VATTENFALL

- A Leading European Energy Company

Lars G. Josefsson, CEO

Vattenfall Capital Markets Day, October 5th, 2004

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- Organisational changes 2004
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- Poland – Achievements
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Achievements & Recent Development

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Achievements in H1 2004

- Continued Financial Consolidation
  - Improved profit, strong cash flow and significant debt reduction
- German consolidation near completion
  - Business units structure fully implemented
  - Cost reduction according to plan
- Poland – continued sucessful restructuring work and profit improvement
- Prudent hedging has sustained earnings. New integrated power trading organisation in place
- Excellent plant performance and overall improved generation output

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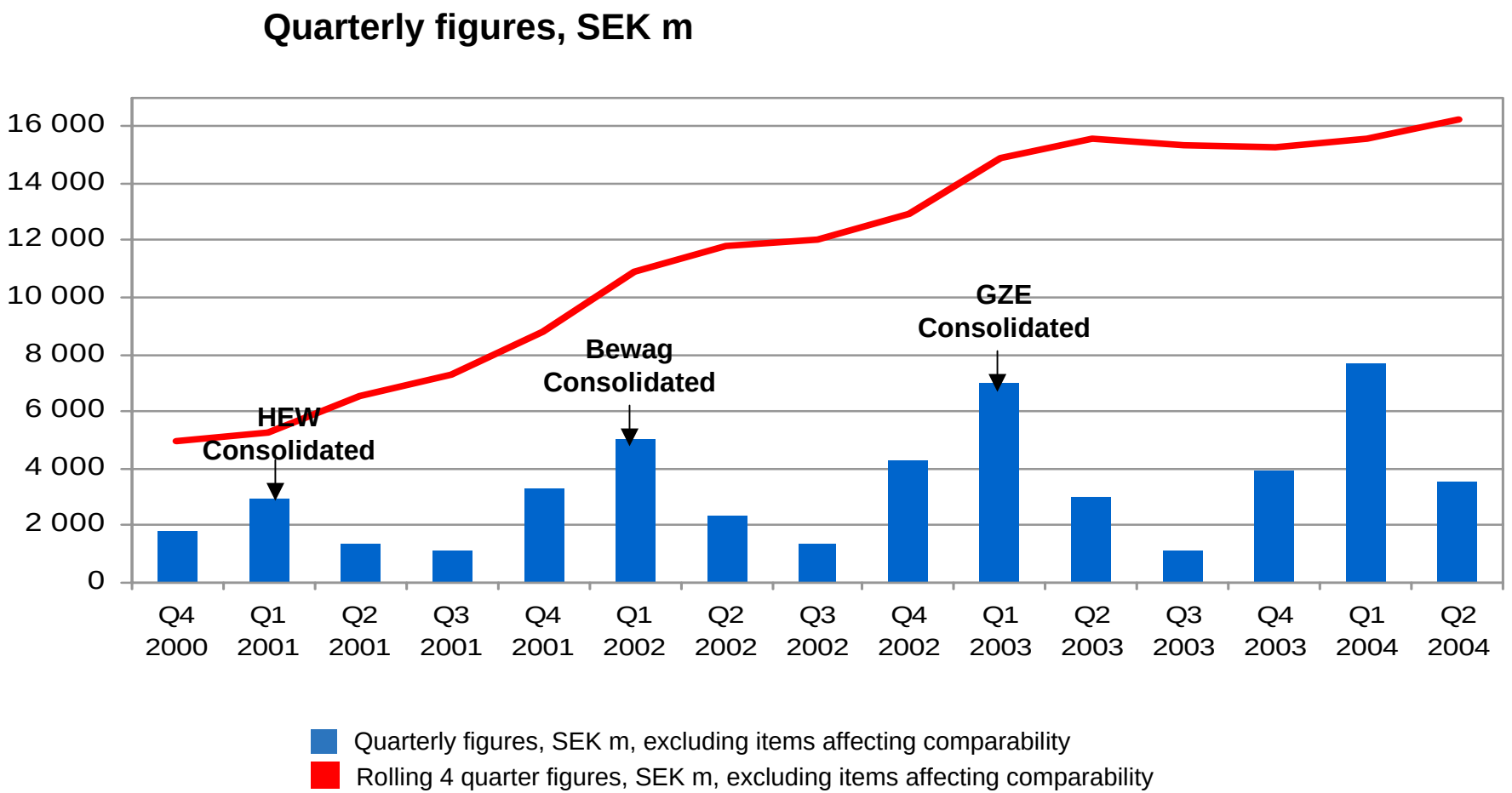
Continued strong EBIT development



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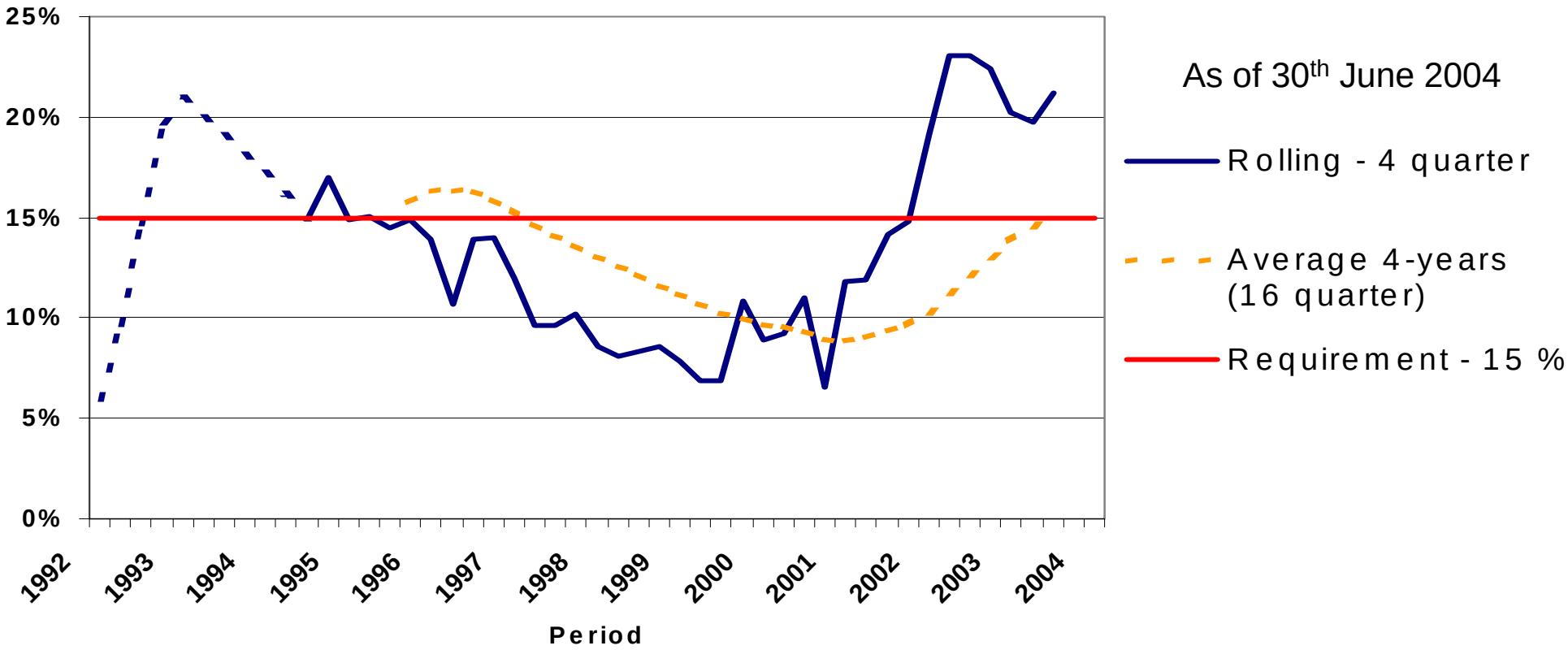
Return on equity ⟹ 4 years average on target



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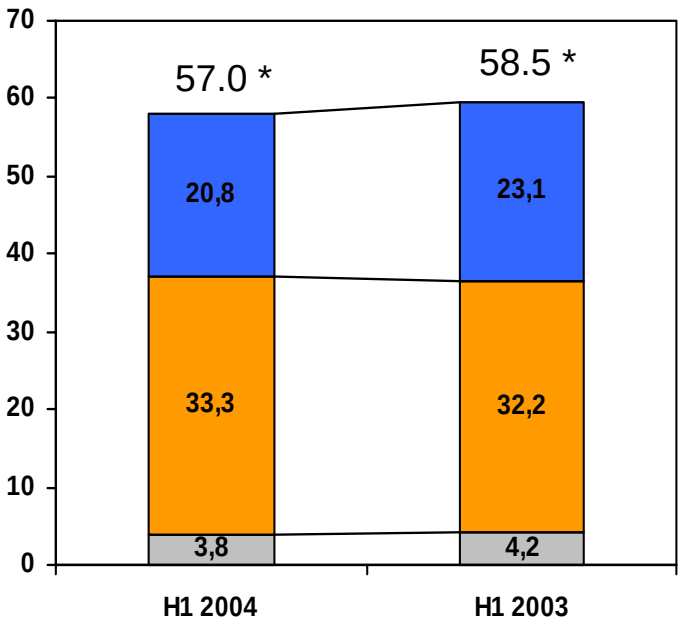
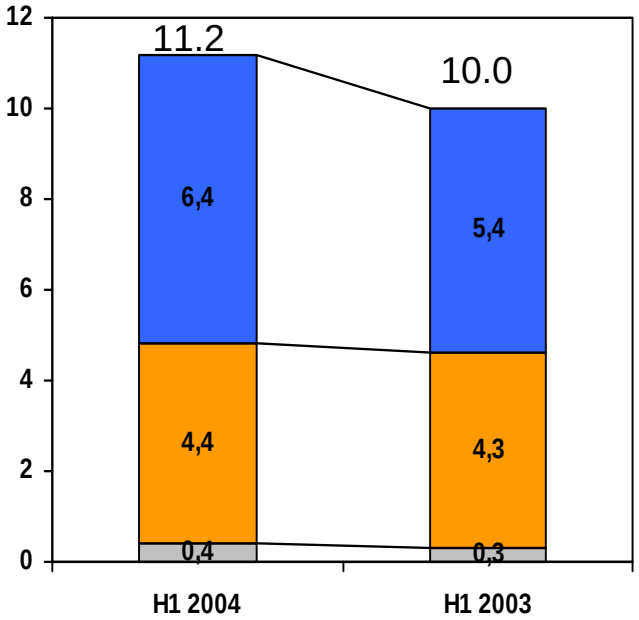
Segment overview

Net Sales, MSEK



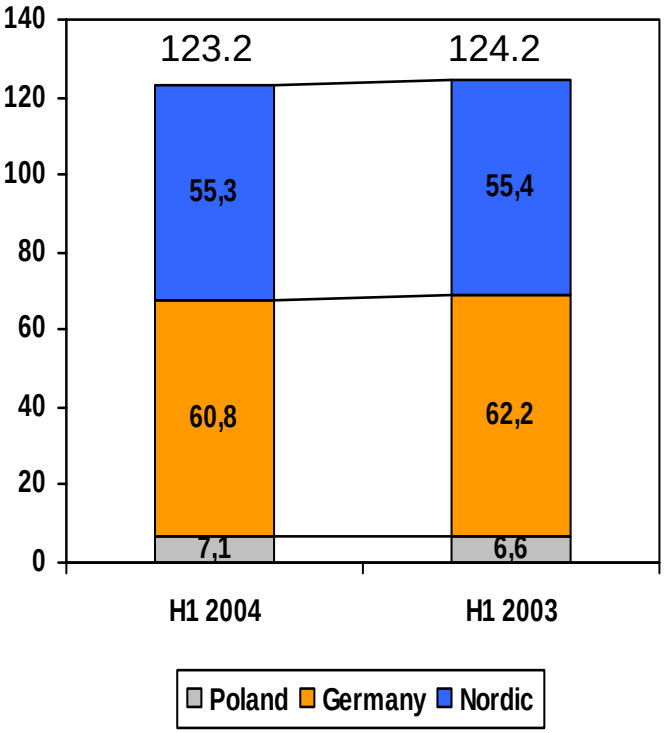
* External sales only

EBIT, MSEK **



** Excl. IAC

Net Assets, MSEK



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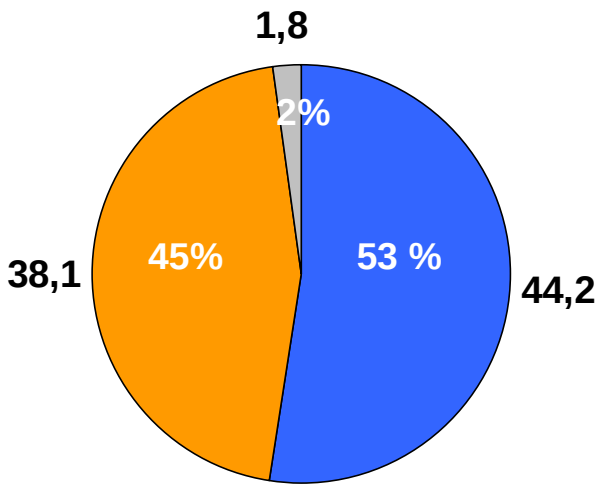
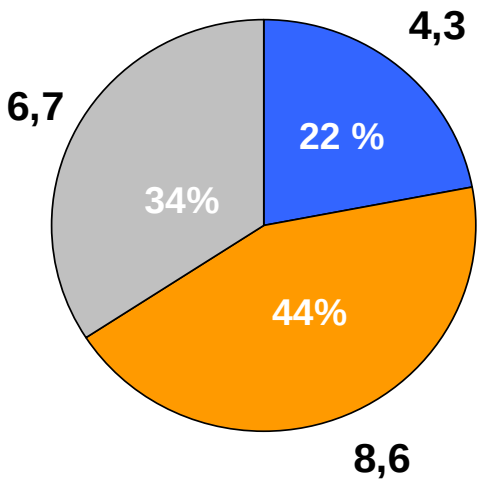
Generation by segments H1 2004

Electricity

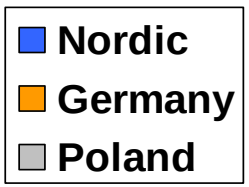


Total electricity: 84,1 TWh

Heat



Total heat: 19,6 TWh



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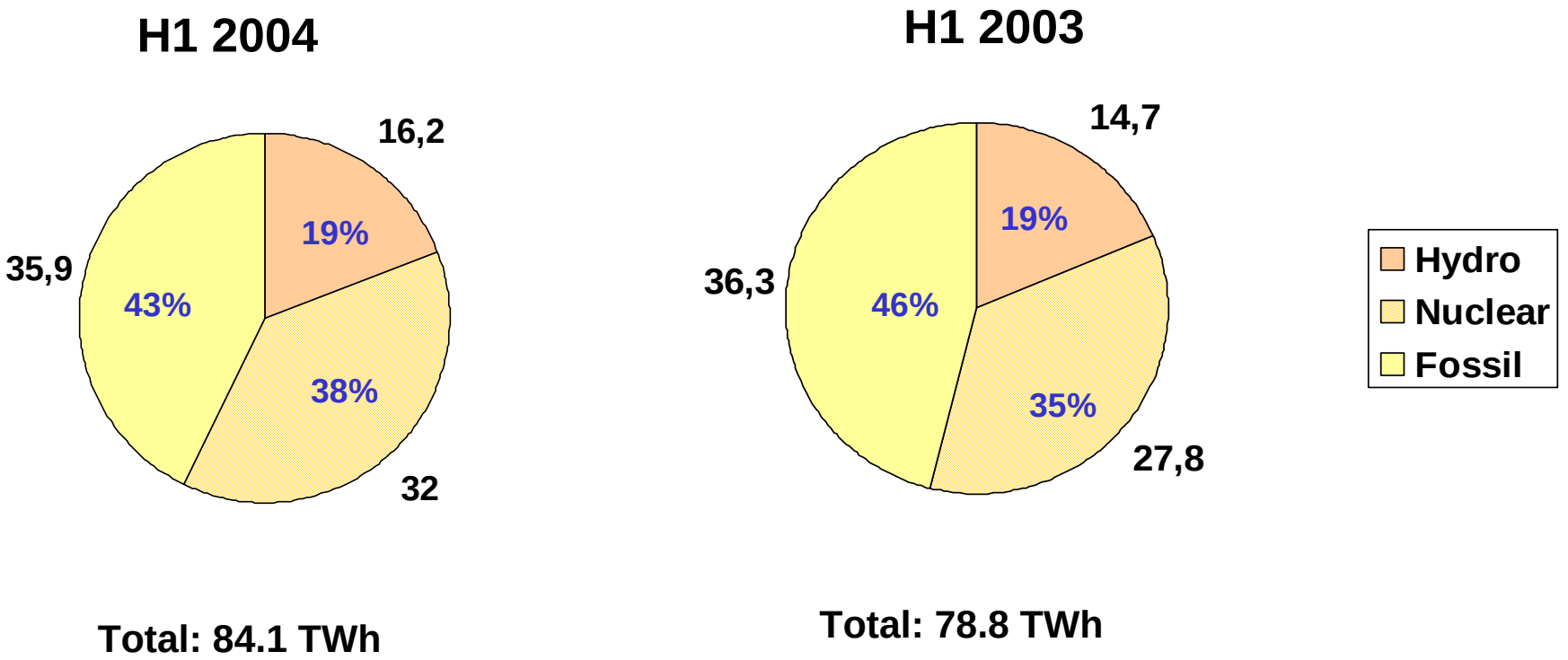
Higher nuclear and hydro production in H1 2004



Total: 84.1 TWh

Total: 78.8 TWh

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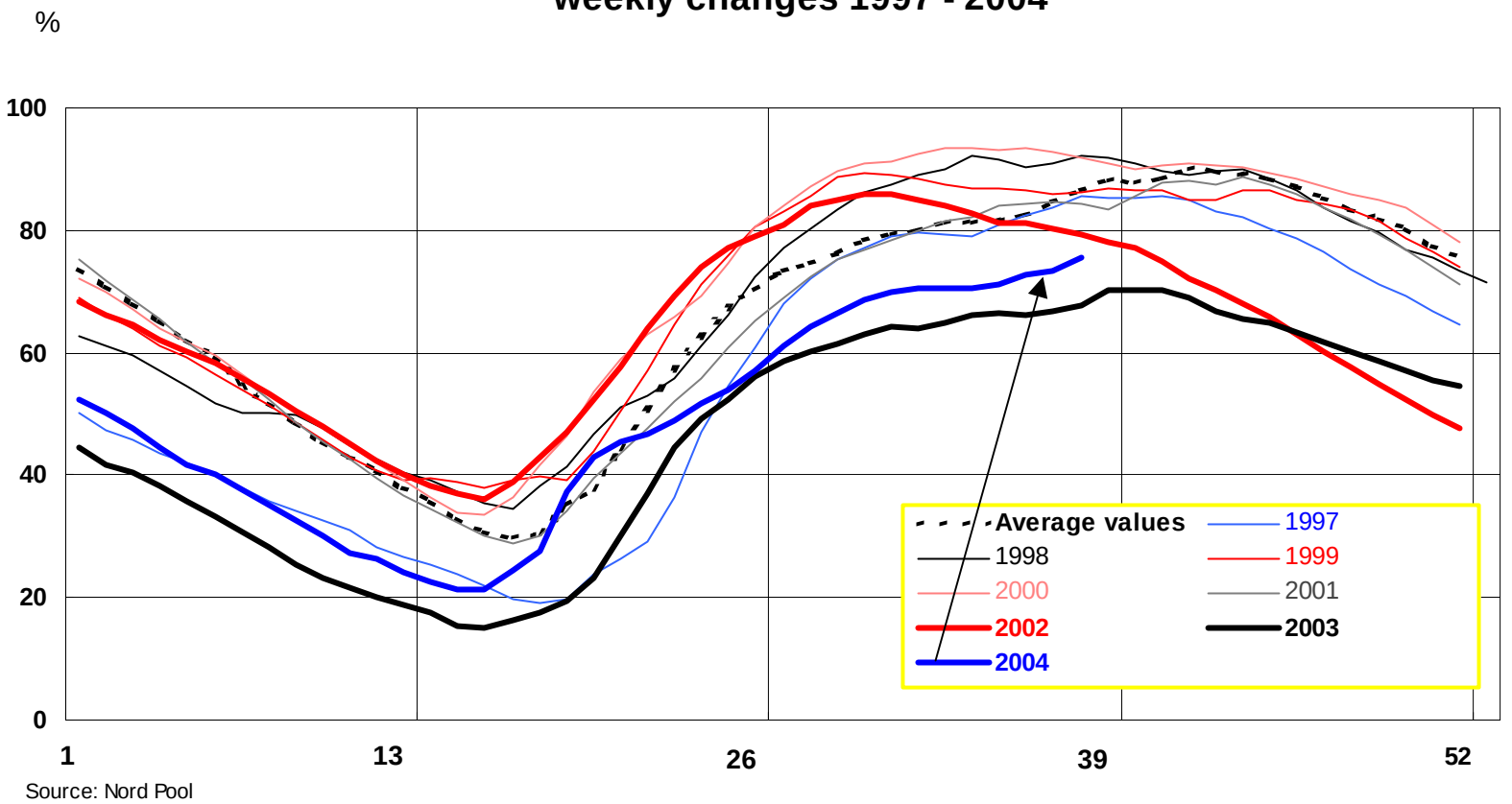
Nordic reservoir levels improving

Total water reservoires in Sweden and Norway

weekly changes 1997 - 2004



Source: Nord Pool

September 19, 2004

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Organisational Changes

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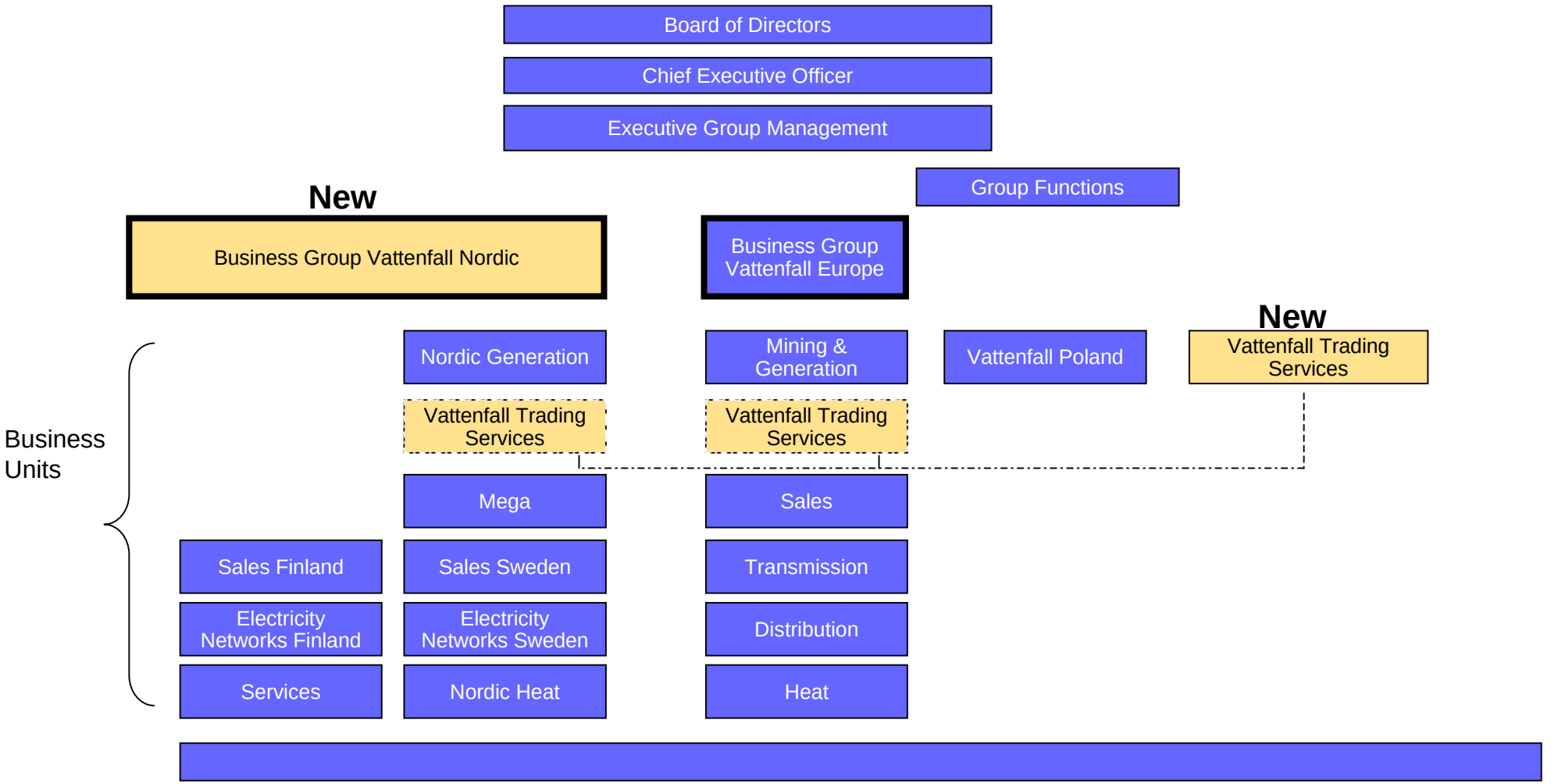
Organisational changes 2004



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Strategic Focus

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Market positions in core markets

	Sweden	Finland	Germany	Poland
Electricity Generation	1 3)		3	4 1)
Electricity Trading	1 3)		Top 3	-
Electricity Distribution	2	2	4	1
Electricity Sales	1	2	3	4
District Heating	4 3)		1	1 2)

1) 40% of CHP and 15 % of large scale genration is from foreign or private Polish investors
2) Heat generation only
3) On a Nordic basis

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Major achievements and lessons learned

- Substantial cost reduction, particularly in generation
- Effective risk management systems have been developed
- Successful German acquisitions, integration and value creation
- Customer loyalty is high but customer satisfaction is a key factor in building long-term trust with customers
- Attractive profitability in the sales business requires cost leadership and excellent risk management
- Multi utility approach has not shown any added value – more a risk diversification strategy
- Cultural differences – challenging but value creating

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Major trends on the european energy market

1. Continued step-wise liberalisation and creation of a transparent and interconnected European market
2. Continued privatisations of state and municipality owned companies
3. Increasing regulatory pressures
4. Increasing influence of the EU
5. Enhanced efforts to curb emission of CO_2 gases

Note: All current EU members are expected to have fully opened their electricity markets by 2007.

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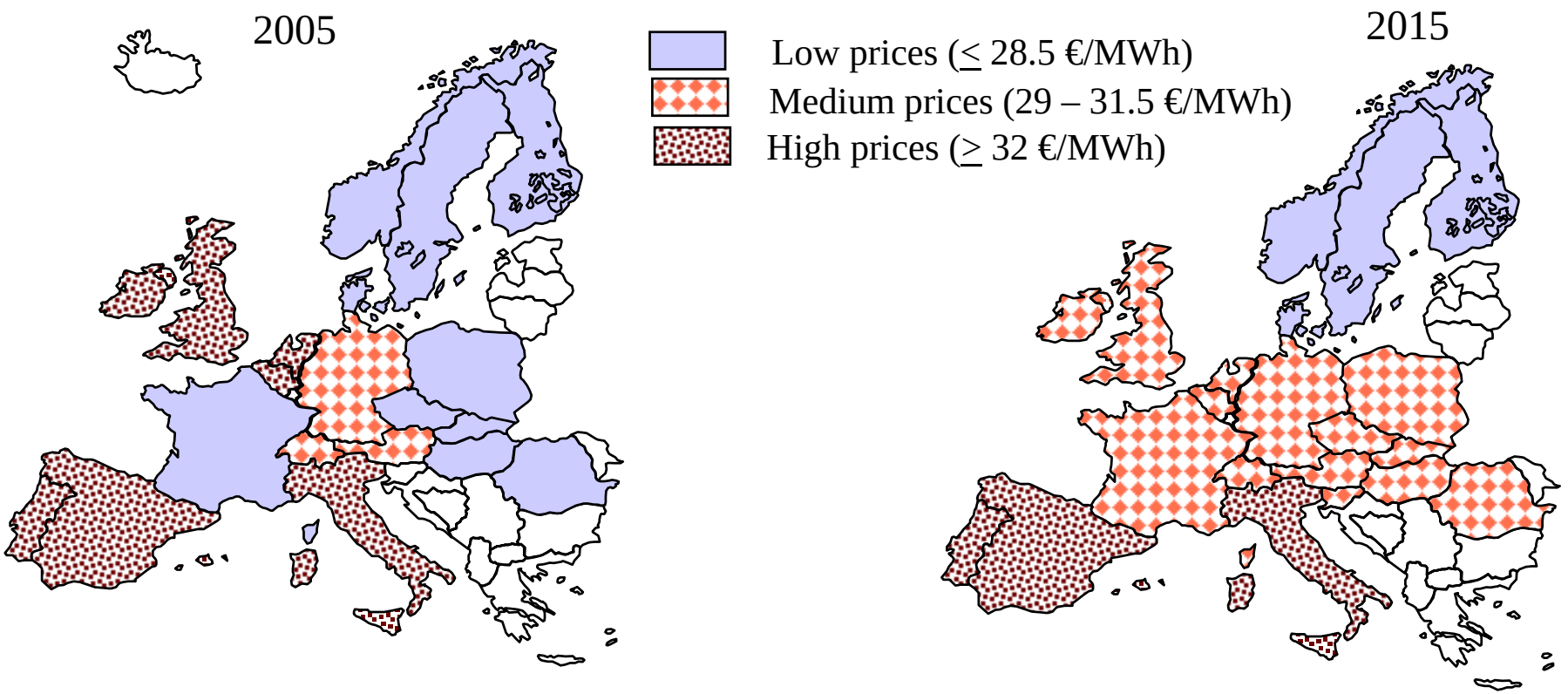
Electricity Price areas in Western Europe 2005 and 2015



(Real term prices excl. CO2 trading)

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Our overall strategic direction

- With consolidation program near completion our focus will shift to the realisation of Vattenfall's vision – to be a leading European energy company

- In order to achieve this aim we have defined five strategic objectives
  - Continue profitable growth through a proactive expansion program
  - Be the benchmark of the industry
  - Be number one for the customer
  - Be number one for the environment
  - Be the employer of choice

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Market objectives

Today

Strong VAB market position no. 1, 2, 3 or 4 in all core countries in

- Electricity
- Heat (District heating)

In the future

About 10 percent market share of the future integrated European energy market (EU 25 + Norway and Switzerland)

- Fulfil vision to be a leading European energy company
- Maintain position relative to our main competitors

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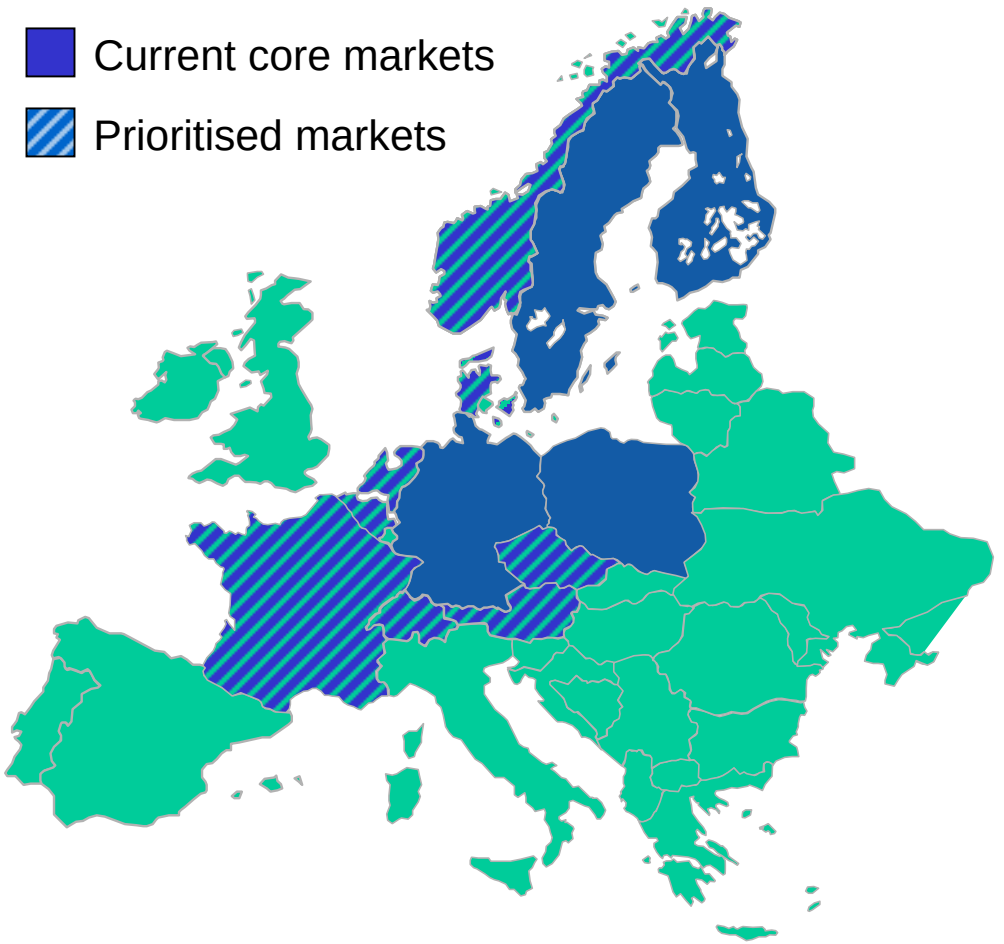
Geographic objectives

- Vattenfall's current core markets are Sweden, Finland, Germany and Poland
- Growth should take place in the core countries plus selected bordering countries, i.e. Norway, Denmark, Benelux, France, Switzerland, Austria and the Czech Republic
- Our primary aim is to go for countries where we can obtain a number 1, 2 or 3 market position within a short period of time



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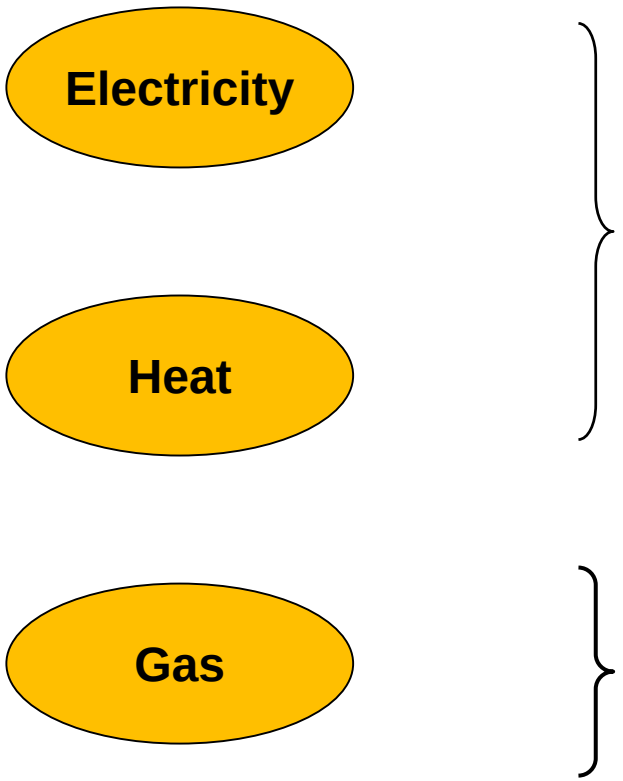
Future product focus



Existing products in which we have strong positions in current core markets

Attractive product on its own merits with strategic potential for Vattenfall as a fuel for generation of both electricity and heat

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Main drivers for expansion

	Main driver	Logic
Electricity	Generation	• Primary source for value creation • Capital intensive • Strong market position today • Competitive edge in whole sale market
Heat		
Gas	Volume	Critical to build volume in order to be able to source gas at competitive prices

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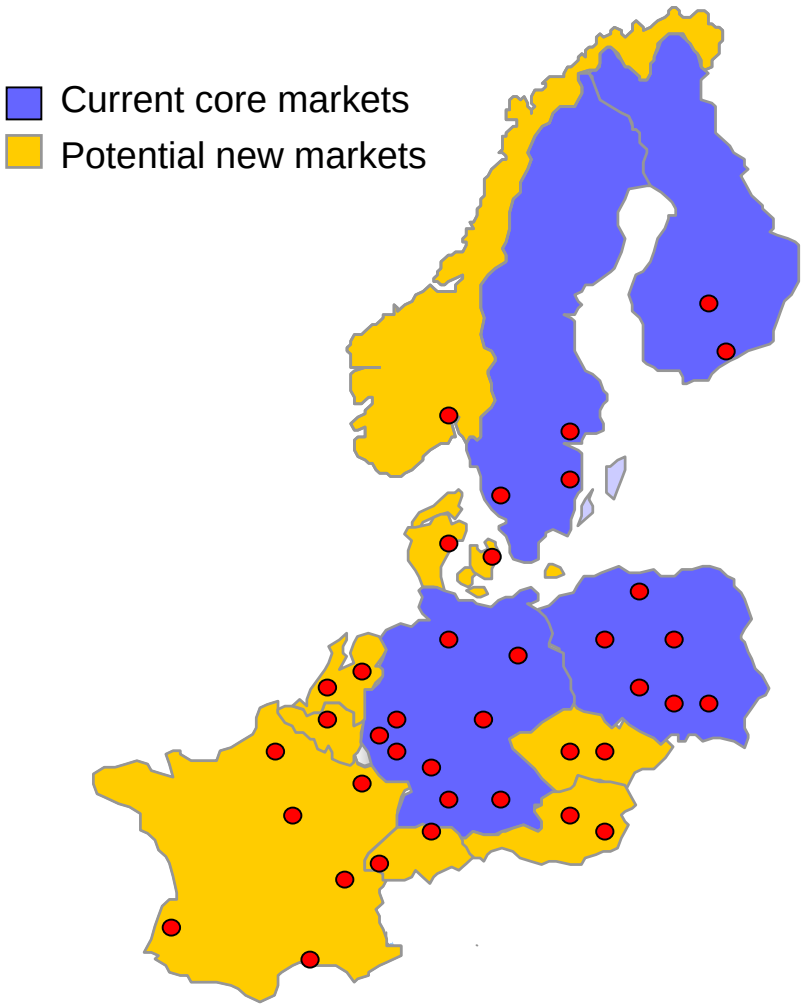
Heat assets primarily in large cities



Heat assets should primarily be located in large cities

- Easier to achieve economies of scale
- Higher probability for cogeneration opportunities of electricity and heat

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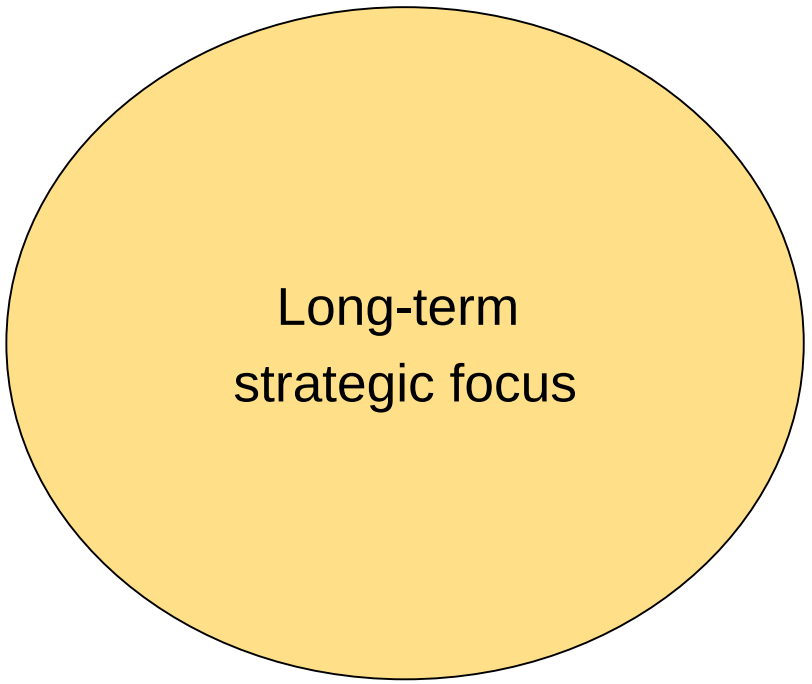
Timing of expansion



A fully integrated European energy market is expected to begin to materialise within the next 10 years

Growth opportunities due to restructuring and consolidation will peak during the next 10 years

Our main competitors are expected to expand heavily during this time

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Renewables

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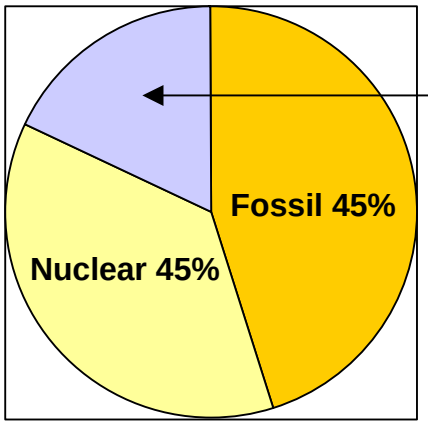
Renewable energy - important part of Vattenfall's operations

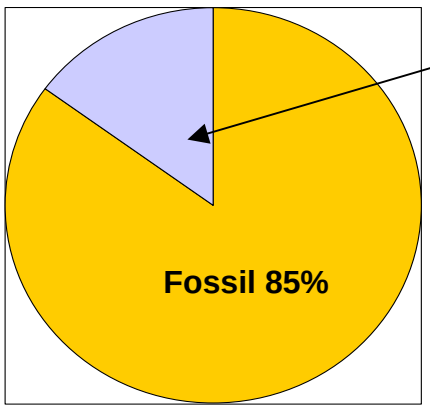
Electricity generation 2003 (157 TWh)



Renewables 18%

- Hydro power
- Bio fuels
- Wind power

Heat generation 2003 (37 TWh)



Renewables 15%

- Hydro power
- Bio fuels
- Wind power

- **Investments in renewables 1997-2003 of SEK 5.5 bn in the Nordic countries**
  - **Investment programs decided for the coming 5 year-period**
  - **ongoing evaluation of new wind power projects**
- **Total R&D 1997-2003 of SEK 2.2 bn of which 23% was in renewables**
  - **from 2004 increased investments of which 50% R&D in renewables and solutions to reduce CO2**
- **Inhouse expertise for construction and development**
- **Cooperation with universities**

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Actions to reduce greenhouse effect

- Increase effectiveness of existing plants
  - we have reduced CO2 emissions in heat generation by 29% and in electricity generation by 36% since 1990.
- Generation of Heat in CHP:s
  - more effective use of fuel - 80% of heat generation in Germany is in CHP:s
- A 10-year program to increase nuclear capacity up to 7 TWh
- Powerful efforts in developing CO2 free power plants through separation and storage
  - Coordination of R&D projects at EU-level. Technology will be there in 10 -15 years.

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The way we operate in renewables……

- Active in all our markets
- Transfer of knowledge through company networks
- Focus on long-term profitable solutions
- International cooperation
- Corporate Social Responsibility reporting in GRI standard
- Increased efforts in communcation/information

…in our efforts to become ”Number One for The Environment”

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Nuclear situation

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World Energy Conference – Nuclear perspective

The recently held WEC Congress in Sydney was concluded in 10 main remarks, two of them as follows:

- All energy options must be kept open and no technology should be idolised or demonised.
- Climate change is a serious global concern, calling for changes in consumers behaviour, but offering potential win-win opportunities.

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Nuclear developments - Worldwide

- New nuclear plants are built in i.a. Finland, China, India, South Korea, Japan, Romania, Russia and Ukraine.
- In the US, the Nuclear Regulatory Commission (NRC) has recently approved Westinghouse AP 1000 advanced reactor design. NRC has previously approved three other standard designs
- Three industrial consortia in the US is working together with DoE to find financial solutions in order to come up with viable proposals before 2010.
- Canada will restart two units which have temporary been out of operation

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Poland - Achievements

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Poland - Achievements in 2003 - 2004

- **Successful restructuring of our subsidiaries EW and GZE**
  - introduction of strong budgeting and controlling process
  - external recruitment to strengthen finance and HR-functions
  - development of risk management and electricity trading function

- **Significant efficiency improvement including:**
  - a 44% staff reduction in 2002-2004, peacefully without industrial action by the unions
  - streamlining of purchasing processes – coal, transport etc

- **Improved customer service level through:**
  - introduction of a call centre to handle customer inquiries

- **Brand endorsement**
  - Change to “Vattenfall brand” in process

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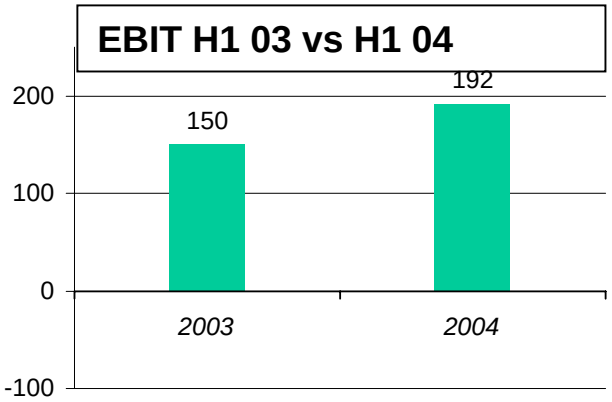
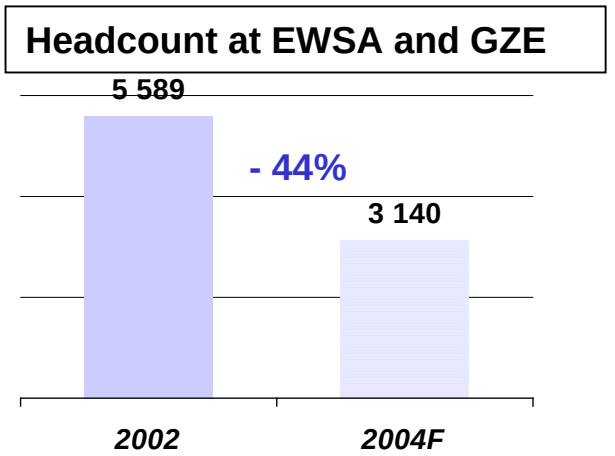
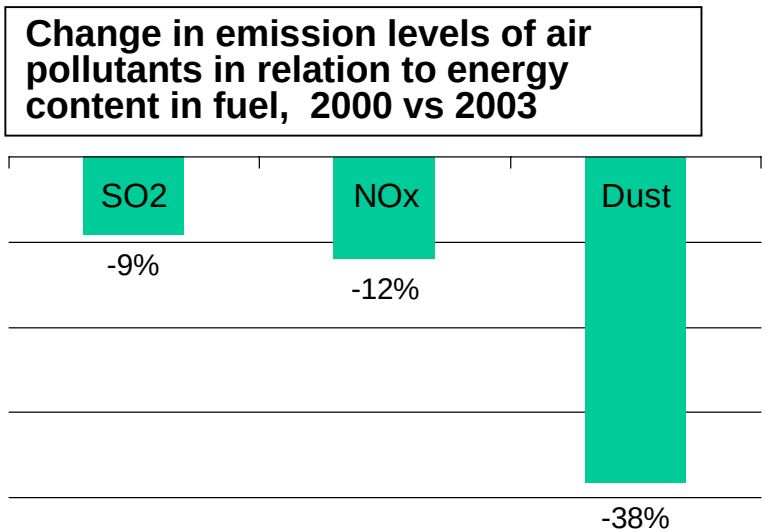
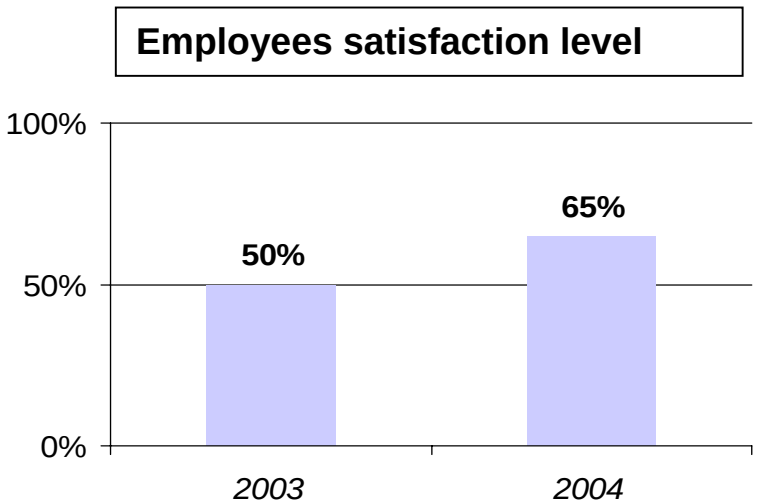
Poland – Achievements









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Opportunities, Challenges & Strengths

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Opportunities & Challenges

- **Continued cost reduction and efficient plant operation**
- **Risk management (commodity risk exposure)**
- **CO2 emissions trading**
- **Network regulation**
- **Energy law**
- **Future of nuclear power**
- **Managing cultural differencies**
- **Harmonisation of taxes**
- **Customer satisfaction**
- **Value Creation through continued growth in core markets while maintaining financial balance**

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Our strengths

- **Track Record (proven ability to manage an integrated utility in a competitive environment)**
- **Strong cash flow and financial discipline throughout the Group**
- **High pace of change**
- **Performance culture within the Group**
- **Diversified business risk (Nordic, Germany, Poland)**
- **Prudent trading and hedging policies**
- **Well balanced, low-cost generation portfolio**
  - State of the Art Power Plants and high operational skills

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Vattenfall's Core Values

Vattenfall stands for…

Effectiveness

Accountability

Openness

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Appendices

Vattenfall's generation capacity

Installed Capacity in MW (end of 2003)

	Germany	Nordic	Poland	Total
Hydro	2,907 [1]	8,386	-	**11,293**
Nuclear	1,409 [3]	5,116	-	**6,525**
Thermal	11,439	1,500 [2]	928	**13,867**
Total electr.	**15,755**	**15,002**	**928**	**31,685**
Heat	7,448	3,100	4,828	15,376

1) Incl. new pumped storage plant Goldisthal (1,060 MW)
2) Of which some 600 MW mothballed
3) Excluding Stade (decommissioned in November 2003)

04-09-30

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Public opinions – Nuclear energy

In general, moves towards a withdrawal from nuclear in certain European countries have been due to political pressures and have not been a response to nuclear opposition. Polls carried out in Sweden, Germany, France and Finland continue to reflect two important factors:

- **No major opposition**
- **Only limited support for a nuclear phase-out**

- According to polls, 60-88% believe that negative impacts of greenhouse gas emissions should be taken into account when making energy generation choices.
- Over 60 % in Germany and Sweden believe that phasing out of nuclear is not a realistic option for the short term run.
- The numbers of Americans who favours the use of nuclear energy is higher now than at any time since 1983. Over 60% agreed that the US should build more nuclear power plants and extend the operating licenses of the 103 existing units.

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Nuclear waste

- To further strengthen the acceptance for Nuclear Energy, the waste issue must get a more proven solution. This fact was emphasised several times at the World Energy Conference, WEC

- In Europe the EU commission has launched proposals for new Directives on harmonisation on nuclear safety and waste handling to increase the credibility for Nuclear Energy. Vattenfall supports these efforts and is actively taking part in this process.

- Capital must be available for decommissioning after the production phase of nuclear plants. A transparent and reliable financial mechanism of national solutions for all members of the Union is an ambition of the EU Commission.

- In Sweden the state controlled Nuclear Waste Fund was created in an early phase securing the funds required. Technical solutions have been developed by the jointly owned company SKB and site investigations are presently carried out.

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Vattenfall's investments in nuclear energy

- Nuclear energy is producing about 50% of total demand of electricity in Sweden
- Vattenfall is operating 8 of the 11 units in Sweden
- The availability of the plants is high in an international perspective
- Vattenfall has decided to make substantial investments to better use the capacity of existing plants by increased reactor power and higher efficiency
- To further improve the high level of safety and to bring existing plants closer to the safety level of newly constructed plants the regulator, SKI is issuing new safety regulations.
- Vattenfall is responding to the requirements by additional investments in order to continuously increase the safety level and to maintain the possibility of extending the life time.

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Nuclear Power under construction

Argentina	Atucha 2	745 MW	
China	Tianwan 1+ 2	1000/1000 MW	Decision on 4 more units
Finland	Olkilouto 3	1600 MW	
India	Tarapur 3+4	490/490 MW	
"-	Kaiga 3+4	220/220 MW	
"-	Kudankulam 1+2	917/917 MW	
"-	Rajastan 5+6	200/200 MW	
Iran	Busher 1+2	1000/1300 MW	
Japan	Higashi Dori 1	1100 MW	
"-	Shika 2	1350 MW	
Rep Korea	Ulching 6	960 MW	
DPR Korea	Project 1	1040 MW	
Romania	Cernavoda 2	655 MW	
Russia	Kursk 5	1000 MW	
"-	Kalinin 3	1000 MW	
"-	Rostov 2	1000 MW	
Ukraine	Khmelnitski 3+4	1000/1000MW	
"-	Rovno 4	1000 MW	

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Poland - Changes in the Macro Environment

- **Polish Economy**
  - Strong GDP-growth, > 6% in H1 2004; 5 % growth rate likely to be sustained during the remainder of 2004 and in 2005
  - The increase in the State budget deficit has been contained and is likely to be < 5% of GDP

- **Impact of EU-accession**
  - No dramatic change in Poland post-accession; the adaptation process started years ago
  - Expectation of increased investment in improving infrastructure (roads, railways etc.)
  - Acceleration of the deregulation and privatisation of energy sector expected

- **Energy sector privatisation**
  - No progress in privatisation; only small CHP's have been privatised in 2004
  - The privatisation of some small to medium sized power plants/CHP's may be completed in 2005: CHP Lodz, Kozienice and Ostroleka power plants
  - The Government wants to create "local champions" through consolidation of generation assets into the BOT and PKE groups, most probably followed by vertical integration of some of the network companies to these groups

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Poland - Changes in the Macro Environment

- **Market deregulation**
  - Long-term PPA's cover approx.60% of total electricity production in Poland; the cancellation of the PPA's has been delayed and the government is currently negotiating with the European Commission, how to implement the cancellation
  - Market fully open for household customers as of July 1, 2007 in accordance with the EU-directives

- **Electricity prices**
  - Although no liquid electricity wholesale market exists in Poland due to the PPA's, the electricity prices in the OTC-market are significantly (10-15%) below German and Scandinavian level
  - In the long-term, prices are likely to increase and converge to the German level due to:
    - Relatively low surplus capacity
    - new emission standards that will require significant investments in all power plants and increase the share of renewable energy in the Polish energy mix

- **Regulatory regime**
  - The current regulation is based on cost-plus ex-ante model offering no incentives for restructuring measures
  - The Polish government has prepared a new draft of the energy law that among other things will recognize cost of capital as a justifiable cost for tariff purposes. The Parliament is expected to approve the new law by the end of the year

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Poland – Environmental Issues

- The allocation of emission rights has been completed by the Ministry of Environment. EWSA obtained a surplus of emission rights, equivalent to 11% of its requirements of 6.2 million tons. This is still subject to ratification by the European Commission

- Priority for green electricity has been introduced as a measure to reach Poland's indicative targets of 7.5% in 2010

- Poland has chosen to implement the LCP Directive through the National Reduction Plan, which envisages significant reductions in emission of air pollutants: 40% of SO_2, 19% of NO_X and 19% of dust. This assumes that boilers are the source of emission. The Plan is still subject to ratification by the European Commission

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