Business Group Vattenfall Europe

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Vattenfall Capital Markets Day, October 5th 2004

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Content

1. BG Overview
2. Strategies & challenges
3. The German electricity market & Legal environment
4. Investments

Business Group Vattenfall Europe - Key facts

- **Turnover:** € 7.0 billion (2003/Swedish GAAP)
- **Employees:** Ca. 20,880 (June 30, 2004)
- **Customers:** Electricity: 3 million
Network: 3,3 million
Heat: ~1.2 million residential units
- **Output:** 74,6 TWh /2003
- **Km Network:** 10,500 km (transmission)
75,000 km (distribution)
- **Mining**: 57 million tons of lignite coal
- **Energy sources** Lignite, nuclear power, water power, hard coal, organic substances, waste, solar
- **Capacity:** 15,755 MW (Dec. 2003)

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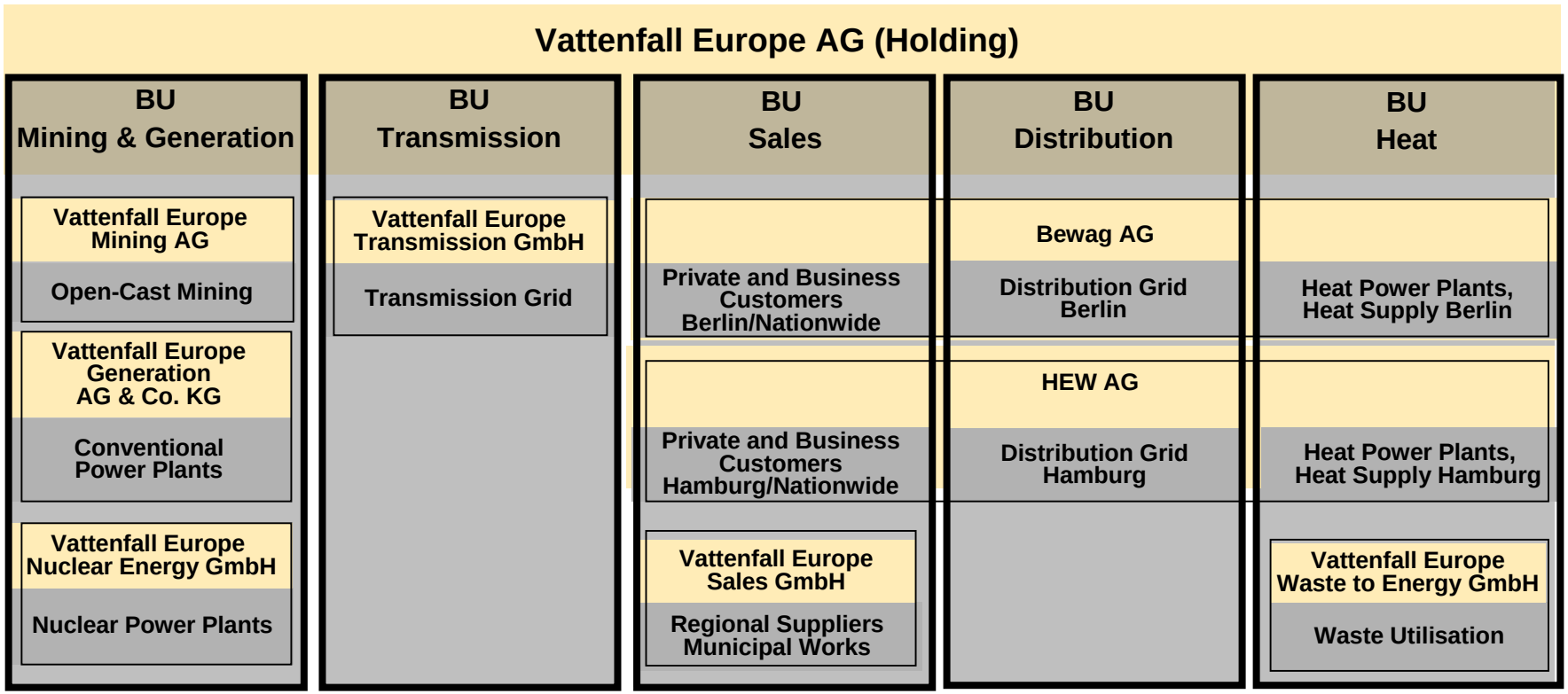
Vattenfall Europe - Legal Structure & Business Units

Legal Entity

BU Business Unit as per Vattenfall Group Management Structure



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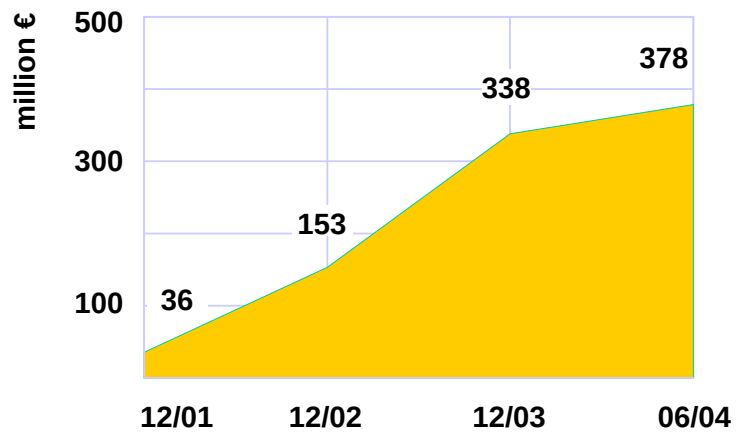
Vattenfall Europe - Profit Improvement

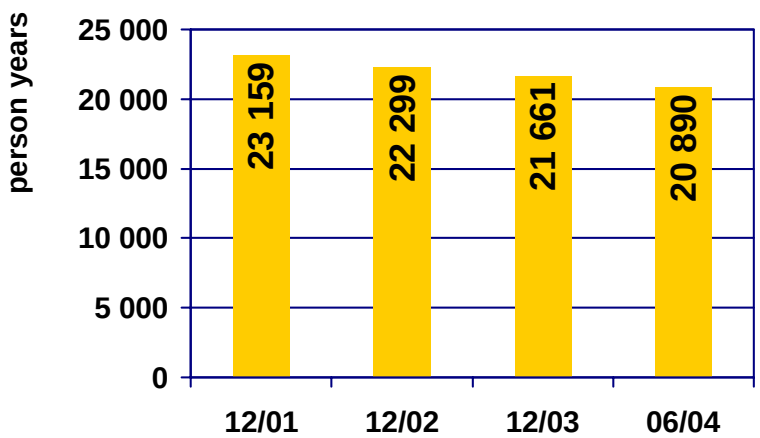
EBIT (Swedish GAAP):

- Actual 03: € 694 million
- Actual 04: € 487 million (H1)
- Good Development expected (H2)

Cost Reductions Achieved:



Staff Reductions Achieved:



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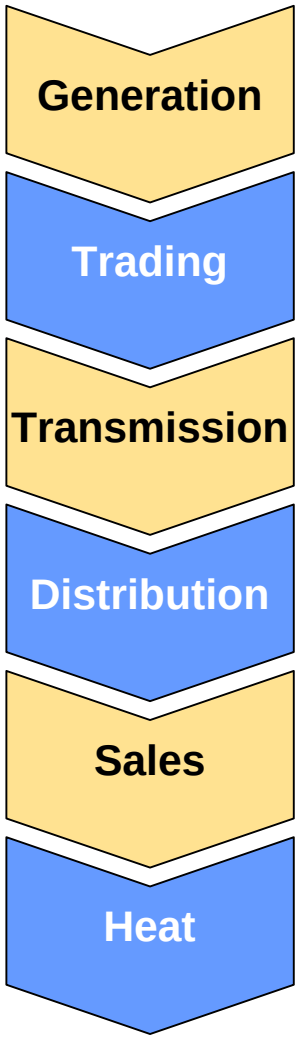
Vattenfall Europe - Market position in Germany

Generation:	16% of 105,000 MW installed generating capacity
Mining:	33% of lignite output
Trans-mission:	27% of 38,600 km network (220/380 kV)
Distribution:	4.9% of 1,550,000 km network (≤ 110 kV)
Sales:	16% of 500 TW hours energy consumption, 8% of 44 million customers
Heat:	23% in Hamburg, 37% in Berlin
Trading:	12% of wholesale trading volume (2,500 TW hours) in Germany

Strategies / Challenges of the Value Chain



- Rising wholesale price level
- Evaluation of investments in new power plants

- Common trading platform
- Market access function

- Political framework
- Investment projects in grid enforcement (Wind energy)

- Preparation for Unbundling
- Increasing regulatory influence

- Price Development
- Margin precedence over volume

- Stable market position
- Organic growth strategy

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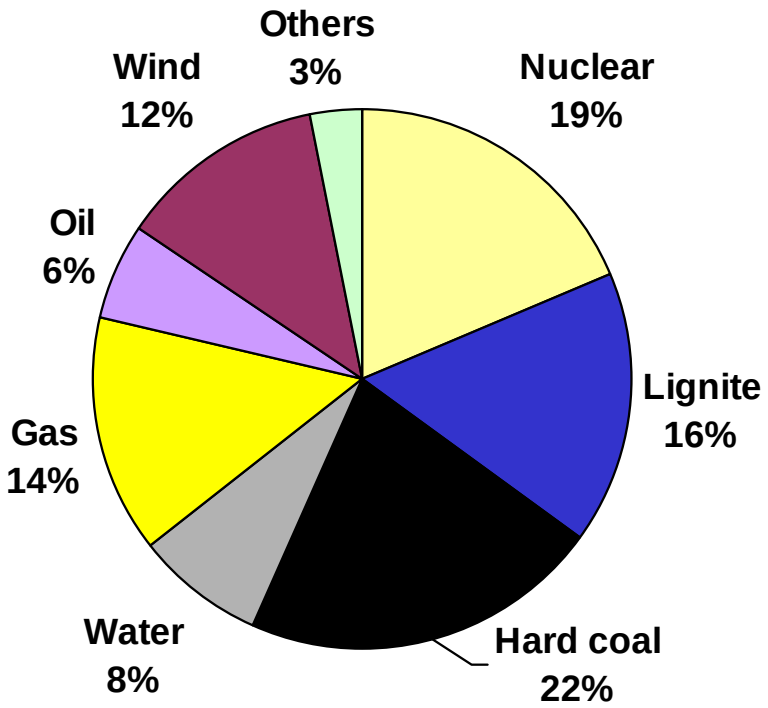
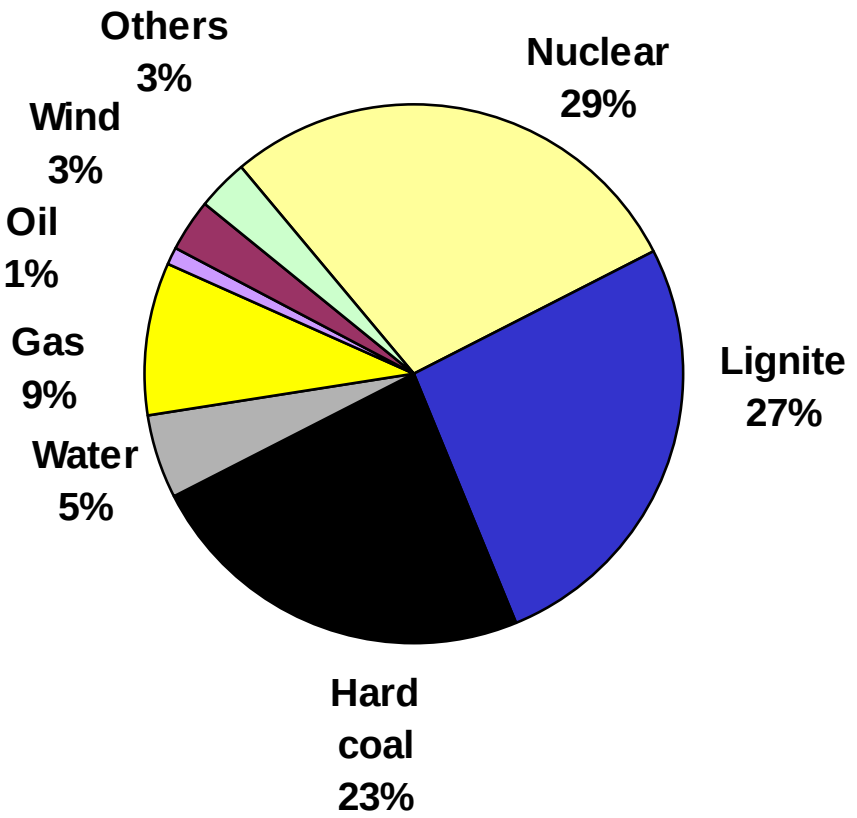
The German Market - Energy Mix 2003

Installed capacity (MW)



provisional data, without industry und railway, source: VDEW

Generation (MWh)



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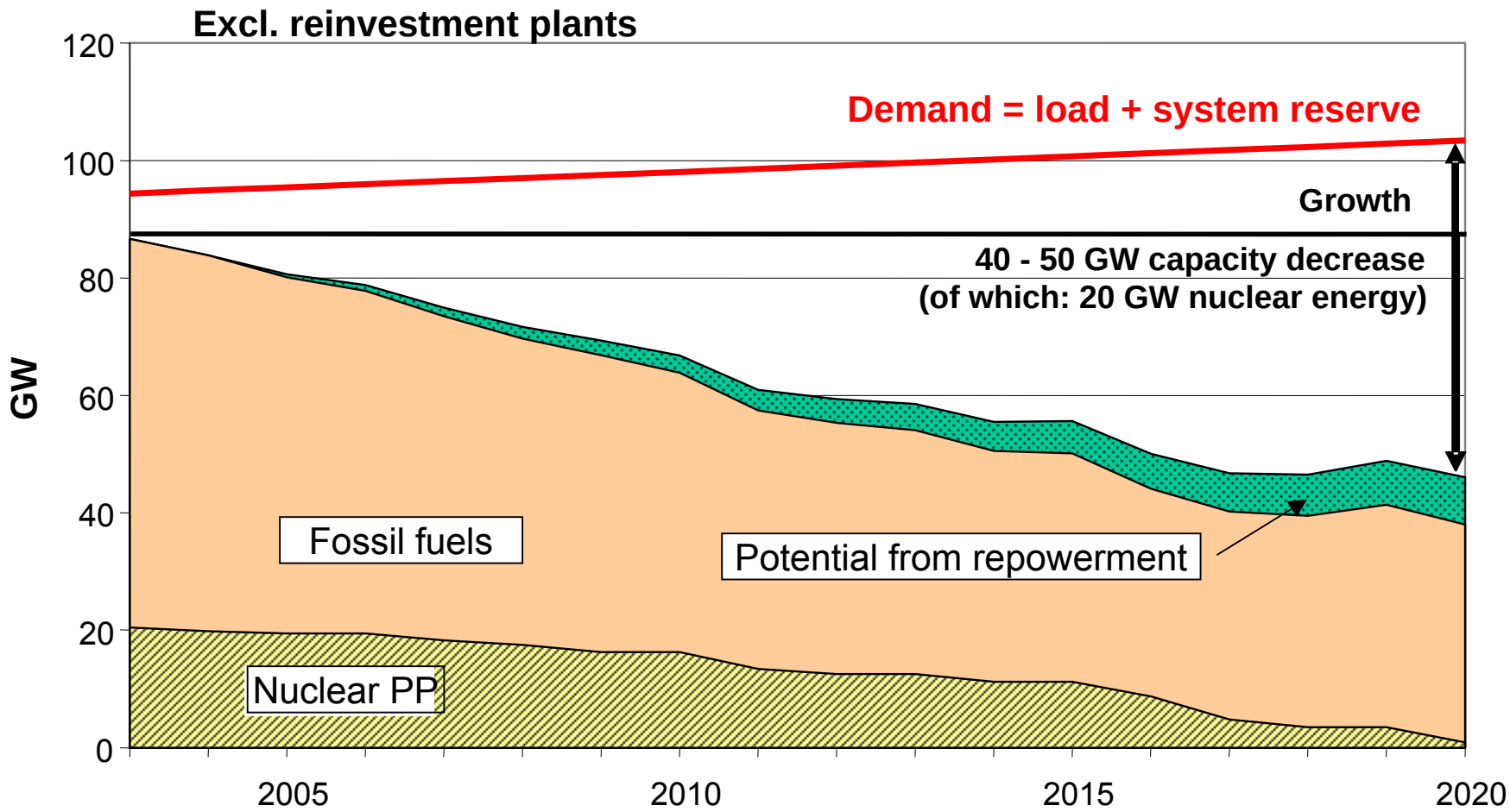
The German Market - Capacity Gap until 2020



Source: Study "Investitionen im liberalisierten Strommarkt" by Prof. Pfaffenberger (BEI), 2004

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Vattenfall Europe - Legal Environment

Top Issues

- Implementation of the Kyoto Protocol and the National Allocation Plan
- EU-Directive / New energy law
  - Regulatory Authority
- Renewable Energy Law – impacts of wind power feed-in

Legal Environment I - CO2 National Allocation Plan

Timetable

7 July 2004	German NAP accepted with amendments by EU-Commission
31 August 2004	German Allocation law (“Zuteilungsgesetz”) comes into force
1 November 2004	Decision of allocation to German installations
Sept. – Nov. 2005	Implementation of linking directive
1st half of 2005	Beginning discussion about specifics NAP 2008
31 July 2006	German NAP 2008-2012

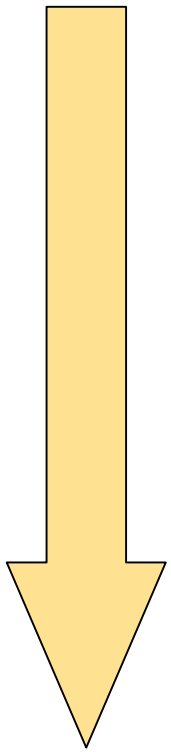
Legal Environment I - National Allocation Plan

Impact on Vattenfall Europe

- National Allocation Plan provides clear framework
- VE expects nearly full allocation for the first emission trading period (2005-7) due to recognition of “Early Actions”
- Yet, unclear implications for the second emission trading period (2008-12)
- Clarity vital for future investment projects

Legal Environment I – New German Energy Law (EnWG)

Timetable



25 February 2004	Publication first draft of the new German energy law (EnWG) by the ministry of economics (BMWA)
28 July 2004	Government: Regulation specifics yet undecided
24 September 2004	Statement of federal states: ex-ante regulation claimed
5 November 2004	Government statement re. regulatory specifics
Nov. 2004 - ? 2005	1st – 3rd parliament reading
1st half 2005	EnWG will come into force

Legal Environment II – EnWG, Main Decisions

- **Unbundling** of network companies
  - Unbundling of functions, information, accounts and legal unbundling
- **Labelling** for electricity supplied to end-users
  - Declaration of primary energy mix and impacts of environment (CO_2 emissions/radioactive waste) on bills
- **Security of supply**
  - Network owner: Obligation to upgrade and extend network
  - Transmission System operator: System responsibility
  - Ministry of economics: Possible tendering of generation capacities

Legal Environment II – EnWG, Main Open Issues

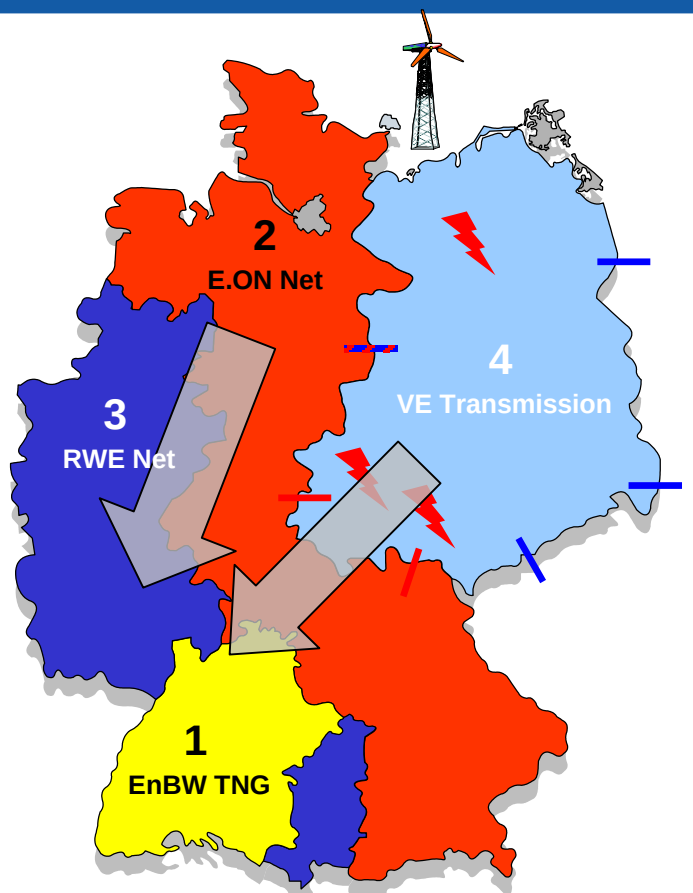
- **Grid Tariffs**
  - Network operators to prove efficient operation
- **Regulatory Body**
  - Supervision by national vs. federal authorities
  - Supervision ex-ante or ex-post

Vattenfall Europe‘s Position:

- We welcome a regulation of the network market - provides tariff transparency
- Return on investments
- Regulator as lean authority with referee status

Legal Environment III - Renewable Energies Act (EEG)

- Network bottlenecks due to strong expansion of wind energy
- Massive strengthening of network required
- Up to 2011: Network investment of € 500 million required
- Balancing Power costly
  - up to € 600 million p.a.



Risk of bottlenecks due to EEG conditions (for net VE Transmission)
EEG horizontal balancing (physical) (from 2+4 to 1+3)
Complementary lines
Complementary lines with risk of bottlenecks

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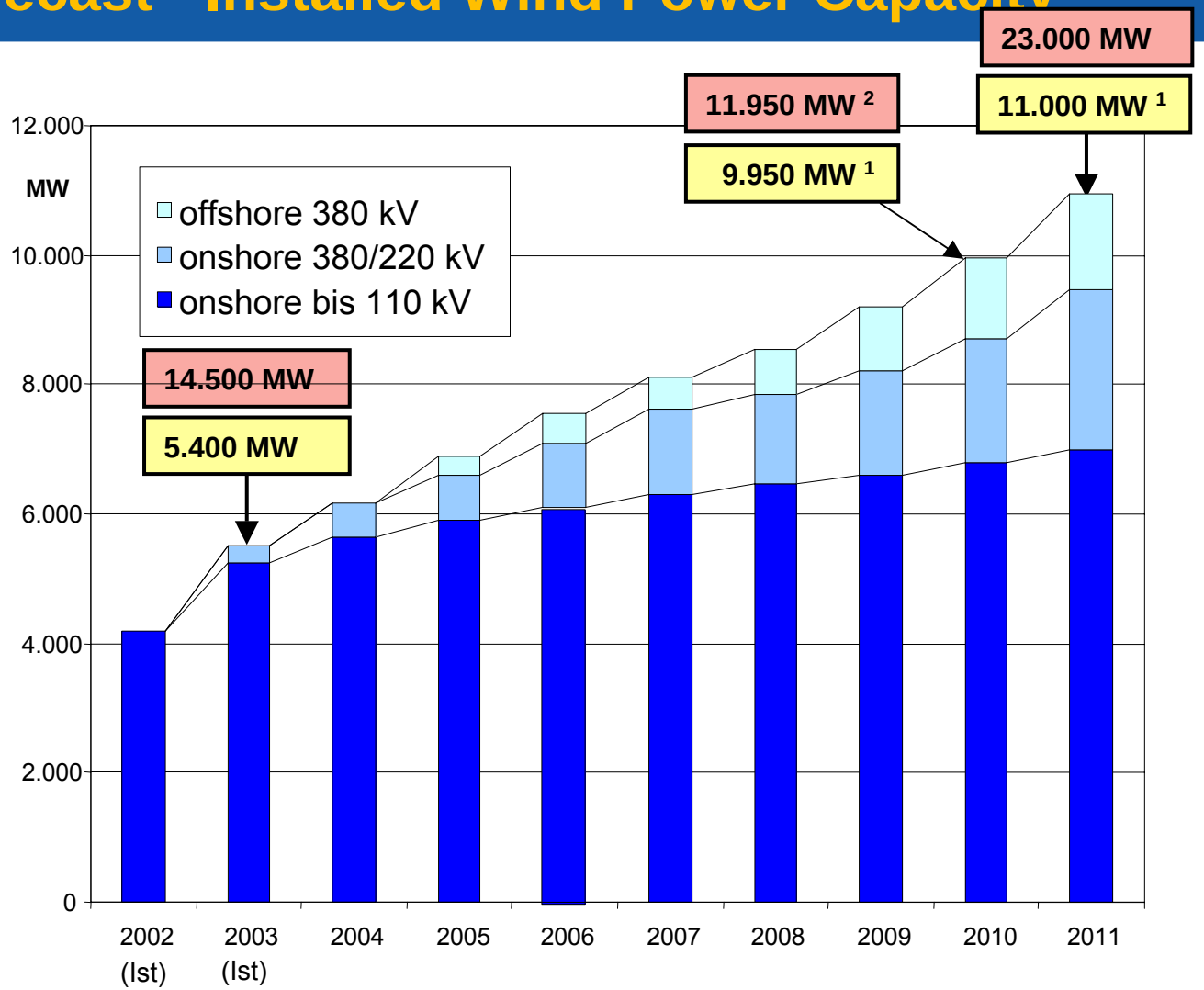
Forecast - Installed Wind Power Capacity

Germany

VE Transmission



[1]source: dena 06/2004

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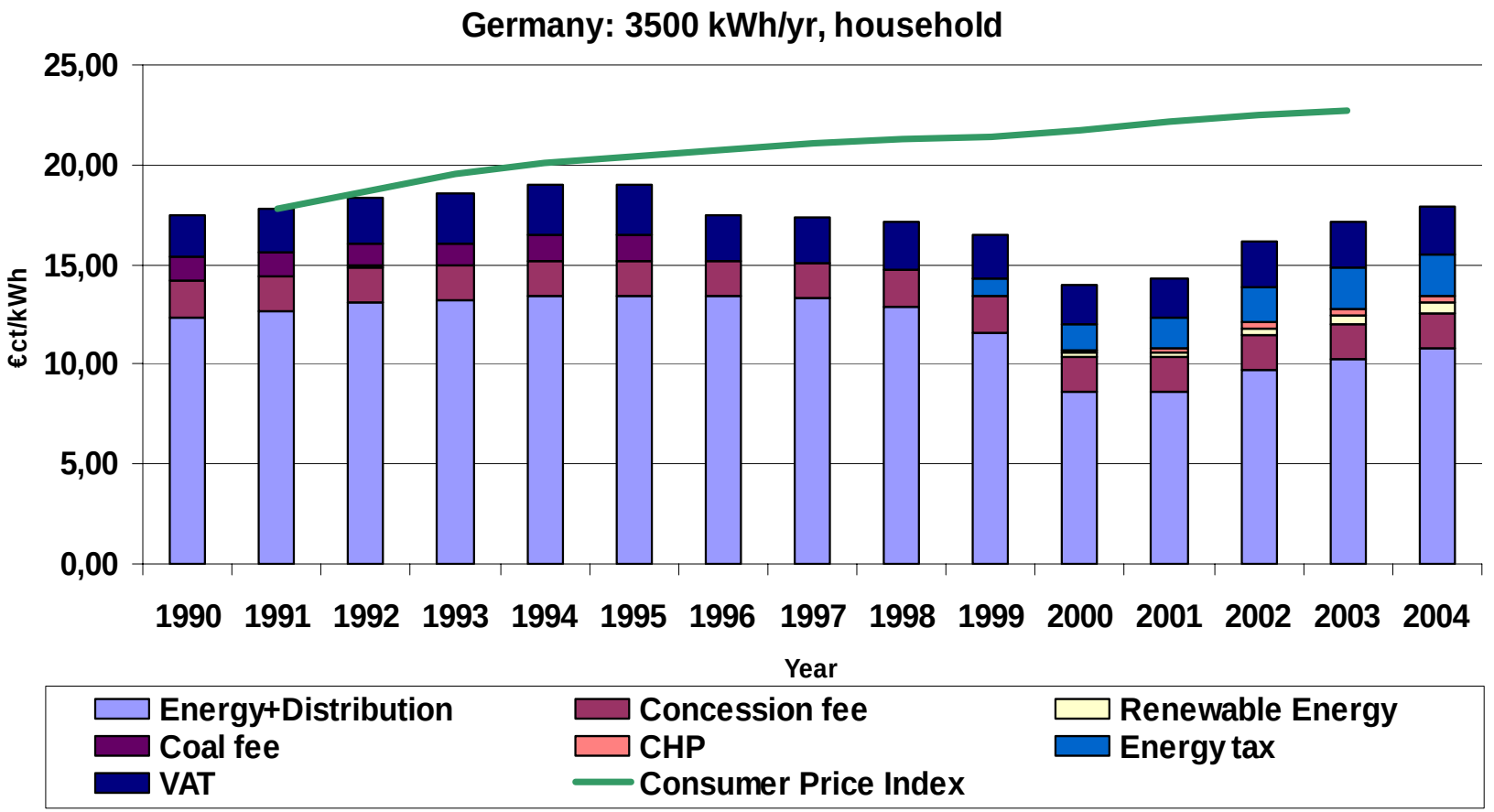
Electricity Price Discussion in Germany



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Electricitity price burdens

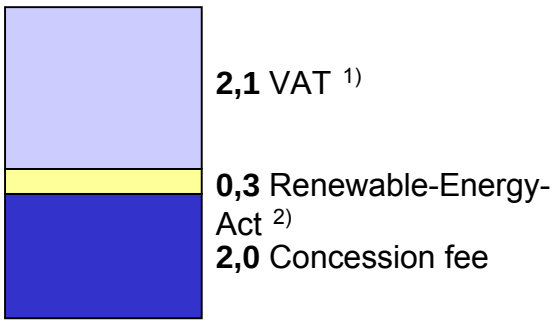
State-driven burdens on electricity price 1998 and 2004 (EUR billion)

Source: VDEW

1) for Households

2) up to 2000:Stromeinspeisungsgesetz

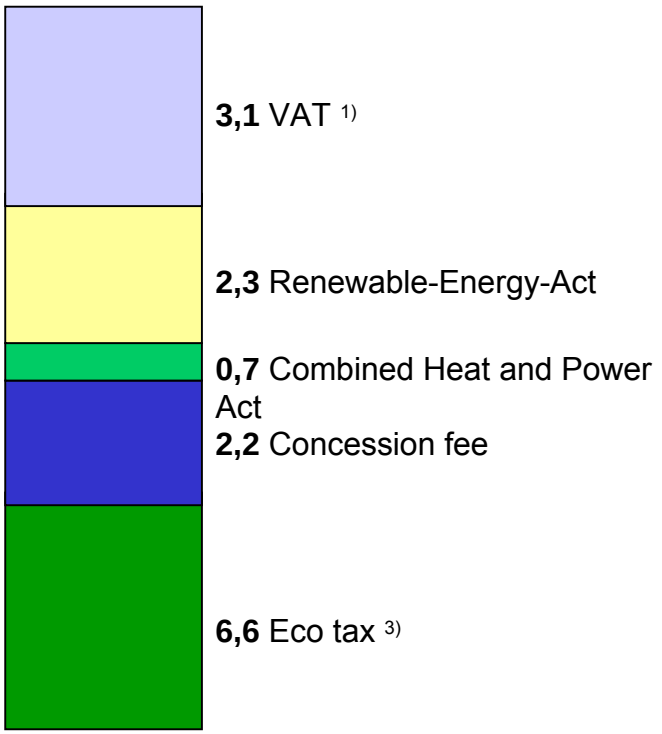
3) as per tax estimation (BMF), May 2003



2,1 VAT 1)

0,3 Renewable-Energy-Act 2)

2,0 Concession fee



3,1 VAT 1)

2,3 Renewable-Energy-Act

0,7 Combined Heat and Power Act

2,2 Concession fee

6,6 Eco tax 3)

1998: 4,4 billion EUR (total)

2004: 14,9 billion EUR (total)

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Vattenfall Europe - Future Investment Options

- **Grid enforcement Project**
  - North-line and South-West-Coupling-line approved – ca. 370 km
  - Security of supply
  - Investment volume ca. € 260 million

- **Power Plant Investment Analysis**
  - Approved locations for power plants
  - Subject to Supervisory Board approval
  - Subject to development of political framework

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Vattenfall Leading – European - Responsible

- Good market position in core business
- Growth options
- Participation in shaping legal framework
- Our Vision: a leading, European, responsible energy company

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