Vattenfall plans to invest the remainder, SEK 13 billion (10.2), mainly in electricity and heat networks. Vattenfall will accelerate the pace of investments in electricity networks, primarily in Sweden, to improve quality.

Of the investments in electricity and heat production, SEK 15 billion, or 45%, pertains to growth through expansion of production capacity. The largest share of the growth investments, SEK 14 billion, or 93%, is planned for renewable energy production – mainly wind power. Vattenfall aims to add 400-600 MW of gross capacity per year. To achieve this, Vattenfall will continue to pursue partnerships as a way to reduce the need for capital.

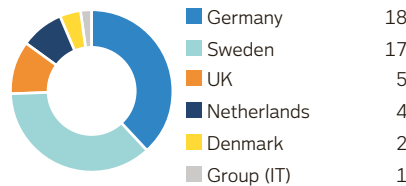
A large share of the total investment plan is earmarked for maintenance of existing plants. A significant portion also pertains to compulsory investments associated with various regulatory decisions, such as in nuclear power. Of total investments, SEK 28 billion (25.7) relates to maintenance and legally mandatory investments, and SEK 2 billion (3.1) to replacement of plants that will be phased out due to their age.

## Investment plan 2016-2017

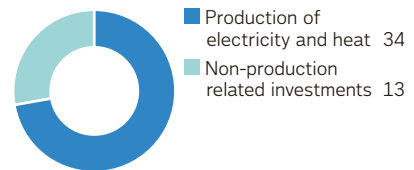
Total investments, SEK 47 billion



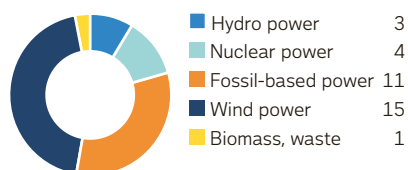
Total investments, SEK 47 billion



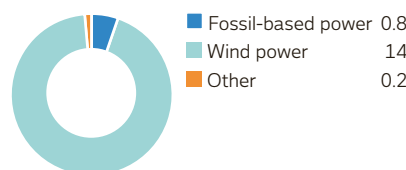
Total investments, SEK 47 billion



Total investments in electricity and heat production, SEK 34 billion



Growth investments in electricity and heat production, SEK 15 billion





#### Major investment projects that have been decided on and are in progress

Project	Country	Type	Capacity	Vattenfall's interest, %	Completion	Total project investment
HOB Haferweg	Germany	Heat, gas	150 MW heat	100%	2016	~SEK 390 million (EUR 42 million <sup>3</sup> )
Lichterfelde	Germany	CHP, gas	300 MW electricity 230 MW heat	100%	2016	~SEK 3,200 million (EUR 34 million <sup>3</sup> )
Akkats	Sweden	Hydro power	150 MW (rebuild)	100%	2016	~SEK 1,200 million
Pen y Cymoedd <sup>1</sup>	UK	Wind, onshore	228 MW	100%	2017	~SEK 4,500 million (GBP 360 million <sup>3</sup> )
Sandbank <sup>1</sup>	Germany	Wind, offshore	288 MW	51% <sup>2</sup>	2017	~SEK 12,000 million (EUR 1,300 million <sup>3</sup> )
Ray <sup>1</sup>	UK	Wind, onshore	54 MW	100%	2017	~SEK 1,200 million (GBP 88 million)
Horns Rev III <sup>1</sup>	Denmark	Wind, offshore	407 MW	100%	2019	~SEK 9,100 million (DKK 7,400 million <sup>3</sup> )

1) As a rule, offshore wind farms have approximately 20%–30% higher annual generation than onshore wind farms with the same capacity.

2) Investment in partnership with Stadtwerke München.

3) Year-end exchange rate as per 31 December 2015.



# TARGETS AND TARGET ACHIEVEMENT

Vattenfall's assignment from its owner, as stated in the Articles of Association, is to generate a market rate of return by operating an energy business in such a way that the company is among the leaders in developing sustainable energy production.

Stable financial performance that provides scope for long-term investments enables environmentally sustainable energy production as well as new product solutions for sustainable consumption of electricity, gas and heat. Vattenfall's owner has set four financial targets for the Group, and the Board has set three sustainability targets.

### Long-term targets

Vattenfall's financial targets have been formulated to ensure that Vattenfall creates value and generates a market rate of return, that the capital structure is efficient, and that financial

risk is kept at a reasonable level. The targets are to be evaluated over a business cycle. The financial targets were set by the owner at an extraordinary general meeting in November 2012.

The sustainability targets are to reduce the Group's CO<sub>2</sub> exposure and thereby make the production portfolio more sustainable, and achieve faster growth in renewable energy than the market up until 2020. The third sustainability target, to improve energy efficiency, was set as a short-term target for 2015 to reduce primary energy consumption through internal and external measures.

TARGETS	OUTCOME 2015		COMMENT
<b>Profitability</b> Return on capital employed: 9%	-8.2%	<b>Return on capital employed</b> % 	The outcome for 2015 was -8.2% (-0.7%), mainly as a result of impairment losses on asset values totalling SEK 36.8 billion. Excluding the impairment losses and items affecting comparability, the return on capital employed was 7.4% (8.2%)
<b>Capital structure</b> FFO/adjusted net debt: 22%-30%	21.1%	<b>FFO/adjusted net debt</b> % 	The outcome for 2015 improved compared to 2014 (20.3%), but was still below the target interval. Funds from operations decreased mainly as a result of the lower profit, while adjusted net debt decreased, mainly as a result of lower net debt.
<b>Capital structure</b> Debt/equity ratio: 50%-90%	55.4%	<b>Debt/equity ratio</b> % 	The outcome for 2015 was 55.4% (61.9%). The improvement is mainly attributable to a lower level of net debt. The debt/equity ratio is within the target interval.

TARGETS

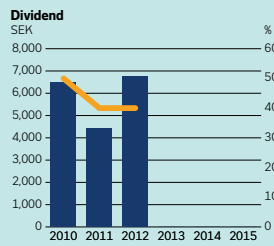
OUTCOME 2015

COMMENT

**Dividend policy**

The dividend should amount to 40%-60% of the year's profit after tax.

0%

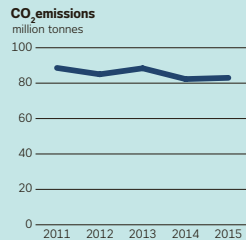


Due to the negative result after tax, the Board has proposed - in accordance with Vattenfall's dividend policy - that no dividend be paid in 2015.

**CO<sub>2</sub> exposure**

Reduce CO<sub>2</sub> exposure to 65 Mtonnes of absolute emissions by 2020.

83.8 Mtonnes

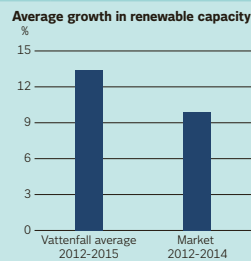


Vattenfall's CO<sub>2</sub> exposure grew slightly in 2015 as a result of the commissioning of the Moorburg power plant in Germany.

**Renewable capacity**

Vattenfall's growth rate of installed renewable capacity will be higher than the average growth rate for ten defined countries in northern and central Europe.<sup>1</sup>

13.4%

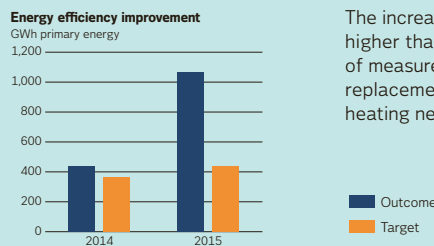


445 MW of new renewable capacity was installed in 2015. Newly installed capacity consisted mainly of the DanTysk offshore wind farm in Germany, the Clashindarroch onshore wind farm in the UK, the Klim onshore wind farm in Denmark, the Juktan onshore wind farm in Sweden and the extension of the Kentish Flats offshore wind farm in the UK.

**Energy efficiency improvement**

Vattenfall will save 440 GWh in 2015.

1,066 GWh



The increase in annual energy savings was higher than the target and consisted mainly of measures such as turbine and generator replacements, and expansion of district heating networks in Berlin and Germany.

1) The ten defined countries are Denmark, Finland, Norway, Sweden, Belgium, France, the Netherlands, Poland, the UK and Germany.

**Strategic targets for 2020**

In December 2015 Vattenfall's Board of Directors adopted six new strategic long-term targets for Vattenfall to better reflect the strategy and the Group's four strategic objectives. Effective January 2016, the three former sustainability targets

will be replaced by the six new strategic long-term targets. The four financial targets, set by the owner, will remain as long-term targets for Vattenfall. The strategic targets have been set for 2020 and will be followed up on a quarterly and annual basis.

**Strategic objectives**

**Strategic targets for 2020**

LEADING TOWARDS SUSTAINABLE CONSUMPTION

1. Customer loyalty, NPS (Net Promoter Score): +2 NPS<sup>1</sup> relative

LEADING TOWARDS SUSTAINABLE PRODUCTION

2. Commissioned renewables capacity: ≥2,300 MW  
3. Absolute CO<sub>2</sub> emissions pro rata: ≤21 Mtonnes<sup>2</sup>

HIGH PERFORMING OPERATIONS

4. ROCE: ≥9%

EMPOWERED AND ENGAGED ORGANISATION

5. LTIF<sup>3</sup> (Lost Time Injury Frequency): ≤1.25  
6. Employee Engagement Index: ≥70%<sup>4</sup>

1) NPS is a tool for understanding customers' perception of Vattenfall's products and services and for measuring customer loyalty. The target is a positive absolute NPS value +2 compared to peers.

2) Require significant structural changes.

3) Lost Time Injury Frequency (LTIF) is expressed in terms of the number of lost time work injuries (per 1 million hours worked), i.e., work-related accidents resulting in absence longer than one day, and accidents resulting in fatality. Pertains to Vattenfall's employees.

4) The basis for the target consists of the results from the employee survey My Opinion.

A young woman with curly hair is sitting and reading a book. She is wearing a dark t-shirt. A blue lamp is positioned above her, casting a warm glow. The background is a plain wall. The overall mood is quiet and focused.

# STAKEHOLDER DIALOGUE

One prerequisite for Vattenfall to be able to conduct successful business long-term is to have an ongoing dialogue with its stakeholders and understand their expectations.



The stakeholder dialogue gives Vattenfall an understanding for and insights into the priorities that the company must set in order to gradually reduce its negative impacts and increase its positive impacts on the environment and communities. Fulfilling these expectations and being transparent enable Vattenfall to be a more sustainable company.

Vattenfall's stakeholders are citizens and customers, the owner, political decision-makers and regulators, NGOs, capital providers, the media, suppliers, and employees. By listening to and having an active dialogue with its stakeholders, Vattenfall can identify challenges and opportunities associated with the company's operations. This dialogue is part of the day-to-day activities and is conducted in a variety of ways throughout the organisation. Dialogues with the owner, regulators and NGOs are conducted regularly. Contacts and meetings with political decision-makers, regulators, capital providers, NGOs and the media are part of Vattenfall's day-to-day business. Every year, Vattenfall conducts in-depth surveys covering many aspects and expectations regarding public opinion, customer satisfaction, Vattenfall's reputation and its brand. Internally, Vattenfall conducts employee surveys every other year.

Focus groups are a forum for dialogue and are used for specific projects or when introducing new customer products and services. In connection with planning of new power plants and wind farms, dialogues are held through formal consultations and information meetings for local organisations, people living nearby and the general public, as well as through social media.

During the year Vattenfall engaged in a number of stakeholder dialogues to increase its understanding of stakeholders' expectations and perceptions at both the local and broader European levels. The outcomes of these dialogues have been used to further enhance and sharpen Vattenfall's strategic focus.

#### Materiality and sustainability focus

Based on the survey conducted in 2013 and stakeholder dialogues carried out during the last two years, Vattenfall has concluded that its sustainability focus will essentially remain the same, but has slightly revised the structure to better meet stakeholder expectations. This has resulted in a change from ten to seven sustainability focus areas:

- Offer customers solutions that enable sustainable use of energy
- Increase renewables
- Reduce emissions
- Increase resource efficiency
- Take responsibility for our impacts on local communities and nature
- Responsible sourcing & purchasing
- Focus on our people

These focus areas are an integral part of Vattenfall's strategy and will not be explicitly described throughout this report.

- ➔ Specific information about the seven focus areas can be found at [www.vattenfall.com/sustainability](http://www.vattenfall.com/sustainability)



## Stakeholder dialogues 2015

### PURPOSE

To gain an understanding of what customers demand and expect from Vattenfall in terms of sustainability.

#### Stakeholders

Customers

### EXAMPLES

During the year Vattenfall held a number of stakeholder dialogues with various business customer segments to gain a better understanding of customer demands.

### OUTCOME

Customers are requesting Vattenfall to put more focus on product development and new products that support customers and help them meet their own environmental and sustainability commitments.

To gain an overview of various stakeholders' perceptions of Vattenfall and its activities.

#### Stakeholders

Customers, citizens, NGOs, the media, regulators, political decision-makers

The Vattenfall Reputation Monitor (VRM) is a Group-wide system for measuring the company's reputation among its stakeholders. In some 21,000 interviews per year, the general public's perception of Vattenfall is measured continuously and analysed on a quarterly basis. The views of opinion-shapers such as political decision-makers, the media and NGOs are measured and evaluated annually based on some 440 interviews in the company's main markets and the EU parliament.

The results from the VRM indicate the company's main reputation drivers and enable insights into reputation decisions, e.g., the importance of focusing on smart customer solutions.

To increase the understanding of the expectations on Vattenfall's responsibility at the local level and in connection with the supply chain.

#### Stakeholders

NGOs, political decision-makers, suppliers

During the annual "politicians' week" convention in Almedalen in Gotland, Sweden, Vattenfall invited various stakeholders to roundtable discussions on Vattenfall's responsibility, both at the local level (with respect to its plants) and in its supply chain (with respect to sourcing and procurement).

Vattenfall needs to be more transparent regarding its challenges and maintain active dialogues with its various stakeholders. These issues have been addressed in-depth in this report through descriptions of Vattenfall's local impacts and by showing what Vattenfall is doing in its supply chain in a more transparent manner.

To gain an understanding of the positions of European stakeholders on current political and legislative debates in Europe, and contribute expertise to these debates.

#### Stakeholders

Political decision-makers, regulators, NGOs

Three thematic roundtable discussions were held in 2015 on the following topics: European heat policy, further harmonisation of renewable energy support schemes, and European transport policies. Two workshops were held on further developments of customer-centric, 100% renewable energy systems.

European energy policies are strong drivers towards customer-centric markets based on renewable energy. Expectations are high on Nordic players as regards ambition levels, contributions of expertise and cooperation. Transparent and open cross-stakeholder expert dialogue formats are considered of high value.

To provide information about Vattenfall's business, strategy and financial performance in order to secure the financial flexibility the company needs to transform its production portfolio.

#### Stakeholders

Capital providers

During an extensive European roadshow, in March 2015, Vattenfall met with more than 100 bond investors and credit analysts. Topics discussed during the meetings included Vattenfall's operations, markets, strategy, financial performance and targets.

Following the roadshow Vattenfall issued hybrid bonds of EUR 1 billion and SEK 6 billion. In November an additional hybrid bond was issued, for USD 400 million.



Read more about Vattenfall's stakeholder dialogues on Vattenfall's website:

[http://corporate.vattenfall.com/globalassets/corporate/sustainability/doc/intressentdialog\\_en\\_final\\_20140320.pdf](http://corporate.vattenfall.com/globalassets/corporate/sustainability/doc/intressentdialog_en_final_20140320.pdf)



# DEVELOPMENT DURING THE YEAR

Sustainable financial performance is created through stable financial results, but also by taking responsibility for employees, ensuring that the company acts with integrity, and taking responsibility for its supply chain. Generating sustainable financial performance is a fundamental precondition for Vattenfall's ability to transform to more sustainable consumption and production.

## **Operations requiring permits**

During the year Vattenfall conducted operations that require permits under national legislation in Sweden, Finland, Denmark, Germany, the Netherlands and the UK. Vattenfall AB conducts operations that require permits in accordance with the Swedish Environmental Code. These consist primarily of electricity and heat production plants that require permits and/or registration. Vattenfall's other operations requiring permits that make up a significant part of the business are conducted primarily by subsidiaries. Since Vattenfall's securities operations for electricity trading no longer requires a permit from the Swedish Financial Supervisory Authority, the company has allowed that permit to lapse.

## **Vattenfall's R&D activities**

Vattenfall conducts research and development (R&D) to contribute to the execution of the company's strategy in both the short and long term. Effective wind power project development and operation is a prioritised R&D area. A growing share of R&D work is focused on new products and services for customers within e-mobility and energy management, including smart homes. Making the electricity network smarter will benefit the customers directly, but will also enable the development of other services for customers. In 2015 Vattenfall invested SEK 422 million (474) in R&D (excluding resources allocated to the safe storage of spent nuclear fuel), corresponding to 0.3% (0.3%) of consolidated net sales.

# VATTENFALL'S FINANCIAL PERFORMANCE

2015 was characterised by continued weak demand, a surplus of production capacity, and falling electricity prices. Despite successful cost-cutting by approximately 30% during the last five years compared with the cost base in 2010, impairment losses and higher provisions during the year led to a negative result after tax of SEK -19.8 billion.

Owing to the large impairment losses, with a return on capital employed of -8.2%, Vattenfall was not able to reach its 9% profitability target. Excluding items affecting comparability, the return on capital employed was 7.4%. To counter the financial burden created by the challenging market conditions, Vattenfall is continuing its work on improving efficiency in all areas of the Group. The investment programme is being reviewed continuously, where investments in renewable energy production will have priority at the same time that assets that are considered to be unable to meet the company's required rate of return will be divested.

## Earnings performance in 2015

The underlying operating profit for 2015 was SEK 20.5 billion, which is SEK 3.6 billion lower than in 2014. The decrease is mainly attributable to lower production margins (SEK -4.6 billion), which were partly compensated by higher hydro power generation (SEK 0.4 billion), higher earnings contribution from the distribution and sales operations (SEK 1.1 billion), and lower operating costs (SEK 0.2 billion).

## Impairment losses

As a result of worsening market conditions and higher business risks, during the year Vattenfall recognised impairment of the book value of assets in the amount of SEK 36.8 billion, resulting in a charge against earnings of SEK 27.2 billion net after tax.

The impairment losses had no impact on Vattenfall's cash flow, however. The impairment losses are broken down primarily into SEK 17.0 billion for Ringhals reactors 1 and 2, SEK 15.2 billion for lignite assets in Germany, and SEK 4.0 billion for the Moorburg power plant in Germany. In 2014 Vattenfall recognised impairment of asset values totalling SEK 23.8 billion, mainly pertaining to the Netherlands. Detailed information about impairment losses is provided in Note 14 to the consolidated accounts, Impairment losses and reversed impairment losses.

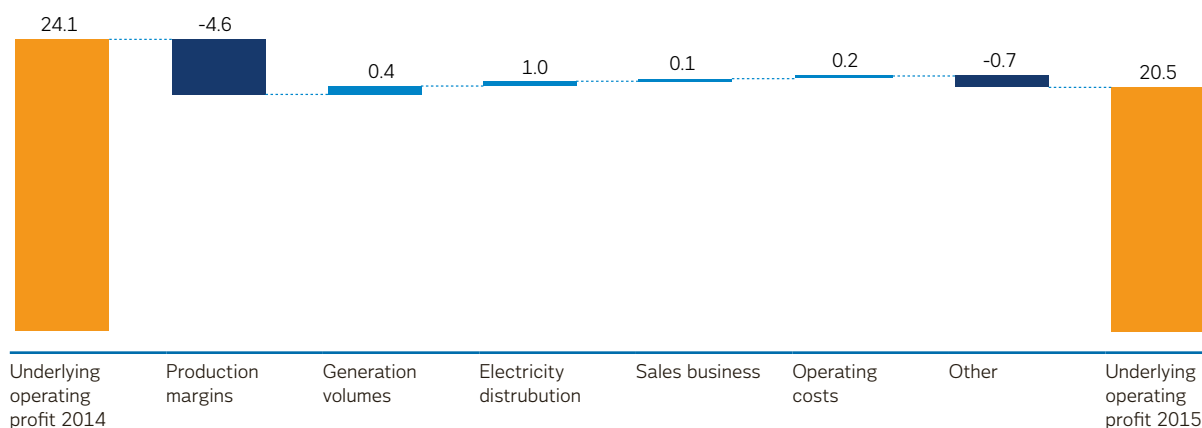
## Higher provisions

Higher provisions in 2015 pertained mainly to new calculations of future costs for the decommissioning of nuclear power in Germany and for the lignite operations in Germany. Provisions for pensions were lower in 2015 in both Sweden and Germany as a result of higher discount rates, which led to a decrease in adjusted net debt. Detailed information about provisions is provided in Notes 41 and 42 to the consolidated accounts, Provision for pensions, and Other interest-bearing provisions, respectively.

## Cash flow and investments

Cash flow from operating activities – operating cash flow – improved by SEK 0.8 billion to SEK 40.9 billion in 2015. Funds from operations (FFO) decreased by SEK 3.1 billion,

Development of Vattenfall's underlying operating profit, SEK billion



mainly owing to lower earnings. Total investments decreased by SEK 0.3 billion to SEK 28.7 billion in 2015, of which SEK 8.6 billion pertained to investments in wind power, which thereby represented Vattenfall's single largest area of investment in 2015. During the year, assets were sold for a combined total of SEK 2.3 billion, net. These pertain to combined heat and power assets in Utrecht, the Netherlands, and to the Fyn combined heat and power station in Denmark.

### Cost-cutting programme

Vattenfall has taken a number of measures to cut costs and has reduced costs under its control by approximately 30% compared with the cost base in 2010. Divestment of operations reduced costs by SEK 3.1 billion. These divestments pertained mainly to heat and electricity network operations in Poland, electricity network operations in Finland and Hamburg, operations in Belgium, combined heat and power assets in Denmark, facility services in Germany, and other assets and operations. The cost savings were mainly achieved through reductions in personnel, IT costs and purchasing costs. During 2015, Vattenfall signed a five-year contract outsourcing IT network services and workplace management to Computer Sciences Corporation (CSC). The agreement is aimed at improving operational efficiency and facilitating IT services development. As part of the agreement, 122 Vattenfall employees will be transferred to CSC and its partner, AT&T. Growth projects primarily in wind power have led to an increase in the cost base by approximately SEK 11.8 billion. The savings programme of SEK 2.5 billion for 2015–2016 is in progress. In addition, Vattenfall is currently studying the opportunity to outsource parts of administration and IT operations to external service providers.

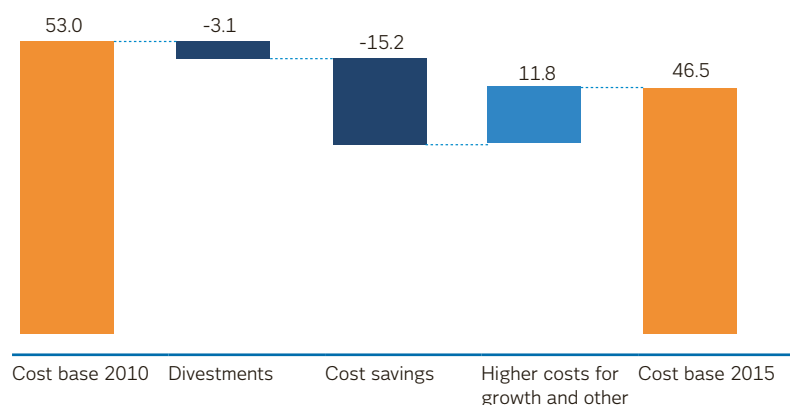
### Reduced debt

Net debt decreased by SEK 15.3 billion compared with the level at 31 December 2014, to SEK 64.2 billion, mainly owing to a positive cash flow after investments. Adjusted net debt (which includes among other things provisions for pensions and nuclear power) decreased by SEK 20.7 billion to SEK 137.6 billion. The decrease is mainly attributable to the lower level of net debt, the newly issued hybrid bonds during the year, which are classified as equity to 50% and thereby reduce the level of adjusted net debt, and lower provisions for pensions as a result of a higher discount rate. The key ratio Funds from operations (FFO)/adjusted net debt improved to 21.1% from 20.3%, but was still below the target interval of 22%–33%.

### Issues of hybrid bonds

Vattenfall issued hybrid bonds on two occasions in 2015. In March Vattenfall issued hybrid bonds of SEK 6 billion and EUR 1 billion (approximately SEK 15 billion combined) in order to refinance an existing hybrid bond of EUR 1 billion issued in 2005. In connection with the issue Vattenfall offered to redeem its existing hybrid bond. The offer was accepted to 49.6% (EUR 496 million). On 29 June Vattenfall redeemed all outstanding hybrid bonds originally issued on 29 June 2005. In November Vattenfall placed a hybrid bond issue of USD 400 million (approximately SEK 3.5 billion). This is Vattenfall's first ever bond denominated in USD, placed under Regulation S outside the USA.

### Cost-cutting programme, SEK billion





# RESPONSIBLE SOURCING AND PURCHASING

Vattenfall is working to continuously improve its supply chain and the performance of its suppliers. Its ambition is to be a company with high sustainable performance throughout the value chain.

Risks, opportunities and impacts related to Vattenfall's operations cut across its entire value chain. A sustainable supply chain can reduce costs and thereby contribute to improved profitability, lead to significant risk mitigation, and increase brand value.

### Diverse supplier base

The composition and complexity of Vattenfall's supplier base varies depending on what is being purchased or sourced. A small but growing share of Vattenfall's suppliers is based in or has production in high-risk countries. Vattenfall's Code of Conduct for Suppliers (CoCfS) defines the company's requirements and expectations within responsible sourcing and purchasing, namely, human rights, working conditions, the environment and anti-corruption. With ambitions to manage supplier-related risks and impacts beyond first tier suppliers, Vattenfall is working to increase its knowledge of risks and impacts further along its supply chain. The methodology for country risk assessment was updated in 2015. Also, a generic Group-wide approach has been adopted to implementing Vattenfall's CoCfS, based on three steps.

Vattenfall purchases a wide range of goods, services and fuels, with varying risk profiles and varying legal and sustainability requirements. As a consequence, implementation of Vattenfall's CoCfS varies. Essentially, purchasing and sourcing are conducted in four streams: goods and services, nuclear fuel, commodity fuels (coal, biomass, gas and oil) and directly sourced heat fuels.

### Training and competence building

Focus during the year was on gaining an enhanced internal understanding and conducting training on auditing, corrective

actions and follow-up, in line with the Group-wide generic approach to implementation of Vattenfall's CoCfS. An expert group of auditors was established to evaluate hard coal suppliers for decision-making by the Responsible Sourcing Board (an internal cross-functional decision-making body). Furthermore, Vattenfall's Competence Centre for Sustainability Due Diligence held internal trainings on human rights and supply chain management, and arranged an internal training with Social Accountability International (SAI) on social auditing in accordance with the SA8000 standard.

### Planned activities

Key challenges include a lack of traceability regarding origin with respect to screen trading of commodities (coal, gas, oil), limited insight into risks in the supply chain for goods and services due to the large number of suppliers, and the complexity of certain supply chains. Other areas for improvement include strengthening Vattenfall's engagement with suppliers, follow-up of corrective actions, and gaining a better understanding of sustainability issues, particularly human rights in high-risk countries.

To ensure continuous improvement beyond first tier suppliers, Vattenfall will continue to apply its risk and impact-based approach when implementing its CoCfS. Focus will also be on strengthening follow-up of the implementation of corrective actions by suppliers and Vattenfall's engagement with suppliers. Vattenfall will start mapping potential and existing impacts on people within its supply chain as part of a human rights impact assessment. Development of internal competence within responsible sourcing and purchasing will be secured through training within the Vattenfall Competence Centre for Sustainability Due Diligence.

### Implementation process for Vattenfall's Code of Conduct for Suppliers





## Status and activities

In 2015, Vattenfall took several steps to improve and further develop its purchasing and sourcing processes. Below are some examples within the four purchasing and sourcing streams. See also the definitions of 'supplier' on page 165.

### GOODS AND SERVICES

**Number of suppliers: ~32,500**

**Number of suppliers representing 80% of spend: ~1,200**

- All three new suppliers from high-risk countries in 2015 screened through site audits.
- Vattenfall's CoCfS, suppliers' own codes of conduct to the extent they are comparable with Vattenfall's, or a declaration of adherence to the UN Global Compact included in the terms of new supplier agreements.
- Project started to map high-risk product and service categories.
- Process developed for sanction list screening of all suppliers.

### COMMODITY FUELS

**Number of suppliers: ~30<sup>1</sup>**

**Number of suppliers representing 80% of spend: ~15<sup>1</sup>**

- Vattenfall only screens hard coal suppliers with ownership or operational control over mines. In 2015, there were no such new suppliers. Screening is conducted mainly through desktop assessments.
- Completed the first cycle of supplier screening for all new and potential hard coal suppliers.
- CoCfS or UN Global Compact included in all contracts for directly purchased hard coal.
- Dialogues held with NGOs and suppliers in relation to Vattenfall hard coal sourcing activities in Colombia.
- In 2015 no new biomass pellet suppliers from high-risk countries.
- All new and existing biomass suppliers screened. Screening is conducted mainly through desktop assessments.
- CoCfS included in all biomass contracts.
- Internal seminar on sustainability aspects of coal, biomass and oil sourcing from Russia.

1) Pertains mainly to directly purchased coal and biomass.

..... 33,000 SUPPLIERS .....

### NUCLEAR FUEL

**Number of suppliers: ~20**

**Number of suppliers representing 80% of spend: ~10**

- No new contracted suppliers from high-risk countries in 2015. Initial delivery of uranium received from a supplier in Kazakhstan. The supplier was contracted several years ago and was assessed in 2012.
- Screening and approval of all nuclear fuel suppliers that made deliveries in 2015 were performed prior to delivery. Desktop assessments of potential and existing suppliers in the industry are performed yearly.
- Environmental and UN Global Compact requirements included in all new supplier contracts.
- Active member of the World Nuclear Association initiative "Corporate Social Responsibility at Mining and Other Fuel Cycle Facilities."

### HEAT FUELS

**Number of suppliers: ~100**

**Number of suppliers representing 80% of spend: ~40**

- In 2015, no new suppliers from high-risk countries to Sweden or to Germany.
- Existing suppliers in Sweden screened through desktop assessments and site visits. All new suppliers to Vattenfall's heat plants in Germany screened during 2015. Suppliers are screened mainly through desktop assessments.
- Desktop assessments conducted for all sourcing of biomass, bio oil and imported waste in Sweden.
- CoCfS included in all contracts in Sweden and in all new contracts in Germany as of 2014.

➔ For more on Vattenfall's purchasing and sourcing streams in 2015, see [www.vattenfall.com/sustainability](http://www.vattenfall.com/sustainability)

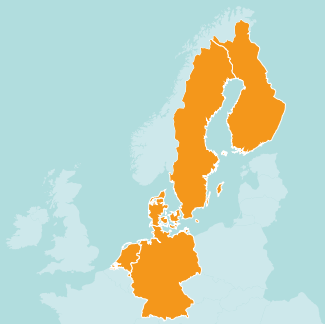
# OPERATING SEGMENTS

As of the second quarter of 2015, Vattenfall reports its operations broken down into the Group's new operating segments: Customers & Solutions, Power Generation, Wind, Heat, and Distribution. The operating segments follow the Business Area structure except for the Power Generation segment, which comprises both the Generation and Markets Business Areas as well as the Mining & Generation unit.

## CUSTOMERS & SOLUTIONS

Responsible for sales of electricity, gas and energy services in all of Vattenfall's markets.

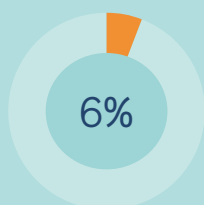
### Vattenfall's markets



External net sales (SEK m)

84,905

Share of underlying operating profit<sup>1</sup>



Number of employees, full-time equivalents

3,168

## POWER GENERATION

Responsible for Vattenfall's hydro and nuclear power operations, the optimisation and trading operations, and lignite operations. Comprises the Generation and Markets Business Areas, and the Mining & Generation unit.

### Vattenfall's markets



External net sales (SEK m)

56,717

Share of underlying operating profit<sup>1</sup>



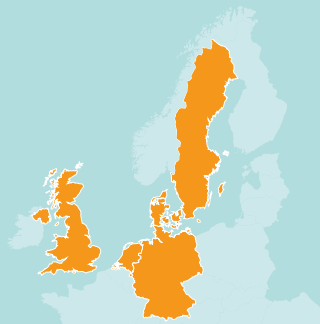
Number of employees, full-time equivalents

14,571

## WIND

Responsible for Vattenfall's wind power operations.

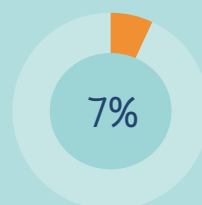
### Vattenfall's markets



External net sales (SEK m)

4,267

Share of underlying operating profit<sup>1</sup>



Number of employees, full-time equivalents

577

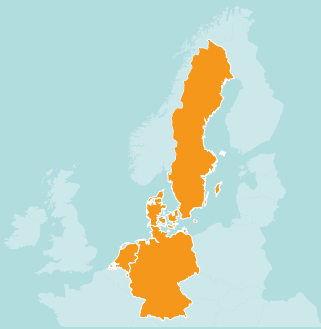
<sup>1</sup> Underlying operating profit is defined as operating profit excluding items affecting comparability. For a specification of items affecting comparability, see page 81.



## HEAT

Comprises Vattenfall's heat operations, including all thermal operations (except lignite).

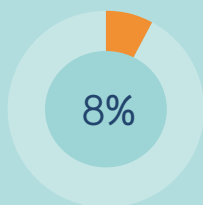
### Vattenfall's markets



External net sales (SEK m)

14,356

Share of underlying operating profit<sup>1</sup>



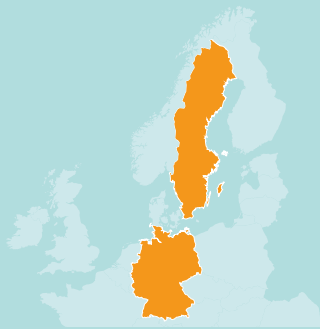
Number of employees, full-time equivalents

4,203

## DISTRIBUTION

Comprises Vattenfall's electricity distribution operations in Sweden and Germany (Berlin).

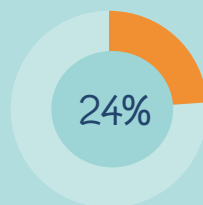
### Vattenfall's markets



External net sales (SEK m)

15,355

Share of underlying operating profit<sup>1</sup>



Number of employees, full-time equivalents

2,728

## OTHER

Pertains mainly to all Staff functions including Treasury activities and Shared Service Centres.

Key data	2015	2014
Net sales (SEK million)	5,361	5,803
External net sales (SEK million)	178	290
Underlying operating profit <sup>1</sup> (SEK million)	-1,897	-978

External net sales (SEK m)

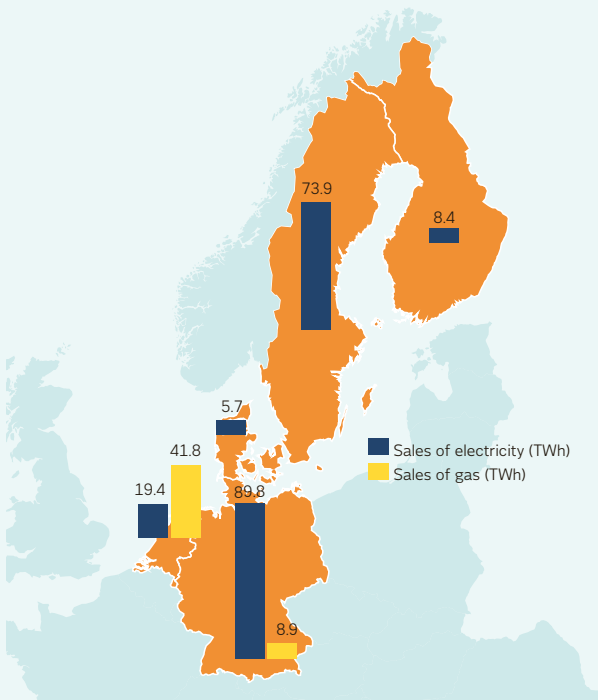
178

Number of employees, full-time equivalents

3,320

1) Underlying operating profit is defined as operating profit excluding items affecting comparability. For a specification of items affecting comparability, see page 81.





“A LEADING CUSTOMER COMPANY SUPPLYING A WIDE RANGE OF ENERGY SOLUTIONS AND SERVICES TO PRIVATE AND BUSINESS CUSTOMERS”

CUSTOMERS & SOLUTIONS:

# A LEADING CUSTOMER COMPANY

The Customers & Solutions Operating Segment and Business Area is responsible for Vattenfall's relationships with customers, providing electricity, gas and energy services and solutions in Vattenfall's markets.

**Strategy**

Vattenfall strives to be the most recognised energy partner among customers. It will secure and increase the profitability of the current business and at the same time develop new, sustainable solutions that are connected to the energy business. Vattenfall will be more customer-centric and create enduring relationships with its customers. This requires a focus on optimising the customer experience as well as giving customers opportunities to reduce their environmental footprint and actively participate in the new, emerging energy landscape.

Vattenfall has identified the following focus areas for carrying out its strategy in the Customers & Solutions segment:

- Continue to develop energy-related solutions by focusing on charging solutions (e-mobility), smart home/facility management, decentralised generation and new customer interaction models
- Optimise Vattenfall's sales and service value chain around the customer's experience and needs
- Grow the customer base further in Germany, Finland and France
- Reduce cost to serve
- Accelerate digital transformation to be able to develop fully digital offerings

**Operations**

In the Nordic countries Vattenfall supplies electricity to private and business customers in Sweden, Finland and Denmark. Vattenfall has a market-leading position in Sweden with more

than 900,000 retail electricity customers, and is one of the leading companies in Finland. In the Netherlands, Vattenfall is the leading supplier of both gas and electricity to private and business customers. In Germany, Vattenfall supplies gas and electricity to private customers and selected business segments and has a market-leading position in Berlin and Hamburg. In France, Vattenfall focuses on sales of gas and electricity to selected business segments.

In 2015, Vattenfall sold a total of 123.0 TWh (118.4) of electricity to private and business customers. This is an increase of 4.2 TWh, mainly owing to an increased number of customers in Germany. Sales of gas increased to 50.7 TWh (45.5) mainly owing to higher sales in Germany and unusually warm weather in 2014.

Vattenfall provides a wide range of energy solutions to give customers tools for more sustainable and efficient energy consumption. Vattenfall's offerings and interactions vary from market to market, but the overall focus is on charging solutions (e-mobility e.g., charging boxes and charging stations), smart home/facility management (e.g., EnergyWatch, smart plugs), decentralised generation and online customer interaction models. Furthermore, Vattenfall is the only electricity company in Sweden to offer its customers EPD-certified electricity. EPD (Environmental Product Declaration) is a third-party verified environmental declaration.

➔ A more detailed description can be found by visiting [www.environdec.com](http://www.environdec.com)

**Developments in 2015**

Vattenfall continued its work on developing energy solutions:

- A demonstration project with plug-in hybrid buses in regular bus traffic started in Stockholm. Vattenfall is responsible for the fast-charge stations and supply of wind-based electricity for the project, in which Stockholm's mass transit company SL and Volvo Buses are the other two main partners
- Vattenfall won the tender for the operation of charging infrastructure in the cities of Amsterdam and Utrecht in the Netherlands
- The SmartChurch concept for energy and climate optimisation of churches was launched in Sweden. This represents Vattenfall's first tailored energy solution for a specific customer segment
- A pilot offering of an innovative solar leasing solution was introduced to private customers in the Netherlands entailing an integrated solution for an energy-efficient roof including solar panels and insulation
- The functionality of Vattenfall's smart home solutions in Germany was expanded
- Vattenfall developed a unique technology for remote control of outdoor street lighting in cities and public areas, with the first commercial system to be constructed in Sweden

In 2015 Vattenfall continued to grow its customer base in the market segment for private customers in Germany and Finland. In France, Vattenfall expanded its sales activities in the market for business customers. The introduction of a customer loyalty scheme for private customers in the Netherlands in 2014 resulted in a stabilisation of Vattenfall's market share in 2015.

In order to increase the focus on the customer experience and at the same time reduce the cost to serve, Vattenfall continued to integrate its sales and service activities in its local market segments.

Key data	2015	2014
Net sales (SEK million)	87,523	87,277
External net sales (SEK million)	84,905	85,606
Underlying operating profit (SEK million)	1,390	962
Sales of electricity (TWh)	123.2	118.4
- of which, private customers	26.8	26.2
- of which, resellers	33.5	29.2
- of which, business customers	62.8	63.4
Sales of gas (TWh)	50.7	45.5
Customer Satisfaction Index, CSI	69	70

**Planned activities**

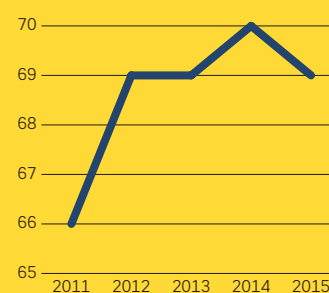
To increase the customer experience, Vattenfall will intensify its work on improving customers' digital interaction and make it possible for customers to choose how to do business with Vattenfall, making the process more personalised. Improved web services for business customers will also be introduced.

In 2016 Vattenfall plans to continue growing in the German, Finnish and French markets as well to consolidate its market position in other markets. New energy solutions within decentralised generation will be introduced, and new ways of interacting with customers will be tested and implemented. Offers to business customers will be further broadened with energy solutions, e.g., smart facility solutions for energy efficiency and small scale energy production.

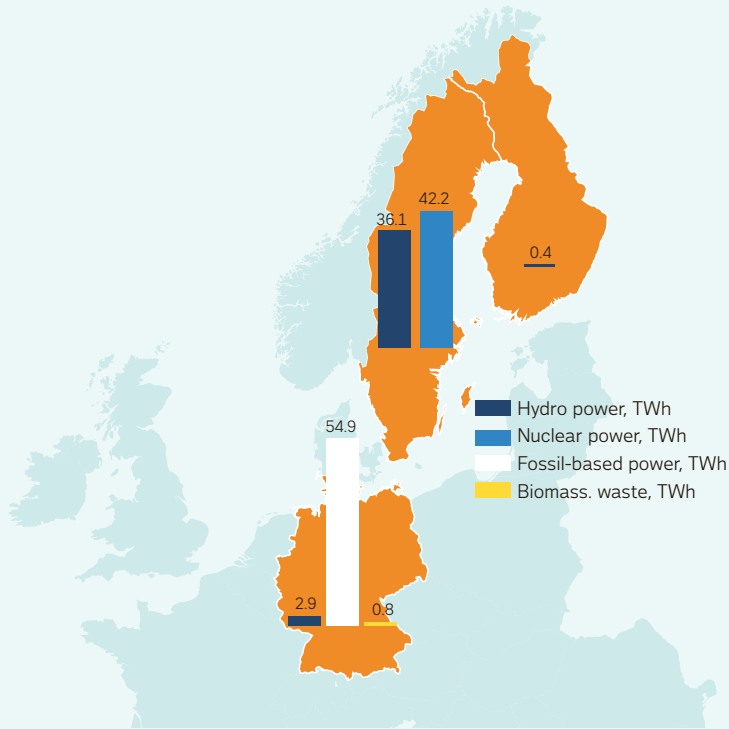
**Customer Satisfaction Index (CSI)**

Vattenfall's Customer Satisfaction Index is an important tool for measuring the results of Vattenfall's customer-related activities. Vattenfall is striving to achieve a CSI score of 75 by continuing its efforts to develop sustainable, smart products and services that benefit customers and meet their expectations. The outcome for 2015 gave a composite CSI score of 69 (70).

In 2016 Vattenfall will continue measuring its customer engagement using the Net Promoter Score (NPS). NPS will be an important tool for measuring customers' experience of Vattenfall and the likelihood of recommending Vattenfall to a friend or colleague. NPS surveys will be conducted throughout the year, primarily online or through phone interviews. Customers are also given opportunities to share views via other channels, such as through Vattenfall's customer service department or website. NPS will be followed-up on a quarterly and annual basis.

**Trend in Customer Satisfaction Index<sup>1</sup>**

1) The chart pertains to retail customers in sales of electricity and heat, and electricity distribution.



“A SIGNIFICANT OPERATOR OF SAFE AND EFFICIENT LARGE-SCALE LOW CO<sub>2</sub>-EMITTING PRODUCTION.”

POWER GENERATION:

# EFFICIENT GENERATION

The Power Generation Operating Segment comprises the Generation and Markets Business Areas, as well as the Mining & Generation unit. The segment includes Vattenfall’s hydro and nuclear power operations, optimisation and trading business, and lignite operations.

**Strategy**

The energy sector has experienced fundamental changes in recent years, characterised by depressed profit margins that have incentivised generators to transition their new build investments away from fossil-based energy to renewables and to increase energy efficiency. The market and industry changes have been particularly dramatic within large scale conventional electricity generation. The market changes, combined with heavy reliance on depressed wholesale electricity prices, have made it necessary for Vattenfall to improve efficiency in its generation operations. Hydro power will continue to play an important role thanks to its flexibility, which will increase in importance as the share of intermittent renewable energy grows.

Vattenfall has identified the following focus areas for carrying out its strategy in the Power Generation Operating Segment:

- Plan to divest Vattenfall’s lignite operations
- Maintain safe, reliable, environmentally compatible and efficient generation
- Ensure efficient decommissioning and dismantling of the nuclear reactors Vattenfall decided to close
- Increase flexibility in the power plants

**Operations**

Vattenfall is one of Europe’s largest generators of electricity. Total electricity generation in 2015 in Power Generation amounted to 137.2 TWh (140.0). The operating segment is responsible for conducting operations as efficiently as possible and for guaranteeing optimal generation capacity and availability. In practice this translates to high commercial availability of plants, high safety standards, continuous improvement of operating efficiency and lower CO<sub>2</sub> and other emissions, for example NO<sub>x</sub> and SO<sub>2</sub>. CO<sub>2</sub> emissions in 2015 amounted to 60.4 Mtonnes (60.5) for the Power Generation Operating Segment.

Apart from CO<sub>2</sub> emissions, fossil-based energy production also results in emissions of NO<sub>x</sub>, SO<sub>2</sub>, mercury and particulates. Vattenfall is using best available technology in order to stay below legal thresholds for these emissions. Improvements have been made in increasing flexibility of power plant processes, which significantly contributes to reducing CO<sub>2</sub> and other emissions as well.

The Markets Business Area is responsible for optimisation (dispatch) of all of Vattenfall’s generation assets. To reduce the impact of market prices on Vattenfall’s earnings, Vattenfall hedges a large share of its future electricity generation in the electricity futures market. Vattenfall also hedges purchases of CO<sub>2</sub> emission allowances and fuel.

## Developments in 2015

### Hydro power

Vattenfall has total installed capacity of 11,727 MW in hydro power. In 2015, Vattenfall's hydro power generated 39.5 TWh (34.3) of electricity. The increase is mainly attributable to high water supply combined with high reservoir levels. Vattenfall's Nordic reservoir levels were 74% (56%) of capacity at the end of 2015, which is 17 percentage points above the normal level. Vattenfall continued to invest in refurbishments and power upgrades in order to increase efficiency and electricity generation at its hydro power plants. The ongoing refurbishment and expansion of the Akkats hydro power plant near Jokkmokk, in northern Sweden, entered its final stage and is expected to be completed in the first half of 2016. Upon completion, the power plant, with a 150 MW turbine, will have been retro-fitted with two more efficient turbines each with 75 MW of installed capacity. This is expected to increase power output in a normal year by approximately 15 GWh. At the same time Vattenfall made further investments in maintaining a high level of dam safety and availability at its hydro power plants.

Vattenfall is engaged in dialogues with authorities, political decision-makers and other stakeholders regarding the EU's Water Framework Directive, aimed at safeguarding water quality in Europe's lakes and watercourses, in an effort to achieve reasonable implementation of the directive in Sweden that does not jeopardise Swedish hydro power generation. Vattenfall's work in the area of biodiversity continues in dialogue with Sweden's five water authorities. In addition, through the environmental foundation associated with the "Bra Miljöval" electricity certification, Vattenfall has participated in the tributary restoration of the Lule River (Flarkån) and the Gota River (Valån). Vattenfall is also working with peers and authorities in a number of projects to carry out the national strategy for hydro power. These projects are focused on finding potential to enhance and restore natural values and to identify efficient mitigation measures.

Key data	2015	2014
Net sales (SEK million)	113,969	122,720
External net sales (SEK million)	56,717	61,874
Underlying operating profit (SEK million)	12,443	15,639
Electricity generation (TWh)	137.2	140.0
CO <sub>2</sub> emissions (Mtonnes)	60.4	60.5
Nitrogen oxide, NO <sub>x</sub> (ktonnes)	42.1	42.4
Sulphur dioxide, SO <sub>2</sub> (ktonnes)	45.7	48.4
Particulates (ktonnes)	1.3	1.3

### Nuclear power

Nuclear power generation decreased by 7.7 TWh to 42.2 TWh (49.9), mainly on account of extended outages at Ringhals 2 and Forsmark 3. Combined availability of Vattenfall's nuclear power plants was 69.7% (82.6%) during 2015. Forsmark had availability of 76.1% (88.9%) and generation of 21.1 TWh (25.3). Availability at Ringhals was 64.4% (77.3%), and generation amounted to 21.1 TWh (24.6).

### Mining & Generation

Fossil-based generation decreased by 0.2 TWh to 54.9 TWh (55.1). As an important part of its strategy to reduce its CO<sub>2</sub> exposure, Vattenfall is planning to divest its German lignite assets.

### Planned activities

In hydro power Vattenfall will continue its investments to further improve dam safety and renew its hydro power plants. The Akkats turbine replacement project is scheduled for completion in the first half of 2016.



Read more about Vattenfall's nuclear power operations on pages 42-43 and Vattenfall's lignite operations on pages 44-45



## Nuclear power decommissioning and radioactive waste

Vattenfall is the majority owner of seven nuclear power reactors in Sweden – four in Ringhals and three in Forsmark. In Germany Vattenfall has operational responsibility for the Krümmel and Brunsbüttel reactors, and also has minority interests in the Brokdorf and Stade reactors. Of the German reactors, only Brokdorf is currently in operation. Stade is currently being dismantled.

### Nuclear provisions

In both Sweden and Germany, the reactor owners are liable for all costs for taking care of and final storage of spent nuclear fuel and radioactive waste as well as for dismantling the plants and other nuclear power facilities. In both countries, the nuclear power operators make provisions for future expenses for nuclear power, which are recorded as liabilities on the companies' balance sheets. However, the financing of these future costs differs from country to country. In Sweden, the reactor owners must pay a special fee per generated kWh to a special fund, the Swedish Nuclear Waste Fund. For Vattenfall, the fee to this fund in 2015 averaged 4 öre (SEK 0.04) per kWh. The fee is paid by Forsmark and Ringhals as the owners of the respective plants. The fee to the Swedish Nuclear Waste Fund is set by the government after a review that is conducted every three years. The next review will be conducted in 2017. On 31 December the value of Vattenfall's share in the fund, SEK 28.7 billion,<sup>1</sup> corresponded to Vattenfall's pro rata share of ownership. Read more about Vattenfall's share in the Swedish Nuclear Waste Fund in Note 29 to the consolidated accounts, Share in the Swedish Nuclear Waste Fund.

In Germany, the handling of nuclear waste is financed by provisions that the reactor owners carry on their balance sheets. The provisions are based on calculations carried out by external experts and audited by the companies' auditors. At present, no external financing arrangements have been made. Read more about Vattenfall's provisions in Note 42 to the consolidated accounts, Other interest-bearing provisions.

In Sweden, the nuclear power companies are required by law to pledge security to the Swedish state to guarantee that sufficient funds exist to pay for future costs for waste handling. This security is subject to approval by the Swedish National Debt Office and is provided in the form of sureties issued by the owners of the nuclear power companies. Read more in Note 51 to the consolidated accounts, Contingent liabilities.

### German nuclear stress test

Pursuant to a decision by Germany's parliament, all nuclear power reactors in the country are to be closed by 2022 at the latest. In order to determine whether the nuclear power operators' provisions are sufficient to cover all costs related to decommissioning and waste handling, a stress test has been performed by the German government. In October 2015 an expert opinion was issued by the auditing firm Warth & Klein Grant Thornton AG on behalf of the German government. The auditing firm reported that they had found no reason to dispute the nuclear power operators' principles for calculating their provisions for nuclear power. Calculated on a proportional basis (pro rata), Vattenfall's nuclear power provisions in Germany amounted to EUR 3.2 billion (SEK 29.4 billion) in 2015.

In addition, the German government has appointed a special commission to issue recommendations during spring 2016 on how to secure the long-term financing of nuclear plant decommissioning costs. An externally managed fund similar to the model used in Sweden could be an option.

Reactor	Start (year)	Net capacity (MW)	Vattenfall's share (%)
Ringhals 1	1976	879	70.4
Ringhals 2	1975	809	70.4
Ringhals 3	1981	1,070	70.4
Ringhals 4	1983	942	70.4
Forsmark 1	1980	984	66.0
Forsmark 2	1981	1,120	66.0
Forsmark 3	1985	1,170	66.0
Brunsbüttel <sup>2</sup>	1977	771	66.7
Brokdorf	1986	1,410	20.0
Krümmel <sup>2</sup>	1984	1,346	50.0
Stade <sup>3</sup>	1972	640	33.3

1) The calculation is based on Vattenfall's share of ownership in the respective nuclear power plants, less Vattenfall's share in the Swedish Nuclear Waste Fund and liabilities to associated companies. Vattenfall has the following ownership interests in the respective plants: Forsmark 66%, Ringhals 70.4%, Brokdorf 20%, Brunsbüttel 66.7%, Krümmel 50% and Stade 33.3%. (According to a special agreement, Vattenfall is responsible for 100% of the provisions for Ringhals.)

2) Brunsbüttel and Krümmel have no authorisation for production since 2011.

3) Stade is being dismantled.

### Phase-out of nuclear power in Sweden and Germany

As a result of poor profitability owing to low electricity prices and a high nuclear tax, in 2015 Vattenfall announced an early phase-out of the Ringhals 1 and 2 reactors. At an extraordinary general meeting of Ringhals AB in October 2015, the decision was made to phase-out Ringhals 2 in 2019 and Ringhals 1 in 2020, instead of around 2025 as previously announced. For Vattenfall's five other reactors – Ringhals 3 and 4 and Forsmark 1, 2 and 3 – the existing plans of at least 60 years of operation remain unchanged. This means they are planned to remain in operation until some time around 2040-2045.

In Germany, all of the country's nuclear power reactors are to be closed stepwise by 2022 as a result of a decision following the Fukushima accident in 2011. Despite safety assurances, the German government decided in 2011 to immediately shut down eight of the country's 17 nuclear reactors, while the remaining nine will be phased out gradually by the end of 2022.

### Application for decommissioning and dismantling

In November 2012, Vattenfall filed an application for the decommissioning and dismantling of the Brunsbüttel reactor. The licence authorisation process is currently in progress, including preparation of documents and specifications for a public hearing procedure. A corresponding application for the Krümmel reactor was filed in August 2015. Vattenfall has contested the confiscation of generation rights for Krümmel and has filed the case with the autonomous International Center for Settlement of Investment Disputes (ICSID) in Washington D.C. In addition, Vattenfall – like other German nuclear power companies – has filed a constitu-

tional suit against the German government for costs and loss of revenues as a result of the German government's decision on immediate closure or shortening of the operating lifetime for the German nuclear reactors.

### Final storage of spent nuclear fuel

In both Sweden and Germany, it is the nuclear power operator's responsibility to have reliable and satisfactory solutions for handling and interim storage of radioactive waste as well as for the decommissioning process until such time that the radioactive waste can be stored in a final repository.

In spring 2011 SKB (the Swedish Nuclear Fuel and Waste Management Company), which is owned by Sweden's nuclear operators, applied for the necessary permits for the final repository in accordance with the Swedish Act on Nuclear Activities and the Swedish Environmental Code in order to begin construction of a nuclear fuel repository in Forsmark and an encapsulation facility in Oskarshamn. The permitting process is ongoing, and construction of the nuclear fuel repository is estimated to begin in 2019 at the earliest.

In Germany, no formal proposal for a final repository for spent nuclear fuel has been set forth yet. Pursuant to a decision by the Bundesrat in June 2013, a suitable location for final storage shall be approved by 2031 at the latest. Until then, spent nuclear fuel is stored in interim facilities adjacent to the nuclear power plants. For the storage of low- and intermediate-level radioactive waste, national plans are in place to use a former iron ore mine, Konrad, outside of the town of Salzgitter in the federal state of Niedersachsen.

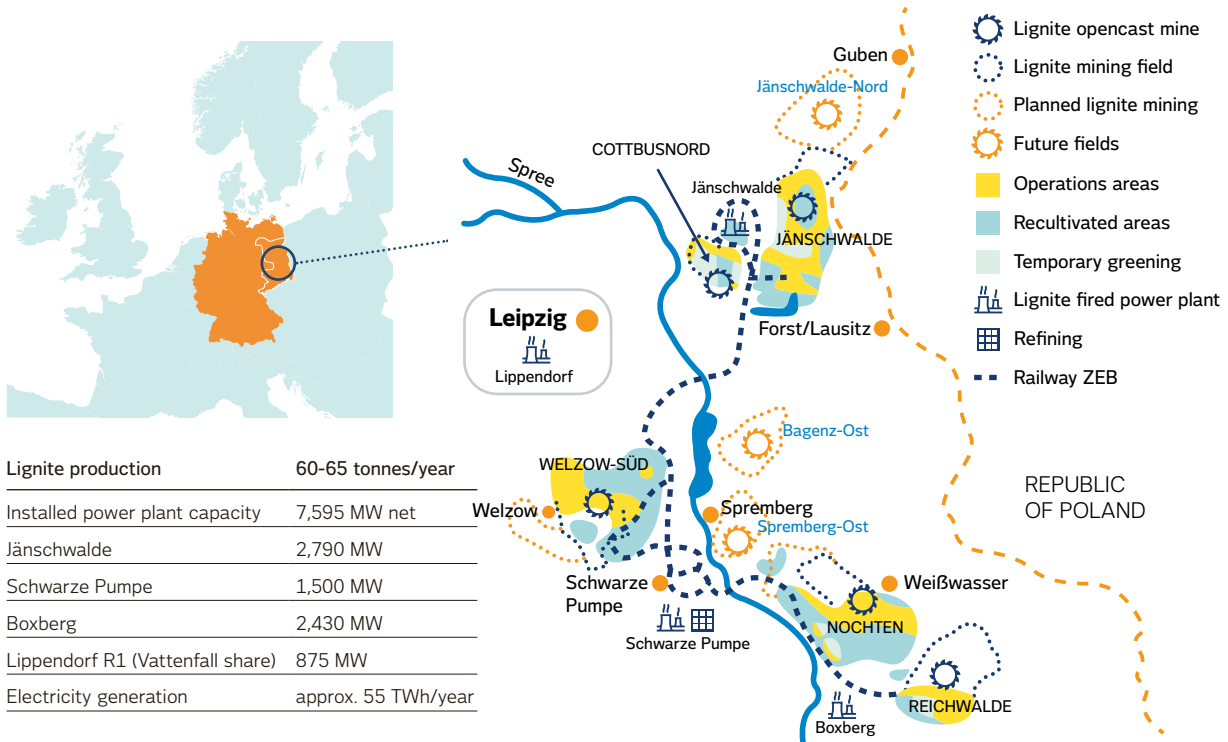
### Radioactive waste

	Low- and intermediate-level radioactive operational waste (m <sup>3</sup> )	Core components (tonnes)	Spent nuclear fuel, removed fuel rods (tonnes)	Spent nuclear fuel, original uranium content (tonnes)
Sweden	1,084	7	197	142
Germany <sup>1</sup>	2,269	–	–	–
<b>Total 2015</b>	<b>3,353</b>	<b>7</b>	<b>167</b>	<b>142</b>
Total 2014	2,251	10	193	138

1) No transports were made of radioactive waste from the German plants in 2015 or 2014; however, waste has been stored on-site in compliance with applicable regulations in Germany.

## Vattenfall's lignite operations

Vattenfall owns and operates three lignite-fired power plants and five open cast mines in the Lausitz region in Germany and is a part-owner of a power plant near Leipzig. As part of the strategy to reduce its CO<sub>2</sub> exposure, Vattenfall plans to divest its lignite operations in Germany.



### Planned divestment of lignite operations – ongoing process

In September, Vattenfall published an invitation to potential bidders to state their interest in Vattenfall's lignite assets in Germany including the power plants Boxberg, Jänschwalde, Schwarze Pumpe and Lippendorf unit R as well as corresponding mining activities (Jänschwalde, Nochten, Reichwalde, Welzow-Süd and Cottbus Nord). Vattenfall's hydro power assets in the adjacent area – mainly pumped storage power plants – may also be included in a sale, but only in conjunction with the sale of the lignite assets. By 20 October 2015 Vattenfall had received statements of interest from a number of potential bidders, and the qualification process is ongoing.

### Capacity reserve for German lignite-fired power plants

The federal government of Germany has set the target to reduce CO<sub>2</sub> emissions by 40% by 2020 compared with 1990 levels. Towards this target, the federal Ministry of Economic Affairs and Energy established the action programme "climate protection", to which the energy industry is to contribute. According to current plans, the German lignite industry is supposed to cut emissions by 12.5 Mtonnes of CO<sub>2</sub> by putting production units with a total capacity of 2,700 MW in a security standby state as of current plans,

called "the standby capacity reserve". The power plant owners will be compensated for the loss of production when power plants are in standby mode. According to the German government, the compensation paid to all of the power plants in the reserve will amount to EUR 230 million per year for seven years.

Within the framework of an agreement between the German government and Germany's lignite generators, Vattenfall has agreed to transfer two production units at the Jänschwalde power plant (500 MW each) to a standby capacity reserve in 2018 and 2019 and then, after four years, to decommission them entirely. This will reduce Vattenfall's annual CO<sub>2</sub> emissions by 8 Mtonnes.

In 2015 Vattenfall generated more than 56.2 TWh of electricity from its lignite-fired power plants and mined 62.5 Mtonnes of lignite for use as fuel in these plants or for processing into lignite briquettes.

Mtonnes	2012	2013	2014	2015
Lignite mined	62.4	63.6	61.8	62.5

Lignite mining is a vital economic factor in the Lausitz region in Germany, and Vattenfall is a large employer, but at the same time the mining has a considerable impact on the

local communities. The open cast mines move approximately 300 metres every year as the mining progresses, and as a result of this, a number of small communities have had to be relocated since 1993.

Village/community	Completed resettlements	Inhabitants
Kausche	1993–1996	360
Geisendorf	1997–2002	45
Horno	2002–2004	350
Parts of the Schleife and Trebendorf communities	2009–	250

In 2015 4.0 km<sup>2</sup> of land was used, and a total of 4.1 km<sup>2</sup> of land was restored or had restoration work begun to either forest or agricultural land. On account of Vattenfall’s ongoing process of divesting its lignite operations, no decisions will be made on investments in mine expansion or resettlement of villages.

**Resettlement programme**

Vattenfall’s resettlement programme involves many aspects, from financial compensation to preserving the communities’ social structure. The aim is for all inhabitants to move to a common location and to integrate new villages with existing communities. Vattenfall appropriates funds to support social and sport activities, community events and local traditions, social work and economic development. Vattenfall strives – in dialogue with the village inhabitants – to find suitable solutions for new housing and to preserve small business in the communities.

**Cooperation with ethnic minorities in Lausitz**

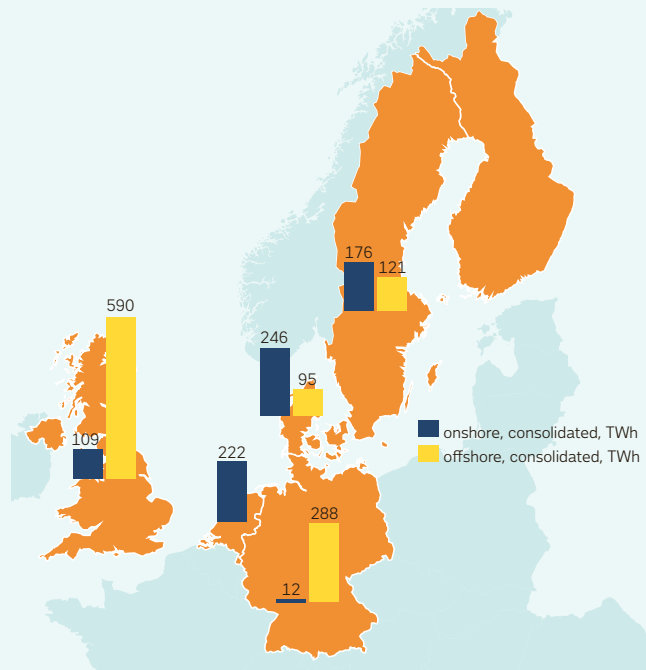
Lausitz is the indigenous region for the Sorbs, a western Slavic population of some 60,000 people who are recognised as an ethnic minority in Germany. The Sorbs have preserved their unique identity for centuries in Germany, with their own language and own culture. Relocation of a minority population is extra sensitive due to risk of sudden disruption caused to the geographic cohesion. Vattenfall’s cooperation with the Sorbs’ interest organisation, Domowina, began in 2007 when a joint agreement regarding resettlement of communities was reached. Vattenfall has supported activities aimed at preserving and promoting the Sorbian language, culture and traditions. The agreement was renewed in 2013 until 2016.

**Rerouting of Weißer Schöps**

The rerouting of the Weißer Schöps river is a compensation measure for the Reichwalde open-cast mine. A total of 5.5 km of former canalised river parts were given a natural design with a focus on nature-oriented engineering to give the river higher ecological value.







“A LEADING DEVELOPER AND OPERATOR OF WIND POWER IN NORTHWESTERN EUROPE”

WIND:

# WIND CHAMPION

The Wind Operating Segment and Business Area is responsible for Vattenfall’s wind power operations.

**Strategy**

Vattenfall will double its wind power operation portfolio in three years and create attractive options for continuous growth, aiming at adding 400-600 MW of gross capacity per year. Growth in wind power will be the key driver in transitioning to a production portfolio that is sustainable for the long-term, and is reflected in one of Vattenfall’s long-term targets. Read more about Vattenfall’s long-term targets on pages 26-27.

Wind power is and will continue to be a highly attractive market. However, growth will become more difficult to achieve in the coming years as markets mature, regulatory regimes become stricter and competition intensifies. Both in onshore and offshore, public and political support relies on strong and visible LEC (Levelised Energy Costs) reductions.

Vattenfall has identified the following strategic focus areas for carrying out its strategy in the Wind Operating Segment:

- Increase the number of ongoing projects
- Reduce the Levelised Energy Cost (LEC)
- Reduce capital need through financial partnerships
- Build up new business with focus on solar photovoltaic (PV) technology and battery storage for integration of renewables

**Operations**

Vattenfall is the second largest producer of offshore wind power in Europe and among the leading operators in onshore wind power in Sweden and the Netherlands. With over 1,000 wind power turbines, Vattenfall will continue to expand its wind operations. In 2015 Vattenfall invested SEK 8.6 billion in wind power, and the company plans to invest an additional SEK 14 billion in the years 2016-2017. Partnering solutions are a key element in securing options for further growth while maintaining strong financial performance with limited debt exposure.

Local acceptance and mutual trust in addition to safeguarding biodiversity are crucial for Vattenfall’s licence to operate as well as for the success of new projects and existing operations. These factors affect everything from choice of locations for new production plants and technological solutions, to permitting and actual plant operation. Vattenfall is committed to continuously improving its processes for stakeholder engagement, safety, and the environment around its wind farms.

Wind power R&D projects have been carried out in order to find ways to reduce bird collisions and gain a better understanding of the impact of underwater piling noise on aquatic populations. To increase efficiency in the permit and monitoring phase Vattenfall has taken the initiative to develop a handbook for bird inventories. The handbook will make it possible to analyse impacts in a more general context and

have the potential to facilitate more effective monitoring of bird populations.

#### Developments in 2015

During 2015, The DanTysk offshore wind farm in Germany (288 MW) and the Clashindarroch onshore wind farm (36.9 MW) in northeast Scotland are examples of projects inaugurated in 2015. DanTysk is Vattenfall and Stadtwerke München's (SWM) first joint project, in which Vattenfall owns 51% and SWM 49%. Vattenfall's onshore wind farms in Sweden – Juktan (39 MW), Höge Väg (38 MW) and Högabjär-Kärsås (38.4 MW) – were commissioned at the end of 2015 and beginning of 2016. These are included in Vattenfall's first joint project with a financial investor, the insurance and banking company Skandia. The wind farms are managed by a jointly owned company.

In 2015 Vattenfall was pre-qualified for the tendering process for the Danish part of Kriegers Flak, Denmark's largest offshore wind power project, with an output of 600 MW.

In December 2015 Vattenfall signed a partnership agreement with the Swedish pension company AMF under which AMF will take a 49% ownership stake in Vattenfall's Ormonde offshore wind farm (150 MW) in northwest UK.

Key data	2015	2014
Net sales (SEK million)	6,769	5,227
External net sales (SEK million)	4,267	3,531
Underlying operating profit (SEK million)	1,469	1,704
Electricity generation (TWh)	5.8	4.1
Investments (SEK million)	8,629	6,526

#### Planned activities

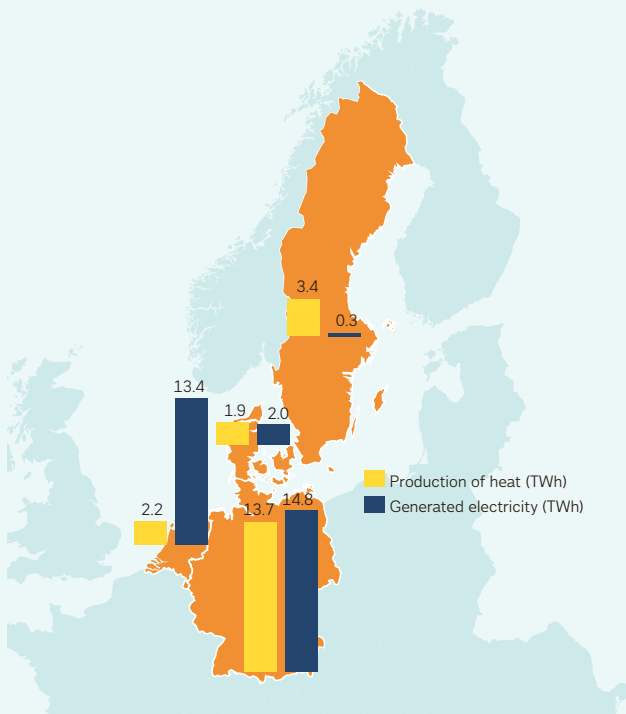
Vattenfall will significantly increase the number of ongoing projects to provide greater scope for LEC reduction and risk diversification. Vattenfall will participate in tenders for offshore wind farm projects, including Borssele 1 and 2 in the Netherlands and Kriegers Flak in Denmark. Growth opportunities in other markets as well as in onshore wind farms will be investigated. Partnering solutions will be further developed and a clear governance model will be established.

To develop new business opportunities, the Wind Business Area will explore opportunities in large-scale photovoltaics (PV) and develop new business cases for PV and batteries (storage).

#### Ongoing wind power projects

Country	Wind farms	Type	Installed capacity (MW)	Ownership (%)	Commissioning
DE	Sandbank	Offshore	288	51	2017
UK	Pen y Cymoedd	Onshore	228	100	2017
UK	Ray	Onshore	54	100	2017
DK	Horns Rev III	Offshore	400	100	2019





“PROVIDE HEAT FOR COMFORT AND BE A PARTNER OF CHOICE FOR CUSTOMERS AND COMMUNITIES”

HEAT:

# COMMUNITY PARTNER

The Heat Operating Segment and Business Area comprises Vattenfall’s heat operations as well as condensing electricity generation (except lignite).

**Strategy**

Vattenfall aspires to be a preferred partner to stakeholders, providing efficient, low CO<sub>2</sub>-emitting solutions. This will be achieved by developing, operating and optimising the full value chain of urban heating and cooling networks as well as efficient heat and electricity generation in order to serve customers and communities with reliable and efficient heat and electricity.

Vattenfall has identified the following focus areas for carrying out its strategy in the Heat Operating Segment:

- Secure strategic alignment with the cities of Hamburg and Berlin, including partnership options
- Increase the number of district heating customers and decentralised solutions
- Develop nationwide growth opportunities in decentralised solutions with a focus on small scale CHP in Germany
- Act as a provider of flexibility and stability to the power markets
- Further review the condensing portfolio for potential divestment

**Operations**

Vattenfall is one of Europe’s largest producers and distributors of heat, with nearly 14,000 MW of installed heat capacity. The company is a leading player in district heating in Germany and one of the foremost in Sweden and the Netherlands. Vattenfall operates some 30 CHP plants and approximately 20 condensing power plants.

Combined heat and power (CHP) production can utilise as much as 90% of the fuel’s energy, compared to the efficiency of electricity-only production, which is about 50%. Numerous different energy sources can be used in CHP plants, including biomass, waste, peat and natural gas. In 2015 72% (75%) of Vattenfall’s heat production was generated by combined heat and power plants..

The Heat Operating Segment generated 29.2 TWh (27.8) of fossil-based electricity and 0.7 TWh (1.1) of biomass-based electricity in 2015. In 2015, Vattenfall emitted 23.9 (22.1) Mtonnes of CO<sub>2</sub> related to heat operations. The increase is mainly due to the commissioning of the Moorburg power plant in Hamburg, Germany. Other emissions of importance are SO<sub>x</sub>, NO<sub>x</sub> and airborne particulates. These emissions are strictly regulated, and all large plants have effective flue gas cleaning equipment installed in order to reduce emissions. Compliance

with environmental permits has top priority, as it is a pre-requisite for the company's continued licence to operate. To minimise emissions, methods are being developed to gain greater flexibility in power plant processes and to optimise combustion processes.

Improving efficiency generates positive environmental effects and leads to lower costs and thereby improves Vattenfall's competitiveness while at the same time resulting in lower emissions per kWh of generation. One of Vattenfall's most important areas coupled to more efficient use of resources entails focusing on lower use of primary energy. This can be achieved in a number of ways at Vattenfall's power plants or in interconnected systems, such as district heating networks, which are an efficient form of heating.

### Developments in 2015

Vattenfall is currently building a new gas-fired CHP plant – Lichterfelde – in Berlin, Germany. The plant is scheduled to be completed in 2016 and will replace an older facility. The plant will have electricity capacity of 300 MW and heat capacity of 230 MW.

District heating is currently experiencing growth driven by the climate ambitions of the cities where Vattenfall operates. One example in 2015 is the co-firing project of the Moabit CHP plant, which has gone from zero use of biomass in 2010 to average annual use of approximately 38 ktonnes, reducing CO<sub>2</sub> emissions by approximately 36 ktonnes.

In addition, during the year Vattenfall helped customers save approximately 150 GWh of primary energy by replacing older equipment with more efficient heating solutions, thereby contributing to both reduced climate impact and energy efficiency improvements. Vattenfall is active in decentralised energy supply via small-scale CHPs, boilers and remote readers, mainly via energy delivering contracting. In 2015, Vattenfall continued to invest in flexible and low CO<sub>2</sub>-emitting generation. In Diemen, the Netherlands, Vattenfall commissioned its largest heat storage facility. Another heat storage was commissioned in Berlin, Germany. Vattenfall continued working on new district heating and decentralised solutions, and assisted its customers to become more energy efficient, such as by replacing decentralised oil and gas boilers with more efficient heating solutions.

Key data	2015	2014
Net sales (SEK million)	27,380	27,812
External net sales (SEK million)	14,356	15,536
Underlying operating profit (SEK million)	1,704	2,384
Sales of heat (TWh)	20.6	21.4
Electricity generation (TWh)	30.0	29.0
- of which, fossil-based power (TWh)	29.2	27.8
- of which, biomass and waste (TWh)	0.7	1.1
CO <sub>2</sub> -emissions (Mtonnes)	23.9	22.1
Nitrogen Oxide, NO <sub>x</sub> (ktonnes)	10.1	10.4
Sulphur Dioxide, SO <sub>2</sub> (ktonnes)	4.5	4.5
Particulates (ktonnes)	0.3	0.3

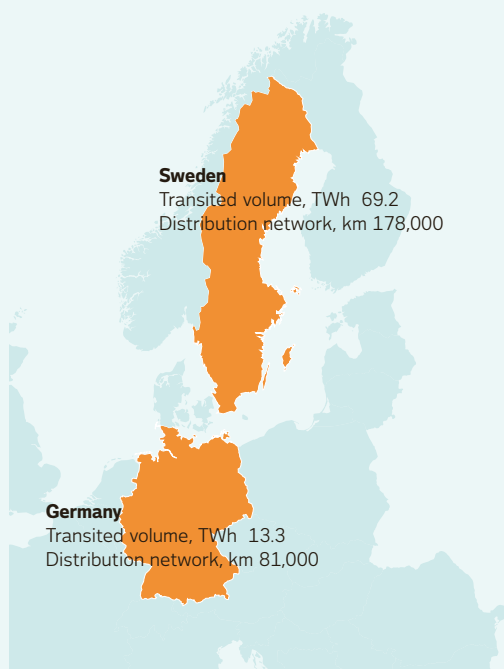
### Planned activities

Vattenfall is positioning itself as a partner of choice in the work towards climate neutrality and is seeking strategic partnerships with the cities of Hamburg and Berlin, including partnership options. Vattenfall is working to increase the number of heat customers and is continuously working on developing new products and services in district heating as well as decentralised solutions. The timetable for the new biomass CHP plant in Uppsala has been pushed back, and a policy decision on technology and start date will be made in 2016. The new plant will replace an old peat-fired plant and will be a cornerstone in Vattenfall's joint commitment with the city of Uppsala towards climate neutrality.

To improve efficiency and reduce emissions, Vattenfall will continue to phase out lignite at the Klingenberg CHP plant as well as hard coal at the Reuter C CHP plant, replacing these fuels with gas, heat storage and power to heat by 2020.

To cope with future emissions restrictions, Vattenfall is continuously monitoring developments surrounding the EU's Industrial Emissions Directive (IED) in an effort to analyse and identify measures to meet the new requirements posed by forthcoming legislation.





“AN EFFICIENT  
 ELECTRICITY DISTRIBUTOR  
 WITH QUALITY OF  
 SUPPLY EXCEEDING  
 STAKEHOLDERS'  
 EXPECTATIONS, AND  
 AN ENABLER OF  
 SUSTAINABLE ENERGY”

DISTRIBUTION:

# HIGH QUALITY NETWORKS

The Distribution Operating Segment and Business Area comprises Vattenfall’s electricity distribution operations in Sweden and Germany (Berlin).

**Strategy**

Vattenfall is faced with the challenge of meeting today’s and tomorrow’s customer and regulatory demands on quality of supply with an ageing asset base and a growing volume of intermittent generation.

Vattenfall has identified the following focus areas for carrying out its strategy in the Distribution Operating Segment:

- Increase investments to improve quality of supply in order to secure high customer satisfaction and to be able to accommodate intermittent power
- Regain the network concession in Berlin
- Develop new business models for partnerships and cooperation with cities and communities to be successful in providing energy efficiency solutions
- Further develop smart grid solutions and smart meters to facilitate the increasing number of “prosumers”, i.e., customers acting as both producers and consumers of electricity

**Operations**

Vattenfall owns and operates electricity distribution networks in Sweden and Germany. Vattenfall has approximately 3.2 million electricity network customers combined in Sweden and Germany, consisting of industrial and business customers as well as households.

Electricity distribution is a monopoly business that is legally and functionally unbundled from the parts of Vattenfall’s operations that are exposed to competition. Electricity distribution is regulated and monitored by the network regulators in the respective countries.

In June, the Swedish Energy Markets Inspectorate issued instructions about a revenue framework for the Swedish distribution operations for the regulatory period 2016–2019. Vattenfall has appealed the decision. For the regulatory period 2012–2015, the revenue framework has been decided in court, implying 6.5%, real terms, pre-tax. In Germany, the prospective rollout of smart meters will be handled by a new law, where integrity and security issues will be key elements.

Vattenfall strives to minimise environmental impacts of construction and operation of its electricity distribution networks. Focus areas include substitution of creosote poles in sensitive areas and proper management of biodiversity aspects in maintenance and construction activities.

**Developments in 2015**

In 2015 alone Vattenfall invested more than SEK 4.7 billion (5.1) in electricity networks in Sweden and Germany as part of its efforts to improve security of supply, of which SEK 3.5 billion pertained to Sweden. A large share of investments in Sweden pertain to weather-proofing the electricity network, particularly in rural areas. This includes measures such as insulating overhead power lines or replacing them with underground cables. In Germany the investments pertain to renewal of assets, e.g., substations and increased digitalisation and automation of assets.

Vattenfall announced an 11% increase in the electricity network fee in Sweden, effective 1 January 2016, in order to accelerate the pace of investment and the quality of electricity networks. In conjunction with this, Vattenfall will improve compensation to customers affected by power outages.

It is important for Vattenfall to minimise any potential adverse impacts on the environment and the people who live close to the company's operations. Involvement of local stakeholders is key when initiating new projects to both ensure local acceptance and mitigate any potential negative impacts. Stakeholder dialogues are conducted by local employees with knowledge of important matters for the community. Environmental aspects are always included, with a special focus on protected species and habitats. As an example, Vattenfall has established a dialogue process for gaining local acceptance from Sami villages in northern Sweden. To minimise environmental impact, transportation of material is conducted by helicopter. To increase resource efficiency Vattenfall is reusing old poles in other parts of the installation, thereby reducing the need for transports and new materials. This is resulting in a positive impact on both the environment and the project economy.

**Five-year overview, SAIDI and SAIFI (2011-2015)**

SAIDI (minutes/customer) – System Average Interruption Duration Index

	2011	2012	2013	2014	2015
Sweden	349	217	183	177	213
Germany	11	12	13	15	10

SAIFI (number/customer) – System Average Interruption Frequency Index

	2011	2012	2013	2014	2015
Sweden	3,1	2,6	2,1	2,4	2,2
Germany	0,2	0,3	0,3	0,2	0,2

Differences in the conditions and character of electricity networks in Sweden and Germany are reflected in the metrics SAIDI and SAIFI. The Swedish electricity network covers both urban and rural networks, while Vattenfall's German network, in Berlin, is an urban network consisting almost exclusively of underground cables. Large parts of the Swedish electricity network are served by overhead power lines in rural areas, which makes it more sensitive to severe weather conditions.

**Regain the network concession in Berlin**

The tender process for new concessions for the electricity network in Berlin was put on hold in 2014, and Vattenfall's electricity network company, Stromnetz Berlin GmbH, continued to operate the electricity network in Berlin. In October 2015, Berlin's senate decided to proceed with the concession process as soon as possible, and Stromnetz Berlin GmbH is preparing to update its concession and cooperation offer to the City of Berlin.

Key data	2015	2014
Net sales (SEK million)	19,914	18,782
External net sales (SEK million)	15,355	14,173
Underlying operating profit (SEK million)	5,465	4,435
Investments (SEK million)	4,671	5,057

**Planned activities**

Vattenfall will continue its investments to significantly improve quality of supply. An overview of the most important and exposed power corridors will be conducted to ensure proper maintenance by contractors and to enable direct measures where they are needed the most. Old and malfunctioning assets will be replaced to improve environmental and safety standards. Preventive work will continue in order to ensure a safe and sound workplace for all employees, contractors and consultants.

A photograph of two men in safety gear (blue hard hats and high-visibility jackets) looking upwards on a construction site. The man in the foreground is wearing a blue and yellow jacket, while the man behind him is wearing a yellow and blue jacket. They are standing on a metal grating floor. The background shows a large window with a view of a construction site.

# EMPOWERED AND ENGAGED ORGANISATION

As an employer of approximately 28,600 people, Vattenfall is responsible for providing a workplace in which all of its employees have equal opportunities and tools to develop themselves and thereby develop the company.





On 1 April, Vattenfall began working according to its new organisational structure to better reflect the company's strategic transformation. The aim of the new organisation is to enhance Vattenfall's business and earnings focus and to become more customer-centric. At the same time, Vattenfall will continue its work on lowering its costs and adapting to the new business environment. During 2015 Vattenfall therefore announced an additional personnel reduction programme corresponding to approximately 1,000 employees (full-time equivalents).

#### **Secure critical competence and talent**

Strategic competence planning is growing increasingly important especially in times of restructuring and reorganisation. This includes activities such as competence sharing, job rotation, and leadership development and trainee programmes aimed at ensuring access to future leaders and key competencies. To support Vattenfall's strategy, special emphasis will be placed on competencies and resources in digitalisation, project management and electrical engineering, with focus on retention in the nuclear operations as well as people with experience from working with partnerships and skills in how to increase internal rotation.

Vattenfall wants clear, visible and courageous leaders and promotes leadership development activities focused on strengthening and supporting leaders to be accountable, lead change and drive performance. Specific actions include a Nuclear Acumen Leadership programme and continued development of the leadership programme at the Vattenfall Management Institute.

#### **Diversity**

Diversity and equal opportunity are key factors for a successful company, and Vattenfall strives to incorporate these into its day-to-day business activities. Vattenfall is working continuously to increase the number of women managers in an effort to achieve a more diverse management culture in the organisation. The importance of this issue has been stressed at the top management level by appointing Annika Viklund, as the company's first Diversity and Inclusion Officer. She is currently head of the Distribution Business Area. Vattenfall runs a female mentorship programme aimed at increasing the share of women managers. For female potential executives, Vattenfall offers an international mentoring programme to support them in their development.

#### **Safe, healthy and engaging working environment**

Ensuring a safe and sound workplace for all employees, contractors and hired-in personnel requires systematic preventive work in all operations. As a result of Vattenfall's undertaking in this area, the Group's companies and units are occupational health and safety-certified according to the OHSAS 18001 standard or similar, and Vattenfall's senior management is actively involved in setting and following up targets and KPIs in this area.

Vattenfall is focusing more actively on work/life balance and on health and stress management. Accordingly, Vattenfall offers regular health, medical, and fitness check-ups and provides active support to employees who have been on long-term sick leave in an effort to help them return to work. Education for employees on stress, mindfulness and related matters is regularly offered in order to increase awareness of stress management.

### High performance culture

Vattenfall is a company in an industry that is currently undergoing significant change, which creates opportunities for individual learning and growth. To navigate in this new environment, Vattenfall has defined a company culture – “The Vattenfall Way” – to guide all employees in their daily work and make them commit to shaping Vattenfall’s future as a leader with a more customer-centric focus. There is a need to shift the mindset and behaviours in order to adapt to and benefit from the new business environment.

Regular goal and performance reviews provide all employees an opportunity, together with their respective managers, to set personal goals and visualise their contribution to Vattenfall’s performance. Individual development plans are also an important component for fostering a high performance culture within the organisation.

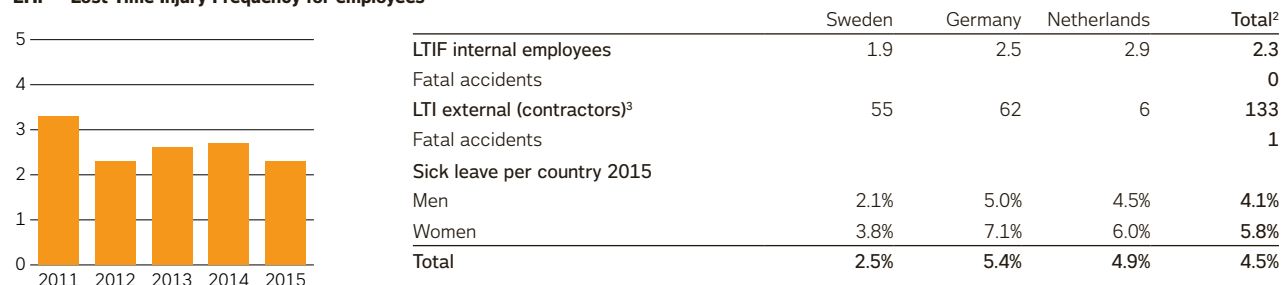
In 2015, the Group-wide employee survey, My Opinion, was conducted. The survey is performed on a regular basis and gives all employees an opportunity to anonymously express their views about Vattenfall as an employer and about their workplace and development opportunities. It is an important tool for engagement and performance measurement. It provides insight and guidance for continuous improvement at local, regional and Group-wide levels. According to the My Opinion survey, 75% of all employees had performance reviews with their managers in 2015.

Key data	2015	2014
Number of employees (FTE)	28,567	30,181
Sick leave (%)	4.5	4.0
Work-related accidents, number (LTIF) internal	2.3	2.7
Gender diversity, female managers (%)	19	18

### Planned activities

Vattenfall will continue its work in health and safety by implementing the Health and Safety Strategy 2016-2020 (H&S), which includes among other things further development of leadership and culture in H&S and development and implementation of H&S standards. Health Watch, a monitoring and self-help tool, will be implemented. Career path development possibilities for project managers, specialists and leaders will be strengthened.

### LTIF – Lost Time Injury Frequency for employees<sup>1</sup>



LTIF: In 2015 Vattenfall initiated a change process from the lagging indicator (LTIF) to a leading indicator using the Health and Safety (H&S) maturity model. The model consists of a five level programme. Each level reflects the performance and development of key H&S elements (e.g., leadership, awareness and commitment) over time. The model will enable more efficient and flexible steering based on the local circumstances and level of maturity. Vattenfall will start implementing the new steering model in 2016.

### Employee key ratios

	Number of employees	Women %	Men %	-29 years %	30-49 years %	50- years %
Position						
Manager	2,564	19%	81%	1%	52%	46%
Other position	26,003	23%	77%	12%	45%	43%
Country						
Sweden	8,859	25%	75%	10%	51%	39%
Germany	14,998	20%	80%	13%	37%	50%
Netherlands	4,014	24%	76%	7%	60%	33%
Other	697	25%	75%	10%	62%	28%
<b>Total</b>	<b>28,567<sup>4</sup></b>	<b>22%</b>	<b>78%</b>	<b>11%</b>	<b>45%</b>	<b>43%</b>

1) Lost Time Injury Frequency (LTIF) is expressed in terms of the number of lost time work injuries (per 1 million hours worked), i.e., work-related accidents resulting in absence longer than one day, and accidents resulting in fatality. Pertains to Vattenfall’s employees.

2) Incl Denmark and UK.

3) Since the Contractor LTIF calculation is not reliable enough, only LTI is reported.

4) Of which, 761 temporary employed.



## Ensure that Vattenfall acts with high integrity

Vattenfall believes that competition is crucial for an effectively functioning market and has zero tolerance for bribery and corruption. Vattenfall requires that all employees take personal responsibility by acting in accordance with the company's ethical guidelines, which are laid down in the Vattenfall Code of Conduct. The aim of this work is to preserve integrity and protect Vattenfall's reputation.

Vattenfall encourages all employees to report any violation of the law or of the Code of Conduct. In total, 54 integrity-related incidents were reported during 2015; 21 of these led to disciplinary actions. Reporting of violations is done through three different internal channels. Any observed or suspected violation should be reported to the employee's immediate manager, or to the Integrity or Internal Audit departments. The Code of Conduct gives employees the opportunity to report incidents through a whistleblower function staffed by locally appointed external ombudsmen (advocates), to whom employees, consultants and contractors can turn to report suspected violations.

Vattenfall's main focus is on training, and all senior managers and employees who have extensive contacts with

competitors are required to participate in the Vattenfall Integrity Programme, whose purpose is to raise the level of awareness, to ensure that Vattenfall's employees understand the integrity standards Vattenfall expects of them, and to ensure a common compliance culture throughout the Group. The training includes information on the eight principles in the Code of Conduct and the merits of Vattenfall's whistleblower function. In 2015 a section about the EU Regulation on wholesale Energy Market Integrity and Transparency (REMIT) was added. Over 1,000 employees attended the programme in 2015. As a complement to instructor-led training, Vattenfall also offers a number of e-learning courses. More than 2,400 employees completed the Code of Conduct e-learning training in 2015.

Going forward, Vattenfall will continue to focus on risk assessments and increased awareness through training and communication.

➔ Read more on governing business ethics and Vattenfall's Code of Conduct in the Corporate Governance Report on pages 62–63.



# CORPORATE GOVERNANCE REPORT

The following pages include information on corporate governance during the 2015 financial year, as prescribed by law and the Swedish Corporate Governance Code. The corporate governance report has been reviewed by the company's auditors.



FURTHER INFORMATION  
[VATTENFALL.COM](http://VATTENFALL.COM)

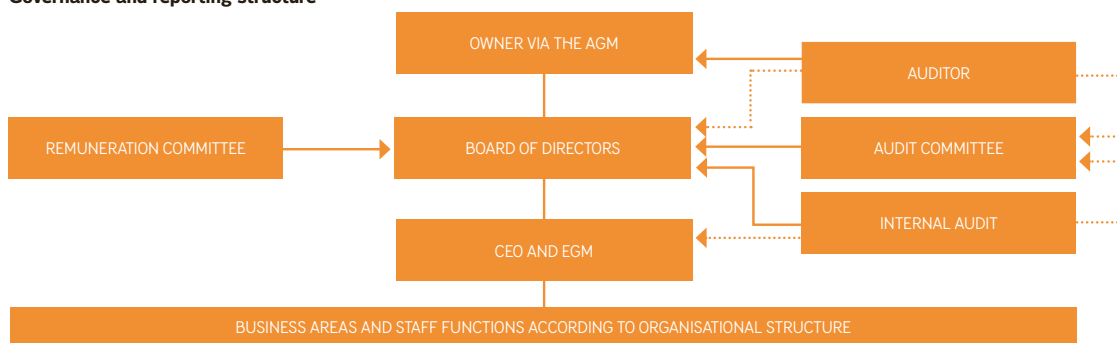
Vattenfall's Articles of Association and continuously updated information about corporate governance at Vattenfall are available on Vattenfall's website: [vattenfall.com](http://vattenfall.com) (original Swedish documents available on [vattenfall.se](http://vattenfall.se)). The website is also a source of previous corporate governance reports, documentation and video presentations from the most recent Annual General Meetings, and links to the Swedish state's ownership policy, the Swedish Corporate Governance Code and Vattenfall's Code of Conduct.

## Corporate governance at Vattenfall – general

The Parent Company of the Vattenfall Group, Vattenfall AB, is a Swedish public limited liability company with registered office in Solna. Vattenfall AB is thereby subject to the provisions of the Swedish Companies Act. The main decision-making bodies are the Annual General Meeting, the Board of Directors, and the

President. The Board of Directors is appointed by the Annual General Meeting. The Board, in turn, appoints the President, who is responsible for the day-to-day administration of the company in accordance with the Board's guidelines and instructions.

### Governance and reporting structure



## Application of the Code

Vattenfall adheres to the Swedish Corporate Governance Code ("the Code"). However, since Vattenfall is wholly owned by the Swedish state, certain stipulations in the Code are not applicable. This applies to the matter of reporting on board members' independence, among other things. In addition, Vattenfall also deviates from the Code with respect to the following points:

Point 1.3, pertaining to the requirement that the nomination committee shall propose a person to serve as AGM chairman. Due to its ownership structure, Vattenfall has no nomination committee. Election of an AGM chairman is instead done at the AGM in accordance

with the stipulations of the Swedish Companies Act and the Swedish state's ownership policy.

Chapter 2, pertaining to the requirement that the company shall have a nomination committee. The nomination process for the Board and auditors is conducted in accordance with the Swedish state's ownership policy and is described below. Thus the references to the nomination committee in points 1.2, 1.3, 4.6, 8.1 and 10.2 are not applicable either. However, information on the nomination of board members for new election or re-election is posted on the company's website in accordance with point 2.6.

## Important external and internal rules and regulations for Vattenfall

### External rules and regulations:

- Swedish and foreign legal rules, particularly the Swedish Companies Act and the Swedish Annual Accounts Act
- The Swedish state's ownership policy
- The Swedish Corporate Governance Code ("the Code")
- Stock exchange rules<sup>1</sup>
- International Financial Reporting Standards (IFRS) and other accounting rules
- The Global Reporting Initiative (GRI) G4 Guidelines

### Internal rules:

- Vattenfall's Articles of Association
- The Board's and committees' Rules of Procedure, including the CEO's instructions and instructions for reporting to the Board
- The Vattenfall Management System (VMS) and other internal governance documents

1) Vattenfall adheres to the stock exchange rules that apply for companies that have fixed-income instruments registered on Nasdaq OMX Stockholm and other marketplaces.

## Shareholders and general meetings

Vattenfall AB is wholly owned by the Swedish state. The shareholder's right to make decisions about Vattenfall's affairs is exercised at the Annual General Meeting (AGM) and other general meetings. The Annual General Meeting of Vattenfall AB is to be held within six months after the end of the financial year by law and not later than 30 April in accordance with the Swedish state's ownership policy. Notice of the AGM is issued not earlier than six weeks and not later than four weeks before the meeting is to be held.

Vattenfall held its 2015 AGM on 27 April 2015, at which it decided on the following items of business. The company's owner, the Swedish state, participated at the AGM through its owner representative. Viktoria Bergman and Tomas Kåberger were elected as new directors on the Board, while Eli Arnstad declined re-election. Members of Parliament were given the opportunity to ask questions, in accordance with Vattenfall's Articles of Association. An open Q&A session was held after the AGM, in accordance with the Swedish state's ownership

policy. The AGM was open to the general public and was aired live via webcast.

The 2016 AGM will be held on 27 April 2016 in Solna, Sweden.

### Duties of the Annual General Meeting:

- Elect the Board of Directors, the Chairman of the Board and the auditors, and decide on their fees
- Adopt the income statement and balance sheet for Vattenfall AB and the Vattenfall Group
- Decide on distribution of the company's profit
- Grant discharge from liability for the board members and the President
- Decide on guidelines for remuneration of senior executives
- Decide on other matters of business as prescribed by law or the Company's Articles of Association

## Board of Directors

### The Board's duties

The Board's fundamental duties are laid out in the Swedish Companies Act and the Code. Each year the Board adopts its Rules of Procedure and a number of instructions. The Rules of Procedure and instructions regulate such matters as reporting to the Board, delegation of duties between the Board, the President and the Board's committees, the Chairman's duties, the form and content of board meetings, and the evaluation of the work of the Board and the President.

The Board's Rules of Procedure stipulate that the Board shall set the overarching goals for Vattenfall's operations, decide on Vattenfall's strategy for achieving those goals, and ensure that effective systems are in place for monitoring and controlling Vattenfall's operations and financial position towards the set goals. The Board is responsible for approving major investments, acquisitions and divestments, and for

adopting central policies and instructions. The Board shall also approve certain important contracts, including contracts between Vattenfall and the President, Executive Vice Presidents and other persons in the Group who are defined as senior executives. The Board's duties pertain to Vattenfall AB as well as the Vattenfall Group.

The Chairman leads the work of the Board in accordance with the Swedish Companies Act and the Code, and is responsible for – among other things – ensuring that the board members receive relevant information, contacts with the owner on ownership matters, and for conveying views from the owner to the Board. According to the Rules of Procedure, the Board – through the Chairman – shall coordinate its views with representatives of the owner when the company is facing particularly important decisions.

### The Board's yearly planning



**Board meetings**

According to the Board's Rules of Procedure, the Board shall hold eight to twelve regular board meetings every year. In addition to the regular meetings, the Board meets when necessary.

The Rules of Procedure stipulate that the agenda of every regular meeting shall include the following items of business:

- The Group's business situation
- Financial report for the Group
- Reports from board committees, in case such meetings were held
- Matters that are not handled by the President in the day-to-day administration
- Other matters of material importance for the Group
- In addition, certain items of business are included on the agenda every year, in accordance with the yearly planning in the Board's Rules of Procedure

Investments approved by the Board are followed up by the Board one year after their implementation. The Board holds at least one board seminar every year. At these seminars the Board receives more detailed information and discusses Vattenfall's long-term development, strategy, competitive situation and risk management.

The Board met ten times in 2015, including the statutory meeting and one meeting conducted via circulation.

The Board's main items of business in 2015:

- Vattenfall's strategic direction, sustainability targets and sustainability reporting
- Cost-cutting and cost-cutting targets
- Impairment losses and revaluation of Vattenfall's assets
- Sale of the lignite operations in Germany
- Early closure of the Ringhals 1 and 2 nuclear reactors
- Investments in new wind farms and wind power partnerships in Sweden
- Maintenance investments in Forsmark

**Sustainability issues addressed by the Board**

The Swedish state's ownership policy stipulates that companies with state ownership shall serve as a model for sustainable business. The ownership policy defines sustainable business as "a development that meets the needs of today without jeopardising future generations' ability to meet their needs" and covers human rights, work conditions, the environment, anti-corruption, business ethics, and equality and diversity.

The Board has adopted an overarching sustainability policy as a complement to individual policies for such areas as the environment, the Code of Conduct, and health and safety. It stipulates that for Vattenfall, sustainability entails taking responsibility for future generations by contributing to sustainable development in society – economically, environmentally and socially. The sustainability policy also stipulates that environmental issues are the top-priority focus area, based on a decision by Swedish Parliament in 2010 that Vattenfall shall operate a commercial energy business that enables the company to be among the leaders in developing environmentally sustainable energy production. This parliamentary decision is also reflected in Vattenfall AB's Articles of Association. Additionally, in 2015 the Board adopted four strategic objectives, which in themselves constitute sustainability objectives:

- Leading towards Sustainable Consumption
- Leading towards Sustainable Production
- High Performing Operations
- Empowered and Engaged Organisation

**Appointment of the Board**

For companies that are wholly owned by the Swedish state, uniform and joint principles for a structured nomination process apply. These principles are set forth in the Swedish state's owner policy and supersede the Code's rules on drafting work for decisions on the nomination of board members and auditors.

The board nomination process in the Swedish Government Offices is coordinated by the Ministry of Enterprise and Innovation. The competency needs are analysed on the basis of the company's operations, situation and future challenges as well as the Board's composition and evaluations of the Board that have been carried out. Thereafter, any recruitment needs are determined and recruitment work is initiated. Once this process has been completed, the nominations are publicly announced in accordance with the Code; however, no account is made regarding directors' independence. Vattenfall provides orientation training for new directors who are elected by the AGM.

More detailed information on the board nomination process is provided in the Swedish state's owner policy, at [regeringen.se](http://regeringen.se).

**The Board's composition**

Vattenfall's Articles of Association stipulate that the Board of Directors shall have, in addition to the employee representatives, a minimum of five and a maximum of ten members without deputies. The directors are elected annually by the Annual General Meeting, which also appoints the Chairman of the Board.

Up until the AGM the Board consisted of eight and thereafter nine directors elected by a general meeting. No member of the Executive Group Management (EGM) is a director on the Board. Lars G. Nordström was Chairman of the Board in 2015. By law, the unions are entitled to appoint three board members plus three deputies, and they have exercised this right. After the AGM, five of the Board's twelve members were women, and among the directors elected by a general meeting, four of nine were women. The average age of board members was 58. Up until the AGM, one director (Eli Arnstad) was a foreign citizen. Biographical information about the board members is provided on pages 66–67.

**Guidelines for directors' fees**

Directors' fees and fees for committee work are set by the owner at the AGM, in accordance with the Swedish state's ownership policy. The 2015 AGM resolved in favour of unchanged fees. Information on directors' fees in 2015 is provided in the 2015 Annual and Sustainability Report, Note 53 to the consolidated accounts, Number of employees and personnel costs.

**Evaluation of the Board's and President's work**

The Board evaluates its own work and the President's work once a year as part of efforts to develop the Board's way of working and effectiveness. This evaluation is conducted under the direction of the Chairman and is reported to the Board and the owner.



The most recent board evaluation was begun at the board meeting on 26 October 2015. As in previous years, with the support of external consultants the Board conducted a self-assessment using questionnaires, where the individual board members evaluated both their own and other board members' performance. This evaluation used a questionnaire for the Board as a whole, which each of the directors and deputy directors responded to, and a questionnaire for the individual directors' evaluation, responded to by the directors elected

by a general meeting. The questions addressed Vattenfall's current challenges, management and organisation, the Board's effectiveness, composition and expertise, and its relationship with the owner, the Chairman and the President. The evaluation was reported on and discussed at the Board meeting on 10 December 2015. As a follow-up to the written evaluation, the Chairman held discussions individually with each of the directors elected by a general meeting and jointly with the employee representatives.

## Board committees

The Board has established two committees, which are described below, and has drawn up Rules of Procedure for these. At the statutory board meeting, the Board appointed four directors elected by a general meeting for each committee, of whom one serves as committee chair. In addition, the Board can, where necessary, establish other board committees or temporary work groups to address matters in more defined areas. No such additional committees or temporary work groups were active in 2015.

The committees report their work to the Board at the next regular board meeting, whereby the committee chair presents a report accompanied by minutes from the committee meetings. Except for a few matters handled by the Audit Committee, the committees are only drafting bodies. The Board's legal responsibility under company law for the company's organisation and administration of the company's affairs is not constrained by the committees' work.

### Audit Committee

The Audit Committee's most important duties are as follows:

- To oversee Vattenfall's financial reporting, including sustainability reporting
- With respect to financial reporting, to monitor the effectiveness of Vattenfall's internal control, internal audit and risk management
- To stay informed about the audit of the annual report and consolidated accounts
- To review and monitor the auditor's impartiality and independence, and in connection with that, to pay particular attention to whether the auditor provides other services to the company than auditing services
- To assist in the drafting of recommendations for decisions on the election of auditor by the Annual General Meeting
- To review and oversee the management of market and credit risks
- To conduct an annual evaluation of the external auditors' work

Important issues in 2015 included preparatory work for decisions in connection with Vattenfall's annual impairment testing of asset values, which resulted in the recognition of both impairment losses and in asset revaluations, and appointment of an external auditor for approval by the AGM in April 2016.

The Audit Committee is responsible for meeting with Vattenfall AB's external and internal auditors on a regular basis in order to stay informed about the planning, focus and scope of the company's audit. The Audit Committee is also responsible for discussing coordination of the external and internal audit work and views of the company's risks. Internal Audit's budget, the Internal Audit Charter and the internal audit plan are prepared by the committee.

The Audit Committee has the right, on behalf of the Board, to decide on guidelines for other services than auditing that Vattenfall may procure from the Group's auditors.

The Audit Committee meets prior to Vattenfall's publication of interim reports and when warranted by the prevailing conditions. The CFO and head of Internal Audit serve in a reporting role on the committee. The company's external auditors attend all regular meetings and report on their observations of the audit. During the entire year 2015 the committee had at least one member with accounting or auditing competence.

### Remuneration Committee

The Remuneration Committee's most important duties are as follows:

- To conduct drafting work for board decisions on matters regarding remuneration principles, remuneration and other terms of employment for members of the Executive Group Management and other senior executives
- To monitor and evaluate application of the guidelines for remuneration of senior executives, which the AGM, by law, is required to decide on as well as the applicable remuneration structures and levels of remuneration in the company
- To conduct drafting work for the Board's decisions regarding overarching remuneration principles in general, such as the general existence of, amount and structure of variable remuneration

The committee's duties include the following:

- Serving as a drafting body to ensure implementation and compliance with guidelines
- Where applicable, conducting drafting work for any special reasons that may exist in an individual case to deviate from the guidelines
- Conducting drafting work for the Board's report on remuneration of senior executives in the annual report and, ahead of the Annual General Meeting, monitoring and following up the auditors' review

The President serves in a reporting role on the Remuneration Committee.

### Other committees

Up until 27 April 2015 the Board also had a Safety and Risk Committee and an External Relations and Ethics Committee. For the time thereafter the entire Board has taken over the duties previously delegated to these committees. This has entailed, among other things, that the Board's yearly planning puts greater emphasis on reporting on sustainability targets and strategy, customer satisfaction, and on nuclear power and dam safety.

## Auditor

The Swedish state's ownership policy stipulates that the owner is responsible for the election of auditors and that the auditors are to be appointed by the Annual General Meeting. The auditors are elected for a mandate period of one year, in accordance with the main rule in the Swedish Companies Act. Vattenfall's Articles of Association stipulate that the company shall have one or two auditors with or without one or two deputy auditors, or a chartered auditing firm as auditor.

At the 2015 AGM, the auditing firm Ernst & Young AB was re-elected as auditor. The auditing firm appointed Authorised Public Accountant Staffan Landén as auditor-in-charge. Staffan Landén succeeded Hamish Mabon, who served as auditor-in-charge for seven years and thus could no longer hold that assignment. Staffan Landén is also the auditor of, among others, Capio AB, Viking Supply Ships AB, Academedia AB, Papyrus AB and Nederman Holding AB, and is the stock exchange auditor appointed by Nasdaq Stockholm. The auditor has no assignments with companies that affect its independence as auditor of Vattenfall. The auditor's audit assignment also includes a review of the company's sustainability reporting.

The Audit Committee has approved guidelines for how procurement of other services than auditing shall take place from the auditor. Consulting services provided by Ernst & Young AB from 2013 to 2015 mainly pertained to tax and accounting

issues, special input in connection with the divestment of subsidiaries that are no longer core businesses, and studies of organisational issues.

At the 2015 AGM the auditor reported on the audit work in 2014 and on its review of compliance with the guidelines for remuneration of senior executives that had applied since the 2014 AGM. The auditor reported on its review of the year-end accounts for 2015 to the entire Board at the board meeting on 2 February 2016 (without the presence of any person from the Executive Group Management), and also reported on its observations at the board meeting on 10 December 2015. In addition, the auditors performed a review of the half-year interim report. The auditor has access to minutes of board meetings and board committee meetings, as stipulated in the Board's Rules of Procedure.

In accordance with the Act on Auditing of State Activities, etc., the Swedish National Audit Office may appoint one or more auditors to participate in the annual audit. No such auditor was appointed in 2015.

The auditor's fees are payable according to an approved invoice. The Group's auditing costs are described in more detail in the Annual Report, in Note 22 to the consolidated accounts, Auditors' fees, and in Note 19 to the Parent Company accounts, Auditors' fees.

## CEO and Executive Group Management

The President of Vattenfall AB, who is also Chief Executive Officer (CEO) of the Vattenfall Group, is responsible for the day-to-day administration in accordance with the Swedish Companies Act. The CEO in 2015 was Magnus Hall. However, the former CEO, Øystein Løseth, was employed by Vattenfall AB through 31 March 2015, as per the terms of his employment contract. Magnus Hall's remuneration is described in the Annual and Sustainability Report, Note 53 to the consolidated accounts, Number of employees and personnel costs.

The CEO has set up internal bodies for governance of the Group and makes decisions independently or with the support of these bodies. The most important of these are the Executive

Group Management (EGM) and the Vattenfall Risk Committee (VRC).

The EGM focuses on the Group's overall direction and addresses – within the framework of the CEO's mandate from the Board of Directors – matters of importance for the Group, such as certain investments. The VRC focuses on decisions pertaining to risk mandates and credit limits, among other things, and exercises oversight of the risk management framework. Both of these bodies conduct preparatory drafting work on matters that are to be decided by the Board of Directors.

Biographical information on the members of the Executive Group Management is provided on page 68.

## Internal governance

### Core values and vision

Vattenfall's core values are Safety, Performance and Cooperation. Vattenfall's vision is to be an engaged partner, both with our customers and with society in general. We stand for convenient and innovative energy solutions. Vattenfall is a leader in sustainable energy production to ensure reliable and cost effective energy supply. We call it Energy You Want.

### Governing business ethics and sustainability

Vattenfall's internal Code of Conduct builds upon eight principles in the areas of Health and Safety, People, Customers and Suppliers, Business Ethics, Communication, Information Security, Company Resources, and the Environment, and includes references to the Vattenfall Management System (VMS), which elaborates on the principles in more detail. Information about the Code of Conduct is provided on the company's intranet in all of the company's languages, through articles in Vattenfall's employee news magazine, and in connection with new hiring and training. These measures have contributed to employees' familiarisation with the Code of Conduct.

To ensure that the organisation acts in an ethical and non-corrupt manner, Vattenfall requires all employees to take personal responsibility by acting in accordance with the company's ethical guidelines, which are set forth in the Code of Conduct as well as in internal policies and instructions. Vattenfall believes that competition plays a decisive role for a market to function effectively and has zero tolerance for bribery and corruption. An important step in ensuring this is the training that is conducted within the Vattenfall Integrity Programme, which is described on page 55.

The Code of Conduct gives employees the opportunity to report incidents anonymously through a whistleblower function staffed by locally appointed external ombudsmen (advocates),

to whom employees, consultants and contractors can turn to report suspected, serious improprieties that the whistleblower does not want to report internally via the normal reporting channels. Read more about reported incidents on page 55. Ongoing legal processes are described in Note 51 to the consolidated accounts, Contingent liabilities.

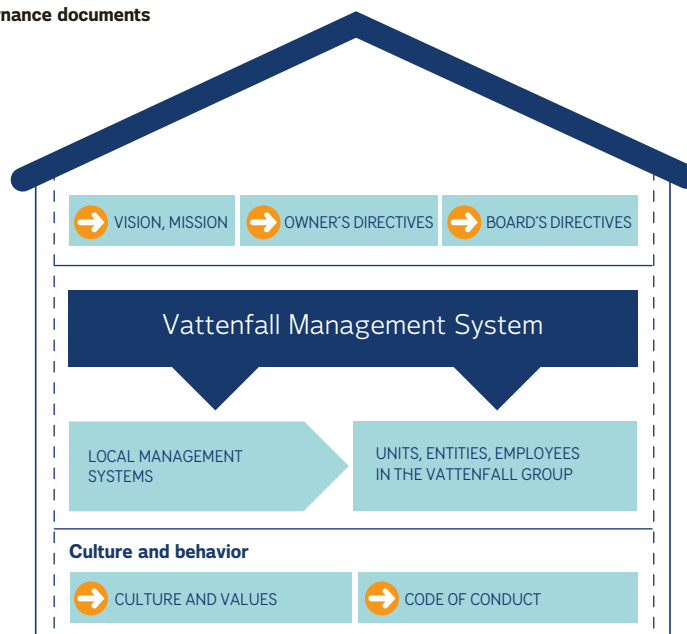
### Vattenfall Management System (VMS)

The Vattenfall Management System (VMS) is the framework that ensures that Vattenfall's governance adheres to formal requirements as well as to requirements made by the Board, the President, the business operations and the Staff Functions. The VMS is documented in binding governance documents consisting of policies, instructions and process documents on three different levels: corporate level, function level and business level. Certain central documents are approved by the Board of Directors of Vattenfall AB. The VMS is an integrated management system that applies for the entire Vattenfall Group, along with the limitations that may arise from legal requirements, such as regarding the unbundling of the electricity distribution business. Special routines are in place to ensure adherence to the management system also by subsidiaries.

Vattenfall's governance with respect to sustainability issues is based on the company's sustainability policy along with a number of other policies, including:

- The environmental policy
- The health and safety policy
- The Code of Conduct
- The Code of Conduct for Suppliers, which addresses – among other things, human rights and work conditions, the environment and anti-corruption, based on the UN Global Compact

### VMS structure and other governance documents



The sustainability policy, the environmental policy and the Code of Conduct are decided on by the Board of Directors, while other policies are decided on by the President. In the EGM, the Head of Strategic Development is responsible for sustainability issues. All of the aforementioned policies are part of the VMS. They are accessible to employees on the company's intranet and are also communicated externally. However, Vattenfall does not require any signatures from employees or members of management. The content is concretised in instructions and process documents within the VMS, for example in special instructions for matters concerning competition law and for countering bribery and corruption. Vattenfall's Environmental Management System is integrated in the VMS. Of Vattenfall's production portfolio, 87% has certified environmental management systems in accordance with ISO 14001. In addition, the Group's business units are certified in accordance with OHSAS 18001 for occupational health and safety and seven units have certified energy management system in accordance with ISO 50001.

During 2015 work was conducted on updating the VMS to incorporate the most recent organisational changes, among other things.

## Organisation

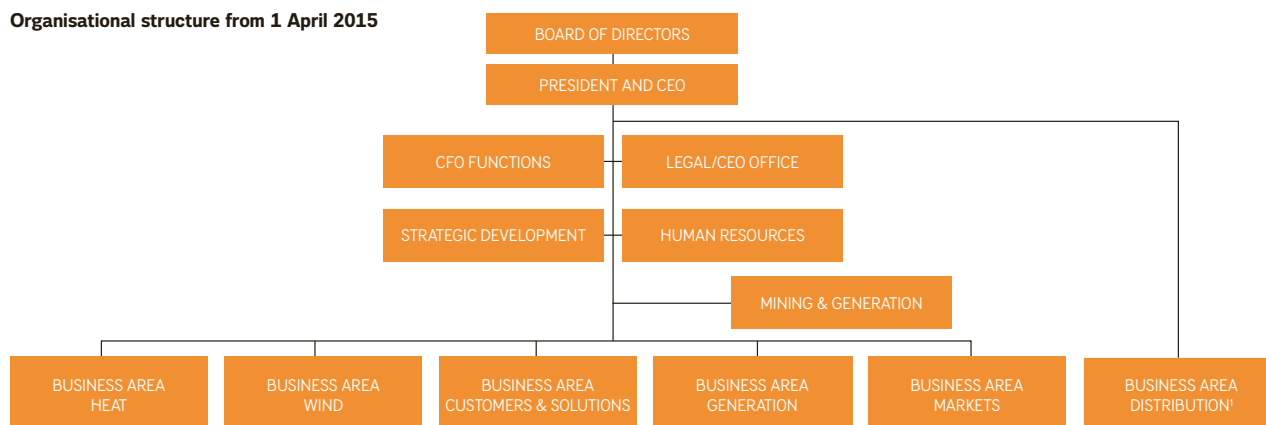
Vattenfall's organisational structure comprises six Business Areas: Heat, Wind, Customers & Solutions, Generation, Markets and Distribution. Vattenfall's lignite operations forms a separate unit, Mining & Generation, in line with Vattenfall's ambition to find a new owner. Vattenfall's Business Areas are organised in five operating segments, where Generation, Markets and the lignite operations make up a single operating segment. The central Staff Functions are organised in a Corporate Centre which supports and directs the business activities. For further information see pages 36-51.

The organisational structure has been formed to reflect Vattenfall's overall strategy for the coming years, which is broken down into the following four strategic objectives:

- Leading towards Sustainable Consumption
- Leading towards Sustainable Production
- High Performing Operations
- Empowered and Engaged Organisation

The company structure differs from the business structure. Governance is conducted financially, non-financially (such as through Staff Functions), and operationally. Unit scorecards and the VMS are the most important governance tools.

### Organisational structure from 1 April 2015



1) The electricity distribution operations are regulated by the Swedish Electricity Act (Ellagen) and the German Energy Industry Act (Energiewirtschaftsgesetz), and are unbundled from Vattenfall's other operations.

## Guidelines for remuneration of senior executives

Vattenfall AB applies the Swedish Government Offices' "Guidelines for terms of employment for senior executives in state-owned companies". These guidelines are available on the Government Offices' website: [regeringen.se](http://regeringen.se).

The 2015 AGM approved Vattenfall's application of the guidelines with the deviation that instead of the definition of senior executive in the Swedish Companies Act, senior executives shall be defined on the basis of whether they have a significant impact on the Group's earnings, through use of the International Position Evaluation (IPE) model. Managers with positions of IPE 68 and higher are to be considered as senior executives. The Board's explanation for this deviation is stated in the 2014 Annual and Sustainability Report, on page 65.

Based on the AGM's definition, in 2015 a total of 16 persons, excluding the current and former Presidents, were

covered by the stipulations on contracts with senior executives. Actions taken with respect to agreements with these executives were continuously reported to the Remuneration Committee and Board, which also decided on the entering into such agreements. Remuneration of senior executives and compliance with the adopted guidelines are described in more detail in the Annual and Sustainability Report, Note 53 to the consolidated accounts, Number of employees and personnel costs.

The Board and Remuneration Committee's report on compliance with the guidelines for remuneration of senior executives set by the AGM is posted on [vattenfall.se](http://vattenfall.se) (English translation is available on [vattenfall.com](http://vattenfall.com)). The proposed guidelines ahead of the 2016 AGM are shown on page 69.

## Internal control over financial reporting

This section describes the most important elements in Vattenfall's system of internal control and risk management in connection with financial reporting, as prescribed by the Annual Accounts Act and the Code. Vattenfall's framework for this control is based on the COSO framework, which has been developed by the Committee of Sponsoring Organizations of the Treadway Commission. For further information see also the risk section, pages 71-78.

### Control environment

According to the Swedish Companies Act and the Code, the Board of Directors has overarching responsibility for internal control over financial reporting. In this context the Board shall ensure that the company's organisation is structured in such a way that the bookkeeping, treasury management and the company's financial conditions in general are controlled in a satisfactory manner. The Board's audit committee conducts drafting work for the Board on matters related to internal control over financial reporting.

The control environment is based on the division of responsibility between the Board and the President, which is set forth in the Board's Rules of Procedure, along with the reporting requirements made by the Board. The Board has also adopted Vattenfall's Code of Conduct, which lays out the overarching rules governing employee conduct.

The VMS is an integrated management system for the Vattenfall Group and is revised on a continuing basis (see also the section on internal governance on page 62). The VMS contains governance documents for all identified material areas, including roles and responsibilities, authority, decision-making processes, risk management, internal control, and ethics and integrity issues. The VMS lays out the "grandfather principle" and "four eyes principle" for decision-making. The VMS also stipulates which decision-making, oversight and advisory bodies exist within the Group, on top of those required by law.

Vattenfall has an internal financial control (IFC) process whose overall purpose is to ensure that controls are in place in the financial reporting.

### Risk assessment

The Board addresses the Group's risk assessment and risk management process at an overarching level. The Board's audit committee conducts drafting work for evaluation and monitoring of risks and quality in financial reporting. The Audit Committee maintains continuous and regular contact with the Group's internal and external audit functions.

The Board's risk management and reporting is centrally coordinated via Vattenfall's risk committee (VRC). A continuous Enterprise Risk Management (ERM) process makes it possible to quantify and compare both financial and non-financial risks.

For the financial reporting, the IFC process serves as a framework for internal control that identifies and defines risks for material errors in the financial reporting. These are overseen by the CFO Function through regular reporting on tests performed of defined control points. The CFO Function is also responsible for performing regular analyses of risks related to financial reporting and for updating this framework.

The external and internal auditors discuss Vattenfall's risk situation in connection with the planning work ahead of the annual audit.

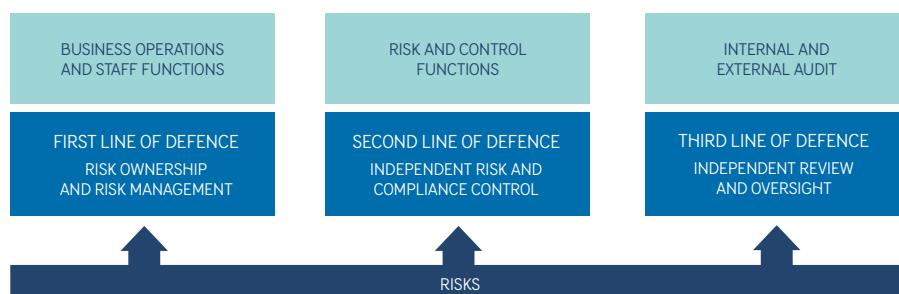
### Control activities and monitoring

Vattenfall applies the "three lines of defence" model for management and control of risks.

The first line of defence consists of the business operations (Business Units and Staff Functions), which are responsible for managing risks.

The risk organisation, which is headed by the Chief Risk Officer (CRO), makes up the second line of defence and is responsible for monitoring and controlling risks. The CRO

### Three lines of defence





heads the risk management organisation within the Group and provides information to the Board's audit committee on a regular basis. The CRO is also responsible for processes related to, among other things, new products and certain contracts with long durations. The second line of defence also includes the Group Internal Financial Control Officer (IFCO), who is responsible for monitoring and control of risks in the financial reporting.

Internal and external audit make up the third line of defence. Internal Audit is an independent and objective function that oversees and evaluates the first and second lines of defence. Internal Audit evaluates, recommends and monitors improvements to the effectiveness of Vattenfall's risk management, internal controls and governance processes throughout the Group. This also applies to compliance with Vattenfall's governance documents, including the Code of Conduct. The Internal Audit function is directly subordinate to the Board of Directors and Audit Committee, and performs its work in accordance with an established internal audit plan. Internal Audit's budget, the Internal Audit Charter and the internal audit plan are drafted by the Audit Committee and decided on by the Board of Directors. The Head of Internal Audit reports administratively to the President and informs the management teams of the Business Units and other units about audit activities that have been performed.

The Executive Group Management holds regular follow-up meetings with the heads of the Business Areas and Staff Functions regarding the financial outcome. Operations are followed up on a monthly basis via Business Performance Meetings, where outcomes, forecasts, important events and challenges are discussed to ensure that the organisation performs in line with expectations. Every quarter a more comprehensive picture of the current situation is presented (including status reports on Vattenfall's sustainability focus areas and sustainability targets), which is discussed with the top management of each Business Unit.

The internal framework for internal control includes processes for self assessments, monitoring, reporting and improvement of control activities in order to prevent, discover and correct errors in the financial reporting. Written confirmation of adherence to internal and external stipulations is part of these processes.

Since 2015 an upgraded IFC process has been in place, aimed at strengthening the governance structure and effectiveness of controls. Going forward, continuous improvements to the IFC process will be ensured through the implementation of an annual evaluation and updating process. This includes appointment of a Group IFC Officer.

The Board monitors and addresses the Group's financial situation at every regular board meeting, with a starting point from the financial report submitted by the President and the Chief Financial Officer. The Board's monitoring of the effectiveness of internal control is conducted via the Audit Committee, which regularly receives status reports on the Group's internal control over financial reporting, in accordance with the IFC process. A financial report, including a report on accounting issues, is presented at every regular Audit Committee meeting, and tax issues are reported on and followed up on a regular basis. A follow-up of the Group's sustainability targets is also reported to the Board every quarter. The timing and forms of this reporting are set in the Board's and Audit Committees' respective Rules of Procedure.

### Information and communication

The Group's governance documents are accessible via Vattenfall's intranet. The forms for handling internal and external communication are documented in a VMS instruction which aims to ensure that Vattenfall is in compliance with legal as well as stock exchange rules, the state's ownership policy (including guidelines for external reporting), and other obligations. Accounting policies and reporting principles are laid out in a joint manual for the entire Group. Updates and changes in these policies and principles are communicated on a continuous basis via the intranet as well as at meetings with representatives of the Group's Business Areas and Staff Functions.

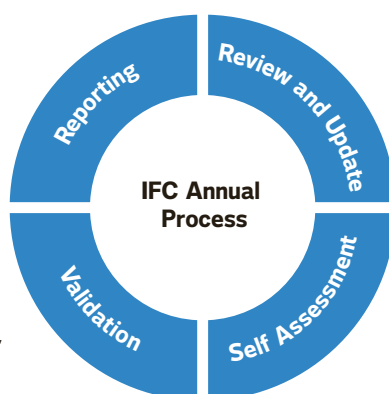
Reporting and follow-up reporting to the Board and EGM are part of monitoring activities. Internal Audit and the CRO also report on their observations to the Board's audit committee.

Financial reporting includes interim reports, the year-end report and the annual report. In addition to these reports, financial information is provided to the Group's external stakeholders via press releases and Vattenfall's websites, in accordance with the Swedish Securities Market Act, among other things.

### The IFC process

**Reporting:** Quarterly IFC status reporting and mid-year/year-end report to Audit Committee.

**Validation:** Complementary evaluations of control points, e. g., via on-site validations.



**Review and Update:** Implement improvements and correct errors in the IFC process and the IFC Framework. Define the IFC scope for the current year.

**Self Assessment:** A yearly questionnaire used to evaluate the status of the control points and identify the need for corrective action.

## BOARD OF DIRECTORS



Name	<b>Lars G. Nordström</b> , <i>Chairman of the Board</i>	<b>Fredrik Arp</b> , <i>Board member</i>	<b>Gunilla Berg</b> , <i>Board member</i>
Born	1943	1953	1960
Education	Law studies	B.Sc. Econ. Honorary Doctor of Economics	B. Sc. Econ.
Current position			CFO of PostNord Group
Other assignments	Chairman of the Finnish-Swedish Chamber of Commerce. Board member of Nordea Bank, Viking Line Abp, the Swedish-American Chamber of Commerce and SNS. Member of the Royal Swedish Academy of Engineering Sciences (IVA). Honorary Consul for Finland in Sweden.	Chairman of Nolato AB and Parques Reunidos. Board member of Technogym Spa.	Board member of Alfa Laval.
Previous positions	Board member of TeliaSonera (2006–2010). Chairman of the Royal Swedish Opera (2005–2009). President and CEO of Posten Norden AB (2008–2011). Various executive positions with Nordea Bank (1993–2007), including as President and Group CEO (2002–2007). Various positions with Skandinaviska Enskilda Banken (1970–1993), including as Executive Vice President (1989–1993).	President and CEO of Volvo Car Corporation (2005–2008). CEO of Trelleborg AB (1999–2005), PLM AB (1996–1999), Trelleborg Industrier AB (1989–1996) and Boliden Kemi AB (1988–1989). Various positions in Trelleborg AB (1986–1989) and Tarkett (1979–1986).	Executive Vice President and CFO of Teracom Group (2010–2014). Executive Vice President and CFO of SAS Group (2002–2009). Executive Vice President and CFO of the KF Group (1997–2001). Various positions in the AGA Group (1987–1997).
Elected	2011	2014	2012
Committee assignment	Member of the Remuneration Committee	Member of the Remuneration Committee	Chairman of the Audit Committee
Board meeting attendance	10 of 10	10 of 10	8 of 10
Committee meeting attendance	RemCom: 3 of 3	RemCom: 3 of 3	AC: 8 of 8



Name	<b>Viktoria Bergman</b> , <i>Board member</i>	<b>Håkan Buskhe</b> , <i>Board member</i>	<b>Håkan Erixon</b> , <i>Board member</i>
Born	1965	1963	1961
Education	Communication Executive Program at IFL/ Stockholm School of Economics. Berghs School of Communication	M. Sc. Eng., Licentiate in transport and logistics	B.Sc. International Business Administration and Economics
Current position		President and CEO of Saab AB	
Other assignments	Chairman of Galber AB. Board member of GS-Hydro Oy and The Swedish Association of Communication Professionals.		Chairman of Orio AB (publ) and Capacent AB (publ). Board member of Norrporten (publ) AB, Alfvén & Didrikson Invest AB and IT Gården i Landskrona AB.
Previous positions	Member of Group Management and Senior Vice President Stakeholder Management & Corporate Sustainability E.ON Nordic, Board member E.ON Försäkring, E.ON Kundsupport, E.ON Smart Living (2012–2014). Positions in Trelleborg Group (2002–2011), member of Group Management and Senior Vice President Corporate Communications Trelleborg Group (2005–2011). Various positions in Falcon Breweries/ Unilever (1989–1996), Cerealia Group (1987–1989).	President and CEO of E.ON Nordic AB and E.ON Sverige AB (2008–2010). Executive Vice President of E.ON Sverige AB (2007–2008). Senior Vice President of E.ON Sverige AB (2006–2007). CEO of Schenker North (2002–2006). Managing Director Schenker-BTL AB (2000–2002).	Member of the Nasdaq Stockholm AB Listing Committee (2011–2016). Board member of Saab Automobile Parts AB (2012–2013). Senior Advisor, Corporate Finance, Swedish Government Offices, which included work for the Swedish National Debt Office (2007–2010). Board member of Carnegie Investment Bank AB (2008–2009). Board member of Vasakronan AB (2007–2008). Various positions with UBS Investment Bank Ltd, London (1997–2007), including as Vice Chairman of the Investment Banking Division. Various positions with Merrill Lynch International Ltd, London (1992–1997). Kansallis-Osake-Pankki, London (1991–1992). Citicorp Investment Bank Ltd, London (1989–1991).
Elected	2015	2012	2011
Committee assignment	Member of the Remuneration Committee.		Member of the Audit Committee.
Board meeting attendance	8 of 8	6 of 10	10 of 10
Committee meeting attendance	RemCom: 1 of 1		AC: 8 of 8

Board member who left the Board in 2015:  
Eli Arnstad left the Board in connection with the 2015 AGM.



Name	<b>Tomas Käberger, Board member</b>	<b>Jenny Lahrin, Board member</b>	<b>Åsa Söderström Jerring, Board member</b>
Born	1961	1971	1957
Education	M Sc Engineering Physics, Ph D Physical Resource Theory, Associate professor (Docent), Environmental Science	Master of Laws, Executive MBA.	B. Sc. Econ.
Current position	Professor, Chalmers University of Technology, Industrial Energy Policy.	Investment Director, Division for State-Owned Enterprises, Ministry of Enterprise and Innovation.	
Other assignments	Chairman of the board of Japan Renewable Energy Foundation. Board member of Cleanergy AB and Industrifonden. Chairman of the steering committee of European Biofuels Technology Platform.	Board member of AB Göta kanalbolag.	Chairman of Delete OY and ELU Konsult AB, Board member of JM AB, OEM International AB, Scanmast AB and Nordic Home Improvement AB, Member of the Royal Swedish Academy of Engineering Sciences (IVA).
Previous positions	Professor Lund University, International Sustainable Energy Systems (2006–2008). Director General, Swedish Energy Agency (2008–2011).	Board member of Swedavia AB (2012–2015). Board member of RISE Research Institutes of Sweden AB (2012–2013), Legal Counsel at the Division for State-Owned Enterprises, Ministry of Enterprise/Ministry of Finance (2008–2012). Legal Director at Veolia Transport Northern Europe AB (2003–2008) and admitted to the bar association (2001–2002).	President SWECO Theorells AB (2001–2006) and Ballast Väst AB (1997–2001). Marketing Manager NCC Industry (1994–1997), and Communications Manager NCC Bygg AB (1991–1993).
Elected	2015	2013	2013
Committee assignment	Member of the Audit Committee	Member of the Audit Committee	Chairman of the Remuneration Committee
Board meeting attendance	8 of 8	10 of 10	10 of 10
Committee meeting attendance	AC: 5 of 6	AC: 8 of 8	RemCom: 3 of 3



Name	<b>Carl-Gustaf Angelin, Employee representative</b>	<b>Johnny Bernhardsson, Employee representative</b>	<b>Ronny Ekwall, Employee representative</b>
Born	1951	1952	1953
Education	M.Sc. Eng	Engineering studies with supplementary coursework in economics	Electrical engineer
Current position	Employee representative for Akademikerrådet at Vattenfall. Vattenfall employee since 1988, currently in Business Area Customers & Solutions.	Employee representative for Unionen. Vattenfall employee since 1970, currently in Human Resource Service at Vattenfall Business Services.	Employee representative for SEKO Facket för Service och Kommunikation
Other assignments		Chairman of the European Works Council.	
Elected	2003	1995	1999
Committee assignment			Member of the Audit Committee
Board meeting attendance	10 of 10	10 of 10	10 of 10
Committee meeting attendance			AC: 6 of 8



Name	<b>Lennart Bengtsson, Employee representative, (deputy)</b>	<b>Christer Gustafsson, Employee representative, (deputy)</b>	<b>Jeanette Regin, Employee representative, (deputy)</b>
Born	1958	1959	1965
Education	Two-year secondary school degree in mechanics and network technology training in IT	Four-year education in technology	Secondary school diploma and two-year education in healthcare
Current position	Employee representative for SEKO Facket för Service och Kommunikation. Vattenfall employee since 1979, currently as IT technician.	Employee representative for Ledarna (the Association of Management and Professional Staff). Employed at Vattenfall since 1986, currently in the staff function for the engineering department, Forsmarks Kraftgrupp AB.	Employee representative for Unionen. Currently head of customer service/office services for Gotland Energientreprenad.
Other assignments		Representative for energy & technology, Confédération Européenne des Cadres (for energy issues).	
Elected	2011	2013	2011
Committee assignment			
Board meeting attendance	7 of 10	7 of 10	6 of 10
Committee meeting attendance			

## EXECUTIVE GROUP MANAGEMENT



Name	<b>Magnus Hall,</b> <i>President and CEO</i>	<b>Kerstin Ahlfont</b> <i>Senior Vice President, Human Resources</i>	<b>Ingrid Bonde,</b> <i>Chief Financial Officer and Deputy CEO</i>	<b>Stefan Dohler,</b> <i>Senior Vice President, Business Area Markets</i>
Vattenfall employee	1 October 2014	1995	2012	1998
Born	1959	1971	1959	1966
Education	M. Sc. Industrial Engineering and Management	M. Sc. Eng.	M. Sc. Econ	M.Sc. Aerospace Engineering, MBA.
Previous positions	President and CEO of the forestry group Holmen, plus several other executive positions with Holmen.	Acting head of Human Resources and various manager positions within Finance in BU Heat Nordic, BG Pan Europe, BD Production and Region Nordic.	President and CEO of AMF (2008–2012), Director General of the Swedish Financial Supervisory Authority (2002–2008). Many years of experience in the financial sector, both from the public sector and private business.	Vice President Finance, Business Division Production (2011–2012). CEO of the Management Board of Distribution and Transmission System Operators (2008–2010). Head of network operations Vattenfall Europe AG.
Other assignments	Chairman of NTM AB. Board member of the Confederation of Swedish Enterprise.		Chairman of Hoist Finance AB, board member of Loomis AB and a commission member of the Global Commission on the Economy and Climate.	Board member of GASAG.



Name	<b>Gunnar Groebler</b> <i>Senior Vice President, Business Area Wind</i>	<b>Anne Gynnerstedt</b> <i>Senior Vice President, General Counsel and Secretary to the Board of Directors</i>	<b>Martijn Hagens</b> <i>Senior Vice President, Business Area Customers &amp; Solutions</i>	<b>Tuomo Hatakka</b> <i>Senior Executive Vice President, Business Area Heat, German region, Executive Vice President of Vattenfall AB</i>
Vattenfall employee	1999	2012	2003	2002
Born	1972	1957	1971	1956
Education	Mechanical Engineering	LL.B.	M. Sc. Industrial Engineering and Management	B. Sc. Econ. MBA.
Previous positions	Vice President, BU Renewables, Region Continental/UK, Vattenfall (2014–2015). Head of BU Hydro Germany, Vattenfall (2011–2013). Head of Corporate Development & M&A, BG Central Europe, Vattenfall Europe AG (2009–2010). Head of Mergers & Acquisitions, BG Central Europe, Vattenfall Europe AG (2008–2009). Head of Corporate Restructuring, Vattenfall Europe AG (2007–2008). Head of Purchasing, Vattenfall Europe Hamburg AG (2005–2007).	General Counsel, Secretary to the Board and member of executive management of SAAB AB (2004–2012). General Counsel and member of executive management of the Swedish National Debt Office (2002–2004). Corporate Legal Counsel, SAS (1990–2002).	Head of Heat Continental/ UK, Vattenfall (2014–2015). Head of Customer Service, Vattenfall (2011–2013). Head of Customer Care Centre, Nuon (2008–2010). Program Director Unbundling, Nuon (2006–2007). Nuon Consultancy Group & Lean Competence Center, Nuon (2005–2006).	Head of Business Division Production (2010–2013). Head of Business Group Central Europe (2008–2010). Head of Business Group Poland (2005–2007).
Other assignments		Board member of the Swedish Space Corporation.	COO Nuon Netherlands.	



Name	<b>Andreas Regnell</b> <i>Senior Vice President, Strategic Development</i>	<b>Torbjörn Wahlborg</b> <i>Senior Executive Vice President, Business Area Generation, Executive Vice President of Vattenfall AB</i>
Vattenfall employee	2010	1990
Born	1966	1962
Education	B. Sc. Econ.	M.Sc. Eng.
Previous positions	Head of Nordic Business Strategy (2014–2015) Head of Strategy and Sustainability (2010–2013) Senior Partner and Managing Director, Managing Partner of Nordic Region, The Boston Consulting Group (1992–2010). Analyst and Account Manager, Citibank (1989–1992).	Head of Business Division Nuclear (2012–2013). Head of Business Division Distribution and Sales (2010–2012). Head of Business Group Nordic (2010). Held positions in Vattenfall's Polish operations (1997–2010), including as country manager (2008–2009).
Other assignments		Board member of the Confederation of Swedish Enterprise and of Swedish Energy.

In 2015 Magnus Hall did not have any significant shareholdings in companies with which Vattenfall has business relations.

No persons left the Executive Group Management in 2015.

## AGM proposal

### Proposed principles for compensation and other terms of employment for senior executives

The Annual General Meeting resolved on 27 April 2015 to adopt the Board's proposed guidelines for compensation of senior executives. The Board proposes that the 2016 Annual General Meeting resolve to adopt the Board's proposal for unchanged guidelines for compensation of senior executives.

The Board's proposed guidelines correspond to the government's guidelines for terms of employment for senior executives of state-owned companies, adopted by the government on 20 April 2009 ([www.regeringen.se](http://www.regeringen.se)), with the deviation set out below.

In accordance with a resolution by the Annual General Meeting on 27 April 2015, Vattenfall deviates from the definition of senior executive of a subsidiary in such way that instead of using the definition of senior executive set forth in the Swedish Companies Act, senior executives shall be defined based on whether they have significant influence on the Group's earnings. Through application of the International Position Evaluation (IPE) model, executives with positions of IPE 68 and higher shall be considered to be senior.

The Board certifies that the compensation in question is in compliance with the guidelines set by the Annual General Meeting, in the following respects. Before a decision is made on compensation and other terms of employment for a senior executive, written documentation shall be available that shows the company's total cost. The proposal for decision shall be drafted by the Board's remuneration committee and thereafter be put to the Board for a decision. The company's auditors shall perform a review to ensure that the set compensation levels and other terms of employment have not been exceeded and, in accordance with the Companies Act, shall once a year – not later than three weeks before the Annual General Meeting – issue a written statement as to whether the adopted guidelines have been adhered to.

### The Board's explanation for deviations from the guidelines

The deviation decided on by the owner at the 2015 Annual General Meeting entails use of a generally accepted ranking model instead of the definition of senior executive of a subsidiary in the Swedish Companies Act. The Board is of the opinion that the following, special reasons exist for deviating from the guidelines.

Like other international groups, Vattenfall governs its operations from a commercial perspective and not according to the legal company structure. For commercial and legal reasons, the

Vattenfall Group has approximately 300 subsidiaries. Through application of the government's guidelines for subsidiaries, a very large number of executives would be considered to be senior, without them having any significant influence on the Group's earnings.

The proposed deviation reflects these circumstances. The criteria used to define what constitutes a senior executive are the individual subsidiary's size based on sales, the number of employees and number of links in the value chain, as well as the requirements on the individual executive for innovation, knowledge, strategic/visionary role and international responsibility.

The International Position Evaluation (IPE) model is used as support for determining in a systematic manner which positions can be considered to be senior. The Board's conclusion is that, in addition to the members of the Executive Group Management, executives in positions of IPE 68 or higher should be considered to be senior.

### Proposed distribution of profits

The Annual General Meeting has at its disposal retained profits including the result for the year, totalling SEK 50,172,717,807. In accordance with the dividend policy adopted by the Annual General Meeting of Vattenfall AB, the Board of Directors and President propose, in view of the result for the year, that the profits to be distributed as follows:

To be distributed to the shareholders:	SEK 0
To be carried forward:	SEK 50,172,717,807

### The Board of Directors' and President's assurance upon signing the Annual and Sustainability Report for 2015

The undersigned certify that the consolidated accounts and the Annual Report have been prepared in accordance with International Financial Reporting Standards (IFRS), as endorsed by the European Commission, for application within the EU, and generally accepted accounting principles, respectively, and give a true and fair view of the Parent Company's and the Group's financial position and earnings, and that the Administration Report for the Parent Company and the Group presents a fair overview of the development of the Parent Company's and the Group's operations, financial position and earnings and describes significant risks and uncertainties that the companies in the Group face. In addition, the undersigned certify that the sustainability data, as defined in the GRI Index on pages 165–170, has been prepared in accordance with the GRI G4 Guidelines, and has been adopted by the Board of Directors.

Solna 18 March 2016

Lars G. Nordström  
Chairman of the Board

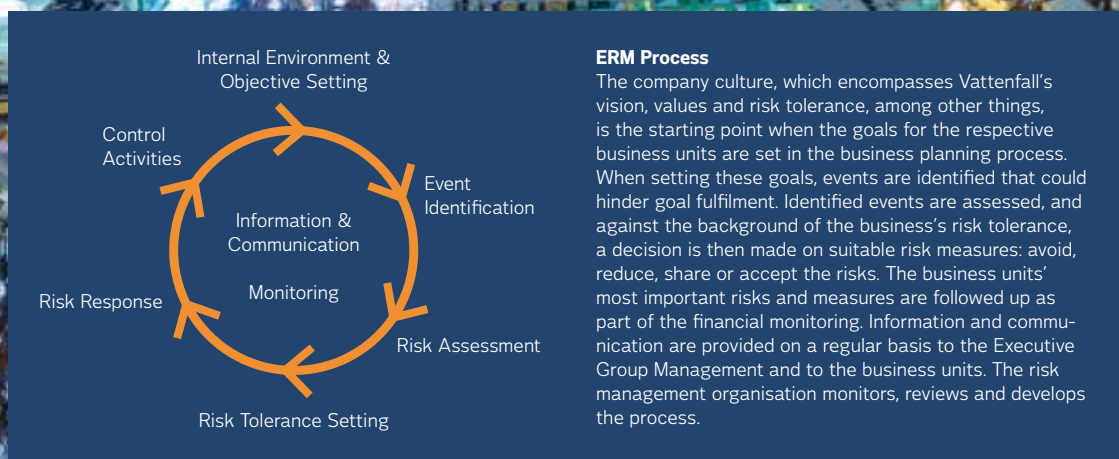
Carl-Gustav Angelin	Fredrik Arp	Gunilla Berg	Viktoria Bergman	Johnny Bernhardsson	Håkan Buskhe
Ronny Ekwall	Håkan Erixon	Tomas Kåberger	Åsa Söderström Jerring	Jenny Lahrin	

Magnus Hall  
President and CEO



# RISKS AND RISK MANAGEMENT

Vattenfall applies conscious and balanced risk-taking in which business transactions are reviewed from both profitability and risk perspectives. In accordance with the Swedish Corporate Governance Code and the Board of Directors' Rules of Procedure, Vattenfall's risk management framework ensures thorough identification of Vattenfall's risks and acceptable risk exposure. Risks and risk management are part of the financial statements in accordance with IFRS, which can be found on pages 79–153.





## Enterprise Risk Management

Enterprise Risk Management (ERM) at Vattenfall is a systematic and holistic approach to managing risks that could have a negative impact on Vattenfall's business operations. It is based on the risk management standards of the Committee of Sponsoring Organizations of the Treadway Commission (COSO) and the three lines of defence model. The aim of ERM is to ensure risk awareness, create transparency, and balance risks with rewards. It combines a top-down with a bottom-up approach to support Vattenfall in achieving its strategy and long-term targets.

Vattenfall's risk management process quantifies and compares risks with respect to both financial and non-financial consequences (e.g., reputation, environment, health and safety). After aggregating the risks, a composite overview of Vattenfall's risk situation is generated. The potential financial impact is linked to relevant financial key data that is used for governance of the company.

Vattenfall is exposed to a number of risks that are difficult to influence. To manage these risks, Vattenfall relies on scenario analyses and business intelligence activities as well as risk diversification.



The following pages provide the main risks that Vattenfall is exposed to and how the company manages these risks. The structure of risks follows the company's strategic objectives: Leading towards Sustainable Consumption, Leading towards Sustainable Production, High Performing Operations and Empowered and Engaged Organisation. Certain financial risks apply to several of these strategic objectives and are therefore addressed in a separate paragraph in the risk section.

## ● Risks related to Sustainable Consumption

As a result of changes in laws and regulations, technological development and evolving customer demands, the energy sector is undergoing a major transformation. The most salient trends are greater consumer involvement, the transition of consumers to “prosumers” (i.e., customers who are both consumers and producers of electricity), and growing demand for energy efficiency services as well as wholesale market services.

### Risks

- The risk of a **decline in market share** if the company is unable to meet customers expectations or unable to develop and offer the energy solutions and services demanded.
- **Supplier risk** related to underperforming quality of supply due to ageing and unreliable distribution networks.
- **Regulatory risks** related to changes of regulations regarding Vattenfall's market activities, e.g., MiFID II (read more on page 16).

### Risk management

To be Leading towards Sustainable Consumption, Vattenfall continues to develop energy solutions for its customers – such as charging solutions and decentralised generation – in an effort to retain and optimise customer value. Read more about Vattenfall's strategic objective to be Leading towards Sustainable Consumption on page 20.

To meet customer and regulatory demands on quality of supply Vattenfall will increase its investments in the distribution network, primarily in Sweden. In the Nordic region Vattenfall is continuously working to make the electricity networks less vulnerable by successively replacing overhead power lines with underground cables.

Vattenfall conducts active business intelligence and related activities to mitigate regulatory risks. Regulatory developments are closely monitored and analysed to, for example, avoid entering into long-term proprietary positions that might be covered by MiFID II.

---

## ● Risks related to Sustainable Production

To be Leading towards Sustainable Production, Vattenfall will reduce its CO<sub>2</sub> exposure and transform its generation portfolio toward more renewable energy. Read more about Vattenfall's strategic objective to be Leading towards Sustainable Production on page 21.

### Risks

- **Carbon risk** related to the risk of not reaching CO<sub>2</sub> exposure reduction target by 2020 and becoming climate neutral by 2050.
- **Regulatory risk** related to developments in environmental legislation that lead to negative impact on operations and permits.
- Several types of **investment risks**, including procurement risk, long-term market risk and risk in choice of technology.

### Risk management

One decisive measure for reaching the CO<sub>2</sub> exposure reduction target is the planned divestment of Vattenfall's lignite operations together with efficiency measures, which could lower emissions to a level of around 21 Mtonnes. Vattenfall will stepwise phase out of fossil-based fuels in order to meet

its climate and sustainability ambitions, and its commitment of being climate neutral by 2050. European environmental legislation is constantly evolving and is growing increasingly important for the energy sector. For example, implementation of the Water Framework Directive (WFD) could result in losses in regulating capacity and hydro power generation. Moreover, Vattenfall's wind power operations are exposed to regulatory risks in relation to tender processes and uncertain subsidy frameworks. Close monitoring of the developments within surrounding environmental permits is being conducted. In addition, Vattenfall belongs to various national and international trade organisations in order to promote the company's interests in these respects.

Vattenfall is a highly capital-intensive company with an extensive investment programme. The company has a very thorough project management process in which risk assessment is an integrated part. In addition to a strategic investment roadmap, a detailed investment plan is updated yearly to provide the Executive Group Management with guidance on the investment decision process.

## ● Risks related to High Performing Operations

Vattenfall needs to keep its focus on cost reductions and capital efficiency, and on pursuing financial partnerships to meet the need to invest and transform. Generating sustainable financial performance is a fundamental precondition for Vattenfall's ability to transform to more sustainable consumption and production.

### Risks

- **Operational asset risks** related to the operation of electricity and heat production plants, open cast lignite mines, and damage to distribution networks.
- **Sourcing and procurement risks** related to risks for loss of value and harm to the company's reputation resulting from sourcing or procurement activities considered as non-compliant by Vattenfall's stakeholders along the value chain.
- **Risk for environmentally hazardous emissions to the environment** related to, e.g., accidents and incidents from explosion, fire, oil spill or leakage of hazardous substance.

### Risk management

Power plants can be damaged as a result of incidents that could give rise to substantial volume losses and outage costs, such as breakdowns or failures of components and equipment.

An important part of the management of operational asset risks involves a rolling inspection programme, continuous control of plant conditions, and effective maintenance. Nuclear power safety and dam safety are special focus areas for Vattenfall's Board of Directors. Vattenfall's Corporate Independent Nuclear Safety Oversight (CINSO) unit is responsible for overseeing nuclear power safety at the Group level. The company's ambition is to be world-leading in nuclear power safety by promoting a strong safety culture, having competent employees and establishing clear and effective processes.

Vattenfall has a Code of Conduct for Suppliers and performs risk assessments and reviews of its suppliers. Numerous internal and external committees and cooperations are in place to mitigate risks related to Vattenfall's supply chain and to ensure that suppliers adhere to the Code of Conduct for Suppliers. Read more about Vattenfall's work on responsible sourcing on pages 34–35.

Identification and management of environmental risks are handled by the respective business units. The foundation of Vattenfall's environmental work is stated in the Vattenfall Environmental Management System, which is part of Vattenfall's overarching management system.

## ● Risks related to Empowered and Engaged Organisation

To achieve its strategic objectives, Vattenfall strives to create an organisational structure, culture and leadership that reflect the company's new business environment.

### Risks

- **Health & safety risks** related to accidents and incidents.
- Risk of inability to attract and retain people with **key competencies**.
- **Fraud and integrity risks** that lead to value and reputational losses as a consequence of incidents related to, e.g., the Group's assets, IT systems, information and personnel.

### Risk management

Health & safety is crucial and a guiding principle in the day-to-day operations, with the target to have zero injuries and no work-related illnesses. Vattenfall believes that increased awareness and knowledge about safety and a focus on proactive measures are prerequisites for achieving a safe and healthy work environment. Lost Time Injury Frequency (LTIF) is an important KPI for internal governance and is monitored on a monthly and yearly basis.

Vattenfall is committed to creating a work environment that attracts and develops people with key competencies and encourages them to perform to the best of their potential. This includes activities such as competence sharing, job rotation, leadership development and trainee programmes aimed at ensuring access to future leaders and key competencies. Individual development plans are an important component for fostering a high performance culture within the organisation.

Vattenfall has zero tolerance for bribery and corruption. Its integrity organisation aims to ensure transparency and an understanding of, and compliance with, applicable laws, regulations and standards in countries where Vattenfall operates. Particular areas of focus include anti-trust/competition, prevention of bribery and corruption, conflicts of interest, insider information and coordination of the whistleblower function. To ensure compliance Vattenfall has implemented a Code of Conduct and integrity guidelines. Training and e-learning programmes are conducted to increase awareness, and the "four eyes principle" is applied to protect assets and information from improprieties and fraud.

## Financial risks

Vattenfall's financial risks arise in both the commodity and financial markets. Vattenfall's Board of Directors has given the President a risk mandate for the Group, which is further delegated to the business units. The maximum loss for trading in commodities on a yearly basis is limited to an amount corresponding to approximately 3% of equity. On average, approximately 25%–30% of the permitted exposure is utilised under these limits. Most of Vattenfall's risk exposure in the

proprietary trading portfolio is based on market prices (mark-to-market). In cases where market prices cannot be observed, modelled prices are used (mark-to-model). Mark-to-model positions arise mainly in plant and sales-related portfolios, see Note 47 to the consolidated accounts, Financial instruments. Management of such valuation models is strictly regulated, and approval is required from the risk organisation before they may be used.

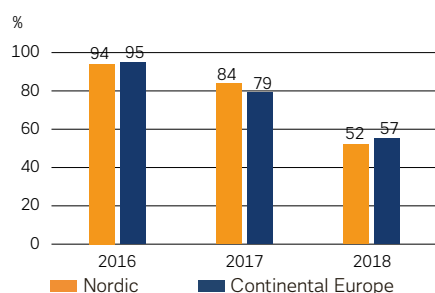
## Electricity price risk

Electricity price risk pertains to changes in the price of electricity, which could have a negative impact on Vattenfall's financial results.

### Risk management

Electricity prices are affected by fundamental factors such as supply, demand, fuel prices and the price of CO<sub>2</sub> emission allowances. Vattenfall hedges its electricity generation and electricity sales through the use of physical and financial forward contracts and long-term customer contracts. Long-term customer contracts pertain to time horizons in which there is no possibility to hedge prices in the liquid part of the futures market, and stretch as far as to 2025. The total hedged volume for the period 2018–2025 is 45 TWh, where most is hedged in the beginning of the period, with falling volumes towards the end. Vattenfall's risk committee decides how much of future electricity generation is to be hedged within the mandates issued by the Board of Directors. To measure electricity price risk, Vattenfall uses methods such as Value at Risk (VaR) and Gross Margin at Risk along with various stress tests.

**Hedge ratios for planned electricity generation  
31 December 2015**



**Average price hedges as per 31 December 2015**

EUR/MWh	2016	2017	2018
Nordic countries	32	31	30
Continental Europe	39	35	33

The price hedges and average prices for the years 2015, 2016 and 2017 were reported as follows in the 2014 Annual and Sustainability Report:

	Nordic countries	Continental Europe
2015	73%, price EUR 36/MWh	99%, price EUR 45/MWh
2016	72%, price EUR 34/MWh	87%, price EUR 39/MWh
2017	59%, price EU 32/MWh	55%, price EUR 36/MWh



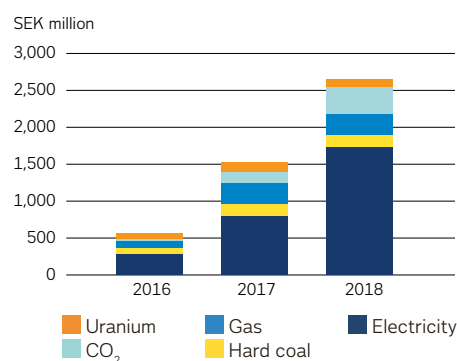
## Fuel price risk

Fuel price risk is related to the risk of Vattenfall's earnings changing as a result of changes in fuel prices, which in turn are affected by macroeconomic factors.

### Risk management

Fuel price risk is minimised through analysis of the various commodity markets and diversification of contracts with respect to price model and terms. Regarding hard coal-fired and gas-fired electricity generation, electricity and fuel price hedges are coordinated to ensure a set fuel cost and, thus, the gross margin on the electricity generation. For lignite-fired plants, there is no fuel price risk, since Vattenfall owns the lignite mines. The price risk for uranium is limited, since uranium accounts for a relatively small proportion of the total cost of nuclear power generation.

### Sensitivity Analysis: impact of price movements (+/-10%) on operating profit



The sensitivity analysis shows the impact that variations in market prices can have on Vattenfall's operating profit. The exposure of Vattenfall's hedges for electricity and fuel prices is monitored daily. The effect of price movements increases as the share of exposure that is not hedged increases. The exposure for the next-coming year is hedged to a higher degree than the exposure that is expected three years ahead.

The analysis is based on the assumption that risks are independent of each other and are based on 252 trading days in a year. Prices and positions are stated as per 31 December 2015. For example, a movement of +10% in the price of electricity in 2017 would have an impact on operating profit of SEK +788 million. Observed yearly volatilities for 2015 are shown in the far-right column in the table above.

### Market-quoted risks

	Impact of +/-10% price on operating profit before tax, SEK million <sup>1</sup>			Observed yearly volatility, <sup>2</sup> %
	2016	2017	2018	
Electricity	+/- 276	+/- 788	+/- 1,722	12% - 13%
Hard coal	-/+ 93	-/+ 174	-/+ 167	18% - 19%
Gas	-/+ 93	-/+ 282	-/+ 288	15% - 16%
CO <sub>2</sub>	-/+ 15	-/+ 141	-/+ 369	24% - 25%
Uranium	-/+ 85	-/+ 138	-/+ 96	

1) The denotation +/- entails that a higher price affects operating profit favourably, and -/+ vice versa.

2) Observed yearly volatility in 2015 for daily price movements for each commodity, based on forward contracts for the period 2016–2018. Volatility normally declines the further ahead in time the contract pertains to.

## Volume risk

Volume risk is related to the risk for deviations between anticipated and actual delivered volume.

### Risk management

In hydro power generation, volume risk is managed by analysing and forecasting such factors as precipitation and snowmelt.

The analysis models are based on extensive historical weather data, among other things. Volumes are managed by improving

and developing forecasts for electricity consumption. There is a correlation between electricity prices and produced electricity volume. The impact of the price of electricity on Vattenfall's electricity generation volume is therefore included in calculations of price sensitivity in the sensitivity analysis of market-quoted risks above. Volume risk also arises in the sales activities as deviations in anticipated versus actual volumes delivered to customers.

## Liquidity risk

Liquidity risk pertains to the risk of Vattenfall not being able to finance its capital needs and arises if the maturities of assets do not match those of liabilities and other derivatives.

### Risk management

Access to capital and flexible financing solutions are ensured through several types of debt issuance programmes and credit facilities. The maturity profile for Vattenfall's debt portfolio is shown in the chart on page 76. The Group has a defined target for its short-term accessibility to capital. The goal is that funds corresponding to no less than 10% of the Group's

sales, or the equivalent of the next 90 days' maturities, shall be available. As per 31 December 2015, available liquid assets and/or committed credit facilities amounted to 34% of net sales (34%).

Vattenfall is committed to sustaining financial stability, which is reflected in the company's long-term targets for capital structure. In August 2015 the rating agency Moody's confirmed Vattenfall's long-term A3 rating but changed its outlook from stable to negative.

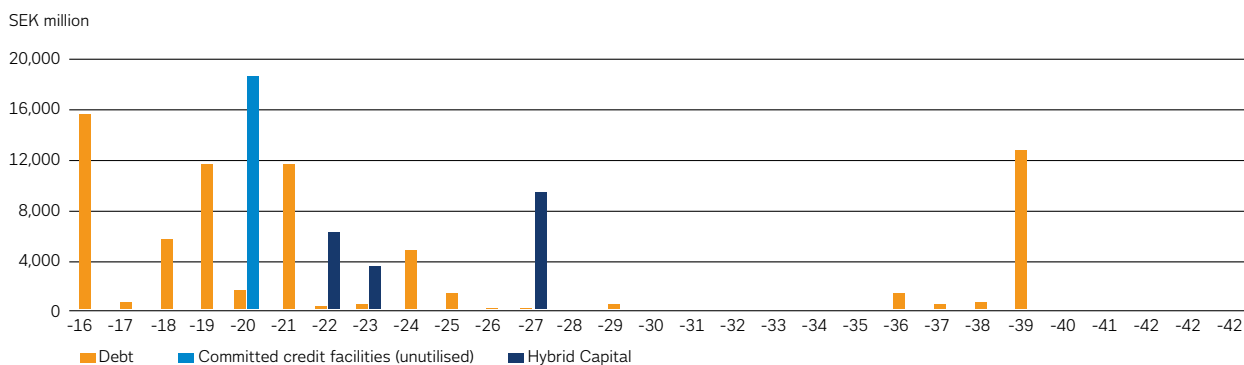
→ Continued on next page

In September 2015 the rating agency Standard & Poor's changed its long-term rating of Vattenfall from A- to BBB+ and changed its outlook to negative. In February 2016, the rating agencies Moody's and Standard & Poor's placed Vattenfall's long-term rating on credit watch with potential downgrade. Vattenfall has a strong liquidity situation and foresees no

refinancing need in the near and medium term future. Even though credit spreads, in general and specifically for the utility industry, widened during the second half of 2015, from extraordinary low and favourable levels, Vattenfall is of the opinion that it has good access to the capital markets.

➔ Read more about Vattenfall's long-term targets on pages 26–27

**Maturity profile for Vattenfall's loans as per 31 December 2015<sup>1</sup>**



1) Excluding loans from minority owners and associated companies.

**Borrowing programmes and committed credit facilities**

	Currency	Maximum aggregated amount		Maturity		Used portion, %		Reported external liability, SEK million	
		2015	2014	2015	2014	2015	2014	2015	2014
<b>Borrowing programmes</b>									
Commercial paper	SEK	15,000	15,000	—	—	0	16	0	2,374
Euro Commercial Paper	EUR	2,000	2,000	—	—	19	13	3,455	2,418
Euro Medium Term Note	EUR	15,000	15,000	—	—	40	41	62,335	64,723
<b>Committed credit facilities</b>									
Revolving Credit Facility <sup>1</sup>	EUR	2,000	2,000	2020	2019	—	—	—	—

1) Back-up facility for short-term borrowing.

Committed credit facilities consist of a EUR 2.0 billion Revolving Credit Facility that expires on 10 December 2020, with an option for one-year extension.

Maturity structure for the debt portfolio excluding loans from minority owners and associated companies, which amounted to SEK 15,792 million for 2015 (15,002). Further information about the maturity structure of loans is provided in Note 40 to the consolidated accounts, Interest-bearing liabilities and related financial derivatives.

## Interest rate risk

Interest rate risk pertains to the negative impact of changed interest rates on the Group's income statement and cash flow.

**Risk management**

Vattenfall quantifies interest rate risk in its debt portfolio in terms of duration, which describes the average term of fixed interest. The norm duration is based on the company's current

financing need and desired interest rate sensitivity in net interest income/expense. Duration is to have a norm of three years with a permissible variation of +/- one year. The duration of the Group's debt portfolio at year-end was 3.87 years including Hybrid Capital (2.78). See the table below for the remaining fixed rate term in Vattenfall's debt portfolio.

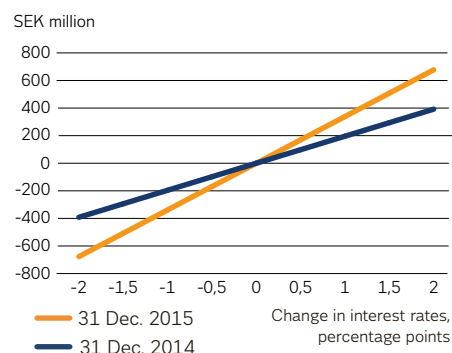
**Remaining fixed rate term in debt portfolio 2015 (2014)**

SEK million	Debt		Derivatives		Total	
	2015	2014	2015	2014	2015	2014
< 3 months	16,839	7,224	15,616	35,966	32,455	43,190
3 months–1 year	2,074	30,899	8,971	-17,843	11,045	13,057
1–5 years	18,616	24,763	-1,434	3,350	17,182	28,113
> 5 years	48,148	37,123	-23,196	-23,302	24,951	13,821
Total	85,676	100,009	-43	-1,828	85,633	98,181

The portfolio includes loans and interest rate derivatives in order to steer the duration of borrowing. Negative amounts are explained by the use of derivatives, such as interest rate swaps and interest rate forwards. The sum of derivatives is not equal to zero due to currency effects. Figures are exclusive

of loans from minority owners and associated companies, totalling SEK 15,792 million for 2015 (15,002). The average financing rate as per 31 December 2015 was 3.94% (3.60%). All figures in nominal amounts.

➔ Continued on next page

**Interest rate sensitivity, excluding loans from minority owners and associated companies**

The interest rate sensitivity analysis shows how changes in interest rates affect the Vattenfall Group's interest income and expenses (before tax and including capital gain/losses on interest rate derivatives) within a 12-month period given the Group's current structure of borrowing at fixed interest rates. With the same method and an assumption that interest rates would rise by 100 basis points, the impact on the Vattenfall Group's equity after tax would be SEK -264 million (-153), including derivatives and Hybrid Capital, but excluding loans from minority owners and associated companies. All figures in nominal amounts.

## Currency risk

Currency risk pertains to the negative impact of changed currency exchange rates on the Group's income statement and balance sheet.

**Risk management**

Vattenfall is exposed to currency risk through exchange rate movements attributable to future cash flows (transaction exposure) and in the revaluation of net assets in foreign subsidiaries (translation or balance sheet exposure).

Vattenfall's debt portfolio per currency is shown in the table below. Currency exposure in borrowing is limited by using currency interest rate swaps. Vattenfall strives for an even maturity structure for derivatives. Derivative assets and derivative liabilities are reported in Note 30 to the consolidated accounts, Derivative assets and derivative liabilities.

Vattenfall has a limited transaction exposure, since most production, distribution and sales of electricity take place in

the respective local markets. Sensitivity to currency movements is thus also relatively low. All transaction exposure that exceeds a nominal value equivalent to SEK 10 million is to be hedged immediately when it arises.

The target for hedging translation exposure is to, over time, match the currency composition in the debt portfolio with the currency composition of the Group's funds from operations (FFO). Vattenfall's largest conversion exposure is in EUR, totalling 100,352 MSEK (2014: 117,229). Of this amount, 36% was hedged at year-end (48%). For further information, see Note 49 to the consolidated accounts, Specifications of equity.

With respect to currency movements, a 5% change in exchange rates, for example, would affect the Group's equity by approximately SEK 3.5 billion (3.8), where a strengthening of the currencies shown in the table in Note 49 to the consolidated accounts would result in a positive change in equity.

**Debt portfolio, breakdown per currency**

Original currency	Debt		Derivative		Total	
	2015	2014	2015	2014	2015	2014
CHF	—	1,562	—	-1,562	—	—
EUR	53,380	72,971	5,973	12,175	59,353	85,147
GBP	16,908	16,285	—	-9,889	16,908	6,396
JPY	2,461	2,270	-2,461	-2,270	—	—
NOK	1,220	1,324	-1,220	-1,324	—	—
PLN	0	0	—	—	0	0
SEK	8,331	5,596	1,042	1,042	9,373	6,638
USD	3,376	—	-3,376	—	0	—
Total	85,676	100,009	-43	-1,828	85,633	98,181

The table shows the currency risk in the debt portfolio and the currencies that Vattenfall is exposed to. The level of debt, and thus the currency risk, decreased in 2015 compared with 2014. Figures above are exclusive of loans from minority owners and associated companies, totalling

**Consolidated operating income and expenses per currency, %**

Currency	Income		Expenses	
	2015	2014	2015	2014
EUR	74	66	73	71
SEK	24	28	19	21
GBP	1	4	1	3
DKK	1	2	2	2
Other	0	1	5	2
Total	100	100	100	100

The values are calculated based on a statistical compilation of external operating income and expenses. Changes in inventories and investments are excluded.

## Credit risk

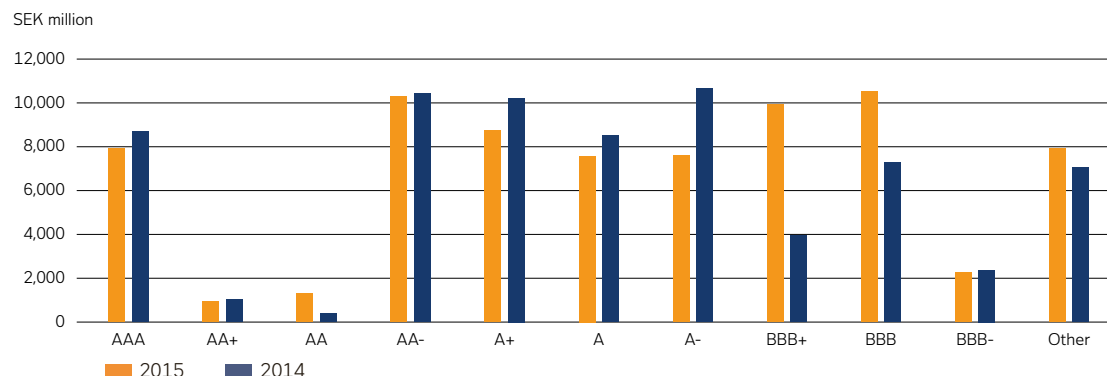
Credit risk can arise if a counterparty cannot or fails to meet its obligations, and exists in Vattenfall's commodity trading, sales, treasury operations and investments.

### Risk management

Vattenfall has a strict framework for governing and reporting credit risks to ensure that risks are monitored, measured and

minimised in a suitable manner. The company's credit risk management involves analysis of its counterparties, reporting of credit risk exposures and proposals for risk mitigation measures (e.g., obtaining collateral). Credit risk exposure per rating class in SEK million is shown in the chart below.

**Credit risk exposure per rating class**



The chart shows exposures to Vattenfall's counterparties where the exposure is greater than SEK 50 million per counterparty, broken down per rating classification according to Standard & Poor's rating scale. Counterparties are reviewed and approved in line with Vattenfall's credit mandates and policies. Smaller exposures are considered to have such a large diversification effect that the net risk for Vattenfall is judged to be low. Procurement and heat sales exposures are not included. Other financial assets (that are neither past-due nor impaired) are considered to have good creditworthiness. The values for "Others" in the chart include mostly counterparties covered by policy and limit exceptions, mainly pertaining to long-term sales contracts.

# FINANCIAL INFORMATION

Consolidated accounts, including comments	80
Notes to the consolidated accounts	90
Parent Company accounts	135
Notes to the Parent Company accounts	140
Audit Report	152
Limited Assurance Report	153





## CONSOLIDATED INCOME STATEMENT

Amounts in SEK million, 1 January–31 December	Note	2015	2014
Net sales	7, 8, 9, 18	164,510	165,945
Cost of products sold <sup>1</sup>	10, 18	-167,075	-149,395
<b>Gross profit</b>		<b>-2,565</b>	<b>16,550</b>
Other operating income	11	2,359	4,597
Selling expenses		-6,698	-7,142
Administrative expenses		-13,337	-12,442
Research and development costs		-376	-636
Other operating expenses	12	-1,853	-2,684
Participations in the results of associated companies <sup>2</sup>	8, 27, 56	-497	-438
<b>Operating profit (EBIT)<sup>3,4</sup></b>	<b>8, 9, 13, 14, 15, 21, 22</b>	<b>-22,967</b>	<b>-2,195</b>
Financial income <sup>5,8</sup>	16	2,762	2,590
Financial expenses <sup>6,7,8</sup>	17, 18	-7,987	-8,635
<b>Profit before tax</b>		<b>-28,192</b>	<b>-8,240</b>
Income tax expense	19	8,426	-44
<b>Profit for the year</b>		<b>-19,766</b>	<b>-8,284</b>
Attributable to owner of the Parent Company		-16,672	-8,178
Attributable to non-controlling interests	20	-3,094	-106
<b>Supplementary information</b>			
Operating profit before depreciation, amortisation and impairment losses (EBITDA)		32,754	41,038
Underlying operating profit before depreciation, amortisation and impairment losses		40,004	43,558
Underlying operating profit		20,541	24,133
Financial items, net excl. discounting effects attributable to provisions and return from the Swedish Nuclear Waste Fund		-3,023	-3,516
1) Of which, depreciation, amortisation and impairment losses		-54,247	-42,398
2) Of which, impairment losses		-41	-155
3) Of which, depreciation, amortisation and impairment losses		-55,721	-43,233
4) Including items affecting comparability		-43,508	-26,328
5) Including return from the Swedish Nuclear Waste Fund		1,168	962
6) Including interest components related to pension costs		-937	-1,240
7) Including discounting effects attributable to provisions		-3,370	-3,491
8) Items affecting comparability recognised as financial income and expenses, net		-18	-52

## COMMENTS ON THE CONSOLIDATED INCOME STATEMENT

### Sales

Consolidated net sales in 2015 decreased by SEK 1.4 billion compared with 2014. Excluding currency effects (SEK +3.3 billion), net sales decreased by approximately SEK 4.7 billion, mainly owing to average lower electricity prices achieved.

### Underlying operating profit

Amounts in SEK million	2015	2014
Operating profit (EBIT)	-22,967	-2,195
Items affecting comparability (included in operating profit)	43,508	26,328
<b>Underlying operating profit</b>	<b>20,541</b>	<b>24,133</b>

The underlying operating profit for 2015 decreased by SEK 3.6 billion, which is mainly explained by the following:

- Lower production margins resulting from average lower electricity prices achieved (SEK -4.6 billion)
- Higher hydro power generation (SEK 0.4 billion)
- Higher earnings contribution from distribution operations (SEK 1.0 billion)
- Higher earnings contribution from sales operations (SEK 0.1 billion)
- Lower operating expenses (SEK 0.2 billion)
- Other items, net (SEK -0.7 billion)

### Items affecting comparability that affected operating profit

Amounts in SEK million	2015	2014
Capital gains	256	3,227
Capital losses	-381	-185
Impairment losses	-36,792	-23,808
Reversed impairment losses	534	—
Provisions	-5,954	-5,688
Unrealised changes in the fair value of energy derivatives	1,558	819
Unrealised changes in the fair value of inventories	-657	72
Restructuring costs	-1,233	-765
Other non-recurring items affecting comparability	-839	—
<b>Total</b>	<b>-43,508</b>	<b>-26,328</b>

Items affecting comparability in 2015 amounted to SEK -43.5 billion. Impairment losses amounted to SEK -36.8 billion. Provisions pertain mainly to higher provisions for nuclear power and for mining operations in Germany, and environment-related provisions for hydro power in Germany. Reversed impairment losses pertain to the Nordjylland power station (SEK -0.5 billion). Other items affecting comparability pertain mainly to restructuring costs (SEK -1.2 billion) and unrealised changes in the fair value of energy derivatives and inventories (SEK -0.9 billion).

Items affecting comparability in 2014 amounted to SEK -26.3 billion. Impairment losses amounted to SEK -23.8 billion. Capital gains pertain primarily to the sale of Vattenfall's electricity distribution operation in Hamburg. Other items affecting comparability pertain to higher provisions primarily for future expenses for the decommissioning of nuclear power in Germany.

### Operating segments

The underlying operating profit for the Customers & Solutions operating segment improved by SEK 0.4 billion compared with 2014, mainly owing to a higher gross margin as a result of higher volumes and lower operating expenses. The underlying operating profit for the Power Generation operating segment decreased by SEK 3.2 billion compared with 2014, which is explained by lower production margins resulting from average lower prices achieved, lower production volumes and higher costs for CO<sub>2</sub> emission allowances. The underlying operating profit for the Wind operating segment decreased by SEK 0.2 billion. Excluding a one-time effect in 2014 (SEK +1.2 billion), operating profit improved as a result of higher income and higher electricity generation, mainly associated with the commissioning of new wind farms. The underlying operating profit for the Heat operating segment was SEK 1.7 billion. This is a decrease of SEK 0.7 billion compared with 2014, which is explained by a narrower gross margin resulting from average lower prices achieved and higher depreciation for the Moorburg power plant. The underlying operating profit for the Distribution operating segment improved by SEK 1.0 billion, which is explained by higher income resulting from higher prices along with income from the service operations in Hamburg. For further information on the Group's operating segments, see Note 8 to the consolidated accounts, Operating segments.

### Costs for CO<sub>2</sub> emission allowance

Costs for CO<sub>2</sub> emission allowances for own use amounted to SEK 6.0 billion in 2015, compared with SEK 4.2 billion in 2014. The increase is mainly attributable to higher prices for CO<sub>2</sub> emission allowances and a positive one-time effect in 2014.

### Financial items

Financial items amounted to SEK -5.2 billion, an improvement by SEK 0.8 billion compared with 2014. The improvement in financial items for 2015 is mainly attributable to higher interest income, lower interest expenses, and a higher return from the Swedish Nuclear Waste Fund.

### Taxes

The Group reported a tax income of SEK 8.4 billion for 2015. The tax income is mainly explained by a positive one-time effect of SEK 9.6 billion through lower deferred tax associated with the impairment losses recognised during the second quarter of 2015.

The low tax cost 2014 is attributable primarily to a positive one-time effect of SEK 3.4 billion through lower deferred tax associated with the impairment losses recognised during the third quarter of 2014. For further information, see Note 19 to the consolidated accounts, Income tax expense.

## CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

Amounts in SEK million, 1 January–31 December	2015	2014
<b>Profit for the year</b>	<b>-19,766</b>	<b>-8,284</b>
<b>Other comprehensive income</b>		
<b>Items that will be reclassified to profit or loss when specific conditions are met</b>		
Cash flow hedges – changes in fair value	11,354	5,243
Cash flow hedges – dissolved against income statement	-5,323	-5,871
Cash flow hedges – transferred to cost of hedged item	-3	-3
Hedging of net investments in foreign operations	1,709	-5,452
Translation differences and exchange rate effects net, divested companies	—	101
Remeasurement of financial assets available-for-sale	—	-182
Translation differences	-1,938	10,453
Income tax relating to items that will be reclassified	-1,722	3,242
<b>Total Items that will be reclassified to profit or loss when specific conditions are met</b>	<b>4,077</b>	<b>7,531</b>
<b>Items that will not be reclassified to profit or loss</b>		
Remeasurement pertaining to defined benefit obligations	2,867	-9,130
Income tax relating to items that will not be reclassified	-762	2,587
<b>Total Items that will not be reclassified to profit or loss</b>	<b>2,105</b>	<b>-6,543</b>
<b>Total other comprehensive income, net after tax</b>	<b>6,182</b>	<b>988</b>
<b>Total comprehensive income for the year</b>	<b>-13,584</b>	<b>-7,296</b>
Attributable to owner of the Parent Company	-10,398	-7,412
Attributable to non-controlling interests	-3,186	116

# CONSOLIDATED BALANCE SHEET

Amounts in SEK million	Note	31 December 2015	31 December 2014
<b>Assets</b>	8		
<b>Non-current assets</b>			
Intangible assets: non-current	9, 23	17,564	19,586
Property, plant and equipment	9, 24	244,563	271,306
Investment property	9, 25	388	461
Biological assets		35	29
Participations in associated companies and joint arrangements	27	7,002	7,765
Other shares and participations	28	273	284
Share in the Swedish Nuclear Waste Fund	29	34,172	31,984
Derivative assets	30, 47	20,220	18,366
Current tax assets, non-current	19	222	449
Prepaid expenses		103	115
Deferred tax assets	19	9,265	9,310
Other non-current receivables	31	9,484	8,407
<b>Total non-current assets</b>		<b>343,291</b>	<b>368,062</b>
<b>Current assets</b>			
Inventories	32	16,592	18,502
Biological assets		19	11
Intangible assets: current	33	1,091	4,885
Trade receivables and other receivables	34	26,193	31,217
Advance payments paid	35	3,607	2,617
Derivative assets	30, 47	14,067	13,342
Prepaid expenses and accrued income	36	5,936	6,398 <sup>1</sup>
Current tax assets	19	3,285	2,390
Short-term investments	37	31,905	32,785
Cash and cash equivalents	38	12,351	12,283
Assets held for sale	39	3,980	4,717
<b>Total current assets</b>		<b>119,026</b>	<b>129,147</b>
<b>Total assets</b>		<b>462,317</b>	<b>497,209</b>
<b>Equity and liabilities</b>			
<b>Equity attributable to owners of the Parent Company</b>			
Share capital		6,585	6,585
Reserve for cash flow hedges		9,460	4,828
Other reserves		-2,989	-2,707
Retained earnings incl. profit for the year		90,928	106,554
<b>Total equity attributable to owners of the Parent Company</b>	49	<b>103,984</b>	<b>115,260</b>
<b>Equity attributable to non-controlling interests</b>		<b>11,972</b>	<b>13,202</b>
<b>Total equity</b>		<b>115,956</b>	<b>128,462</b>
<b>Non-current liabilities</b>			
Hybrid Capital	40	18,546	—
Other interest-bearing liabilities	40	68,179	78,807
Pension provisions	41	38,919	45,298
Other interest-bearing provisions	42	93,042	86,487
Derivative liabilities	30, 47	10,579	11,760
Deferred tax liabilities	19	22,970	27,595
Other noninterest-bearing liabilities	43	6,273	5,756
<b>Total non-current liabilities</b>		<b>258,508</b>	<b>255,703</b>
<b>Current liabilities</b>			
Trade payables and other liabilities	44	23,958	30,641
Advance payments received	45	2,293	2,397
Derivative liabilities	30, 47	8,023	5,065
Accrued expenses and deferred income	46	19,969	18,182 <sup>1</sup>
Current tax liabilities	19	306	1,135
Hybrid Capital	40	—	9,385
Other interest-bearing liabilities	40	23,860	37,736
Interest-bearing provisions	42	6,302	6,782
Liabilities associated with assets held for sale	39	3,142	1,721
<b>Total current liabilities</b>		<b>87,853</b>	<b>113,044</b>
<b>Total equity and liabilities</b>		<b>462,317</b>	<b>497,209</b>

See also information on Collateral (Note 50), Contingent liabilities (Note 51) and Commitments under consortium agreements (Note 52), in to the consolidated accounts.

1) The amount for 2014 has been recalculated compared with previously published information in Vattenfall's 2014 Annual and Sustainability Report as a result of new accounting rules (IFRIC 21) that took effect in 2015. See Note 2 to the consolidated accounts, Important changes in the financial statements compared with the preceding year.

## COMMENTS ON THE CONSOLIDATED BALANCE SHEET

**Capital employed**

Amounts in SEK million	31 Dec. 2015	31 Dec. 2014
Intangible assets: current and non-current	18,655	24,471
Property, plant and equipment	244,563	271,306
Participations in associated companies and joint arrangements	7,002	7,765
Deferred and current tax assets	12,550	11,700
Non-current noninterest-bearing receivables	8,309	7,226
Inventories	16,592	18,502
Trade receivables and other receivables	26,193	31,217
Prepaid expenses and accrued income	5,936	6,398
Unavailable liquidity	6,813	7,272
Other	719	1,071
<b>Total assets excl. financial assets</b>	<b>347,332</b>	<b>386,928</b>
Deferred and current tax liabilities	-23,276	-28,730
Other noninterest-bearing liabilities	-6,273	-5,756
Trade payables and other liabilities	-23,958	-30,641
Accrued expenses and deferred income	-19,969	-18,182
Other	-77	-91
<b>Total noninterest-bearing liabilities</b>	<b>-73,553</b>	<b>-83,400</b>
Other interest-bearing provisions not related to adjusted net debt <sup>1</sup>	-9,188	-9,250
<b>Capital employed</b>	<b>264,591</b>	<b>294,278</b>
<b>Capital employed, average</b>	<b>279,435</b>	<b>293,992</b>

1) Includes personnel-related provisions for non-pension purposes, provisions for tax and legal disputes and certain other provisions.

**Non-current assets**

Non-current assets decreased by SEK 24.8 billion compared with the level on 31 December 2014. This is mainly attributable to the impairment losses that were recognised in the second quarter of 2015, which were partly offset by the net of investments in and depreciation of property, plant and equipment. For further information on impairment losses, see Note 14 to the consolidated accounts, Impairment losses and reversed impairment losses. In addition, the value of Vattenfall's share in the Swedish Nuclear Waste Fund increased by slightly more SEK 2 billion.

**Current assets**

Current assets decreased by SEK 10.1 billion in 2015, mainly owing to a decrease in trade receivables, other receivables and inventories.

**Financial assets as per 31 December**

Amounts in SEK million	2015	2014
Cash and cash equivalents, and short-term investments	44,256	45,068
Committed credit facilities (unutilised)	18,379	18,786

Cash and cash equivalents, and short-term investments decreased by SEK 0.8 billion compared with the level at 31 December 2014.

Committed credit facilities consist of a EUR 2.0 billion Revolving Credit Facility that expires on 10 December 2020, with an option for a one-year extension. As per 31 December 2015, available liquid assets and committed credit facilities amounted to 34% of net sales. Vattenfall's target is to maintain a level at no less than 10% of the Group's net sales, but at least the equivalent of the next 90 days' maturities.

**Interest-bearing liabilities and net debt as per 31 December**

Amounts in SEK million	2015	2014
Hybrid Capital	-18,546	-9,385
Bond issues, commercial paper and liabilities to credit institutions	-68,898	-72,461
Present value of liabilities pertaining to acquisitions of Group companies	—	-19,293
Liabilities to associated companies	-2,751	-2,617
Liabilities to owners of non-controlling interests	-13,041	-12,384
Other liabilities	-7,349	-9,788
<b>Total interest-bearing liabilities</b>	<b>-110,585</b>	<b>-125,928</b>
Cash and cash equivalents	12,351	12,283
Short-term investments	31,905	32,785
Loans to owners of non-controlling interests in foreign Group companies	2,128	1,387
<b>Net debt</b>	<b>-64,201</b>	<b>-79,473</b>

Total interest-bearing liabilities decreased by SEK 15.3 billion compared with the level at 31 December 2014, mainly owing to the fact that cash flow from operating activities exceeded cash flow from investing activities. On 1 July 2015 Vattenfall made the scheduled payment of EUR 2,071.3 million for the remaining 21% of the shares in N.V. Nuon Energy, corresponding to approximately SEK 19 billion. This amount was previously included among interest-bearing liabilities. During 2015, new hybrid bonds were issued on two occasions, and the hybrid bonds issued in 2005 were redeemed. This resulted in a net increase in Hybrid Capital by SEK 9.2 billion. For further information on Hybrid Capital, see Note 40 to the consolidated accounts, Interest-bearing liabilities and related financial derivatives.

**Adjusted gross debt and net debt as per 31 December**

Amounts in SEK million	2015	2014
Total interest-bearing liabilities	-110,585	-125,928
50% of Hybrid Capital <sup>1</sup>	9,273	4,693
Present value of pension obligations	-38,919	-45,298
Provisions for mining, gas and wind operations and other environment related provisions	-19,099	-14,497
Provisions for nuclear power (net) <sup>2</sup>	-32,944	-33,696
Margin calls received	5,307	7,013
Liabilities to owners of non-controlling interests due to consortium agreements	11,939	11,626
<b>Adjusted gross debt</b>	<b>-175,028</b>	<b>-196,087</b>
Reported cash and cash equivalents and short-term investments	44,256	45,068
Unavailable liquidity	-6,813	-7,272
<b>Adjusted cash and cash equivalents and short-term investments</b>	<b>37,443</b>	<b>37,796</b>
<b>Adjusted net debt</b>	<b>-137,585</b>	<b>-158,291</b>

1) 50% of Hybrid Capital is treated as equity by the rating agencies, which thereby reduces adjusted net debt.

2) The calculation is based on Vattenfall's share of ownership in the respective nuclear power plants, less Vattenfall's share in the Swedish Nuclear Waste Fund and liabilities to associated companies. Vattenfall has the following ownership interests in the respective plants: Forsmark 66%, Ringhals 70.4%, Brokdorf 20%, Brunsbüttel 66.7%, Krümmel 50% and Stade 33.3%. (According to a special agreement, Vattenfall is responsible for 100% of the provisions for Ringhals.)

In their assessments of a company's credit strength, the rating agencies and analysts regularly make a number of adjustments of various items on the balance sheet in order to arrive at a figure for adjusted gross and net debt. Vattenfall's calculations of its adjusted gross and net debt are shown in the table above.

Adjusted net debt decreased by SEK 20.7 billion compared with the level on 31 December 2014. The decrease is mainly attributable to the lower level of net debt, the new hybrid bonds issued in March and November, which are classified as 50% equity and thereby reduce adjusted net debt, and lower provisions for pensions as a result of a higher discount rate.

**Equity**

The Group's equity decreased by SEK 12.5 billion. The decrease is mainly attributable to the year's loss of SEK 20 billion. In addition, equity was positively affected by slightly more than SEK 5 billion from cash flow hedges and currency hedges, and by slightly more than SEK 2 billion from recalculations of defined benefit pension plans in Sweden and Germany resulting from higher discount rates.



## CONSOLIDATED STATEMENT OF CASH FLOWS

Amounts in SEK million, 1 January–31 December	Note	2015	2014
<b>Operating activities</b>			
Profit before tax		-28,192	-8,240
Reversal of depreciation, amortisation and impairment losses		55,724	43,270
Tax paid		-1,340	-3,168
Capital gains/losses, net		143	-3,028
Other, incl. non-cash items	48	2,674	3,297
<b>Funds from operations (FFO)</b>		<b>29,009</b>	<b>32,131</b>
Changes in inventories		-553	1,080
Changes in operating receivables		4,074	2,645 <sup>1</sup>
Changes in operating liabilities		5,775	1,685 <sup>1</sup>
Other changes		2,629	2,605
<b>Cash flow from changes in operating assets and operating liabilities</b>		<b>11,925</b>	<b>8,015</b>
<b>Cash flow from operating activities</b>		<b>40,934</b>	<b>40,146</b>
<b>Investing activities</b>			
Acquisitions in Group companies	5	-5	-10
Investments in associated companies and other shares and participations	5	272	222
Other investments in non-current assets	48	-28,993	-29,244
<b>Total investments</b>		<b>-28,726</b>	<b>-29,032</b>
Divestments	48	2,814	12,054
Cash and cash equivalents in acquired companies		—	35
Cash and cash equivalents in divested companies		-563	-513
<b>Cash flow from investing activities</b>		<b>-26,475</b>	<b>-17,456</b>
<b>Cash flow before financing activities</b>		<b>14,459</b>	<b>22,690</b>
<b>Financing activities</b>			
Changes in short-term investments		235	-19,921
Changes in loans to owners of non-controlling interests in foreign Group companies		-783	-1,109
Loans raised <sup>2</sup>		5,088	12,678 <sup>3</sup>
Amortisation of debt pertaining to acquisitions of Group companies		-19,152	—
Amortisation of other debt interests		-10,223	-20,443 <sup>3</sup>
Divestment of shares in Group companies to owners of non-controlling interests		—	491
Effect of early termination of swaps related to financing activities		1,690	—
Redemption of Hybrid Capital		-9,172	—
Issue of Hybrid Capital		18,636	—
Dividends paid to owners		-333	-104
Contribution from owners of non-controlling interests		1,973	1,912
<b>Cash flow from financing activities</b>		<b>-12,041</b>	<b>-26,496</b>
<b>Cash flow for the year</b>		<b>2,418</b>	<b>-3,806</b>
<b>Cash and cash equivalents</b>			
Cash and cash equivalents at start of year		12,283	15,801
Cash and cash equivalents included in assets held for sale		-2,263	—
Cash flow for the year		2,418	-3,806
Translation differences		-87	288
<b>Cash and cash equivalents at end of year</b>		<b>12,351</b>	<b>12,283</b>

**Supplementary information**

Amounts in SEK million, 1 January–31 December	Note	2015	2014
<b>Cash flow before financing activities</b>		<b>14,459</b>	<b>22,690</b>
<b>Financing activities</b>			
Divestment of shares in Group companies to owners of non-controlling interests		—	491
Effects from terminating swaps related to financing activities		1,690	—
Dividends paid to owners		-333	-104
Contribution from owners of non-controlling interests		1,973	1,912
<b>Cash flow after dividend</b>		<b>17,789</b>	<b>24,989</b>
<b>Analysis of change in net debt</b>			
Net debt at start of year		-79,473	-98,998
Cash flow after dividends		17,789	24,989
Changes as a result of valuation at fair value		274	-2,739
Change in interest-bearing liabilities for leasing		3	34
Interest-bearing liabilities/short-term investments acquired/divested		35	145
Changes in liabilities pertaining to acquisitions of Group companies, discounting effects		-160	-322
Cash and cash equivalents included in assets held for sale		-2,263	—
Transfer to liabilities due to changed shareholders' rights		—	3,043
Translation differences on net debt		-406	-5,625
<b>Net debt at end of year</b>		<b>-64,201</b>	<b>-79,473</b>
<b>Free cash flow</b>		<b>25,013</b>	<b>23,234</b>

1) The amount for 2014 has been recalculated compared with previously published information in Vattenfall's 2014 Annual and Sustainability Report as a result of new accounting rules (IFRIC 21) that took effect in 2015. See Note 2 to the consolidated accounts, Important changes in the financial statements compared with the preceding year.

2) Short-term borrowings in which the duration is three months or shorter are reported net.

3) The amount for 2014 has been recalculated compared with previously published information in Vattenfall's 2014 Annual and Sustainability Report as a result of the fact that short-term borrowings in which the duration is three months or shorter are reported net.

## COMMENTS ON THE CONSOLIDATED STATEMENT OF CASH FLOWS

### Funds from operations (FFO)

Funds from operations (FFO) decreased by SEK -3.1 billion to SEK 29.0 billion, mainly owing to lower earnings.

### Change in operating assets and operating liabilities (working capital)

Cash flow from changes in working capital for 2015 increased to SEK 11.9 billion (8.0). This is mainly attributable a change in inventories (SEK -0.5 billion), a net change in operating receivables and operating liabilities (SEK 9.8 billion), and a change in margin calls (SEK 2.6 billion). The net change in operating receivables and operating liabilities pertains mainly to lower receivables in the Customers & Solutions operating segment and an increase in liabilities attributable to CO<sub>2</sub> emission allowances in the Power Generation operating segment.

### Cash flow from investing activities

Cash flow from investing activities amounted to SEK -26.5 billion in 2015 (-17.5). Total investments during the year amounted to SEK 28.7 billion (29.0). In 2015, divestments of assets led to net cash flow of SEK 2.3 billion (11.6).

Amounts in SEK million	2015	2014
Maintenance/replacement investments	15,921	16,912
Growth investments <sup>1</sup>	12,805	12,120
– of which, shares and shareholder contributions	-266	-212
<b>Total investments</b>	<b>28,726</b>	<b>29,032</b>
<b>Total divestments</b>	<b>2,814</b>	<b>12,054</b>
– of which, shares	206	8,875

1) Investments in new capacity.

### Specification of investments

Amounts in SEK million	2015	2014
Hydro power	1,706	1,442 <sup>1</sup>
Nuclear power	4,219	3,924 <sup>1</sup>
Coal power	1,947	5,304 <sup>1</sup>
Gas	174	188
Wind power	8,629	6,526
Biomass, waste	25	14
Other	—	476 <sup>1</sup>
<b>Total electricity generation</b>	<b>16,700</b>	<b>17,874</b>
Fossil-based power	1,949	2,110
Biomass, waste	145	297
Other	1,242	1,312
<b>Total CHP/heat</b>	<b>3,336</b>	<b>3,719</b>
Electricity networks	4,671	5,057
<b>Total electricity networks</b>	<b>4,671</b>	<b>5,057</b>
Purchases of shares, shareholder contributions	-267	-137
Other, excl. purchases of shares	4,286	2,519
<b>Total</b>	<b>28,726</b>	<b>29,032</b>

1) The value for 2014 has been recalculated compared with previously published information in the 2014 Annual and Sustainability Report on account of the fact that prepayments have been allocated to the respective assets instead of being classified as "Other".

### Cash flow from financing activities

Cash flow from financing activities amounted to SEK -12.0 billion (26.5). On 1 July 2015 Vattenfall made the scheduled payment of EUR 2,071.3 million for the remaining 21% of the shares in N.V. Nuon Energy, corresponding to approximately SEK 19 billion. In March Vattenfall launched hybrid bonds of SEK 6 billion and EUR 1 billion (approximately SEK 15 billion combined) in order to refinance an existing hybrid bond of EUR 1 billion issued in 2005. In November Vattenfall placed a hybrid bond issue of USD 400 million (approximately SEK 3.5 billion).

## CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

Amounts in SEK million	Attributable to owner of the Parent Company						Attributable to non-controlling interests	Total equity
	Share capital	Reserve for hedges	Translation reserve	Fair value reserve	Retained earnings	Total		
<b>Balance brought forward 2015</b>	6,585	4,828	-2,707	—	106,554	115,260	13,202	128,462
<b>Profit for the year</b>	—	—	—	—	-16,672	-16,672	-3,094	-19,766
Cash flow hedges – changes in fair value	—	11,335	—	—	—	11,335	19	11,354
Cash flow hedges – dissolved against income statement	—	-5,324	—	—	—	-5,324	1	-5,323
Cash flow hedges – transferred to cost of hedged item	—	-4	—	—	—	-4	1	-3
Hedging of net investments in foreign operations	—	—	1,709	—	—	1,709	—	1,709
Translation differences	—	—	-1,746	—	—	-1,746	-192	-1,938
Remeasurement pertaining to defined benefit obligations	—	—	—	—	2,742	2,742	125	2,867
Income tax relating to other comprehensive income	—	-1,375	-245	—	-818	-2,438	-46	-2,484
<b>Total other comprehensive income for the year</b>	—	4,632	-282	—	1,924	6,274	-92	6,182
<b>Total comprehensive income for the year</b>	—	4,632	-282	—	-14,748	-10,398	-3,186	-13,584
Dividends paid to owners	—	—	—	—	—	—	-333	-333
Group contributions from (+)/to (-) owners of non-controlling interests	—	—	—	—	—	—	355	355
Additional purchase price pertaining to previous share purchase	—	—	—	—	-878	-878	—	-878
Contribution from minority interest	—	—	—	—	—	—	1,973	1,973
Other changes in ownership	—	—	—	—	—	—	-39	-39
<b>Total transactions with equity holders</b>	—	—	—	—	-878	-878	1,956	1,078
<b>Balance carried forward 2015</b>	6,585	9,460	-2,989	—	90,928	103,984	11,972 <sup>1</sup>	115,956

Amounts in SEK million	Attributable to owner of the Parent Company						Attributable to non-controlling interests	Total equity
	Share capital	Reserve for hedges	Translation reserve	Fair value reserve	Retained earnings	Total		
<b>Balance brought forward 2014</b>	6,585	5,315	-10,470	182	118,758	120,370	10,348	130,718
<b>Profit for the year</b>	—	—	—	—	-8,178	-8,178	-106	-8,284
Cash flow hedges – changes in fair value	—	5,209	—	—	—	5,209	34	5,243
Cash flow hedges – dissolved against income statement	—	-5,871	—	—	—	-5,871	—	-5,871
Cash flow hedges – transferred to cost of hedged item	—	-6	—	—	—	-6	3	-3
Hedging of net investments in foreign operations	—	—	-5,452	—	—	-5,452	—	-5,452
Translation differences and exchange rate effects net, divested companies	—	—	101	—	—	101	—	101
Remeasurement of available-for-sale financial assets (unrealised)	—	—	—	-182	—	-182	—	-182
Translation differences	—	—	10,056	—	—	10,056	397	10,453
Remeasurement pertaining to defined benefit obligations	—	—	—	—	-8,841	-8,841	-289	-9,130
Income tax relating to other comprehensive income	—	181	3,058	—	2,513	5,752	77	5,829
<b>Total other comprehensive income for the year</b>	—	-487	7,763	-182	-6,328	766	222	988
<b>Total comprehensive income for the year</b>	—	-487	7,763	-182	-14,506	-7,412	116	-7,296
Dividends paid to owners	—	—	—	—	—	—	-104	-104
Group contributions from (+)/to (-) owners of non-controlling interests	—	—	—	—	—	—	484	484
Changes in ownership in Group companies on divestments of shares to owners of non-controlling interests	—	—	—	—	-33	-33	387	354
Additional purchase price pertaining to previous share purchase	—	—	—	—	—	—	1,912	1,912
Other changes in ownership	—	—	—	—	2,335	2,335	59	2,394
<b>Total transactions with equity holders</b>	—	—	—	—	2,302	2,302	2,738	5,040
<b>Balance carried forward 2014</b>	6,585	4,828	-2,707	—	106,554	115,260	13,202 <sup>1</sup>	128,462

See also Note 49 to the consolidated accounts, Specifications of equity.

1) Of which, Reserve for cash flow hedges SEK 11 million (1).



## NOTES TO THE CONSOLIDATED ACCOUNTS

Amounts in SEK million unless indicated otherwise.

1 Company information	91
2 Important changes in the financial statements compared with the preceding year	91
3 Accounting policies	91
4 Important estimations and assessments in the preparation of the financial statements	97
5 Acquired and divested operations	98
6 Exchange rates	98
7 Net sales	98
8 Operating segments	98
9 Information about geographical areas	100
10 Cost of products sold	100
11 Other operating income	100
12 Other operating expenses	100
13 Depreciation and amortisation	100
14 Impairment losses and reversed impairment losses	100
15 Operating expenses according to type	102
16 Financial income	102
17 Financial expenses	102
18 Ineffectiveness of hedges	102
19 Income tax expense	103
20 Non-controlling interests	104
21 Leasing	105
22 Auditors' fees	105
23 Intangible assets: non-current	106
24 Property, plant and equipment	108
25 Investment property	110
26 Shares and participations owned by the Parent Company Vattenfall AB and other Group companies	111
27 Participations in associated companies and joint arrangements	114
28 Other shares and participations	116
29 Share in the Swedish Nuclear Waste Fund	116
30 Derivative assets and derivative liabilities	117
31 Other non-current receivables	117
32 Inventories	117
33 Intangible assets: current	118
34 Trade receivables and other receivables	118
35 Advance payments paid	119
36 Prepaid expenses and accrued income	119
37 Short-term investments	119
38 Cash and cash equivalents	119
39 Assets held for sale	119
40 Interest-bearing liabilities and related financial derivatives	120
41 Pension provisions	121
42 Other interest-bearing provisions	123
43 Other noninterest-bearing liabilities (non-current)	124
44 Trade payables and other liabilities	124
45 Advance payments received	124
46 Accrued expenses and deferred income	124
47 Financial instruments by category, offsetting of financial assets and liabilities, and financial instruments' effects on income	125
48 Specifications of the cash flow statement	129
49 Specifications of equity	130
50 Collateral	131
51 Contingent liabilities	131
52 Commitments under consortium agreements	132
53 Number of employees and personnel costs	132
54 Gender distribution among senior executives	134
55 Related party disclosures	134
56 Events after the balance sheet date	134

**Note 1 Company information**

Vattenfall's year-end report for 2015 was approved for publication on 2 February 2016 in accordance with a decision by the Board of Directors. The Annual and Sustainability Report was approved in accordance with a decision by the Board of Directors on 18 March 2016.

The Parent Company, Vattenfall AB (publ) with corporate identity number 556036-2138, is a limited liability company with its registered office in Solna, Sweden and with the mailing address SE-169 92 Stockholm, Sweden.

The consolidated balance sheet and income statement included in Vattenfall's Annual and Sustainability Report will be submitted at the Annual General Meeting (AGM) on 27 April 2016.

The main activities of the Group are described in Note 8 to the consolidated accounts. Operating segments.

**Note 2 Important changes in the financial statements compared with the preceding year****Recalculation of financial statements for 2014**

As shown in Note 3 to the consolidated accounts, Accounting policies, new accounting rules apply as from 2015 in accordance with IFRIC 21 – "Levies". For Vattenfall, conformity with IFRIC 21 entails that property tax in Sweden has been expensed in its entirety already by 1 January 2015 in the amount of SEK 3 billion, and that the tax on thermal capacity in Sweden has been expensed by SEK 0.8 billion. As a result, the balance sheet total as per 1 January 2015 has increased by SEK 3.8 billion. Previously, the liability for Swedish property tax was recognised progressively during the year. The tax on thermal capacity of nuclear reactors is assessed during the time a nuclear reactor is in operation and during the first 90 days it has been out of operation. The balance sheet for 2014 has been recalculated as a result of IFRIC 21 by SEK 0.8 billion.

**Note 3 Accounting policies****Conformity with standards and regulations**

The consolidated accounts have been prepared in accordance with the International Financial Reporting Standards (IFRS) issued by the International Accounting Standards Board (IASB) as well as the interpretations issued by the IFRS Interpretations Committee (IFRIC) as endorsed by the European Commission for application within the EU.

In addition, recommendation RFR 1 – "Supplementary Accounting Policies for Groups", issued by the Swedish Financial Reporting Board (RFR), has been applied. RFR 1 specifies the additions to the IFRS disclosure requirements that are required by the Swedish Annual Accounts Act.

**Basis of measurement**

Assets and liabilities are reported at cost or amortised cost, with the exception of certain financial assets and liabilities and inventories held for trading, which are measured at fair value. Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Financial assets and liabilities measured at fair value consist of holdings in the categories financial assets and liabilities recognised at fair value through profit or loss, holdings in the category available-for-sale financial assets, and all derivatives.

Vattenfall uses valuation methods that reflect the fair value of an asset or liability appropriately. Financial assets and liabilities that are measured at fair value are described below according to the fair value hierarchy (levels), which in IFRS 13 is defined as follows:

- Level 1: Quoted prices (unadjusted) in active markets for identical assets or liabilities
- Level 2: Inputs other than quoted prices included in Level 1 that are observable for the asset or liability, either directly (that is, as prices) or indirectly (that is, derived from prices). In Level 2 Vattenfall reports mainly commodity derivatives, currency-forward contracts and interest rate swaps
- Level 3: Inputs for the asset or liability that is not based on observable market data (that is, unobservable inputs)

Classification into a level is determined by the lowest level input that is significant for the measurement of the fair value at the end of a reporting period. Vattenfall assesses whether reclassifications between the levels are necessary. Observable input data are used whenever possible and relevant. For assets and liabilities included in Level 3, fair value is modelled either on the basis of market prices with adjustments that consider specific terms of a contract, or on the basis of unobservable inputs such as future cash flows. The assumptions for the estimated cash flows are monitored on a regular basis and adjusted if necessary.

**Functional and presentation currencies**

The functional currency is the currency of the primary economic environment in which each Group entity operates.

The Parent Company's functional currency is Swedish kronor (SEK), which is also the presentation currency of both the Parent Company and the Group. This

means that the financial statements are presented in Swedish kronor. Unless otherwise stated, all figures are rounded off to the nearest million Swedish kronor (SEK million).

**Estimations and assessments**

Preparation of the financial statements in accordance with IFRS requires the company's executive management and Board of Directors to make estimations and assessments as well as to make assumptions that affect the application of the accounting policies and the reported amounts of assets, liabilities, income and expenses.

Assessments made by the company's executive management and Board of Directors, when applying IFRS, that have a material effect on the financial statements, and estimations that may result in substantial adjustments to the following year's financial statements, are described in greater detail in Note 4 to the consolidated accounts, Important estimations and assessments in the preparation of the financial statements.

**Accounting policies**

The accounting policies of the Group described below, with the exception of what is stated under the heading New IFRSs and interpretations effective as of 2015, have been applied consistently for all periods presented in the consolidated financial statements.

**New IFRSs and interpretations effective as from 2015**

The following new standards and amendments to standards and interpretations that have been endorsed by the EU are effective as of the 2015 financial year.

IFRIC 21 – "Levies". The interpretation clarifies when a liability for levies should be recognised. Levies are fees and taxes charged to companies by governmental authorities in accordance with laws and regulations, except income taxes, penalties and fines. The interpretation clarifies that a liability should be recognised when a company has an obligation to pay due to a past event. A liability is recognised progressively if the obligating event occurs over a period of time. If an obligation to pay a levy is triggered when a minimum threshold is reached, the liability is not recognised until the minimum threshold is reached. This interpretation has only a marginal effect on Vattenfall's financial statements.

Amendments to IAS 19 – "Defined Benefit Plans: Employee Contributions", entail clarifications on how contributions to a pension plan from employees or third parties should be recognised. The clarifications do not change the way Vattenfall recognises these fees.

"Annual improvements to IFRSs 2010–2012 Cycle" and "Annual improvements to IFRSs 2011–2013 Cycle" aim to streamline and clarify the accounting standards concerning presentation, recognition and measurement, including changes in terminology and amendments of an editorial nature. The amendments have no significant effect on Vattenfall's financial statements.

**New IFRSs and interpretations not yet adopted**

New standards, amendments to standards and interpretations endorsed by the EU as per 31 December 2015, which are effective as of the 2016 financial year and which have not been applied prospectively:

Amendments in IAS 27 – "Equity Method in Separate Financial Statements" entail that the equity method may be used as an accounting option for investments in subsidiaries, joint ventures and associates for entities that report in separate financial statements according to IAS 27. Vattenfall is not affected by these changes, as the accounts of Vattenfall's parent company, Vattenfall AB, are prepared in accordance with the Annual Accounts Act and RFR 2 – "Accounting for Legal Entities".

Amendments in IAS 16 and IAS 38 entail a clarification of acceptable policies for depreciation and amortisation of tangible and intangible non-current assets. The clarification has no significant effect on Vattenfall's financial statements.

Amendments in IAS 1: "Disclosure initiative" encourage companies to exercise professional judgement when determining which information are to be presented in the financial statements. The amendments clarify that the materiality aspect shall be applied for the report as a whole and that the inclusion of none essential information may obscure the usefulness of the financial information. The amendments also clarify that companies shall exercise professional judgement when determining where and in which order financial information is to be presented. The amendments and clarification enable Vattenfall to reduce none essential information in the financial statements and thereby improve readability.

Amendments in IAS 16 and IAS 41 – "Bearer Plants" entail that so-called bearer plants are to be stated at cost in accordance with IAS 16 instead of at fair value in accordance with IAS 41. The change will not have any significant effect on Vattenfall's financial statements.

Amendments in IFRS 11 add guidance clarifying that when a part-owner of a joint operation acquires a business as defined in IFRS 3, the acquirer shall apply IFRS 3 when accounting for the acquisition. The change will not have any significant effect on Vattenfall's financial statements.

"Annual improvements to IFRSs 2012–2014 Cycle" aim to streamline and clarify the accounting standards by changes that affect presentation, recognition and measurement, and changes in terminology or amendments of an editorial nature. The changes have no significant impact on Vattenfall's financial statements.

New standards, amendments to standards and interpretations issued by IASB/IFRIC which at 31 December 2015 had not yet been endorsed by the EU:

IFRS 9 – “Financial Instruments” pertains to recognition of financial assets and liabilities and replaces IAS 39 – “Financial Instruments”: Recognition and Measurement. As in IAS 39, financial assets are classified in various categories, of which certain assets are measured at amortised cost and others at fair value. IFRS 9 introduces other categories than those referred to in IAS 39. IFRS 9 also introduces a new model for impairment of financial assets. One aim of the new model is that credit losses shall be recognised earlier than according to IAS 39. Financial liabilities are in essence treated the same in IFRS 9 and IAS 39. However, for liabilities recognised at fair value, the portion of the change in fair value that is attributable to own credit risk is to be reported in other comprehensive income instead of through profit or loss, inasmuch as this does not cause an inconsistency in the reporting. The model for hedge accounting may lead to a situation in which additional economic hedging strategies may meet the requirements for hedge accounting in IFRS 9. Vattenfall is evaluating the effects of the new standard. Provided endorsement by the EU, IFRS 9 is expected to be effective as from 2018.

IFRS 14 – “Regulatory Deferral Accounts” is an interim standard entailing that an entity that conducts rate regulated activity, that is, an operation whose income or profitability is regulated in some way, may account for regulatory deferral account balances upon initial adoption of IFRS. Entities that already report in accordance with IFRS may not apply IFRS 14. Pending a new standard for reporting of rate regulated activities, the EU has decided to not proceed with the endorsement process for IFRS 14.

IFRS 15 – “Revenue from Contracts with Customers” is a new revenue recognition model that provides a single, principles-based standard for all revenue recognition, regardless of the type of transaction or sector. IFRS 15 replaces all previously issued standards and interpretations that address revenue recognition, including IAS 11, IAS 18, IFRIC 13, IFRIC 15 and IFRIC 18. Vattenfall is evaluating the effects of the new standard. Provided endorsement by the EU, IFRS 15 is expected to be effective as from 2018.

IFRS 16 – “Leases” is a new standard for reporting leases that requires lessees to recognise assets and liabilities for all leases unless the lease term is 12 months or less or has a low value. Reporting for the lessor will essentially be unchanged. IFRS 16 replaces IAS 17 – “Leases” along with the accompanying interpretations IFRIC 4, SIC-15 and SIC-27. Provided endorsement by the EU, IFRS 16 is expected to be effective as from 2019.

Amendments in IFRS 10 and IAS 28 – “Sale or Contribution of Assets Between an Investor and its Associate or Joint Venture” address a conflict between IFRS 10 and IAS 28 and clarify that in a transaction involving an associate or joint venture, the extent of gain or loss recognition depends on whether the assets sold or contributed constitute a business. The EU has decided to push back the approval process for the amendments in IFRS 10 and IAS 28 indefinitely.

Amendments in IFRS 10, IFRS 12 and IAS 28: “Investment companies” introduce certain, minor clarifications regarding the requirements for reporting of investment companies. Vattenfall is not an investment company and thus is not affected by these amendments.

Amendments to IAS 7 – “Statement of Cash Flows” are part of the so-called Disclosure Initiative and entail clarification and some extension of disclosures about cash flow pertaining to financial liabilities. Provided endorsement by the EU, the amendments to IAS 7 is expected to be effective as from 2017.

Amendments to IAS 12 – “Income Taxes” entail a clarification that temporary differences arise in the fair value of financial instruments even if the company intends to hold these to maturity. Provided endorsement by the EU, the amendments to IAS 12 is expected to be effective as from 2017.

### Segment information

An operating segment is a component of the Group that engages in business activities from which it may earn revenues and incur expenses and for which discrete financial information is available. An operating segment’s result is reviewed regularly by “the chief operating decision maker”, who in Vattenfall is the Chief Executive Officer, to assess its performance and to make decisions about resources to be allocated to the operating segment. Segmental information (see Note 8 to the consolidated accounts, Operating segments) is only provided for the Group.

### Classification of current and non-current assets and liabilities

An asset is classified as a current asset when it is held primarily for the purpose of trading or is expected to be realised within twelve months after the balance sheet date or consists of cash and cash equivalents, provided it is not subject to restrictions on its exchange or use for regulating a liability at least twelve months after the balance sheet date. All other assets are classified as non-current assets.

A liability is classified as a current liability when it is held primarily for the purpose of trading or is expected to be settled within twelve months after the balance sheet date or one for which the Group does not have an unconditional right to defer settlement of for a minimum of twelve months after the balance sheet date. All other liabilities are classified as non-current liabilities.

### Assets held for sale

Non-current assets (or disposal groups) are classified as held for sale if their carrying amount will be recovered principally through a sale transaction rather than through continuing use. In this connection a number of criteria must be met, see also Note 4 to the consolidated accounts, Important estimations and assessments in the preparation of the financial statements. The assets are valued at the lower of their carrying amount and fair value less costs to sell and are not subject to amortisation or depreciation.

Assets (and liabilities) held for sale are classified as current assets (current liabilities) when the sale transaction is expected to be settled within twelve months after the balance sheet date.

### Principles of consolidation

Starting in 2014, the consolidated financial statements are prepared in accordance with the principles set forth in IFRS 10 – “Consolidated Financial Statements”. The consolidated financial statements cover the Parent Company, subsidiaries, associated companies, joint ventures and joint arrangements that are reported as a joint operation according to IFRS 11.

### Subsidiaries

Subsidiaries are all entities over which the Parent Company has control. Control is considered to exist when the following three criteria are met: (i) the investor is exposed to or is entitled to a variable return from the investment, (ii) the investor has the opportunity to influence the return through its opportunity to govern the company, and (iii) there is a link between the return that is received and the opportunity to govern the company. By influence is meant the rights that allow the investor to govern the relevant business, that is, the business which significantly influences the company’s return.

Business combinations are accounted for using the purchase method. This method entails that the acquisition of a subsidiary is considered to be a transaction through which the Group indirectly acquires the subsidiary’s assets and takes over its liabilities and contingent liabilities. The consideration transferred includes the fair value of any asset or liability resulting from a contingent consideration agreement.

Through purchase price allocation (PPA) of the business acquisition, the cost of the participating interests or business activities is established as well as the fair value of acquired identifiable assets, assumed liabilities and contingent liabilities. Deferred tax is taken into account for differences between the carrying amount and the corresponding tax base on all items except goodwill. The difference between the cost of the subsidiaries’ shares and the fair value of acquired assets, assumed liabilities and contingent liabilities constitutes goodwill. If the cost of the subsidiaries’ shares is less than the fair value of the net assets of the subsidiary acquired, the difference is recognised directly in the consolidated income statement. There is a choice on an acquisition-by-acquisition basis to measure the non-controlling interest in the acquiree at fair value or at the proportionate share of the acquiree’s net assets.

Contingent payments are classified as liabilities subsequently remeasured through profit or loss.

All acquisition-related costs are expensed.

The subsidiary’s financial statements, which are prepared in accordance with the Group’s accounting policies, are included in the consolidated accounts from the point of acquisition to the date when control ceases.

Acquisitions and divestments of non-controlling interests in subsidiaries are recognised in equity.

When the Group ceases to have control in a subsidiary, any retained interest in the entity is remeasured to its fair value, with the change in carrying amount recognised in profit or loss. The fair value is the initial carrying amount for the purposes of subsequently accounting for the retained interest as an associated company, joint venture or financial asset.

A discontinued operation is reported separately from continuing operations if the discontinued operation amounts to a significant value.

### Joint arrangements

A joint arrangement is an arrangement over which two or more parties have joint control. Joint arrangements are classified as a joint operation or joint venture. A joint operation entails that the parties that have joint control of the arrangement have rights to the assets, and obligations for the liabilities, relating to the arrangement. A joint venture entails that the parties that have joint control of the arrangement have rights to the net assets of the arrangement. In a joint operation, the respective owners recognise in relation to their interest in the joint organisation: their assets and liabilities as well as their respective share of assets and liabilities held or incurred jointly; revenue from the sale of their respective shares of the output of the joint operation and their share of the revenue from the sale of the output of the joint operation; and their expenses, including the share of any expenses incurred jointly. Joint ventures are reported in accordance with the equity method.

### Associated companies

Associated companies are companies in which the Group has a significant – but not controlling – influence or joint control with other owners over their operational and financial management, usually through shareholdings corresponding

to between 20% and 50% of the votes. In conjunction with the acquisition of an associated company, a purchase price allocation similar to that of a business combination is made. Identifiable surplus values are handled in a similar manner to surplus values in business combinations. From the point at which the significant influence is acquired, participations in associated companies are reported in the consolidated accounts in accordance with the equity method. The equity method entails that the value of the shareholding in associated companies reported in the consolidated accounts corresponds to the Group's share of the associated companies' equity plus consolidated goodwill and any unamortised value of consolidated surplus and deficit values less internal profit reserves. Dividends received from an associated company reduce the carrying amount of the investment.

In the consolidated income statement, the item Participations in the results of associated companies is shown net after tax.

The equity method is applied from the point of acquisition up to the point when the significant influence ceases.

#### Transactions that are eliminated upon consolidation

Intra-Group receivables and liabilities, income and expenses, as well as gains or losses arising from intra-Group transactions between Group companies, are eliminated in their entirety when preparing the consolidated accounts.

Gains arising from transactions with associated companies and joint ventures are eliminated to an extent that corresponds to the Group's holding in the company. Losses are eliminated in the same manner as gains, but are treated as an indicator of impairment.

#### Foreign currencies

##### Transactions in foreign currencies

Transactions in foreign currencies are translated to the functional currency at the exchange rate on the day of the transaction. On the balance sheet date, monetary assets and liabilities in foreign currencies are translated to the functional currency at the exchange rate applicable on that day. Exchange rate differences arising from translation of currencies are reported in the income statement. Operationally derived exchange gains and losses are shown under Other operating income and Other operating expenses, respectively. Financially derived exchange gains and losses are shown as Financial income and expenses, respectively.

##### Financial reporting of foreign activities

Assets and liabilities of foreign activities, including goodwill and other consolidated surplus and deficit values, are translated to SEK at the exchange rate in effect on the balance sheet date. Income and expenses of foreign activities are translated to SEK using an average exchange rate. Translation differences arising from foreign currency translation of foreign activities are reported in Other comprehensive income.

For the Vattenfall Group, key exchange rates applied in the accounts are provided in Note 6 to the consolidated accounts, Exchange rates.

#### Revenue recognition

Net sales include sales proceeds from core businesses, that is, generation, sales and distribution of electricity, sales and distribution of heat, sales of gas, energy trading and other revenues such as service and consulting assignments and connection fees.

##### Sales of electricity, heat and gas

Sales of electricity, heat and gas and related distribution are recognised as revenue at the time of delivery, excluding value-added tax and excise taxes.

Vattenfall's electricity transactions between Nordic electricity generation and sales activities in the Nordic countries are transactions vis-à-vis the Nordic electricity exchange. The purchases that the sales activities make from the Nordic electricity exchange are, at the Group level, offset against sales of generation to the Nordic electricity exchange.

The change in fair value of derivatives, including commodity derivatives, that does not qualify for hedge accounting is reported in gross profit unless it does not relate to derivative instruments used in financial activities.

##### Other revenues

In the case of service and consulting assignments, the percentage of completion method is applied, that is, revenues and expenses are reported in proportion to the degree of completion. The degree of completion is established according to the relation between accrued expenses on the balance sheet date and estimated total expenses. In cases where losses are expected, a provision is established immediately.

Connection fees for electricity distribution and heat distribution are reported as revenues to the extent that they are not required to cover future obligations.

#### Government grants

Grants are reported at fair value when it can reasonably be assumed that the grant will be received and that the Group will meet the conditions of the grant.

A grant tied to a non-current asset reduces the reported cost of the asset.

A grant intended to cover expenses is reported in the income statement as Other operating income.

#### Operating expenses

##### Operating leases

Expenses paid for operating leases are reported in the income statement on a straight-line basis over the leasing period. For a definition of operating leases, see below under the heading Property, plant and equipment/Leasing.

#### Financial income and financial expenses

##### Financial income

Financial income consists of interest income on bank balances, receivables and interest-bearing securities, returns from the Swedish Nuclear Waste Fund, dividend income, exchange rate differences, and positive changes in values of financial investments and derivative instruments used in financial activities.

Interest income is adjusted for transaction costs and any rebates, premiums and other differences between the original value of the receivable and the amount received when due. Interest income is reported as it is earned. The calculation is made on the basis of the return on underlying assets in accordance with the effective interest method.

Dividend income is reported when the right to receive payment is established.

##### Financial expenses

Financial expenses consist of interest expenses on loans, discounting effects and interest attributable to provisions, exchange rate differences, and negative changes in values of financial investments and derivative instruments used in the financial activities. Discounting effects are defined here as the periodic change of the present value which reflects the time value of money.

Issue expenses and similar direct transaction costs for raising loans are distributed over the term of the loan in accordance with the effective interest method.

Borrowing costs directly attributable to investment projects in non-current assets which take a substantial period of time to complete are not reported as a financial expense but should be included in the cost of the non-current asset during the construction period.

Leasing fees pertaining to finance leases are distributed between interest expense and amortisation of the outstanding debt. Interest expenses are distributed over the leasing period so that each accounting period is charged in the amount corresponding to a fixed interest rate for the reported debt in each period. Variable fees are carried as an expense in the period in which they arise.

#### Financial assets and financial liabilities

##### General principles

Financial instruments are reported initially at cost, corresponding to the instrument's fair value plus transaction costs for all financial instruments, except for those that belong to the category "financial assets at fair value through profit or loss" and all derivatives, which are reported at fair value excluding transaction costs.

A financial asset or financial liability is recognised on the balance sheet when Vattenfall becomes a party to such in accordance with terms of the instrument's contract. A trade receivable is recognised on the balance sheet when an invoice has been sent. A liability is recognised when the counterparty has performed a service and a contractual obligation to pay exists, even if the invoice has not yet been received. A trade payable is recognised when the invoice has been received.

A financial asset is derecognised from the balance sheet when the rights under the contract are sold, expire, or when Vattenfall no longer retains the risks and rewards of ownership of the asset. The same applies for parts of a financial asset. A financial liability is derecognised from the balance sheet when the contractual obligation has been fulfilled or in some other way extinguished. The same applies for parts of a financial liability.

Foreign exchange gains and losses concerning operating receivables and liabilities in foreign currencies are reported under operating profit, while foreign exchange gains and losses concerning other receivables and liabilities in foreign currencies are reported under net financial items.

For financial instruments traded in active financial markets, the fair value is set at the rate applicable when the market closes on the balance sheet date. The same rule applies for fixing the fair value of bilaterally traded financial instruments (OTC trading). For unlisted financial instruments, fair value is set by discounting estimated future cash flows. Discounting is done using discounting factors based on return curves in the cash flows of the respective currencies. The return curves are based on the market interest rates, such as swap rates, that apply on the balance sheet date.

##### Financial assets

Financial assets are classified in various categories depending on the purpose of the acquisition of the financial asset. The classification is determined at the original point of acquisition.

Settlement day accounting is applied for spot purchases and spot sales of financial assets.

##### Financial assets at fair value through profit or loss

This category includes assets classified as held for trading, which means that the intention is for them to be divested in the near term. Derivative instruments



not held for hedging purposes are always regarded as held for trading. Fair value of currency forward contracts is calculated by discounting the difference between the contracted forward rate and the forward rate that can be contracted on the balance sheet date for the remaining contract period. Discounting is done at a risk-free interest rate based on government bonds. Fair value of interest rate swaps is based on a discounting of calculated future cash flows in accordance with the contract's terms and due dates, based on the market rate of interest. Fair value of options is based on quoted prices, where such are available. The value of unquoted options is calculated using the Black-Scholes model, based on underlying market data.

Fair value of commodity contracts is calculated by discounting the difference between the contracted forward price and the contracted forward price that can be obtained on the balance sheet date for the remaining contract period.

For Vattenfall, the category "Financial assets at fair value through profit or loss" also includes short-term liquid investments with terms of less than three months, since Vattenfall follows up and measures these based on fair values. The category also includes short-term investments with original maturities in excess of three months. For listed securities, fair value is based on the quoted buying price on the balance sheet date. For other short-term investments, fair value is calculated by discounting estimated future cash flows in accordance with the contract's terms and maturity dates, and based on the market rate of interest for similar instruments on the balance sheet date.

The assets are remeasured on a continuous basis to fair value, with changes in value presented in profit or loss.

#### *Loans and trade receivables*

Loans and receivables are financial assets with fixed payments or payments whose amounts can be determined. Receivables arise when the company provides money, goods and services directly to the debtor without the intention of trading in the receivable rights. Acquired receivables are also covered. Loans and trade receivables are measured at amortised cost. Amortised cost is defined as the value at which a financial asset or liability is stated when it is initially recorded on the balance sheet, less any repayments, and with additions or deductions for the distribution over time of any differences between the amount initially recognised and the repayment amount.

Trade receivables are reported at the amount expected to be paid, that is, less doubtful debts. Impairment losses on trade receivables are reported under operating expenses. Trade receivables have a short anticipated term and are therefore valued at a nominal amount without discounting.

Fair value of loans is calculated for disclosure purposes by discounting future cash flows using the current interest rate. For trade receivables, the reported value is considered to reflect fair value.

The category Loans and trade receivables also includes Cash and bank balances, that is, immediately available balances with banks and similar institutions, and Shares in the Swedish Nuclear Waste Fund.

#### *Available-for-sale financial assets*

Financial assets that are available for sale are measured at fair value, with changes in value recognised in Other comprehensive income. On the date that the assets are derecognised from the balance sheet, any previously recognised accumulated gain or loss in Other comprehensive income is transferred to the income statement.

Holdings in listed companies are measured based on the share price on the balance sheet date.

Shares and participations for which there are no balance sheet date quotations and for which a fair value cannot be established are valued at cost, after taking accumulated impairment losses into account.

#### **Financial liabilities**

Financial liabilities have been classified in various categories depending on the purpose of the acquisition of the financial liability. The classification is determined at the date of original acquisition.

#### *Financial liabilities at fair value through profit or loss*

Derivative instruments not held for hedging purposes are always classified in this category. These financial liabilities are measured at fair value with changes in value recognised in profit or loss. For a description of how fair value is measured, see above under the heading "Financial assets at fair value through profit or loss".

#### *Other financial liabilities*

In this category, interest-bearing and noninterest-bearing financial liabilities that are not held for trading purposes are reported. Other financial liabilities are measured at amortised cost.

Trade liabilities have a short anticipated term and are therefore valued at a nominal amount without discounting.

Fair value of other financial liabilities is calculated for disclosure purposes by discounting future cash flows using the current interest rate for the remaining term, with the exception of trade payables, where the reported value is considered to reflect fair value.

Liabilities included in a hedge relationship are reported in accordance with the principles described below.

#### **Derivative instruments**

Vattenfall uses various types of derivative instruments (forwards, futures and swaps) to hedge various financial risks, primarily interest rate risks, currency risks and commodity price risks.

Derivative assets are reported as a separate line item on the balance sheet under non-current assets and current assets, respectively, while derivative liabilities are reported as a separate line item under non-current liabilities and current liabilities, respectively.

Derivative instruments are reported at fair value on the balance sheet date. The reporting of changes in value depends on whether the derivative instrument is classified as a hedge or not. In a situation where hedging is not applied, the change in value is recognised in profit or loss in the period in which it arises. Based on the purpose of the contract, changes in value are reported either under operating profit or as financial income/expense. Effects of hedge accounting are described below.

#### **Embedded derivatives**

Embedded derivatives are parts of another contract (the host contract), whose terms and conditions meet the definition of a derivative instrument. In cases where embedded derivatives are identified, and where the risk profile of the embedded derivative is not considered to be closely related to the risk profile of the host contract, the embedded derivative is separated and accounted for as if it were a free-standing derivative instrument, in accordance with what is described under the heading Derivative instruments above.

#### **Hedge accounting**

Hedge accounting is applied for derivative instruments that are included in a documented hedge relationship. For hedge accounting to be applied, a direct connection between the hedge and the hedged item is required. Further, it is necessary for the hedge to protect the risk effectively as intended, that the effectiveness of the measure can be demonstrated at all times to be sufficiently high through effectiveness testing, and that hedging documentation has been prepared. The reporting of changes in value depends on the type of hedge entered into.

#### *Cash flow hedges*

Cash flow hedges are used primarily in the following cases: i) when forward commodity contracts are used to hedge commodity price risk in future purchases and sales, ii) when forward exchange rate contracts are used to hedge currency risk in future purchases and sales in foreign currencies, and iii) when interest rate swaps are used to replace borrowing at a floating interest rate with a fixed interest rate.

For derivative instruments that constitute a hedge instrument in a cash flow hedge, the effective part of the change in value is reported in Other comprehensive income while the ineffective part is recognised directly in profit or loss. The part of the change in value that is reported in Other comprehensive income is then transferred to the income statement in the period when the hedged item affects the income statement. In cases where the hedged item refers to a future transaction, which is later capitalised as a non-financial asset or liability on the balance sheet (for example, when hedging future purchases of non-current assets in a foreign currency), the part of the change in value reported in Other comprehensive income is transferred to and included in the cost of the asset or liability.

If the conditions for hedging are no longer met, the accumulated changes in value that were reported in Other comprehensive income are transferred to the income statement/balance sheet in the later period when the hedged item affects the income statement/balance sheet. Changes in value from the day on which the conditions for hedging ceased to be met are recognised directly in profit or loss. If the hedged transaction is no longer expected to occur, the hedges accumulated changes in value are immediately transferred from Other comprehensive income to the income statement.

#### *Hedges of fair value*

For hedges of fair value, hedge accounting is applied in cases where the hedge pertains to an item that is normally stated at amortised cost. In such cases, hedge accounting entails that changes in fair value of the hedged item relating to the hedged risk are recognised in profit or loss when they occur. The carrying amount of the hedged item is adjusted with these changes.

If a hedge no longer meets the criteria for hedge accounting, the adjustment of the carrying amount of the hedged item for which the effective interest method is used will be allocated over the remaining term in the income statement.

A hedge of fair value is primarily used in cases where interest rate swaps are used to replace borrowing at a fixed interest rate with a floating interest rate.

#### *Hedges of net investments in foreign operations*

For derivative instruments and loans in foreign currencies that constitute hedge instruments in hedging of net investments in foreign operations, the effective part of the change in value is reported in Other comprehensive income while the ineffective part is recognised directly in profit or loss. The changes in value reported in Other comprehensive income are transferred to the income statement at the later date when the foreign activity is divested.



Hedging of net investments is primarily used when forward exchange rate contracts and loans in foreign currencies are used to hedge the currency risk of the company's investments in foreign subsidiaries.

#### **Intangible assets: non-current**

##### **Capitalised development costs**

Development costs resulting from the application of research findings or other knowledge to produce new or improved products or processes are reported as an asset on the balance sheet from the time when the product or process is expected to become technically and commercially viable and the company has sufficient resources to complete the development work and subsequently use or sell the intangible assets. The reported value includes costs for materials, direct costs for salaries and indirect costs, all of which can be attributed to the asset. Other development costs are recognised in profit or loss as expenses as they arise. On the balance sheet, development costs are reported at cost less accumulated amortisation and any impairment losses.

Research costs with the purpose of obtaining new scientific or technical knowledge are reported as expenses as they arise.

##### **Goodwill**

Goodwill represents the difference between the cost of a business combination and the fair value at the point of acquisition of acquired assets, assumed liabilities and contingent liabilities. The difference is the cost of goodwill.

Goodwill is measured at cost less any accumulated impairment losses. Goodwill is not subject to amortisation but is tested at least annually for impairment. Goodwill that arises on acquisition of associated companies or joint ventures is included in the carrying amount of Participations in associated companies and joint ventures.

##### **Other intangible non-current assets**

Other intangible non-current assets such as concessions, patents, licences, trademarks and similar rights as well as renting rights, mining rights and similar rights acquired by the Group are reported at cost less accumulated amortisation and impairment losses.

##### **Principles for amortisation**

Amortisation of intangible non-current assets other than goodwill is reported on a straight-line basis in the income statement over the estimated useful life of the asset, provided the useful life not is indefinite. Estimated useful lives are unchanged compared with a year ago and are further described in Note 23 to the consolidated accounts, Intangible assets: non-current. Assessments of the residual value and useful life of an asset are conducted at least annually.

#### **Property, plant and equipment**

##### **Owned assets**

Property, plant and equipment are reported as assets on the balance sheet if it is likely that there will be future financial benefit for the company and the cost of the asset can be calculated in a reliable manner.

Assets reported as property, plant and equipment are land and buildings, plant and machinery as well as equipment, tools and fixtures and fittings. These assets are valued at cost less accumulated depreciation and impairment losses.

Cost includes the purchase price and costs directly attributable to putting the asset in place and in a suitable condition for use in accordance with the management's intention of the acquisition. Examples of directly attributable expenses included in cost are delivery and handling, installation, land registration and consulting services. Borrowing costs directly attributable to investment projects in property, plant and equipment, which take a substantial period of time to complete, are included in the cost of the asset during the construction period.

In the nuclear power operations in Germany (impaired during 2011) and Sweden, cost at the time of acquisition includes a calculated present value for estimated costs for dismantling and removing the plant and restoring the site where the plant is located. Similarly, for mining operations in Germany, for example, cost at the time of the acquisition includes a calculated present value for estimated costs for restoring undertakings.

The equivalent estimated cost calculated on the basis of the present value is reported initially as a provision.

See also below under the heading Other provisions than provisions for pensions.

##### **Leasing**

Leases are classified as either finance or operating leases. A finance lease exists when the economic risks and benefits associated with ownership are, in essence, transferred to the lessee; if this is not the case, it is classified as an operating lease.

##### **Leased assets**

Assets leased under finance leases are reported as assets on the consolidated balance sheet. The commitment to pay future leasing charges is reported as a non-current or current liability. The leased assets are depreciated on a straight-line basis over the shorter of the leasing period or useful life, while the leasing payments are reported as interest and amortisation of the debts.

Operating leases normally entail recognition of the leasing charge as an expense on a straight-line basis over the leasing period.

##### **Assets leased out**

Assets that are leased out under finance leases are not reported as property, plant and equipment, since the risks associated with ownership are transferred to the lessee. Instead, a financial receivable is entered for the future minimum lease payments.

Assets leased out under operating leases are reported as property, plant and equipment and are subject to depreciation.

##### **Subsequent costs**

Subsequent costs for property, plant and equipment are only added to the acquisition cost if it is likely that there will be future financial benefits associated with the asset for the company and the cost can be calculated in a reliable manner. All other subsequent costs are reported as expenses in the period when they arise.

What is decisive for the assessment when a subsequent cost is added to the acquisition cost is whether the cost concerns the replacement of identified components, or parts of them, whereby such costs are capitalised. Also in cases where new components are created, the cost is added to the cost of the asset. Any undepreciated reported values of replaced components, or parts of components, are retired and carried as an expense in connection with the replacement. Repairs and maintenance are expensed as incurred.

##### **Depreciation principles**

Depreciation is reported on a straight-line basis in the income statement over the estimated useful life of the asset except for depreciation related to the German nuclear power plants (impaired during 2011). The Group applies component depreciation, which means that the components' estimated useful life provides the basis for the straight-line depreciation. The estimated useful life for all property, plant and equipment is unchanged compared with the preceding year. Estimated useful life is described further in Note 24 to the consolidated accounts, Property, plant and equipment. Assessments of the residual value and useful life of an asset are conducted annually.

Land and water rights are not subject to depreciation.

##### **Investment property**

Investment property is property held in order to earn rental income or an increase in value or a combination of these two objectives.

Investment property is reported on the balance sheet at cost less accumulated depreciation and impairment losses. Depreciation is done on a straight-line basis, and an assessment of residual value and useful life of an asset is conducted annually.

##### **Biological assets**

By biological assets is meant so-called energy forests that Vattenfall grows – following harvest and thereafter reported as inventory – for use as biofuel in own plants.

Biological assets are reported on the balance sheet as current assets and are measured at fair value less costs to sell, or as non-current assets, in which case they are measured at cost less accumulated depreciation and impairment losses.

##### **Inventories**

##### **Nuclear fuel, fossil fuels, emission allowances and certificates held for trading, and materials and spare parts**

Inventories (except for inventories held for trading) are valued at the lower of their cost and net realisable value. Net realisable value is the estimated sales price in operating activities, less estimated costs for completion and to bring about a sale.

The consumption of nuclear fuel is calculated as a depletion of the energy content of the fuel rods, and is based on the cost of each batch of fuel loaded into the core.

The cost of inventories is estimated – depending on the type of inventory – either through application of the first in, first out (FIFO) method or through the application of the weighted average cost formula. Both methods include costs that arose on acquisition of the inventory items.

Inventories held for trading are valued at fair value less costs to sell. See Note 32 to the consolidated accounts, Inventories.

The value of the energy stored in the form of water in reservoirs is not reported as an asset.

##### **Intangible assets: current**

##### **Emission allowances held for own use**

Since 2005, a trading system applies in the EU (the Emissions Trading System – ETS) with the purpose of reducing emissions of the greenhouse gas carbon dioxide. Within the framework of this system, some concerned plants have received, without payment or for prices below fair value, so-called emission allowances (European Union Allowances – EUAs) from the authorities in each country. Sales and purchases of emission allowances are conducted on designated

exchanges, where plants that have a greater need for emission allowances than their free-of-charge or subsidised allocation are required to purchase allowances to cover their remaining need and thereby settle their obligations.

During the first trading period, 2005–2007, trading was conducted only in EUAs. During the second trading period, 2008–2012, trading was conducted in parallel with the first commitment period in the Kyoto Protocol, and the EU's Emission Trading Scheme was opened up to international trading in Certified Emission Reductions (CERs) and Emission Reduction Units (ERUs).

Starting with the third trading period (2013–2020) there is no free-of-charge or subsidised allocation of emission allowances for the power generation sector, meaning that all power generators must purchase all of their emission allowances. In sectors other than power generation, for example, heat generation, free-of-charge allocations will be available during a transition period, however with decreasing levels in the coming years during the transition period.

Purchased emission allowances held for own use are reported as intangible assets under current assets at cost less accumulated impairment losses, while emission allowances that have been received free of charge from the respective countries' authorities are stated at a value of SEK nil. As carbon dioxide is emitted, an obligation arises to deliver emission allowances (EUAs, CERs, ERUs) to the authorities in the respective countries. An expense and a liability are recognised in cases where the emission allowances that were received free of charge do not cover this obligation. This liability is valued in the amount at which it is expected to be settled.

#### Certificates held for own use

With the aim to increase renewable energy sources for electricity generation, Sweden and UK, among other countries, have so-called electricity certificate systems. Plants included in these systems receive, free of charge from the authorities in the respective countries, certificates in pace with their generation of electricity qualifying for certificates.

Accumulated certificates, which are received free of charge, are reported as an intangible asset under current assets at fair value when obtained. The corresponding amount is recognised as revenue under Net sales. Purchased certificates held for own use are reported at cost less accumulated impairment losses.

When electricity is sold, an obligation arises to deliver certificates to the authorities in the respective countries. This obligation is reported as an expense and as a liability. The liability is valued at the amount at which it is expected to be settled.

#### Impairment losses

##### Impairment of non-financial assets

###### General principles

Assessments are made throughout the year for any indication that an asset may have decreased in value. If there is an indication of this kind, the asset's recoverable amount is estimated. For goodwill and other intangible assets with an indefinite useful life and for intangible assets that are still not ready for use, the recoverable amount is calculated at least annually or as soon there is an indication that an asset has decreased in value.

If the essentially independent cash flow for an individual asset cannot be established for the assessment of any need for impairment, the assets must be grouped at the lowest level where it is possible to identify the essentially independent cash flow (a so-called cash-generating unit). An impairment loss is reported when an asset or cash-generating unit's reported value exceeds the recoverable amount. Any impairment loss is recognised in profit or loss.

Impairment of assets attributable to a cash-generating unit is allocated primarily to goodwill. Thereafter, a proportional impairment loss is conducted of other assets that are part of the unit.

###### Calculation of the recoverable amount

The recoverable amount is the higher of fair value less costs to sell and value in use. When calculating value in use, the future cash flow is discounted by a discounting factor that takes into consideration risk-free interest and the risk associated with the specific asset. For an asset that does not generate cash flow independently of other assets, the recoverable amount is calculated for the cash-generating unit to which the asset belongs.

###### Reversal of impairment losses

Impairment of goodwill is never reversed. Impairment of other assets is reversed if a change has occurred in the assumptions that formed the basis for the calculation of the recoverable amount. An impairment loss is reversed only if the asset's carrying amount after reversal does not exceed the carrying amount that the asset would have had if the impairment loss had not been recognised.

##### Impairment of financial assets

###### General principles

On each reporting occasion, an assessment is made to determine if there is objective evidence that a financial asset has become impaired. Objective evidence consists in part of observable conditions that have a negative impact on the ability to recover the cost of the asset, and in part of a significant or prolonged decrease in the fair value of an investment in a financial asset that is classified as an available-for-sale financial asset.

Vattenfall classifies trade receivables as doubtful when – after a missed or significantly late payment and individual assessment of the debtor's financial conditions – a need to recognise impairment can be considered to exist. Impairment is determined on the basis of historical experience of customer losses for similar receivables. Impaired trade receivables are reported at the present value of anticipated future cash flows. When determining any need to recognise impairment, the existence of any credit insurance and other forms of security is also taken into account.

Listed shareholdings that are classified as an available-for-sale financial asset are considered to be in need of impairment and are impaired if the fair value falls below cost by a significant amount, or when the decrease in value has become prolonged over time.

###### Reversal of impairment

Impairment of financial assets reported at amortised cost is reversed if a subsequent increase in the recoverable amount can objectively be attributed to an event that occurred after the impairment was recognised.

Impairment of listed shareholdings that are classified as available-for-sale financial assets, which was previously reported in the income statement, is not reversed through profit or loss but in Other comprehensive income.

#### Employee benefits

##### Defined contribution pension plans

Defined contribution pension plans are post-employment benefit plans according to which fixed fees are paid to a separate legal entity. There is no legal or constructive obligation to pay additional fees if the legal entity does not have sufficient assets to pay all benefits to the employees. Fees for defined contribution pension plans are reported as an expense in the income statement in the period they apply to.

##### Defined benefit pension plans

Defined benefit pension plans consist of other post-employment benefit plans than defined contribution pension plans. The Group's defined benefit pension obligations are calculated separately for each plan in accordance with the Projected Unit Credit Method by calculating employees' current and past service cost. Estimated future salary adjustments are taken into consideration as well as taxes levied on pension costs, for example, the Swedish special employers' payroll tax ("särskild löneskatt"). The net obligation comprises the discounted present value of the total earned future salaries less the fair value of any plan assets. The discount rate consists of the interest rate on the balance sheet date of high quality corporate bonds with lifetimes that corresponds to the Group's pension obligations. When there is no deep market in corporate bonds of this kind, the market rate yield on government bonds with an equivalent lifetime should be used instead. When the calculation leads to an asset for the Group, the recognised value of the asset is limited to the present value of any future refunds from the plan or reductions in future contributions to the plan.

Items related to the earnings of defined benefit pensions and interest on the net of defined benefit plans assets and liabilities are recognised in the income statement. When benefits in a plan are improved, the proportion of the increased benefit attributable to the employees' past service cost is reported as an expense in the income statement, as well as gains and losses arising on settlement of a pension liability.

Remeasurements recognised in Other comprehensive income consist of actuarial gains and losses and the difference between the actual and expected return on pension assets and are recognised in Other comprehensive income under the heading "Items that will not be reclassified to profit or loss". Actuarial gains and losses arise from the effects of changes in actuarial assumptions and from experience adjustments (the effects of differences between the previous actuarial assumptions and what has actually occurred). When the calculation leads to an asset for the Group, the reported value of the asset is limited to the present value of future repayments from the plan or reduced future payments to the plan.

##### Other provisions than pension provisions

A provision is reported on the balance sheet when the Group has a legal or constructive obligation as a result of an event and it is probable that an outflow of financial resources will be required to regulate the obligation and a reliable estimate of the amount can be made. Where the effect of the time when payment is made is material, provisions are estimated by discounting the anticipated future cash flow at an interest rate before tax that reflects current market estimates of time value of money. The discount rate does not reflect such risks that are taken into consideration in the estimated future cash flow.

Changes in discounted provisions for dismantling, restoration or similar measures, which at the time of acquisition have also been reported as tangible non-current assets, are reported as follows: In cases where the change is due to a change in the estimated outflow of resources or a change in the discount rate, the cost of a non-current tangible asset is changed in an amount corresponding to the provision. The periodic change of the present value is recognised as a financial expense. See also above under the heading Property, plant and equipment/Owned assets.

Provisions are also reported for onerous contracts, that is, where unavoidable costs of meeting the obligations under the contract exceed the economic benefits expected to be received from the contract.

#### Income taxes

Income tax comprises current tax and deferred tax. Income tax is reported in the income statement except when the underlying transaction is reported in Other comprehensive income or in equity, whereby also the associated tax effect is reported in Other comprehensive income and equity, respectively.

Current tax is tax to be paid or received for the current year, with the application of the tax rates that are established or, established in practice as of the balance sheet date. Adjustments of tax paid attributable to previous periods are also included in this.

Deferred tax is calculated in accordance with the balance sheet method on the basis of temporary differences between the reported and taxable values of assets and liabilities. The following temporary differences are not taken into account: temporary differences that arises with the initial recognition of goodwill and temporary differences on initial recognition of assets and liabilities that are not business combinations and at the time of the transaction do not affect either reported or taxable profit. Further, such temporary differences attributable to shares or participations in subsidiaries or associated companies that are not expected to be reversed in the foreseeable future are not taken into account either. The valuation of deferred tax is based on how the reported value of assets or liabilities is expected to be realised or settled. Deferred tax is calculated in accordance with the tax rates and tax rules that have been established or have been established in practice by the balance sheet date.

Deferred tax assets concerning non-deductible temporary differences and tax-loss carryforwards are only reported to the extent that it will be possible for these to be used. The value of deferred tax assets is reduced when it is no longer considered likely that they can be used.

#### Note 4 Important estimations and assessments in the preparation of the financial statements

Preparation of the financial statements in accordance with IFRS requires the company's executive management and Board of Directors to make estimations and assessments as well as to make assumptions that affect application of the accounting policies and the reported amounts of assets, liabilities, income and expenses. These estimations and assessments are based on historic experience and other factors that seem reasonable under current conditions. The results of these estimations and assessments are then used to establish the reported values of assets and liabilities that are not otherwise clearly documented from other sources. The final outcome may deviate from the results of these estimations and assessments. The estimations and assessments are revised on a regular basis. The effects of changes in estimations are reported in the period in which the changes were made if the changes affected this period only or in the period the changes were made and future periods if the changes affect both the current period and future periods. Important estimations and assessments are described below.

#### Impairment testing for intangible assets and property, plant and equipment

The Group has substantial values reported on the balance sheet regarding intangible assets and property, plant and equipment. These are tested for impairment in accordance with the accounting policies described in Note 3 to the consolidated accounts, Accounting policies. The recoverable amount for cash-generating units is determined by calculating the value in use or fair value less costs to sell. For these calculations, certain estimations must be made regarding future cash flows along with other adequate assumptions regarding the required rate of return, for example. See also Note 23 to the consolidated accounts, Intangible assets.

For 2015 the Group reported impairment losses of SEK 36,792 million (23,808) and reversals of previously recognised impairment losses of SEK 534 million (-). These impairment losses and reversed impairment losses are described in more detail in Note 14 to the consolidated accounts, Impairment losses and reversed impairment losses.

#### Pension provisions

The value of pension obligations for defined benefit pension plans is determined through actuarial computations that are based on assumptions about the discount rate, the expected return on plan assets, future salary increases, inflation and demographic conditions. Every change in these assumptions affects the calculated value of pension obligations.

For pension provisions in Sweden, the discount rate was increased to 3.25% from 2.5% in the preceding year. The discount rate is based on mortgage bonds with high credit ratings, the market for which is large and liquid.

In Germany, where the discount rate is based on high quality corporate bonds, the discount rate was increased to 2.25% from 2.0% in the preceding year.

For further information on pension provisions, see Note 41 to the consolidated accounts, Pension provisions.

#### Provisions for future expenses for nuclear operations

Provisions for future expenses for nuclear operations, which pertain to future obligations for handling the decommissioning of Vattenfall's nuclear power plants in Sweden and Germany as well as for handling nuclear waste, are based on long-term cash flow estimations with respect to future expenses. These long-term cash flow estimations mainly pertain to technical plans, estimations on the amount of the expenses, when in time these are expected to fall due, and the discount rate. In many cases, these cash flow estimations must be approved by the pertinent authorities.

For provisions for future expenses for nuclear operations in Sweden, the discount rate is unchanged at 4.0% (4.0%) in the preceding year. The corresponding discount rate in Germany was unchanged at 4.0% (4.0%) in the preceding year.

For further information on provisions for future expenses for nuclear operations, see Note 42 to the consolidated accounts, Other interest-bearing provisions.

#### Other provisions than pension provisions and provisions for future expenses of nuclear power operations

For other types of provisions, such as provisions for future expenses for mining, gas and wind operations and other environmental measures/undertakings, and for personnel-related provisions for non-pension purposes, provisions for tax and legal disputes, or other provisions, the following discount rates are used: Sweden 3.75% (3.75%), Germany 1.5%–4.0% (1.5%–4.0%), Netherlands 1.5% (1.5%), Denmark 4.0% (4.0%) and the UK 4.0% (4.0%).

For further information on these provisions, see Note 42 to the consolidated accounts, Other interest-bearing provisions.

#### Income taxes and deferred taxes

On its balance sheet, Vattenfall reports deferred tax assets and liabilities that are expected to be realised in future periods. In calculating these deferred taxes, certain assumptions and estimations must be made. The estimations include assumptions about future taxable earnings, that applicable tax laws and tax rates will be unchanged in the countries in which the Group is active, and that applicable rules for utilising tax-loss carryforwards will not be changed.

The Group also reports future expenses arising out of ongoing tax audits or tax disputes under Provisions. The outcome of these may deviate from the estimations made by Vattenfall.

For further information on taxes, see Note 19 to the consolidated accounts, Taxes.

#### Assets held for sale

According to IFRS 5 – "Non-current Assets Held for Sale and Discontinued Operations", an entity should classify an asset as held for sale if its carrying amount will be recovered principally through a sale transaction rather than through continuing use. For that to be the case, certain criteria must be fulfilled. The asset must be available for immediate sale in its present condition subject to usual and customary terms. Further, the sale must be highly probable within one year from the date of classification. The last-mentioned criterion means that a plan for the disposal must have been prepared and approved at the appropriate level of management, an active programme for the disposal must have been initiated, and the asset must be marketed for sale at a price that is reasonable in relation to its current fair value. In the event shareholder approval is required before a sale can be carried out, Vattenfall is of the opinion that a transaction cannot be regarded as likely until shareholder approval has been obtained.

For further information on assets held for sale, see Note 39 to the consolidated accounts, Assets held for sale.

**Note 5 Acquired and divested operations**

	Fair value	
	2015	2014
<b>Acquired operations</b>		
Trade receivables and other receivables	—	1
Cash and cash equivalents	—	35
Trade payables and other liabilities	—	-35
<b>Total net assets</b>	<b>—</b>	<b>1</b>
Acquisition of non-controlling interests	5	9
<b>Total purchase consideration = Cash flow for the year</b>	<b>5</b>	<b>10</b>

Acquisitions/investments in associated companies and other shares and participations amounted to SEK -272 million (-222). See Note 27, Participations in associated companies and joint arrangements, and Note 28, Other shares and participations in the consolidated accounts.

	Carrying amount	
	2015	2014
<b>Divested operations</b>		
Intangible assets: non-current	—	20
Property, plant and equipment	163	5,902
Participations in associated companies and joint arrangements	28	2
Deferred tax assets	9	91
Other non-current assets	—	2,269
Inventories	4	79
Trade receivables and other receivables	189	1,087
Cash and cash equivalents	562	513
Assets held for sale	12	—
Borrowings	-35	—
Provisions	-114	-1,312
Deferred tax liabilities	-2	-361
Trade payables and other liabilities	-487	-1,707
<b>Total net assets</b>	<b>329</b>	<b>6,583</b>
Non-controlling interests share of net assets	-25	—
Proceeds from sales/Cash flow for the year	206	8,875
Net of proceeds received in previous years and provision for price adjustments	—	706
<b>Capital gain(+)/loss (-) recognised in the income statement</b>	<b>-98</b>	<b>2,998</b>

**Divestments in 2015**

Divestments in 2015 consisted mainly of the sales of Barsebäck Kraft AB and VERA Klärschlammverbrennung GmbH.

**Divestments in 2014**

Divestments in 2014 consisted mainly of the sale of the majority interest of 74.9% in the electricity grid company Stromnetz Hamburg GmbH, the sale of the 85.5% majority shareholding in Müllverwertung Borsigstraße GmbH (a waste incineration plant in Hamburg), and the divestment of the minority shareholding in the Polish energy company Enea S.A.

**Note 6 Exchange rates**

Key exchange rates applied in the accounts of the Vattenfall Group:

Currency	Average rate		Balance sheet date rate		
	2015	2014	31 Dec. 2015	31 Dec. 2014	
Euro					
Countries	EUR	9.3414	9.1004	9.1895	9.3930
Denmark	DKK	1.2523	1.2207	1.2314	1.2616
Norway	NOK	1.0403	1.0848	0.9569	1.0388
Poland	PLN	2.2297	2.1715	2.1552	2.1981
UK	GBP	12.8325	11.3091	12.5206	12.0593
USA	USD	8.4004	6.8837	8.4408	7.7366

**Note 7 Net sales**

	2015	2014
Generation, sales and distribution	162,392	163,789
Rendering of services	14,835	17,440
Excise taxes (included in the above)	-12,717	-15,284
<b>Net sales</b>	<b>164,510</b>	<b>165,945</b>

Vattenfall did not have transactions in 2015 or 2014 with a single external customer where revenues amounted to more than 10% of the Group's total net sales.

**Note 8 Operating segments**

To better support Vattenfall's strategy towards clearer customer focus and to facilitate the shift towards a long-term sustainable production portfolio, effective 1 April 2015 Vattenfall has been organised in six Business Areas: Customers & Solutions, Generation, Markets, Wind, Heat, and Distribution. The aim is to increase the Group's business and performance focus, and to capitalise on cross-border synergies. The segment reporting corresponds to the new organisational structure.

**Areas of responsibility for the operating segments**

The Customers & Solutions operating segment is responsible for sales of electricity, gas and energy services in all of Vattenfall's markets.

The Power Generation operating segment comprises the Generation and Markets Business Areas, and the Mining & Generation unit. The segment includes Vattenfall's hydro and nuclear power operations, optimisation and trading operations, and lignite operations.

The Wind operating segment is responsible for Vattenfall's wind power operations.

The Heat operating segment comprises Vattenfall's heat operations, including all thermal operations (except lignite).

The Distribution operating segment comprises Vattenfall's electricity distribution operations in Sweden and Germany (Berlin).

The financial steering key performance indicators for the operating segments are return on capital employed, underlying operating profit and external operating expenses. The financial information in the IFRS reporting is used to calculate these key performance indicators.

**Staff Functions and Shared Service Centres**

A number of Group-wide Staff Functions direct, administrate and support the business activities. The Staff Functions are centrally placed within the organisation as a whole and in the Business Areas. Shared Service Centres (Shared Services) focus on transaction-related processes and are an integral part of Vattenfall's business activities. Shared Services are led with a focus on efficiency and utilisation of scale economies. Staff Functions and Shared Services are reported under the heading "Other".

	External net sales		Internal net sales		Total net sales	
	2015	2014	2015	2014	2015	2014
Customers & Solutions	84 905	85 606	2 618	1 671	87 523	87 277
Power Generation	56 717	61 874	57 252 <sup>3</sup>	60 846 <sup>3</sup>	113 969	122 720
Wind	4 267	3 531	2 502	1 696	6 769	5 227
Heat	14 356	15 536	13 024	12 276	27 380	27 812
Distribution	15 355	14 173	4 559	4 609	19 914	18 782
– of which, Distribution Germany	6 018	5 149	4 012	4 060	10 030	9 209
– of which, Distribution Sweden	9 337	9 024	547	549	9 884	9 573
Other <sup>1</sup>	178	290	5 183	5 513	5 361	5 803
Eliminations <sup>2</sup>	-11 268	-15 065	-85 138	-86 611	-96 406	-101 676
<b>Total</b>	<b>164 510</b>	<b>165 945</b>	<b>—</b>	<b>—</b>	<b>164 510</b>	<b>165 945</b>
	Operating profit before depreciation, amortisation and impairment losses (EBITDA)		Underlying operating profit before depreciation, amortisation and impairment losses			
	2015	2014	2015	2014		
Customers & Solutions	1,657	1,422	2,271	1,821		
Power Generation	14,981	20,588	20,652	25,284		
Wind	4,282	3,817	4,621	3,772		
Heat	5,555	5,931	5,634	5,986		
Distribution	8,143	7,283	8,189	7,412		
– of which, Distribution Germany	2,649	2,008	2,683	2,137		
– of which, Distribution Sweden	5,494	5,275	5,506	5,275		
Other <sup>1</sup>	-1,831	2,059	-1,330	-704		
Eliminations	-33	-62	-33	-13		
<b>Total</b>	<b>32,754</b>	<b>41,038</b>	<b>40,004</b>	<b>43,558</b>		
	Operating profit (EBIT)		Underlying operating profit			
	2015	2014	2015	2014		
Customers & Solutions	775	274	1,390	962		
Power Generation	-25,519	898	12,443	15,639		
Wind	931	-946	1,469	1,704		
Heat	-2,633	-6,841	1,704	2,384		
Distribution	5,419	4,306	5,465	4,435		
– of which, Distribution Germany	1,848	1,231	1,881	1,361		
– of which, Distribution Sweden	3,571	3,075	3,584	3,074		
Other <sup>1</sup>	-1,907	178	-1,897	-978		
Eliminations	-33	-64	-33	-13		
<b>Total</b>	<b>-22,967</b>	<b>-2,195</b>	<b>20,541</b>	<b>24,133</b>		
Items affecting comparability (see Comments on the consolidated income statement page 81)			-43,508	-26,328		
Financial income and expenses			-5,225	-6,045		
<b>Profit before tax</b>			<b>-28,192</b>	<b>-8,240</b>		
	Participations in the results of associated companies		Depreciation and amortisation		Impairment losses affecting operating profit	
	2015	2014	2015	2014	2015	2014
Customers & Solutions	—	—	881	856	—	289
Power Generation	-448	-483	8,209	9,644	32,290	10,045
Wind	-190	-33	3,152	2,068	199	2,696
Heat	141	78	3,930	3,605	4,258	9,170
Distribution	—	—	2,723	3,004	—	—
– of which, Distribution Germany	—	—	802	777	—	—
– of which, Distribution Sweden	—	—	1 921	2 227	—	—
Other <sup>1</sup>	—	—	567	247	45	1 608
<b>Total</b>	<b>-497</b>	<b>-438</b>	<b>19,462</b>	<b>19,424</b>	<b>36,792</b>	<b>23,808</b>
	Investments		Assets			
	2015	2014	2015	2014		
Customers & Solutions	331	201	48,353	41,115		
Power Generation	12,231	9,833	314,276	339,622		
Wind	8,855	6,995	58,877	55,746		
Heat	6,532	7,804	107,720	113,287		
Distribution	4,757	5,151	58,503	59,478		
– of which, Distribution Germany	1,208	1,198	17,398	17,579		
– of which, Distribution Sweden	3,549	3,953	41,105	41,899		
Other <sup>1</sup>	7,461	13,265	230,098	237,210		
Eliminations	-11,441	-14,217	-355,510 <sup>4</sup>	-349,249 <sup>4</sup>		
<b>Total</b>	<b>28,726</b>	<b>29,032</b>	<b>462,317</b>	<b>497,209</b>		

1) "Other" pertains mainly to all Staff functions including treasury activities and Shared Service Centres.

2) Pertains to Trading's sales to the Nordic electricity exchange. Vattenfall's sales organisation buys the corresponding electricity from the Nordic electricity exchange.

3) Pertains mainly to Trading's sales of electricity, fuel and CO<sub>2</sub> emission allowances to other segments within Vattenfall.

4) Chiefly concerns Trading's liquid assets and financial receivables from other operating segments.



**Note 9 Information about geographical areas**

	External net sales		Internal net sales		Total net sales	
	2015	2014	2015	2014	2015	2014
Sweden	42,525	45,891	4,393	4,231	46,918	50,122
Germany	90,133	86,517	59,763	47,159	149,896	133,676
Netherlands	26,566	27,808	59,372	52,471	85,938	80,279
Other countries	7,913	9,006	2,029	1,474	9,942	10,480
Eliminations	-2,627 <sup>1</sup>	-3,277 <sup>1</sup>	-125,557	-105,335	-128,184	-108,612
<b>Total</b>	<b>164,510</b>	<b>165,945</b>	<b>—</b>	<b>—</b>	<b>164,510</b>	<b>165,945</b>

	Operating profit (EBIT)		Underlying operating profit		Intangible assets: non-current, property, plant and equipment and investment property	
	2015	2014	2015	2014	2015	2014
Sweden	-6,772	10,532	10,470	11,598	101,750	113,006
Germany	-17,080	693	9,186	10,955	101,027	117,522
Netherlands	-169	-13,145	-42	797	36,930	39,601
Other countries	1,054	-275	927	783	22,808	21,224
<b>Total</b>	<b>-22,967</b>	<b>-2,195</b>	<b>20,541</b>	<b>24,133</b>	<b>262,515</b>	<b>291,353</b>

1) Pertains to sales from Swedish companies to the Nordic electricity exchange. Vattenfall's sales organisations in other Nordic countries buy the corresponding electricity from the Nordic electricity exchange.

**Note 10 Cost of products sold**

Cost of products sold include production taxes and duties of SEK 4,829 million (5,484) and property taxes of SEK 3,383 million (3,010).

**Note 11 Other operating income**

	2015	2014
Capital gains from divestment of shares	87	3,054
Operationally derived exchange rate gains	948	395
Rental income	242	222
Government grants	239	258
Other	843	668
<b>Total</b>	<b>2,359</b>	<b>4,597</b>

**Note 12 Other operating expenses**

	2015	2014
Capital losses from sales of non-current assets	209	138
Operationally derived exchange rate losses	—	1,838
Other	1,644 <sup>1</sup>	708
<b>Total</b>	<b>1,853</b>	<b>2,684</b>

1) Of which, SEK 470 million pertains to costs in connection with claim settlement, and SEK 450 million pertains to costs related to disputes.

**Note 13 Depreciation and amortisation**

Depreciation of property, plant and equipment and of investment property and amortisation of non-current intangible assets in the income statement are broken down as follows:

	2015	2014
Cost of products sold	18,209	18,860
Selling expenses	321	325
Administrative expenses	888	198
Research and development costs	39	33
Other operating expenses (investment property)	5	8
<b>Total</b>	<b>19,462</b>	<b>19,424</b>

Amortisation of non-current intangible assets is included in Cost of products sold above in the amount of SEK 1,021 million (1,161), Selling expenses in the amount of SEK 69 million (56) and Administrative expenses in the amount of SEK 35 million (32).

**Note 14 Impairment losses and reversed impairment losses**

Impairment losses for non-current intangible assets, property, plant and equipment, financial non-current assets and investment properties in the income statement are broken down as follows:

	2015	2014
Cost of products sold	36,530	23,538
Administrative expenses	174	115
Research and development costs	1	—
Participations in the result of associated companies	41	155
Other operating expenses	46	—
<b>Total</b>	<b>36,792</b>	<b>23,808</b>

During 2015, previously recognised impairment losses of SEK 534 million (0) were reversed, pertaining to heat power plants in Denmark, amounting to SEK 492 million, and other assets in Germany, amounting to SEK 42 million.

## Impairment losses 2015

	Property, plant and equipment	Associated companies	Current assets	Effect on Operating profit	Effect on taxes	Total impairment losses
<b>Power Generation</b>	<b>34,724</b>	<b>—</b>	<b>1,584</b>	<b>36,308</b>	<b>-9,532</b>	<b>26,776</b>
– of which, the German plant Moorburg	4,017	—	—	4,017	-1,205	2,812
– of which, lignite assets in Germany	15,285	—	—	15,285	-4,585	10,700
– of which, Ringhals 1 and 2	15,417	—	1,584	17,001	-3,740	13,261
– of which, other assets	5	—	—	5	-2	3
<b>Wind</b>	<b>157</b>	<b>41</b>	<b>—</b>	<b>198</b>	<b>-28</b>	<b>170</b>
– of which, wind assets in the UK	156	—	—	156	-28	128
– of which, other assets	1	41	—	42	—	42
<b>Heat</b>	<b>240</b>	<b>—</b>	<b>—</b>	<b>240</b>	<b>-32</b>	<b>208</b>
– of which, heat power plants in Denmark	69	—	—	69	—	69
– of which, heat assets in Germany	65	—	—	65	—	65
– of which, other assets	106	—	—	106	-32	74
<b>Other</b>	<b>46</b>	<b>—</b>	<b>—</b>	<b>46</b>	<b>-14</b>	<b>32</b>
– of which, other assets	46	—	—	46	-14	32
<b>Total impairment losses</b>	<b>35,167</b>	<b>41</b>	<b>1,584</b>	<b>36,792</b>	<b>-9,606</b>	<b>27,186</b>
Reversed impairment losses attributable to heat power plants in Denmark	-492	—	—	-492	—	-492
Reversed impairment losses attributable to other assets in Germany	-42	—	—	-42	—	-42
<b>Net effect of impairment losses</b>	<b>34,633</b>	<b>41</b>	<b>1,584</b>	<b>36,258</b>	<b>-9,606</b>	<b>26,652</b>
Of which, assets in Germany	19,483	41	—	19,524	-5,838	13,686
Of which, assets in the Nordic countries	14,994	—	1,584	16,578	-3,740	12,838
Of which, assets in the UK	156	—	—	156	-28	128
<b>Total</b>	<b>34,633</b>	<b>41</b>	<b>1,584</b>	<b>36,258</b>	<b>-9,606</b>	<b>26,652</b>

Vattenfall has performed impairment testing by calculating the value in use of the cash-generating units. The structure of the cash-generating units, which represent the smallest group of identifiable assets that generate continuous cash inflows that are largely independent of other assets or groups of assets, is based on the Group's Business Area structure. As a result of the change in Vattenfall's organisational structure as from 1 April 2015, the segments and structure of the cash-generating units have been changed correspondingly.

Vattenfall closely monitors market developments on a continuous basis and their impact on operations. In the annual impairment testing carried out during the second quarter of 2015, continued worsening market conditions and growing business risks were noted. Owing to low electricity prices and higher costs, anticipated profitability for the Ringhals 1 and 2 nuclear reactors has fallen. Vattenfall has therefore decided to close the two reactors ahead of schedule. In Germany, narrower production margins have affected anticipated profitability of the lignite operations and of the Moorburg coal-fired plant. For these reasons, substantial impairment losses have been recognised for 2015. In the preceding year, impairment testing was conducted during the third quarter.

Impairment losses charged against operating profit in 2015 amounted to SEK 36,792 million (23,808). Of these, SEK 36,308 million are attributable to the Power Generation operating segment, SEK 198 million to the Wind operating segment, SEK 240 million to the Heat operating segment and SEK 46 million to Other.

Goodwill, which is not amortised but is instead tested annually for impairment, is allocated to the Power Generation operating segment (Trading cash-generating unit) in the amount of SEK 660 million and to the Customers & Solutions operating segment (Sales B2B and B2C cash-generating unit) in the amount of SEK 12,305 million. Impairment testing of goodwill is included in the impairment testing process described below. In this process, no need to recognise impairment of goodwill has been identified.

The impairment losses charged against operating profit were partly offset by a positive tax effect of SEK 9,606 million (3,387).

**Power Generation**

Impairment losses in the Power Generation operating segment amounted to SEK 36,308 million, which includes impairment losses of SEK 17,001 million for Ringhals 1 and 2, SEK 15,285 million for lignite assets in Germany, SEK 4,017 million for the Moorburg coal-fired plant in Germany, and SEK 5 million for other assets.

**Wind**

Impairment losses in the Wind operating segment amounted to SEK 198 million, including SEK 156 million in impairment of wind power assets in the UK, SEK 41 million in impairment of wind power assets in Germany, and SEK 1 million in impairment of other assets.

**Heat**

Impairment losses in the Heat operating segment amounted to SEK 240 million, including SEK 69 million in impairment of heat power plants in Denmark, SEK 65 million in impairment of heat assets in Germany, and SEK 106 million in impairment of other assets.

**Impairment process**

The main assumptions that executive management has used in calculating projections of future cash flows in cash-generating units with finite useful lives are based on forecasts of the useful life of the respective assets. The projected cash flows are based on market prices and on Vattenfall's long-term market outlook. The long-term market outlook is based on internal and external input parameters and is benchmarked against external price projections. Based on the price assumptions, the dispatch of the power plants is calculated, taking technical, economic and legal constraints into consideration. Technical flexibility of the assets, that is the ability to adapt generation to changes in spot market prices, has been taken into account. Cash flow projections of other cash-generating units are based on the business plan for the coming five years, after which their residual value is taken into account, based on a growth factor of 0% (0%–1%).

Future cash flows have been discounted to value in use using a discount rate of 5.5%–5.6% (5.4%–6.3%) after tax (corresponding to 7.3%–7.5% before tax) for regulated business. For non-regulated business, future cash flows have been discounted at a rate of 5.6%–9.4% (6.5%–7.0%) after tax (corresponding to 8.3%–12.3% before tax). The discount rate varies for the various asset classes, depending on their risk. When setting the discount rate for non-regulated business, consideration has been given to the extent of exposure this has for changes in wholesale prices of electricity, fuel, CO<sub>2</sub> emission allowances, and regulatory risks. An increase in the discount rate by 0.5 percentage points would give rise to a need to recognise additional impairment losses of slightly more than SEK 2 billion.

Margins for generation assets represent another major value driver. The most important production margins are the "clean spark spread" for gas-fired power plants and the "clean dark spread" for hard coal-fired power plants. Those spreads include electricity prices as well as the respective cost for fuel and CO<sub>2</sub> emission allowances to produce the electricity, considering fuel type and efficiency factors. Based on the assumptions used in the impairment testing, a decrease in future electricity prices by 5%, with unchanged costs for fuel and CO<sub>2</sub> emission allowances, would lead to a decrease in the value of fossil-based assets in Germany and the Netherlands by between 15% and 27%, depending on the type of asset. This would lead to recognition of further impairment losses of approximately SEK 12 billion. For other assets, such a decrease in electricity prices would not lead to any impairment.

**Note 15** Operating expenses according to type

	2015	2014
Personnel costs	23,538	23,874
Depreciation and amortisation	19,462	19,424
Impairment losses of non-current assets	36,792	23,808
Reversed impairment losses of non-current assets	-534	—
Other operating expenses incl. input commodities	109,547	105,193
<b>Total</b>	<b>189,339</b>	<b>172,299</b>

**Note 16** Financial income

	2015	2014
Dividends	31	21
Interest income attributable to investments	914	772
Return from the Swedish Nuclear Waste Fund	1,168	962
Exchange rate differences, net	—	234
Net change in value from remeasurement of derivatives	647	569
Net change in value from reassessment of other financial assets	—	6
Capital gains from divestments of shares and participations	2	26
<b>Total</b>	<b>2,762</b>	<b>2,590</b>

**Note 17** Financial expenses

	2015	2014
Interest expenses attributable to loans	3,426	3,832
Interest expenses for the net of pension liabilities and plan assets	937	1,240
Interest effects attributable to provisions	3,370	3,491
Exchange rate differences, net	181	—
Net change in value from remeasurement of other financial assets	55	—
Impairment losses for shares and participations	3	37
Capital losses from divestments of shares and participations	15	35
<b>Total</b>	<b>7,987</b>	<b>8,635</b>

**Note 18** Ineffectiveness of hedges

	2015	2014
Ineffectiveness of fair value hedges	-40	-632
Ineffectiveness of cash flow hedges	-165	315
<b>Total</b>	<b>-205</b>	<b>-317</b>

Ineffectiveness of fair value hedges is distributed as follows:

	2015	2014
Gains (+)/losses(-) from hedging instruments	1,291	-3,235
Gains (+)/losses(-) from hedged items	-1,331	2,603
<b>Total</b>	<b>-40</b>	<b>-632</b>

**Note 19** Income tax expense

The reported income tax is broken down as follows:

	2015	2014
<b>Current tax expense (+)/ tax income (-)</b>		
Current taxes pertaining to the period:		
Sweden <sup>1</sup>	1,438	1,197
Germany	551	2,493
Netherlands	—	1
Other countries	55	56
Adjustment of current tax for prior periods:		
Sweden	28	412
Germany	-3,105	-275
Netherlands	-5	-23
Other countries	-69	-6
<b>Total current tax</b>	<b>-1,107</b>	<b>3,855</b>
<b>Deferred tax expense (+)/ tax income (-)</b>		
Sweden	-3,688	26
Germany	-3,596	-3,200
Netherlands	-46	-655
Other countries	11	18
<b>Total deferred tax</b>	<b>-7,319</b>	<b>-3,811</b>
<b>Total income tax expense</b>	<b>-8,426</b>	<b>44</b>

1) Of which, SEK 1,776 million (369) has a cash flow effect.

The difference between the nominal Swedish tax rate and the effective tax rate is explained as follows:

	2015		2014	
	%		%	
Profit before tax		-28,192		-8,240
Swedish income tax rate at 31 December	22.0	6,202	22.0	1,813
Difference in tax rate in foreign operations	5.4	1,513	5.4	446
Tax adjustment for previous periods	3.9	1,095	2.6	217
Revaluation of previously non-valued losses and other temporary differences	-1.3	-376	4.8	396
Tax-loss carryforwards from current year that are not valued	—	—	-5.2	-432
Other non-taxable income <sup>1</sup>	0.6	157	13.5	1,107
Other non-deductible expenses <sup>2</sup>	-0.7	-206	-41.7	-3,441
Participations in the results of associated companies	-0.1	-17	-1.8	-144
Changed tax rates excl. Sweden	0.1	58	-0.1	-6
<b>Effective tax rate</b>	<b>29.9</b>	<b>8,426</b>	<b>-0.5</b>	<b>-44</b>

1) Of which, capital gains SEK 72 million (1,053).

2) Of which, non-deductible impairment losses SEK -24 million (-2,870).

A non-current tax asset for current tax has arisen following changed legislation in Germany (December 2006) which entails that a tax credit received during the years 2002–2005 pertaining to previously abolished rules regulating tax on dividends, can now be recovered without conditions for further distribution. The released tax credit will be paid out during the years 2009–2017. The non-current part is represented in the balance sheet by a discounted value.

<b>Balance sheet reconciliation of current tax<sup>1</sup></b>	2015	2014
Balance brought forward net asset (-)/ net liability (+)	-937	530
Translation differences	51	-13
Interest and discounting effects on non-current tax items	-78	-9
Change via income statement	-1,107	3,855
Tax effect through equity <sup>2</sup>	338	-2,132
Taxes paid, net	-1,340	-3,168
<b>Balance carried forward net asset (-)/ net liability (+)</b>	<b>-3,073</b>	<b>-937</b>

1) Including tax liabilities reported under provision for tax disputes.

2) Of which, equity hedge SEK 238 million (-965). For 2014 SEK -1,304 million pertains to a positive outcome in Sweden attributable to reassessment of previous years.

	2015						Balance carried forward
	Balance brought forward	Changes via income statement	Changes via other comprehensive income	Acquisitions, disposals and assets held for sale	Translation differences	Reclassification	
<b>Balance sheet reconciliation of deferred tax</b>							
Non-current assets	32,837	-5,735	—	-112	-9	-7	26,974
Current assets	2,412	-519	—	89	-1	-59	1,922
Provisions	-16,353	477	762	517	110	70	-14,417
Other non-current liabilities	384	-170	—	1	13	-774	-546
Current liabilities	-2,631	539	—	4	6	811	-1,271
Cash flow hedges	2,259	—	1,391	—	-46	—	3,604
Tax losses carried forward	-623	-1,911	—	—	19	-46	-2,561
<b>Total</b>	<b>18,285</b>	<b>-7,319</b>	<b>2,153</b>	<b>499</b>	<b>92</b>	<b>-5</b>	<b>13,705</b>
	2014						Balance carried forward
	Balance brought forward	Changes via income statement	Changes via other comprehensive income	Acquisitions, disposals and assets held for sale	Translation differences	Reclassification	
<b>Balance sheet reconciliation of deferred tax</b>							
Non-current assets	34,913	-2,046	—	-714	684	—	32,837
Current assets	928	1,600	—	-86	-30	—	2,412
Provisions	-12,498	-1,170	-2,587	186	-284	—	-16,353
Other non-current liabilities	1,378	-1,212	—	256	-38	—	384
Current liabilities	-1,006	-797	-774	-61	7	—	-2,631
Cash flow hedges	2,342	—	-184	—	101	—	2,259
Tax losses carried forward	-384	-186	—	—	-53	—	-623
<b>Total</b>	<b>25,673</b>	<b>-3,811</b>	<b>-3,545</b>	<b>-419</b>	<b>387</b>	<b>—</b>	<b>18,285</b>

Accumulated tax-loss carryforwards are broken down as follows:

	2015	2014
Sweden	17	10
Germany	11,255	3,609
Netherlands	1,985	631
Other countries	2,195	2,929
<b>Total</b>	<b>15,452</b>	<b>7,179</b>

The tax-loss carryforwards fall due as follows:

	2015
2016	83
2017-2020	532
2021 and beyond	1,622
No time limit	13,215
<b>Total</b>	<b>15,452</b>

Tax-loss carryforwards not included in the computation of deferred tax represent a tax value of SEK 645 million (628) and pertain mainly to loss carryforwards in German operations. These have not been assigned any value, since at present it is uncertain whether it will be possible to use them.

#### Note 20 Non-controlling interests

	2015	2014
Share in profit before tax	-3,821	124
Share in income tax expense	727	-230
<b>Total</b>	<b>-3,094</b>	<b>-106</b>



**Note 21 Leasing****Leasing expenses**

Machinery and equipment leased by the Group through finance leasing and reported as property, plant and equipment comprises:

	2015	2014
Cost	905	165
Accumulated depreciation according to plan	-409	-164
<b>Total</b>	<b>496</b>	<b>1</b>

Future payment commitments, as of 31 December 2015, for leasing contracts and rental contracts are broken down as follows:

	Finance leasing, nominal	Finance leasing, present value	Operating leasing
2016	74	70	530
2017	69	64	475
2018	70	61	319
2019	70	59	195
2020	513	412	162
2021 and beyond	—	—	287
<b>Total</b>	<b>796</b>	<b>666</b>	<b>1,968</b>

The current year's leasing expenses for Group assets amounted to SEK 934 million (1,087).

**Leasing revenues**

Certain Group companies own and operate power facilities on behalf of customers. Revenues from customers are broken down into two components – a fixed component to cover capital expenses and a variable component based on the quantity delivered.

Facilities are classified in accordance with standard leasing principles, based on the fixed revenue component.

On 31 December 2015, cost of assets reported under operating leases amounted to SEK 2,888 million (2,892). Accumulated depreciation amounted to SEK 1,588 million (1,545) and accumulated impairment losses amounted to SEK 291 million (305).

Future payments for this type of facility are broken down as follows:

	Finance leasing	Operating leasing
2016	50	345
2017	41	326
2018	1	306
2019	1	275
2020	1	243
2021 and beyond	3	776
<b>Total</b>	<b>97</b>	<b>2,271</b>

**Note 22 Auditors' fees**

	2015	2014
<b>Annual audit assignment</b>		
EY	40	42
<b>Audit-related activities besides the annual audit assignment</b>		
EY	3	3
<b>Tax consulting</b>		
EY	6	3
<b>Other assignments</b>		
EY	9	6

**Note 23** Intangible assets: non-current

	2015					
	Development projects in progress	Capitalised development costs	Goodwill	Concessions and similar rights with finite useful lives	Renting rights, mining rights and similar rights with finite useful lives	Total
<b>Cost</b>						
Cost brought forward	4	2,102	41,544	16,505	4,218	64,373
Investments	—	26	—	422	18	466
Advance payments capitalised	—	—	—	5	—	5
Transfer from development projects in progress	-3	3	—	4	—	4
Divestments/Disposals	—	-216	—	-132	-199	-547
Reclassifications	—	—	—	-569	—	-569
Assets held for sale	—	—	—	-16	—	-16
Translation differences	-1	-27	-844	-242	-71	-1,185
<b>Accumulated cost carried forward</b>	<b>—</b>	<b>1,888</b>	<b>40,700</b>	<b>15,977</b>	<b>3,966</b>	<b>62,531</b>
<b>Accumulated amortisation according to plan<sup>1</sup></b>						
Amortisation brought forward	—	-1,784	—	-9,216	-2,679	-13,679
Amortisation for the year	—	-29	—	-1,008	-88	-1,125
Divestments/Disposals	—	212	—	129	198	539
Reclassifications	—	—	—	346	—	346
Assets held for sale	—	—	—	15	—	15
Translation differences	—	27	—	185	52	264
<b>Accumulated amortisation carried forward</b>	<b>—</b>	<b>-1,574</b>	<b>—</b>	<b>-9,549</b>	<b>-2,517</b>	<b>-13,640</b>
<b>Impairment losses</b>						
Impairment losses brought forward	—	-193	-28,293	-2,028	-600	-31,114
Impairment losses for the year	—	—	—	—	-786	-786
Translation differences	—	—	558	—	12	570
<b>Accumulated impairment</b>	<b>—</b>	<b>-193</b>	<b>-27,735</b>	<b>-2,028</b>	<b>-1,374</b>	<b>-31,330</b>
<b>Residual value according to plan carried forward</b>	<b>—</b>	<b>121</b>	<b>12,965</b>	<b>4,400</b>	<b>75</b>	<b>17,561</b>
Advance payments to suppliers						3
<b>Total</b>						<b>17,564</b>

2014

	Development projects in progress	Capitalised development costs	Goodwill	Concessions and similar rights with finite useful lives	Renting rights, mining rights and similar rights with finite useful lives	Total
<b>Cost</b>						
Cost brought forward	47	2,016	39,135	15,456	3,972	60,626
Investments	3	26	—	212	51	292
Advance payments capitalised	—	—	—	2	—	2
Transfer from development projects in progress	-8	-3	—	-7	7	-11
Divestments/Disposals	—	—	—	-13	—	-13
Reclassifications	-38	56	—	-18	—	—
Divested companies	—	-75	—	-53	—	-128
Translation differences	—	82	2,409	926	188	3,605
<b>Accumulated cost carried forward</b>	<b>4</b>	<b>2,102</b>	<b>41,544</b>	<b>16,505</b>	<b>4,218</b>	<b>64,373</b>
<b>Accumulated amortisation according to plan<sup>1</sup></b>						
Amortisation brought forward	—	-1,739	—	-7,926	-2,365	-12,030
Amortisation for the year	—	-104	—	-966	-179	-1,249
Divestments/Disposals	—	—	—	12	—	12
Reclassifications	—	79	—	45	—	124
Divested companies	—	60	—	48	—	108
Translation differences	—	-80	—	-429	-135	-644
<b>Accumulated amortisation carried forward</b>	<b>—</b>	<b>-1,784</b>	<b>—</b>	<b>-9,216</b>	<b>-2,679</b>	<b>-13,679</b>
<b>Impairment losses</b>						
Impairment losses brought forward	—	-115	-15,783	-820	-595	-17,313
Impairment losses for the year	—	—	-11,163	-1,050	-7	-12,220
Reclassifications	—	-78	—	-45	140	17
Translation differences	—	—	-1,347	-113	-138	-1,598
<b>Accumulated impairment</b>	<b>—</b>	<b>-193</b>	<b>-28,293</b>	<b>-2,028</b>	<b>-600</b>	<b>-31,114</b>
<b>Residual value according to plan carried forward</b>	<b>4</b>	<b>125</b>	<b>13,251</b>	<b>5,261</b>	<b>939</b>	<b>19,580</b>
Advance payments to suppliers						6
<b>Total</b>						<b>19,586</b>

1) Estimated useful life is 3–4 years for capitalised development costs, 3–30 years for concessions and similar rights, and 3–50 years for renting rights, mining rights and similar rights.

Contractual commitments for acquisitions of non-current intangible assets amounted to SEK 14 million (16) as per 31 December 2015.

#### Goodwill

Goodwill is allocated to the Customers & Solutions operating segment, in the amount of SEK 12,305 million (12,576) and to the Power Generation operating segment, in the amount of SEK 660 million (675).

Goodwill is not subject to amortisation, but is tested annually for impairment. Impairment testing has been conducted through calculation of the value in use for the Group's Business Areas, which is the basis for determining the cash-generating units. Impairment testing was conducted during the second quarter of 2015. See also Note 14 to the consolidated accounts, Impairment losses and reversed impairment losses. Earnings performance for Vattenfall's operating segments is shown in Note 8 to the consolidated accounts, Operating segments.

**Note 24** Property, plant and equipment

	2015				
	Land and buildings <sup>1</sup>	Plant and machinery and other technical installations	Equipment, tools, fixtures and fittings	Construction in progress <sup>2</sup>	Total
<b>Cost</b>					
Cost brought forward <sup>3</sup>	71,372	488,695	15,240	48,871	624,178
Investments <sup>4</sup>	106	1,881	626	23,190	25,803
Reversed investments	—	—	—	73	73
Advance payments capitalised	—	46	—	2,125	2,171
Capitalised/Reversed future expenses for decommissioning, restoration	42	-573	—	142	-389
Transfer from construction in progress	1,879	38,738	198	-40,818	-3
Divestments/Disposals	-1,119	-1,655	-564	-303	-3,641
Other reclassifications	987	-657	55	—	385
Assets held for sale	962	2,028	-142	—	2,848
Divested companies	-100	-1,341	-67	-2	-1,510
Translation differences	-986	-6,500	-274	-314	-8,074
<b>Accumulated cost carried forward</b>	<b>73,143</b>	<b>520,662</b>	<b>15,072</b>	<b>32,964</b>	<b>641,841</b>
<b>Accumulated depreciation according to plan<sup>5</sup></b>					
Depreciation brought forward	-32,367	-264,458	-10,854	—	-307,679
Depreciation for the year	-1,368	-15,724	-914	—	-18,006
Divestments/Disposals	821	1,577	499	—	2,897
Other reclassifications	-248	260	-52	—	-40
Assets held for sale	-486	-1,812	99	—	-2,199
Divested companies	70	820	55	—	945
Translation differences	533	3,913	199	—	4,645
<b>Accumulated depreciation carried forward</b>	<b>-33,045</b>	<b>-275,424</b>	<b>-10,968</b>	<b>—</b>	<b>-319,437</b>
<b>Impairment losses</b>					
Impairment losses brought forward	-3,462	-34,701	-728	-8,494	-47,385
Impairment losses for the year	-2,192	-29,536	-40	-2,498	-34,266
Reversed impairment losses for the year	—	492	—	—	492
Transfer from construction in progress	-437	-5,910	—	6,346	-1
Divestments/Disposals	3	37	4	85	129
Assets held for sale	—	69	—	—	69
Other reclassifications	—	-66	—	—	-66
Divested companies	—	396	7	—	403
Translation differences	106	1,122	16	16	1,260
<b>Accumulated impairment losses carried forward</b>	<b>-5,982</b>	<b>-68,097</b>	<b>-741</b>	<b>-4,545</b>	<b>-79,365</b>
<b>Residual value according to plan carried forward</b>	<b>34,116</b>	<b>177,141</b>	<b>3,363</b>	<b>28,419</b>	<b>243,039</b>
Advance payments to suppliers	—	—	—	—	1,524
<b>Total</b>					<b>244,563</b>

	2014				
	Land and buildings <sup>1</sup>	Plant and machinery and other technical installations	Equipment, tools, fixtures and fittings	Construction in progress <sup>2</sup>	Total
<b>Cost</b>					
Cost brought forward <sup>3</sup>	69,585	465,843	14,366	45,570	595,364
Investments <sup>4</sup>	244	3,483	579	23,845	28,151
Reversed investments	—	—	—	-77	-77
Advance payments capitalised	—	71	—	2,842	2,913
Capitalised/Reversed future expenses for decommissioning, restoration	172	1,095	—	99	1,366
Transfer from construction in progress	1,756	12,363	279	-14,387	11
Divestments/Disposals	-775	-6,333	-430	-76	-7,614
Other reclassifications	545	9,562	178	-10,745	-460
Assets held for sale	-937	-1,014	—	—	-1,951
Divested companies	-1,753	-16,262	-445	-532	-18,992
Translation differences	2,535	19,888	713	2,332	25,468
<b>Accumulated cost carried forward</b>	<b>71,372</b>	<b>488,696</b>	<b>15,240</b>	<b>48,871</b>	<b>624,179</b>
<b>Accumulated depreciation according to plan<sup>5</sup></b>					
Depreciation brought forward	-31,584	-253,466	-10,209	—	-295,259
Depreciation for the year	-1,358	-16,387	-922	—	-18,667
Divestments/Disposals	359	4,034	381	—	4,774
Other reclassifications	7	668	6	—	681
Assets held for sale	473	58	—	—	531
Divested companies	1,115	11,576	399	—	13,090
Translation differences	-1,379	-10,943	-509	—	-12,831
<b>Accumulated depreciation carried forward</b>	<b>-32,367</b>	<b>-264,460</b>	<b>-10,854</b>	<b>—</b>	<b>-307,681</b>
<b>Impairment losses</b>					
Impairment losses brought forward	-3,216	-28,249	-416	-2,648	-34,529
Impairment losses for the year	-140	-5,219	-277	-5,909	-11,545
Divestments/Disposals	33	646	4	—	683
Other reclassifications	40	-96	-7	387	324
Translation differences	-179	-1,783	-32	-324	-2,318
<b>Accumulated impairment losses carried forward</b>	<b>-3,462</b>	<b>-34,701</b>	<b>-728</b>	<b>-8,494</b>	<b>-47,385</b>
<b>Residual value according to plan carried forward</b>	<b>35,543</b>	<b>189,535</b>	<b>3,658</b>	<b>40,377</b>	<b>269,113</b>
Advance payments to suppliers					2,193
<b>Total</b>					<b>271,306</b>

1) Cost for land and buildings includes cost of land and water rights amounting to SEK 14,501 million (14,567), which are not subject to depreciation.

2) Interest during the construction period has been reported as an asset in the amount of SEK 735 million (1,016) for the year.

The average interest rate for 2015 was 1.22% for borrowings in SEK, 4.16% for borrowings in EUR and 3.64% for borrowings in GBP.

3) Government grants received, balance brought forward, amount to SEK 6,734 million (6,527). Accumulated interest reported as an asset totalling SEK 7,870 million (7,135) is included in cost of buildings.

4) Government grants received during the year amounted to SEK 179 million (105).

5) Estimated useful life is 5-50 years for hydro power installations, 3-60 years for nuclear power installations, 5-50 years for other combined heat and power installations, 10-25 years for wind power installations, 10-35 years for electricity distribution lines, 4-25 years for mining operations, 3-10 years for office equipment and 15-100 years for office and warehouse buildings and workshops.

At 31 December 2015, contractual commitments for the acquisition of property, plant and equipment amounted to SEK 10,602 million (27,032).



**Note 25 Investment property**

	2015	2014
<b>Cost</b>		
Cost brought forward	1,360	1,427
Divestments/Disposals	-245	-136
Reclassifications	-1	-12
Translation differences	-25	81
<b>Accumulated cost carried forward</b>	<b>1,089</b>	<b>1,360</b>
<b>Accumulated depreciation according to plan<sup>1</sup></b>		
Depreciation brought forward	-406	-412
Depreciation for the year	-5	-8
Divestments/Disposals	85	38
Translation differences	9	-24
<b>Accumulated depreciation carried forward</b>	<b>-317</b>	<b>-406</b>
<b>Impairment losses</b>		
Impairment losses brought forward	-493	-537
Impairment losses for the year	-46	—
Reversed impairment losses for the year	42	—
Divestments/Disposals	106	68
Reclassifications	—	5
Translation differences	7	-29
<b>Accumulated impairment losses carried forward</b>	<b>-384</b>	<b>-493</b>
<b>Residual value according to plan carried forward</b>	<b>388</b>	<b>461</b>
<b>Estimated fair value</b>	<b>553</b>	<b>532</b>

1) The estimated useful life for investment property ranges from 25–50 years.

Investment property encompasses properties located in Berlin, Hamburg and eastern Germany. The estimated fair value has been defined as the price that would be received to sell an asset in an orderly transaction between participants at the measurement date. The fair value calculations have mainly been made by Vattenfall's own assessors. Determination of fair value for investment properties is done through a multiple method using local, comparable rents as observable data. This valuation method entails a categorisation of Level 3 in the fair value hierarchy. See Note 3 to the consolidated accounts, Accounting policies.

Rental income from external customers amounted to SEK 76 million (76). Direct costs for the concerned properties amounted to SEK 528 million (203), of which SEK 439 million (119) pertains to properties that did not generate rental income.

At 31 December 2015, contractual obligations to purchase, construct or develop investment property or for repairs, maintenance or improvements amounted to SEK 8 million (9).

**Note 26** Shares and participations owned by the Parent Company Vattenfall AB and other Group companies**Shares and participations owned by Parent Company Vattenfall AB**

	Corporate Identity Number	Registered office	Number of shares	Participation in % 2015	Carrying amount	
					2015	2014
<b>Sweden</b>						
Borås Elhandel AB	556613-7765	Borås	1,000	100	100	100
Chlorout AB	556840-9253	Stockholm	500	100	—	—
Forsaströms Kraft AB	556010-0819	Åtvidaberg	400,000	100	48	48
Forsmarks Kraftgrupp AB	556174-8525	Östhammar	198,000	66	198	198
Försäkrings AB Vattenfall Insurance	516401-8391	Stockholm	200,000	100	200	200
Gotlands Energi AB	556008-2157	Gotland	112,500	75	13	13
Haparanda Värmeverk AB	556241-9209	Haparanda	200	50	1	1
Produktionsbalans PBA AB	556425-8134	Stockholm	4,800	100	5	5
Ringhals AB	556558-7036	Varberg	248,572	70	379	379
Svensk Kärnbränslehantering AB	556175-2014	Stockholm	360	36 <sup>1</sup>	—	—
Vattenfall Biomass Liberia AB	556809-8809	Stockholm	5,000	100	—	—
Vattenfall Business Services Nordic AB	556439-0614	Stockholm	100	100	130	130
Vattenfall Elanläggningar AB	556257-5661	Solna	1,000	100	1	1
Vattenfall Eldistribution AB	556417-0800	Solna	8,000	100	38,000 <sup>2</sup>	11
Vattenfall France Holding AB	556815-4214	Stockholm	30,500	100	11	11
Vattenfall Inlandskraft AB	556528-2562	Jokkmokk	3,000	100	4	4
Vattenfall Kundservice AB	556529-7065	Stockholm	100,000	100	30	30
Vattenfall Nuclear Fuel AB	556440-2609	Stockholm	100	100	96	96
Vattenfall PHEV Holding AB	556785-9383	Stockholm	1,000	100	—	—
Vattenfall Power Consultant AB	556383-5619	Stockholm	12,500	100	15	15
Vattenfall Power Management AB	556573-5940	Stockholm	6,570	100	12	12
Vattenfall Procurement International AB	556923-6671	Solna	500	100	—	—
Vattenfall Research & Development AB	556390-5891	Älvkarleby	14,000	100	17	17
Vattenfall Services Nordic AB	556417-0859	Stockholm	26,000	100	19	19
Vattenfall Vattenkraft AB	556810-1520	Stockholm	1,200	100	1	1
Vattenfall Vindkraft AB	556731-0866	Stockholm	1,000	100	3,000	3,000
Vattenfall VätterEI AB (Liquidated 2015)	556528-3180	Motala	—	—	—	291
Västerbergslagens Energi AB	556565-6856	Ludvika	14,674	51	15	15
Övertorneå Värmeverk AB (Divested 2015)	556241-9191	Övertorneå	—	—	—	2
<b>Denmark</b>						
Vattenfall A/S	213 11 332	Copenhagen	10,040,000	100	1,148	2,357
Vattenfall Energy Trading A/S	310 811 81	Copenhagen	500	100	49	49
<b>Finland</b>						
Vattenfall Sähkömyynti Oy	1842073-2	Helsinki	85	100	5	5
<b>Germany</b>						
Vattenfall GmbH	(HRB) 124048	Berlin	500,000,000	100	64,066	64,066
<b>Poland</b>						
Vattenfall IT Services Poland Sp.z.o.o	0000402391	Gliwice	58,000	100	12	12
Vattenfall Energy Trading Sp.z.o.o	0000233066	Warsaw	80,000	100	9	9
<b>Netherlands</b>						
N.V. Nuon Energy	33292246	Amsterdam	136,794,964	100	44,138	47,231
<b>Other countries</b>						
Aegir Wave Power Ltd, Scotland	SC367232	Edinburgh	33,594	77	9	9
Nautimus Ltd, UK (Liquidated 2015)	5532528	Grantham	—	—	—	4
Vattenfall Reinsurance S.A., Luxembourg	(B) 49528	Luxembourg	13,000	100	111	111
<b>Total</b>					<b>151,842</b>	<b>118,452</b>

1) The Group owns a further 30% via Forsmarks Kraftgrupp AB.

2) The shares in Vattenfall Eldistribution AB were revalued to SEK 38 billion in order to better reflect the value of the shares.

**Larger shareholdings owned by other Group companies than the Parent Company Vattenfall AB**

When calculating the participation percentages, consideration is taken for the non-controlling interests in the respective companies.

	Registered office	Participation in % 2015	Registered office	Participation in % 2015
<b>Sweden</b>			<b>Netherlands</b>	
Vattenfall Indalsälven AB	Bispgården	74	Emmtec Services B.V.	Emmen 100
			Feenstra N.V.	Amsterdam 100
<b>Denmark</b>			Feenstra Verwarming B.V.	Lelystad 100
Vattenfall Vindkraft A/S	Esbjerg	100	N.V. Nuon Duurzame Energie	Arnhem 100
Vattenfall Vindkraft Nørrekær Enge A/S	Esbjerg	100	N.V. Nuon Energy Sourcing	Amsterdam 100
			N.V. Nuon Sales	Amsterdam 100
<b>Germany</b>			N.V. Nuon Sales Nederland	Amsterdam 100
DanTysk Offshore Wind GmbH	Hamburg	51	N.V. Nuon Warmte	Amsterdam 100
Fernheizwerk Neukölln AG	Berlin	81	Nuon Epe Gas Service B.V.	Amsterdam 100
Kernkraftwerk Brunsbüttel GmbH & Co. oHG	Hamburg	67	Nuon Power Generation B.V.	Utrecht 100
Kraftwerke Schwarze Pumpe GmbH	Spremberg	100	Nuon Power Projects I B.V.	Amsterdam 100
MVR Müllverwertung Rugenberger Damm GmbH & Co. KG	Hamburg	55	Nuon Renewables NSW I B.V.	Amsterdam 100
Nuon Epe Gasspeicher GmbH	Heinsberg	100	Nuon Storage B.V.	Amsterdam 100
Stromnetz Berlin GmbH	Berlin	100	Vattenfall Energy Trading Netherlands N.V.	Amsterdam 100
Vattenfall Europe Business Services GmbH	Hamburg	100	Zuidlob Wind B.V.	Amsterdam 100
Vattenfall Europe Generation AG	Cottbus	100	<b>UK</b>	
Vattenfall Europe Information Services GmbH	Hamburg	100	Eclipse Energy UK Plc	Grantham 100
Vattenfall Europe Kundenservice GmbH	Hamburg	100	Kentish Flats Ltd	London 100
Vattenfall Europe Mining AG	Cottbus	100	Nuon UK Ltd	Cornwall 100
Vattenfall Europe Metering GmbH	Hamburg	100	Pen Y Cymoedd Wind Farm Ltd.	Cornwall 100
Vattenfall Europe Netzservice GmbH	Berlin	100	Swinford Wind Farm Ltd.	Cornwall 100
Vattenfall Europe New Energy GmbH	Hamburg	100	Thanet Offshore Wind Ltd	London 100
Vattenfall Europe Nuclear Energy GmbH	Hamburg	100	Vattenfall Wind Power Ltd	Hexham 100
Vattenfall Europe Sales GmbH	Hamburg	100		
Vattenfall Europe Windkraft GmbH	Hamburg	100		
Vattenfall Europe Wärme AG	Berlin	100		
Vattenfall Kraftwerk Moorburg GmbH	Berlin	100		
Vattenfall Netzservice Hamburg GmbH	Hamburg	100		
Vattenfall Wasserkraft GmbH & Co. KG	Berlin	100		
Vattenfall Wärme Hamburg GmbH	Hamburg	75		
Vattenfall Energy Trading GmbH	Hamburg	100		

**Subsidiaries with material non-controlling ownership interests****Forsmarks Kraftgrupp**

Forsmarks Kraftgrupp conducts nuclear power operations from three nuclear reactors in Östhammar municipality, Uppsala County.

Forsmarks Kraftgrupp is owned by Vattenfall AB (66.0%) together with Mellansvensk Kraftgrupp AB (25.5%), with Fortum as the largest owner, and Sydkraft Nuclear Power AB (8.5%). The part-owners have a consortium agreement that regulates how the operations of Forsmarks Kraftgrupp are conducted and how decision-making is done. Forsmarks Kraftgrupp is reported as a Group company in the Vattenfall Group since Vattenfall has control over Forsmarks Kraftgrupp according to IFRS 10 – “Consolidated Financial Statements”.

Sales of the electric power that is generated are made on a pro rata basis to the part owners at cost, pursuant to the consortium agreement. In addition, the consortium agreement entails that the part owners are responsible for the company’s funding on a pro rata basis, and that the company’s operations shall in principle not generate any profit.

Generation in 2015 amounted to 21.1 TWh (25.3), and the average availability for Forsmark was 76.1% (88.9%).

**Ringhals**

Ringhals conducts nuclear power operations from four nuclear reactors on the Swedish west coast in Varberg municipality.

Ringhals is owned by Vattenfall AB (70.4%) and Sydkraft Nuclear Power AB (29.6%). The part-owners have a consortium agreement that regulates how the operations of Ringhals are conducted and how decision-making is done.

Ringhals is reported as a Group company in the Vattenfall Group since Vattenfall has control over Ringhals according to IFRS 10 – “Consolidated Financial Statements”.

Sales of the electric power that is generated are made on a pro rata basis to the part owners at cost, pursuant to the consortium agreement. In addition, the consortium agreement entails that the part owners are responsible for the company’s funding on a pro rata basis, and that the company’s operations shall in principle not generate any profit.

Generation in 2015 amounted to 21.1 TWh (24.6), and the average availability for Ringhals was 64.4% (77.3%).

**Vattenfall Wärme Hamburg**

Vattenfall owns 74.9% of the shares in Vattenfall Wärme Hamburg, based in Hamburg, Germany. The other part-owner, the City of Hamburg, has a veto right in decisions that require a 75.0% majority. The veto right does not limit Vattenfall’s control over the company’s continuing operations according to IFRS 10 – “Consolidated Financial Statements”.

Since there is a profit-and-loss transfer agreement in place between the company and Vattenfall GmbH, the City of Hamburg does not have a profit participation in the annual result, but receives an annual guaranteed fixed dividend. If Vattenfall GmbH decides to terminate the profit-and-loss transfer agreement, the City of Hamburg has the right to sell its shares back to Vattenfall. In addition, the City of Hamburg has a right to purchase Vattenfall’s 74.9% shareholding with effect in 2019.

Following is condensed financial information for Forsmarks Kraftgrupp, Ringhals, and Vattenfall Wärme Hamburg:

	2015			2014		
	Forsmarks Kraftgrupp	Ringhals	Vattenfall Wärme Hamburg	Forsmarks Kraftgrupp	Ringhals	Vattenfall Wärme Hamburg
<b>Income statements in summary</b>						
Net sales	6,495	8,192	2,905	6,590	9,019	2,821
Profit for the year	998	-11,936	104	377	688	-142
– of which allocated to non-controlling interests	339	-3,528	—	128	203	—
<b>Balance sheets in summary</b>						
Non-current assets	45,910	42,988	3,823	43,874	54,356	3,826
– of which, receivables from Group companies	5,640	8,314	—	5,144	7,301	—
– of which, receivables from non-controlling interests	2,554	3,475	—	2,531	3,044	—
Current assets	4,574	3,706	3,014	4,507	5,425	2,839
– of which, receivables from Group companies	197	433	2,829	533	744	2,667
– of which, receivables from non-controlling interests	13	—	—	108	—	—
<b>Total assets</b>	<b>50,484</b>	<b>46,694</b>	<b>6,837</b>	<b>48,381</b>	<b>59,781</b>	<b>6,665</b>
Equity	9,671	-682	2,766	8,524	10,801	2,634
– of which, allocated to non-controlling interests	3,288	-201	694	2,898	3,193	661
Liabilities	40,813	47,376	4,071	39,857	48,980	4,031
– of which, liabilities to Group companies	10,908	15,210	225	10,589	14,505	275
– of which, liabilities to non-controlling interests	5,309	6,278	—	5,416	5,955	—
<b>Total equity and liabilities</b>	<b>50,484</b>	<b>46,694</b>	<b>6,837</b>	<b>48,381</b>	<b>59,781</b>	<b>6,665</b>
<b>Statement of cash flows in summary</b>						
Cash flow from operating activities	2,035	9,412	668	340	1,282	407
Cash flow from investing activities	-1,725	-2,812	-353	-1,286	-2,652	-264
Cash flow from financing activities	-501	-6,893	—	960	1,424	16
– of which, dividend paid to Group companies	—	-6	—	—	-7	—
– of which, dividend paid to non-controlling interests	—	-3	—	—	-2	—
Cash flow for the year	-191	-293	315	14	54	159

**Note 27** Participations in associated companies and joint arrangements

	2015	2014
Balance brought forward	7,765	8,391
New share issues and shareholders' contributions	5	9
Withdrawals/Repaid shareholders' contributions	-298	-253
Divested companies	-4	-2
Reclassifications from other shares and participations	117	—
Impairment losses	-41	-155
Other changes	105	-101
Profit participations and dividends	-503	-555
Translation differences	-144	431
<b>Balance carried forward</b>	<b>7,002</b>	<b>7,765</b>

**Shares and participations owned by the Parent Company Vattenfall AB or by other Group companies**

	Corporate Identity Number	Registered office	Participation in % 2015	Carrying amount Group		Carrying amount Parent Company	
				2015	2014	2015	2014
<b>Associated companies and joint ventures owned by the Parent Company Vattenfall AB</b>							
<b>Sweden</b>							
Taggen Vindpark Elnät AB	556701-3981	Gothenburg	50	—	—	—	—
<b>Norway</b>							
NorthConnect KS	996625001	Kristiansand	33	10	4	—	—
NorthConnect AS	995878550	Kristiansand	30	2	2	—	—
<b>Associated companies and joint ventures owned by other Group companies than the Parent Company Vattenfall AB</b>							
<b>Sweden</b>							
V <sup>2</sup> Plug-In Hybrid Vehicle Partnership HB	969741-9175	Gothenburg	50	629	609	—	—
<b>UK</b>							
East Anglia Offshore Wind Ltd	06990367	Hexham	50	—	—	—	—
<b>Germany</b>							
DOTI Deutsche Offshore Testfeld und Infrastruktur GmbH & Co. KG	A 200395	Oldenburg	26	219	294	—	—
GASAG Berliner Gaswerke AG	HRB 965	Berlin	32	3,231	3,189	—	—
Kernkraftwerk Brokdorf GmbH & Co. oHG	HRA 99143	Hamburg	20	1,721	2,226	—	—
Kernkraftwerk Stade GmbH & Co. oHG	HRA 99146	Hamburg	33	598	661	—	—
<b>Netherlands</b>							
B.V. NEA	09018339	Dodewaard	23	14	14	—	—
C.V. De Horn	34227063	Amsterdam	42	2	2	—	—
C.V. Groettocht	37085868	Amsterdam	50	7	11	—	—
C.V. Oudelandertocht	37085867	Amsterdam	50	11	12	—	—
C.V. Waardtocht	37085866	Amsterdam	50	4	7	—	—
C.V. Waterkaaptocht	37085865	Amsterdam	50	11	15	—	—
C.V. Windpoort	34122462	Heemskerk	40	9	8	—	—
NoordzeeWind C.V.	34195602	Oegstgeest	50	364	675	—	—
V.O.F. Windpark Oom Kees	09210903	Ede	13	2	2	—	—
Westpoort Warmte B.V.	34121626	Amsterdam	50	29	25	—	—
Windpark Hoofdplaatpolder B.V.	22053732	Sluis	70	134	—	—	—
Windpark Willem-Annapolder B.V.	22049359	Ede	33	—	4	—	—
V.O.F. Noordpier Wind	51173441	Heemskerk	50	5	5	—	—
<b>Total</b>				<b>7,002</b>	<b>7,765</b>	<b>—</b>	<b>—</b>



## Financial information pertaining to associated companies of material significance for Vattenfall

	GASAG Berliner Gaswerke AG <sup>1</sup>		Kernkraftwerk Brokdorf GmbH & Co. oHG <sup>1</sup>	
	2015	2014	2015	2014
Net sales	9,846	10,000	3,657	5,151
Profit or loss after tax for continuing operations	428	300	-2,068	-683
Profit or loss after tax for discontinued operations	—	—	—	—
Other comprehensive income	-121	-359	—	—
Total comprehensive income	374	-59	-2,068	-683
Non-current assets	16,762	16,867	5,351	6,644
Current assets	2,876	4,161	29,316	30,627
Non-current liabilities	9,502	10,534	22,050	20,645
Current liabilities	3,667	3,874	2,741	4,160
Paid dividend to Vattenfall GmbH	84	165	—	—
Contingent liabilities	234	128	—	—

1) The figures in the table pertain to 100% of the values in the respective companies.

GASAG Berliner Gaswerke AG is an energy service provider based in Berlin, Germany. The business activities of the GASAG Group involve the transportation, distribution and sale of natural gas, heat, electricity and water, the operation of storage facilities and other gas-related activities. Vattenfall owns 31.58% of the shares in GASAG.

Kernkraftwerk Brokdorf GmbH & Co. oHG is based in Brokdorf near Hamburg, Germany. The purpose of the company is to operate a nuclear power plant. Vattenfall owns 20.0% of the shares in Brokdorf.

## Financial information pertaining to other associated companies

	2015	2014
Profit or loss after tax for continuing operations	-68	-315
Profit or loss after tax for discontinued operations	—	—
Other comprehensive income	—	—
Total comprehensive income	-68	-315

## Financial information related to joint ventures

	2015	2014
Profit or loss after tax for continuing operations	-151	157
Profit or loss after tax for discontinued operations	—	—
Other comprehensive income	—	—
Total comprehensive income	-151	157

## Information pertaining to joint arrangements of material significance for Vattenfall

Vattenfall owns 50% of the shares in the German nuclear power company Kernkraftwerk Krümmel GmbH & Co. oHG, which is classified as a joint operation. With this method of accounting Vattenfall recognises its share of Kernkraftwerk Krümmel GmbH & Co. oHG's assets and liabilities as well revenues and expenses. For more information about accounting treatment of joint operations, see Note 3 to the consolidated accounts, Accounting policies.

**Note 28 Other shares and participations**

	2015	2014
Balance brought forward	284	2,699
Investments	—	3
New share issues and shareholders' contributions	20	47
Divested companies	—	-2,261
Liquidated companies	-24	—
Impairment losses	-3	-219
Translation differences	-4	15
<b>Balance carried forward</b>	<b>273</b>	<b>284</b>

	Participation in % 2015	Carrying amount Group		Carrying amount Parent Company	
		2015	2014	2015	2014
<b>Shares and participations owned by the Parent Company Vattenfall AB</b>					
Other companies		3	6	2	5
<b>Shares and participations owned by other Group companies than the Parent Company Vattenfall AB</b>					
<b>Germany</b>					
Fernkälte Geschäftsstadt Nord GbR	10	2	2	—	—
GNS Gesellschaft für Nuklear-Service GmbH	6	23	24	—	—
Other companies		27	23	—	—
<b>Netherlands</b>					
Cuculus GmbH	17	27	25	—	—
Locamation Control systems B.V.	39	56	69	—	—
Topell Energy B.V.	14	31	32	—	—
Tri-O-Gen Group B.V.	19	26	25	—	—
Other companies		48	49	—	—
<b>Other countries/companies</b>					
Elini	13	29	29	—	—
Other companies		1	—	—	—
<b>Total</b>		<b>273</b>	<b>284</b>	<b>2</b>	<b>5</b>

**Note 29 Share in the Swedish Nuclear Waste Fund**

	2015	2014
Balance brought forward	31,984	30,600
Payments	1,936	1,175
Disbursements	-916	-753
Returns	1,168	962
<b>Balance carried forward</b>	<b>34,172</b>	<b>31,984</b>

According to the Swedish Nuclear Activities Act (1984:3), any organisation in Sweden with a permit to own or run a nuclear installation is obliged to dismantle the plant in a safe manner, to manage spent fuel and other radioactive waste and to conduct necessary research and development. The permit holder shall also finance this dismantling.

The financing of future fees for spent nuclear fuel is currently ensured by Swedish law. The reactor owner is required to pay a generation-based fee to the board of the Swedish Nuclear Waste Fund, which manages paid-in funds. The fund reimburses the owner of the reactor for expenses as the owner's obligations pursuant to the Swedish law are fulfilled. According to agreements between the Swedish state, Vattenfall AB and E.ON Sverige AB, fund assets for Ringhals AB shall be managed by Vattenfall AB.

On 31 December 2015, the fair value of the Vattenfall Group's share in the Swedish Nuclear Waste Fund was SEK 35,272 million (34,569).

As stated in Note 42 to the consolidated accounts, Other interest-bearing provisions, provisions for future expenses for decommissioning within Swedish nuclear power operations amount to SEK 41,553 million (41,217).

Contingent liabilities attributable to the Swedish Nuclear Waste Fund are described in Note 51 to the consolidated accounts, Contingent liabilities.

**Note 30** Derivative assets and derivative liabilities

	Non-current portion, maturity 1–5 years		Non-current portion, maturity >5 years		Total non-current portion		Current portion		Total	
	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014
<b>Derivative assets</b>										
Financial contracts	1,905	3,192	8,083	9,510	9,988	12,702	1,326	2,116	11,314	14,818
Commodity and commodity-related contracts	10,178	5,396	54	268	10,232	5,664	12,741	11,226	22,973	16,890
<b>Total</b>	<b>12,083</b>	<b>8,588</b>	<b>8,137</b>	<b>9,778</b>	<b>20,220</b>	<b>18,366</b>	<b>14,067</b>	<b>13,342</b>	<b>34,287</b>	<b>31,708</b>
<b>Derivative liabilities</b>										
Financial contracts	1,999	3,031	5,309	5,895	7,308	8,926	1,229	1,294	8,537	10,220
Commodity and commodity-related contracts	3,271	2,829	—	5	3,271	2,834	6,794	3,771	10,065	6,605
<b>Total</b>	<b>5,270</b>	<b>5,860</b>	<b>5,309</b>	<b>5,900</b>	<b>10,579</b>	<b>11,760</b>	<b>8,023</b>	<b>5,065</b>	<b>18,602</b>	<b>16,825</b>

**Note 31** Other non-current receivables

	Receivables from associated companies		Other receivables		Total	
	2015	2014	2015	2014	2015	2014
Balance brought forward	27	22	8,380	6,664	8,407	6,686
New receivables	—	37	519	5,062	519	5,099
Payments received	—	-24	-30	-120	-30	-144
Assets held for sale	—	—	—	-1	—	-1
Reclassifications	—	-8	643	-3,288	643	-3,296
Translation differences	—	—	-55	63	-55	63
<b>Balance carried forward</b>	<b>27</b>	<b>27</b>	<b>9,457</b>	<b>8,380</b>	<b>9,484</b>	<b>8,407</b>
<b>Breakdown of non-current receivables</b>						
Non-current interest-bearing receivables	27	27	1,147	1,154	1,174	1,181
Non-current noninterest-bearing receivables	—	—	8,310	7,226	8,310	7,226
<b>Total</b>	<b>27</b>	<b>27</b>	<b>9,457</b>	<b>8,380</b>	<b>9,484</b>	<b>8,407</b>

**Note 32** Inventories

	2015	2014
<b>Inventories held for own use</b>		
Nuclear fuel	7,226	7,845
Materials and spare parts	3,816	3,823
Fossil fuel	1,397	2,569
Other	939	1,055
<b>Total</b>	<b>13,378</b>	<b>15,292</b>
<b>Inventories held for trading</b>		
Fossil fuel	2,017	2,205
CO <sub>2</sub> emission allowances/Certificates	1,118	975
Biomass	79	30
<b>Total</b>	<b>3,214</b>	<b>3,210</b>
<b>Total inventories</b>	<b>16,592</b>	<b>18,502</b>

Inventories recognised as an expense in 2015 amount to SEK 62,468 million (44,641). Impairment losses for inventory for own use amounted to SEK 1,629 million (28) during the year. Of impairment losses recognised in 2015, SEK 1,584 million pertain to inventories in Ringhals 1 and 2. See Note 14 to the consolidated accounts, Impairment loss and reversed impairment losses. Reversed impairment amounted to SEK 103 million (18).

Parts of inventories are held for trading. These inventories are measured at fair value. For CO<sub>2</sub> emission allowances that are held for trading, fair value is based on quoted prices (Level 1).

For other commodities fair value measurement is derived from an observable market price (API#2 for coal), which means a categorisation into Level 2 of the fair value hierarchy. See Note 3 to the consolidated accounts, Accounting policies.

**Note 33 Intangible assets: current**Attributable to CO<sub>2</sub> emission allowances and certificates held for own use.

	CO <sub>2</sub> emission allowances		Certificates		Total	
	2015	2014	2015	2014	2015	2014
Balance brought forward	4,717	7,377	168	158	4,885	7,535
Purchases	6,310	3,304	583	321	6,893	3,625
Received free of charge	—	—	100	201	100	201
Sold	-5,875	-293	-218	-300	-6,093	-593
Redeemed	-4,301	-6,019	-328	-183	-4,629	-6,202
Disposals	—	—	-26	-29	-26	-29
Translation differences	-39	348	—	—	-39	348
<b>Balance carried forward</b>	<b>812</b>	<b>4,717</b>	<b>279</b>	<b>168</b>	<b>1,091</b>	<b>4,885</b>

**Note 34 Trade receivables and other receivables**

	2015	2014
Accounts receivable – trade	18,841	25,014
Receivables from associated companies	11	30
Other receivables	7,341	6,173
<b>Total</b>	<b>26,193</b>	<b>31,217</b>

**Age analysis**

The collection period is normally between 10 and 30 days.

	2015			2014		
	Receivables, gross	Impaired receivables	Receivables, net	Receivables, gross	Impaired receivables	Receivables, net
<b>Accounts receivable – trade</b>						
Not due	16,126	17	16,109	20,831	24	20,807
Past due 1–30 days	1,107	11	1,096	1,759	21	1,738
Past due 31–90 days	323	18	305	610	41	569
Past due >90 days	2,447	1,116	1,331	3,269	1,369	1,900
<b>Total</b>	<b>20,003</b>	<b>1,162</b>	<b>18,841</b>	<b>26,469</b>	<b>1,455</b>	<b>25,014</b>
<b>Receivables from associated companies</b>						
Not due	9	—	9	28	—	28
Past due 1–30 days	1	—	1	2	—	2
Past due >90 days	2	1	1	—	—	—
<b>Total</b>	<b>12</b>	<b>1</b>	<b>11</b>	<b>30</b>	<b>—</b>	<b>30</b>
<b>Other receivables</b>						
Not due	6,203	9	6,194	5,035	2	5,033
Past due 1–30 days	18	—	18	237	21	216
Past due 31–90 days	3	—	3	153	30	123
Past due >90 days	1,223	97	1,126	851	50	801
<b>Total</b>	<b>7,447</b>	<b>106</b>	<b>7,341</b>	<b>6,276</b>	<b>103</b>	<b>6,173</b>

Impaired receivables as above:

	2015	2014
Balance brought forward	1,558	1,325
Provision for impairment losses	270	556
Written-off receivables	-506	-323
Reversed impairment losses	-15	-44
Reclassifications	-6	1
Divested companies	—	-33
Translation differences	-32	76
<b>Balance carried forward</b>	<b>1,269</b>	<b>1,558</b>

**Note 35 Advance payments paid**

	2015	2014
Margin calls paid, energy trading	3,267	2,150
Other advance payments	340	467
<b>Total</b>	<b>3,607</b>	<b>2,617</b>

A margin call is a marginal security (collateral) that Vattenfall pays its counterparty, that is, to the holder of a derivative position to cover the counterparty's credit risk, either bilaterally via OTC or through an exchange. In Vattenfall's business activities, margin calls occur in energy trading and in the financing activities.

Margin calls paid within energy trading are recognised on the balance sheet as advance payments received and are thereby recognised in the statement of cash flows as cash flows from changes in operating assets. Margin calls paid within financing activities are recognised as short-term investments (Note 37 to the consolidated accounts, Short-term investments) and are thereby reported in the statement of cash flows as cash flows from financing activities.

**Note 36 Prepaid expenses and accrued income**

	2015	2014
Prepaid expenses and accrued income, electricity	2,862	3,303 <sup>2</sup>
Prepaid nuclear power-related tax	832	776 <sup>1</sup>
Prepaid insurance premiums	60	68
Prepaid expenses, other	636	553
Accrued income, other	1,546	1,698 <sup>2</sup>
<b>Total</b>	<b>5,936</b>	<b>6,398<sup>1</sup></b>

1) The amount has been recalculated by SEK 776 million compared with previously published information in Vattenfall's 2014 Annual and Sustainability Report as a result of new accounting rules (IFRIC 21) that took effect in 2015. See Note 2 to the consolidated accounts, Important changes in the financial statements compared with the preceding year.

2) The amount has been recalculated by SEK 936 million compared with previously published information in Vattenfall's 2014 Annual and Sustainability Report as a result of a reclassification of network transmission revenues.

**Note 37 Short-term investments**

	2015	2014
Interest-bearing investments	29,226	29,735
Margin calls paid, financing activities	2,679	3,050
<b>Total</b>	<b>31,905</b>	<b>32,785</b>

**Note 38 Cash and cash equivalents**

	2015	2014
Cash and bank balances	10,822	11,839
Cash equivalents	1,529	444
<b>Total</b>	<b>12,351</b>	<b>12,283</b>

**Note 39 Assets held for sale**

Refers to combined heat and power assets in the Netherlands and Denmark as well as waste incineration plants in Germany.

	2015	2014
Property, plant and equipment	1,050	3,928
Other non-current assets	593	572
Trade receivables and other receivables	74	217
Cash and cash equivalents	2,263	—
<b>Total assets</b>	<b>3,980</b>	<b>4,717</b>
Other interest-bearing provisions	2,812	783
Deferred tax liabilities	3	559
Trade payables and other liabilities	327	379
<b>Total liabilities</b>	<b>3,142</b>	<b>1,721</b>



**Note 40 Interest-bearing liabilities and related financial derivatives**

Interest-bearing liabilities include Hybrid Capital and other interest-bearing liabilities – mainly bond issues and liabilities pertaining to acquisitions of Group companies.

In 2015 Vattenfall issued hybrid bonds on two occasions. In March, two hybrid bonds, each worth SEK 3 billion, were issued, as well as a EUR 1 billion bond (total amount approximately SEK 15 billion). The issues were made to refinance the EUR 1 billion, hybrid bond, issued in 2005. The excess amount of the proceeds is earmarked for use in Vattenfall's continuing operations. Just under half of the 2005 hybrid bond, was redeemed in March, and the rest on 29 June. In November Vattenfall issued an additional hybrid bond of USD 400 million (approximately SEK 3.5 billion) for use in continuing operations.

Like the previous hybrid bond that was issued in 2005, the new bonds are reported as an interest-bearing liability and are subordinated to Vattenfall's other debt instruments. The credit rating agencies Moody's and Standard & Poor's classify 50% of the new hybrid bonds as equity in their credit analyses.

In contrast with the 2005 hybrid bond, which had a perpetual maturity, the new SEK and EUR bonds have set terms of 62 years and the USD bond 63 years. Like the 2005 bond, Vattenfall has an option at specifically defined points in time to redeem the new bonds at a call date prior to maturity. These call dates arise for the first time after seven years for the two SEK-denominated bonds, after eight years for the USD-denominated bond, and after twelve years for the EUR-denominated bond.

Hybrid Capital is reported as follows:

	2015	2014
Balance brought forward	9,385	8,835
Redemption of Hybrid Capital	-9,172	—
Issue of Hybrid Capital	18,636	—
Effects from hedge accounting	-20	—
Discount allocation	6	16
Translation differences	-289	534
<b>Balance carried forward</b>	<b>18,546</b>	<b>9,385</b>

Reported values for Hybrid Capital and other interest-bearing liabilities are specified as follows:

	Non-current portion maturity 1–5 years		Non-current portion maturity >5 years		Total non-current portion		Current portion		Total	
	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014
Bond issues	16,119	27,575	35,035	35,084	51,154	62,659	11,181	2,064	62,335	64,723
Commercial paper	—	—	—	—	—	—	3,455	4,791	3,455	4,791
Liabilities to credit institutions	2,832	2,112	—	349	2,832	2,461	276	486	3,108	2,947
Liabilities pertaining to acquisitions of subsidiaries <sup>1</sup>	—	—	—	—	—	—	—	19,293	—	19,293
Liabilities to owners of non-controlling interests	150	159	12,195	11,468	12,345	11,627	696	757	13,041	12,384
Liabilities to associated companies	—	—	—	—	—	—	2,751	2,617	2,751	2,617
Other liabilities	1,092	1,272	756	788	1,848	2,060	5,501 <sup>2</sup>	7,728 <sup>2</sup>	7,349	9,788
<b>Total interest-bearing liabilities excl. Hybrid Capital</b>	<b>20,193</b>	<b>31,118</b>	<b>47,986</b>	<b>47,689</b>	<b>68,179</b>	<b>78,807</b>	<b>23,860</b>	<b>37,736</b>	<b>92,039</b>	<b>116,543</b>
Hybrid Capital	—	—	18,546	—	18,546	—	—	9,385	18,546	9,385
<b>Total interest-bearing liabilities</b>	<b>20,193</b>	<b>31,118</b>	<b>66,532</b>	<b>47,689</b>	<b>86,725</b>	<b>78,807</b>	<b>23,860</b>	<b>47,121</b>	<b>110,585</b>	<b>125,928</b>
Derivatives (swaps) attributable to the above interest-bearing liabilities	292	-507	-2,773	-3,607	-2,481	-4,114	-209	-616	-2,690	-4,730

1) According to agreement, the liability pertaining to the acquisition of the remaining 21% of the shares in N.V. Nuon Energy, SEK 19,293 million, was paid in July 2015.

2) Of which, margin calls within financing activities SEK 5,307 million (7,013).

Undiscounted future cash flows including interest payments on the interest-bearing liabilities mentioned above, future cash flow for derivatives, trade payables and financial instruments with contractual payments on 31 December, are shown in the table below. Floating interest cash flows with future interest fixing dates are estimated based on observable interest rate curves at year end. All future cash flows in foreign currency are translated to SEK using the rate on the balance sheet date for the annual accounts.

	Non-current portion maturity 1–5 years		Non-current portion maturity > 5 years		Total non-current portion		Current portion		Total	
	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014
Interest-bearing liabilities	32,573	42,111	85,575	65,284	118,148	107,395	28,086	51,421	146,234	158,816
Derivatives (swaps)	-2,315	-2,390	-7,521	-10,388	-9,836	-12,778	-794	-1,343	-10,630	-14,121
Trade payables and other financial liabilities	1,966	1,558	4,307	4,198	6,273	5,756	23,958	30,641	30,231	36,397
<b>Total</b>	<b>32,224</b>	<b>41,279</b>	<b>82,361</b>	<b>59,094</b>	<b>114,585</b>	<b>100,373</b>	<b>51,250</b>	<b>80,719</b>	<b>165,835</b>	<b>181,092</b>

The table below shows the largest benchmark bond issues by Vattenfall.

Type	Issued	Currency	Nominal amount	Coupon %	Maturity
Euro Medium Term Note	2009	EUR	1,100	5.250	2016
Euro Medium Term Note	2003	EUR	500	5.000	2018
Euro Medium Term Note	2008	EUR	650	6.750	2019
Euro Medium Term Note	2009	GBP	350	6.125	2019
Euro Medium Term Note	2009	EUR	1,100	6.250	2021
Euro Medium Term Note	2004	EUR	500	5.375	2024
Euro Medium Term Note	2009	GBP	1,000	6.875	2039

**Note 41 Pension provisions****General**

Vattenfall's pension obligations in the Group's Swedish and German companies are predominantly defined benefit pension obligations. The concerned pension plans are primarily retirement pensions, disability pensions and family pensions. The assets in these funds (the plan assets) are reported at fair value. There are also pension plans in these and other countries that are defined contribution plans.

**Swedish pension plans**

The Swedish pension plans supplement the Swedish social insurance system and are the result of agreements between employer and employee organisations. Essentially all Vattenfall employees in Sweden are enrolled in the collectively bargained ITP-Vattenfall pension plan. For employees born in 1978 and earlier, the plan is mostly a defined benefit solution, while for employees born in 1979 and later, the plan is entirely a defined contribution solution.

In defined benefit pension solutions, the employee is guaranteed a lifetime pension that corresponds to a set percentage of the employee's final salary. Defined benefit pensions are secured through provisions on the balance sheet, and the obligation is covered by credit insurance with PRI Pensionsgaranti. In addition, certain pensions attributable the time prior to Vattenfall's incorporation are covered by a government guarantee via the Swedish National Debt Office. Defined contribution pensions are secured through insurance with any of the insurance companies that are electable within the framework of the ITP plan.

Certain of Vattenfall's obligations in the ITP plan (such as spousal benefits and disability pensions) are secured through an insurance policy from Alecta (a Swedish mutual insurance company). According to a statement (UFR 10) issued by the Swedish Financial Reporting Board, this plan is a multi-employer defined benefit plan. As in previous years, Vattenfall has not had access to such information to make it possible to report this plan as a defined benefit plan. The pension plan according to ITP secured by insurance in Alecta is therefore reported as a defined contribution plan. This year's share of the total savings premium in Alecta is 0.26567%, while Vattenfall's share of the total number of actively insured in Alecta is 1.25013%. Alecta's surplus can be distributed among the policyholders and/or the insureds. At the end of 2015, Alecta's surplus in the form of its so-called collective funding amounted to 153% (143%). Collective funding consists of the fair value of Alecta's assets as a percentage

**Defined benefit pension plans**

	2015				
	Sweden	Germany		Other	Total
		Plan Berlin	Plan Hamburg		
Present value of unfunded obligations	10,355	458	20,764	1	31,578
Present value of fully or partly funded obligations	—	15,977	323	—	16,300
<b>Present value of obligations</b>	<b>10,355</b>	<b>16,435</b>	<b>21,087</b>	<b>1</b>	<b>47,878</b>
Fair value of plan assets	—	8,694	265	—	8,959
<b>Net defined benefit liability</b>	<b>10,355</b>	<b>7,741</b>	<b>20,822</b>	<b>1</b>	<b>38,919</b>

	2014				
	Sweden	Germany		Other	Total
		Plan Berlin	Plan Hamburg		
Present value of unfunded obligations	11,511	505	25,280	1	37,297
Present value of fully or partly funded obligations	—	17,255	321	—	17,576
<b>Present value of obligations</b>	<b>11,511</b>	<b>17,760</b>	<b>25,601</b>	<b>1</b>	<b>54,873</b>
Fair value of plan assets	—	9,308	267	—	9,575
<b>Net defined benefit liability</b>	<b>11,511</b>	<b>8,452</b>	<b>25,334</b>	<b>1</b>	<b>45,298</b>

**Changes in obligations**

	2015	2014
Balance brought forward	54,873	44,540
Benefits paid by the plan	-2,284	-2,265
Service cost	763	638
Contributions by plan participants	5	5
Actuarial gains (-) or losses(+) due to changes in financial assumptions	-2,899	8,948
Actuarial gains (-) or losses(+) due to changes in demographic assumptions	-1	40
Actuarial gains (-) or losses(+) due to plan experience	-148	240
Current interest expense	1,124	1,558
Divested companies	-109	-1,148
Liabilities associated with assets held for sale	-2,587	—
Translation differences	-859	2,317
<b>Balance carried forward</b>	<b>47,878</b>	<b>54,873</b>

of the insurance obligations calculated in accordance with Alecta's actuarial calculation assumptions.

**German pension plans**

The pension plans in Germany are based on collective agreements in line with market terms and conditions. Substantial defined benefit plans exist for employees in Berlin and Hamburg.

**Berlin**

Two pension plans exist, both secured through Pensionskasse der Bewag, a mutual insurance company. Obligations are secured through funds paid in by Vattenfall and its employees. One plan has been classified as a defined contribution plan and is reported as such since the benefit is based on paid-in premiums and Pensionskasse der Bewag's financial position. For employees who began their employment before 1 January 1984, there is a supplementary agreement providing employees working until retirement age with a pension equal to up to 80% of the salary on which the pension is based. Half of the statutory pension and the entire benefit from Pensionskasse der Bewag, including surpluses, are credited to the guaranteed amount. Vattenfall's obligations encompass the entire pension obligation. The plan assets attributable to personnel hired before 1 January 1984 are reported as plan assets at fair value. Pensionskasse der Bewag's operations are supervised by a regulatory authority. The assets of Pensionskasse are investment funds that are not listed on the stock exchange. The fair value is determined by the repurchase price.

**Hamburg**

Vattenfall has pension obligations for employees in Hamburg that mainly consist of the company's obligations to personnel employed before 1 April 1991 and who have been employed for at least 10 years. The sum of the retirement pension, statutory pension and pensions from third parties normally amounts to a maximum of 65% of pensionable salary.

**Dutch pension plans**

In the Netherlands Vattenfall has the majority of the pension obligations secured through the ABP pension fund and the "Metaal en Techniek" pension fund. The ABP and "Metaal en Techniek" plans are classified and reported as defined contribution plans.

**Changes in plan assets**

	2015	2014
Balance brought forward	9,575	9,063
Benefits paid by the plan	-459	-472
Contributions by employer	28	28
Contributions by plan participants	5	5
Interest income	186	318
Difference between interest and actual return	-172	98
Divested companies	-4	-9
Translation differences	-200	544
<b>Balance carried forward</b>	<b>8,959</b>	<b>9,575</b>

**Plan assets consist of the following**

	2015	2014
Shares and participations	3,017	2,261
Interest-bearing instruments	4,530	5,977
Property	902	858
Other	510	479
<b>Total</b>	<b>8,959</b>	<b>9,575</b>

Payments for contributions to defined benefit plans during 2016 are estimated at SEK 414 million.

**Pension costs**

	2015	2014
Defined benefit plans:		
Current service cost	783	599
Interest expenses	1,123	1,558
Interest income	-186	-318
Past service cost	-19	39
<b>Total cost for defined benefit plans</b>	<b>1,701</b>	<b>1,878</b>
Cost for defined contribution plans	868	870
<b>Total pension costs</b>	<b>2,569</b>	<b>2,748</b>

Pension costs are reported on the following lines in the income statement:

	2015	2014
Cost of products sold	1,526	1,376
Selling expenses	43	28
Administrative expenses	62	104
Financial expenses	938	1,240
<b>Total pension costs</b>	<b>2,569</b>	<b>2,748</b>

In calculating pension obligations, the following actuarial assumptions have been made (%):

	Sweden		Germany	
	2015	2014	2015	2014
Discount rate	3.25	2.5	2.25	2.0
Future annual salary increases	3.00	3.0	2.50	2.5
Future annual pension increases	1.50	1.5	0.0-2.0	0.0-2.0

**Sensitivity to key actuarial assumptions**

	Sweden				Germany			
	2015		2014		2015		2014	
	%		%		%		%	
Impact on the defined benefit obligation at 31 December of a:								
Increase by 50 basis points in the discount rate	-863	-8.3	-970	-8.7	-2,682	-6.7	-3,220	-7.2
Decrease by 50 basis points in the discount rate	936	9.0	1,056	9.2	3,106	7.8	3,641	8.1
Increase by 50 basis points in the annual pension increases	936	9.0	1,056	9.2	2,303	5.8	2,673	6.0
Decrease by 50 basis points in the annual pension increases	-863	-8.3	-970	-8.7	-2,078	-5.2	-2,443	-5.4

At 31 December 2015 the weighted duration of pension obligations was 15.0 (15.7) years for Germany and 17.2 (17.6) years for Sweden.

**Note 42 Other interest-bearing provisions**

	Non-current portion		Current portion		Total	
	2015	2014	2015	2014	2015	2014
Provisions for future expenses of nuclear power operations	68,540	67,031	2,464	2,492	71,004	69,523
Provisions for future expenses of mining, gas and wind operations and other environmental measures/undertakings	17,516	12,870	1,594	1,626	19,110	14,496
Personnel-related provisions for non-pension purposes	1,646	1,787	1,701	1,559	3,347	3,346
Provisions for tax and legal disputes	1,794	1,161	144	785	1,938	1,946
Other provisions	3,546	3,638	399	320	3,945	3,958
<b>Total</b>	<b>93,042</b>	<b>86,487</b>	<b>6,302</b>	<b>6,782</b>	<b>99,344</b>	<b>93,269</b>

Discount rates used in the calculations of the provisions are described in Note 4 to the consolidated accounts, Important estimations and assessments in the preparation of the financial statements.

**Provisions for future expenses of nuclear power operations**

Vattenfall's nuclear power producers in Sweden and Germany have a legal obligation upon the cessation of production to decommission and dismantle the nuclear power plants and to restore the plots of land where the plants were located. Further, this obligation also encompasses the safeguarding and final storage of spent radioactive fuel and other radioactive materials used by the plants. The provisions include future expenses for the management of low- and intermediate-level radioactive waste.

	Sweden	Germany	Total
Balance brought forward	41,217	28,306	69,523
Provisions for the period	592	2,592	3,184
Interest effects	1,835	1,126	2,961
Revaluations versus non-current assets	-886	—	-886
Reversed provisions	—	-342	-342
Provisions used	-1,205	-1,590	-2,795
Translation differences	—	-641	-641
<b>Balance carried forward</b>	<b>41,553<sup>1</sup></b>	<b>29,451<sup>2</sup></b>	<b>71,004</b>

1) Of which, approximately 28% (26%) pertains to the dismantling of nuclear power plants and approximately 72% (74%) to the handling of spent radioactive fuel.

2) Of which, approximately 43% (50%) pertains to the dismantling of nuclear power plants and approximately 57% (50%) to the handling of spent radioactive fuel.

**Provisions for future expenses of mining, gas and wind operations and other environmental measures/undertakings**

Provisions are made to restore sites and for other undertakings associated with the Group's permits to conduct lignite mining in Germany, and in the Netherlands for the dismantling and removal of assets and restoration of sites where the Group conducts gas operations. Provisions are also made for restoration of sites where the Group conducts wind operations and for environmental measures/undertakings within other activities carried out by the Group.

Balance brought forward	14,496
Transfer balance brought forward	1,414
Provisions for the period	5,415
Interest effects	513
Revaluations versus non-current assets	242
Provisions used	-796
Provisions reversed	-1,623
Divested companies	-60
Assets held for sale	-123
Translation differences	-368
<b>Balance carried forward</b>	<b>19,110</b>

**Personnel-related provisions for non-pension purposes**

Provisions are made for future costs pertaining to redundancy in the form of severance pay and other costs for giving notice to personnel.

Balance brought forward	3,346
Provisions for the period	1,912
Interest effects	79
Revaluations	-32
Provisions used	-1,611
Provisions reversed	-133
Divested companies	2
Assets held for sale	-149
Translation differences	-67
<b>Balance carried forward</b>	<b>3,347</b>

**Provisions for tax and legal disputes**

Provisions are made for possible future tax expenses due to ongoing tax audits and for ongoing legal disputes and actions. These include provisions related to ongoing legal actions concerning encroachment regarding cable laying on land in eastern Germany.

Balance brought forward	1,946
Provisions for the period	895
Interest effects	-124
Revaluations	-620
Provisions used	-33
Provisions reversed	-106
Translation differences	-20
<b>Balance carried forward</b>	<b>1,938</b>

**Other provisions**

Other provisions include, among others, provisions for losses on contracts, restructuring and guarantee commitments.

Balance brought forward	3,958
Transfer balance brought forward	-1,414
Provisions for the period	1,143
Interest effects	13
Revaluations	718
Provisions used	-327
Provisions reversed	-129
Translation differences	-17
<b>Balance carried forward</b>	<b>3,945</b>

**Future expenses of non-current provisions**

With the current assumptions, provisions are expected to result in outgoing payments as shown below:

	Provision for nuclear Germany	Provision for mining, gas and wind operations	Personnel- related provision	Provision for tax and legal disputes	Other provisions	Total
2–5 years	6,037	3,157	449	1,733	2,514	13,890
6–10 years	8,342	3,770	389	61	185	12,747
11–20 years	6,149	7,030	662	—	216	14,057
Beyond 20 years	6,460	3,559	146	—	631	10,796
<b>Total</b>	<b>26,988</b>	<b>17,516</b>	<b>1,646</b>	<b>1,794</b>	<b>3,546</b>	<b>51,490</b>

Payments of future expenses for nuclear power in Sweden are not included in the amounts reported above, since the owners of the reactors are compensated in corresponding amounts from the Swedish Nuclear Waste Fund.

**Note 43 Other noninterest-bearing liabilities (non-current)**

Of total liabilities of SEK 6,273 million (5,756), SEK 4,306 million (4,198) falls due after more than five years. Of the total liabilities, SEK 4,789 million (4,894) pertains to deferred income and SEK 1,484 million (862) to other liabilities.

**Note 44 Trade payables and other liabilities**

	2015	2014
Accounts payable – trade	15,587	19,564
Liabilities to associated companies	-321	270
Other liabilities	8,692	10,807
<b>Total</b>	<b>23,958</b>	<b>30,641</b>

**Note 45 Advance payments received**

	2015	2014
Margin calls received, energy trading	2,216	2,371
Other advance payments	77	26
<b>Total</b>	<b>2,293</b>	<b>2,397</b>

A margin call is marginal security (collateral) that Vattenfall's counterparty pays to Vattenfall as the holder of a derivative position to cover Vattenfall's credit risk, either bilaterally via OTC or through an exchange. In Vattenfall's business activities, margin calls occur in energy trading and in the treasury operations.

Margin calls received within energy trading are recognised on the balance sheet as Advance payments received and are thereby recognised in the statement of cash flows as cash flows from changes in operating liabilities while margin calls received within financing activities are recognised on the balance sheet as Current interest-bearing liabilities (Note 40 to the consolidated accounts, Interest-bearing liabilities and related financial derivatives) and are thereby recognised in the statement of cash flows recognised as cash flows from financing activities.

**Note 46 Accrued expenses and deferred income**

	2015	2014
Accrued personnel-related costs	2,695	3,894
Accrued expenses, CO <sub>2</sub> emission allowances	6,373	4,566
Accrued expenses, connection fees	70	70
Accrued nuclear power-related fees and taxes	1,122	943 <sup>1</sup>
Accrued interest expense	2,698	3,163
Other accrued expenses	4,052	2,621
Deferred income and accrued expenses, electricity	2,525	2,552
Other deferred income	434	373
<b>Total</b>	<b>19,969</b>	<b>18,182<sup>1</sup></b>

1) The amount has been recalculated by SEK 776 million compared with previously published information in Vattenfall's 2014 Annual and Sustainability Report as a result of new accounting rules (IFRIC 21) that took effect in 2015. See Note 2 to the consolidated accounts, Important changes in the financial statements compared with the preceding year.



**Note 47** Financial instruments by category, offsetting of financial assets and liabilities, and financial instruments' effects on income

Risks arising from financial instruments are described under the heading Risks and risk management on pages 70–78 in this Annual and Sustainability Report.

	2015		2014	
	Carrying amount	Fair value	Carrying amount	Fair value
<b>Financial instruments by category:</b>				
<b>Financial assets at fair value through profit or loss</b>				
Derivative assets	18,435	18,435	17,126	17,126
Short-term investments	29,226	29,226	29,735	29,735
Cash equivalents	1,529	1,529	444	444
<b>Total</b>	<b>49,190</b>	<b>49,190</b>	<b>47,305</b>	<b>47,305</b>
<b>Derivative assets for hedging purposes for:</b>				
Fair value hedges	3,467	3,467	4,850	4,850
– of which interest rate swaps	3,467	3,467	4,102	4,102
– of which cross-currency interest rate swaps	—	—	748	748
Cash flow hedges	12,385	12,385	9,732	9,732
– of which commodities and commodity-related contracts	12,280	12,280	9,700	9,700
– of which currency-forward contracts and other	105	105	32	32
<b>Total</b>	<b>15,852</b>	<b>15,852</b>	<b>14,582</b>	<b>14,582</b>
<b>Loans and receivables</b>				
Share in the Swedish Nuclear Waste Fund	34,172	35,272	31,984	34,569
Other non-current receivables	9,484	9,506	8,407	8,429
Trade receivables and other receivables	26,193	26,147	31,217	31,282
Advance payments paid	3,267	3,267	2,150	2,150
Short-term investments	2,679	2,679	3,050	3,049
Cash and bank balances	10,822	10,822	11,839	11,839
<b>Total</b>	<b>86,617</b>	<b>87,693</b>	<b>88,647</b>	<b>91,318</b>
<b>Available-for-sale financial assets</b>				
Other shares and participations carried at cost	273	273	284	284
<b>Total</b>	<b>273</b>	<b>273</b>	<b>284</b>	<b>284</b>
<b>Financial liabilities at fair value through profit or loss</b>				
Derivative liabilities	16,408	16,408	13,837	13,837
<b>Total</b>	<b>16,408</b>	<b>16,408</b>	<b>13,837</b>	<b>13,837</b>
<b>Derivative liabilities for hedging purposes for:</b>				
Fair value hedges	8	8	2	2
– of which interest rate swaps	8	8	1	1
– of which cross-currency interest rate swaps	—	—	1	1
Cash flow hedges	2,186	2,186	2,986	2,986
– of which commodities and commodity-related contracts	2,186	2,186	2,974	2,974
– of which currency-forward contracts and other	—	—	12	12
<b>Total</b>	<b>2,194</b>	<b>2,194</b>	<b>2,988</b>	<b>2,988</b>
<b>Other financial liabilities</b>				
Hybrid Capital, non-current interest-bearing liability	18,546	16,196	—	—
Other non-current interest-bearing liabilities	68,179	74,962	78,807	89,800
Other non-current noninterest-bearing liabilities	6,273	6,273	5,756	5,756
Hybrid Capital, current interest-bearing liability	—	—	9,385	9,551
Current interest-bearing liabilities	23,860	23,978	37,736	38,420
Trade payables and other liabilities	22,362	22,362	28,094	28,094
Advance payments received	2,216	2,216	2,371	2,371
<b>Total</b>	<b>141,436</b>	<b>145,987</b>	<b>162,149</b>	<b>173,992</b>

For assets and liabilities with a remaining maturity less than three months (that is cash and bank balances, trade receivables and other receivables and trade payables and other payables), fair value is considered to be equal to the carrying amount. For Other shares and participations carried at cost, in the absence of fair value, cost is considered to be equal to the carrying amount. The fair value hierarchy is described in Note 3 to the consolidated accounts, Accounting policies.

**Offsetting financial assets and financial liabilities**

Financial assets and liabilities that are subject to enforceable master netting arrangements and similar agreements:

	Gross amounts of recognised financial assets	Gross amounts of recognised financial liabilities set off on the balance sheet	Net amounts of financial assets presented on the balance sheet	Related amounts not set off on the balance sheet		Net amount
				Financial liabilities, not intended to be settled net <sup>1</sup>	Cash collateral received	
<b>Assets 31 December 2015</b>						
Derivatives, financial operations	11,315	—	11,315	5,751	5,216	348
Derivatives, commodity contracts	77,037	57,446	19,591	—	2,221	17,370
<b>Total</b>	<b>88,352</b>	<b>57,446</b>	<b>30,906</b>	<b>5,751</b>	<b>7,437</b>	<b>17,718</b>
Derivatives, not subject to offsetting	3,381	—	3,381	—	—	3,381
<b>Total derivative assets</b>			<b>34,287</b>			<b>21,099</b>

	Gross amounts of recognised financial assets	Gross amounts of recognised financial liabilities set off on the balance sheet	Net amounts of financial assets presented on the balance sheet	Related amounts not set off on the balance sheet		Net amount
				Financial liabilities, not intended to be settled net <sup>1</sup>	Cash collateral received	
<b>Assets 31 December 2014</b>						
Derivatives, financial operations	14,818	—	14,818	7,136	7,010	672
Derivatives, commodity contracts	60,763	47,343	13,420	—	2,397	11,023
<b>Total</b>	<b>75,581</b>	<b>47,343</b>	<b>28,238</b>	<b>7,136</b>	<b>9,407</b>	<b>11,695</b>
Derivatives, not subject to offsetting	3,470	—	3,470	—	—	3,470
<b>Total derivative assets</b>			<b>31,708</b>			<b>15,165</b>

	Gross amounts of recognised financial liabilities	Gross amounts of recognised financial assets set off on the balance sheet	Net amounts of financial liabilities presented on the balance sheet	Related amounts not set off on the balance sheet		Net amount
				Financial assets, not intended to be settled net <sup>1</sup>	Cash collateral pledged	
<b>Liabilities 31 December 2015</b>						
Derivatives, financial operations	8,537	—	8,537	5,751	2,620	166
Derivatives, commodity contracts	65,434	57,446	7,988	—	3,254	4,734
<b>Total</b>	<b>73,971</b>	<b>57,446</b>	<b>16,525</b>	<b>5,751</b>	<b>5,874</b>	<b>4,900</b>
Derivatives, not subject to offsetting	2,077	—	2,077	—	—	2,077
<b>Total derivative liabilities</b>			<b>18,602</b>			<b>6,977</b>

	Gross amounts of recognised financial liabilities	Gross amounts of recognised financial assets set off on the balance sheet	Net amounts of financial liabilities presented on the balance sheet	Related amounts not set off on the balance sheet		Net amount
				Financial assets, not intended to be settled net <sup>1</sup>	Cash collateral pledged	
<b>Liabilities 31 December 2014</b>						
Derivatives, financial operations	10,220	—	10,220	7,136	2,976	108
Derivatives, commodity contracts	51,994	47,343	4,651	—	2,109	2,542
<b>Total</b>	<b>62,214</b>	<b>47,343</b>	<b>14,871</b>	<b>7,136</b>	<b>5,085</b>	<b>2,650</b>
Derivatives, not subject to offsetting	1,954	—	1,954	—	—	1,954
<b>Total derivative liabilities</b>			<b>16,825</b>			<b>4,604</b>

1) These items cannot be settled net as each transaction has a unique due date and they were not entered into with the purpose to be settled net. Settlement can be entailed only in case of default.

**Financial assets and liabilities that are measured at fair value on the balance sheet at 31 December 2015**

	Level 1	Level 2	Level 3	Total
<b>Assets</b>				
Derivative assets	—	33,879	408	34,287
Short-term investments and cash equivalents	20,606	10,149	—	30,755
<b>Total assets</b>	<b>20,606</b>	<b>44,028</b>	<b>408</b>	<b>65,042</b>
<b>Liabilities</b>				
Derivative liabilities	—	17,164	1,438	18,602
<b>Total liabilities</b>	<b>—</b>	<b>17,164</b>	<b>1,438</b>	<b>18,602</b>

**Financial assets and liabilities that are measured at fair value on the balance sheet at 31 December 2014**

	Level 1	Level 2	Level 3	Total
<b>Assets</b>				
Derivative assets	—	31,058	650	31,708
Short-term investments and cash equivalents	25,071	5,108	—	30,179
<b>Total assets</b>	<b>25,071</b>	<b>36,166</b>	<b>650</b>	<b>61,887</b>
<b>Liabilities</b>				
Derivative liabilities	—	16,155	670	16,825
<b>Total liabilities</b>	<b>—</b>	<b>16,155</b>	<b>670</b>	<b>16,825</b>

**Information about fair value of financial assets and liabilities which are, on the balance sheet at 31 December 2015, measured at amortised cost**

	Level 1	Level 2	Total
<b>Assets</b>			
Share in the Swedish Nuclear Waste Fund	35,272	—	35,272
Other non-current receivables	—	9,506	9,506
<b>Total assets</b>	<b>35,272</b>	<b>9,506</b>	<b>44,778</b>
<b>Liabilities</b>			
Hybrid Capital	—	16,196	16,196
Other non-current interest-bearing liabilities	—	74,962	74,962
Current interest-bearing liabilities	—	23,978	23,978
<b>Total liabilities</b>	<b>—</b>	<b>115,136</b>	<b>115,136</b>

**Information about fair value of financial assets and liabilities which are, on the balance sheet at 31 December 2014, measured at amortised cost**

	Level 1	Level 2	Total
<b>Assets</b>			
Share in the Swedish Nuclear Waste Fund	34,569	—	34,569
Other non-current receivables	—	8,429	8,429
<b>Total assets</b>	<b>34,569</b>	<b>8,429</b>	<b>42,998</b>
<b>Liabilities</b>			
Hybrid Capital	—	9,551	9,551
Other non-current interest-bearing liabilities	—	89,800	89,800
Current interest-bearing liabilities	—	38,420	38,420
<b>Total liabilities</b>	<b>—</b>	<b>137,771</b>	<b>137,771</b>

**Financial instruments at fair value through profit or loss, changes in Level 3 financial instruments**

	Derivative assets		Derivative Liabilities	
	2015	2014	2015	2014
Balance brought forward	650	1,377	670	385
Transfer from another level	—	4	—	—
Revaluations recognised in operating profit (EBIT)	-232	-776	795	254
Translation differences	-10	45	-27	31
<b>Balance carried forward</b>	<b>408</b>	<b>650</b>	<b>1,438</b>	<b>670</b>
Total revaluations for the period included in Operating profit (EBIT) for assets and liabilities held at 31 December	-83	389	459	117

**Sensitivity analysis for electricity and fuel derivatives**

The price of electricity is the main factor impacting the change in fair value recognised in other comprehensive income. Changes in fair value that are recognised in the income statement originate from the prices for gas and oil. The sensitivity analysis is based on volumes and market prices at year-end. The analysis pertains to profit before tax.

Fair valuation on the balance sheet date of 31 December 2015 of +/-10% would change the fair value of Vattenfall's electricity and fuel derivatives by SEK +/-3,125 million (+/-5,972) in other comprehensive income (hedge-accounted derivatives) and SEK +/-423 million (+/-609) in the income statement (non-hedge-accounted derivatives).

**Sensitivity analysis for Level 3 contracts**

For the determination of fair value of financial instruments, Vattenfall strives to use valuation techniques that maximise the use of observable market data where it is available and rely as little as possible on entity-specific estimates.

Entity-specific estimates are based on internal valuation models that are subject to a defined process of validation, approval and monitoring. In the first step the model is designed by the business. The valuation model and calibration of the valuation model is then independently reviewed and approved by Vattenfall's risk organisation. If deemed necessary, adjustments are required and implemented. Afterwards, Vattenfall's risk organisation continuously monitors whether the application of the method is still appropriate. This is made by usage of several back-testing tools. In order to reduce valuation risks, the application of the model can be restricted to a limited scope.

**Gas supply agreement:**

A gas supply agreement (coal price-indexed) is an agreement that extends further ahead in time than liquid trading in the gas market. Valuation of the agreement is against the market price, as long as a market price can be observed. Modelled prices are used for commodity deliveries beyond the market horizon or deliveries with uncommon terms and options. The gas agreement is hedged with OTC forward trades of underlying products. These trades are also marked against the same market and modelled prices. The modelled prices are benchmarked against reliable financial information obtained from the company Markt; this information is well-known and is used by many energy companies, offering a reasonable valuation of the portion of the gas supply contract that cannot be valued against market prices (Level 3).

The net value as per 31 December 2015 has been calculated at SEK -2 million (+111). The price of the coal price index used in the model (API#2) has a large impact on the modelled price. A change in this index of +/-5% would affect the total value by approximately SEK +/-0 million (+/-6).

**CDM:**

Clean Development Mechanism (CDM) is a flexible mechanism under the Kyoto Protocol and overseen by the UNFCCC under which projects set up in developing countries to reduce CO<sub>2</sub> emissions can generate tradable carbon credits called CERs (Certified Emission Reductions). Once CERs are issued by the UNFCCC they can be used by companies and governments in industrialised nations as carbon emission offsets at home to meet their reduction targets, either under the EU ETS in the case of a company or under the Kyoto Protocol in case of countries. In terms of valuation of the CDM projects in Vattenfall's CDM portfolio, the non-observable input factor is an estimation of the volume of CERs that is expected to be delivered from each project annually. This estimation is derived from six defined Risk Adjustment Factors (RAFs) that have the same weighting. These project specific factors are calculated using the "Point Carbon Valuation Tool" developed by Point Carbon to quantify the risk by adjusting the volume based on these six risks and calculating the fair value based on these six risks adjusted volumes against the CER forward curve on the exchange (Inter Continental Exchange - ICE). The tool is based on Point Carbon's valuation methodology, which was developed in cooperation with several experienced market players. The valuation methodology is strictly empirical, and all risk parameters are extracted from Point Carbon's proprietary databases of CDM project data, which entails a correct valuation of the contracts. The results are validated based on monitoring reports for the respective CDM projects, which are publicly available on the website of the UNFCCC.

The net value as per 31 December 2015 has been calculated at SEK 3 million (-3). The fair value is mainly determined and correlated with the observable price of CER, meaning a higher price of CER leads to a higher value of the CDM contract and vice versa. A change in the modelled price of CERs of +/-5% would affect the total value by approximately SEK +/-3 million (+/-3).

**Long-term electricity contracts:**

Vattenfall has long-term electricity contracts with a customer extending until 2019 that include embedded derivatives in which the electricity price for the customer is coupled to the price development of aluminium and exchange rate movements of the Norwegian krone (NOK) in relation to the US dollar (USD). Reliable market quotations for aluminium are available for a period of 27 months forward in time. Vattenfall has estimated that the use of modelled prices provides reliable values for valuation of the period beyond 27 months, that is, the time horizon during which market quotations are not available until the contracts' expiration date. For modelling the prices, a Monte-Carlo simulation

is used. Valuation is done on a monthly basis. The value of the embedded derivative is defined as the difference between the total contract value and the fair value of a fixed price agreement concluded at the same time and for same time horizon as the actual contract was concluded. Furthermore, changes in fair value are analysed every month by comparing changes in market price for aluminium and the USD/NOK exchange rate.

The value as per 31 December 2015 has been calculated at SEK -29 million (+99). The price of aluminium is the factor that has the greatest bearing on the modelled price. An increase of the price for aluminium leads to a higher fair value and vice versa. A change in the price of aluminium of +/-5% would affect the total value by approximately SEK +/-34 million (+/-48).

**Virtual gas storage contracts:**

A virtual gas storage contract is a contract that allows Vattenfall to store gas without owning a gas storage facility. The virtual gas storage contracts include constraints to the maximum storage capacity and the maximum injection and withdrawal per day. The valuation of the contract is based on the storage, injections and withdrawal fees included in the contract, the expected spread between gas prices in the summer and winter which is observable and the optionality value, which is marked to model (Level 3). The valuation methodology is based on a backward estimation of the value of the contracts under different price and operational scenarios and a forward step that selects the optimal exercise. The price scenarios are based on simulating the forward prices until the beginning of their respective delivery periods and the simulation of the daily spot prices during the delivery period. The spot prices are simulated using the forward prices as a starting point. Finally, the spot volatility is calibrated using three years of historical data.

The net value as per 31 December 2015 has been calculated at SEK -352 million (+97) and is most sensitive to the optionality volatility. A change in the value of the daily volatility of +/-5% would affect the total value by approximately +/- SEK 63 million (+/-69).

**Gas swing contracts:**

A gas swing contract is a contract that provides flexibility on the timing and amount of gas purchases. The contract is based on a price formula with a maximum and minimum annual and daily gas quantity. The valuation of the contract is based on observable price difference between the contract prices and indexes and the optional value, which is marked to model (Level 3). The valuation methodology is based on a backward estimation of the value of the contracts under different price and operational scenarios and a forward step that selects the optimal exercise. The price scenarios are based on simulating the forward prices until the beginning of their respective delivery periods and the simulation of the daily spot prices during the delivery period. The spot prices are simulated using the forward prices as a starting point. Finally, the spot volatility is calibrated using three years of historical data.

The net value as per 31 December 2015 has been calculated at SEK -774 million (-328) and is most sensitive to the optionality volatility. A change in the value of the daily volatility of +/-5% would affect the total value by approximately +/- SEK 43 million (+/-48).

**Virtual Power Plants:**

A Virtual Power Plant (VPP) is a form of power delivery contract providing the buyer with the option to optimise a fictitious power plant without the technical risks and operational procedures involved in running a real-life plant. VPPs are means of balancing out the fuel exposure of a company's portfolio and of extracting value through optimisation of the plant. The valuation of the contract is based on underlying commodities defined in the contract and a daily optionality value, which is marked to model (Level 3). The valuation methodology is based on a backward estimation of the value of the contracts under different price and operational scenarios and a forward step that selects the optimal exercise. The price scenarios are based on simulating the forward prices until the beginning of their respective delivery periods and the simulation of the daily spot prices during the delivery period. The spot prices are simulated using the forward prices as a starting point. Finally, the spot volatility is calibrated using three years of historical data.

The net value as per 31 December 2015 has been calculated at SEK 2 million (4) and is most sensitive to the optionality volatility. A change in the value of the daily volatility of +/-5% would affect the total value by approximately +/- SEK 0.3 million (+/-0.2).

**Biomass Sourcing contract:**

Vattenfall has signed a biomass sourcing contract to buy a fixed volume of wood pellets at a floating index price from 2017 until 2024, which is delivered to a specific point of delivery in the USA. The buyer is responsible for contracting freight from the USA to Europe, so the contract is exposed to a freight curve. There is no liquid market for the tenor of the contract and therefore the valuation of the contract is based on a modelled forward curve. The three most significant factors in the modelled valuation are diesel, heating oil and time charter.

The net value as per 31 December 2015 has been calculated at SEK 122 million. The factors diesel, fuel oil and time charter have a significant impact on the sensitivity of the valuation. A change in the price of +/-5% would affect the total value by approximately +/- SEK 15 million.

**Financial instruments: Effects on income by category**

Net gains (+)/losses(-) and interest income and expenses for financial instruments recognised in the income statement:

	2015			2014		
	Net gains/ losses <sup>1</sup>	Interest income	Interest expenses	Net gains/ losses <sup>1</sup>	Interest income	Interest expenses
Derivative assets and derivative liabilities	3,940	116	-76	5,024	186	-122
Available-for-sale financial assets	15	—	—	-25	—	—
Loans and trade receivables	-241	1,546	—	-184	1,116	—
Financial liabilities measured at amortised cost	1,000	—	-3,306	-2,675	—	-3,624
<b>Total</b>	<b>4,714</b>	<b>1,662</b>	<b>-3,382</b>	<b>2,140</b>	<b>1,302</b>	<b>-3,746</b>

1) Exchange rate gains and losses are included in net gains/losses.

**Note 48** Specifications of the cash flow statement**Other, incl. non-cash items**

	2015	2014
Undistributed results from participation in associated companies	500	526
Unrealised foreign exchange gains	-1,516	2,632
Unrealised foreign exchange losses	-2	12
Unrealised changes in values related to derivatives	-1,110	-4,610
Changes in fair values for inventories	648	-86
Changes in interest receivables	-74	-321
Changes in interest liabilities	-3	674
Changes in the Swedish Nuclear Waste Fund	-2,188	-1,385
Changes in provisions	6,378	5,765
Other	41	90
<b>Total</b>	<b>2,674</b>	<b>3,297</b>

Interest paid totalled SEK 3,413 million (3,074) and interest received totalled SEK 845 million (537). Dividends received totalled SEK 210 million (294).

**Other investments in non-current assets**

	2015	2014
Investments in intangible assets: non-current, including advance payments	-469	-296
Investments in property, plant and equipment, including advance payments	-28,524	-28,948
<b>Total</b>	<b>-28,993</b>	<b>-29,244</b>

**Divestments**

	2015	2014
Divestments of shares and participations	206	8,875
Divestments of property, plant and equipment	2,608	3,179
<b>Total</b>	<b>2,814</b>	<b>12,054</b>



**Note 49 Specifications of equity****Share capital:**

As of 31 December 2015 the registered share capital comprised 131,700,000 shares with a share quota value of SEK 50.

**Reserve for hedges:**

The reserve for hedges comprises mostly unrealised changes in values of commodity derivatives used to hedge future sales (cash flow hedges).

**Translation reserve:**

The translation reserve comprises all exchange rate differences arising from the translation of financial reports from non-Swedish operations that prepare their reports in a currency other than that in which the Group reports. Further, the translation reserve includes exchange rate differences arising from the reassessment of debts raised as hedges for net investments in non-Swedish operations.

**Fair value reserve:**

The fair value reserve comprises revaluations of financial instruments belonging to the category "available-for-sale financial assets".

The reserve for hedges is expected to affect the income statement and cash flow, respectively, in the periods indicated below:

	2015		2014	
	Cash flow	Income statement	Cash flow	Income statement
Within 1 year	6,124	13,107	3,320	5,028
Between 1–5 years	2,331	368	2,176	2,688
Beyond 5 years	—	—	12	12
	<b>8,455</b>	<b>13,475</b>	<b>5,508</b>	<b>7,728</b>
Other	-329	—	-404	-67
<b>Total</b>	<b>8,126</b>	<b>13,475</b>	<b>5,104</b>	<b>7,661</b>

Amounts that have reduced the reserve for hedges are included in the following line items in the income statement:

	2015	2014
Net sales	6,962	7,466
Cost of products sold	-1,636	-1,593
Other operating expenses	—	-2
<b>Total</b>	<b>5,326</b>	<b>5,871</b>

Amounts that have reduced the reserve for hedges are included in the following line items on the balance sheet:

	2015	2014
Property, plant and equipment	—	-3
Inventories	-3	-1
<b>Total</b>	<b>-3</b>	<b>-4</b>

**Retained earnings including profit for the year:**

Retained earnings including profit for the year include earned profits in the Parent Company and its subsidiaries, associated companies and joint ventures, and effects of remeasurements of defined benefit pension plans.

**Translation exposure of equity in other currencies than SEK**

Original currency	Equity		Hedging after tax		Net exposure after tax		Average exposure after tax	
	2015	2014	2015	2014	2015	2014	2015	2014
EUR	100,352	117,229	36,046	55,796	64,306	61,433	61,630	61,975
DKK	807	1,516	—	—	807	1,516	1,065	1,883
GBP	16,916	18,345	13,161	4,963	3,755	13,382	8,498	13,143
Other currencies	134	134	—	—	134	134	137	130
<b>Total</b>	<b>118,209</b>	<b>137,224</b>	<b>49,207</b>	<b>60,759</b>	<b>69,002</b>	<b>76,465</b>	<b>71,330</b>	<b>77,131</b>

**Note 50 Collateral**

	2015	2014
Shares pledged to PRI Pensionsgaranti, as security for credit insurance in respect of pension obligations in Vattenfall's Swedish operations	7,295	7,696
Blocked bank funds as security for guarantees issued by bank	20	59
Blocked bank funds as security for trading on the Nordic electricity exchange and trading with CO <sub>2</sub> emission allowances	572	657
<b>Total</b>	<b>7,887</b>	<b>8,412</b>

In addition to the collateral mentioned above, Vattenfall has the following significant commitments:

To fulfil the requirements for security in the derivative market, in its energy trading and financial operations Vattenfall has pledged security to counterparties for the negative fair value of derivative positions. As per 31 December 2015 this security amounted to SEK 3,267 million (2,150) for energy trading and SEK 2,679 million (3,050) for the financial operations. The amounts are reported as assets on the balance sheet under Advance payments (Note 35 to the consolidated accounts, Advance payments paid) and under Short-term investments (Note 37 to the consolidated accounts, Short-term investments). The counterparties are obligated to repay this security to Vattenfall in the event the negative fair value decreases.

In a similar manner, Vattenfall's counterparties in energy trading and the financial operations have pledged security to Vattenfall. Security received as per 31 December 2015 amounted to SEK 2,216 million (2,371) for energy trading and SEK 5,285 million (7,013) for the financial operations. The amounts are reported as liabilities on the balance sheet under Advance payments received for the energy trading position (Note 45 to the consolidated accounts, Advance payments received) and Interest-bearing liabilities (current) for the financial operations (Note 40 to the consolidated accounts, Interest-bearing liabilities and related financial derivatives).

**Note 51 Contingent liabilities**

As per 31 December 2015 contingent liabilities amounted to SEK 1,653 million (2,960). The contingent liabilities mainly consist of the following:

- Vattenfall Wind Power Ltd., together with Scottish Power Renewables Ltd., takes part in developing up to 7,200 MW of wind capacity off the coast of East Anglia as part of The Crown Estate's Round Three wind programme, known as East Anglia Offshore Wind Ltd. For this Vattenfall AB has issued guarantees
- Pending legal issues
- Pension commitments PRI

In addition to the contingent liabilities mentioned above, Vattenfall has the following significant commitments.

In certain rivers, joint regulation facilities exist for several hydro power plants. The owners of the power plants have payment obligations for their share of these regulation costs. Vattenfall has an obligation to compensate certain owners of water rights, in rivers where hydro power stations are built, through the delivery of power. In 2015, such compensation deliveries amounted to 0.9 TWh (0.7), for a value of approximately SEK 171 million (220).

Under Swedish law, Vattenfall has strict and unlimited liability for third-party loss resulting from dam accidents. Together with other hydro power producers in the Nordic countries, Vattenfall has liability insurance that is limited to payment of a maximum of SEK 9,110 million (8,685) in benefits for these types of claims.

In Germany, nuclear power operators have strict and unlimited liability to third parties. By law, nuclear power plants are required to have insurance or other financial guarantees for amounts up to EUR 2,500 million. Claims of up to EUR 256 million are covered by the German Mutual Atomic Energy Reinsurance Pool. The nuclear power plants and their German parent companies (in Vattenfall's case, Vattenfall GmbH) are liable for amounts in excess of this, in proportion to the ownership interests the respective parent companies have in the nuclear power plants. It is not until these resources are exhausted that a joint liability insurance agreement (Solidarvereinbarung) takes force between the owners of the German nuclear power plants (Vattenfall GmbH, E.ON, RWE and EnBW), for amounts up to EUR 2,500 million. Since the liability is unlimited, the nuclear power plants and their German parent companies are ultimately liable for losses that exceed this amount.

Vattenfall owns nuclear power plants in Germany together with other partners in the legal form oHG partnerships. The liability of partners in those partnerships is joint and several. Accounting is based on the assessment that the partnerships themselves as well as the partners are able to fulfil the legal and financial obligations of the partnerships. The total amount of the liabilities (including provisions) of the German nuclear companies as per 31 December 2015 is as follows:

	Share %	Total liabilities	Of which reported in Vattenfalls consolidated statements
Kernkraftwerk Brunsbüttel GmbH & Co. oHG	66.67	19,818	19,818
Kernkraftwerk Krümmel GmbH & Co. oHG	50.00	24,046	12,023
Kernkraftwerk Stade GmbH & Co. oHG	33.33	6,258	—
Kernkraftwerk Brokdorf GmbH & Co. oHG	20.00	24,784	—

Vattenfall accounts for the nuclear plants Stade and Brokdorf using the at equity method. Hence, the share in the liabilities is included in the at equity value, which reflects the partial net assets.

Atomic liability in Sweden is strict and limited to 300 million Special Drawing Rights (SDRs) (rate 11,5836), corresponding to SEK 3,475 million (3,391), which means that the companies that are owners of nuclear power plants are only liable for damage to the surrounding environment up to this amount. The obligatory atomic liability insurance for this amount is issued by the Nordic Nuclear Insurers and by the mutual insurance company ELINI (European Liability Insurance for the Nuclear Industry). As policyholders of the mutual insurance companies ELINI and EMANI (European Mutual Association for Nuclear Insurance), Vattenfall's Swedish nuclear power plants Forsmark and Ringhals have an obligation to cover any deficits in insurance reserves in these insurance companies.

In 2009 Vattenfall AB, together with its subsidiary the Swedish Nuclear Fuel and Waste Management Company (SKB) and the other part-owners of that company, signed a long-term co-operation agreement with the Östhammar and Oskarshamn municipalities. The agreement covers the period 2010 to approximately 2025 and regulates development efforts in association with the implementation of the Swedish nuclear waste programme. Through development initiatives in areas such as training, enterprise and infrastructure, over time the parties will generate value-added worth SEK 1,500 million to SEK 2,000 million. The parties are to finance the development efforts in proportion to their ownership interests. The Vattenfall Group's ownership interest is 56%. Implementation of the efforts is being carried out across two periods: a period before all necessary permits have been received (Period 1), and a period during implementation and operation of the facilities (Period 2). In 2015 Vattenfall reported a provision of SEK 61 million (88) for its share of Period 1 activities.

As a consequence of the Group's continuing business activities, companies in the Group become parties to legal processes. In addition, disputes arise in the Group's operations that do not lead to legal processes. Vattenfall's management assesses these legal processes and disputes on a regular basis and makes provisions in cases where it believes an obligation exists and this can be judged with a reasonable degree of certainty. Vattenfall did not receive any complaints from authorities in 2015, nor was it party to any legal actions, concerning alleged anti-competitive behaviour or incidents of bribery or corruption. For legal processes or disputes where at present it cannot be determined whether an obligation exists or where for other reasons it is not possible to calculate the amount of a possible provision with a reasonable degree of certainty, management makes the overall judgement that there is no risk for material impact on the Group's result of operations or financial position. As part of the Group's business activities, in addition to the contingent liabilities stated here, guarantees are made for the fulfilment of various contractual obligations.

**Note 52 Commitments under consortium agreements**

Power plants are often built on a joint venture basis. Under the consortium agreements, each owner is entitled to electricity in proportion to its share of ownership, and each owner is liable, regardless of output, for an equivalent proportion of all the joint venture's costs. Vattenfall's investments often entail a liability for costs in proportion to its share of ownership. For more information, see Note 26 to the consolidated accounts, Shares and participations owned by the Parent Company Vattenfall AB and other Group companies

**Note 53 Number of employees and personnel costs**

Number of employees at 31 Dec., full-time equivalents	2015			2014		
	Men	Women	Total	Men	Women	Total
Sweden	6,650	2,209	8,859	6,629	2,241	8,870
Denmark	264	59	323	387	75	462
Germany	11,943	3,055	14,998	12,642	3,516	16,158
Netherlands	3,052	962	4,014	3,323	1,046	4,369
UK	121	56	177	111	58	169
Other countries	138	58	196	106	47	153
<b>Total</b>	<b>22,168</b>	<b>6,399</b>	<b>28,567</b>	<b>23,198</b>	<b>6,983</b>	<b>30,181</b>

Average number of employees during the year, full-time equivalents	2015			2014		
	Men	Women	Total	Men	Women	Total
Sweden	6,634	2,229	8,863	6,639	2,233	8,872
Denmark	310	64	374	388	75	463
Germany	12,203	3,201	15,404	12,919	3,686	16,605
Netherlands	3,159	1,006	4,165	3,464	1,098	4,562
UK	115	57	172	109	57	166
Other countries	127	56	183	107	52	159
<b>Total</b>	<b>22,548</b>	<b>6,613</b>	<b>29,161</b>	<b>23,626</b>	<b>7,201</b>	<b>30,827</b>

Personnel costs	2015	2014
Salaries and other remuneration	17,466	18,267
Social security costs <sup>1</sup>	6,072	5,607
<b>Total</b>	<b>23,538</b>	<b>23,874</b>

1) Pension costs are specified in Note 41 to the consolidated accounts, Pension provisions.

**Benefits for board members of Vattenfall AB and senior executives of the Vattenfall Group**

SEK thousands	2015			2014		
	Directors' fees and base salary including vacation pay	Other remuneration and benefits	Pension and severance costs	Directors' fees and base salary including vacation pay	Other remuneration and benefits	Pension and severance costs
<b>Board of Directors</b>						
Lars G. Nordström, Chairman of the Board	645	—	—	685	—	—
Eli Arnstad, board member until 27 April 2015	128	—	—	385	—	—
Fredrik Arp, board member	325	—	—	217	—	—
Gunilla Berg, board member	355	—	—	400	—	—
Viktoria Bergman, board member from 27 April 2015	217	—	—	—	—	—
Håkan Buskhe, board member	295	—	—	325	—	—
Håkan Erixon, board member	325	—	—	345	—	—
Tomas Kåberger, board member from 27 April 2015	217	—	—	—	—	—
Jenny Lahrin, board member	—	—	—	—	—	—
Åsa Söderström Jerring, board member	355	—	—	365	—	—
Employee representatives	—	—	—	—	—	—
<b>Total, Board of Directors</b>	<b>2,862</b>	<b>—</b>	<b>—</b>	<b>2,722</b>	<b>—</b>	<b>—</b>

SEK thousands	2015			2014		
	Directors' fees and base salary including vacation pay	Other remuneration and benefits	Pension and severance costs	Directors' fees and base salary including vacation pay	Other remuneration and benefits	Pension and severance costs
<b>Executive Group Management<sup>1</sup></b>						
Magnus Hall, President and CEO	14,408	169	4,204	4,363	64	1,409
Ingrid Bonde, Deputy CEO, Vice President and CFO	7,247	—	2,103	7,180	—	2,103
Tuomo Hatakka, Vice President, Head of Heat Business Area and Head of Mining and Generation	11,528	32	2,569	11,231	23	2,503
Torbjörn Wahlborg, Vice President, Head of Generation Business Area	6,830	53	2,037	6,899	57	2,037
Kerstin Ahlfont, Head of Human Resources Staff Function from 1 April 2015 <sup>2</sup>	3,792	18	1,125	3,098	3	874
Stefan Dohler, Head of Markets Business Area	6,708	95	1,543	6,535	92	1,503
Gunnar Groebler, Head of Wind Business Area from 1 April 2015	3,853	66	576	—	—	—
Anne Gynnerstedt, Head of Legal & CEO Office Staff Function and Secretary of the Board	4,620	56	1,361	4,568	45	1,361
Martijn Hagens, Head of Customers & Solutions Business Area from 1 April 2015 <sup>2</sup>	5,605	440	254	4,095	890	755
Andreas Regnell, Head of Strategic Development Staff Function from 1 April 2015	3,319	14	962	—	—	—
<b>Other senior executives<sup>1</sup></b>						
Anders Dahl, Head of Operations Support and Deputy Head of Nordic Region until 1 April 2015 <sup>2,3</sup>	5,509	44	9,007	5,076	48	1,507
Tessel Jarigsmma, Head of Sales Business Unit, Continental/UK Region, N.V. Nuon Energy until 1 Mars 2015	514	9	36	3,003	555	540
Eva Halldén, Head of Ringhals, Head of Forsmark <sup>4</sup>	2,863	53	888	2,784	74	811
Helmar Rendez, Head of Distribution Business Unit until 1 July 2015	2,362	537	708	4,601	596	1,380
Peter Smink, Head of Finance, Continental/UK Region until 1 April 2015	1,470	193	79	5,727	107	1,037
Annika Viklund, Head of Distribution Business Area from 1 April 2015 <sup>5</sup>	3,451	204	1,020	—	—	—
Hartmuth Zeiss, Head of Mining & Generation Business Unit	5,560	208	1,140	5,416	189	1,110
Former senior executives <sup>6</sup>	4,017	41	1,051	19,378	471	14,913
<b>Total Executive Group Management and senior executives</b>	<b>93,656</b>	<b>2,232</b>	<b>30,663</b>	<b>93,954</b>	<b>3,214</b>	<b>33,843</b>
<b>Total Board of Directors, Executive Group Management and other senior executives</b>	<b>96,518</b>	<b>2,232</b>	<b>30,663</b>	<b>96,676</b>	<b>3,214</b>	<b>33,843</b>

1) For persons who changed positions in 2015, their most recent position is indicated.

2) Amounts indicated pertain to the full calendar year 2015.

3) Base salary includes salary during the notice period in 2015. Pension and severance costs include costs for a maximum of 18 months of severance pay, for a combined maximum amount of SEK 7.5 million.

4) Including pension premiums for 2014 which were paid in retroactively in 2015.

5) Including SEK 185 thousand in bonus pertaining to 2014.

6) See Vattenfall's 2014 Annual and Sustainability Report, pages 123–124.

**Board of Directors**

The 2015 Annual General Meeting resolved that directors' fees for the period until the end of the next Annual General Meeting shall amount to SEK 580 thousand for the Chairman and SEK 280 thousand for each of the other directors elected at the Annual General Meeting.

In addition, it was resolved that for service on the Remuneration Committee and the Audit Committee, a fee of SEK 60 thousand shall be paid to the respective committee chairs and SEK 45 thousand to the other committee members. In connection with the 2015 Annual General Meeting, the Safety and Risk Committee and the External Relations and Ethics Committee were disbanded.

The directors' fees set by the 2015 Annual General Meeting are unchanged compared with the directors' fees set by the 2011–2014 Annual General Meetings. No directors' fees are paid to board members who are employed by the Swedish Government Offices or to employee representatives. The fees paid to each individual board member are shown in the table above. The board members' respective committee assignments are described in the Corporate Governance section on pages 56–69.

**President and Chief Executive Officer**

Magnus Hall received a salary of SEK 14,408 thousand in 2015. The value of other benefits in 2015 amounted to SEK 169 thousand, including a company car benefit worth SEK 75 thousand, an annual pass for train travel with SJ worth SEK 67 thousand, and a garage parking spot in Stockholm worth SEK 27 thousand (through September 2015). Magnus Hall has no variable salary component in his employment as President and CEO of Vattenfall AB.

Magnus Hall has a defined contribution pension solution. Premiums paid for 2015 totalled SEK 4,204 thousand, which corresponds to 30% of his 2015 salary excluding benefits. Magnus Hall's term of employment is until further notice, with a mutual notice period of six months. In the event Vattenfall serves notice, Magnus Hall is entitled to a maximum of 18 months' severance pay after the notice period, but not longer than until his date of retirement. The amount of the severance pay shall be based on the fixed salary that applied at the time the notice was served. In the event Magnus Hall accepts new employment or earns income from other business activities, the severance pay shall be reduced by an amount corresponding to the new income or other benefit received during the period in question. Severance pay is to be paid out monthly. Magnus Hall's terms of employment are in agreement with the Swedish government's guidelines.

**Other senior executives****Salaries and other remuneration**

For other members of the Executive Group Management, a total of 9 individuals (6), the sum of salaries and other remuneration for 2015, including the value of company cars and other benefits, was SEK 54,276 thousand. For other persons defined as senior executives by Vattenfall, who are not members of the Executive Group Management – a total of 3 individuals (8) – the sum of salaries and other remuneration for 2015, including the value of company cars and other benefits, was SEK 12,339 thousand.

**Retirement benefits**

Kerstin Ahlfont, Ingrid Bonde, Stefan Dohler, Gunnar Groebler, Anne Gynnerstedt, Tuomo Hatakka, Andreas Regnell, Torbjörn Wahlborg, Eva Halldén, Annika Viklund and Hartmuth Zeiss all have defined contribution pension solutions. Martijn Hagens has a pension solution under collective agreements in the Netherlands. All pensions for these executives are in compliance with the Swedish government's guidelines.

**Terms of notice on the part of the company**

According to the government's guidelines, the notice period for a senior executive in the event the company serves notice shall not exceed six months. In addition, severance pay equivalent to a maximum of 18 months' salary is payable thereafter. In the event the individual in question accepts new employment or receives income from other business activities, the severance pay shall be reduced by an amount corresponding to the new income or benefit received during the time in question. The severance pay is paid out monthly. All senior executives have severance terms that are in compliance with the government's guidelines.

**Incentive programmes**

The members of the Executive Group Management and other senior executives do not receive any variable salary component.

**Note 55 Related party disclosures**

Vattenfall AB is 100%-owned by the Swedish state. The Vattenfall Group's products and services are offered to the state, state authorities and state companies in competition with other vendors under generally accepted commercial terms. In a similar manner, Vattenfall AB and its Group companies purchase products and services from state authorities and state companies at market prices and otherwise under generally accepted commercial terms. No significant share of the Vattenfall Group's net sales, purchasing or earnings is attributable to the Swedish state or any of its authorities or companies.

Disclosures of transactions with key persons in executive positions in the company are shown in Note 53 to the consolidated accounts, Number of employees and personnel costs.

Disclosures of transactions with major associated companies in 2015 and associated receivables and liabilities as per 31 December 2015 are described below.

**Kernkraftwerk Brokdorf GmbH & Co. oHG**

This is a nuclear power plant from which Vattenfall purchases electricity. Purchases amounted to SEK 817 million (1,087). Operating revenue from the company amounted to SEK 3 million (2). Vattenfall's interest expense to the company amounted to SEK 22 million (24). Trade liabilities and loan liabilities amounted to SEK 0 million (150) and SEK 2,193 million (2,081), respectively.

**Kernkraftwerk Stade GmbH & Co. oHG**

This is a nuclear power plant that is being decommissioned. Vattenfall's revenue from the company amounted to SEK 0 million (0) while expenses to the company amounted to SEK 87 million (210). Vattenfall's interest expense to the company amounted to SEK 6 million (6). Trade liabilities and loan liabilities amounted to SEK 0 million (116) and SEK 558 million (536), respectively.

**GASAG Berliner Gaswerke AG**

The company sells, distributes and stores natural gas in the Berlin area. Vattenfall received SEK 56 million (31) in operating revenue from the company, and purchases from the company totalled SEK 17 million (10). Trade receivables and trade liabilities amounted to SEK 0 million (0). Vattenfall's part of contingent liabilities of the company amounted to SEK 228 million (132).

**DOTI Deutsche Offshore-Testfeld- und Infrastruktur-GmbH & Co. KG**

The company conducts planning work and operates an offshore wind power test facility. Operating revenue from the company amounted to SEK 1 million (0). Purchases from the company amounted to SEK 56 million (0). Trade liabilities amounted to SEK 0 million (0).

**Note 56 Events after the balance sheet date**

No significant events have occurred after the balance sheet date.

**Note 54 Gender distribution among senior executives**

	Women, %		Men, %	
	2015	2014	2015	2014
Gender distribution among board members	33	36	67	64
Gender distribution among other senior executives	38	22	62	78



## PARENT COMPANY VATTENFALL AB

### Condensed review of 2015

A condensed income statement and balance sheet for the Parent Company are presented below.

- Net sales amounted to SEK 30,670 million (31,676).
- Profit before appropriations and tax was SEK 6,150 million (-12,884).
- Earnings were affected by the following:
  - Received dividends of SEK 4,815 million
  - A small capital gain from the sale of entire shareholding in Övertorneå Värmeverk AB
  - A capital gain of SEK 59 million from the liquidation of Vattenfall VätterEI AB
  - An impairment loss of SEK 1,209 million for the shareholding in Vattenfall A/S – the effect of previously a received dividend
- The balance sheet total was SEK 292,057 million (267,526).
- On 1 July 2015 Vattenfall made the scheduled payment of EUR 2,071.3 million for the remaining 21% of the shares in N.V. Nuon Energy, corresponding to approximately SEK 19 billion.
- During the third quarter, the shares in Vattenfall Distribution AB were revalued to SEK 38 billion in order to better reflect the value of the shares.
- During the first quarter of 2015, Vattenfall issued hybrid bonds of SEK 6 billion and EUR 1 billion, respectively (slightly more than SEK 15 billion combined). The aim was to refinance Vattenfall's previous hybrid bond that was issued 2005 and to use the remaining for general corporate purposes. In November Vattenfall issued hybrid bonds of USD 400 million (corresponding to approximately SEK 3.5 billion).
- Investments during the period amounted to SEK 589 million (461).
- Cash and cash equivalents, and short-term investments amounted to SEK 38,794 million (35,059).

## PARENT COMPANY INCOME STATEMENT

Amounts in SEK million, 1 January–31 December	Note	2015	2014
Net sales	4, 5	30,670	31,676
Cost of products sold	6	-24,177	-22,470
<b>Gross profit</b>		<b>6,493</b>	<b>9,206</b>
Selling expenses		-817	-832
Administrative expenses		-1,534	-1,601
Research and development costs		-3	-193
Other operating income	7	1,080	535
Other operating expenses	8	-71	-2,145
<b>Operating profit</b>	9, 10, 18, 19	<b>5,148</b>	<b>4,970</b>
Result from participations in subsidiaries	11	3,654	-13,830
Result from participations in associated companies	12	7	—
Result from other shares and participations	13	—	-213
Other financial income	14	991	1,075
Other financial expenses	15	-3,650	-4,886
<b>Profit before appropriations and tax</b>		<b>6,150</b>	<b>-12,884</b>
Appropriations	16	1,194	418
<b>Profit before tax</b>		<b>7,344</b>	<b>-12,466</b>
Income tax expense	17	-908	748
<b>Profit for the year</b>		<b>6,436</b>	<b>-11,718</b>

## PARENT COMPANY STATEMENT OF COMPREHENSIVE INCOME

Amounts in SEK million, 1 January–31 December	Note	2015	2014
Profit for the year		6,436	-11,718
Total other comprehensive income		—	—
<b>Total comprehensive income for the year</b>		<b>6,436</b>	<b>-11,718</b>

## PARENT COMPANY BALANCE SHEET

Amounts in SEK million	Note	31 December 2015	31 December 2014
<b>Assets</b>			
<b>Non-current assets</b>			
Intangible assets: non-current	20	174	118
Property, plant and equipment	21	4,122	4,128
Shares and participations	22	151,865	118,473
Deferred tax assets	17	212	—
Other non-current receivables	23	83,624	90,478
<b>Total non-current assets</b>		<b>239,997</b>	<b>213,197</b>
<b>Current assets</b>			
Inventories	24	342	385
Intangible assets: current	25	215	68
Current receivables	26	12,172	18,055
Current tax assets	17	537	762
Short-term investments	27	28,491	26,724
Cash and cash equivalents	28	10,303	8,335
<b>Total current assets</b>		<b>52,060</b>	<b>54,329</b>
<b>Total assets</b>		<b>292,057</b>	<b>267,526</b>
<b>Equity, provisions and liabilities</b>			
<b>Equity</b>			
<b>Restricted equity</b>			
Share capital (131,700,000 shares with a share quota value of SEK 50)		6,585	6,585
Revaluation reserve		37,989	—
Statutory reserve		1,286	1,286
<b>Non-restricted equity</b>			
Retained earnings		43,736	55,454
Profit for the year		6,436	-11,718
<b>Total equity</b>		<b>96,032</b>	<b>51,607</b>
<b>Untaxed reserves</b>	16	<b>14,882</b>	<b>16,227</b>
<b>Provisions</b>	29	<b>4,835</b>	<b>4,278</b>
<b>Non-current liabilities</b>			
Hybrid capital	30	18,603	—
Other interest-bearing liabilities	30	54,961	63,962
Deferred tax liabilities	17	—	165
Other noninterest-bearing liabilities	31	18,302	36,421
<b>Total non-current liabilities</b>		<b>91,866</b>	<b>100,548</b>
<b>Current liabilities</b>			
Hybrid capital	30	—	9,385
Other interest-bearing liabilities	30	78,348	78,379
Other noninterest-bearing liabilities	32	6,094	7,102
<b>Total current liabilities</b>		<b>84,442</b>	<b>94,866</b>
<b>Total equity, provisions and liabilities</b>		<b>292,057</b>	<b>267,526</b>
Collateral	34	177	375
Contingent liabilities	35	41,448	42,437
Commitments under consortium agreements	36	—	—

## PARENT COMPANY CASH FLOW STATEMENT

Amounts in SEK million, 1 January–31 December	Note	2015	2014
<b>Operating activities</b>			
Profit before tax		7,344	-12,466
Reversal of depreciation, amortisation and impairment losses		1,733	15,110
Tax paid		-847	-249
Capital gains/losses, net		-58	129
Other, incl. non-cash items	40	4,812	4,569
<b>Funds from operations (FFO)</b>		<b>12,984</b>	<b>7,093</b>
Changes in inventories		43	52
Changes in operating receivables		12,342	5,705
Changes in operating liabilities		-2,856	-235
<b>Cash flow from changes in operating assets and operating liabilities</b>		<b>9,529</b>	<b>5,522</b>
<b>Cash flow from operating activities</b>		<b>22,513</b>	<b>12,615</b>
<b>Investing activities</b>			
Investments in associated companies and other shares and participations		-5	-2
Other investments in non-current assets		-584	-459
<b>Total investments</b>		<b>-589</b>	<b>-461</b>
Divestments		366	2,358
<b>Cash flow from investing activities</b>		<b>-223</b>	<b>1,897</b>
<b>Cash flow before financing activities</b>		<b>22,290</b>	<b>14,512</b>
<b>Financing activities</b>			
Changes in short-term investments		-1,767	-19,027
Loans raised, external		43,305	20,501
Amortisation of other debts		-43,806	-17,119
Payment from Vattenfall's Pension Foundation		—	19
Group contributions received/paid		-18,054	306
<b>Cash flow from financing activities</b>		<b>-20,322</b>	<b>-15,320</b>
<b>Cash flow for the year</b>		<b>1,968</b>	<b>-808</b>
<b>Cash and cash equivalents</b>			
Cash and cash equivalents at start of year		8,335	9,143
Cash flow for the year		1,968	-808
<b>Cash and cash equivalents at end of year</b>		<b>10,303</b>	<b>8,335</b>

## PARENT COMPANY STATEMENT OF CHANGES IN EQUITY

Amount in SEK million	Share capital	Revaluation reserve	Statutory reserve	Non-restricted equity	Total
Balance brought forward 2014	6,585	—	1,286	55,454	63,325
Dividend paid to owner	—	—	—	—	—
Profit for the year	—	—	—	-11,718	-11,718
<b>Balance carried forward 2014</b>	<b>6,585</b>	<b>—</b>	<b>1,286</b>	<b>43,736</b>	<b>51,607</b>
Dividend paid to owners	—	—	—	—	—
Revaluation of share	—	37,989	—	—	37,989
Profit for the year	—	—	—	6,436	6,436
<b>Balance carried forward 2015</b>	<b>6,585</b>	<b>37,989</b>	<b>1,286</b>	<b>50,172</b>	<b>96,032</b>

As of 31 December 2015 the registered share capital comprised 131,700,000 shares with a share quota value of SEK 50.



## NOTES TO THE PARENT COMPANY ACCOUNTS

Amounts in SEK million unless indicated otherwise

1 Company information	141
2 Accounting policies	141
3 Exchange rates	141
4 Net sales	141
5 Intra Group transactions	141
6 Cost of products sold	141
7 Other operating income	141
8 Other operating expenses	141
9 Depreciation and amortisation	141
10 Impairment losses	142
11 Result from participations in subsidiaries	142
12 Result from participations in associated companies	142
13 Result from other shares and participations	142
14 Other financial income	142
15 Other financial expenses	142
16 Appropriations and untaxed reserves	142
17 Income tax expense	143
18 Leasing	143
19 Auditors' fees	144
20 Intangible assets: non-current	144
21 Property, plant and equipment	145
22 Shares and participations	146
23 Other non-current receivables	146
24 Inventories	146
25 Intangible assets: current	146
26 Current receivables	147
27 Short-term investments	147
28 Cash and cash equivalents	147
29 Provisions	147
30 Other interest-bearing liabilities and derivatives	148
31 Other noninterest-bearing liabilities (non-current)	148
32 Other noninterest-bearing liabilities (current)	148
33 Financial instruments: Carrying amount and fair value	149
34 Collateral	150
35 Contingent liabilities	150
36 Commitments under consortium agreements	151
37 Average number of employees and personnel costs	151
38 Gender distribution among senior executives	151
39 Related party disclosures	151
40 Specification of the cash flow statement	151
41 Events after the balance sheet date	151

**Note 1 Company information**

Vattenfall AB's 2015 Annual Report was approved in accordance with a decision by the Board of Directors on 18 March 2016. Vattenfall AB (publ) with corporate identity number 556036-2138, which is the Parent Company of the Vattenfall Group, is a limited liability company with its registered office in Solna, Sweden and with the address SE-169 92 Stockholm, Sweden.

The balance sheet and income statement of the Parent Company included in Vattenfall's Annual and Sustainability Report will be submitted at the Annual General Meeting (AGM) on 27 April 2016.

**Note 2 Accounting policies****General**

The Parent Company Vattenfall AB's accounts are prepared in accordance with the Swedish Annual Accounts Act and recommendation RFR 2 – "Accounting for Legal Entities", issued by the Swedish Financial Reporting Board (RFR). RFR 2 entails that Vattenfall AB should apply all standards and interpretations issued by IASB and IFRIC as endorsed by the European Commission for application within the EU. This should be done as far as possible within the framework of the Swedish Annual Accounts Act by taking into consideration the relationship between accounting and taxation.

Vattenfall AB has applied the exemption rule regarding IAS 39 "Financial Instruments" according to RFR 2, which entails that financial instruments are reported at cost.

New and amended accounting standards effective as of 2016 are expected to have no or minimal impact on Vattenfall AB's financial statements.

The accounting policies applied are stated in the applicable parts of Note 3 to the consolidated accounts, Accounting policies with the following amendments for the Parent Company Vattenfall AB.

**Depreciation and amortisation**

As in the consolidated accounts, depreciation and amortisation are based on cost and are applied on a straight-line basis over the estimated useful life of the asset in question. In addition, certain accelerated depreciation/amortisation (the difference between depreciation/amortisation according to plan and depreciation/amortisation for tax purposes) in the Parent Company is reported under Appropriations and Untaxed reserves, respectively.

**Pension provisions**

Pension obligations in the Parent Company are calculated in accordance with generally accepted Swedish actuarial principles and are recognised according to the Act on Safeguarding of Pension Obligations, ("Tryggandelagen").

**Foreign currency**

The Parent Company applies hedge accounting for assets in a foreign currency effectively hedged by loans in a foreign currency. Effects of changes in exchange rates are therefore not recognised for loans raised for the financing of foreign subsidiaries, associated companies and joint arrangements. Non-monetary assets acquired in a foreign currency are recognised at the exchange rate at the time of the acquisition. The loans raised in connection with the acquisition of N.V. Nuon Energy are hedged, as in the consolidated accounts, from the date of the acquisition, 1 July 2009.

Other assets and liabilities in foreign currencies are recognised at the exchange rates of the balance sheet date.

**Realised exchange rate effects**

Realised exchange rate effects that are attributable to loans used to hedge investments in foreign currency are not recognised through profit or loss, but as a change in the reported cost of the shares. The policy concerning unrealised effects of such loans follows what is stated under foreign currency and is not reported.

**Income taxes**

Tax legislation in Sweden allows companies to defer tax payments by making provisions to untaxed reserves. In the Parent Company, untaxed reserves are reported as a separate item on the balance sheet that includes deferred tax. In the Parent Company's income statement, provisions to untaxed reserves and dissolution of untaxed reserves are reported under the heading Appropriations.

**Note 3 Exchange rates**

See Note 6 to the consolidated accounts, Exchange rates.

**Note 4 Net sales**

	2015	2014
Electricity, heat	32,098	32,887
Rendering of services	1,333	1,450
Excise taxes (included in the above)	-2,761	-2,661
<b>Total</b>	<b>30,670</b>	<b>31,676</b>
<b>Net sales per geographical area</b>	<b>2015</b>	<b>2014</b>
Nordic	27,521	28,426
Germany	2,543	2,767
Netherlands	342	312
Other countries	264	171
<b>Total</b>	<b>30,670</b>	<b>31,676</b>
<b>Net sales for products and services</b>	<b>2015</b>	<b>2014</b>
Optimisation and Trading	13,688	13,292
Energy sales	13,078	14,827
Heat	2,195	2,160
Other	1,709	1,397
<b>Total</b>	<b>30,670</b>	<b>31,676</b>

**Note 5 Intra Group transactions**

Of the Parent Company's total income from sales and total purchase costs, transactions with subsidiaries account for 22% (21%) of sales and 54% (61%) of purchase costs.

**Note 6 Cost of products sold**

Direct costs include production taxes and duties of SEK 44 million (26) and property taxes of SEK -1 million (-34). In 2015 Vattenfall dissolved a previous year's provision of SEK 4 million after determining that the risk for a tax assessment in arrears no longer exists. In 2014, SEK 37 million was received in refunded property tax.

**Note 7 Other operating income**

Other operating income consists primarily of intra Group invoiced services, insurance compensation, claim revenue and operationally derived foreign exchange gains.

**Note 8 Other operating expenses**

Other operating expenses consist primarily of intra Group invoiced services.

**Note 9 Depreciation and amortisation**

Amortisation of intangible non-current assets and depreciation of property, plant and equipment in the income statement are broken down as follows:

	2015	2014
Cost of products sold	517	513
Selling expenses	2	3
Administrative expenses	1	1
<b>Total</b>	<b>520</b>	<b>517</b>

Amortisation of intangible non-current assets is included above in Cost of products sold with the amount of SEK 74 million (79).

**Note 10 Impairment losses**

No impairment was recognised of intangible non-current assets or of property, plant and equipment 2015 or 2014 financial years.

**Note 11 Result from participations in subsidiaries**

	2015	2014
Dividends	4,805	679
Impairment losses <sup>1</sup>	-1,209	-14,593
Capital gains/losses on divestments	58	84
<b>Total</b>	<b>3,654</b>	<b>-13,830</b>

1) See Note 22 to the Parent Company accounts, Shares and participations.

**Note 12 Result from participations in associated companies**

	2015	2014
Dividends	9	—
Impairment of shares	-2	—
<b>Total</b>	<b>7</b>	<b>—</b>

**Note 13 Result from other shares and participations**

	2015	2014
Capital gains/losses on divestments	—	-213
<b>Total</b>	<b>—</b>	<b>-213</b>

**Note 14 Other financial income**

	2015	2014
Interest income from subsidiaries	736	1,669
Other interest income	255	-232
Foreign exchange gains and losses, net	—	-362
<b>Total</b>	<b>991</b>	<b>1,075</b>

**Note 15 Other financial expenses**

	2015	2014
Interest expenses to subsidiaries	50	111
Other interest expenses	2,400	4,775
Foreign exchange gains and losses, net	1,200	—
<b>Total</b>	<b>3,650</b>	<b>4,886</b>

**Note 16 Appropriations and untaxed reserves**

	2015	2014
<b>Appropriations</b>		
Group contributions paid	-3,030	-2,784
Group contributions received	2,878	2,305
Provision/Dissolution of untaxed reserves, net	1,346	897
<b>Total</b>	<b>1,194</b>	<b>418</b>

	Balance brought forward	Provision(+)/dissolution (-)	Balance carried forward
<b>Untaxed reserves</b>			
Accelerated depreciation	2,292	60	2,352
2009 Fiscal year allocation reserve	2,992	-2,992	—
2010 Fiscal year allocation reserve	4,153	—	4,153
2011 Fiscal year allocation reserve	1,922	—	1,922
2012 Fiscal year allocation reserve	1,319	—	1,319
2013 Fiscal year allocation reserve	2,959	—	2,959
2014 Fiscal year allocation reserve	590	-138	452
2015 Fiscal year allocation reserve	—	1,725	1,725
<b>Total</b>	<b>16,227</b>	<b>-1,345</b>	<b>14,882</b>

**Note 17 Income tax expense**

The reported tax income/tax expense is broken down as follows:

	2015	2014
Current tax	1,286	-726
Deferred tax	-378	-22
<b>Total</b>	<b>908</b>	<b>-748</b>

Current tax attributable to previous years amounts to SEK 23 million (-1,002).  
The tax effect of the standard interest on tax allocation reserves amounts to SEK 20 million (44).

The difference between the nominal Swedish tax rate and the effective tax rate is explained as follows:

	2015		2014	
	%		%	
Profit before tax		7,344		-12,466
Swedish income tax rate at 31 December	22.0	1,616	22.0	-2,743
Current tax adjustment attributable to previous years	0.3	23	8.0	-1,002
Deferred tax adjustment attributable to previous years	—	—	-0.1	8
Capital gains, non-taxable	-0.2	-13	-0.2	29
Non-taxable income	-14.8	-1,089	3.7	-470
Impairment losses, non-deductible <sup>1</sup>	3.6	266	-25.8	3,210
Non-deductible interest	1.4	99	-1.5	210
Other non-deductible expenses	0.1	6	-0.1	10
<b>Effective tax rate in Sweden</b>	<b>12.4</b>	<b>908</b>	<b>6.0</b>	<b>-748</b>

1) Chiefly concerns non-deductible impairment losses for shares in Vattenfall A/S (2015) and N.V. Nuon Energy (2014).

	Balance brought forward		Changes via income statement		Balance carried forward	
	2015	2014	2015	2014	2015	2014
<b>Balance sheet reconciliation - Deferred tax</b>						
Non-current assets	-2	-2	—	—	-2	-2
Current assets	-40	6	-92	-45	-132	-39
Provisions	-135	-148	-5	14	-140	-134
Other non-current liabilities	262	183	-335	78	-73	261
Current liabilities	79	148	56	-69	135	79
<b>Total</b>	<b>164</b>	<b>187</b>	<b>-376</b>	<b>-22</b>	<b>-212</b>	<b>165</b>

**Note 18 Leasing****Leasing expenses**

Future payment commitments, as of 31 December 2015 for leasing contracts and rental contracts are broken down as follows:

	Finance leases	Operating leases
2016	—	190
2017	—	190
2018	—	190
2019	—	190
2020	—	190
2021 and beyond	—	—
<b>Total</b>	<b>—</b>	<b>950</b>

Leasing expenses for the year amounted to SEK 190 million (23).

**Leasing revenues**

Vattenfall AB owns and operates energy facilities on behalf of customers. Revenues from customers are broken down into two components – a fixed component to cover capital expenses and a variable component based on the quantity delivered.

Facilities are classified in accordance with standard leasing principles, based on the fixed revenue component.

On 31 December 2015, the cost of assets reported under Operating leases amounted to SEK 490 million (481). Accumulated depreciation amounted to SEK 230 million (208), and accumulated impairment losses amounted to SEK 30 million (30).

Future payments for this type of facility are broken down as follows:

	Finance leases	Operating leases
2016	—	1
2017	—	1
2018	—	1
2019	—	1
2020	—	—
2021 and beyond	—	—
<b>Total</b>	<b>—</b>	<b>4</b>

**Note 19** Auditors' fees

	2015	2014
Annual audit assignment EY	6	8

**Note 20** Intangible assets: non-current

	2015				
	Capitalised development costs	Goodwill	Concessions and similar rights	Renting and similar rights	Total
<b>Cost</b>					
Cost brought forward	304	13	926	95	1,338
Investments	—	—	130	—	130
Divestments/Disposals	—	-13	—	-27	-40
<b>Accumulated cost carried forward</b>	<b>304</b>	<b>—</b>	<b>1,056</b>	<b>68</b>	<b>1,428</b>
<b>Accumulated amortisation according to plan</b>					
Amortisation brought forward	-186	-13	-809	-27	-1,035
Amortisation for the year	-1	—	-73	—	-74
Divestments/Disposals	—	13	—	27	40
<b>Accumulated amortisation carried forward</b>	<b>-187</b>	<b>—</b>	<b>-882</b>	<b>—</b>	<b>-1,069</b>
<b>Impairment losses</b>					
Impairment losses brought forward	-116	—	-1	-68	-185
<b>Accumulated impairment losses carried forward</b>	<b>-116</b>	<b>—</b>	<b>-1</b>	<b>-68</b>	<b>-185</b>
<b>Residual value according to plan carried forward</b>	<b>1</b>	<b>—</b>	<b>173</b>	<b>—</b>	<b>174</b>
	2014				
	Capitalised development costs	Goodwill	Concessions and similar rights	Renting and similar rights	Total
<b>Cost</b>					
Cost brought forward	304	13	868	95	1,280
Investments	—	—	59	—	59
Divestments/Disposals	—	—	-1	—	-1
<b>Accumulated cost carried forward</b>	<b>304</b>	<b>13</b>	<b>926</b>	<b>95</b>	<b>1,338</b>
<b>Accumulated amortisation according to plan</b>					
Amortisation brought forward	-185	-13	-732	-27	-957
Amortisation for the year	-1	—	-78	—	-79
Divestments/Disposals	—	—	1	—	1
<b>Accumulated amortisation carried forward</b>	<b>-186</b>	<b>-13</b>	<b>-809</b>	<b>-27</b>	<b>-1,035</b>
<b>Impairment losses</b>					
Impairment losses brought forward	-116	—	-1	-68	-185
<b>Accumulated impairment losses carried forward</b>	<b>-116</b>	<b>—</b>	<b>-1</b>	<b>-68</b>	<b>-185</b>
<b>Residual value according to plan carried forward</b>	<b>2</b>	<b>—</b>	<b>116</b>	<b>—</b>	<b>118</b>

At 31 December 2015 there were no contractual commitments for the acquisition of intangible non-current assets.



**Note 21** Property, plant and equipment

	2015				
	Land and buildings	Plant and machinery and other technical installations	Equipment, tools, fixtures and fittings	Construction in progress	Total
<b>Cost</b>					
Cost brought forward	1,225	7,648	447	396	9,716
Investments	—	—	62	394	456
Transfer from construction in progress	5	364	—	-369	—
Divestments/Disposals	—	-14	-18	—	-32
<b>Accumulated cost carried forward</b>	<b>1,230</b>	<b>7,998</b>	<b>491</b>	<b>421</b>	<b>10,140</b>
<b>Accumulated depreciation according to plan</b>					
Depreciation brought forward	-677	-4,628	-280	—	-5,585
Depreciation for the year	-30	-323	-94	—	-447
Divestments/Disposals	—	4	13	—	17
<b>Accumulated depreciation carried forward</b>	<b>-707</b>	<b>-4,947</b>	<b>-361</b>	<b>—</b>	<b>-6,015</b>
<b>Impairment losses</b>					
Impairment losses brought forward	-1	-2	—	—	-3
Impairment losses carried forward	-1	-2	—	—	-3
<b>Residual value according to plan carried forward</b>	<b>522</b>	<b>3,049</b>	<b>130</b>	<b>421</b>	<b>4,122</b>
Accumulated accelerated depreciation	—	-2,351	—	—	-2,351
<b>Carrying amount</b>	<b>522</b>	<b>698</b>	<b>130</b>	<b>421</b>	<b>1,771</b>
	2014				
	Land and buildings	Plant and machinery and other technical installations	Equipment, tools, fixtures and fittings	Construction in progress	Total
<b>Cost</b>					
Cost brought forward	1,271	7,579	384	344	9,578
Investments	—	—	70	330	400
Transfer from construction in progress	13	262	3	-278	—
Divestments/Disposals	-29	-223	-10	—	-262
Reclassifications	-30	30	—	—	—
<b>Accumulated cost carried forward</b>	<b>1,225</b>	<b>7,648</b>	<b>447</b>	<b>396</b>	<b>9,716</b>
<b>Accumulated depreciation according to plan</b>					
Depreciation brought forward	-705	-4,437	-191	—	-5,333
Depreciation for the year	-30	-311	-97	—	-438
Divestments/Disposals	17	161	8	—	186
Reclassifications	41	-41	—	—	—
<b>Accumulated depreciation carried forward</b>	<b>-677</b>	<b>-4,628</b>	<b>-280</b>	<b>—</b>	<b>-5,585</b>
<b>Impairment losses</b>					
Impairment losses brought forward	9	-16	—	—	-7
Divestments/Disposals	2	2	—	—	4
Reclassifications	-12	12	—	—	—
<b>Impairment losses carried forward</b>	<b>-1</b>	<b>-2</b>	<b>—</b>	<b>—</b>	<b>-3</b>
<b>Residual value according to plan carried forward</b>	<b>547</b>	<b>3,018</b>	<b>167</b>	<b>396</b>	<b>4,128</b>
Accumulated accelerated depreciation	—	-2,292	—	—	-2,292
<b>Carrying amount</b>	<b>547</b>	<b>726</b>	<b>167</b>	<b>396</b>	<b>1,836</b>

At 31 December 2015 there were no contractual commitments for the acquisition of property, plant and equipment.

**Note 22 Shares and participations**

	2015				2014			
	Participations in subsidiaries	Participations in associated companies	Other shares and participations	Total	Participations in subsidiaries	Participations in associated companies	Other shares and participations	Total
Balance brought forward	118,452	16	5	118,473	133,045	14	2,420	135,479
Shareholder contributions	—	5	—	5	—	2	—	2
Divestments	-2	—	—	-2	—	—	-2,415	-2,415
Purchase price adjustment	-3,094 <sup>1</sup>	—	—	-3,094	—	—	—	—
Write up	37,989 <sup>2</sup>	—	—	37,989	—	—	—	—
Liquidation	-294	—	—	-294	—	—	—	—
Impairment losses	-1,209 <sup>3</sup>	—	-3	-1,212	-14,593 <sup>1</sup>	—	—	-14,593
<b>Balance carried forward</b>	<b>151,842</b>	<b>21</b>	<b>2</b>	<b>151,865</b>	<b>118,452</b>	<b>16</b>	<b>5</b>	<b>118,473</b>

1) Pertains to adjustment of purchase price in 2015 and impairment loss (not tax-deductible) for shares in N.V. Nuon Energy in 2014.

2) Pertains to tax-exempt revaluation of shares in Vattenfall Eldistribution AB.

3) Pertains to impairment loss (not tax-deductible) for shares in Vattenfall A/S.

For a breakdown of the Parent Company's shares and participations in subsidiaries, associated companies and other shares and participations, see Notes 26–28 to the consolidated accounts.

**Note 23 Other non-current receivables**

	2015				2014			
	Receivables from subsidiaries	Receivables from associated companies	Other receivables	Total	Receivables from subsidiaries	Receivables from associated companies	Other receivables	Total
Balance brought forward	89,676	24	778	90,478	91,397	11	868	92,276
New receivables	—	—	12	12	199	13	14	226
Payments received	-6,732	—	—	-6,732	—	—	-111	-111
Foreign exchange gains/losses	-84	—	-14	-98	213	—	38	251
Reclassification between non-current and current receivables	—	—	-36	-36	-2,133	—	-31	-2,164
<b>Balance carried forward</b>	<b>82,860</b>	<b>24</b>	<b>740</b>	<b>83,624</b>	<b>89,676</b>	<b>24</b>	<b>778</b>	<b>90,478</b>

**Note 24 Inventories**

	2015	2014
Biofuels	78	93
Fossil fuels	211	247
Materials and spare parts	53	45
<b>Total</b>	<b>342</b>	<b>385</b>

Inventories recognised as an expense in 2015 amounted to SEK 50 million (640). No impairment losses for inventories or reversals of impairment losses were recognised during the year.

**Note 25 Intangible assets: current**

Attributable to CO<sub>2</sub> emission allowances and certificates. See Note 3 to the consolidated accounts, Accounting policies.

	2015			2014		
	CO <sub>2</sub> emission allowances	Certificates	Total	CO <sub>2</sub> emission allowances	Certificates	Total
Balance brought forward	—	68	68	—	86	86
Purchases	134	553	687	287	397	684
Received free of charge	—	38	38	—	68	68
Sold	-134	-116	-250	-287	-300	-587
Redeemed	—	-328	-328	—	-183	-183
<b>Balance carried forward</b>	<b>—</b>	<b>215</b>	<b>215</b>	<b>—</b>	<b>68</b>	<b>68</b>

**Note 26 Current receivables**

	2015	2014
Advance payments paid	18	21
Accounts receivable - trade	1,172	1,704
Receivables from subsidiaries	7,334	12,314
Receivables from associated companies	3	—
Other receivables	1,212	1,215
Prepaid expenses and accrued income	2,433	2,801
<b>Total</b>	<b>12,172</b>	<b>18,055</b>

**Age analysis of Current receivables**

The collection period is normally 30 days.

	2015			2014		
	Receivables gross	Impaired receivables	Receivables net	Receivables gross	Impaired receivables	Receivables net
<b>Accounts receivable - trade</b>						
Not due	1,039	—	1,039	1,158	—	1,158
Past due 1–30 days	93	—	93	511	—	511
Past due 31–90 days	23	—	23	16	—	16
Past due >90 days	34	17	17	51	32	19
<b>Total</b>	<b>1,189</b>	<b>17</b>	<b>1,172</b>	<b>1,736</b>	<b>32</b>	<b>1,704</b>
<b>Receivables from subsidiaries</b>						
Not due	7,334	—	7,334	12,314	—	12,314
<b>Total</b>	<b>7,334</b>	<b>—</b>	<b>7,334</b>	<b>12,314</b>	<b>—</b>	<b>12,314</b>
<b>Receivables from associated companies</b>						
Not due	3	—	3	—	—	—
<b>Total</b>	<b>3</b>	<b>—</b>	<b>3</b>	<b>—</b>	<b>—</b>	<b>—</b>
<b>Other receivables</b>						
Not due	1,212	—	1,212	1,215	—	1,215
<b>Total</b>	<b>1,212</b>	<b>—</b>	<b>1,212</b>	<b>1,215</b>	<b>—</b>	<b>1,215</b>

**Note 27 Short-term investments**

	2015	2014
Fixed-income investments	25,812	23,737
Margin calls, financing activities	2,679	2,987
<b>Total</b>	<b>28,491</b>	<b>26,724</b>

**Note 28 Cash and cash equivalents**

	2015	2014
Cash and bank balances	9,068	7,959
Cash equivalents	1,235	376
<b>Total</b>	<b>10,303</b>	<b>8,335</b>

**Note 29 Provisions**

	2015	2014
Pension provisions <sup>1,2</sup>	4,188	3,657
Personnel-related provisions for non-pension purposes	591	540
Provisions for environmental measures/undertakings	56	81
<b>Total</b>	<b>4,835</b>	<b>4,278</b>
1) Of which, information registered by PRI	3,688	3,141
2) Of which, covered by credit insurance with FPG/PRI	4,181	3,652

The Parent Company's pension obligations are subject in its entirety to the Act on Safeguarding of Pension Obligations ("Tryggandelagen").

Vattenfall AB owns, together with Svafo Ågestaverket, a nuclear power station that previously produced district heating in southern Stockholm. Vattenfall is settling its obligation for dismantling, restoration and final storage through payments to the Swedish Nuclear Waste Fund. Vattenfall's payments to the Swedish Nuclear Waste Fund have been expensed in the Parent Company's accounts and are therefore not recognised as a liability for the obligation nor a balance with the Swedish Nuclear Waste Fund in Vattenfall AB. See also Note 29, Share in Nuclear Waste Fund and Note 42, Other interest-bearing provisions, in the consolidated accounts.

**Note 30 Other interest-bearing liabilities and derivatives**

	Non-current portion maturity 1–5 years		Non-current portion maturity >5 years		Total non-current portion		Current portion		Total	
	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014
Bond issues	20,512	28,747	33,806	32,558	54,318	61,305	11,444	1,262	65,762	62,567
Commercial paper	—	—	—	—	—	—	3,455	4,791	3,455	4,791
Liabilities to credit institutions	—	1,934	—	15	—	1,949	210	415	210	2,364
Liabilities pertaining to acquisition of N.V. Nuon Energy <sup>1</sup>	—	—	—	—	—	—	—	21,985	—	21,985
Liabilities to subsidiaries	643	708	—	—	643	708	57,954	42,912	58,597	43,620
Other liabilities (margin calls within financing activities)	—	—	—	—	—	—	5,285	7,014	5,285	7,014
<b>Total interest-bearing liabilities excluding Hybrid capital</b>	<b>21,155</b>	<b>31,389</b>	<b>33,806</b>	<b>32,573</b>	<b>54,961</b>	<b>63,962</b>	<b>78,348</b>	<b>78,379</b>	<b>133,309</b>	<b>142,341</b>
Hybrid capital <sup>2</sup>	—	—	18,603	—	18,603	—	—	9,385	18,603	9,385
<b>Total interest-bearing liabilities</b>	<b>21,155</b>	<b>31,389</b>	<b>52,409</b>	<b>32,573</b>	<b>73,564</b>	<b>63,962</b>	<b>78,348</b>	<b>87,764</b>	<b>151,912</b>	<b>151,726</b>

Undiscounted future cash flows including interest payments on the interest-bearing liabilities, excluding liabilities to subsidiaries, mentioned above, future cash flow for derivatives, trade payables and financial instruments with contractual payments on 31 December, are shown in the table below. Floating interest cash flows with future interest fixing dates are estimated based on observable interest rate curves at year end. All future cash flows in foreign currency are translated to SEK using the rate on the balance sheet date for the annual accounts.

	Non-current portion maturity 1–5 years		Non-current portion maturity >5 years		Total non-current portion		Current portion		Total	
	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014
Interest-bearing liabilities	38,178	40,503	103,572	52,694	141,750	93,197	33,986	47,935	175,736	141,132
Derivatives (swaps)	-7,598	-2,390	-26,674	-10,388	-34,272	-12,778	-6,620	-1,343	-40,892	-14,121
Accounts payable - trade, and other financial liabilities	—	3,835	—	—	—	3,835	-6,093	7,108	-6,093	10,943
<b>Total</b>	<b>30,580</b>	<b>41,948</b>	<b>76,898</b>	<b>42,306</b>	<b>107,478</b>	<b>84,254</b>	<b>21,273</b>	<b>53,700</b>	<b>128,751</b>	<b>137,954</b>

1) According to agreement, the liability pertaining to the acquisition of the remaining 21% of the shares in N.V. Nuon Energy was be paid in July 2015.

2) See Note 40 to the consolidated accounts, Interest-bearing liabilities and related financial derivatives.

**Note 31 Other noninterest-bearing liabilities (non-current)**

	2015	2014
Liabilities to subsidiaries	18,251	36,367
Other liabilities	51	54
<b>Total</b>	<b>18,302</b>	<b>36,421</b>

Liabilities to subsidiaries refer mainly to liabilities pertaining to Group contributions and to a non-current liability to Forsmarks Kraftgrupp AB for power charges. For this latter debt, in accordance with an agreement between the co-owners, no interest is payable on the debt. Of other liabilities, SEK 26 million (29) falls due after more than five years.

**Note 32 Other noninterest-bearing liabilities (current)**

	2015	2014
Advance payments from customers	252	1
Accounts payable – trade	381	381
Liabilities to subsidiaries	2,037	2,485
Other liabilities	545	733
Accrued expenses and deferred income	2,879	3,502
<b>Total</b>	<b>6,094</b>	<b>7,102</b>

Breakdown of accrued expenses and deferred income:

	2015	2014
Accrued personnel-related costs	270	268
Accrued interest expenses	1,805	2,435
Other accrued expenses	352	357
Deferred income and accrued expenses, electricity	444	435
Other deferred income	8	7
<b>Total</b>	<b>2,879</b>	<b>3,502</b>

**Note 33** Financial instruments: Carrying amount and fair value

The categories for assets and liabilities below correspond to the categories described in Note 47 to the consolidated accounts, Financial instruments by category and related effects on income. However, the Parent Company recognises all financial instruments based on cost in accordance with the Swedish Annual Accounts Act, that is, the categories do not determine how the instruments are measured or recognised. For disclosures on how fair value is calculated, see Note 3 to the consolidated accounts, Accounting policies. The column fair value is included for information purposes only.

	2015		2014	
	Carrying amount	Fair value	Carrying amount	Fair value
<b>Financial assets at fair value through profit or loss</b>				
Derivative assets	— <sup>1</sup>	21,360	—	16,692
Short-term investments	28,491	28,491	26,724	26,724
Cash equivalents	1,235	1,235	376	376
<b>Total</b>	<b>29,726</b>	<b>51,086</b>	<b>27,100</b>	<b>43,792</b>
<b>Loans and receivables</b>				
Share in the Swedish Nuclear Waste Fund <sup>2</sup>	—	187	—	194
Other non-current receivables	83,624	83,811	90,478	90,478
Trade receivables and other receivables	12,154	12,154	18,034	18,034
Advance payments paid	18	18	21	21
Cash and bank balances	9,068	9,068	7,959	7,959
<b>Total</b>	<b>104,864</b>	<b>105,238</b>	<b>116,492</b>	<b>116,686</b>
<b>Available-for-sale financial assets</b>				
Other shares and participations carried at cost	23	23	21	21
<b>Total</b>	<b>23</b>	<b>23</b>	<b>21</b>	<b>21</b>
<b>Financial liabilities at fair value through profit or loss</b>				
Derivative liabilities	— <sup>1</sup>	10,547	—	11,467
<b>Total</b>	<b>—</b>	<b>10,547</b>	<b>—</b>	<b>11,467</b>
<b>Other financial liabilities</b>				
Hybrid capital	18,603	16,196	9,385	9,551
Other non-current interest-bearing liabilities	54,961	61,614	63,962	77,566
Other non-current noninterest-bearing liabilities	18,302	18,302	36,421	36,421
Current interest-bearing liabilities	78,348	78,459	78,379	78,537
Trade payables and other liabilities	5,843	5,843	7,101	7,101
Advance payments received	252	252	1	1
<b>Total</b>	<b>176,309</b>	<b>180,666</b>	<b>195,249</b>	<b>209,177</b>

For assets and liabilities with a remaining maturity of less than three months (for example cash and bank balances, trade receivables and other receivables and trade payables and other payables) fair value is considered to be equal to the carrying amount.

- 1) The carrying amount of derivatives is included in related items, that is in the hedged items or in the interim entries, with a net value of SEK 63 million (319).
- 2) The carrying amount for the provision to the Swedish Nuclear Waste Fund for Ågestaverket is zero, since the provision is expensed directly. See also Notes 29, 47 and 51 to the consolidated accounts.

**Note 34 Collateral**

	2015	2014
Blocked bank funds as security for trading on Nord Pool, ICE and EEX	151	310
Assets pledged to the Swedish insurance company PRI Pensionsgaranti as security for credit insurance for pensions obligations in Vattenfall's Swedish operations	7,295	6
Blocked bank funds as security for guarantees issued by bank	20	59
<b>Total</b>	<b>7,466</b>	<b>375</b>

In addition to the collateral mentioned above, Vattenfall has the following significant collateral:

To fulfil the requirements for security in the derivative market, in its financial operations Vattenfall has pledged security to counterparties for the negative fair value of derivative positions. As per 31 December 2015 this security amounted to SEK 2,679 million (2,987). The counterparties are obligated to repay this security to Vattenfall in the event the negative fair value decreases. The amount is reported as an asset on the balance sheet under Short-term investments. See also Note 27 to the Parent Company accounts, Short-term investments. In a similar manner, counterparties of Vattenfall have pledged security to Vattenfall in the financial operations. Security received amounted to SEK 39 million (0) for energy trading and to SEK 5,285 million (7,013) for financial operations as per 31 December 2015. The amount is reported as a liability on the balance sheet under Interest-bearing liabilities (short-term). See also Note 30 to the Parent Company accounts, Other interest-bearing liabilities and derivatives.

Vattenfall AB has pledged shares in Vattenfall Eldistribution AB to the insurance company PRI Pensionsgaranti as security for the credit insurance that is required to fund the pensions.

**Note 35 Contingent liabilities**

	2015	2014
<b>Guarantees pertaining to:</b>		
Swedish Nuclear Waste Fund	15,448	12,025
Contractor guarantees provided by order of subsidiaries	7,457	12,693
Guarantees provided as collateral for the subsidiaries within Vattenfall Energy Trading's energy trading	8,068	6,758
Other contingent liabilities	10,475	10,961
<b>Total</b>	<b>41,448</b>	<b>42,437</b>

**Swedish Nuclear Waste Fund**

According to the Swedish Act (2006:647) on the Financing of Future Expenses for Nuclear Waste Management, Sweden's nuclear power companies are required to pledge security to the Swedish state (the Swedish Nuclear Waste Fund) as a guarantee that sufficient funds exist to cover the future costs of nuclear waste management. The security is pledged in the form of guarantee commitments to the owners of the nuclear power companies. In a decision made on 18 December 2014, the Swedish government set new guarantee amounts for the years 2015–2017. As security for the subsidiaries Forsmarks Kraftgrupp AB and Ringhals AB, the Parent Company Vattenfall AB has made guarantee commitments for a combined value of SEK 15,448 million (12,025). Two types of guarantees have been issued. The first guarantee – so-called Financing Security, totalling SEK 10,633 million – is intended to cover the requisite need for fees that have been decided on but not yet been paid in during the so-called earnings period (25 years of operation). The second guarantee, amounting to SEK 4,815 million, pertains to future cost increases stemming from unforeseen events (so-called Complementary Security). The amounts for both of these types of security have been determined based on a probability-based risk analysis in which the former amount has been determined as such that there is a 50% probability that it, together with currently funded amounts (the median value), will provide full cost coverage. The latter amount essentially consists of the supplement that would be required if the corresponding probability was 90%. See also Note 29 to the consolidated accounts, Share in the Swedish Nuclear Waste Fund and Note 42 to the consolidated accounts, Other interest-bearing provisions.

**Contract guarantees provided by order of subsidiaries**

As collateral for contractors' obligations, Vattenfall AB has issued guarantees amounting to SEK 7,457 million (12,693), mainly attributable to obligations in the Wind Business Area.

**Guarantees provided as collateral for subsidiaries in Vattenfall Energy Trading's energy trading**

Vattenfall AB has issued guarantees with a total value of SEK 27,358 million (27,017) for energy trading conducted by the subsidiary Vattenfall Energy Trading. As per 31 December 2015 a total of SEK 8,068 million (6,758) of these guarantees had been utilised, which is included in the reported amount of contingent liabilities.

**Other contingent liabilities**

Other contingent liabilities (SEK 10,475 million (10,961)) consists mainly of guarantees that Vattenfall AB has issued for the Customers & Solutions and Wind Business Areas (for the latter, see Note 51 to the consolidated accounts, Contingent liabilities), and pension obligations, which amounted to SEK 1,261 million (1,185).

**In addition to the contingent liabilities mentioned above, Vattenfall has the following significant commitments**

In 2009 Vattenfall AB, together with its subsidiary SKB (the Swedish Nuclear Fuel and Waste Management Company) and the other part-owners of that company, signed a long-term cooperation agreement with the Östhammar and Oskarshamn municipalities. The agreement covers the period 2010 to approximately 2025 and regulates development efforts in association with the implementation of the Swedish nuclear waste programme. Through development initiatives in areas such as training, enterprise and infrastructure, over time the parties will generate value-added worth SEK 1,500 million to SEK 2,000 million. The parties are to finance the development efforts in proportion to their ownership interests. The Vattenfall Group's ownership interest is 56%. Implementation of the efforts is being carried out across two periods: a period before all necessary permits have been received (Period 1), and a period during implementation and operation of the facilities (Period 2). In 2015 Vattenfall reported a provision of SEK 61 million (88) for its share of Period 1 activities.

Atomic liability in Sweden is strict and limited to 300 million Special Drawing Rights (SDRs) (rate 11.5836), corresponding to about SEK 3,475 million (3,391), which means that the companies that are owners of nuclear power plants are only liable for damage to the surrounding environment up to this amount.



**Note 36** Commitments under consortium agreements

See Note 52 to the consolidated accounts, Commitments under consortium agreements.

**Note 37** Average number of employees and personnel costs

Average number of employees	2015			2014		
	Men	Women	Total	Men	Women	Total
Sweden	1,167	558	1,725	1,081	508	1,589

Personnel costs	2015	2014
Salaries and other remuneration	1,184	1,183
Social security expenses	739	388
– of which pension costs <sup>1</sup>	203	69
<b>Total</b>	<b>1,923</b>	<b>1,571</b>

1) SEK 14 million (14) of the pension costs are attributable to senior executives, i.e., presidents and vice presidents and former presidents and vice presidents. The company's outstanding pension obligations attributable to these executives amounted to SEK 0 million (0).

None of the board members receive any pension benefits in connection with their board duties.

Salaries and other remuneration	2015			2014		
	Senior executives <sup>1</sup>	Other employees	Total	Senior executives <sup>1</sup>	Other employees	Total
Sweden	53	1,134	1,187	49	1,134	1,183

1) Senior executives comprise board members and deputy board members as well as presidents and vice presidents. The term also refers to former board members and deputy board members, former presidents and vice presidents, and other senior executives who are members of the Executive Group Management.

Total salaries and other remuneration to board members and presidents include bonuses of SEK 0 million (0). For benefits to senior executives at Vattenfall AB, see Note 53 to the consolidated accounts, Number of employees and personnel costs.

**Note 38** Gender distribution among senior executives

	Women, %		Men, %	
	2015	2014	2015	2014
Gender distribution among board members	33	36	67	64
Gender distribution among other senior executives	38	22	62	78

**Note 39** Related party disclosures

See Note 55 to the consolidated accounts, Related party disclosures.

**Note 40** Specification of the cash flow statement

Other, incl. non-cash items	2015	2014
Unrealised foreign exchange gains/losses	4,824	2,895
Changes in interest receivables	-1,182	756
Changes in interest liabilities	512	884
Group contributions	152	479
Changes in provisions	557	18
Changes in appropriations	-1,345	-897
Other	1,294	434
<b>Total</b>	<b>4,812</b>	<b>4,569</b>

**Note 41** Events after the balance sheet date

See Note 56 to the consolidated accounts, Events after the balance sheet date.

## AUDITOR'S REPORT

To the annual meeting of the shareholders of Vattenfall AB, corporate identity number 556036-2138

### Report on the annual accounts and consolidated accounts

We have audited the annual accounts and consolidated accounts of Vattenfall AB for the year 2015, except for the corporate governance statement on pages 56–69. The annual accounts and consolidated accounts of the company are included in the printed version of this document on pages 4–5, 9–10, 31–33 and 56–153.

### Responsibilities of the Board of Directors and the Managing Director for the annual accounts and consolidated accounts

The Board of Directors and the Managing Director are responsible for the preparation and fair presentation of these annual accounts in accordance with the Annual Accounts Act and of the consolidated accounts in accordance with International Financial Reporting Standards, as adopted by the EU, and the Annual Accounts Act, and for such internal control as the Board of Directors and the Managing Director determine is necessary to enable the preparation of annual accounts and consolidated accounts that are free from material misstatement, whether due to fraud or error.

### Auditor's responsibility

Our responsibility is to express an opinion on these annual accounts and consolidated accounts based on our audit. We conducted our audit in accordance with International Standards on Auditing and generally accepted auditing standards in Sweden. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the annual accounts and consolidated accounts are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the annual accounts and consolidated accounts. The procedures selected depend on the auditor's judgement, including the assessment of the risks of material misstatement of the annual accounts and consolidated accounts, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the company's preparation and fair presentation of the annual accounts and consolidated accounts in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the company's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by the Board of Directors and the Managing Director, as well as evaluating the overall presentation of the annual accounts and consolidated accounts.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

### Opinions

In our opinion, the annual accounts have been prepared in accordance with the Annual Accounts Act and present fairly, in all material respects, the financial position of the parent company as of 31 December 2015 and of its financial performance and its cash flows for the year then ended in accordance with the Annual Accounts Act. The consolidated accounts have been prepared in accordance with the Annual Accounts Act and present fairly, in all material respects, the financial position of the group as of 31 December 2015 and of their financial performance and cash flows for the year then ended in accordance with International Financial Reporting Standards, as adopted by the EU, and the Annual Accounts Act. Our opinions do not cover the corporate governance statement on pages 56–69. The statutory administration report is consistent with the other parts of the annual accounts and consolidated accounts.

We therefore recommend that the annual meeting of shareholders adopt the income statement and balance sheet for the parent company and the group.

### Report on other legal and regulatory requirements

In addition to our audit of the annual accounts and consolidated accounts, we have also audited the proposed appropriations of the company's profit or loss and the administration of the Board of Directors and the Managing Director of Vattenfall AB for the year 2015. We have also conducted an examination of the corporate governance statement.

### Responsibilities of the Board of Directors and the Managing Director

The Board of Directors is responsible for the proposal for appropriations of the company's profit or loss. The Board of Directors and the Managing Director are responsible for administration under the Companies Act and that the corporate governance statement on pages 56–69 has been prepared in accordance with the "The Government's owner policy and guidelines for government owned companies" (Statens ägarpolicy och riktlinjer för företag med statligt ägande).

### Auditor's responsibility

Our responsibility is to express an opinion with reasonable assurance on the proposed appropriations of the company's profit or loss and on the administration based on our audit. We conducted the audit in accordance with generally accepted auditing standards in Sweden.

As a basis for our opinion on the Board of Directors' proposed appropriations of the company's profit or loss, we examined the Board of Directors' reasoned statement and a selection of supporting evidence in order to be able to assess whether the proposal is in accordance with the Companies Act.

As a basis for our opinion concerning discharge from liability, in addition to our audit of the annual accounts and consolidated accounts, we examined significant decisions, actions taken and circumstances of the company in order to determine whether any member of the Board of Directors or the Managing Director is liable to the company. We also examined whether any member of the Board of Directors or the Managing Director has, in any other way, acted in contravention of the Companies Act, the Annual Accounts Act or the Articles of Association.

We believe that the audit evidence which we have obtained is sufficient and appropriate in order to provide a basis for our opinions.

Furthermore, we have read the corporate governance statement and based on that reading and our knowledge of the company and the group we believe that we have obtained a sufficient basis for our opinion. This means that our statutory examination of the corporate governance statement is different and substantially less in scope than an audit conducted in accordance with International Standards on Auditing and generally accepted auditing standards in Sweden.

### Opinions

We recommend to the annual meeting of shareholders that the profit be appropriated in accordance with the proposal in the statutory administration report and that the members of the Board of Directors and the Managing Director be discharged from liability for the financial year.

A corporate governance statement has been prepared, in accordance with the owner policy, and its mandatory statutory content is consistent with the other parts of the annual accounts and the consolidated accounts.

Stockholm, March 18, 2016  
Ernst & Young AB

Staffan Landén  
Authorized Public Accountant

# LIMITED ASSURANCE REPORT

## Auditor's Limited Assurance Report on Vattenfall AB's Sustainability Report

This is a translation of the auditor's report in Swedish.

To Vattenfall AB

### Introduction

We have been engaged by the Board of Directors of Vattenfall AB to undertake a limited assurance engagement of Vattenfall AB's Sustainability Report for the year 2015. The Company has defined the scope of the Sustainability Report to the pages referred to in the GRI Index on the pages 167–170.

### Responsibilities of the Board of Directors and the Executive Management for the Sustainability Report

The Board of Directors and the Executive Management are responsible for the preparation of the Sustainability Report in accordance with the applicable criteria, as explained on pages 165–166 in the Sustainability Report, and are the parts of the *Sustainability Reporting Guidelines* (published by The Global Reporting Initiative (GRI)) which are applicable to the Sustainability Report, as well as the accounting and calculation principles that the Company has developed. This responsibility also includes the internal control relevant to the preparation of a Sustainability Report that is free from material misstatements, whether due to fraud or error.

### Responsibilities of the auditor

Our responsibility is to express a conclusion on the Sustainability Report based on the limited assurance procedures we have performed.

We conducted our limited assurance engagement in accordance with RevR 6 Assurance of Sustainability Reports issued by FAR. A limited assurance engagement consists of making inquiries, primarily of persons responsible for the preparation

of the Sustainability Report, and applying analytical and other limited assurance procedures. The procedures performed in a limited assurance engagement vary in nature from, and are less in extent than for, a reasonable assurance engagement conducted in accordance with IAASB's Standards on Auditing and other generally accepted auditing standards in Sweden. The firm applies ISQC 1 (International Standard on Quality Control) and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements. The procedures performed consequently do not enable us to obtain assurance that we would become aware of all significant matters that might be identified in a reasonable assurance engagement. Accordingly, we do not express a reasonable assurance conclusion.

Our procedures are based on the criteria defined by the Board of Directors and the Executive Management as described above. We consider these criteria suitable for the preparation of the Sustainability Report.

We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our conclusion below.

### Conclusion

Based on the limited assurance procedures we have performed, nothing has come to our attention that causes us to believe that the Sustainability Report is not prepared, in all material respects, in accordance with the criteria defined by the Board of Directors and Executive Management.

Stockholm 18 March 2016

Ernst & Young AB

Staffan Landén  
Authorised Public Accountant

Outi Alestalo  
Specialist member in FAR

## NON-FINANCIAL NOTES

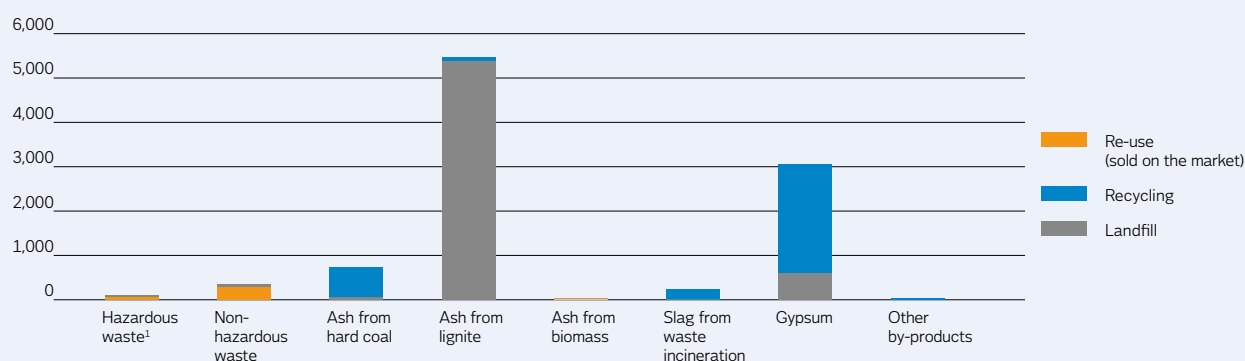
1 Management of waste and by-products	155
2 Water management	156
3 Chemical management	156

**Note 1 Management of waste and by-products**

All of Vattenfall’s operations generate waste, including the operation and maintenance of power plants, electricity and heating networks, as well as mining, and construction and dismantling of power plants. The activities conducted at Vattenfall’s offices also generate waste, although this accounts for only a minor portion compared with the other parts of the Group’s operations. Vattenfall strives to work according to the waste hierarchy with a focus on waste prevention. When waste or a by-product is produced, reuse and recycling are the preferred waste management options. Read more about radioactive waste on page 43.

By-products, mainly ash and gypsum, are produced in flue gas cleaning associated with the combustion of solid fuels, such as lignite and hard coal. The volumes of waste and by-products are a direct effect of how much fuel is used and how effective the flue gas cleaning is. Vattenfall optimises the quality of by-products to facilitate reuse. For example, ash from Vattenfall’s hard coal-fired plants is used in the production of cement and asphalt for road construction. Ash from lignite-fired plants is usually transported back to the mining area, where it is used as land filler for landscape restoration. In addition, Vattenfall is one of Europe’s largest producers of synthetic gypsum (a by-product of flue gas desulphurisation) and supplies high-quality gypsum to the construction industry.

**Waste and by-products, ktonnes**



ktonnes	Hazardous waste <sup>1</sup>	Non-hazardous waste	Ash from hard coal	Ash from lignite	Ash from biomass	Slag from waste incineration	Gypsum	Other by-products
2015	86	342	745	5,474	38	229	3,048	32
2014	123	416	578	5,334	42	245	3,000	48

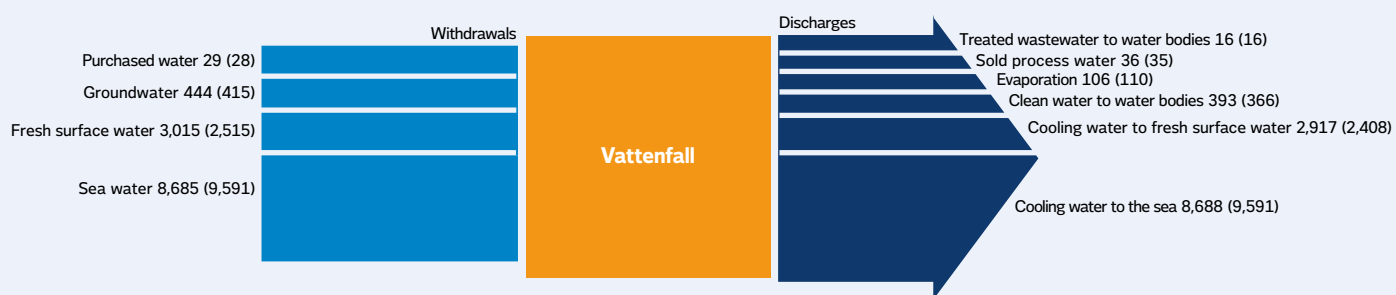
Waste from construction and demolition make up a small portion compared with the by-products that are created at combustion plants. The greatest volume of by-products consists of ash from the lignite-fired power plants. This ash is used almost exclusively to refill landscape in connection with restoration following mining activities.

1) Includes fly ash from waste incineration.

**Note 2 Water management**

Vattenfall operates large nuclear and fossil-based power plants which use large amounts of water for cooling. Flow-through cooling is used at plants where large volumes of water – such as seawater or rivers – are available. In areas where such volumes are not available, cooling towers or closed-loop systems are used, which require less water.

To be able to conduct safe and effective mining operations at Vattenfall’s open cast lignite mines, groundwater must be temporarily lowered and removed. To reduce water pumping, a “sealing wall” technology is used to keep the natural groundwater level stable in the vicinity of the mining area and at the same time reduce the water table on the side of the open cast mine. This helps protect adjacent nature conservation areas from the dramatic lowering of groundwater levels.



Most water withdrawals consist of sea water that is used for cooling in nuclear power plants and is returned to the sea after use. Water use decreased slightly between 2015 and 2014 in association with lower production from combined heat and power plants and nuclear power plants (inflows and outflows do not match exactly due to the omission of certain smaller flows).

**Note 3 Chemical management**

Chemicals are used in electricity generation and heat production, such as for flue gas cleaning and water treatment, in the maintenance of technical equipment and in mining operations. Vattenfall works actively on substituting hazardous chemicals, and the ambition is to phase out or substitute all hazardous chemicals where technically possible by 2020. Vattenfall also sets requirements and evaluates the use of chemicals by contractors in connection with procurement processes.



## FIVE-YEAR OVERVIEW OF SUSTAINABILITY DATA

	2011	2012	2013	2014	2015
<b>Production and the environment</b>					
Electricity generation, TWh	166.7	178.9	181.7	172.9	173.0 <sup>1</sup>
– of which, Hydro power	34.5	42.2	35.6	34.3	39.5
– of which, nuclear power	42.5	48.9	51.9	49.9	42.2
– of which, fossil power	85	81.7	87.9	82.7	84.0 <sup>1</sup>
– of which, wind power	3.4	3.6	3.9	4.1	5.8
– of which, biomass and waste	1.3 <sup>2</sup>	2.5	2.4	2.0	1.5
<b>Energy consumption, TWh</b>					
Gas	33.8	32.5	37.1	31.7	27.7
Hard coal	58.5	41.5	45.1	35.2	46.1
Lignite	147.4	152.8	157	153.5	152.7
Peat	1.1	0.6	0.7	0.4	0.5
Waste (non-biogenic)	2.8	2.9	3.2	2.9	2.6
Biomass, waste (biogenic)	11.8	10.5	9.8	7.1	4.3
Other fuels, including oil	5.3	5.9	5.7	5.7	1.9
Uranium, tonnes	104	126	133	119	143
<b>Emissions to air</b>					
Carbon dioxide (CO <sub>2</sub> ), Mtonnes <sup>3</sup>	86.7	83.5	86.9	82.7	84.3 <sup>4</sup>
Specific CO <sub>2</sub> emissions, g/kWh	418	400	412	421	426
Biogenic CO <sub>2</sub> , Mtonnes <sup>5</sup>	4.0	3.6	3.4	2.4	1.9
Nitrogen oxides (NO <sub>x</sub> ), ktonnes	63.6	53.4	56.5	52.8	52.2
Specific NO <sub>x</sub> emissions, g/kWh	0.306	0.258	0.268	0.271	0.264
Specific NO <sub>x</sub> emissions (only combustion plants), g/kWh	0.491	0.460	0.458	0.474	0.475
Sulphur dioxide (SO <sub>2</sub> ), ktonnes	69.8	56.1	58.2	53.1	50.1
Specific SO <sub>2</sub> emissions, g/kWh	0.336	0.272	0.276	0.272	0.253
Specific SO <sub>2</sub> emissions (only combustion plants), g/kWh	0.539	0.483	0.472	0.476	0.455
Particulate matter (PM), ktonnes	2.6	1.9	2.1	1.7	1.5
Specific PM emissions, g/kWh	0.012	0.009	0.010	0.008	0.008
Specific PM emissions (only combustion plants), g/kWh	0.020	0.016	0.017	0.015	0.014
<b>Waste and by-products, ktonnes</b>					
Hazardous waste	211	431	194	123	86
Non-hazardous waste	219	447	349	416	342
Ash from hard coal	1,103	667	738	578	745
Ash from lignite	5,198	5,330	5,388	5,334	5,474
Ash from biomass	90	64	67	42.3	38.3
Slag from waste incineration	301	317	330	245	229
Gypsum	3,109	3,154	3,219	3,000	3,048
Other by-products	88	75	73	48	32
<b>Radioactive waste</b>					
Low and medium radioactive operational waste, cubic metres	1,082	1,277	883	2,251	3,353
Core components, tonnes	842	18	18	10	7
Spent nuclear fuel, tonnes	157	147	161	193	197
Uranium in spent nuclear fuel, tonnes	103	136	145	138	142
<b>SAIDI (minutes/customer)</b>					
Sweden	349	217	183	177	213
Germany	11	12	13	15	10
<b>SAIFI (number/customer)</b>					
Sweden	3.1	2.6	2.1	2.4	2.2
Germany	0.2	0.3	0.3	0.2	0.2
<b>Employees</b>					
Number employees, full-time equivalents	34,685	32,794	31,819	30,181	28,567
– of which, females	8,267	7,928	7,485	6,983	6,399
– of which, temporary employed (not permanent employment contracts)	N/A	1,234	1,154	882	761
<b>Sick leave</b>					
men %	N/A	N/A	3.8%	3.7%	4.1%
females %	N/A	N/A	5.3%	5.0%	5.8%
<b>Working related accidents</b>					
Internal LTIF (employees)	3.3	2.3	2.6	2.7	2.3
External LTI (contractors) <sup>6</sup>	N/A	N/A	N/A	N/A	133
<b>Gender diversity</b>					
Female managers %	19%	19%	18%	18%	19%
<b>Share of managers per age category total</b>					
–29	2%	1%	2%	2%	1%
30–49	70%	55%	51%	53%	52%
50–	28%	44%	47%	45%	46%

1) The value has been adjusted compared with the value presented in Vattenfall's 2015 year-end report.

2) Accounting principle changed in 2012.

3) Emissions are presented in accordance to financial accounting and consolidated.

4) Total GHG emissions amount to 84.6 Mtonnes, 0.3 Mtonnes consist of SF<sub>6</sub> and N<sub>2</sub>O emissions. Global Warming Potential factors are obtained from the IPCC Fifth Assessment report.

5) CO<sub>2</sub> emissions from combustion of biomass.

6) Since the Contractor LTIF calculation is not reliable enough, only LTI is reported.

## QUARTERLY OVERVIEW

Amounts in SEK million	2014				2015			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
<b>Income statement items</b>								
Net sales	45,912	36,575	34,734	48,725	45,377	36,115	37,519	45,499
EBITDA	16,588	3,890	8,438	12,120	13,518	2,852	7,548	8,835
Operating profit (EBIT)	11,832	-1,637	-19,436	7,045	8,386	-38,045	3,001	3,690
Underlying operating profit	9,075	4,086	2,750	8,223	7,736	2,966	3,388	6,449
Financial income	690	623	577	697	414	1,009	705	635
Financial expenses	-2,391	-2,044	-1,939	-2,257	-1,957	-2,410	-1,810	-1,810
Profit before tax	10,131	-3,058	-20,798	5,485	6,843	-39,446	1,896	2,515
Profit for the period	8,205	-2,323	-18,065	3,900	4,987	-28,812	1,600	2,460
- of which, attributable to owners of the Parent Company	8,111	-1,830	-18,122	3,663	4,679	-24,996	1,403	2,243
- of which, attributable to non-controlling interests	94	-493	57	237	308	-3,816	197	217
<b>Cash flow items</b>								
Funds from operations (FFO)	10,792	3,854	5,008	12,476	9,795	4,154	5,698	9,362
Cash flow from operating activities	7,487	8,333	9,992	14,333	6,753	9,717	14,868	9,595
Free cash flow	4,685	4,330	6,083	8,136	4,003	6,218	10,520	4,270
<b>Balance sheet items</b>								
Cash and cash equivalents and short-term investments	35,301	30,147	35,794	45,068	57,240	54,012	43,364	44,256
Equity	145,725	142,387	123,864	128,462	134,678	108,303	114,440	115,956
- of which, attributable to owners of the Parent Company	134,852	131,567	111,603	115,260	120,367	97,646	103,043	103,984
- of which, attributable to non-controlling interests	10,873	10,820	12,261	13,202	14,311	10,657	11,397	11,972
Interest-bearing liabilities	121,588	116,618	120,680	125,928	137,379	128,162	111,046	110,585
Net debt	85,694	85,872	83,403	79,473	78,825	72,839	65,405	64,201
Adjusted net debt	147,296	156,124	151,464	158,291	150,737	149,080	143,061	137,585
Provisions	117,640	128,560	128,478	138,567	137,554	139,536	141,983	138,263
Noninterest-bearing liabilities	110,032	100,371	91,684	104,252	102,774	87,548	89,889	97,513
Capital employed, average	303,207	296,908	282,390	293,992	298,803	287,377	274,459	279,435
Balance sheet total	494,985	487,936	464,706	497,209	512,385	463,549	457,358	462,317
<b>Key ratios</b>								
<b>In % unless otherwise stated. (x) means times.</b>								
Operating margin	25.8	-4.5	-56.0	14.5	18.5	-105.3	8.0	8.1
Operating margin	19.8	11.2	7.9	16.9	17.1	8.2	9.0	14.2
Pre-tax profit margin	22.1	-8.4	-59.9	11.3	15.1	-109.2	5.1	5.5
Pre-tax profit margin	16.1	7.3	4.1	13.7	13.7	4.3	4.0	11.6
Return on equity	-9.9	8.4	-8.0	-6.9	-10.1	-32.6	-14.8	-16.8
Return on capital employed	-1.7	6.4	-1.9	-0.7	-1.9	-14.6	-7.2	-8.2
Return on capital employed	8.4	8.2	8.1	8.2	7.6	7.5	8.1	7.4
EBIT interest cover, (x)	-0.6	3.3	-0.6	-0.1	-0.9	-8.0	-3.6	-4.6
EBIT interest cover, (x)	3.9	4.2	4.2	5.0	5.1	4.6	4.8	4.8
FFO interest cover, (x)	5.4	5.5	5.5	7.2	7.6	7.2	7.5	7.3
FFO interest cover, net, (x)	6.2	5.0	7.3	10.1	10.0	9.7	10.9	10.6
Cash flow interest cover after maintenance investments, (x)	5.5	5.4	4.8	7.0	7.4	7.1	8.3	7.8
FFO/gross debt	24.7	24.0	21.7	25.5	22.7	24.5	28.9	26.2
FFO/net debt	35.1	32.5	31.4	40.4	39.5	43.2	49.1	45.2
FFO/adjusted net debt	20.4	17.9	17.3	20.3	20.7	21.1	22.5	21.1
EBITDA/net financial items, (x)	17.4	4.2	10.5	14.7	15.3	2.6	16.7	14.7
EBITDA/net financial items, (x)	14.5	10.3	38.1	16.1	14.5	7.4	17.3	18.9
Equity/total assets	29.6	29.3	26.7	25.9	26.3	23.4	25.0	25.1
Gross debt/equity	83.4	81.9	97.4	98.0	102.0	118.3	97.0	95.4
Net debt/equity	58.8	60.3	67.3	61.9	58.5	67.3	57.2	55.4
Gross debt/gross debt plus equity	45.5	45.0	49.4	49.5	50.5	54.2	49.3	48.8
Net debt/net debt plus equity	37.0	37.6	40.2	38.2	36.9	40.2	36.4	35.6
Net debt/EBITDA, (x)	1.9	2.2	2.2	1.9	2.1	2.0	1.8	2.0
Adjusted net debt/EBITDA, (x)	3.3	4.0	4.0	3.9	4.0	4.0	4.0	4.2
<b>Other information</b>								
Investments	5,254	6,044	7,890	9,844	5,557	6,726	7,997	8,447
Electricity generation, TWh	50.1	39.7	36.8	46.2	46.4	39.7	41.2	45.9 <sup>1)</sup>
Sales of electricity, TWh	56.5	46.6	42.5	53.4	53.4	45.9	46.1	51.8
Sales of heat, TWh	9.1	4.7	2.5	7.8	9.1	4.1	2.8	6.6
Sales of gas, TWh	18.4	7.0	4.8	15.3	21.8	8.4	5.4	15.0
Number of employees, full-time equivalents	31,261	30,544	30,332	30,181	29,341	28,977	28,744	28,567

1) The value has been adjusted compared with the value presented in Vattenfall's 2015 year-end report.

## TEN-YEAR OVERVIEW

Amounts in SEK million	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Income statement items</b>										
Net sales	135,802	143,639	164,549	205,407	213,572	181,040	167,313	172,253	165,945	164,510
EBITDA	43,938	45,821	45,960	51,777	60,706	54,538	54,271	43,554	41,038	32,754
Operating profit (EBIT)	27,821	28,583	29,895	27,938	29,853	23,209	25,958	-6,218	-2,195	-22,967
Underlying operating profit	27,448	28,497	30,220	31,294	36,838	30,793	27,530	28,135	24,133	20,541
Financial income	3,839	2,276	3,412	2,814	2,514	3,843	2,636	1,416	2,590	2,762
Financial expenses	-6,135	-6,926	-9,809	-13,018	-10,944	-12,754	-10,476	-10,453	-8,635	-7,987
Profit before tax	25,525	23,933	23,498	17,734	21,423	14,298	18,118	-15,255	-8,240	-28,192
Profit for the period	19,858	20,686	17,763	13,448	13,185	10,416	17,047	-13,543	-8,284	-19,766
– of which, attributable to owners of the Parent Company	18,729	19,769	17,095	12,896	12,997	11,083	16,759	-13,668	-8,178	-16,672
– of which, attributable to non-controlling interests	1,129	917	668	552	188	-667	288	125	-106	-3,094
<b>Cash flow items</b>										
Funds from operations (FFO)	35,673	34,049	30,735	36,700	40,108	38,256	34,419	31,888	32,131	29,009
Cash flow from operating activities	35,207	32,331	36,194	46,246	41,231	33,468	28,485	37,843	40,146	40,934
Free cash flow	23,178	19,650	18,963	27,566	23,846	17,637	12,619	23,579	23,234	25,013
<b>Balance sheet items</b>										
Cash and cash equivalents and short-term investments	22,168	22,659	40,236	56,940	43,873	28,685	46,495	27,261	45,068	44,256
Equity	107,674	124,132	140,886	142,404	133,621	138,931	149,372	130,718	128,462	115,956
– of which, attributable to owners of the Parent Company	96,589	111,709	129,861	135,620	126,704	131,988	140,764	120,370	115,260	103,984
– of which, attributable to non-controlling interests	11,085	12,423	11,025	6,784	6,917	6,943	8,608	10,348	13,202	11,972
Interest-bearing liabilities	71,575	67,189	107,347	213,494	188,277	170,350	160,261	126,488	125,928	110,585
Net debt	49,407	43,740	66,000	154,987	144,109	141,089	111,907	98,998	79,473	64,201
Adjusted net debt	—	—	—	205,028	173,409	176,031	154,335	162,590	158,291	137,585
Provisions	66,094	73,985	89,799	91,100	87,822	91,719	103,832	118,166	138,567	138,263
Noninterest-bearing liabilities	77,823	72,930	107,795	155,129	131,712	123,558	114,899	110,112	104,252 <sup>1</sup>	97,513
Capital employed, average	—	—	—	—	—	317,799	313,124	302,743	293,992	279,435
Balance sheet total	323,166	338,236	445,827	602,127	541,432	524,558	528,364	485,484	497,209 <sup>1</sup>	462,317
<b>Key ratios</b>										
In % unless otherwise stated. (x) means times.										
Operating margin	20.5	19.9	18.2	13.6	14.0	12.8	15.5	-3.6	-1.3	-14.0
Operating margin <sup>2</sup>	20.2	19.8	18.4	15.2	17.2	17.0	16.5	16.3	14.5	12.5
Return on equity	19.1	17.6	13.6	9.5	10.0	8.6	12.3	-11.4	-6.9	-16.8
Return on capital employed	—	—	—	—	—	7.3	8.3	-2.1	-0.8	-8.2
Return on capital employed <sup>2</sup>	—	—	—	—	—	9.7	8.8	9.3	8.2	7.4
EBIT interest cover, (x)	7.2	6.7	4.5	3.1	4.1	2.6	3.7	-0.7	-0.1	-4.6
EBIT interest cover, (x) <sup>2</sup>	7.1	6.7	4.6	3.4	5.0	3.3	3.9	4.1	5.0	4.8
FFO interest cover, (x)	9.7	8.6	5.4	4.8	6.2	4.9	5.7	5.4	7.3	7.3
FFO interest cover, net, (x)	15.9	12.2	7.1	5.6	7.5	5.8	6.6	6.2	10.1	10.6
FFO/gross debt	49.8	50.7	28.6	17.2	21.3	22.5	21.5	25.2	25.5	26.2
FFO/net debt	72.2	77.8	46.6	23.7	27.8	27.1	30.8	32.2	40.4	45.2
FFO/adjusted net debt	—	—	—	17.9	23.1	21.7	22.3	19.6	20.3	21.1
Equity/total assets	33.3	36.7	31.6	23.7	24.7	26.5	28.3	26.9	25.9	25.1
Gross debt/equity	66.5	54.1	76.2	149.9	140.9	122.6	107.3	96.8	98.0	95.4
Net debt/equity	45.9	35.2	46.8	108.8	107.8	101.6	74.9	75.7	61.9	55.4
Gross debt/gross debt plus equity	39.9	35.1	43.2	60.0	58.5	55.1	51.8	49.2	49.5	48.8
Net debt/EBITDA, (x)	1.1	1.0	1.4	3.0	2.4	2.6	2.1	2.3	1.9	2.0
Adjusted net debt/EBITDA, (x)	—	—	—	4.0	2.9	3.2	2.8	3.7	3.9	4.2
<b>Other information</b>										
Dividend to owners of the Parent Company	7,500	8,000	6,900	5,240	6,500	4,433	6,774	—	—	— <sup>3</sup>
Investments	17,220	18,964	42,296	102,989	41,794	35,750	29,581	27,761	29,032	28,726
Electricity generation, TWh	165.4	167.6	162.1	158.9	172.4	166.7	178.9	181.7	172.9	173.0 <sup>4</sup>
Sales of electricity, TWh	191.1	193.8	189.3	194.6	194.2	209.4	205.5	203.3	199.0	197.2
Sales of heat, TWh	35.2	36.2	35.6	37.9	47.1	41.6	29.8	30.3	24.1	22.6
Sales of gas, TWh	—	—	0.3	20.0	63.2	53.8	52.4	55.8	45.5	50.7
Number of employees, full-time equivalents	32,308	32,396	32,801	36,593	38,459	37,679	33,059	31,819	30,181	28,567

1) The amount for 2014 has been recalculated compared with previously published information in Vattenfall's 2014 Annual and Sustainability Report as a result of new accounting rules (IFRIC 21) that took effect in 2015. See Note 2 to the consolidated accounts, Important changes in the financial statements compared with the preceding year.

2) Based on underlying Operating profit, that is, Operating profit excluding Items affecting comparability.

3) Proposed dividend.

4) The value has been adjusted compared with the value presented in Vattenfall's 2015 year-end report.

## DEFINITIONS AND CALCULATIONS OF KEY RATIOS

Figures for the Group in 2015. Amounts in SEK million unless indicated otherwise.

**EBIT:** Earnings Before Interest and Tax (Operating profit)

**EBITDA:** Earnings Before Interest, Tax, Depreciation and Amortisation. (Operating profit before depreciation, amortisation and impairment losses)

**Items affecting comparability:** Capital gains and capital losses from shares and other non-current assets, impairment losses and reversed impairment losses and other material non-recurring items. Also included here are, for trading activities, unrealised changes in the fair value of energy derivatives, which according to IAS 39 cannot be recognised using hedge accounting, and unrealised changes in the fair value of inventories

**Underlying operating profit:** Operating profit (EBIT) excluding items affecting comparability

**FFO:** Funds From Operations

**Free cash flow:** Cash flow from operating activities less maintenance investments

**Hybrid capital:** Perpetual subordinated securities, junior to all Vattenfall's unsubordinated debt instruments

**Capital employed:** Balance sheet total less financial assets, noninterest-bearing liabilities and certain other interest-bearing provisions not included in adjusted net debt

**Net debt:** Interest-bearing liabilities less loans to owners of non-controlling interests in Group companies, cash and cash equivalents, short-term investments

**Adjusted net debt:** For calculation, see Consolidated balance sheet - Supplementary Information

Operating margin, %	= 100 x	$\frac{\text{EBIT}}{\text{Net sales}}$	$\frac{-22,967}{164,510}$	= -14.0
Operating margin excl. items affecting comparability, %	= 100 x	$\frac{\text{Underlying EBIT}}{\text{Net sales}}$	$\frac{20,541}{164,510}$	= 12.5
Pre-tax profit margin, %	= 100 x	$\frac{\text{Profit before tax}}{\text{Net sales}}$	$\frac{-28,192}{164,510}$	= -17.1
Pre-tax profit margin excl. items affecting comparability, %	= 100 x	$\frac{\text{Profit before tax excl. items affecting comparability}}{\text{Net sales}}$	$\frac{15,334}{164,510}$	= 9.3
Return on equity, %	= 100 x	$\frac{\text{Profit for the period attributable to owner of the Parent Company}}{\text{Average equity for the period attributable to owner of the Parent Company excl. the Reserve for cash flow hedges}}$	$\frac{-16,672}{98,986}$	= -16.8
Return on capital employed, %	= 100 x	$\frac{\text{EBIT}}{\text{Capital employed, average}}$	$\frac{-22,967}{279,435}$	= -8.2
Return on capital employed excl. items affecting comparability, %	= 100 x	$\frac{\text{Underlying EBIT}}{\text{Capital employed, average}}$	$\frac{20,541}{279,435}$	= 7.4
EBIT interest cover, (x)	=	$\frac{\text{EBIT + financial income excl. return from the Swedish Nuclear Waste Fund}}{\text{Financial expenses excl. discounting effects attributable to provisions}}$	$\frac{-21,373}{4,617}$	= -4.6
EBIT interest cover excl. items affecting comparability, (x)	=	$\frac{\text{Underlying EBIT + financial income excl. return from the Swedish Nuclear Waste Fund}}{\text{Financial expenses excl. discounting effects attributable to provisions}}$	$\frac{22,135}{4,617}$	= 4.8

FFO interest cover, (x)	=	FFO + financial expenses excl. discounting effects attributable to provisions	<u>33,626</u>	=	7.3
		Financial expenses excl. discounting effects attributable to provisions	<u>4,617</u>		
FFO interest cover, net, (x)	=	FFO + financial items net excl. discounting effects attributable to provisions and return from the Swedish Nuclear Waste Fund	<u>32,032</u>	=	10.6
		Financial items net excl. discounting effects attributable to provisions and return from the Swedish Nuclear Waste Fund	<u>3,023</u>		
Cash flow interest cover after maintenance investments, (x)	=	Cash flow from operating activities less maintenance investments + financial expenses excl. discounting effects attributable to provisions and interest components related to pension costs	<u>28,693</u>	=	7.8
		Financial expenses excl. discounting effects attributable to provisions and interest components related to pension costs	<u>3,680</u>		
FFO/gross debt, %	= 100 x	FFO	<u>29,009</u>	=	26.2
		Interest-bearing liabilities	<u>110,585</u>		
FFO/net debt, %	= 100 x	FFO	<u>29,009</u>	=	45.2
		Net debt	<u>64,201</u>		
FFO/adjusted net debt, %	= 100 x	FFO	<u>29,009</u>	=	21.1
		Adjusted net debt	<u>137,585</u>		
EBITDA/net financial items, (x)	=	EBITDA	<u>32,754</u>	=	10.8
		Financial items net excl. discounting effects attributable to provisions and return from the Swedish Nuclear Waste Fund	<u>3,023</u>		
EBITDA excl. items affecting comparability/net financial items, (x)	=	EBITDA excl. items affecting comparability	<u>40,004</u>	=	13.2
		Financial items net excl. discounting effects attributable to provisions and return from the Swedish Nuclear Waste Fund	<u>3,023</u>		
Equity/total assets, %	= 100 x	Equity	<u>115,956</u>	=	25.1
		Balance sheet total	<u>462,317</u>		
Gross debt/equity, %	= 100 x	Interest-bearing liabilities	<u>110,585</u>	=	95.4
		Equity	<u>115,956</u>		
Net debt/equity, %	= 100 x	Net debt	<u>64,201</u>	=	55.4
		Equity	<u>115,956</u>		
Gross debt/gross debt plus equity, %	= 100 x	Interest-bearing liabilities	<u>110,585</u>	=	48.8
		Interest-bearing liabilities + equity	<u>226,541</u>		
Net debt/net debt plus equity, %	= 100 x	Net debt	<u>64,201</u>	=	35.6
		Net debt + equity	<u>180,157</u>		
Net debt/EBITDA, (x)	=	Net debt	<u>64,201</u>	=	2.0
		EBITDA	<u>32,754</u>		
Adjusted net debt/EBITDA, (x)	=	Adjusted net debt	<u>137,585</u>	=	4.2
		EBITDA	<u>32,754</u>		

FACTS ABOUT VATTENFALL'S MARKETS<sup>1</sup>

	2015						
	Sweden	Finland	Denmark	Germany	Netherlands	UK	Total
<b>Installed capacity electricity, MW, 31 December 2015</b>							
Hydro power <sup>2</sup>	8,700	124	—	2,880	24	—	11,727
Nuclear power	7,197	—	—	—	—	—	7,197
Fossil-based power	699	—	—	12,972	4,070	—	17,741
– of which, gas	—	—	—	1,707	3,420	—	5,127
– of which, lignite	—	—	—	7,767	—	—	7,767
– of which, hard coal	—	—	—	2,866	650	—	3,516
– of which, oil and other	699	—	—	632	—	—	1,331
Wind power	297	—	342	300	222	698	1,858
Biomass, waste <sup>3</sup>	189	—	—	92	2	—	282
<b>Total electricity</b>	<b>17,082</b>	<b>124</b>	<b>341</b>	<b>16,243</b>	<b>4,318</b>	<b>698</b>	<b>38,806</b>
<b>Installed capacity heat, MW, 31 December 2015</b>	<b>2,226</b>	<b>—</b>	<b>—</b>	<b>9,902</b>	<b>1,326</b>	<b>—</b>	<b>13,455</b>
<b>Generated electricity, TWh</b>							
Hydro power	36.1	0.4	—	2.9	0.1	—	39.5
Nuclear power	42.2	—	—	—	—	—	42.2
Fossil-based power	—	—	1.9	69.2	13.0	—	84.0 <sup>6</sup>
– of which, gas	—	—	—	2.6	8.5	—	11.0
– of which, lignite	—	—	—	55.3	—	—	55.3
– of which, hard coal	—	—	1.3	10.9	4.5	—	16.7
– of which, oil and other	—	—	0.5	0.4	—	—	1.0
Wind power	0.9	—	1.1	1.1	0.5	2.2	5.8
Biomass, waste	0.3	—	—	1.2	—	—	1.5
<b>Total electricity</b>	<b>79.4</b>	<b>0.4</b>	<b>3.0</b>	<b>74.5</b>	<b>13.6</b>	<b>2.2</b>	<b>173.0<sup>6</sup></b>
<b>Production of heat, TWh</b>							
Fossil-based heat	0.4	—	2.0	16.3	2.1	—	20.9
– of which, gas	—	—	—	4.5	2.1	—	6.7
– of which, lignite	—	—	—	5.5	—	—	5.5
– of which, hard coal	—	—	1.1	5.8	—	—	6.9
– of which, oil and other	0.4	—	1.0	0.5	—	—	1.9
Biomass, waste	2.9	—	—	1.0	—	—	4.0
<b>Total heat Production</b>	<b>3.4</b>	<b>—</b>	<b>2.0</b>	<b>17.3</b>	<b>2.2</b>	<b>—</b>	<b>24.8</b>
<b>Sales of electricity, TWh</b>	<b>73.9</b>	<b>8.4</b>	<b>5.7</b>	<b>89.8</b>	<b>19.4</b>	<b>—</b>	<b>197.2</b>
<b>Sales of Heat, TWh</b>	<b>3.6</b>	<b>—</b>	<b>1.9</b>	<b>15.1</b>	<b>2.0</b>	<b>—</b>	<b>22.6</b>
<b>Sales of gas, TWh</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>8.9</b>	<b>41.8</b>	<b>—</b>	<b>50.7</b>
<b>Number of retail customers</b>	<b>929,000</b>	<b>388,000</b>	<b>—</b>	<b>2,935,000</b>	<b>1,973,000</b>	<b>—</b>	<b>6,225,000</b>
Electricity volume, TWh retail customers	8.3	2.6	—	8.4	7.4	—	26.8
Electricity volume, TWh resellers	4.2	0.6	1.8	27.0	—	—	33.5
Electricity volume, TWh businesses	27.6	4.6	—	21.7	8.9	—	62.8
<b>Number of network customers</b>	<b>899,000</b>	<b>—</b>	<b>—</b>	<b>2,304,000</b>	<b>—</b>	<b>—</b>	<b>3,203,000</b>
<b>Number of gas customers</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>348,000</b>	<b>1,714,000</b>	<b>—</b>	<b>2,062,000</b>
<b>Electricity network</b>							
Transited volume, TWh <sup>4</sup>	69.2	—	—	13.3	—	—	82.5
Distribution network, km	178,000	—	—	81,000	—	—	259,000
<b>Number of employees (full-time equivalents)</b>							
Per country	8,859	65	323	14,998	4,014	177	28,436
Group total <sup>5</sup>							28,567
<b>CO<sub>2</sub> emissions per country, Mtonnes</b>	<b>0.3</b>	<b>—</b>	<b>1.7</b>	<b>74.7</b>	<b>7.6</b>	<b>—</b>	<b>84.3</b>
<b>CO<sub>2</sub> emission allowances received, Mtonnes</b>	<b>0.5</b>	<b>—</b>	<b>—</b>	<b>2.4</b>	<b>0.3</b>	<b>—</b>	<b>3.2</b>

1) Rounding differences of 0.1 occur for certain items.

2) In Germany mainly pumped-storage power plants.

3) Including peat.

4) Excl. generation transiting.

5) There are 131 employees in other countries.

6) The value has been adjusted compared with the value presented in Vattenfall's 2015 year-end report.



FACTS ABOUT VATTENFALL'S MARKETS<sup>1</sup>

	2014						Total
	Sweden	Finland	Denmark	Germany	Netherlands	UK	
<b>Installed capacity electricity, MW, 31 December 2014</b>							
Hydro power <sup>2</sup>	8,701	128	—	2,880	24	—	11,733
Nuclear power	6,974	—	—	—	—	—	6,974
Fossil-based power	702	—	1,059	12,971	4,750	—	19,482
– of which, gas	—	—	—	1,707	4,100	—	5,807
– of which, lignite	—	—	—	7,767	—	—	7,767
– of which, hard coal	—	—	1,059	2,866	650	—	4,575
– of which, oil <sup>3</sup>	702	—	—	631	—	—	1,333
Wind power <sup>4</sup>	272	—	360	12	224	612	1,480
Biomass, waste	189	—	59	112	2	—	362
<b>Total electricity</b>	<b>16,838</b>	<b>128</b>	<b>1,478</b>	<b>15,975</b>	<b>5,000</b>	<b>612</b>	<b>40,030</b>
<b>Installed capacity heat, MW, 31 December 2014</b>	<b>2,255</b>	<b>—</b>	<b>1,063</b>	<b>9,911</b>	<b>2,622</b>	<b>—</b>	<b>15,852</b>
<b>Generated electricity, TWh</b>							
Hydro power	30.9	0.3	—	3.0	0.1	—	34.3
Nuclear power	49.9	—	—	—	—	—	49.9
Fossil-based power	—	—	3.7	65.9	13.1	—	82.7
– of which, gas	—	—	—	2.4	10.5	—	12.9
– of which, lignite	—	—	—	55.4	—	—	55.4
– of which, hard coal	—	—	3.7	7.6	2.6	—	13.9
– of which, oil	—	—	—	0.5	—	—	0.5
Wind power	0.7	—	1.0	—	0.5	1.8	4.1
Biomass, waste	0.2	—	0.3	1.5	—	—	2.0
<b>Total electricity</b>	<b>81.7</b>	<b>0.3</b>	<b>5.0</b>	<b>70.4</b>	<b>13.7</b>	<b>1.8</b>	<b>172.9</b>
<b>Production of heat, TWh</b>							
Fossil-based heat	0.4	—	2.8	15.6	3.3	—	22.1
– of which, gas	—	—	—	4.5	3.3	—	7.8
– of which, lignite	—	—	—	5.2	—	—	5.2
– of which, hard coal	—	—	2.7	5.5	—	—	8.3
– of which, oil and other	0.4	—	—	0.5	—	—	0.9
Biomass, waste	3.0	—	0.4	1.1	—	—	4.5
<b>Total heat production</b>	<b>3.4</b>	<b>—</b>	<b>3.1</b>	<b>16.7</b>	<b>3.3</b>	<b>—</b>	<b>26.6</b>
<b>Sales of electricity, TWh</b>	<b>76.3</b>	<b>8.9</b>	<b>8.1</b>	<b>85.6</b>	<b>20.1</b>	<b>—</b>	<b>199</b>
<b>Sales of heat, TWh</b>	<b>3.7</b>	<b>—</b>	<b>3.1</b>	<b>14.2</b>	<b>3.2</b>	<b>—</b>	<b>24.1</b>
<b>Sales of gas, TWh</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>5.0</b>	<b>40.6</b>	<b>—</b>	<b>45.5</b>
<b>Number of retail customers</b>	<b>934,000</b>	<b>373,000</b>	<b>—</b>	<b>2,854,000</b>	<b>1,993,000</b>	<b>—</b>	<b>6,154,000</b>
Electricity volume, TWh retail customers	7.9	2.6	—	7.7	8	—	26.2
Electricity volume, TWh resellers	4.1	1.1	1.7	22.3	—	—	29.2
Electricity volume, TWh businesses	28.1	4.9	—	21.4	9	—	63.4
<b>Number of network customers</b>	<b>938,000</b>	<b>—</b>	<b>—</b>	<b>2,293,000</b>	<b>—</b>	<b>—</b>	<b>3,231,000</b>
<b>Number of gas customers</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>224,100</b>	<b>1,717,700</b>	<b>—</b>	<b>1,941,800</b>
<b>Electricity network</b>							
Transited volume, TWh <sup>5</sup>	69.6	—	—	13.3	—	—	82.9
Distribution network, km	175,000	—	—	81,000	—	—	256,000
<b>Number of employees (full-time equivalents)</b>							
Per country	8,870	55	462	16,158	4,369	169	30,083
Group total <sup>6</sup>							30,181
CO <sub>2</sub> emissions per country, Mtonnes	0.3	—	3.3	72.2	6.9	—	82.7
CO <sub>2</sub> emission allowances received, Mtonnes CO <sub>2</sub> /year	0.5	—	—	2.7	0.5	—	3.7

1) Rounding differences of 0.1 occur for certain items.

2) Capacities in Sweden and Finland updated to reflect long term capacity. Short-term limitations not reflected. In Germany mainly pumped-storage power plants.

3) Oil-fired capacity in Sweden updated due to decommissioning.

4) Consolidation corrected on one Dutch wind farm, reducing the number by 10 MW.

5) Excl. generation transiting.

6) There were 98 employees in other countries.

PRO RATA<sup>1</sup>

## Pro rata – Generation data corresponding to Vattenfall's ownership in the respective facilities

	2015						
	Sweden	Finland	Denmark	Germany	Netherlands	UK	Total
<b>Installed capacity electricity, MW</b>							
Hydro power <sup>2</sup>	8,483	124	—	2,880	24	—	11,511
Nuclear power	4,924	—	—	282 <sup>7</sup>	—	—	5,206
Fossil-based power	699	—	—	12,891	4,070	—	17,660
– of which, gas	—	—	—	1,675	3,420	—	5,095
– of which, lignite	—	—	—	7,767	—	—	7,767
– of which, hard coal	—	—	—	2,817	650	—	3,467
– of which, oil and other	699	—	—	632	—	—	1,331
Wind power	278	—	340	175	322	698	1,813
Biomass, waste	189	—	—	77	2	—	268
<b>Total electricity</b>	<b>14,573</b>	<b>124</b>	<b>340</b>	<b>16,304</b>	<b>4,418</b>	<b>698</b>	<b>36,458</b>
<b>Installed capacity heat, MW</b>	<b>2,097</b>	<b>—</b>	<b>—</b>	<b>9,431</b>	<b>1,326</b>	<b>—</b>	<b>12,853</b>

	2014						
	Sweden	Finland	Denmark	Germany	Netherlands	UK	Total
<b>Installed capacity electricity, MW</b>							
Hydro power <sup>2</sup>	8,483	128	—	2,880	24	—	11,515
Nuclear power	4,767	—	—	282	—	—	5,049
Fossil-based power	702	—	1,059	12,890	4,750	—	19,401
– of which, gas	—	—	—	1,675	4,100	—	5,775
– of which, lignite	—	—	—	7,767	—	—	7,767
– of which, hard coal	—	—	1,059	2,817	650	—	4,526
– of which, oil and other <sup>8</sup>	702	—	—	631	—	—	1,333
Wind power	271	—	358	28	328	612	1,597
Biomass, waste	189	—	59	92	2	—	342
<b>Total electricity</b>	<b>14,412</b>	<b>128</b>	<b>1,476</b>	<b>16,171</b>	<b>5,104</b>	<b>612</b>	<b>37,903</b>
<b>Installed capacity heat, MW</b>	<b>2,116</b>	<b>—</b>	<b>1,063</b>	<b>9,466</b>	<b>2,622</b>	<b>—</b>	<b>15,267</b>

	2015						
	Sweden	Finland	Denmark	Germany	Netherlands	UK	Total
<b>Generated electricity, TWh</b>							
Hydro power	34.9	0.4	—	2.9	0.1	—	38.3
Nuclear power	28.8	—	—	2.1	—	—	30.9
Fossil-based power	—	—	1.9	68.9	13.0	—	83.7
– of which, gas	—	—	—	2.5	8.5	—	11.0
– of which, lignite	—	—	—	55.3	—	—	55.3
– of which, hard coal	—	—	1.3	10.6	4.5	—	16.5
– of which, oil and other	—	—	0.5	0.4	—	—	1.0
Wind power	0.8	—	1.1	0.6	0.8	2.2	5.6
Biomass, waste	0.3	—	—	1.2	—	—	1.5
<b>Total electricity</b>	<b>64.8</b>	<b>0.4</b>	<b>3.0</b>	<b>75.7</b>	<b>13.9</b>	<b>2.2</b>	<b>160.0</b>

	2014						
	Sweden	Finland	Denmark	Germany	Netherlands	UK	Total
<b>Generated electricity, TWh</b>							
Hydro power	29.8	0.3	—	3.0	0.1	—	33.2
Nuclear power	34.0	—	—	2.2	—	—	36.2
Fossil-based power	—	—	3.7	65.7	13.2	—	82.6
– of which, gas	—	—	—	2.4	10.6	—	13.0
– of which, lignite	—	—	—	55.5	—	—	55.5
– of which, hard coal	—	—	3.7	7.3	2.6	—	13.6
– of which, oil and other	—	—	—	0.5	—	—	0.5
Wind power	0.7	—	1.0	0.1	0.7	1.8	4.3
Biomass, waste	0.3	—	0.3	1.3	—	—	1.9
<b>Total electricity</b>	<b>64.8</b>	<b>0.3</b>	<b>5.0</b>	<b>72.3</b>	<b>14.0</b>	<b>1.8</b>	<b>158.3</b>

	2015						
	Sweden	Finland	Denmark	Germany	Netherlands	UK	Total
<b>CO<sub>2</sub> emissions, pro rata</b>							
CO <sub>2</sub> emissions per country, Mtonnes	0.3	—	1.7	74.2	7.6	—	83.8

	2014						
	Sweden	Finland	Denmark	Germany	Netherlands	UK	Total
CO <sub>2</sub> emissions per country, Mtonnes	0.3	—	3.3	71.7	6.9	—	82.3

7) The technical capacity of Krümmel nuclear power plant is 673 MW pro rata. However, Krümmel has no authorisation for power operation and is therefore reported as zero capacity.

8) Oil-fired capacity in Sweden updated due to decommissioning.

For other explanations, see page 162.

# GRI ~ CONTENT AND REFERENCES

Vattenfall's Annual and Sustainability Report is a report in which information about the company's work with sustainability issues and outcomes is described together with the company's financial performance.

Vattenfall has been reporting in accordance with the Global Reporting Initiative (GRI) Guidelines since 2003. For 2015 Vattenfall adheres to the GRI G4 Guidelines and reports according to the Core option. This means that Vattenfall has identified the aspects that are significant for the company and reports at least one indicator per aspect. Omitted information is reported in the GRI Index on pages 167–170. Certain aspects, such as Water, and Effluents and Waste, are most relevant at the local level and not as significant at the Group level. No Group targets are currently defined for these areas; instead they are steered and managed locally. Reporting on local communities focuses on the business areas and topics where Vattenfall's operations have the most significant impact on local communities.

Vattenfall's overall ambition for its sustainability reporting is that it will be transparent and relevant. The GRI Index indicates where information about Vattenfall's reporting in accordance with GRI can be found in the Annual and Sustainability Report.

## Reporting profile and scope

The Annual and Sustainability Report describes the areas in which the Group has considerable environmental, social and financial impacts. Vattenfall's activities, performance and results are reported as an integrated part of Vattenfall's strategy. The reporting covers all of the Vattenfall Group's operations during the 2015 financial year, unless indicated otherwise, and the figures provided pertain to the 2015 financial year. Vattenfall reports sustainability data annually, and the preceding year's report was published on 25 March 2015.

## Boundaries

Vattenfall has limited its reporting to the areas in which the company has full control over data collection and information quality, which entails all operations of the company unless indicated otherwise. While GRI G4 entails a greater focus on impacts along the entire value chain, the company cannot yet measure data outside of its own operations in a reliable manner; instead, activities connected to both suppliers and customers are described. Important events and information about changes in the organisation during the year are

provided on pages 9–10 and 63. Changes in Vattenfall's supply chain are described on pages 34–35. Changes in the capital structure and other changes in capital are described in Note 49 to the consolidated accounts, Specifications of equity. The limitations and changes in the reporting are also described in the respective sections or in comments to diagrams and tables.

Vattenfall uses different definitions of 'supplier' and 'new supplier' for its four purchasing streams reported on page 35. Vattenfall is currently conducting a project to streamline the definitions of suppliers and new suppliers to improve consistency in its reporting and to increase transparency. For 2015, a supplier of goods and services is defined as an entity providing goods and services to Vattenfall and whose invoices have been paid. A new supplier is entity which has no agreements/contracts with Vattenfall yet but will be included in or is currently in Vattenfall's tender processes and/or pre-qualification processes. For commodity fuels, a coal supplier is an entity which delivered coal to Vattenfall's power plants for its own usage. A new coal supplier is an entity that Vattenfall did not previously have a contractual relationship with. A supplier of biomass, nuclear fuel or heat fuels is an entity Vattenfall has a contract with while a new supplier is an entity that does not have a contractual relationship with Vattenfall.

## Data collection and accounting policies

Environmental data is collected via the Group's environmental reporting process. Group-wide definitions are used for all environmental parameters to enhance quality. Accounting policies for the financial reporting are described in Note 3 to the consolidated accounts, Accounting policies. The principles of consolidation for environmental data are the same as for financial data. Consolidation includes subsidiaries in which Vattenfall AB owns shares corresponding to more than 50% of the voting rights or in some other way has control. Absolute CO<sub>2</sub> emissions are also reported in accordance with Vattenfall's share of ownership in the respective plants. The reported CO<sub>2</sub> emissions are calculated based on fuel consumption. It should be noted that the calculation methods differ from country to country. The calculation methods are set

by national legislation, with ties to the EU Emissions Trading System. All other emissions have either been measured or calculated based on periodically recurring measurements. Figures for energy and water consumption are based, like all environmental data, on the production units' own reporting. Depending on the size and type of operation, the measurement equipment differs from unit to unit. However, all reporting is to be in accordance with the Group-wide definitions and principles. The employee data that is presented is based on verified figures from Vattenfall's annual accounts.

#### External assurance

The sustainability information in the Annual and Sustainability Report for 2015 has been reviewed by Vattenfall's auditor, Ernst & Young. In addition, it has been approved by Vattenfall's Board of Directors.

#### Sustainability initiatives and principles that the company has aligned itself with or supports, and important memberships in interest association and organisations

Vattenfall has aligned its sustainability work with the UN Sustainable Development Goals. The Vattenfall Group has also adhered to the UN's voluntary Global Compact since 2002 through the Swedish partnership for Global Responsibility. Vattenfall has been a direct participant since 2008. Consequently, Vattenfall has undertaken to support the UN's Global

Compact and to adhere to the OECD Guidelines for Multinational Enterprises. The implementation and the monitoring of compliance to the Vattenfall Code of Conduct for Suppliers, based on the UN Global Compact, is in progress. Vattenfall also adheres to the UN Guiding Principles on Business and Human Rights. Vattenfall uses the Annual and Sustainability Report as its Communication on Progress for the UN Global Compact (UNGC), and a cross reference between the UN Global Compact and the GRI can be found in the GRI Index. The cross reference is primarily done to the DMA of each relevant aspect. If this connection is not possible or if the information is available on another page, the principle is directly linked to an indicator. In addition to these undertakings, Vattenfall has opted to align itself with a number of voluntary sustainability initiatives and organisations at the Group level.

Examples of these include:

- CSR Europe
- UNEP Sustainable Innovation Forum
- The World Economic Forum

Vattenfall mainly operates in western European countries (Sweden and the rest of the Nordic region, Germany, the Netherlands and the UK). These countries have all ratified the International Labour Organization's (ILO) eight fundamental conventions. A country that has ratified an ILO convention must regularly report on its performance to the ILO.

## UN Global Compact – 10 Principles

### HUMAN RIGHTS

- Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights; and
- Principle 2: make sure that they are not complicit in human rights abuses.

### LABOUR

- Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;
- Principle 4: the elimination of all forms of forced and compulsory labour;
- Principle 5: the effective abolition of child labour; and
- Principle 6: the elimination of discrimination in respect of employment and occupation.

### ENVIRONMENT

- Principle 7: Businesses should support a precautionary approach to environmental challenges;
- Principle 8: undertake initiatives to promote greater environmental responsibility; and
- Principle 9: encourage the development and diffusion of environmentally friendly technologies.

### ANTI-CORRUPTION

- Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery.

## GENERAL STANDARD DISCLOSURE

DMA and indicator	Page or reference	Omissions	UNGC Principle(s)
<b>Strategy and analysis</b>			
G4-1	Statement from the most senior decision-maker of the organization	6–8	
<b>Organisational profile</b>			
G4-3	The name of the organisation	Cover, Note 1	
G4-4	Brands, products and services	38–39	8–9: Environment
G4-5	Location of the organisation's headquarters	4	
G4-6	The number of countries and their names where the organisation has significant operations	4, 162	
G4-7	Nature of ownership and legal form	4	
G4-8	Markets served (including geographic breakdown, sectors served, and types of customers)	4, 162	
G4-9	Scale of the organisation, including number of employees, operations, net sales, total capitalisation (debt/equity)	4-5	
G4-10	Number of employees by employment contract, gender, region, and permanent employees/seasonal employees	54	6: Labour
G4-11	Percentage of total employees covered by collective bargaining agreements	98% at Group level	3: Labour
G4-12	The organisation's supply chain	34–35	
G4-13	Changes in the organisation's size, structure, ownership, supply chain	9, Note 5, Note 26	
G4-14	Handling of the precautionary principle	70–78	1–10
G4-15	External sustainability principles and initiatives to which the organisation subscribes or which it endorses	166	
G4-16	Memberships of associations and industry advocacy organisations	166	
EU1	Installed capacity	162–164	
EU2	Energy production, net	162–164	
EU3	Number of customers	162–163	
EU4	Length of transmission and distribution lines, based on voltage	162–163	
EU5	Allocation of CO <sub>2</sub> emission allowances	162–163	

## GENERAL STANDARD DISCLOSURE

DMA and indicator	Page or reference	Omissions	UNGC Principle(s)
<b>Identified Material Aspects and Boundaries</b>			
G4-17	Entities included in the reporting, or not	165, note 3, note 26	
G4-18	Process for defining the report content	28, <a href="http://corporate.vattenfall.com/sustainability/">http://corporate.vattenfall.com/sustainability/</a>	
G4-19	Identified material Aspects	29, 165, <a href="http://corporate.vattenfall.com/sustainability/">http://corporate.vattenfall.com/sustainability/</a>	
G4-20	Aspect Boundaries for each material aspect within the organisation	29, 165, <a href="http://corporate.vattenfall.com/sustainability/">http://corporate.vattenfall.com/sustainability/</a>	
G4-21	Aspect Boundaries for each material aspect outside the organisation	29, 165, <a href="http://corporate.vattenfall.com/sustainability/">http://corporate.vattenfall.com/sustainability/</a>	
G4-22	The effect of any restatements of information provided in previous reports	165–166	
G4-23	Significant changes from previous reporting periods in the Scope and Aspect Boundaries	29, 165–166	
<b>Stakeholder Engagement</b>			
G4-24	List of stakeholder groups	29	
G4-25	Basis for identification and selection of stakeholders	29, <a href="http://corporate.vattenfall.com/sustainability/">http://corporate.vattenfall.com/sustainability/</a>	
G4-26	Approach to stakeholder engagement	29–30, <a href="http://corporate.vattenfall.com/sustainability/">http://corporate.vattenfall.com/sustainability/</a>	
G4-27	Key topics, concerns and the organisation's response, including through its reporting	29–30, <a href="http://corporate.vattenfall.com/sustainability/">http://corporate.vattenfall.com/sustainability/</a>	
<b>Report Profile</b>			
G4-28	Reporting period	165	
G4-29	Date of most recent previous report	165	
G4-30	Reporting cycle	165	
G4-31	Contact information	173	
G4-32	GRI content and references	165–166	
G4-33	Policy for external assurance	61, 165	
<b>Governance</b>			
G4-34	Governance structure, including committees and board responsibility for decision-making on economic, environmental and social impacts	56–61	
<b>Ethics and Integrity</b>			
G4-56	Values, principles and codes of conduct	34–35, 55, 62–63	1–10



## SPECIFIC STANDARD DISCLOSURE

DMA and indicator		Page or reference	Omissions	UNGC Principle(s)
<b>Economic</b>				
<b>Sector specific aspect: Research and development</b>				
G4-DMA	Research and development activities	31	No reporting on allocation of R&D resources for strategic and competitive reasons.	
<b>Sector specific aspect: Plant decommissioning</b>				
G4-DMA	Plant decommissioning	43		
<b>Environmental</b>				
<b>Aspect: Energy</b>				
G4-DMA	Energy	21, 27		8–9: Environment
Specific DMA	Energy regulations	15–16		
G4-EN3	Energy consumption within the organisation	157	Total consumption of electricity, heat, cooling and steam, and sold steam and cooling are not reported as data is not available at the Group level.	
<b>Aspect: Water</b>				
G4-DMA	Water	21, 156		8–9: Environment
Sector specific DMA	Access to water		No reporting due to insignificance, as Vattenfall has no power plants in areas with poor access to water.	
G4-EN8	Water sources	156	Rain and waste water from other organisations are not reported, as this is not significant compared with other water flows.	
<b>Aspect: Emissions</b>				
G4-DMA	Emissions	21, 40, 48–49		7–9: Environment
Specific DMA	Emissions regulations	15–16	Focus on regulations and policies for CO <sub>2</sub> , as this is most significant for Vattenfall.	
G4-EN15	Direct greenhouse gas emissions	27, 41, 49, 157, 162–164	Only CO <sub>2</sub> emissions (Scope 1) are reported	8: Environment
G4-EN18	Greenhouse gas emissions intensity	157	CO <sub>2</sub> emissions (Scope 1) are reported	
G4-EN21	Emissions to air	41, 49, 157	Emissions of POP, VOC and HAP are not reported because they are not measured regularly, since they are not significant for Vattenfall's plants. There are no specific legal requirements associated with these emissions.	
<b>Aspect: Effluents and waste</b>				
G4-DMA	Effluents and waste	155		8–9: Environment
Sector specific DMA	Nuclear waste	43		
G4-EN22	Water discharge	156		
G4-EN23	Waste	155		
<b>Aspect: Supplier environment assessment</b>				
G4-DMA	Audit of suppliers	34–35		7: Environment
Specific DMA	Audit system for new suppliers"	34–35		
G4-EN32	Audit of new suppliers	35, <a href="http://corporate.vattenfall.com/sustainability/">http://corporate.vattenfall.com/sustainability/</a>		

## SPECIFIC STANDARD DISCLOSURE

DMA and indicator		Page or reference	Omissions	UNGC Principle(s)
<b>Social</b>				
<b>Working conditions</b>				
<b>Aspect: Occupational Health &amp; Safety</b>				
G4-DMA	Occupational Health & Safety	23, 53–54		1-2: Human Rights 4-6: Labour
Specific DMA	Programme for handling illnesses	53–54		
G4-LA6	Injuries, absences and work-related fatalities	54		
<b>Aspect: Training and education</b>				
G4-DMA	Training and education	23, 53–54		6: Labour
G4-LA11	Performance and career development	54	No reporting per employee category, since such a categorical breakdown does not exist in Vattenfall.	
<b>Aspect: Diversity and equal opportunity</b>				
G4-DMA	Diversity and equal opportunity	53		6: Labour
G4-LA12	Composition of governance bodies	54	No reporting per minority group, as this is prohibited by rules in certain markets.	
<b>Aspect: Supplier labour assessment</b>				
G4-DMA	Audit of suppliers	34–35		3-6: Labour
Specific DMA	Audit system for new suppliers	34–35		
G4-LA14	Audit of new suppliers	35, <a href="http://corporate.vattenfall.com/sustainability/">http://corporate.vattenfall.com/sustainability/</a>		
<b>Human rights</b>				
<b>Aspect: Supplier human rights assessment</b>				
G4-DMA	Audit of suppliers	34–35		1–2: Human Rights
Specific DMA	Audit system for new suppliers	34–35		
G4-HR10	Audit of new suppliers	35, <a href="http://corporate.vattenfall.com/sustainability/">http://corporate.vattenfall.com/sustainability/</a>		
<b>Society</b>				
<b>Aspect: Local communities</b>				
G4-DMA	Local communities	2, 41, 44–46, 49		1–2: Human Rights 8–9: Environment
Specific DMA	Collective rights and engagement	45		1–2: Human Rights
G4-SO2	Actual and potential negative impacts on local communities	2, 41, 44–46, 50–51		
Sector specific DMA	Stakeholders' participation in decision-making processes	45		1–2: Human Rights
G4-EU22	People physically or economically displaced, and compensation	44–45		
<b>Aspect: Anti-corruption</b>				
G4-DMA	Anti-corruption	55, 62		10: Anti-corruption
Specific DMA	Risk assessment process	73		10: Anti-corruption
G4-SO4	Communication and training on anti-corruption policies and procedures	55		
<b>Aspect: Anti-competitive behaviour</b>				
G4-DMA	Anti-competitive behaviour	55, 62		10: Anti-corruption
G4-SO7	Legal actions against anti-competitive operations	55, Note 51		
<b>Product responsibility</b>				
<b>Aspect: Product and service labelling</b>				
G4-DMA	Product and service labelling	38–39		
Specific DMA	Customer satisfaction	39		
G4-PR5	Customer satisfaction	39		

## GLOSSARY

**APX** Amsterdam Power Exchange. An energy exchange for the Netherlands, the UK and Belgium.

**Aspect** GRI term that describes sustainability areas based on the categories Environment, Economy and Society.

**Availability** Actual electricity generation in relation to the maximum possible generation.

**Biomass** Renewable fuel, such as wood, bark and pine oil.

**BSCI (Business Social Compliance Initiative)** An initiative launched by the Foreign Trade Association to improve working conditions at factories and farms around the world.

**CCS** Carbon Capture and Storage. The capture and underground storage of the carbon dioxide that is produced from combustion of fossil fuels.

**CHP (Combined Heat and Power)**. A plant that produces both heat and electricity. In such a plant a large share of the primary energy is used for electricity and heat production, with little wasted heat.

**CO<sub>2</sub>** Carbon dioxide.

**Derivative instrument** A financial instrument that is commonly used to manage risk. Its value and change in value is related to the underlying (derived) instrument. Examples of derivative instruments are options, forward contracts and swaps.

**DMA** "Disclosures on Management Approach". Describes why certain sustainability aspects are identified as material for the company and how steering and monitoring of these are conducted.

**Ecological compensation** Measures taken to create new environmental values to compensate for environmental values that have been lost through exploitation.

**EEX** The European Energy Exchange. The German electricity exchange.

**Efficiency** An efficiency rating indicates the relationship between energy output and the energy input in a system.

**EPD** Environmental Product Declaration – a third-party environmental declaration in accordance with ISO 14025 ([www.environdec.com](http://www.environdec.com)).

**EPEX** The spotmarket of EEX. Since 2009 part of EPEX Spot SE, Paris.

**EU 27** The 27 member-states of the EU after its widening on 1 January 2007.

**EU ETS** The EU Emissions Trading System. The EU's trading system for CO<sub>2</sub> emission allowances. The system sets a cap for emissions from businesses within the system and facilitates optimisation through trading in emission allowances.

**Forward market** A market in which buyers and sellers agree on a set price for a future delivery of the underlying instrument, such as an electricity contract. (See also Derivative instrument).

**Fossil fuels** Fuels based on hydrocarbons from ancient sedimentary layers – mainly coal, oil and natural gas.

**Global Compact** The United Nations' (UN's) ten principles for companies surrounding human rights, labour issues, the environment and anti-corruption.

**Green certificates** Certificates for renewable energy that may be bought and sold. Called electricity certificates in Sweden.

**GRI** Global Reporting Initiative – a global standard for sustainability reporting.

**Gross capacity** The electric output delivered directly from a plant's generator. Measured in MW (Megawatt).

**IED (Industrial Emissions Directive)** An EU directive that sets higher demands on lowering emission levels and spills to soil and water.

**IFRS** International Financial Reporting Standards – Vattenfall has been reporting in accordance with IFRS since 2005.

**Indicator** GRI term that provides qualitative or quantitative information about the performance and development of the aspects that are identified as material for the company.

**Installed capacity** The performance according to design data for power plants. Commonly measured in MW (Megawatt).

**ISO 14001** An international standard in the ISO 14000 series for establishing environmental management systems.

**ISO 9001** An international standard in the ISO 9000 series for establishing quality management systems.

**Life cycle analysis (LCA)** Methodology to establish a products' total environmental impact during its life cycle, from raw material extraction, through manufacturing processes and usage, to waste management, including all transportation and energy consumption.

**LTIF (Lost Time Injury Frequency)** Work-related accidents. Expressed in terms of the number of lost time work injuries (per 1 million hours worked), resulting in absence longer than one day, and accidents resulting in fatality.

**Margin call** Marginal security that the holding of a derivative position must pledge to cover the credit risk of its counterparty (OTC or exchange).

**Merit order** The order in which production capacity at plants is used.

**Net capacity** The electric output that a plant delivers to distribution networks, i.e., gross capacity less the energy used by the plant itself. Measured in MW (Megawatt)

**Nominal capacity** The capacity that a generator is designed for. This concept is used mainly for electricity generation power plants, e.g., hydro power plants and wind turbines. Measured in MW (Megawatt).

**Nord Pool** The Nordic electricity exchange. Started in Sweden and Norway in 1996.

**NO<sub>x</sub>** Collective term for nitrogen oxide, nitrogen dioxide and similar nitrogen compounds.

**OHSAS 18000** A series of standards that can be used as a basis for an occupational health and safety management system.

**OTC** Over the Counter. Trading outside of exchanges (directly or via brokers) in physical and financial contracts.

**Oxyfuel technology** A technology used to separate carbon dioxide in a CCS plant.

**Primary energy** Primary energy is the form of energy that is accessible directly from the original sources. Vattenfall uses the interpretation applied by Eurostat and IEA. This means that all fuels are assigned a primary energy content corresponding to its heating value. Uranium is assigned a primary energy content corresponding to the heat released in the power plant. Solar, wind and hydro power are assigned a primary energy content corresponding to the extracted electricity (or heat).

**Renewable energy sources** Non-finite energy sources such as hydro power, biomass, wind, the sun, ocean waves and geothermal energy.

**Reservoir levels** Refers to the volume of water stored in a reservoir which on a specific occasion can be used for hydro power generation. Reservoir levels vary during the year depending on precipitation and production.

**SAIDI (System Average Interruption Duration Index)** An index of average power interruption times within electricity distribution. Measured in terms of interruption duration per customer and year.

**SAIFI (System Average Interruption Frequency Index)** An index of average power interruption frequency within electricity distribution. Measured in terms of the number of power interruptions per customer and year.

**SKB Svensk Kärnbränslehantering AB** (The Swedish Nuclear Fuel Management Company) – responsible for handling radioactive waste in Sweden.

**SO<sub>2</sub>** Sulphur dioxide.

**Spot market** A market in which trading is conducted for immediate delivery.

**Swap** A financial instrument that is a combination of a spot and forward transaction – a type of financial swap agreement.

**Swedish GAAP** Swedish Generally Accepted Accounting Principles. Applied by Vattenfall through 2004.

**Thermal power** Electricity generated via a heating process, such as a gas turbine or a steam process in a coal or nuclear power plant (compare combined heat and power).

**Volatility** A measure of how the price of a product varies during a given period of time.

**Voluntary nature protection** Measures taken on a voluntary basis aimed at protecting species and natural environments.

**Waste hierarchy** The EU's prioritisation framework for how waste is to be avoided and managed.

For definitions of **financial key ratios**, see pages 159–160.

#### Power units

- Power is energy per unit of time
- Power output is measured in watts (W)
- 1 kW (kilowatt) = 1,000 W
- 1 MW (megawatt) = 1,000 kW
- 1 GW (gigawatt) = 1,000,000 kW

#### Energy units

- Energy is power multiplied by time
- 1 kWh (kilowatt hour) = 1 kW in one hour
- 1 MWh (megawatt hour) = 1,000 kWh
- 1 GWh (gigawatt hour) = 1,000,000 kWh
- 1 TWh (terawatt hour) = 1,000,000,000 kWh

#### Weight units

- ktonnes (kilotonnes) = 1,000 tonnes
- Mton (megatonnes) = 1,000,000 tonnes

#### Voltage

- 1 kV (kilovolt) = 1,000 volts (V)





**Vattenfall AB (publ)**  
SE-169 92 Stockholm

Visitors' address:  
Evenemangsgatan 13, Solna

Corporate identity number 556036-2138

**T** +46-8-739 50 000

[www.vattenfall.com](http://www.vattenfall.com)  
[www.vattenfall.se](http://www.vattenfall.se)