

THE ENERGY MARKET IN TRANSITION

In 2005, a new trading system was introduced for emission allowances for carbon dioxide in the EU, which clearly has affected electricity prices. The European electricity market still has a certain excess capacity, but in the long-term, new power plants will be needed.

Highly regulated historically, the energy sector has changed radically in the past 15 years. Deregulation and internationalisation, largely driven by the EU, has resulted in several electricity markets now being totally open to competition (see map on page 13). According to the EU Electricity Directive, the intention is for all countries to have deregulated their electricity markets and have totally opened them to competition by 1 July 2007 at the latest.

The differences in how far the various countries have progressed with this deregulation are still substantial and as a result the European Commission continues to drive development and integration across borders. The goal is to increase competition and integrate national markets into larger regional markets.

The intention is also for the natural gas market to be deregulated by 2007, but development towards

increased competition in this segment has progressed more slowly than in the electricity market (see the gas market fact box on page 15).

Uneven development in the electricity markets

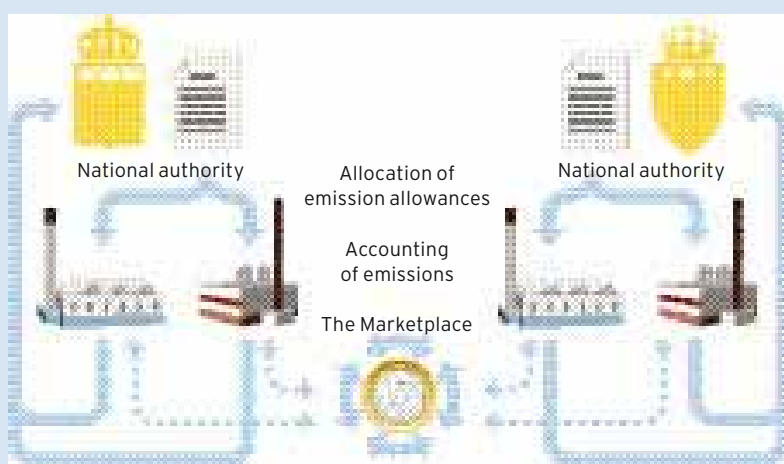
The changes have resulted in pressure to cut prices and costs, lower margins in the supply business and increased competition. Consumers now have the opportunity to freely choose their electricity suppliers and increased ability to customise price and risk profiles. Several studies, such as the Swedish Electricity and Gas Market Survey, have shown that the deregulated market in the Nordic countries is working well. Some other electricity markets in Europe have still not developed into liquid regional markets. In national markets, there is a high level of market concentration and customers have a narrow range of choice available. Price trends during the past two years have led to strong protests from customers, above all from the power-intensive industries in Europe. Against this background, the EU's anti-trust authority began a so-called Sector Inquiry into the electricity and gas markets in June 2005.

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Trading in emission allowances

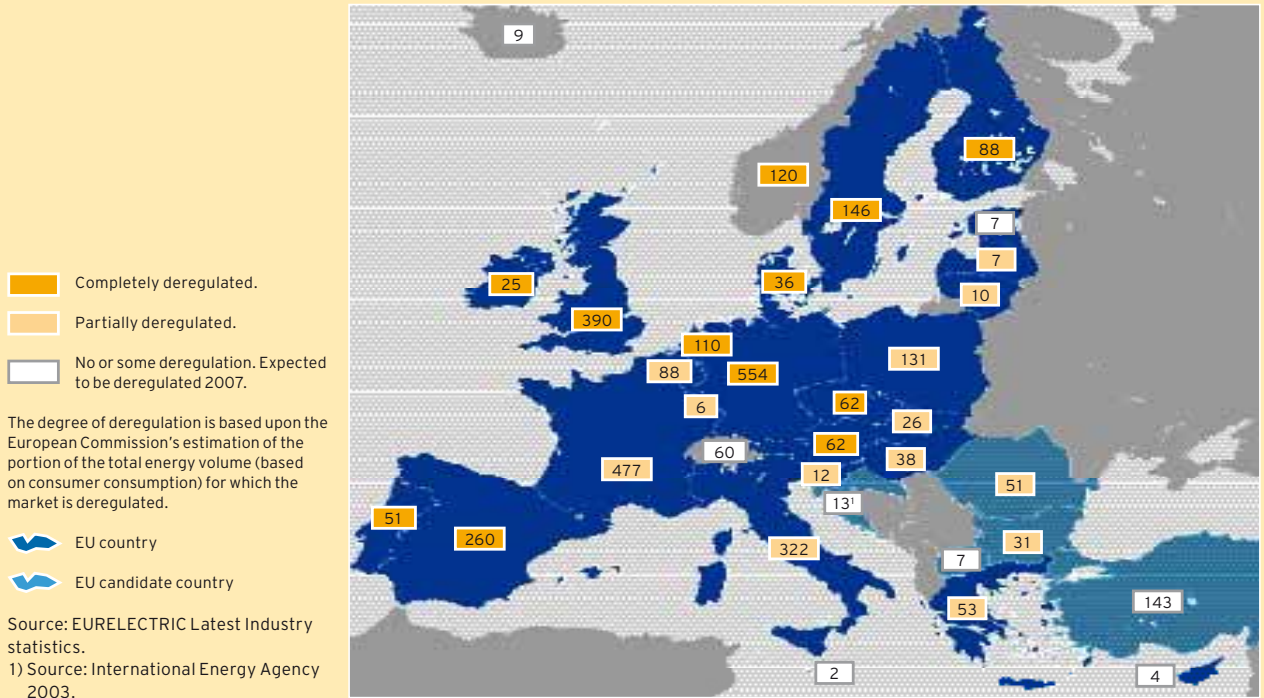
One of the most serious environmental problems of our time – the ongoing climate change – is an issue that not only dominates the European environmental discussion, but that also affects the global energy market to a large degree. According to the Kyoto Protocol, the EU mem-

The trading system for carbon dioxide allowances

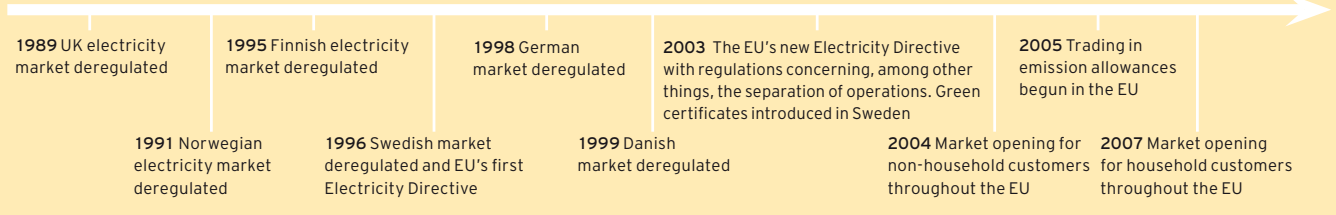


The different countries national allocation plans for emission allowances places a cap on how high emissions can be. Power plants and industrial installations then are allocated emission allowances up to the total cap. The emission allowances trading system creates opportunities for the company to prioritise the most economical method of reducing emissions. The producers can choose between implementing technical measures in order to lower emissions, purchasing additional emission allowances or refraining from producing altogether and instead selling their emission allowances on the market. This will ensure that the measures to reduce emissions are managed in the most cost-effective way.

The European electricity market (Consumption 2004, TWh)



Important events 1989–2007



ber states have committed their countries to reduce their total emissions of greenhouse gases by 8 per cent by 2012 as compared with 1990. In order to reduce the emissions that give rise to the greenhouse effect, the EU introduced a system for trading emission allowances in January 2005. The system currently covers carbon dioxide only. The first trading period runs between 2005 and 2007 and the second covers 2008–2012.

The purpose of the trading system is to contribute to attaining the EU's climate goals and living up to the commitments made under the Kyoto Protocol. This shall take place in a cost-efficient manner and in a way that is effective from a socio-economic perspective. This is achieved by capping the allocation of emission allowances to plants (with capacity >20 MW) that emit carbon dioxide. The cap limits emissions and as allowances become scarce, their market price will rise. Hence, an economic incentive is provided for increased investments in generation with lower carbon dioxide emissions. Companies will always have to balance the options of either buying emission allowances or taking

technical measures to reduce emissions, which results in choosing the most cost-effective method.

To begin with, the system only covers power plants and certain heavy industry segments. The conclusion after a year's trading in emission allowances is that the system has worked well. On the other hand, prices for emission allowances have been considerably higher than most analysts predicted, which has affected electricity prices more than expected (read more under Pricing on page 24).

Various methods for regulating network companies

As a rule, in the old monopoly structure, the entire value chain, consisting of production, transmission, distribution and supply, belonged to the same company without any obligations regarding disclosure. After deregulation, production and supply have been opened up for competition, while transmission and distribution, which are natural monopolies, have remained regulated.

Network operations are natural monopolies since it would not be economically rational from a societal point of view to introduce competition by, for example, building parallel sets of power lines. Network tariffs are therefore regulated and monitored by an independent authority. The principles that govern network regulation vary between countries and there are different regulatory models, such as returns-based regulation, cost-based regulation and incentive-based regulation. In addition, regulation can take place in two different ways: ex-ante regulation, where network tariffs (or at least a model for how tariffs are calculated) must be approved by the regulator prior to implementation, and ex-post regulation, where the network tariffs are examined by the regulator after they have been charged. The EU Commission recommends ex-ante regulation. Common to all legislation and monitoring models is that they must:

- Enable connection and use of the network for all users under non-discriminatory conditions
- Provide operators a reasonable return on invested capital

- Provide network operators the possibility and incentive to increase efficiency and reliability of supply
- Protect the customer from being abused by the monopoly

In Sweden, the regulator has developed a calculation model, the so-called network performance assessment model, to judge the fairness of the network companies' network tariffs. The model uses a fictitious network to assess network companies' performance. In principle, the calculated network performance provides, according to the model, the permitted income level. The relation between the calculated income level and actual income, the so-called charge ratio, then provides the basis for the regulator's examination of the company's network fees. The model and its application have been strongly questioned by many network companies and Vattenfall is of the opinion that the model can not be strictly applied for regulatory purpose in the manner that it has been applied to date.

In Finland, a new returns-based regulatory model was introduced in 2005.

Germany previously had voluntary industry agreements, but has now introduced ex-ante regulation. On 13 July, the new German energy industry act (EnWG) came into force. As a result, the new German network regulator, Bundesnetzagentur, could start its work. Initially, all tariff changes must be approved by the regulator, although transition to an incentive-based regulatory model is planned for 2007.

In Poland, network tariffs are regulated in accordance with an ex-ante cost plus model where tariffs must be approved prior to charging. As of 2005, capital costs are allowed to be included in the calculation of the total cost.

Projected electricity consumption

Countries/Regions	Electricity demand TWh, 2004	Projected annual growth, % p.a. 2002-2010
Cyprus and Malta	6	5.8 ²
Greece	53	4.7
Ireland	25	3.9
Iberia	311	3.6
Italy	322	3.1
Benelux	204	2.1
Other Eastern Europe ¹	162	2.0
UK	390	1.9
Austria	62	1.7
Poland	131	1.7 ³
France	477	1.6
Switzerland	60	1.4
Nordic Countries	397	0.6 ³
Germany	554	0.5 ³

Source: EURELECTRIC Latest Industry statistics.

1) Includes the Czech Republic, Estonia, Hungary, Latvia, Lithuania, the Slovak Republic and Slovenia.

2) Growth projections for Malta are estimated.

3) Vattenfall's projection.

Supply and demand in Europe's electricity markets

There are in total 240 million electricity customers in Europe, of which almost 20 per cent in Germany

Natural gas in Europe

Natural gas is the second largest energy source in Europe and accounted for about 24 per cent of the total energy supply in 2004. The majority of the gas comes from European fields, primarily in the North Sea and the Netherlands, but a considerable portion (about 41 per cent) is imported, the majority from Russia. The most important uses for natural gas are heating, electricity generation and industrial processes.

So far, the overwhelmingly dominant means of transporting gas for import is via pipeline to Europe. In recent years, however, the use of Liquefied Natural Gas (LNG) has increased dramatically, both globally and in Europe. LNG is produced in gas fields that lack a nearby market. The gas is cooled to a liquid form, then transferred to special tanker ships for transport to the importing country, where it must then be re-converted to a gaseous state and then fed into the ordinary gas network.

Swedish gas usage is relatively moderate, about 10 TWh per annum or about 2 per cent of total energy use. However, in the geographical area that has access to gas, primarily the west coast, gas accounts for about 15–20 per cent of energy use. Two major

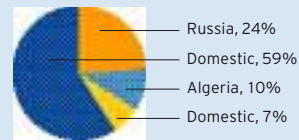
and about 12–13 per cent in the UK, France and Italy respectively. The total electricity consumption in Europe (EU 25 plus Norway and Switzerland) amounted to 3,150 TWh in 2004. Annual consumption is expected to increase by an average of 1.7 per cent until 2010, primarily in southern Europe and central eastern Europe.

There is still a certain level of surplus capacity in Europe, but this is being reduced as older power plants are taken out of operation and through increased consumption. In the Nordic countries increase in electricity consumption is projected to remain low. During a “normal year” i.e. when the so-called hydrological balance is normal, supply and demand is in balance. Upgrades of existing Swedish nuclear power plants and as from 2009 a fifth nuclear reactor in Finland will increase capacity. In addition, capacity in the area of renewable energy is expected to increase in coming years, in both Sweden and Norway.

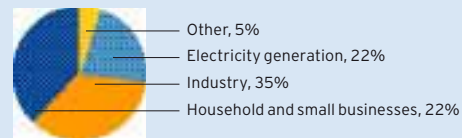
Growth in the German electricity market is also projected to be low. Wind power generation in Germany has increased significantly during recent years due to extensive subsidies. A large portion of fossil-based generation will need to be replaced or renewed in coming years.

The Polish electricity market is growing faster than the Nordic and German markets. Deregulation, however, has not advanced particularly fast and Poland will therefore need to up speed its deregulation process and upgrade power plants in accordance with stricter environmental regulations in coming years. There is also a great need to replace aging power plants over the next ten years.

Gas supply in Europe (2004)



Use of gas in Europe (2004)



gas projects are planned in proximity to Sweden. One involves Russian gas and a pipeline under the Baltic Sea to Germany. The other project is planned for southern Norway (Grenland and Oslo) with possible extensions to Sweden.

The Dutch, Belgian and French governments have taken the initiative to create a regional market in the Benelux countries. The reasons for this include optimising transmission capacity between the countries and increasing competition in otherwise strongly concentrated national markets.

Growing market for district heating

Environmentally-friendly heating alternatives are becoming increasingly important in the European energy market. This has led to an increase in district heating in recent years. It is primarily the Nordic countries and former Eastern Europe that have large markets for district heating. The four largest markets in Europe are Poland (105 TWh), Germany (90 TWh), Sweden (52 TWh) and the Czech Republic (41 TWh), which together represent more than half of the European district heating market.

The advantages of district heating are that it enables more efficient use of fuel and the use of fuel that has no other alternative use, such as logging remnants and waste, which has resulted in a successive decrease in carbon dioxide emissions. A large portion of district heating comes from CHP plants that also generate electricity. The EU believes that a considerable increase in combined heat and power will occur between now and 2010. The primary alternative to district heating is natural gas, mainly in Germany. The trend is for gas and district heating to replace oil. District heating plays a large role in reaching environmental goals in Europe and there is a belief that district heating will be prioritised in the future as well.

M&A ACTIVITIES PICKING UP MOMENTUM

After a couple of years' of inactivity, the trend was broken, with major structural transactions once again seen in the European energy market in 2005. During the year, a range of major transactions were carried out or initiated. In addition, Europe's largest electric utility, France's EDF, was floated in 2005.

When, in the beginning of the 1990s, the national power utilities were exposed to competition, profit margins dropped. This triggered a wave of strategic acquisitions across national boundaries. After deregulation and privatisation in England and Wales in the beginning of the 1990s, the privatised companies were acquired by primarily American energy companies. When these companies left Europe, the English utilities were acquired by German E.ON and RWE and by French EDF. Several southern European power utilities ventured in Latin American growth. Some electric utilities also broadened their operations to new product areas such as telecommunications.

Back to core business

This, primarily debt financed, expansion led to dramatically weakened balance sheets, rating downgrades and lessened confidence from the capital mar-

kets. Several utilities also failed to deliver promised synergies. In 2002/2003, the major utilities changed their strategies. They stopped growth investments and instead concentrated on consolidation and the integration of acquired companies as well as on reducing debt and divesting non core assets. This "back-to-basics" focus has been successful and the financial position of these utilities have improved.

Electricity and gas utilities have worked towards upstream integration in order to back up trading activities with physical assets. In some countries, politicians have tended to support development that has favoured national champions, i. e. large, integrated utilities, rather than creating a market with high competition and less market concentration.

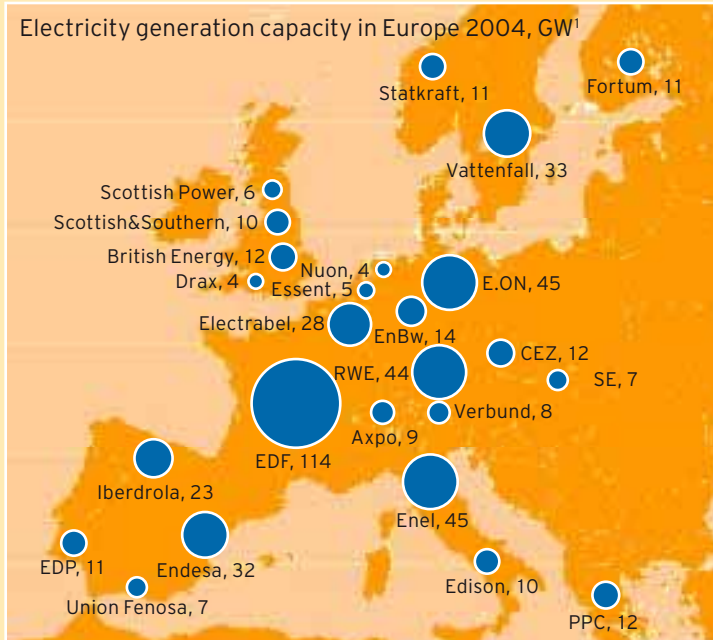
Resumed M&A and privatisation activity

Overall, utilities reported stronger operating profits

Major M&A transactions in the European energy market in 2005

Company	Acquisition target	Amount	Company	Divestments	Amount
Suez	49.9% of Belgian Electrabel. 100% holding after acquisition	EUR 11.2 billion	RWE	British and American water utilities; Thames Water and American Water	EUR 13–16 billion (sales not completed)
EDF and AEM	80% of Italian Edison	EDF EUR 7 billion AEM EUR 1.2 billion	E.ON	Real estate company Viterra	EUR 7 billion
Dong	Danish Elsam, E2, Nesa, Copenhagen Energy	not disclosed	Enel	Telecom operator Wind	EUR 12.4 billion
Vattenfall	Elsam 35.3%	SEK 10.3 billion	Endesa	Telecom operator Auna 32.7%	EUR 2.1 billion
Enel	66% of Slovakian SE	EUR 840 million	Union Fenosa	Telecom operator Auna 18.7%	EUR 1.2 billion
Gas Natural and Iberdrola	Bid for Spanish Endesa ¹	EUR 22.5 billion (not completed)	Scottish Power	Pacificorp (USA)	EUR 4 billion
EDF	Motor Columbus 17.3%	not disclosed	Fortum	Oil company Neste oil (85% spin-off)	EUR 1.4 (for 15% sold)
EnBW	16.8% of EVN. 30% holding after acquisition	not disclosed	EDF	Edenor (Argentina)	not disclosed
Fortum	E.ON Finland, 99.8%	EUR 744 million			

1) On 21 February 2006 German E.ON launched a counter bid for Endesa of EUR 29.1 billion.



1) The circles represent each player's total European generation capacity and have been placed in each player's 'home market'.

Vattenfall's market position

	Sweden	Finland	Germany	Poland
Electricity Generation	1 ⁴	1 ⁴	3	7 ¹
Electricity trading	Top 3 ⁴	Top 3 ⁴	Top 3	–
Distribution	2	2	4	6 ²
Supply	1	3	3	6 ²
District heating	4 ⁴	4 ⁴	1	1 ³

1) Market position number four if only privatised companies are included.
 2) Market position number one if only privatised companies are included.
 3) Only heat generation.
 4) In the Nordic countries.

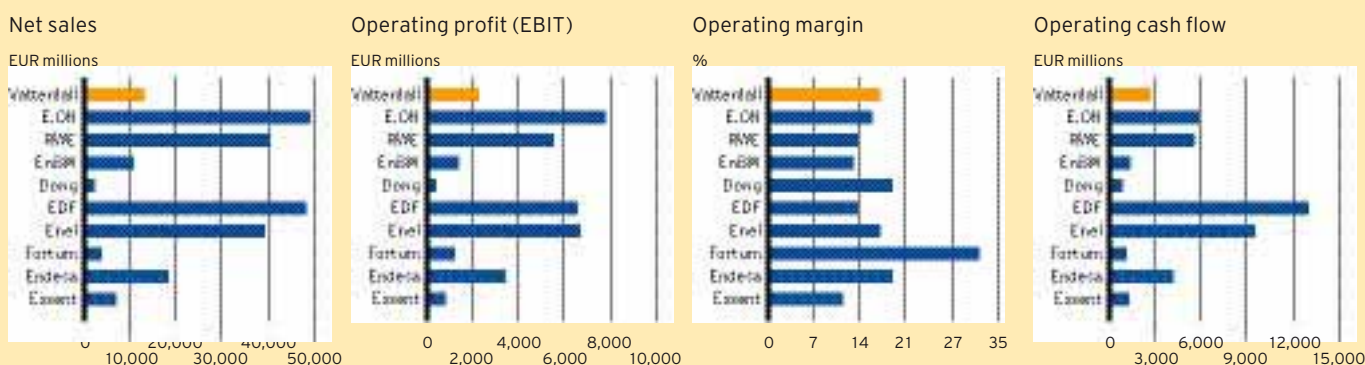
from their core energy operations during the year. Dramatically increased wholesale prices – in addition to cost-reductions and divestments – have improved cash flow and credit metrics. Pressure from shareholders to either raise dividends or to create further value through profitability and growth through acquisitions has increased.

While at the same time that utilities have streamlined their operations by divesting non-core businesses, several utilities began once again to act as buyers. Several M&A transactions have taken place or were initiated. French Suez purchased the outstanding minority shares in Belgian Electrabel, EDF finally managed to acquire 50 per cent of Italian Edison, Dong and Vattenfall bought Danish power assets, Enel acquired a majority holding in Slovakian Slovenske Elektrarne and in Spain, Gas Natural initiated a hostile takeover of Endesa in combination with the sale of major assets to Iberdrola. In 2005, the long-discussed and anticipated public offerings of the French

state-owned Gaz de France (GDF) and Electricité de France (EDF) took place. The French state now holds about 80 per cent of the shares in GDF and 85 per cent of EDF. The market introduction of EDF was the largest initial public offering in Europe in 2005. Vattenfall is now the only major non-listed power utility in the EU.

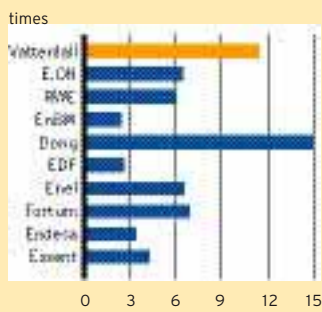
The expected privatisation wave in Eastern Europe after the EU enlargement has been delayed, due in part to uncertainty regarding regulations, investment requirements and the ability to rationalise operations through staff cutbacks. Czech CEZ, however, has expanded considerably and has clear ambitions to grow in the region. In the Netherlands, the government has renewed its bill regarding the demerger of the distribution network from the existing players. The timetable for this has been moved from 2007 to 2008. While this structural shift is gaining momentum, the EU has announced increased supervision with an eye towards limiting market concentration.

Comparison of certain European energy utilities (As of 30 September 2005 unless otherwise stated)

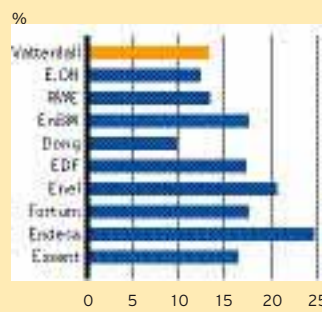


	Vattenfall	E.ON	RWE	EnBW	Dong
Country	Sweden	Germany	Germany	Germany	Denmark
Listing	Not listed 100% state owned	Listed	Listed	Listed (EDF owns 45.01%)	Not listed 100% state owned
Electricity sales 2004, TWh	186 (207 incl. deliveries to minority owners)	404 (Of which Europe 356)	296	100	-
Number of customers, millions	Electricity: 6 (incl. network)	Electricity: 22 Gas: 8	Electricity: 21 Gas: 10 Water: 15	Electricity: 5 Gas: 0.4	Gas: 0.1
Primary products	Electricity, heat	Electricity, gas	Electricity, gas, water	Electricity, gas, water	Gas, oil
Primary markets	Nordic Countries, Germany, Poland	Central Europe, UK, Nordic Countries, Russia	Germany, UK, Central and Eastern Europe	Germany, Central and Eastern Europe	Denmark, (Sweden, Germany, Netherlands)
Strategies	<p>Five strategic ambitions:</p> <ul style="list-style-type: none"> • Profitable growth in the neighbourhood area through both M&A and new production facilities • To become the Benchmark for the industry • To become Number One for the Customer • To become Number One for the Environment • To be the employer of choice 	<ul style="list-style-type: none"> • To Integrate and strengthen its electricity and gas operations • Reinforce its gas supply position through own gas fields and potentially LNG • Expansion in Russia, Italy and Spain 	<ul style="list-style-type: none"> • Focus on electricity and gas in its four primary regions • Divest water operations in UK and USA 	<ul style="list-style-type: none"> • Be number three in German energy market • Develop positions in Central and Eastern Europe • Develop its strategic alliance with EDF 	<ul style="list-style-type: none"> • Secure its gas supply • Integrate gas and electricity operations • International growth (Sweden, Germany, Netherlands)

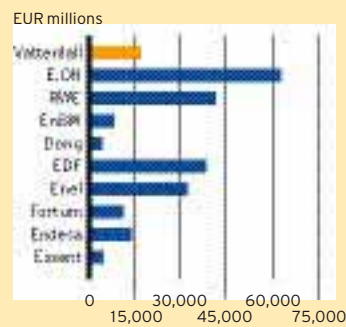
Net interest cover



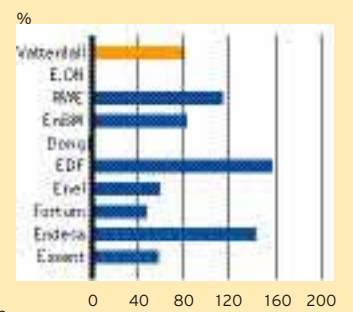
EBIT/Capital employed



Capital employed



Debt/equity ratio, net



EDF	Enel	Fortum	Endesa	Essent
France	Italy	Finland	Spain	Netherlands
Listed 2005 (French state owns 85%)	Listed (Italian state owns 32.2%)	Listed (Finnish state owns 51.5%)	Listed	Not listed
610	158 (258 incl. resellers)	62	181 (of which Europe 129)	49
Electricity: 42 (of which Europe 36)	Electricity: 30 Gas: 2 Telecom: 1.4	Electricity: 1.1	Electricity: 22 (of which Europe 21) Gas: 0.4	Electricity: 2.5 Gas: 1.9
Electricity	Electricity, gas	Electricity, heat	Electricity, gas, water	Electricity, gas, heat
France, UK, Germany, Italy, Eastern Europe	Italy, (Spain, France, Slovakia, Bulgaria, Rumania)	Nordic countries, Baltic States, Russia	Spain, Portugal, Latin America, Italy, France	Netherlands, Germany, Belgium
<ul style="list-style-type: none"> Stabilise ownership structure in its foreign holdings Divest non-core businesses Improve productivity Invest in gas assets in order to be able to offer customers both electricity and gas 	<ul style="list-style-type: none"> Focus on core energy business (water and telecom divested) Expansion in Eastern Europe Convert all oil-fired power plants to gas or coal 	<ul style="list-style-type: none"> Expand in Nordic Countries, Baltic States, Poland and Russia Oil and shipping operations separated 2005 	<ul style="list-style-type: none"> Consolidate its position in Spain and Latin America Develop activities in France and Italy Telecom operations have been divested 	<ul style="list-style-type: none"> Strengthen its core operations Selective growth in the neighbourhood area Divest non-core operations

Rolling 12-month values as of 30 September 2005 for all companies except EDF, Endesa and Essent, which are as of 30 June 2005.

Sources:

Diagram values: Barclay's Capital.
Electricity sales, Number of customers, Primary products, Primary markets, Strategies: Vattenfall research, annual reports, interim reports and company homepages.

Definitions:

Total Capital = interest-bearing liabilities + equity incl. minority interests. Operating cash flow = FFO +/- changes in working capital.



TO BECOME THE BENCHMARK FOR THE INDUSTRY

“FORSMARK IS A WORLD LEADER, NO MATTER HOW YOU LOOK AT IT”

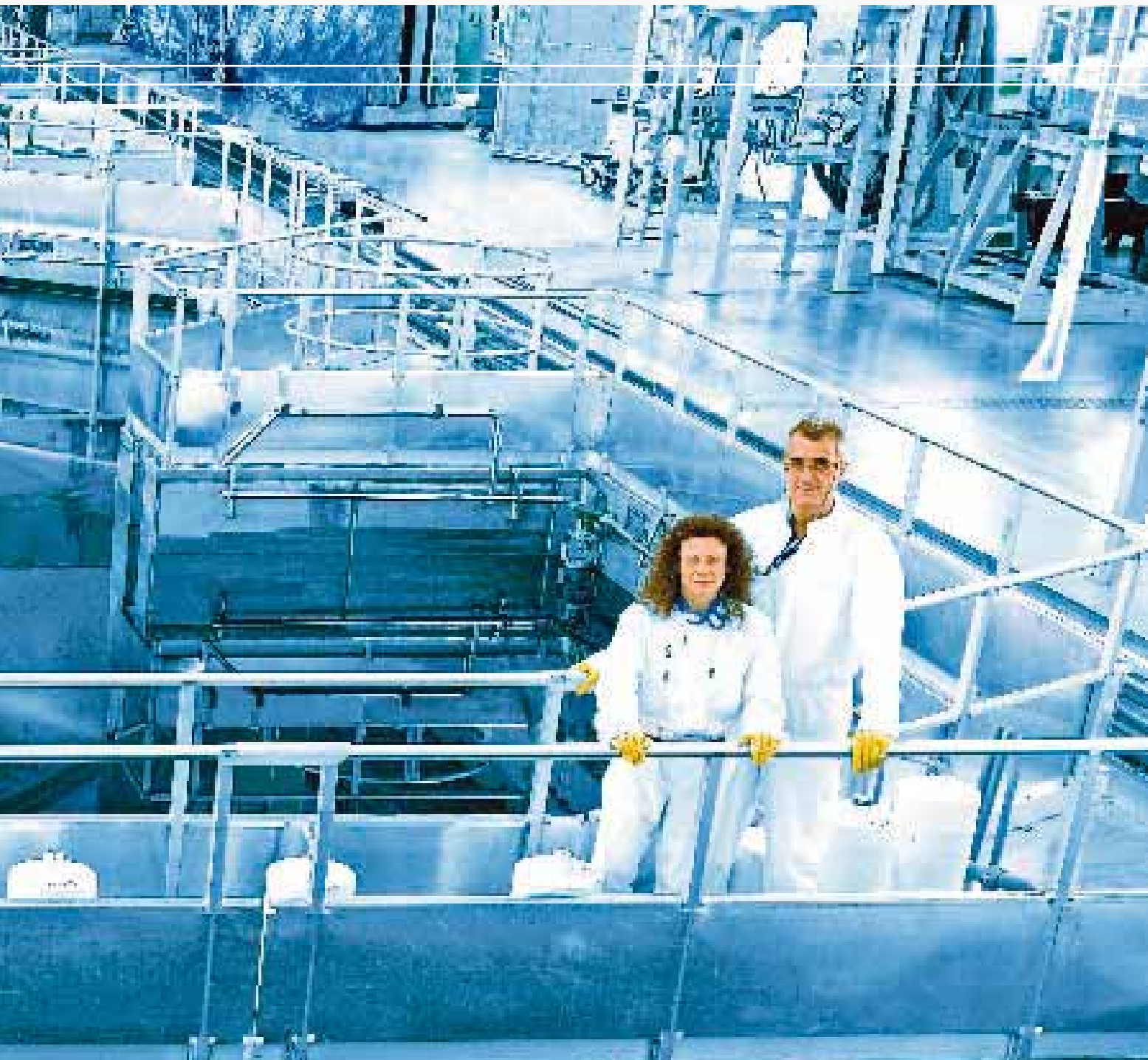
Deep down in the reactor pool the heart of Forsmark is concealed: the reactor. Here, every second, 1,600 litres of water are boiled into steam for further transport to the turbine. After some twenty years in use, all the trends are positive for Forsmark – a model facility in the nuclear power industry.

In 2005, availability for the three reactors was almost 93 per cent on average and electricity generation almost reached 25 TWh. That corresponds to more than a sixth of the electricity that Sweden needs.

“We are among the world leaders, both with regard to cost per produced unit and low environmental impact,” says Claes-Göran Runermark, Deputy Managing Director of Forsmark.

“Before Forsmark was built, we conducted a benchmarking project and saw how others, at the best nuclear reactors in world, worked.”

That paid off. Ever since the middle of the 1980s, Forsmark’s three reactors have delivered far more than was predicted. And now, Vattenfall is investing SEK 6 billion to hone the reactors even further. The facilities are to be modernised, both with regard to technology



and safety. The turbines in the different units, for example, were replaced between 2004 and 2006. An increase in generation capacity is planned to be carried out 2008–2010, assuming the Swedish government approves the necessary permit. All in all, these measures can result in increased generation capacity corresponding to more than 4 TWh.

Forsmark is also a leader in environmental issues: the facility was the first in the world, for example, to supply electricity with a certified environmental declaration and is also certified in accordance with ISO 14001.

One key component of the facility's success is, of course, the staff. The level of expertise is very high among the 800 people working here and many of them have long experience and are highly educated.

Eva Petterson, for example, began as a station technician in 1988. Today, she is one of the country's few female reactor operators. She is responsible for supervising the operation and safety of the reactor facility.

"It's a very special job, but very enjoyable too," says Eva.

Benchmark for the industry:

The Vattenfall Group's Key Performance Indicators

In accordance with our ambition to serve as a benchmark for our industry, so-called Key Performance Indicators have been defined for each business unit and, as of 2006, these will be followed up monthly at Group level.

Generation

Cost per MW, availability and average sales price

Electricity Networks

Number of disruptions, operating costs and maintenance investments

Sales

Customer satisfaction index, number of customers, cost-to-serve per customer and margin per customer segment

Heat

Cost per MW, availability and average sales price

LARGE PRICE DIFFERENCES BETWEEN REGIONS BUT HIGHER CORRELATION

In 2005, European electricity wholesale prices rose sharply, mainly due to increased fuel costs and the new trading system for emission allowances. But during the year prices in Europe also exhibited higher correlation.

Electricity wholesale prices are still dependent on local production conditions, although price correlations between countries have increased.

Previously, water supply was the factor with the greatest impact on price development in the Nordic countries, as hydro power represents a very large part of power generation. Despite good water supply, in 2005 we saw Nordic electricity prices climb in unison with prices in Central Europe as fossil-based power in Denmark and Finland from time to time determines prices in the Nordic market. International trade in coal, oil and gas has contributed to increased covariance, primarily in countries with similar production. Actual price levels still vary between different regions, but prices in the European electricity market are levelling out to an increasing extent. If cross-border

transmission capacities between countries are further improved, this trend will continue.

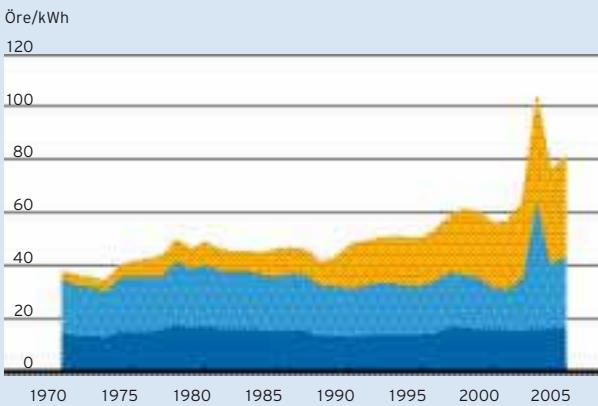
Supply and demand determine electricity prices

In a well functioning market, it is market equilibrium, i.e. the point where supply meets demand, that determines the wholesale price. Production facilities are taken into operation in accordance with the 'merit order dispatch' system, which means that the plant with the lowest variable costs is the first to be taken into operation. Supply and demand therefore determine which type of production is used.

Competition in the electricity market leads to pricing based on this wholesale price, which leads to:

- *Effective resource allocation.* The most cost efficient

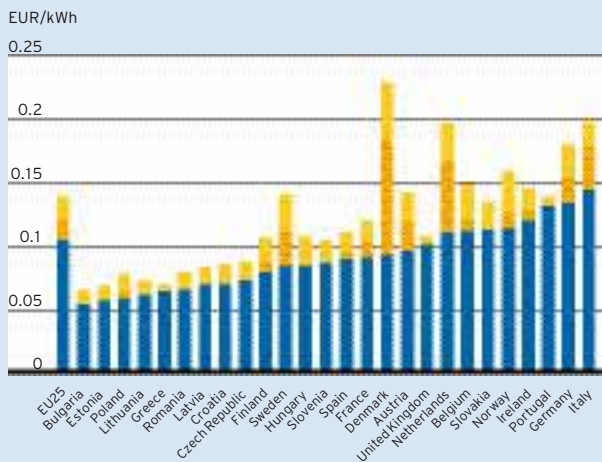
Electricity prices and taxes in Sweden



Legend: Tax + green certificate, Electricity, Network tariffs

20 000 kWh/year, variable prices, in 1990 monetary value
Source: SCB, Svensk Energi

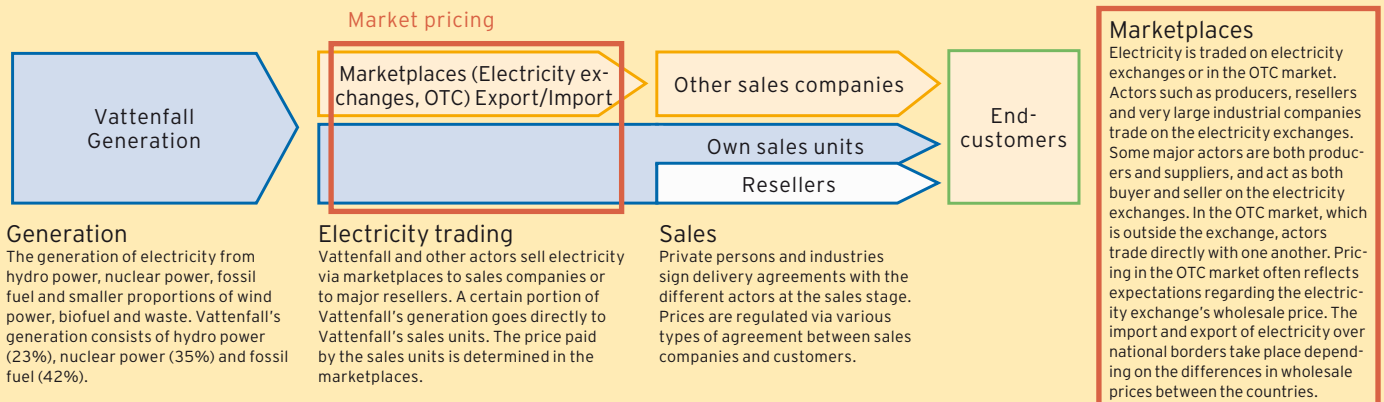
Household electricity prices in Europe



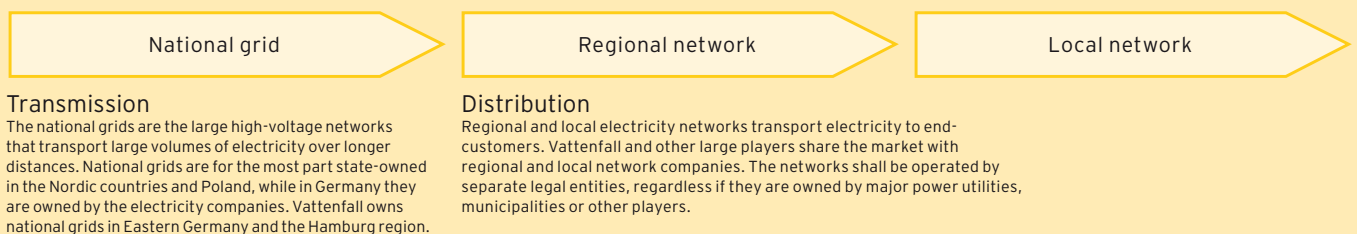
Legend: VAT, Tax, Electricity + network tariffs

Household customers 3,500 kWh/year, January 2005
Source: Eurostat

Vattenfall and the electricity value chain



Distribution chain



power sources are taken into operation first and more expensive power sources only when demand requires it. Marginal pricing ensures that every electricity generation plant covers – at least – its variable generation costs.

- *Clear signals for future investments.* As the price is set for the last generation utilised, generators receive a clear signal as to whether future investments are economically viable.
- *Increased transparency.* A prerequisite for a well-functioning market is that all bids are anonymous. If this was not the case, an electricity producer with low variable costs could “guess” other producers’ costs, risking market manipulation.
- *All players get the same price.* If all electricity sellers are paid the same price in a transparent system, the electricity sellers compete on equal terms, regardless how the electricity is generated. This prevents electricity sellers, which have access to power sources with low variable cost, from dumping electricity prices. Otherwise this could force sellers without own electricity production assets to abandon the market.
- *Fair pricing for consumers.* As the variable costs vary between different types of production, it would be difficult to determine which customers should get a “cheap” price and which customers should get an

“expensive” price, as the low cost production does not suffice to meet demand.

In the Nordic countries and in Germany, extensive trading takes place on the Nord Pool and EEX electricity exchanges, which set market prices daily. Forward trading also takes place on the electricity exchanges and reflects market expectations for future electricity wholesale prices. In the forward market, the price is also set as a function of supply and demand, but the price applies only to the individual contract. Good liquidity in the forward market is crucial since wholesale electricity prices are largely based on the forward prices. Nord Pool’s liquidity is good. On EEX traded volumes and liquidity have increased, but are still not on a par with Nord Pool. In Germany, a large part of the volumes are traded outside the EEX, on the so-called OTC (Over The Counter) market. In practice, however, there is no price difference between electricity exchange prices and OTC prices for long-term standard contracts.

Network business needs stable regulatory framework

Network business, i.e. the transport of electricity in the electricity networks, is regulated and supervised by special authorities. From the customer perspective

it is important that the regulatory models provide stable conditions. Returns on capital must be sufficient to provide incentive for maintenance and new investments. (Different regulatory models are described on page 14.)

Emission allowances affect electricity prices

Trading in emission allowances has functioned well, but prices have been higher than most analysts expected. The average price in 2005 was 16 EUR/tonne with a peak of about 29 EUR/tonne in July. High oil and gas prices during the year led to increased use of coal in electricity generation. This increased demand for – and the price of – emission

allowances, which in turn led to higher electricity prices.

As there is a market price for emission allowances (regardless if the emission allowances have been purchased or received free of charge), electricity producers must include this as an opportunity cost. The emission allowance is either used to generate electricity, which creates emissions, or sold in the market. As more players become involved in the selling of emission allowances, prices will be moderated and eventually stabilise. However, uncertainty about which allocation principles will apply to the next trading period, 2008–2012, is great, and it is therefore difficult to make any reliable price forecasts.

Electricity price development

Spot price development

In 2005, average base-load spot prices on the Nordic electricity exchange, Nord Pool, were slightly higher than in 2004, EUR 29.3 per MWh, compared with EUR 28.9 per MWh.

On the EEX, the German electricity exchange, average spot prices were about 61 per cent higher than in 2004, EUR 46.0 per MWh compared with EUR 28.5 per MWh. While in 2004, the Nordic and German spot prices were on roughly the same average level, German spot prices rose sharply in 2005 and hence were on a considerably higher level than the Nordic prices.

In Poland the average spot prices on POLPX, the Polish electricity exchange, were somewhat higher in 2005 than in 2004, PLN 114 per MWh compared with PLN 110 per MWh.

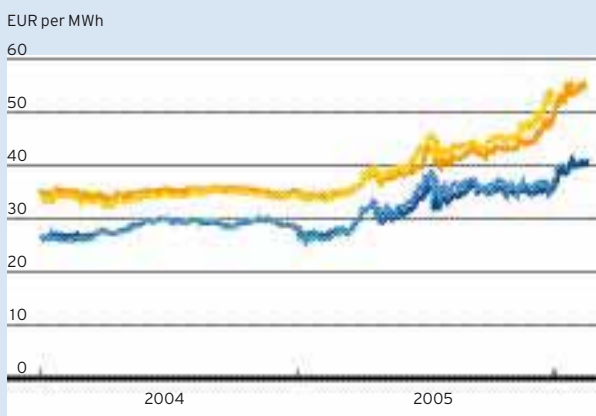


Legend for Spot Price Development:
 ■ Nord Pool (SYSEUR) 2005
 ■ Nord Pool (SYSEUR) 2004
 ■ EEX 2005
 ■ EEX 2004

Forward price development

In the Nordic countries, forward contract prices (base-load) for 2006 and 2007 closed at EUR 37.4 per MWh and EUR 35.3 per MWh respectively, compared with average closing prices in 2004 of slightly more than EUR 28 per MWh. Corresponding forward contracts in Germany closed at EUR 53.6 per MWh and EUR 48.9 per MWh respectively, compared with average closing prices in 2004 of EUR 34.1 per MWh and EUR 34.9 per MWh respectively. The high electricity wholesale prices of 2005 were chiefly due to high fuel prices and the high prices of emission allowances for carbon dioxide.

Correlation between the Nordic countries and Germany is high but the German price levels are significantly higher. In Poland, the forward market is still at the development stage with low turnover and liquidity.



Legend for Forward Price Development:
 ■ Nordic Countries 2006
 ■ Nordic Countries 2007
 ■ Germany 2006
 ■ Germany 2007

Subsidies for electricity based on renewable energy

In order to increase the proportion of renewable energy, many European countries have introduced financial subsidies that favour electricity generation based on, for example, wind power and other renewable energy sources.

With the support of the German EEG law (Erneubare-Energien-Gesetz), the German government has decided to increase the proportion of renewable energy in electricity generation to 20 per cent by 2020. Electricity from renewable energy sources is subsidised and is therefore outside the market and its marginal pricing. The EEG regulations

stipulate that all renewable energy shall be prioritised in the transmission system.

In Sweden, a green certificate system was introduced in 2003. Generators receive one green certificate for every MWh of electricity produced using renewable energy sources and delivered to the network. Electricity consumers must buy a certain number of green certificates. This creates the necessary business conditions for this type of production and enables investments.

In Sweden the goal is to produce 10 TWh of electricity from renewable energy sources by 2010. The Swedish government has proposed that the system be extended to 2030.

As of this year, Poland introduced green certificates to be traded via the electricity exchange or bilaterally. The electricity producers are obliged to ensure that at least 3.1 per cent of their sales to end-customers are based on renewable energy. This proportion will be increased gradually until 2010.

Coal, oil, gas and emission allowance price trends

In 2005 electricity wholesale prices rose sharply in Europe during 2005, primarily due to dry weather in Southern Europe and record high oil and gas prices which have led to increased use of coal in electricity generation. This drove up the price of emission allowances for carbon dioxide and thus electricity wholesale prices.

In 2005, the price of emission allowances was initially below EUR 10 per tonne but has since risen dramatically to a high in July of EUR 29 per tonne. On average for the year, the price of emission allowances was EUR 16 per tonne.



- Oil (USD/bbl), Brent Front Month
- Coal (USD/t), API2, Front Year
- Emission allowances CO₂ (EUR/t), Front Year
- Gas (EUR/MWh), TTW, Front Year

Heat prices and price trends

In Sweden, district heating prices have risen in recent years from low levels to new levels, where they have stabilised. Financially competitive alternatives, such as geothermal heat, are putting pressure on prices. The price trend for district heating in Sweden will not be affected by so-called green tax balancing as environmental performance has been considerably improved in recent years. District heating is well adapted and judged to remain a competitive alternative in the regional European energy markets due, among other things, to the fact that environmentally-profiled economic means of control and customer preferences will favour such heating alternatives.

INCREASED INVESTMENTS IN RENEWABLE ENERGY SOURCES

Vattenfall's ambition is to have a leading role in renewable electricity and heat production. In 2005, measures included the decision to build one of Europe's largest wind power farms. Vattenfall's customer offering also includes energy services and advice to contribute to more efficient energy use.

Renewable energy sources will play an increasingly important role in the future. Increasing fossil fuel prices and various subsidies for renewable energy sources will provide increasingly favourable business conditions for this development.

Of current world energy consumption, a little over 13 per cent is derived from renewable sources and about 7 per cent from nuclear power. The remaining roughly 80 per cent comes from fossil fuel.

Of the renewable energy sources, biofuel is by far the most common, hydropower comes second, while at this time the other sources represent a very small proportion of energy consumption. The EU's goal is for 12 per cent of all energy used in 2010 to stem from renewable energy sources, compared with 6 per cent in 1997. As for electricity generation, the goal is 22.1 per cent compared with 13.9 per cent in 1997.

Vattenfall drives development

Vattenfall's ambition is to have a leading role in renewable electricity and heat generation where the ecological, technical and commercial prerequisites are present – primarily within hydro power, biofuel-fired plants and wind power. Vattenfall, by standing at the forefront and driving development forward within the framework of its commercial activities, can contribute to ecologically and economically sustainable development. At the annual general meeting in 2005 an addition was made to Vattenfall's articles of association stating that “the Company shall, within the framework of businesslike operations, be the leading company in the transition to an ecologically and economically sustainable Swedish energy supply”. The motivation for the change states that the company, under certain conditions, ought to be able to provide 5 TWh of new electricity generation from renewable energy from the 2002 level by 2010. Vattenfall's investments in renewable energy generation in the Nordic Countries since 2002 is shown in the table to the left.

The total proportion of renewable energy in Vattenfall's heat generation is currently 19.4 per cent (18.3) while the figure for electricity generation is 23.9 per cent (20.4). The proportion of electricity generated by the Group using renewable energy sources, excluding hydro power, is 0.3 per cent (0.4).

Returns on Vattenfall's investments in renewable generation in the Nordic Countries 2005

	Wind power	Hydro power	Heat	Total
Investments, SEK millions	18.3	65.9	512.3	596.5
Tangible non-current assets, SEK millions	379.9	277.6	3,754.9	4,412.4
Return on tangible non-current assets, %	1.0	25.3	7.6	8.2

Vattenfall's renewable generation in the Nordic Countries (GWh)

	2002	2003	2004	2005
Generated electricity				
Hydro power	35,600	28,100	33,600	39,800
–of which small-scale hydro power ¹	218.6	160.8	225.8	189.7
Wind power ¹	50.4	55.0	58.9	54.4
Biofuel ¹	525.0	503.0	497.0	547.0
Total electricity	36,175	28,658	34,156	40,401
Generated heat				
Biofuel ¹	4,020	3,844	4,506	4,577
Waste ²	700	700	700	900
Total heat	4,720	4,544	5,206	5,477
Total renewable generation	40,895	33,202	39,362	45,878

1) Sweden and Finland

2) Sweden

Renewable energy within Vattenfall

Hydro power

In the Nordic countries, Vattenfall has about one hundred hydro power plants, about half of which are small-scale units. In an average year, these hydro power plants generate about 33 TWh. In Germany, the Group owns 14 hydro power plants, 8 of which are pumped storage power plants.

Renewable fuel

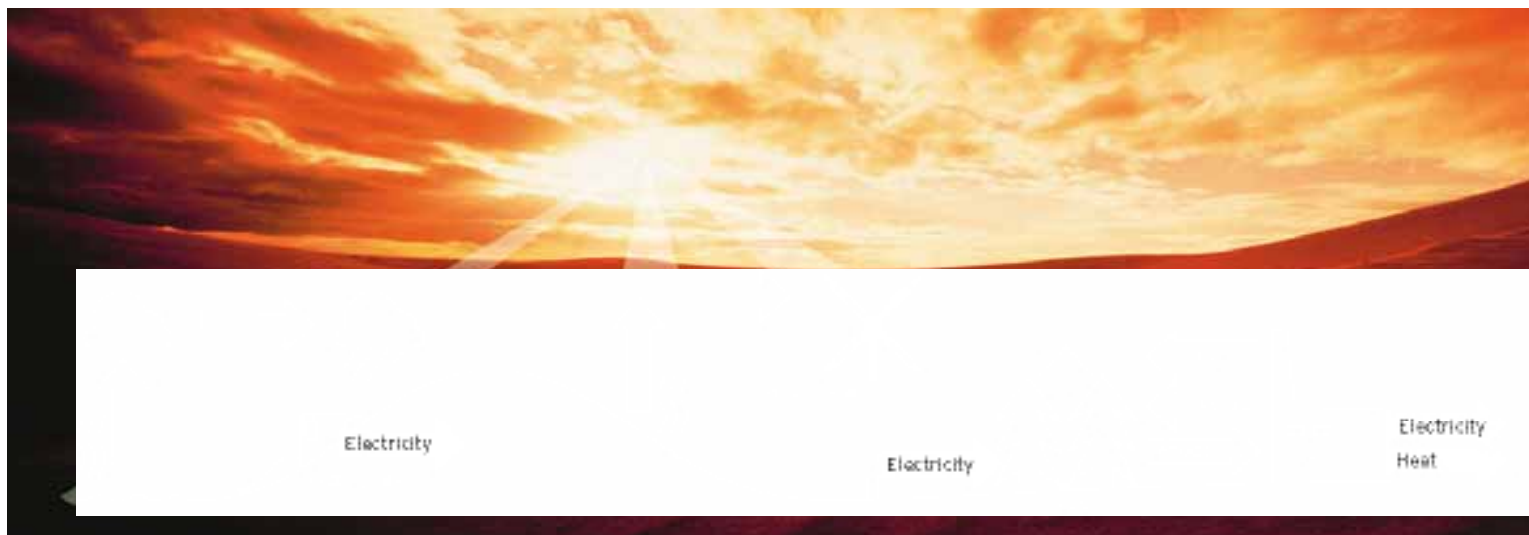
Vattenfall operates almost 90 plants that use renewable fuel and is one of the world's largest buyers and users of biofuel for energy generation. In Vattenfall's Nordic heat and combined heating and

power production, biofuel comprises about 55 per cent of the energy supply.

Wind power

Vattenfall has 49 wind power turbines in the Nordic countries, which together generate approximately 54.4 GWh. In Germany, Vattenfall has 3 wind power turbines, which generate 4 GWh. With the investment in the offshore wind power park at Lillgrund and the acquisition of Danish wind power turbines, Vattenfall's generation capacity will multiply many times over and we will be one of Europe's largest wind power producers.





Electricity

Electricity

Electricity
Heat

Renewable energy sources make use of solar radiation falling on the Earth and do not consume finite natural resources.

Sweden's largest wind power farm

In 2005, Vattenfall made the decision to build a wind power park at Lillgrund. 48 wind turbines are planned, seven kilometres from the coast of Skåne, just south-east of Öresund Bridge. Lillgrund represents the largest investment in wind power in Sweden and one of the largest in Europe. The park will have a maximum capacity of 110 MW, corresponding to an electricity output of slightly more than 0.3 TWh. These facilities are estimated to be in operation in 2007.

Vattenfall has also acquired the rights to develop the Swedish part of Kriegers Flak, an area in the southern part of the Baltic Sea, where there is the opportunity to build one of the world's largest wind power farms with a total of 100–150 wind turbines providing a generation capacity of about 1.6 TWh per annum. This project is currently under appraisal.

In 2006, we expect to be able to incorporate more than 300 MW of wind power within the scope of our Danish acquisitions.

Maintaining existing facilities

In addition to building new power plants we also continually develop our existing facilities. As an example, the maintenance programme currently underway at our Swedish hydro power plants will

ensure continued reliability and increased capacity over the coming years.

With great dedication, Vattenfall has worked with bio energy for 30 years and has developed technologies, installations and different types of biofuel. In Hamburg and Uppsala, we have recently built ultra-modern waste incinerators that convert waste into energy. In Germany and Warsaw, we are developing combined combustion methods where different bio-fuels are mixed with coal.

As well as pursuing the commercial development of wind power, hydro power and biofuel, Vattenfall also actively participates in national and European research projects in future production technologies, such as wave power, fuel cells, black liquor gasification, geothermal power and solar power.

Helping private customers choose the right agreement

Vattenfall's ambition is to be the power company that sets the standard for customers. Setting the standard has two aspects. Vattenfall helps customers to:

- choose the right type of electricity agreement
- reduce electricity consumption

In the Nordic countries, Vattenfall encourages private

electricity customers to actively choose which of the three types of contracts – fixed price contract, variable price contract or the contract until further notice – best suits their needs and risk profile. Vattenfall's role here is to clearly describe the different types of contracts and their characteristics for customers.

As for helping customers reduce their electricity consumption, this is achieved in part with concrete advice on how to reduce electricity consumption and in part by adapting our pricing so as not to disfavour customers who reduce their consumption.

Previously, higher annual consumption led to a lower price per kWh than lower annual consumption. For customers that reduced their electricity consumption, this could entail an increased price per kWh. In order to avoid this effect, during the spring of 2005 a new pricing model was introduced so that customers with a lower annual consumption pay the same unit price as larger consumers.

Publications advise on optimisation

Vattenfall's advice on how to reduce electricity consumption is available on the company's website and in printed form. These publications describe how much electricity different household appliances consume and how customers can use simple means to reduce household electricity consumption. Naturally, we describe how heating a home affects electricity consumption and how customers can influence their overall electricity consumption.

Vattenfall's approach in providing this advice to customers is to view electricity as a product which in many cases can simplify daily tasks and improve the quality of life for individuals, but which can also be used in an economic manner.

Tailored solutions for major customers

Vattenfall wants to contribute to strengthening its customers' competitive edge by tailoring the solutions we offer within electricity and energy and process optimisation. As basic industries operate in a global and very competitive market, it is important for Vattenfall, in a professional manner, to be able to

help strengthen these customers' competitive edge, so that they can continue to develop strongly in the geographic areas where Vattenfall operates.

Vattenfall collaborates with customers in formulating suitable strategies and risk policies as regards electricity agreements. The company also offers market analysis, consulting services and active electricity contract portfolio management to major customers.

The right combination of long and short-term delivery agreements provides the customer with predictable energy costs on market terms. Market pricing favours customers who have the opportunity to reduce their consumption when the price is high, such as during peak load periods or capacity peaks. This contributes to effective use of the power system.

Energy analyses for industry

Vattenfall successfully collaborates with major industrial customers on projects to reduce energy consumption and optimise customers' manufacturing processes. We have, for example, helped customers introduce new energy management systems within the framework of the Swedish state's programme for energy optimisation. Vattenfall also conducts energy analyses, wherein we identify measures that lead to reduced energy consumption or improved energy use. In several cases, Vattenfall has taken matters a step further and assumed full responsibility for financing and implementing the optimisation measures identified in an energy analysis: project planning, technical equipment procurement, installation and operation.

Reduced carbon dioxide emissions for German customers

Vattenfall works in a similar manner in Germany. For example, in 2000 we signed a 12-year energy optimisation agreement with a hospital in Berlin. So far the project has resulted in cost-savings in excess of 28 per cent and a reduction in carbon dioxide emissions of 26 per cent.

In 2005, an energy optimisation project was conducted with a large furniture chain with resultant cost-savings of almost 10 per cent.

ENERGY ON FUTURE GENERATIONS' TERMS

Vattenfall's operations are based on long-term environmental considerations. As far as possible, we try to meet today's energy needs without risking future generations' opportunities to meet their needs. With goal-oriented work methods, Vattenfall introduces solutions that contribute to sustainable societal development.

Within the energy sector, an investment cycle usually lasts about 30 to 40 years. With goal-oriented and long-term R&D work, Vattenfall can create greater freedom of choice for both our customers and society at large.

Our responsibility

Vattenfall takes responsibility for and contributes to developing and providing energy solutions suited to sustainable societal development. However, it is not enough to only consider the environmental consequences of an individual energy solution. An energy system must be sustainable not only from an environmental perspective but also from social and economic perspectives.

In our operations, this is largely about a number of gradual improvements to increase efficiency and reduce environmental impact. We must always begin with the actual circumstances and compare all aspects of the different courses of action.

Vattenfall's contribution to sustainable development

Vattenfall works intensively with a number of different solutions such as renewable energy sources and investments in new and innovative technologies – the carbon dioxide-free power plant, for example. Investments in existing plants that do not cause any carbon dioxide emissions, such as hydro power and nuclear power, are important measures, as is reducing the emissions of fossil-fired power plants. The company's growth creates the requisites to participate in and influence development. We are pushing for the development of a global trading system for carbon

dioxide, which will avoid the distorted competition that a regional trading system creates. We also want to create better conditions for our customers to be able to use our products – electricity and heat – in an effective manner. Vattenfall shall stand for innovation in the European energy sector, particularly in terms of sustainability work.

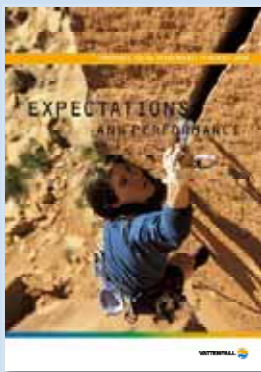
On the opposite page we provide examples of the results of our efforts.

Sustainability work – part of everyday life

In the development of energy solutions suited to sustainable societal development, we need to consider the big picture, not just the breakthroughs. Day-to-day work to improve and optimise operations is the work that will provide lasting results. Responsibility for sustainability work at Vattenfall is not held by a particular department or organisation, instead it is governed at Group level along the same lines as other strategic issues. Day-to-day sustainability work is conducted at Business Group level, making it a natural part of Vattenfall's work; the entire company is responsible for achieving positive effects for society and the environment.

In order to be number one for the environment, the customer and the economy, we must continually work to reduce the environmental impact of our operations. We need to squeeze out even more usable energy from fuels, reduce energy losses and secure availability for our customers. If we are to be a positive force in society, then we must act to ensure the company's long-term profitability.

Corporate Social Responsibility report



Each year Vattenfall publishes a sustainability report. The aim of this report is to provide a balanced picture of Vattenfall's efforts as regards the environment, society and the economy. Vattenfall's sustainability reporting follows the GRI (Global Reporting Initiative) guidelines, the most widely used standard for sustainability reports. The Corporate Social Responsibility Report (in English) and offprints (in Swedish, German, Finnish and Polish) can be downloaded from www.vattenfall.com. There you can also order printed copies.

Development and results in recent years

Environment

- Since 1997, more than SEK 8 billion has been invested in renewable energy sources and production capacity in the Nordic countries alone.
- Several major investment decisions on renewable energy sources were recently made concerning, for example, hydro power, off-shore wind power and several biofuel and waste-fired plants.
- The work to optimise our plants has continued to produce results, leading to reduced emissions and more efficient use of resources.
- Combined Heat and Power (CHP) plant utilisation has been improved.
- Extensive development projects for carbon dioxide-free power generation have been launched – work with a pilot installation for a "carbon dioxide-free coal-fired power plant" has begun.
- Increased combined combustion of biofuel and coal has replaced other fossil fuels in certain plants.
- Participation in several research projects in the EU and at national level with a focus on, for example, wave power, hydrogen gas, black liquor gasification, fuel cells, geothermal power and solar energy.
- Work to restore mining areas in Germany continues. The land area restored so far corresponds to the new open-cast mine land area.
- Vattenfall has taken an active role in finding long-term solutions to the climate change issue. The issue has been lobbied within, for example, the World Economic Forum, G8 and the electricity sector's collaborative organisations with an emphasis on the energy sector's considerable role in making progress.
- TIME Magazine named Lars G. Josefsson one of its "European Heroes 2005" for his efforts on the issue of climate change.

Society

- A five-year SEK 10 billion investment programme was initiated in Sweden in 2004 with the aim of increasing network reliability. New network monitoring systems have been introduced in Sweden and Finland.
- In Sweden, work has begun on the SEK 24 billion nuclear power investment programme and the SEK 6.5 billion hydro power investment programme. In Germany, the work to optimise and adjust safety levels at nuclear power plants continues.
- Vattenfall takes responsibility for development in the regions where we operate. Examples of this include the projects "Inland power" in northern Sweden, "Initiative for employment" in Germany and "Switch to Silesia" in Silesia, Poland.
- Remote-readable electricity meter installations are now underway in Finland and Sweden. The aim is for all customers to have remote-readable meters by 2009.
- The Group's customer service via telephone has been improved. A customer ombudsman has been appointed in Sweden.
- The "My Opinion" employee survey has shown that our employees are more satisfied than ever with their work situation.
- The "Young Academics" project continues. Of the 45 newly graduated academics that completed the project at the beginning of 2005, 37 have continued their employment at Vattenfall. In 2006, 20 new graduates will be offered employment on a project basis.

Economy

For figures and financial performance in accordance with the GRI guidelines, please refer to Vattenfall's Corporate Social Responsibility Report 2004. The corporate social responsibility report for 2005 will be published in September 2006.