

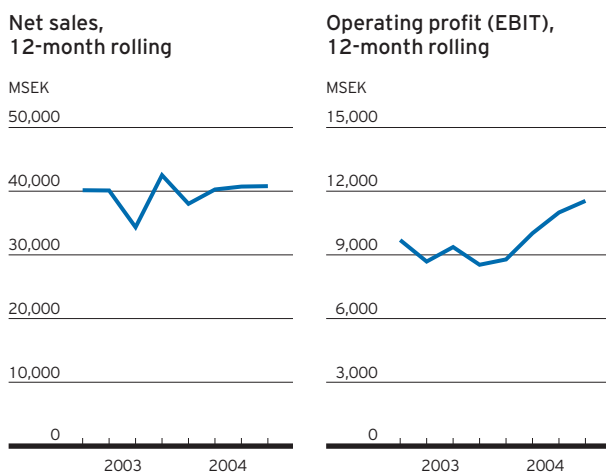
THE NORDIC COUNTRIES: RECORD NUCLEAR POWER AVAILABILITY LEVEL AND LOWER MARKET PRICES

Despite falling electricity prices, Nordic operations have developed very strongly, mostly thanks to record high generation within nuclear power and successful price hedging. The year was otherwise characterised by comprehensive measures designed to increase trust and customer satisfaction and by continued uncertainty regarding nuclear power.

Vattenfall generates, distributes and sells electricity and heat in the Nordic countries. Electricity trading is also pursued in order to hedge prices for generation and sales. Vattenfall also sells telephony and broadband services, as well as consulting and contracting services, primarily within the energy sector. Transmission, that is, the transfer of electricity via high-voltage networks, is not included in Vattenfall's operations, but is run in Sweden by the state-owned company Svenska Kraftnät and in Finland by Fingrid. Vattenfall's market position in the Nordic coun-

tries is number one in electricity generation, number two in distribution and number one and two in Swedish and Finnish electricity sales to end-customers respectively. Nuclear power and hydro power comprised 65.0 and 34.3 per cent respectively in 2004, and form the basis of Vattenfall's electricity generation. Fossil fuel, biofuel and waste are also used, especially in heat generation. Vattenfall also invests heavily in wind power. Operations are organised in a number of business units which are coordinated under Business Group Vattenfall Nordic.

Vattenfall in the Nordic Countries



Key facts – Nordic Countries

		2004	2003	Change, %
Net sales	▼	40,794	42,514	-4.0
Operating profit (EBIT)	▲	11,543	8,535	35.2
Operating margin, %	▲	28.3	20.1	40.8
Net assets	▲	57,415	56,367	1.9
Return on net assets, %	▲	20.4	15.2	34.2
Electricity generation capacity, MW	▲	16,878	16,756	0.7
Heat generation capacity, MW	▼	3,523	3,662	-3.8
Electricity generation, TWh	▲	88.4	77.8	13.6
Heat generation, TWh	▼	7.6	7.9	-3.8
Number of electricity customers	▼	934,235	948,235	-1.5
Number of network customers	▲	1,278,310	1,264,000	1.1

Best result ever

Sales decreased by 4 per cent to SEK 40.8 billion (42.5). Sales were affected negatively by falling market prices, the fall being due to the vastly improved water supply. At the end of 2004, the deficit in the hydrological balance had been improved to a surplus of 4.3 TWh, compared with a deficit of 14.2 TWh at the end of 2003. Operating profit increased by 35.2 per cent to 11.5 billion SEK (8.5). The fact that operating profit increased despite falling electricity prices can be primarily explained by increased generation volumes, but also by the fact that generation had been hedged at advantageous prices. The Generation business unit contributed especially well to the good results. The nuclear power plants exhibited absolute world-class availability and both Forsmark and the Ringhals Group posted their best generation results ever. The

	Challenges 2004	Measures 2004	Forecasts and strategy
Generation	<ul style="list-style-type: none"> Extend lifetime, further improve safety and efficiency within existing power plants. Maintain high availability during ongoing maintenance work. Nuclear power negotiations were suspended by the Swedish government in October without agreement being reached. The government then decided to close Barsebäck 2 by 31 May 2005. Amendments to financing legislation governing nuclear waste (Note 7). 	<ul style="list-style-type: none"> Continued optimisation of generation within existing nuclear power facilities and hydro power facilities. Investments in among other things new turbines that increased power output. Continued work for an improved environment – building permits and permission for Sweden's largest wind power project – Örestad – have been obtained. 	<ul style="list-style-type: none"> Maintenance programme for nuclear power and hydro power. Safety upgrades for dams. Increased utilisation of existing generation facilities. Construction of Örestad 120 MW wind power park. Closing of Barsebäck 2 on 31 May 2005. Continued evaluation of renewable energy sources which meet green certificate requirements.
Distribution	<ul style="list-style-type: none"> Improved trust among customers. Fewer and shorter disruptions. New regulatory model, the Performance Assessment Model. 	<ul style="list-style-type: none"> New network disruption guarantee. Continued installation of remote-readable meters: 105,000 meters in total. Expanded investment and maintenance programme and strengthened contingency organisation. Actively provided feedback about the new regulatory model. 	<ul style="list-style-type: none"> Optimise and simplify management of customer issues with a genuine customer focus. Implement quality improvements in the electricity networks. Continued installation of remote-readable meters for all network customers.
Sales	<ul style="list-style-type: none"> Ensure growth through increased quality that increases customer satisfaction. Create understanding and acceptance for pricing. Retain market share within reseller segment. Ensure long-term competitive edge through increased cost-efficiency. Ensure successful implementation of new business system. 	<ul style="list-style-type: none"> End to invoicing in arrears for consumption more than a year old for household customers (corporate customers 3 years) within our own network areas. Optimise collaboration within the Group for increased customer satisfaction by creating total energy solutions for customers. Began implementing new business system. 	<ul style="list-style-type: none"> Continue our work to increase customer satisfaction. Increase customer benefits with total energy solutions based on customer needs. Further improve information about the customer's possibility to select their agreement type. Finalise the implementation of the new business system.
Heat	<ul style="list-style-type: none"> Find a long-term solution for peat producer Härjedalens Miljöbränsle AB. Construction of a waste incinerator in Uppsala, Sweden expected to be completed ahead of plan. 	<ul style="list-style-type: none"> Divestment of Härjedalens Miljöbränsle AB. Continued operation with new owners. Waste incinerator in Uppsala completed. Automated reading introduced for single family homes. 	<ul style="list-style-type: none"> Work to increase customer satisfaction. Optimisation of fuel composition. Growth through acquisitions for long-term profitability. Waste incinerator in Uppsala commissioned.
Services	<ul style="list-style-type: none"> Market level profitability in all operations. Continued growth and increased external sales. 	<ul style="list-style-type: none"> Developed maintenance agreement with Vattenfall's largest customers. Recruitment of strategic resources to manage the large reinvestment programme in the energy sector. Functional maintenance agreement with external process industry. 	<ul style="list-style-type: none"> Ensure resource and expertise supply for the future. Continued development of maintenance services. Market for consulting and development services continues to look good throughout the energy sector.

basis for the year's good results comprises the very efficiently implemented outages during the summer with, among other measures, turbine replacements in the Forsmark plant. Hydro power generation increased by almost 17 per cent thanks to the considerably improved water supply.

Different paths in Nordic energy policies

Uncertainty regarding the future of Swedish nuclear power was seen throughout the year. In October, the Swedish government broke off negotiations with the nuclear power operators regarding the phasing out of nuclear power in Sweden and in December, the government decided to

close Barsebäck 2 on 31 May 2005. The reactor is 74 per cent owned by Vattenfall via Ringhals AB. The Finnish government has, unlike the Swedish, decided to give permission to build a fifth nuclear power reactor, which will provide a capacity increase of 12 TWh as of 2009. In Sweden, the state energy authority (STEM) has finished its development of a new regulatory model, the so-called Performance Assessment Model, for evaluation of network fees (see page 17 for a description of the model). At the end of the year, STEM announced that they had selected 40 network companies for closer inspection regarding network tariffs in 2003. Vattenfall Sveanät AB, which has now been merged with Vattenfall Eldistribution AB, is one of these companies. Finland has also begun using a new regulatory model in conjunction with the amendment of its electricity market legislation. The model calculates a reasonable return. If the model shows the return to be too high, then this is to be compensated for via pricing.

Considerable investments for the future

Vattenfall runs several comprehensive investment programmes in the Nordic countries, comprising a total of SEK 42 billion over 10 years:

- SEK 10 billion in Distribution in a five-year investment and maintenance programme to strengthen security of supply. This programme was expanded in 2004 from 8 to SEK 10 billion, primarily to increase disruption prevention measures.
- Investments within renewable energy, including the planning of a large off-shore wind power facility in Öresund for SEK 1.5 billion. These facilities are estimated to be in operation in 2007.
- SEK 18 billion in maintenance investments in nuclear power, planned for a lifetime of at least 40 years, and SEK 6 billion in measures to increase efficiency.
- SEK 6 billion in reinvestments for the maintenance of hydro power and improved dam safety over the next 10 years and an additional SEK 0.5 billion to increase generation in hydro power plants in conjunction with the maintenance investments being made.
- Investments in remote-readable electricity meters continue; by the end of 2004, a total of 105,000 meters had been installed in the Nordic countries. All of Vattenfall's 1.3 million Nordic network customers will have such meters installed.

Limited initial impact from emissions trading

In 2005, the previously described trade in emission allowances for carbon dioxide began in Europe (see description on pages 30–32). The Nordic countries have had their respective allocation plans approved by the EU. Since Vattenfall's generation mix in the Nordic countries primarily consists of carbon dioxide free hydro power and nuclear power, Vattenfall does not need any emission allowances for this generation. On the other hand, Vattenfall's heat operations generate certain levels of carbon dioxide emissions. In accordance with the Swedish allocation plan, Vattenfall has not been given emission allowances for these operations full out and must therefore purchase such allowances in the market.

Customer satisfaction in the Nordic consumer market

Vattenfall has approximately 934,000 electricity customers, approximately 1,280,000 network customers and 16,600 heating customers in the Nordic market. The energy sector as a whole has, during the year, been subject to debate and criticism focused on such factors as poor billing practices, high prices and disruptions in supply. Criticism has primarily been directed towards the largest companies. Vattenfall takes this criticism very seriously and is devoting extensive resources to improve trust and customer satisfaction. In order to strengthen the customer's standing, for example, Vattenfall appointed a Customer Ombudsman in Vattenfall Nordic in 2004, ceased billing in arrears for household customer consumption more than 12 months old and improved disruption compensation for power cuts. In order to measure customer satisfaction within the Group, we use a model based on the Customer Satisfaction Index (NKI). In the Swedish market, we also compare the result with a Swedish quality index (SKI), an independent instrument to measure and analyse how customers judge goods and services in Sweden. In the autumn of 2004, Vattenfall recorded a value of 57.5, which is a clear improvement, but still low if we compare ourselves with smaller electricity suppliers and other sectors. These independent surveys are an important part of our work towards our goal of becoming 'Number one for the customer'.



INVESTMENTS IN HYDRO POWER

"THINGS ARE WORKING PERFECTLY NOW"

Clary Brandum is an operations engineer at Storuman. From this location, other hydro power units, including the one in Bastusel, by the Skellefte River, are run. During the summer of 2004, the generator and facilities were shut down for renovation. Clary Brandum, together with the other operations engineers, had experienced the old generator's problems with overheating and short-circuiting. A renovation and upgrade were, for that reason, required and financially and environmentally advantageous as well. Recurrent shut-downs are expensive, in terms of both production losses and troubleshooting.

Since the station is a single unit station, a stop means that generation ceases completely. For that reason, the decision was made for a

complete overhaul of the entire facility.

"We made sure we replaced all the important components, but also that we replaced such things as lighting and ventilation systems in the facility. We even improved the fire cell division, so staff safety has also been improved," says Patrik Nilsson, who led the project. Hopefully, there will be no shutdowns for a while. The work that has been done should ensure the station's operation for an additional 40 years.

Even if work with running in the new facilities will continue for some time, the effect can already be seen.

"We no longer have the operating problems we had previously. We haven't had any overheating," says Clary Brandum.

GERMANY: INTEGRATION WORK HAS PROVIDED STRONG RESULTS

Vattenfall is the third largest electricity producer in Germany and runs operations throughout the entire value chain. Operating profit has improved greatly thanks to a very successful cost-cutting programme.

Vattenfall generates, transmits, distributes and sells electricity and heat in Germany. Trading is also pursued in electricity and energy-related raw materials in order to hedge prices for generation and sales. Vattenfall's market position in Germany is number three in electricity generation, number three in electricity sales to end-customers, number two in transmission and number four in electricity distribution. Within district heating, Vattenfall is the largest actor with the longest district heating network in Europe. Vattenfall's generation in Germany consists of approximately 89 per cent fossil fuel-based power, which is produced in some of the world's most modern and cleanest lignite-fired plant.

The remaining electricity generation is comprised primarily of nuclear power and hydro power. Operations are organised according to a value chain in the same way as in the Nordic countries and are run according to the same principles. Business Group Vattenfall Europe coordinates the German business units.

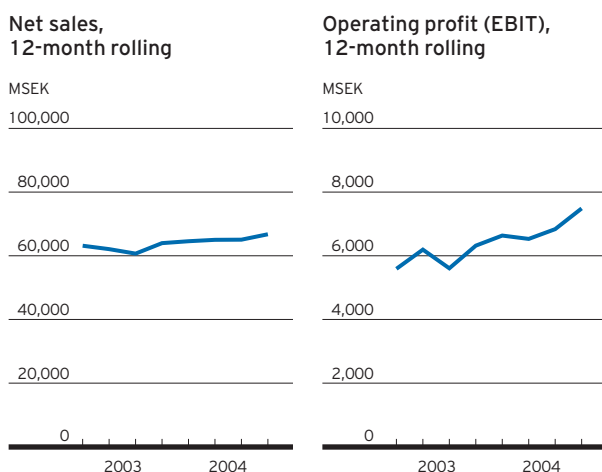
Strong improvement in financial performance

Sales increased by approximately 4 per cent to SEK 66.8 billion while operating profit increased by 18.5 per cent to SEK 7.5 billion (6.3), primarily explained by the extremely successful cost-cutting programme, which resulted in annual savings of EUR 519 million (approximately SEK 4.7 billion). Return on net assets improved to 12.5 per cent as against 10.2 in 2003. Both electricity and heat generation were, in terms of volume, largely unchanged compared with 2003. The Mining & Generation, Distribution and Heat business units reported very good results. Even Sales improved its operating profit, but still shows reports a loss. Transmission reports lower operating profit than in 2003 as a result of higher costs due to the increased input of wind power to the network. Two smaller district heating companies in Berlin, with a combined capacity of 320 MW, were acquired for about SEK 440 million during the year.

Extensive investment needs in the German market

As previously mentioned (see page 18), there is an agreement in Germany regarding the phasing out of nuclear

Vattenfall in Germany



Key facts – Germany

		2004	2003	Change, %
Net sales	▲	66,761	63,974	4.4
Operating profit (EBIT)	▲	7,487	6,318	18.5
Operating margin, %	▲	11	10	10.0
Net assets	▼	58,350	62,171	-6.1
Return on net assets, %	▲	12.5	10.2	22.5
Electricity generation capacity, MW	▼	15,112	15,148	-0.2
Heat generation capacity, MW	▲	8,380	8,090	3.6
Electricity generation, TWh	▲	75.5	74.6	1.2
Heat generation, TWh	▼	15.5	15.7	-1.3
Number of electricity customers	▲	3,006,271	2,947,743	2.0
Number of network customers	▲	3,393,000	3,323,000	2.1

	Challenges 2004	Measures 2004	Forecasts and strategy
Mining & Generation	<ul style="list-style-type: none"> • Guarantee the availability of facilities during heavy loads. • Develop strategy for continued development of conventional power plants. • Prepare for trade in emission allowances which begins in January 2005. 	<ul style="list-style-type: none"> • Preliminary plans for new power plants in Lausitz and Hamburg area. • Decision regarding the further development of lignite extraction and transport capacities. • Goldisthal pump power plant in operation. • Commissioning of the Lauta thermal waste treatment plant. • Construction of interim storage for spent nuclear fuel in Brunsbüttel and Krümmel. 	<ul style="list-style-type: none"> • Further development of modern, efficient and environmentally-friendly power plants. • Attain 'Cost Leadership' in each plant. • Consistently take advantage of the opportunity to optimise our portfolio in the wholesale market. • Continued work with long-term hedging of generation. • Retained market share in Germany.
Transmission	<ul style="list-style-type: none"> • Handling increased input of wind power-based electricity. • Ensure a fair distribution of EU-related network expansion costs. 	<ul style="list-style-type: none"> • Active participation in EU changes as partner to political and industry organisations. • Investments in network expansion after increased volume of wind power. • Formation of a department for EU/ Network clearing for management of increased EU risks. • Communication to customers and market actors of increased costs due to EU. • Participated in development of new electricity legislation. 	<ul style="list-style-type: none"> • Increased cost-efficiency with retained security of supply in the networks. • Continued comprehensive investment programme to expand the networks for the transmission of wind energy and to ensure an effective European electricity market. • Ensure access to reserve and balancing power.
Distribution	<ul style="list-style-type: none"> • Increased efficiency to ensure profitability in a regulated market. • Create conditions for functional and legal unbundling of operations. • Pressure to cut network tariffs due to proposed electricity network regulation. 	<ul style="list-style-type: none"> • Functional unbundling where business units are divided into network operators and network service. • Optimisation of processes in purchasing, IT and order management to minimise costs. 	<ul style="list-style-type: none"> • Increased transparency and increased control of network operations with the new EU guidelines. • Implementation of the portion of 'legal separation' to comply with the requirements of the regulator and new electricity legislation. • Appoint a 'Compliance Officer' to ensure equal treatment of all network users. • Continued high reliability in distribution parallel to improved customer service.
Sales	<ul style="list-style-type: none"> • Higher acquisition prices. • Insufficient profitability in agreements with corporate customers. Improve profitability within this segment under the Vattenfall brand. • Amendments to the German energy law (EnWG). 	<ul style="list-style-type: none"> • Alignment of old agreements to market conditions to enable effective risk management. • Requested tariff adjustments for private customers and small company segment based on our cost profile. 	<ul style="list-style-type: none"> • Improve profitability despite increased market competition. • Increased costs as a result of increased amount of wind power. • Establish a customer service centre to meet neutrality requirements as a result of separation of business units. • Invest in expanded IT functionality and more effective management of customer issues in order to become 'Number one for the Customer'. • Actively participate in reworking the new energy legislation (EnWG) and implement the new rules.
Heat	<ul style="list-style-type: none"> • Prepare for trade in emission allowances, which began in January 2005. • Ensure efficiency in heating operations. • Hedge fuel costs in a volatile market. • Uncertainty regarding continued subventions for the environmental-friendly combined power and heating plants (KWK-Anlagen). 	<ul style="list-style-type: none"> • The acquisition of the Fernwärme Märkisches Viertel GmbH and Spitzenheizwerks Lange Enden GmbH district heating plants in Berlin. • The 'Contracting' and 'Waste to Energy' divisions integrated with sections of the Heating unit. • Customer concentration in the heating network in Hamburg and Berlin. 	<ul style="list-style-type: none"> • Consistently take advantage of the marketing possibilities in the areas of Heat and 'Contracting'. • Continued investments in networks and generation plants and opening of new growth possibilities. • Increased customer satisfaction by offering high quality products and support. • High availability at plants through goal-oriented training of required personnel.

power, which today stands for 158.2 TWh of the total 570 (2004) generated TWh in Germany. In addition, there is a great need for the replacement of outdated fossil-based power generation over the coming 10–20 years. In all, approximately 40,000 MW must be replaced. Vattenfall, with its modern fossil-based facilities and a limited proportion of nuclear power generation, is well equipped for the future but has still decided to test investments in two new large plants, Boxberg (a lignite-based plant in eastern Germany) and Moorburg (a thermal power plant in Hamburg). With the support of EU legislation (Erneubare-Energien-Gesetz), the government has decided to increase the percentage of renewable energy to 20 per cent by 2020 and, as a result, wind power generation has increased dramatically. Since wind power generation is affected by weather conditions, which leads to irregular supplies to the electricity networks, there are occasional heavy loads. Large investments in the transmission network are required in order to remove bottlenecks and ensure transmission capacity. Vattenfall is currently carrying out two large construction projects within its transmission network, an extension of the southwest transmission link between Halle and Schweinfurt and the northern one between Schwerin and Hamburg, at a cost of approximately EUR 260 million. As a result of the increased wind power generation and these major investments, transmission and balancing power costs in the German market are increasing. For this reason, Vattenfall is raising its transmission tariffs by 19 per cent as of 2005.

New unit for nuclear power operations

To optimise and more easily benefit from the collective knowledge within Vattenfall's nuclear power operations,

these operations were restructured during 2004. The Brunsbüttel and Krümmel nuclear power plants, for which Vattenfall has management responsibility, and management of Vattenfall's minority holdings in the Brokdorf and Stade power plants (closed 2003) were integrated with the new unit, Vattenfall Europe Nuclear Energy.

Intensive debate on price increases

As a result of increased taxes due to EU legislation and other factors, the German network operators' costs have increased. For this reason, Vattenfall, like a number of other utilities, announced price increases during the autumn. Vattenfall's sales units also announced price adjustments. Price increases have given rise to intensive debate. Vattenfall's prices, however, are well founded and Vattenfall expects all price monitoring bodies to provide approval.

Allocation of emission allowances complete

Allocation of emission allowances in accordance with the German national allocation plan means that Vattenfall has been given, in principle, a full allocation for the first trading period 2005–2007. In this way, Vattenfall's earlier efforts to reduce carbon dioxide emissions have been recognised. Vattenfall's coal-fired power plants in eastern Germany are among the most modern fossil fuel-fired plants in Europe and Vattenfall's German operations represent a full 90 per cent of the total reduction in emissions within the German electricity and heat industry.



INVESTMENTS IN THE ELECTRICITY NETWORK

"WE'RE COUNTING ON 11,000 MW OF WIND POWER IN 2011"

The project to strengthen the German transmission network has begun with the aim of adapting the electricity network so that it can handle the increasing electricity generation from renewable energy sources. The reason behind this is the new legislation regarding renewable energy sources which came into effect in the year 2000. Its goal is to increase the amount of electricity that is generated from renewable energy sources, such as wind power. Among other things, electricity network operators are charged with purchasing electricity from such sources at fixed prices. The goal is that by 2010, 12.5 per cent of overall generation shall be renewable.

Generation capacity in wind power has increased rapidly since the law came into effect.

"Electricity from wind power has increased from 4,200 MW per year in 2002 to 5,400 MW in 2003 in Vattenfall Europe Transmission's area. We're counting on 11,000 MW in 2011 and this increased amount of wind power requires an equal expansion of the electricity network,"

says Dr. Yvonne Saßnick, who has worked with the project.

The electricity network will also need to be strengthened to be able to transport electricity from coastal areas with low consumption, where the wind power is generated. Since wind power is dependent on the weather, reserve capacity is also required in order to guarantee network stability.

"We will extend the southwest transmission link between Halle and Schweinfurt and the northern one between Schwerin and Hamburg. In total, an increase in capacity of 3,000 MW at a cost of more than EUR 260 million," says Saßnick.

And the investments in transmission capacity will not only help consumers get access to wind power generated electricity.

"The project contributes to strengthening the stability of the electricity network and the reliability of the north-western part of Vattenfall Europe's area. In addition, the project contributes to the development of European trade in electricity," Saßnick points out.

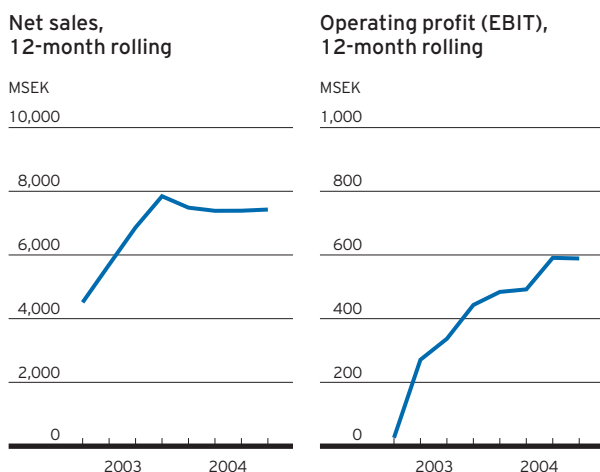
POLAND: DEREGULATION EXPECTED TO GAIN SPEED AFTER ENTRY TO EU

Deregulation has only just begun in Poland. Several steps towards a free market have been taken during 2004 and entry into the EU is expected to increase the speed of change even more. Optimisations and cost-cutting have led to dramatic improvements in financial performance for Vattenfall.

Vattenfall generates, distributes and sells electricity and heat in Poland. Heat (and to a lesser extent even electricity) are generated through the company Elektrociepłowni Warszawskie (EW), of which Vattenfall now owns 75 per cent. Distribution and sales of electricity take place through the company Górnośląski Zakład Elektroenergetyczny (GZE), in which Vattenfall increased its share from 54 per cent to 75 per cent during the year. Vattenfall is the largest heating producer in Poland, with a market share of 27 per cent. Vattenfall is the largest foreign investor

in the Polish energy sector, with a total market share of approximately 7 per cent. Through EW, Vattenfall's market position in the area of electricity generation is number seven (3 per cent) with regards to the overall market and number four with regards to only the privatised companies. The majority of the distribution companies are state-owned. Of the 33 distribution companies, only two companies have been privatised so far. Through GZE, Vattenfall is the largest distribution and sales company in Poland among the privatised companies. All in all, Vattenfall holds sixth position in the market.

Vattenfall in Poland



Streamlining has shown results

Despite somewhat lower volumes and increased fuel costs, operations continued to show very positive development. Sales dropped somewhat but operating profit increased by 33 per cent, mainly due to optimised operations and considerable cost-cutting. Return on net assets improved to 8.4 per cent against 6.9 in 2003. Both heat and electricity generation decreased by approximately 5 per cent as a result of higher temperatures.

Adaptation to the EU's environmental directive

The Polish energy sector is obligated to implement the LCP (Large Combustion Plant) directive to reduce emissions. Since many of Poland's power plants are old, com-

Key facts - Poland

		2004	2003	Change, %
Net sales	▼	7,427	7,845	-5.3
Operating profit (EBIT)	▲	589	443	33.0
Operating margin, %	▲	8	6	33.3
Net assets	▲	7,187	6,270	14.6
Return on net assets, %	▲	8.4	6.9	21.7
Electricity generation capacity, MW	▶	928	928	0.0
Heat generation capacity, MW	▶	4,824	4,824	0.0
Electricity generation, TWh	▼	3.2	3.4	-5.9
Heat generation, TWh	▼	11.4	12.0	-5.0
Number of electricity customers	▲	1,100,127	1,095,099	0.5
Number of network customers	▲	1,101,477	1,096,359	0.5

Challenges 2004

- Prepare for entry into the EU on 1 May 2004 and market deregulation.
- Optimise operations in the acquired companies.
- Improve financial performance.

Measures 2004

- Divestment of EW's service and maintenance company (EW Services).
- Increased ownership in GZE, from 54 to about 75 per cent, and in EW, from about 70 to about 75 per cent.
- Personnel reduction by 15 per cent.
- Merger of the two service companies within GZE.
- Implementation of digital system for network information at GZE.
- Introduction of the Vattenfall brand.

Forecasts and strategy

- Continue to optimise operations.
- Increase customer satisfaction in all operations.
- Increase market share through acquisitions.
- Create Vattenfall Trading Services Poland and separate generation and distribution within GZE.
- Prepare for trade in emission allowances which is expected to begin in 2005.
- Plan investments to meet stricter environmental requirement.
- Implement new billing system.
- Continue the introduction of the Vattenfall brand.

prehensive investments are required to comply with these directives. To enable Poland to meet this challenge, a transition period stretching to 2017 has been granted for some of the power plants. Generation of electricity from renewable energy sources will increase in Poland with the goal of 7.5 per cent of electricity generation to be renewable by 2010. National legislation supports this goal and requires power suppliers to gradually increase the percentage of renewable electricity. Proof of origin, in other words, the certificate that shows where power is generated, is one step in this effort and will be introduced in 2005. Network operators will also be obligated to prioritise the transport of green electricity produced in their respective network areas.

Structural changes

The Polish government is currently working with the horizontal integration of companies by consolidating the state-owned companies and thereby creating larger units. For example, three power plants – Bełchatów, Opole and Turów – have been consolidated into one company (BOT), which is the largest electricity producer in Poland with a market share of about 30 per cent. In a similar way, 31 local distribution companies are now being consolidated into six regional companies. With regard to dereg-

ulation at the sales stage, it is still difficult to change suppliers in the Polish market. The EU rules that stipulate that all corporate customers in Poland shall be able to freely choose their supplier have not yet been fully implemented. The goal is for all consumers, regardless of size, to be able to freely choose their supplier by 2007.

Trading in emission allowances (carbon dioxide)

Poland has decided on a national plan for the reduction of carbon dioxide emissions. The national allocation plan has been presented to the EU Commission for approval. It is believed that the plan will meet the electricity producers' needs for the first trading period of 2005–2007.

The Vattenfall brand in Poland

Vattenfall is one of the first foreign companies to establish itself in the Polish energy market. With Poland's entry into the EU, the rate of deregulation will increase and Vattenfall has an advantage in its experience and early presence in Poland. During the year, a decision was made to introduce the Vattenfall brand and a project has been underway for this express purpose, see page 19. The ambition is that by 2007, when even private consumers will be able to freely choose their supplier, Vattenfall should be a familiar name.

FACTS ABOUT VATTENFALL

	2004				2003			
	Nordic Countries	Germany	Poland	Total	Nordic Countries	Germany	Poland	Total
Generation capacity, electricity and heat, MW¹								
Hydro power	8,386 ²	2,894		11,280	8,386 ²	2,907		11,293
Nuclear power	7,242 ³	771 ⁶		8,013	7,212 ³	771 ⁶		7,983
Fossil fuel-based power	1,004 ⁴	11,371	928	13,303	900 ⁴	11,439	928	13,267
Wind power	31 ⁵	41		72	31 ⁵			31
Biofuel, waste	215	35		250	227	31		258
Total Electricity	16,878⁷	15,112	928	32,918	16,756⁷	15,148	928	32,832
Total Heat	3,523	8,380	4,824	16,727	3,662	8,090	4,824	16,576
Electricity and heat generated, TW								
Hydro power	30.3	3.3		33.6	25.8	2.3		28.1
Nuclear power	57.5	4.9		62.4	51.6	4.9		56.5
Fossil fuel-based power	0.1	67.2	3.2	70.5	0.3	67.4	3.4	71.1
Wind power	0.1			0.1	0.1			0.1
Biofuel, waste	0.4	0.1		0.5	0.1			0.1
Total Electricity	88.4⁸	75.5	3.2	167.1	77.8⁸	74.6	3.4	155.8
Total Heat	7.6	15.5	11.4	34.5	7.9	15.7	12.0	35.6
No. of electricity customer	934,235	3,006,271	1,100,127	5,040,633	948,235	2,947,743	1,095,099	4,991,077
No. of network customer	1,278,310	3,393,000	1,101,477	5,772,787	1,264,000	3,323,000	1,096,359	5,683,359
Electricity Networks								
Transmitted volume, TWh	113.0	28.5 ⁹	10.6	152.1	106.8	28.2 ⁹	10.2	145.2
Number of km								
Transmission grid	n.a.	10,000	n.a.	10,000	n.a.	10,000	n.a.	10,000
Distribution network	188,067	75,000	27,543	290,610	185,656	75,000	27,650	288,306
Number of employees								
Full-time equivalents	8,735	20,864	3,309	32,908 ¹⁰	8,531	21,719	4,935	35,185 ¹⁰
Total emissions to air, tonnes								
Carbon dioxide					1,333,089	68,849,416	6,422,500	76,605,005
Sulphur dioxide					1,169	50,213	32,165	83,547
Nitric oxide					3,102	42,923	10,106	56,131
Particles					597	1,516	1,961	4,074

1) Refers to 100% of the plants in those cases where Vattenfall owns more than 50 per cent.

2) Vattenfall's share totals 7,935 MW for 2004 and 2003.

3) Vattenfall's share totals 5,119 MW for 2004 and 5,100 MW for 2003.

4) Vattenfall's share totals 990 MW for 2004 and 886 MW for 2003.

5) Vattenfall's share totals 30 MW for 2004 and 2003.

6) Refers to 100% of the plants in those cases where Vattenfall owns more

than 50 per cent (100% Brunsbüttel). Vattenfall's share, based on all plants, totals 1,409 MW (Brunsbüttel 67%, Krümmel 50% and Brokdorf 20%).

7) Vattenfall's share totals 14,289 MW for 2004 and 14,178 MW for 2003.

8) Vattenfall's share totals 70 TWh for 2004 and 61 TWh for 2003.

9) Excl. transmission grid.

10) There are 109 employees (111) in other countries. The total number of employees in the Group is 33,017 (35,296).

EFFECTIVE RISK MANAGEMENT

Vattenfall has been very active in many European energy markets for several years. During 2004, the trading units within the Group were integrated to strengthen risk management, better utilise resources and enable increased value creation for the Group.

During 2004, the two former trading units in Stockholm and Hamburg were integrated into a single unit, Vattenfall Trading Services, with its head office in Hamburg and a regional office in Stockholm. During 2005, the Polish trading operation will also be integrated with the unit.

The unit focuses on offering risk management and portfolio management services, both within the Group and to external customers. The integration of the two units optimises and improves risk management and portfolio management, better coordinates and optimises IT-systems, and deepens specialists competence.

The integrated unit provides access to the electricity markets and other energy-related commodity markets for all of Vattenfall's business units and is the Group's joint representative in the various markets. This structure ensures the highest possible transparency for the risks that arise through Vattenfall's activities in different countries.

Vattenfall is active on the energy exchanges in the Nordic countries, Germany, Poland, France and the

Netherlands and is one of Europe's largest actors in terms of sales. Primarily, trade is in physical and financial electricity contracts, but also in various energy-related commodities, such as coal, gas and oil. Swedish green certificates and the recently introduced carbon dioxide certificates for emission allowances are also traded.

Vattenfall is market maker on NordPool and EEX, which means that we have agreed to always give both purchase and sales prices. In NordPool's own rankings, in 2004 Vattenfall was ranked highest of the exchange's actors, based on criteria such as pricing, flexibility, market making, reliability and speed in business.

Effective risk management

	2004	2003
External electricity trading volume	859 TWh	822 TWh
Market share, NordPool	Top-3	Top-3
Market share, EEX	Top-3	Top-3
Number of external counterparts	150	90

	Challenges 2004	Measures 2004	Forecasts and strategy
VTS	<ul style="list-style-type: none"> • Create a new unit, Vattenfall Trading Services, consisting of German 'Vattenfall Europe Trading GmbH' and Swedish 'Supply and Trading'. • Integrate Poland in Vattenfall Trading Services. 	<ul style="list-style-type: none"> • Created a new organisational structure under joint management with head office in Hamburg and a regional office in Stockholm. • Implementation of a joint trade and risk management system. 	<ul style="list-style-type: none"> • Further improve overall Group risk management. • Focus on being a Service Provider. • Geographic and product-related development steered by intra-group customers. • Implementation of a regional office in Gliwice, Poland during 2005. • Actively participate in market development.