

# ADMINISTRATION REPORT

The Board of Directors and President of Vattenfall AB (publ), Swedish corporate identity number 556036-2138, herewith submit the annual accounts and consolidated accounts for 2006, encompassing pages 60–110.

## Group operations and structure

Vattenfall works in all parts of electricity value chain – generation, transmission, distribution and sales. Vattenfall also conducts energy trading and lignite mining, and produces, distributes and sells heat. Vattenfall's vision is to be a leading European energy company. The majority of operations are in Sweden, Denmark, Finland, Germany and Poland, and the primary segments consist of the Nordic countries, Germany and Poland. Vattenfall has approximately 6 million electricity customers, including those through partly-owned companies. The Group has slightly more than 32,000 employees. Vattenfall AB is 100%-owned by the Swedish state. The Board of Directors has its registered office in Stockholm.

## The year in brief

- Net sales rose 12.9% to SEK 145,815 million (129,158).
- Operating profit decreased by 1.9%, to SEK 27,049 million (27,571). Excluding items affecting comparability<sup>1</sup>, operating profit rose 8.5%, to SEK 26,676 million (24,585).
- Profit for the year decreased by 3.2%, to SEK 19,858 million (20,518). Excluding items affecting comparability, profit for the year rose 12.1%, to SEK 19,472 million (17,364).
- Return on equity was 19.1% (23.2%). Excluding items affecting comparability, return on equity was 18.7% (19.4%).
- Return on net assets was 16.6% (17.8%). Excluding items affecting comparability, the return on net assets was 16.3% (15.8%).
- Cash flow before financing activities was SEK 19,560 million (728).
- Investments amounted to SEK 17,220 million (24,497), including SEK 5,191 million in growth investments (14,415) and SEK 12,029 million in maintenance investments (10,082).
- Net debt decreased by SEK 14,936 million to SEK 49,407 million, from SEK 64,343 million on 31 December 2005.

### 1) Items affecting comparability:

Items affecting comparability in 2006 amounted to SEK 373 million and consisted of capital gains/losses on shares and other non-current assets.

Items affecting comparability in 2005 consisted primarily of net compensation/impairment charges of SEK 3,057 million for the closure of Barsebäck 2.

## Electricity and heat generation 2006 compared with 2005

Electricity generation decreased by 2.7% to 164.5 TWh (169.1). Hydro power generation decreased by 13.8%, to 34.3 TWh (39.8), due to low water supply during a large part of the year. Nuclear power generation decreased by 6.3%, to 55.2 TWh (58.9), mainly due to a disruption at the Forsmark nuclear power plant, and to the closure of the Barsebäck 2 nuclear power plant on 31 May 2005.

Fossil-based power increased by 5.3% to 73.6 TWh (69.9), and wind power generation rose 500.0% to 0.6 TWh (0.1). Electricity generation based on biofuels and waste rose 75.0% to 0.7 TWh (0.4). Heat production rose 3.2% to 35.2 TWh (34.1). The increases in fossil-based power, wind power and heat production are mainly attributable to combined heat and power assets and wind power assets acquired in Denmark, which were consolidated by Vattenfall starting on 1 July 2006. For more information about Vattenfall's electricity generation and heat production, see pages 114–115.

## Important events in 2006:

### First quarter

#### Higher power generation taxes in Sweden

On 1 January 2006, property taxes were raised for hydro power assets, as was the tax on installed nuclear power capacity. For Vattenfall this resulted in higher annual costs of approximately SEK 1.7 billion.

#### Vattenfall brand introduced in Germany and Poland

On 1 January 2006, Vattenfall's German subsidiaries Bewag and HEW, and the Polish subsidiaries EW and GZE, changed their names to Vattenfall. This is an important step in the build-up of "One Vattenfall" and the introduction of a uniform, cohesive brand for all of Vattenfall, giving the organisation better opportunities to collaborate internally and externally and act as a strong player in the European market.

#### Squeeze out of minority shareholdings in Germany

In March 2006 an extraordinary general meeting of Vattenfall Europe AG resolved to redeem the minority shareholders' shares, corresponding to a total of 3.19% of the total shares outstanding, through a squeeze out. Vattenfall's offer was worth EUR 42.77 per share, for a total of approximately EUR 276 million (approx. SEK 2.5 billion).

## Strong focus on climate issues

Early in the year, Vattenfall presented its "Curbing Climate Change" report. The report discusses a proposed model for reducing global levels of carbon dioxide emissions, combined with favourable conditions for investments in cost-effective and climate-friendly technology. Vattenfall's commitment to the climate issue has attracted a great deal of attention and very positive feedback.

### Second quarter

#### Groundbreaking for construction of the world's first CO<sub>2</sub> emission-free lignite power plant

In May, construction began on Vattenfall's pilot CO<sub>2</sub> emission-free lignite power plant, the first of its kind in the world. The plant is being built adjacent to Vattenfall's Schwarze Pumpe

coal power station in eastern Germany, in an investment worth approximately SEK 600 million. The plant is scheduled to be commissioned in 2008.

### Open Annual General Meeting and revised financial targets for Vattenfall

On 26 April, Vattenfall held its second open Annual General Meeting. Following the formal part, visitors in the audience were invited to ask questions directly to Vattenfall's chairman and CEO. The entire meeting was aired live via webcast. The meeting set certain partially new financial targets for Vattenfall:

- The 15% required rate of return was kept, however, in the future it will be calculated on the basis of average equity instead of opening equity.
- The previous interest coverage ratio target based on operating profit was changed to a ratio based on cash flow after maintenance investments within a target interval of 3.5–4.5.
- The dividend policy was changed from a dividend payout corresponding to one-third of profit for the year to a target interval of 40%–60%.
- The goal of maintaining minimum credit ratings of A3 and A– from Moody's and Standard & Poor's, respectively, was reaffirmed.

### Strong increase in future investments

In April Vattenfall announced an investment programme worth SEK 104 billion for the five-year period 2006–2010, including SEK 54 billion in Germany, SEK 42 billion in the Nordic countries and SEK 8 billion in Poland. Two major power plants are planned in Germany. In Hamburg (Moorburg) a 1,640 MWh coal-fired combined heat and power plant is planned with commissioning in 2012 and a total investment sum of slightly more than SEK 16 billion. In eastern Germany, the 675 MWh Boxberg 2 lignite plant is planned, with commissioning in 2011 and a total investment sum of slightly more than SEK 7 billion.

In May, Vattenfall presented a plan for greater investment in renewable electricity generation in Sweden. The goal is to increase annual generation of renewal energy by 10 TWh by 2016. This initiative is valued at approximately SEK 40 billion.

### Success for Vattenfall's new "Trygghetsavtal" product

In June Vattenfall launched its new "Trygghetsavtal" product – a three-year fixed-price contract that shelters customers against rising electricity prices for three years at the same time that it gives them the right to sign a new three-year contract at a lower price if the price of electricity falls. Both existing and new customers have discovered that "Trygghetsavtalet" is by far the best offer in the market.

### Third quarter

#### Completion of deal between Vattenfall and DONG in Denmark

Under an agreement between Vattenfall and DONG, on 1 July approximately 24% of the combined generation capacity of the Danish companies Elsam A/S and Energi E2 A/S was transferred to Vattenfall in exchange for Vattenfall's 35.3% shareholding in Elsam A/S and participation in I/S Avedøre 2. The assets taken over consist primarily of combined heat and power plants and wind power plants. The takeover increases Vattenfall's annual generation volume by approximately 6 TWh of electricity and 6 TWh of heat.

### Substantial loss of nuclear power generation caused by disruptions at Forsmark

On 25 July an emergency shutdown (a "scram") took place at the Forsmark reactor as a result of a short circuit in a switchyard outside the power plant. A complicated series of events ensued and indicated a number of shortcomings in the facility's electricity supply and safety system. This led to considerable media attention, and to allay the public's fears, in September the Swedish Nuclear Power Inspectorate (SKI) issued the following statement: "The incident did not cause any damage to the reactor. The control room personnel acted according to instructions. Cooling of the reactor was present at all times and any risk of radioactive discharge was never present."

Before allowing a restart, SKI demanded that a number of safety measures be performed at Forsmark 1 and also at Forsmark 2, which was closed for an annual overhaul when the incident occurred. On 28 September, SKI gave its clearance for a restart of both reactors. At the same time, SKI issued a statement saying that "Forsmark Kraftgrupp AB has shown defects in safety management and control of operations." The restart of the Forsmark 2 reactor was delayed further by a leakage in the reactor containment and shortcomings in control documentation. Following repairs and a review of the documentation of the repair work, SKI granted clearance for a restart on 24 October. As a principal owner of Forsmark, Vattenfall has taken the events at Forsmark with the utmost gravity. In view of these events, a thorough review of safety routines has been carried out at all of Vattenfall's nuclear power plants and safety work is being strengthened. In February 2007, Forsmark requested, via the Ministry of the Environment, an inspection by the International Atomic Energy Agency, the UN's nuclear power body. The disruption caused a 2.3 TWh loss in generation. The total loss of income amounted to approximately SEK 1.4 billion, of which Vattenfall's share (66%) was approximately SEK 0.9 billion.

### Sharp tariff reductions announced by German network regulator

In June Vattenfall was handed a decision by Bundesnetzagentur, the German network regulator, demanding sharp reductions in tariffs for the transmission operations. After Vattenfall appealed the decision, a German court overruled the regulator's demands for retroactive tariff reductions. In September and October, Bundesnetzagentur announced its decision regarding tariff reductions for the distribution networks in Berlin and Hamburg, and for the subsidiary Wemag's network in northern Germany.

As a result of the new rules for electricity network operations and Bundesnetzagentur's decision to lower Vattenfall's distribution tariffs, following a thorough impairment test, Vattenfall's distribution network assets were written down by SEK 1,019 million (EUR 110 million). The decision on the transmission tariffs applied through the end of 2006, while the decision on the distribution tariffs applies through the end of 2007.

### Ratings outlook changed from positive to stable

Both Moody's and Standard & Poor's changed their outlook from positive to stable. Vattenfall's current long-term credit ratings are A2 from Moody's and A– from Standard & Poor's. For short-term borrowing, the corresponding ratings are P–1 and A–2, respectively.

## Fourth quarter

**Authorities give green light for investment in Boxberg plant in Germany**

In December, regulatory approval was granted to build the Boxberg 2 lignite power station in eastern Germany. The 675 MW plant is expected to be commissioned in 2011. The plant's high efficiency will reduce fuel needs as well as CO<sub>2</sub> emissions to substantially lower levels than existing lignite power plants. The investment is worth slightly more than SEK 7 billion.

**German network regulator approves increase in transmission tariffs for 2007**

Germany's network regulator, Bundesnetzagentur, approved a 26% increase in network tariffs for 2007, compared with the tariff in 2006.

**Significant structural changes**

The single largest structural deal was the completion of the agreement with the Danish company DONG A/S, under which Vattenfall acquired assets – mainly combined heat and power plants and wind power plants – in exchange for primarily its 35.3% shareholding in the Danish company Elsam A/S and a participating interest in I/S Avedøre 2. The value of the acquired net assets was SEK 13,307 million, while the value of the sold assets was SEK 12,621 million. The net investment thus amounted to SEK 686 million. Further details on this deal and on other divestments made in 2006 are provided in a table in Note 3 to the consolidated accounts on page 83.

**Personnel**

(Number of employees, full-time equivalents)	2006	2005	Change,%
Denmark	319	6	–
Finland	554	546	+ 1.5
Poland	2,851	3,031	–5.9
Sweden	8,558	8,350	+ 2.5
Germany	19,936	20,199	–1.3
Other countries	90	99	–9.1
<b>Total</b>	<b>32,308</b>	<b>32,231</b>	<b>0.2</b>

The increase in Denmark is mainly attributable to the acquisition of the combined heat and power assets as per 1 July 2006. On a full-year basis this corresponds to approximately 630 employees. The increase in Sweden is mainly attributable to the extensive investment programme surrounding the renewal of Vattenfall's generation facilities. The decreases in Poland and Germany are mainly the result of rationalisation measures.

**Research and development (R&D)**

Vattenfall conducts R&D activities within the framework of its five core strategies: Profitable Growth, Benchmark for the Industry, Number One of the Environment, Number One for the Customer and Employer of Choice. In 2006 Vattenfall spent SEK 761 million on R&D (650). Of this, SEK 349 million (325) pertained to Vattenfall's share of the work on developing a safe and approved method for permanent storage of spent nuclear fuel (which is conducted by the subsidiary SKB), SEK 64 million (56) pertained to R&D in renewable energy, and SEK 126 million (61) pertained to work on reducing emissions of climate-impacting CO<sub>2</sub> from Vattenfall's operations.

Expressed as a share of Group sales, R&D spending amounted to approximately 0.5% (0.5%), which is on a par with Vattenfall's industry peers. This may seem low compared with other industries, but it should be kept in mind that Vattenfall is a technology-

**Specification of investments 2006 and 2005**

SEK million	Nordic countries		Germany		Poland		Other		Eliminations		Total	
	2006	2005	2006	2005	2006	2005	2006	2005	2006	2005	2006	2005
<b>Electricity generation</b>												
Hydro power	1,092	819	104	97	–	–	–	–	–	–	1,196	915
Nuclear power	2,765	2,140	164	167	–	–	–	–	–	–	2,929	2,307
Fossil-based power	338	–	2,235	1,803	–	–	–	–	–	–	2,573	1,803
Renewable energy	703	18	555	254	–	–	–	–	–	–	1,258	272
Other	191	223	188	186	–	–	–	–	–	–	379	409
<b>Total electricity generation</b>	<b>5,089</b>	<b>3,200</b>	<b>3,246</b>	<b>2,507</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>8,335</b>	<b>5,707</b>
<b>Heat</b>												
Heat	486	657	895	546	334	487	–	–	–	–	1,715	1,690
Renewable	22	–	45	203	–	–	–	–	–	–	67	203
Other	8	17	115	116	–	–	–	–	–	–	123	134
<b>Total heat</b>	<b>516</b>	<b>674</b>	<b>1,055</b>	<b>866</b>	<b>334</b>	<b>487</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>1,905</b>	<b>2,027</b>
<b>Electricity networks</b>												
Electricity networks	3,352	2,502	1,364	1,297	303	267	–	–	–	–	5,019	4,067
Other	288	240	426	79	–	–	–	–	–	–	714	318
<b>Total electricity networks</b>	<b>3,640</b>	<b>2,742</b>	<b>1,790</b>	<b>1,376</b>	<b>303</b>	<b>267</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>5,733</b>	<b>4,385</b>
Acquisitions (shares)	1,725	10,484	93	56	11	3	1	1,184	–1,687	–19	143	11,709
Acquired network assets in Denmark	540	–	–	–	146	–	–	–	–	–	686	–
Other (excl. Acquisitions)	234	331	121	268	51	55	13	16	–1	–	418	670
<b>Total</b>	<b>11,744</b>	<b>17,432</b>	<b>6,305</b>	<b>5,072</b>	<b>845</b>	<b>812</b>	<b>14</b>	<b>1,200</b>	<b>–1,688</b>	<b>–19</b>	<b>17,220</b>	<b>24,497</b>
<b>Per cent of total investments</b>	<b>68.2</b>	<b>71.2</b>	<b>36.6</b>	<b>20.7</b>	<b>4.9</b>	<b>3.3</b>	<b>0.1</b>	<b>4.9</b>	<b>–9.8</b>	<b>–0.1</b>	<b>100.0</b>	<b>100.0</b>

**Comments:** Of total investments in 2006, maintenance investments in property, plant and equipment accounted for 70% (SEK 12,029 million), broken down as follows: Nordic countries SEK 6,853 million, Germany SEK 4,574 million, Poland SEK 600 million and Other SEK 2 million. Growth investments accounted for 30% (SEK 5,191 million), of which

SEK 686 million consisted of the net investment resulting from the deal between Vattenfall and DONG. Other growth investments were broken down as follows: Nordic countries SEK 2,518 million, Germany SEK 1,731 million, Poland SEK 245 million and Other SEK 11 million.

using, rather than product-developing, company.

Vattenfall's growth strategy calls for major investments in new plants, among other things. Increasing the value and lowering the risks associated with this are important objectives of the Group's R&D activities. For example, several development projects are being started in the area of wind power, where new technologies are tested prior to being employed on a large scale. This is being done in preparation for future investments in major, sea-based wind power farms.

In its efforts to be a Benchmark for the Industry, Vattenfall strives to run its plants and operations more efficiently – in terms of fuel consumption, operating and maintenance costs, and capital utilisation. The goal of many R&D projects is to increase efficiency by lowering costs. For example, methods and knowledge are being developed to enable the use of cheaper categories of biofuels in heat production, without this leading to operating problems, such as corrosion.

The climate issue is the greatest environmental challenge of our time and is the focal point of Vattenfall's work on being Number One for the Environment. Vattenfall's climate strategy comprises four aspects: increased generation from plants with low CO<sub>2</sub> emissions, including renewable energy and nuclear power; greater efficiency in generation facilities and networks; the "CO<sub>2</sub> emission-free power plant" project; and active support of a global trading system for CO<sub>2</sub> emission allowances. R&D is a cornerstone in the first three aspects.

Vattenfall is investing in new and existing plants that are based on renewable energy sources, ranging from hydro power to biofuels and wind power. However, the Group is also conducting R&D in other forms of renewable energy that could have growing impact on tomorrow's energy system, such as wave power.

A great deal of the energy generated by power plants is used in internal processes or disappears during the course of transmission and distribution. Reducing such losses would eliminate emissions to a corresponding degree. As mentioned above, many projects are being conducted to increase the efficiency of facilities and systems.

The "CO<sub>2</sub> emission-free power plant" is a vital part of Vattenfall's work on being Number One for the Environment. This programme, which spans many years, is based on working with equipment manufacturers and other partners to scale up and demonstrate cost-effective technologies for capturing the carbon dioxide that is formed in the combustion of lignite, for example. An important step in this direction is the construction of a pilot plant employing oxyfuel technology adjacent to Vattenfall's Schwarze Pump power station in Germany.

Key customer demands on Vattenfall's operations include competitive prices, availability, simplicity, comprehensible and predictable invoicing, and customer service contacts. R&D also plays a part in Vattenfall's strategy to be Number One for the Customer. Efficiency and low generation costs are essential prerequisites for keeping wholesale electricity prices down. R&D in efficiency is thus also important in this respect.

To increase availability in electricity distribution, Vattenfall continues to replace overhead transmission lines with underground cables. Parallel with this, R&D work is being conducted on ways to quickly and efficiently locate problems with cables and thereby minimise outages when problems occur. This is considerably more difficult than in overhead lines, since cables are located underground.

Vattenfall is investing billions of kronor in new electricity me-

ters. R&D projects are being conducted to find new applications and functions for meters that customers can benefit from.

As part of its competence succession activities, Vattenfall is engaged in extensive R&D in collaboration with universities and colleges in various key areas in all countries in which Vattenfall has operations. By supporting high-calibre university research in such areas as nuclear power, hydro power and electricity, Vattenfall is helping to ensure high quality instruction in these areas. This is also helping Vattenfall in its efforts to be perceived as an Employer of Choice – the Company's fifth core strategy.

### Environmental impact of the Group

The Group conducts operations in Sweden, Finland, Denmark, Germany and Poland that require permits in accordance with national legislation in the respective countries. Such operations include electricity generation, heat production and, in Germany, lignite mining in four open-cast mines.

The Group conducts considerable network operations for the distribution and transmission of electricity under concessions held in Sweden, Finland, Germany and Poland. The Group also conducts its own rail activities in Germany.

The greatest environmental impact of the Vattenfall Group's operations results from the generation of electricity and heat and, in Germany, from coal mining in open-cast mines.

The main environmental impact of Vattenfall's nuclear power plants is the creation of radioactive waste, while for combustion plants the main environmental impact is from emissions of climate-affecting carbon dioxide and acidic compounds. The main environmental impact of hydro power, wind power and the network operations, as well as of open-cast lignite mines, is land use. Other environmental impact includes the production of waste and solid residuals, and the use of water for cooling at nuclear power plants.

The aggregate environmental impact of operations in 2006 was essentially unchanged compared with a year earlier. Trends in environmental impact between two years are often overshadowed by fluctuating energy needs caused primarily by the weather and socioeconomic conditions. Viewed over longer periods of time, the trends become clearer. Specific emissions of carbon dioxide from plants owned currently by Vattenfall are 30% lower today than in 1990 (per kWh) for both electricity and heat. Emissions of other pollutants have decreased even more. Vattenfall's ambition is to continue reducing its emissions.

Electricity generation is conducted in numerous large and small hydro power plants, nuclear power facilities, wind power plants and in combustion facilities. Some of the hydro power plants are pumped storage plants, of which two are of considerable size. The Group also has an ownership stake in the Stade nuclear power plant in Germany, which was decommissioned in 2003, and has partial responsibility for the decommissioned Barsebäck nuclear power plant in Sweden.

Heat production is conducted in numerous large and medium-sized combustion plants primarily in Germany, Denmark and Poland, but also in Sweden and Finland. In Germany a new lignite-fired combined heat and power (CHP) plant is planned for electricity generation at an existing power plant. This new lignite-fired CHP plant will entail the resumption of lignite mining in an open-cast mine where operations have currently been shut down. The necessary permits to resume mining have been obtained. In Berlin and Hamburg, new coal-fired CHP plants are planned as a replacement for existing and previously decom-

missioned CHP plants. In 2006, construction was begun on a pilot plant employing the separation of fossil fuel-based CO<sub>2</sub> in Germany. This pilot facility will be commissioned in 2008. The separated carbon dioxide will be permanently stored in bedrock. Power plants as well as CHP plants require permits under German legislation. A permit for the pilot plant employing the new CO<sub>2</sub> separation technology was received in 2006.

Construction of 48 offshore wind power turbines in the Oresund Strait was begun in 2006. According to plans, this wind power farm will come on stream in 2007. Once this wind power farm has been commissioned in autumn 2007, Vattenfall will have more than doubled the number of wind power turbines it operates and increased its electricity generation from wind power seven-fold, from 54 GWh to 370 GWh. The permit required under the Swedish Environmental Code was obtained in 2005. This permit has been appealed by a third party. An additional offshore wind power farm comprising 128 wind power turbines is planned at the Kriegers Flak site in the southern Baltic Sea.

Poland's entry to the EU in 2004 has entailed the adaptation of the country's national laws to the EU's legislation. As a result, Vattenfall's plants in Warsaw that require permits will become subject to reconsideration in the years ahead in accordance with transitional rules for existing plants. Preparations are currently in progress to ensure compliance with the new regulations in time.

Sweden's parliament has set 15 TWh as the target level to be reached by 2015 for the expansion of wind power and other renewable energy. Vattenfall's owner, the Swedish state, has declared that Vattenfall shall work toward realising this goal. An appendix to the Company's articles of association stipulates that the Company should be able to achieve 5 TWh.

The Parent Company conducts operations that require permits in accordance with the Swedish Environmental Code. These consist primarily of combustion plants for electricity generation and heat production, and wind power plants.

The Parent Company has 46 plants for electricity and heat generation that require permits and registration, of which 37 require permits. The Parent Company also has 49 wind power turbines that are located separately as well as in groups. The wind power plants have been erected in such manner that 10 of the facilities require permits and the others require registration. The Parent Company also has hydro power plants with associated water regulation facilities that are subject to review outside of the jurisdiction of the Swedish Environmental Code. The Parent Company conducts fish farming at four facilities requiring permits.

The terms for nine of the Parent Company's small heat plants are subject to review in 2007, while a final decision is pending for one. The Company's earnings and financial position are not dependent on these reviews.

The Group's Swedish subsidiaries also conduct operations requiring permits in accordance with the Swedish Environmental Code. Forsmarks Kraftgrupp AB and Ringhals AB generate electricity in nuclear power plants. SKB operates an installation for the final storage of low- and medium-level nuclear waste in Forsmark and an installation of intermediate storage of spent fuel in Oskarshamn. In several subsidiaries, electricity and heat are generated primarily in combustion plants. The Group conducts network operations in Swedish subsidiaries for the distribution of electricity, in accordance with concessions.

In accordance with a decision by the Swedish government, Barsebäck was closed on 31 May 2005. The work on winding

down the operations at the Barsebäck plant began in 2005 and will successively continue as soon as the radiological conditions allow and the necessary permits have been obtained. E.ON Sverige AB is responsible for the winding down and dismantling in accordance with a power agreement from 1998 between Vattenfall, the former Sydkraft and the Swedish state.

Projects are under way at nuclear power plants and hydro power plants with the aim of increasing the power output of existing facilities. Environmental review work associated with an increase in power output at the subsidiaries Ringhals AB and Forsmarks Kraftgrupp AB continued in 2006.

Along with the network operations, generation of electricity in hydro and nuclear power plants constitutes a central part of the Parent Company's and the Swedish operations. Generation of electricity in hydro power plants is conducted primarily by the Parent Company. Other significant operations are conducted primarily by subsidiaries.

## Personnel matters

### Competence development

Vattenfall works according to a yearly, strategic competence succession process to ensure that the Company will continue to have access to the business-critical competence that is needed for its operations. This annual process, which is used throughout the organisation, couples business plans with future competency needs and makes use of gap analyses and action plans. Competence development is conducted primarily in the day-to-day activities and through participation in various projects. In addition to this, competence development is conducted at both the Group and local levels. At the Group level, Vattenfall has a Group-wide leadership development programme. The aim of this programme is to spread knowledge about the Group's strategies and values, and to promote a shared understanding of Vattenfall's company philosophy and leadership criteria. The goal is to support managers in their role as leaders and in their personal development, and to stimulate network-building in an international environment. These programmes are offered to managers at various levels. In addition, managers are offered a Group-wide function-focused programme.

### Employee turnover

Employee turnover, defined as the number of employees who have left their positions within the Group in relation to the total number of employees, was 2.4% in 2006.

### Collective agreements

The right to co-determination is regulated primarily at the country level and is based on the respective countries' labour market laws. At the Group level, as well, Vattenfall works with employee representatives and local unions, mainly via the European Works Council (EWC-Vattenfall). In 2006 a new, joint collective agreement was signed in Germany.

## Corporate Social Responsibility report

Vattenfall publishes an annual Corporate Social Responsibility (CSR) report in accordance with the Global Reporting Initiative (GRI) guidelines. The aim of this report is to provide a balanced picture of Vattenfall's efforts with regard to the environment, society and the economy. For more information, see page 33 of this Annual Report.

### Parent Company

The accounts of Vattenfall AB, the Parent Company, are prepared in accordance with Swedish GAAP, i.e., in accordance with the Swedish Annual Accounts Act and Swedish Financial Accounting Standards Council recommendation RR 32:05 on reporting for legal entities. Vattenfall has adopted the exemption rule regarding IAS 39 according to RR 32:06.

Financial instruments are reported at cost.

Sales amounted to SEK 33,049 million (26,843). The increase is mainly attributable to higher prices.

Profit before appropriations and tax was SEK 16,106 million (6,168). The increase is mainly attributable to a dividend from Ringhals AB pertaining to compensation for Barsebäck 2, in the amount of approximately SEK 4.1 billion, and to exchange rate effects associated with hedges of investments in foreign companies, totalling approximately SEK 2.6 billion.

Investments for the year amounted to SEK 2,364 million (13,052). Cash and cash equivalents amounted to SEK 181 million (2,360). Funds in the Group account managed by Vattenfall Treasury AB amounted to SEK 30,965 million (30,892).

### The work of the Board of Directors in 2006

The Board of Directors conducts its work for the most part in accordance with its established Rules of Procedure. These prescribe that seven regular meetings are to be held each year. In addition to the regular meetings, board meetings can be summoned if the need arises. According to the Rules of Procedure, at least one meeting each year is to be held at a place other than the head office. In 2006 a meeting was held in Copenhagen. In connection with this, the Board visited local facilities and was provided with more in-depth information about the operations that Vattenfall acquired in Denmark.

The Board had 11 meetings in 2006, including the statutory meeting. The Board evaluates its work once a year. In 2006 the Board established a compensation committee to handle executive compensation matters. The Compensation Committee had one meeting in 2006. The Board also has an audit committee, which held four meetings in 2006. Vattenfall AB's auditors were present at all meetings, at which they presented their review of, among other things, the year-end closing and interim reports. For further information on the work of the Board and the Corporate Governance Report, see pages 48–55.

### Outlook for 2007

Apart from the availability of its generation facilities, the single most important factor affecting Vattenfall's financial performance is the wholesale price of electricity. Wholesale prices fluctuated sharply in 2006. Prices in the Nordic countries are affected to a great extent by the hydrological balance, which at year-end 2006 showed a surplus of 10.7 TWh, compared with a deficit of 3.7 TWh at year-end 2005. Since Vattenfall hedges future electricity generation to a considerable extent, it can smoothen out the effect of fluctuating wholesale electricity prices on profits. In Sweden, the network regulator's application of the so-called network performance assessment model can lead to considerable income loss in electricity network operations and, consequently, insufficient return on investments in electricity networks. However, the parameters for cost of capital in the network performance assessment model were raised at year-end 2006 which, all else equal, should lead to considerably lower demands for tariff reductions. In Germany, as previously announced, the network regulator an-

nounced sharp reductions in distribution tariffs for 2007, while its decision on transmission tariffs allowed for a slight increase over 2006 levels. The trading system for carbon dioxide emissions, whose first trading period will expire in 2007, is not expected to have any negative impact on Vattenfall in 2007.

### Proposed distribution of profits

See page 110.

### Events after the balance sheet date

In the Company's opinion, no significant events have taken place after the balance sheet date up until the date of this report's publication that require disclosure under this heading.

## RISKS AND RISK MANAGEMENT

Vattenfall's operations are exposed to a number of risks. To address these risks, Vattenfall has established an organisation and risk management process that is based on the following components:

- Standardised risk definitions
- Identifying the origination of risks
- Reliable methods for measuring risks
- Effective risk management for manageable risks
- Reporting in accordance with established routines
- Management in accordance with established strategies and fixed rules

### Risk mandate and risk management structure

The Board of Directors has overarching responsibility for internal control and risk management at Vattenfall. The Board has, in turn, given Vattenfall's management a risk mandate. Management allocates this mandate to Vattenfall's business units in accordance with a delegation structure. Each unit manages its own risks and has some room to manoeuvre within its respective mandate. The results achieved by the units are followed up on a continuous basis and reported to the executive management by an independent risk control function, Group Risk Control, which is also responsible for monitoring the Group's overall risk mandate. Group Risk Control is also responsible for identifying risks in the organisation and for developing appropriate models and measurement methods for managing these risks.

### Risk Committee

The Group's risk management and reporting is co-ordinated by a risk committee headed by the CFO. The committee's task is to scrutinise policies and mandates and to approve risk instructions.

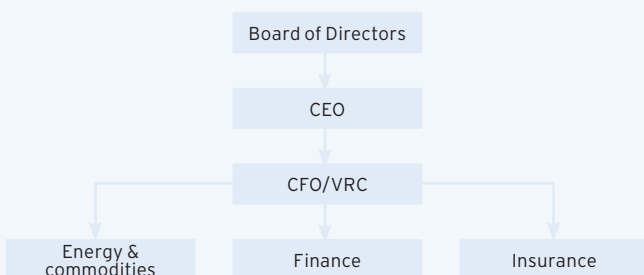
### Risks at Vattenfall

Political risks, operational risks, environmental risks and legal risks are general in nature and exist in all units throughout the Group. Insurable risks are managed centrally by Vattenfall Insurance. The more specific risks in each part of the value chain are discussed on page 67. Financial risks are reported in Note 34 to the consolidated accounts.

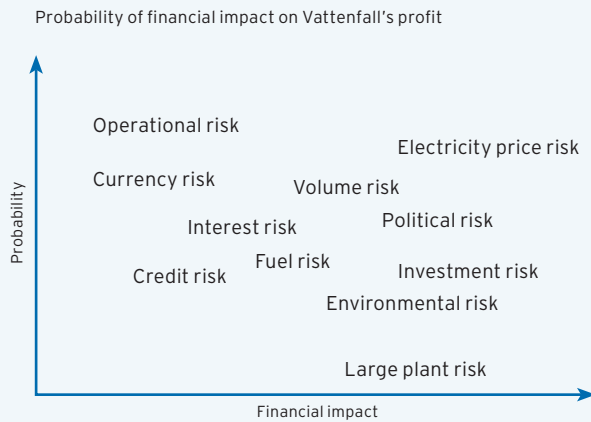
### Electricity price risk

Electricity price risk is the risk that has the greatest bearing on Vattenfall's earnings.

### Risk organisation



### Risks in Vattenfall's operations



One risk that has a high probability of affecting Vattenfall's earnings is electricity price risk. The net position that the Company has is partially hedged through financial contracts. For the unhedged portion, a price movement of 10% for Germany and the Nordic countries can change earnings for the coming three years by approximately SEK 10 billion. If the hedged amount were to be increased, the certainty of the outcome (earnings) would also increase. During the year, forward contracts for 2007, 2008 and 2009 moved by 39%, 25% and 24%, respectively, in the Nordic countries, while the corresponding contracts in Germany moved by 21%, 22% and 22%, respectively. The impact on Vattenfall of fuel price risks is mainly indirect, through the impact on electricity prices. The direct effect of an increase in coal prices that affects generation is marginal, since most of Vattenfall's coal-fired plants use lignite from own mines. With respect to currency risks, these pertain primarily to translation exposure in equity in other currencies than SEK. See the descriptions under the Currency risks section and Note 34 to the consolidated accounts, pages 93–95, where interest rate risks are also described. Plant risks are described in on page 68.

Electricity prices are determined by supply and demand. A key factor for demand is temperature; for example, in the Nordic countries, cold weather leads to greater demand due to increased heating needs, while in continental Europe, hot weather leads to higher demand due to increased use of air conditioning. Other important factors for demand include the industrial economic situation and fuel prices. Supply varies and is dictated by available capacity. For example, in the Nordic countries, available capacity varies mainly with precipitation and the associated supply of hydro power. In continental Europe, available capacity varies along with the irregular feed-in of wind power.

Every hour the price is set to the market equilibrium, that is, the point where supply meets demand. For most of the year and in most of Vattenfall's markets, electricity generation and thereby the production cost is dependent on some type of fossil fuel. As a result, the cost is also a reflection of the price of CO<sub>2</sub> emission allowances and the market prices of oil, natural gas and coal. Vattenfall's electricity price risk is therefore also a risk based on weather (temperature and precipitation), and prices of oil, natural gas, coal and CO<sub>2</sub> emission allowances. Continuous analysis of these factors is crucial for the successful management of electricity price risk.

To determine the value of electricity price risk in electricity generation, Vattenfall simulates an anticipated outcome in the electricity spot market. Forecasts of anticipated generation levels are drawn up, which then serve as the basis for how much is to be hedged. Vattenfall hedges its generation and sales to the physical and financial electricity forward contracts available in the market. Such hedging is done while taking into account liquid-

## Risk management along the value chain

Following is a compilation of risks along Vattenfall's value chain. Political risks, operational risks, environmental risks and legal risks are general in nature and are encountered by all units within the Group. In the value chain, these risks are listed under the area in which they are most likely to arise.

Generation	Trading	Sales	Networks
<p><b>Electricity price risk</b> Earnings risk stemming from changes in electricity wholesale prices.</p> <p><b>Plant risk</b> Vattenfall's generation plants can be damaged by incidents and breakdowns, which as a rule also give rise to costs caused by shut-downs.</p> <p><b>Fuel price risk</b> Risk of loss due to changes in the market price of the fuels that Vattenfall uses in its generation/production plants. Measurement and management of this risk are conducted by the respective facilities.</p> <p><b>Environmental risks and liabilities</b> Environmental risks refer to the probability of accidents and defects in operations and their impact on the environment. Environmental liabilities refer to identified environmental problems in which demands for corrective measures can be expected.</p>	<p><b>Price area risk</b> Price area risk arises when electricity prices differ between geographic areas due to shortages in transmission between areas. This risk is managed centrally by Vattenfall Trading Services.</p> <p><b>Electricity price risk</b> Risk of loss due to changes in the wholesale price of the electricity that Vattenfall conducts physical and financial trading in.</p> <p><b>Credit risk</b> Risk of loss stemming from a counterparty failing to fulfil its obligations in a transaction.</p> <p><b>Currency risk</b> Currency risk pertains to the risk of a negative impact on the consolidated income statement and balance sheet caused by changes in exchange rates.</p>	<p><b>Electricity price risk</b> Earnings risk stemming from changes in the wholesale price of electricity sold to customers.</p> <p><b>Credit risk</b> Credit risk arises, for example, in transactions with customers and is defined as the risk of a counterparty failing to fulfil its obligations. Measurement and management of credit risk is conducted within the respective sales units.</p> <p><b>Volume risk</b> This is defined as deviations in delivered volumes compared with expected volumes for customers, caused by weather and economic factors. Vattenfall uses simulation models to measure volume risk.</p>	<p><b>Network loss risk</b> Network loss risk stems from short- and long-term variations in generation and loads in the network. The risk entails not being able to predict the size of the variations. Measurement and management of network loss risks are conducted within the respective business units.</p> <p><b>Plant risk</b> The risk of damage to Vattenfall's transmission and distribution networks.</p> <p><b>Political risk</b> The risk of financial loss stemming from political decisions.</p> <p><b>Environmental risks and liabilities</b> Environmental risks refer to the probability of accidents and defects in operations and their impact on the environment. Environmental liabilities refer to identified environmental problems in which demands for corrective measures can be expected.</p> <p><b>Credit risk</b> Credit risk arises, for example, in transactions with customers and is defined as the risk of a counterparty failing to fulfil its obligations. Measurement and management of credit risk is conducted within the respective sales units.</p>

ity in the market at different periods in time. The Group hedges in accordance with established mandates and generally for three years ahead in time. In certain cases, the business arrangement is such that it is the customer that accepts the electricity price risk in the sales activities.

The business units conduct their hedging in Vattenfall's various markets through Vattenfall Trading Services, which hedges its own positions in external markets, such as the Nordic electricity exchange, Nord Pool, and the European Electricity Exchange (EEX) in Germany.

The mandates allocated to the various business units regulate how large of an electricity price risk is acceptable. Exposure is followed up in relation to the mandate on a daily basis. To measure electricity price risk, Vattenfall uses methods such as Value at Risk (VaR) and Profit at Risk (PaR) along with various stress tests.

### Price area risk

Price area risk arises when the price of electricity differs between various geographic areas. Vattenfall's price area risk is controlled centrally and is managed by Vattenfall Trading Services. Price

area risk is managed through hedging in the respective areas in which delivery is to take place. In the Nordic countries, the Nord Pool electricity exchange provides financial instruments – area swaps – which can be used to manage price area risk. Vattenfall Trading Services is also a market maker on Nord Pool. Through this undertaking, liquidity is ensured in these financial instruments, and Vattenfall also helps spread risks for other players.

### Volume risk

Volume risk consists of deviations in anticipated and actually delivered volumes to a customer. Vattenfall manages volume risk by improving and developing forecasts of electricity consumption. Another method involves taking volume risk into account when drawing up the terms of contracts with customers or by including this risk into the customer's price.

### Fuel price risk

Measurement and management of fuel price risk is conducted within the individual generation units. Fuel prices are affected by macroeconomic factors, among other things. Vattenfall man-

ages fuel price risk by forecasting and analysing price trends. For example, financial and physical instruments for coal and oil are used to smoothen the result over time. However, most of Vattenfall's coal-fired plans use lignite from Vattenfall's own mines. For coal-fired electricity generation, hedges on electricity and coal prices are co-ordinated to safeguard margins. Uranium is used as fuel in Vattenfall's nuclear power plants. This price risk is limited, however, since the uranium fuel constitutes a relatively small portion of the generation cost.

#### Credit risk

Vattenfall uses external rating information, where available, to manage and limit its credit risk. In other cases, internal models are used to establish the creditworthiness of its counterparties. Individual limits are established for each counterparty, and each counterparty is assessed on a regular basis. Exposures are followed up in relation to the credit limits on a daily basis. If necessary, additional credit assurances are demanded in the form of a guarantee from the parent company or a bank, for example. In cases where framework agreements are entered into, the calculation of debts and receivables for an individual counterparty are permitted. In cases where Vattenfall has more than one framework agreement with the same counterparty, a master netting agreement is desirable in order to calculate the net debt and receivable amount, even when trading in different raw materials, such as electricity, coal and gas. When contracts are made in marketplaces, such as Nord Pool or EEX, which offer central counterparty clearing, the risk is in the market instead.

#### Investment risk

Vattenfall is a highly capital-intensive company and, consequently, has an extensive investment programme worth SEK 134 billion from 2007 to 2011 (see page 17).

Prior to every investment decision, a risk analysis is performed. By simulating outcomes of price, cost, delays and cost of capital, the risks associated with each individual investment are assessed.

For example, the electricity generation operations in the Nordic countries have a broad investment portfolio, encompassing the repair and maintenance of nuclear and hydro power facilities and dams, which puts greater demands on systematic risk management.

Major planned investments in Germany include the Boxberg lignite-fired power plant (675 MW) and the Moorburg coal-fired combined heat and power plant (2x820 MW), for a combined investment sum of approximately SEK 23 billion. Fuel price forecasts, electricity price forecasts, prices of CO<sub>2</sub> emission allowances, district heating prices, investment costs, operating and maintenance costs, and other costs must be factored into the risk analysis. Sensitivity analyses have been conducted of a vast number of price and cost scenarios. The investment risk associated with these two investments is mitigated by the fact that Vattenfall has its own lignite mine in Boxberg and a heat base in Moorburg.

During the year, a new Group function was established – Capacity Management – which focuses on growth areas such as electricity and heat generation to ensure that capital is invested in a way that will maximise long-term economic value. In addition to a strategic investment roadmap, a list of priority investment projects is continuously updated, above all to guide the Executive Group Management in its investment decision-making

process. Projects are ranked according to a number of main criteria: support of Vattenfall's overarching strategic orientation, consequences for the existing generation portfolio, risk profile and profitability.

#### Plant risk

Vattenfall's largest insurable risks are associated with the operation of power generation and heat production plants. Vattenfall's plants can be damaged as a result of incidents and breakdowns which, as a rule, give rise to substantial costs due to shutdowns.

Such plant risks are minimised through loss-prevention measures, good maintenance, training and effective administrative routines.

#### Plant insurance

The Group protects itself against major economic loss to the greatest extent possible through insurance. Vattenfall's nuclear power plants in Sweden have insurance cover for property damage through EMANI, a European mutual insurance association. The Nordic nuclear insurance pool participates in this insurance programme in Sweden, and also issues nuclear liability insurance. The German nuclear liability risk is insured by the German Mutual Atomic Energy Reinsurance Pool, and by the mutual undertaking between German power plant operators.

Vattenfall Insurance, a captive company, provides the non-nuclear facilities of the Swedish and German units and companies with insurance cover against property damage and consequential losses. The Group's companies in Finland and Poland are insured through their respective local insurance markets.

Electricity transmission and distribution networks are uninsured, with the exception of transformer stations and switchgear. The reasoning is that these risks are not generally covered by most insurance providers. Vattenfall continually works to reduce electricity network vulnerability.

In Sweden, liability for damage to third parties as a result of dam accidents is strict and unlimited. Vattenfall and other hydro power producers have therefore taken out dam liability insurance together.

Vattenfall Reinsurance S.A. in Luxembourg reinsures part of the insurance commitments of Vattenfall Insurance. Economies of scale and direct access to the international reinsurance market help keep total insurance costs low.

#### Network loss risk

Network loss risk arises from short- and long-term variations in generation and loads in the network. Measurement and management of network loss risk is conducted within the individual units. This risk is managed through detailed follow-up of outcomes in relation to hedged volumes. In the case of deviations that are judged to be permanent, the target volume is altered for ongoing hedges for future periods. In addition, the need for additional purchases for the current period is determined.

#### Political risk

Political risk is defined as the commercial risk that can arise as a result of political decisions. Examples of this are price regulations in electricity distribution and transmission, uncertainty regarding a new political majority, or changes in finance policies. In connection with acquisitions and other investments, this type of risk is managed by adjusting the cost of capital.

Another type of political risk stems from changes in the rules

governing the energy industry. These can concern such factors as changed taxes, environmental surcharges, changes in how natural monopolies are regulated, and political goals for the composition of the energy system. This type of risk is more difficult to predict and protect against. To mitigate this risk, Vattenfall conducts active business intelligence activities and maintains contacts with decision-makers in relevant markets. Vattenfall also belongs to various national and international trade organisations.

### Operational risk

Operational risk refers to the risk of incurring financial loss, or a loss of trust, due to errors or defects in the Company's administrative routines.

Operational risks can be divided into the following categories:

- Administrative risks – the risk of loss due to defects in the Company's division of responsibility, competence, reporting routines, risk measurement and evaluation models, and in control and follow-up routines
- Legal risks – the risk of loss arising from the non-fulfilment of contracts due to shortcomings in documentation, counterparties lacking the right to enter into contracts or uncertainties regarding contract validity
- IT risks – the risk of loss due to defects in IT systems

To limit operational risks at Vattenfall, each business unit is responsible for ensuring that well-documented routines, reliable IT systems and satisfactory internal controls are in place. For more information about internal control, see page 55.

### Environmental risks

Environmental risks can be divided into three categories – environmental liabilities, anticipated environmental liabilities, and environmental risks. Environmental liabilities refer to environmental problems that have been identified in production plants, installations or operations and where requirements have been raised to take action as a result of more stringent legislation, permit restrictions or new stipulations in the Company's environmental policy. Anticipated environmental liabilities are those that are influenced by probable future changes in requirements and laws. Environmental risks refer to the probability of accidents and defects in operations, combined with their impact on the environment.

The work on continuously preventing and controlling environmental risks is carried out largely on a local basis and is based on the knowledge and experience that exists in the group's respective units. The business units are responsible for identifying and expressing the risks and liabilities described above in monetary terms. Through this risk inventory, Vattenfall increases its ability to analyse and decide on actions that reduce the Group's environmental impact.

The consequences of an environmental risk can entail the following, for example:

- Contamination/clean-up costs
- Impact on the Vattenfall brand
- Opinions and policies that lead to more cumbersome permit application processes and production limitations

The business units' reporting on environmental liabilities covers the following areas, among others:

- Air, water and ground pollution
- Oil-filled cables with lead encapsulation
- Mercury in electrical equipment and fumes
- Insulation in electrical equipment
- Asbestos in thermal power plants and CHP plants
- Magnetic fields from transformers and power lines

Environmental liabilities are identified and analysed for decisions on actions to be taken. Currently an action programme is being carried out for Vattenfall's hydro power plants in Sweden and for Vattenfall's operations in Poland. Vattenfall sees advance planning in this area as a way of strengthening the Group's competitive edge in the long term. In the German companies, funds have been reserved for restoring contaminated land, and action plans have been drawn up in consultation with the pertinent authorities.

Parallel with this, cross-functional co-ordination work is being conducted at the Group level to identify and adopt uniform methods and application of principles. The main purpose of this work is to ensure that assessments are made as independent of individuals as possible, to promote knowledge-sharing, and to more clearly link environmental risk work to the Group's overall risk management activities.

One of the great challenges for Vattenfall and the energy sector as a whole is to curb emissions of greenhouse gases from fossil-fired power plants and all other business activities. Societal representatives are focusing on this issue with keen interest, and Vattenfall is addressing it from an integrated risk perspective that takes technological and political aspects into account. Toward this end, Vattenfall has initiated a project for large-scale separation and storage of carbon dioxide and is actively searching for cost-effective internal reduction alternatives among all relevant gases and in all aspects of operations.

### Financial risks

The Group's financial risks are managed primarily by Vattenfall Treasury AB (the Group's internal bank and finance function). These finance operations aim to provide cost-effective management of the Group's financial risks. The Group's funding, investments and currency trading are carried out primarily by Vattenfall Treasury AB and, to a lesser extent, by Vattenfall Europe AG. The Group's liquidity is centralised in Group cash pool systems. Speculative investments are made to a limited extent within set risk limits. For more detailed description and quantification of financial risks, see Note 34 to the consolidated accounts.