



Fortum and electricity market development

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30 May 2006
Handelsbanken

- **Fortum today**
- **Fortum's view on electricity market development**
 - Electricity production
 - Common Nordic market - integrating to Europe
 - Emission trading
 - Other issues - regulation impact
 - capacity reserves
- **Russian electricity market**
 - Market development
 - Fortum in Russia

Leading market positions in the Nordic area

Nro 1



**Electricity
distribution**



Heat

Nro 2



**Power
generation**



**Retail sales
of electricity**

Presence in focus market areas

Nordic

Generation	51.2 TWh
Electricity sales	58.2 TWh
Distribution cust.	1.4 mill.
Electricity cust.	1.2 mill.
Heat sales	19.4 TWh

NW Russia

(in associated companies)

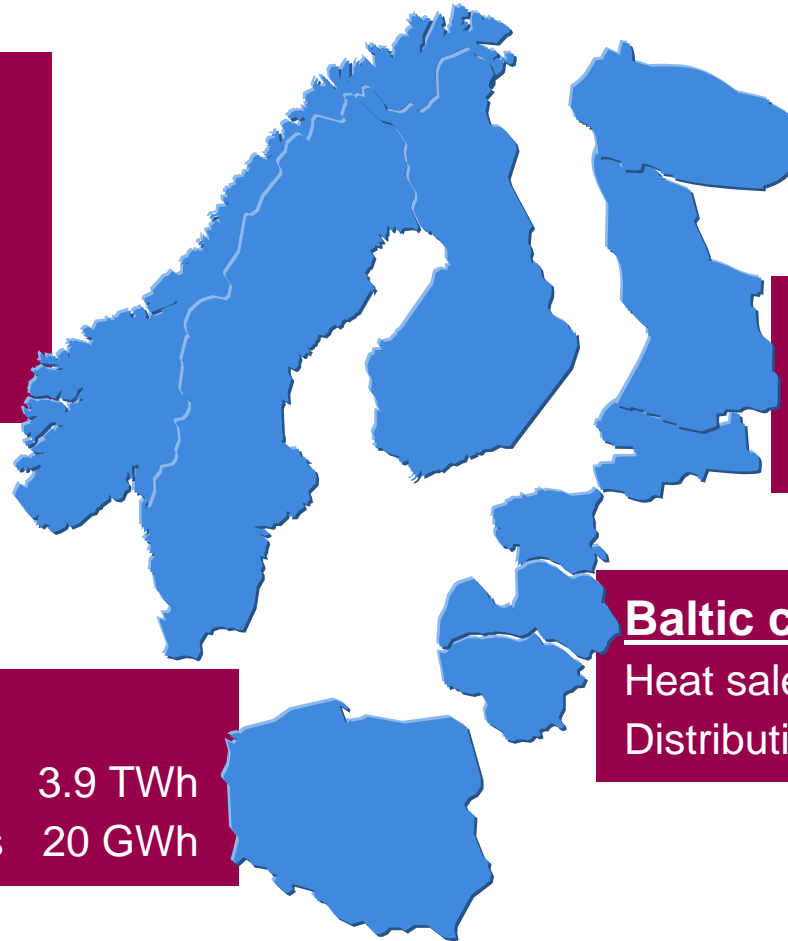
Generation	~6 TWh
Heat production	~10 TWh

Poland

Heat sales	3.9 TWh
Electricity sales	20 GWh

Baltic countries

Heat sales	1.2 TWh
Distribution cust.	22,000



Fortum's strategy

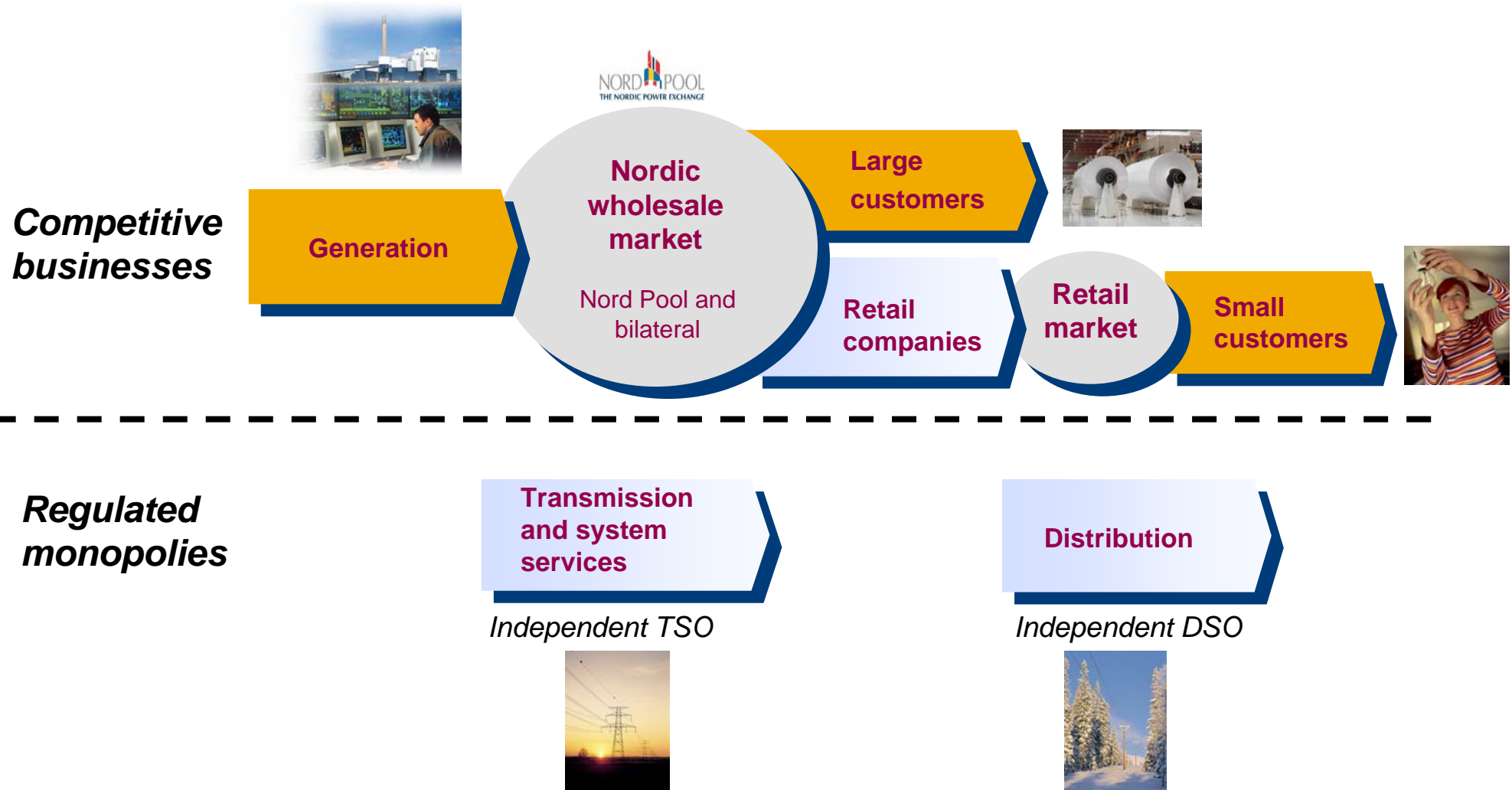
Fortum focuses on the Nordic and Baltic Rim markets
as a platform for profitable growth

Become the leading
power and heat
company

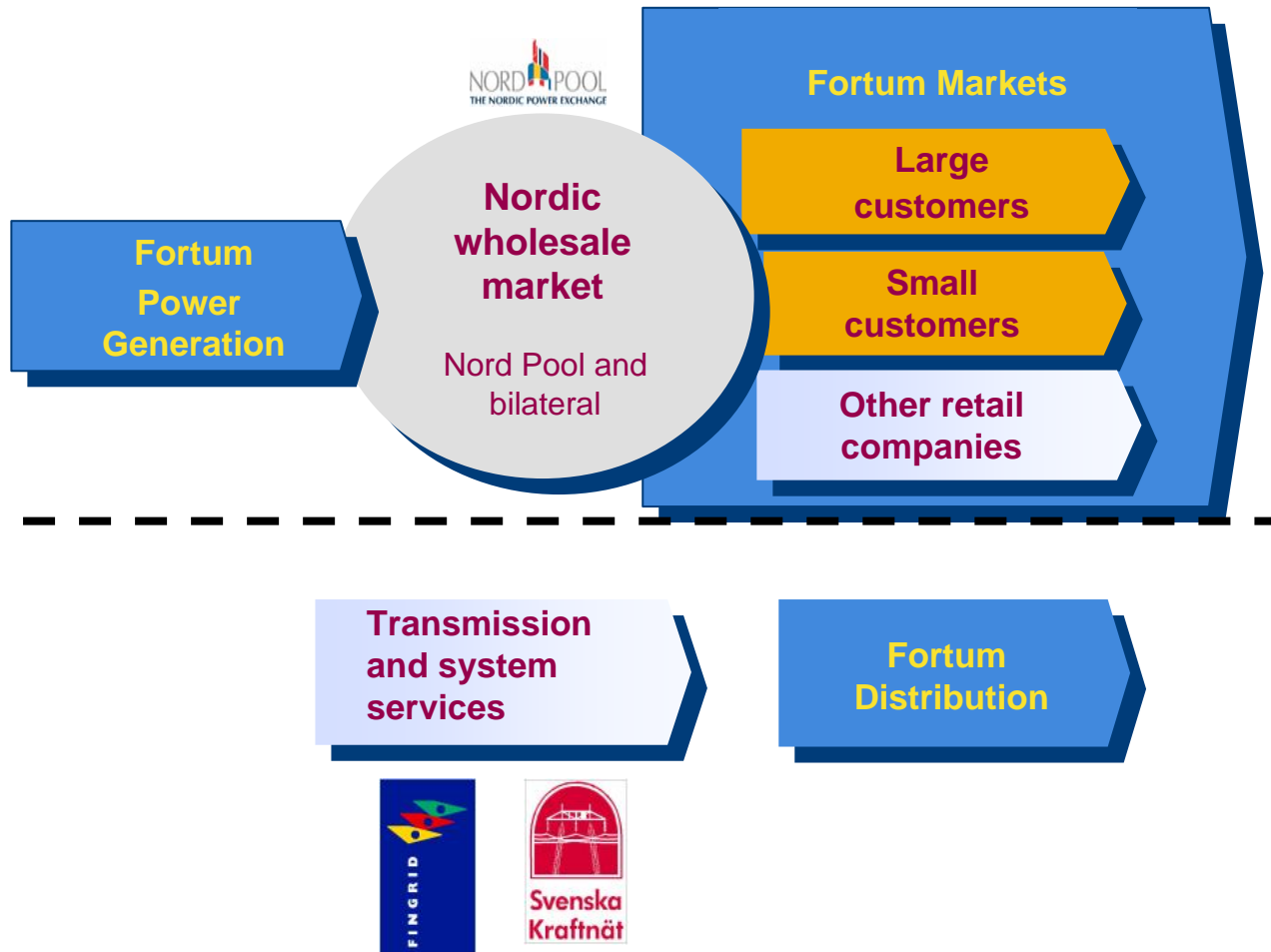
Become the
energy supplier
of choice

Benchmark business performance

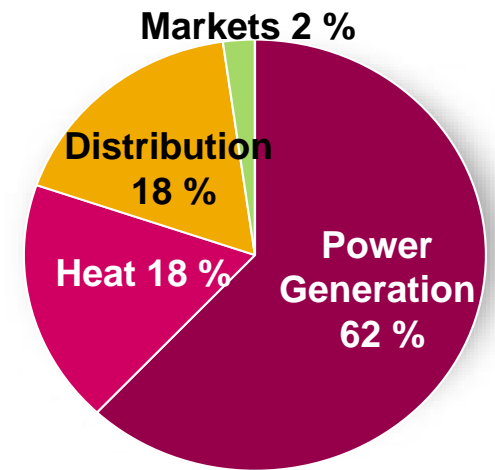
Market Structure - Business Value Chain



Fortum Business structure

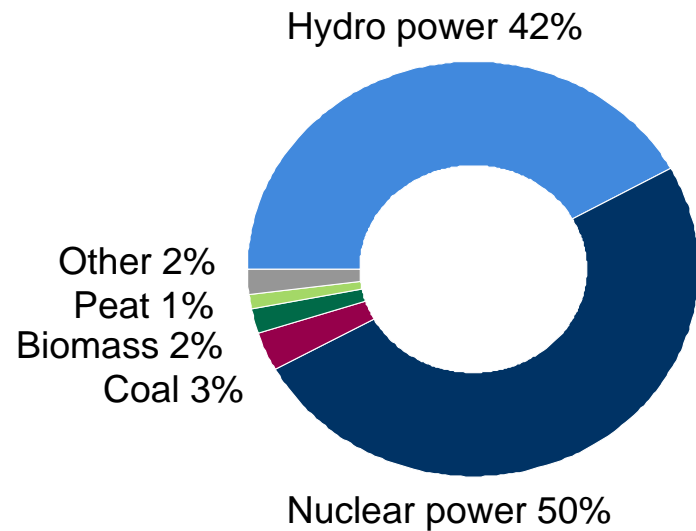


Fortum's operating profit in 2005
EUR million 1,334



Power and heat generation by source

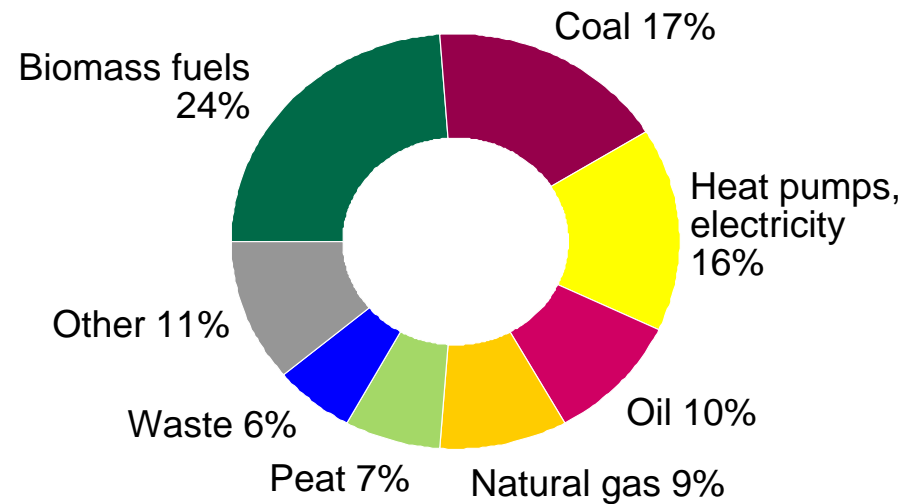
Fortum's Nordic power generation



51.2 TWh in 2005

Total generation capacity 11,136 MW

Fortum's Nordic heat production

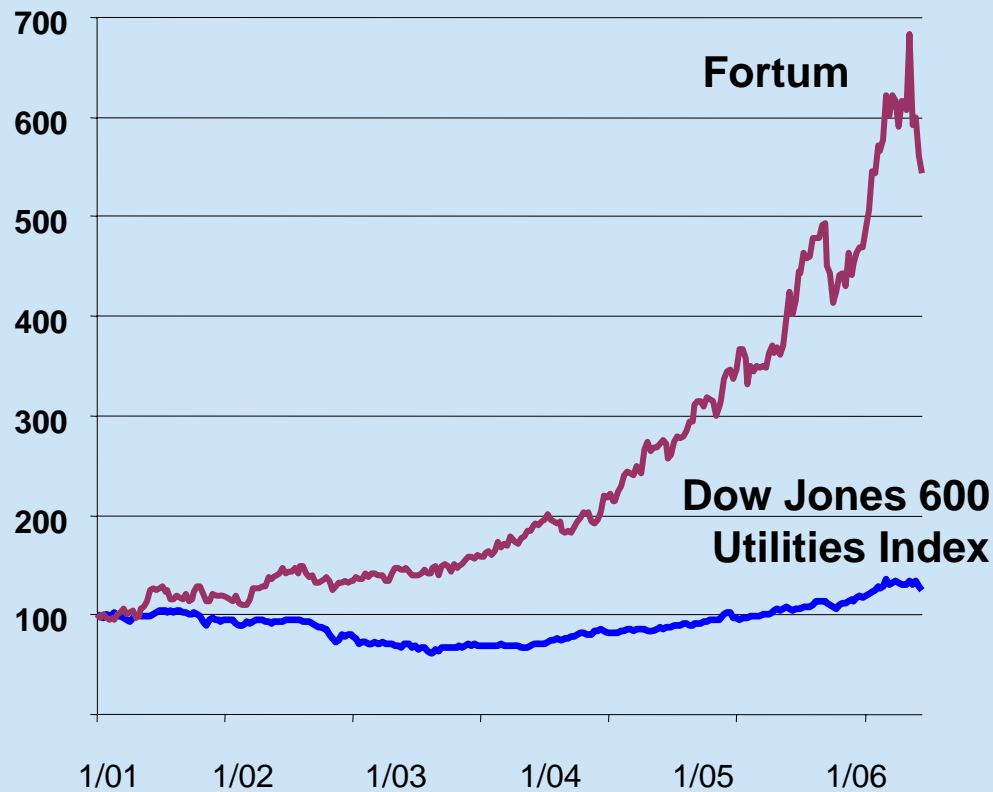


20.6 TWh in 2005

Total production capacity 8,252 MW

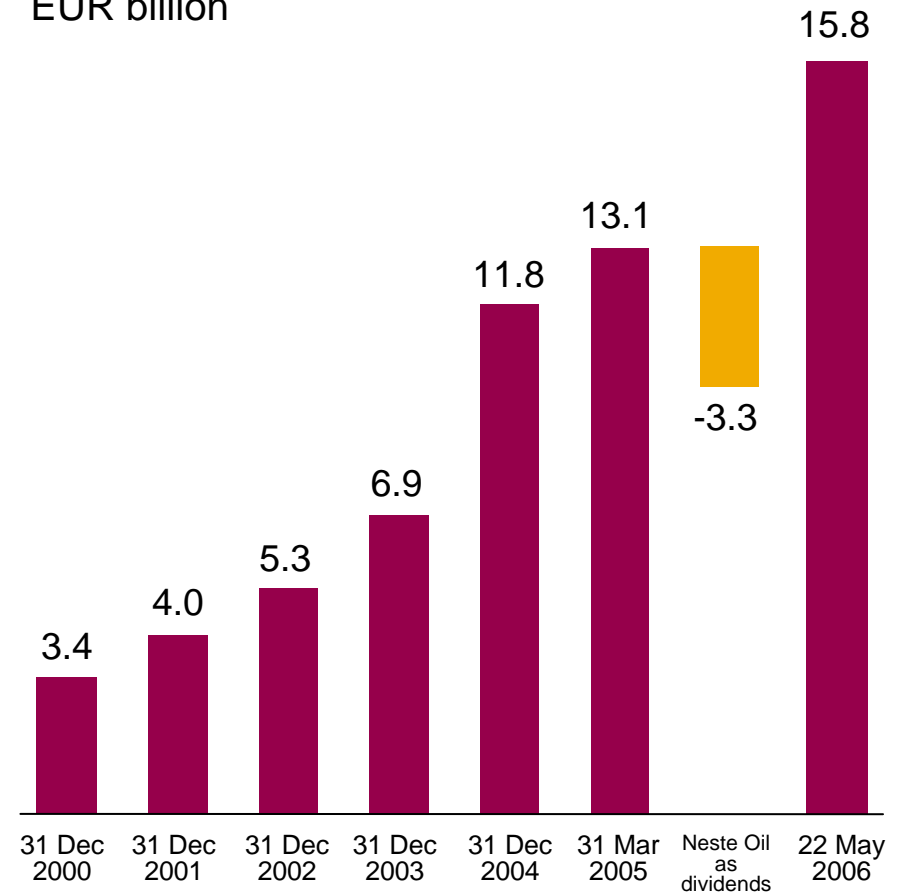
Excellent share performance

Share price
Index



Source: Reuters, 22 May 2006, adjusted for Neste spin-off

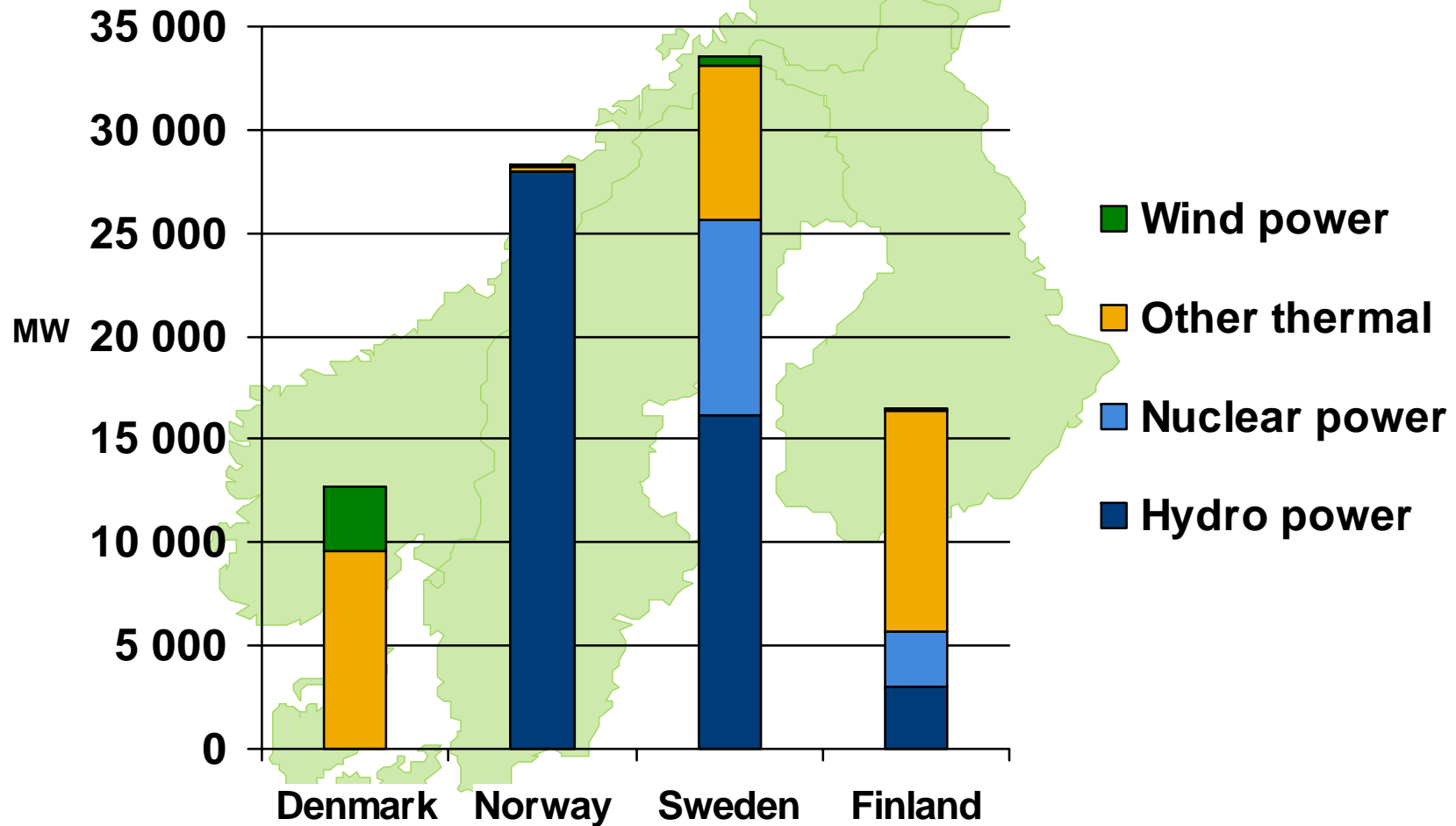
Market value
EUR billion



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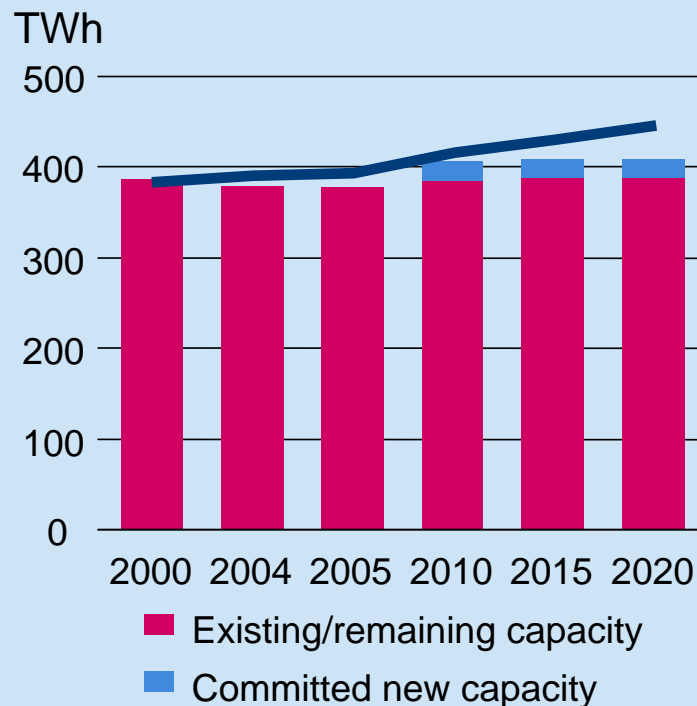
Nordic capacity structure

Total 91 100 MW (2004)



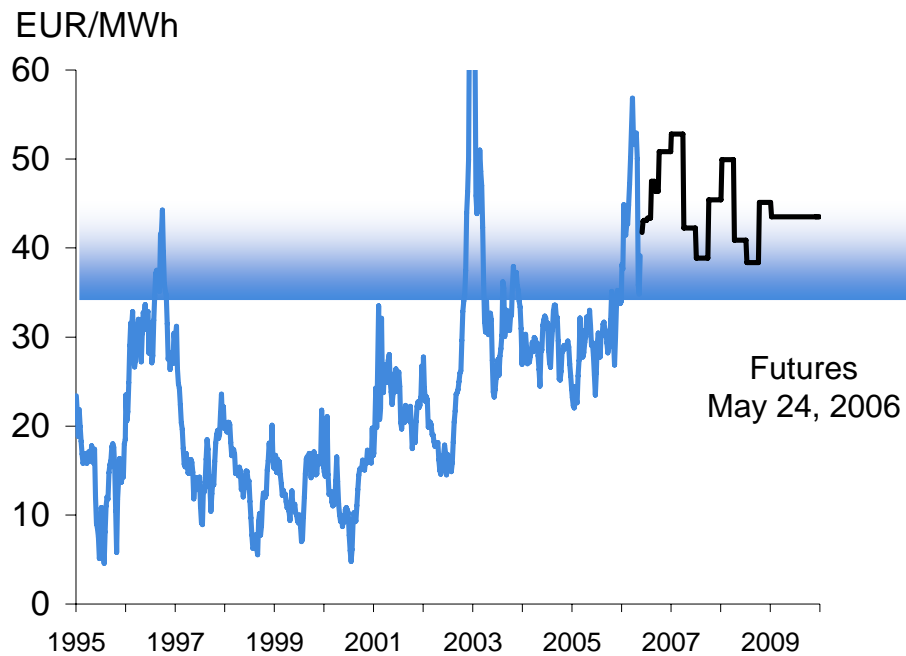
New capacity will be needed

Demand and capacity development in the Nordic market

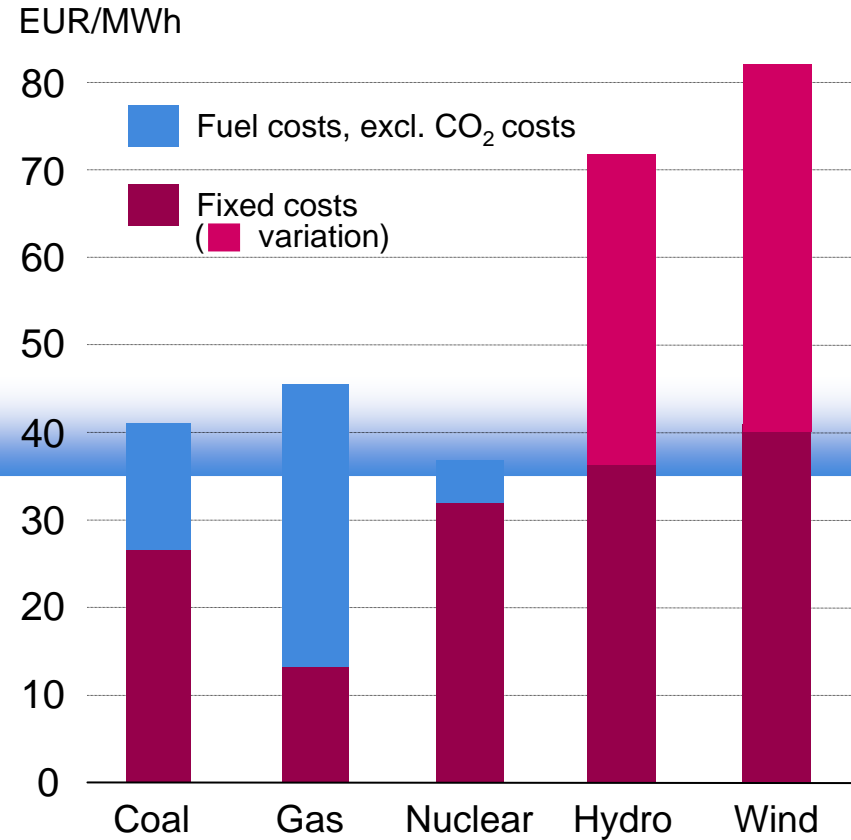


- Electricity demand is expected to increase by around 55 TWh to 2020
- Committed plans of new capacity approx. 20 TWh
- Additionally:
 - effect increases in Swedish nuclear may bring up to 8 TWh more capacity
 - plans to construct wind power capacity in Nordic Countries
 - possible closures of current capacity may take away up to 10 TWh by 2020

New capacity will require an EUR 35+ price



Source: Nord Pool, Fortum



Source: NEA & IEA "Projected Cost of Generating Electricity", 2005 update (average of European projects); Elforsk: "El från nya anläggningar", 2003.

Fortum investments in the Nordic Production



Decided and planned investments in additional capacity by 2010

	Fortum's share*	
	MW	MEUR
Nuclear	660	1600
Hydro	150	600
CHP and Thermal	540	500
Sum	1 350	2 700

* Fortum's pro rata share of associated companies' investments included

Requirements of a Functioning Electricity Market

- Legislation and regulation
 - stability and predictability
 - non-discriminatory
- Transmission connections
 - cooperation between TSOs
 - market based congestion management
- Power exchange
 - reliable price
 - liquid market - both physical and financial
 - international intraday and balancing markets
- Market transparency
 - information affecting market price available at the same time for all market participants



Development of the European Emission Trading System

Future challenges

- EU committed to emission trading
- Improving the market by increasing market transparency
 - information available to all market participants at the same time
 - common procedures - harmonisation
 - stability and predictability
- Expansion of emission trading during the Kyoto period
 - JI and CDM utilisation
 - National allocation plans for second trading period (NAP 2)

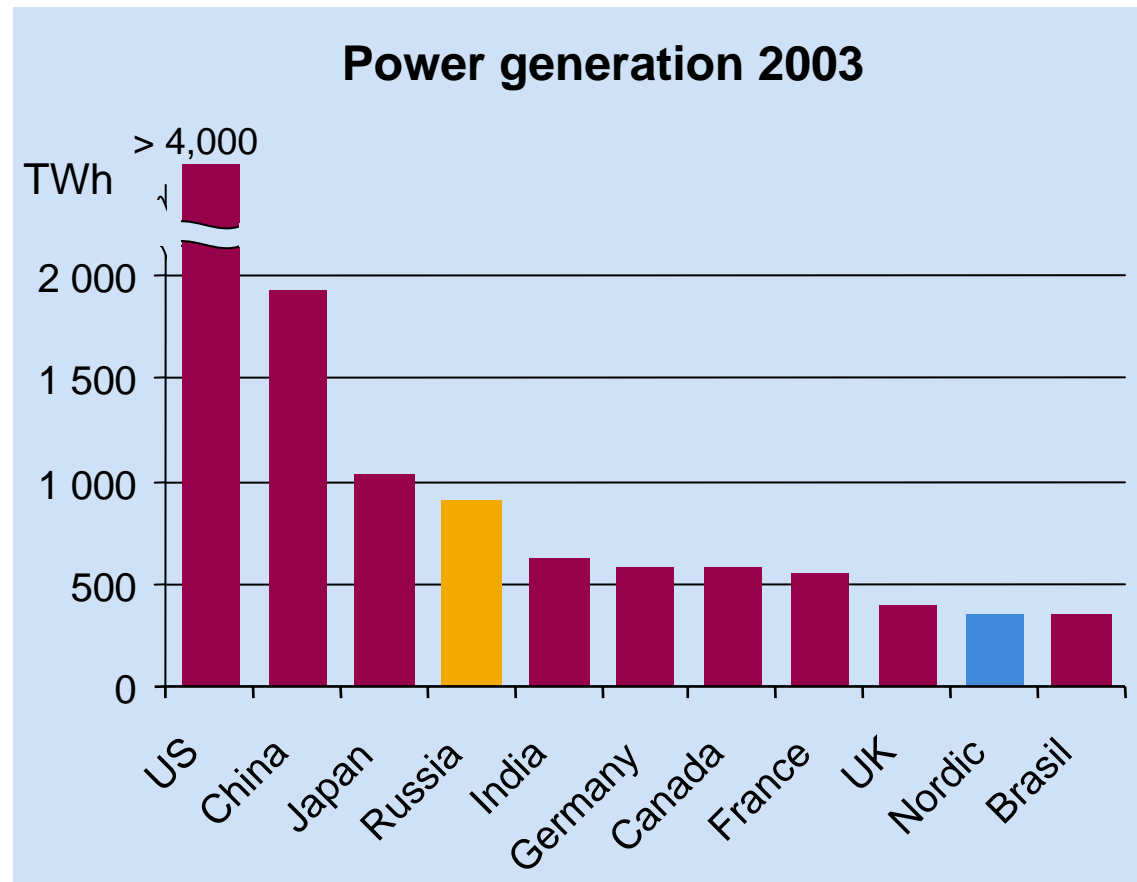
ETS Prices 2005-2006



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The large Russian power market is undergoing major change

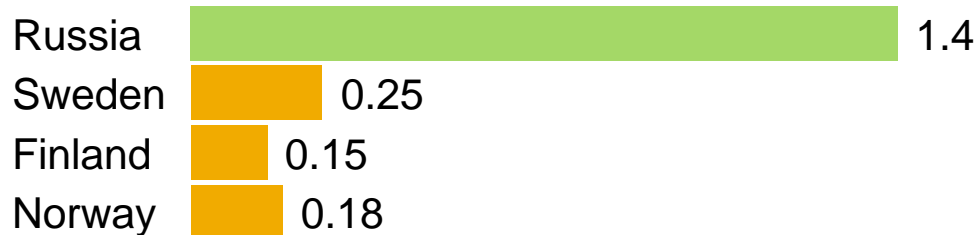
- A major need for new capacity
- Big potential for efficiency improvement



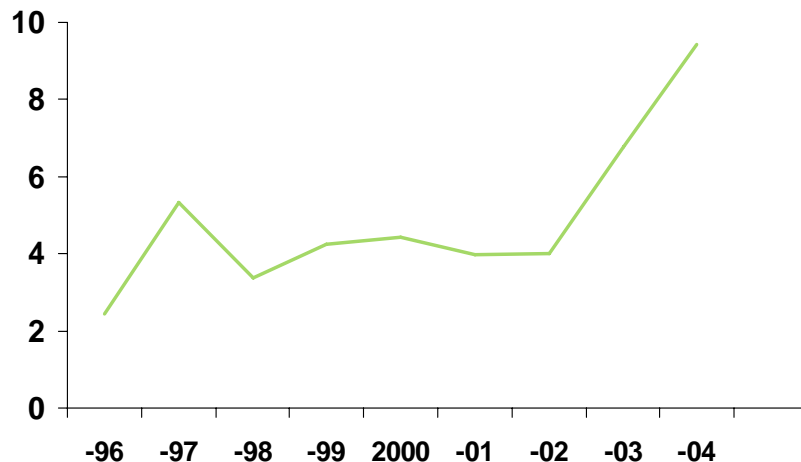
Source: IEA

More favourable business environment is developing in Russia

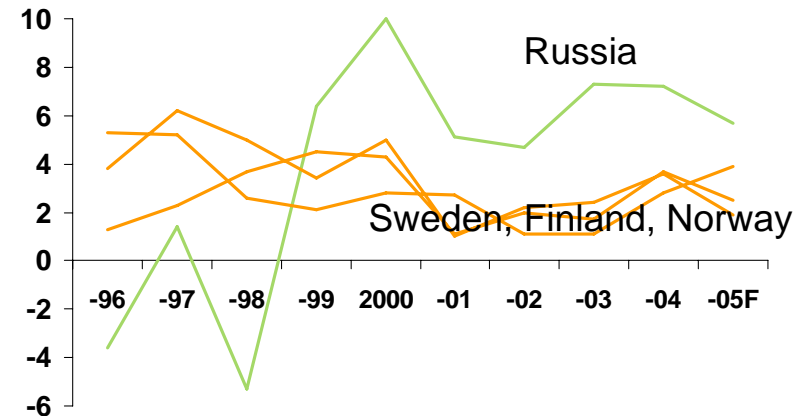
GDP, USD billion (ppp)



Foreign direct investments into Russia, USD billion



Real GDP growth rate, %



Exports to Russia USD ~100 billion/a; from Germany, China, Ukraine, Italy, Finland, France, Japan ...

- from Finland USD 5 bn
- from Sweden USD 2 bn

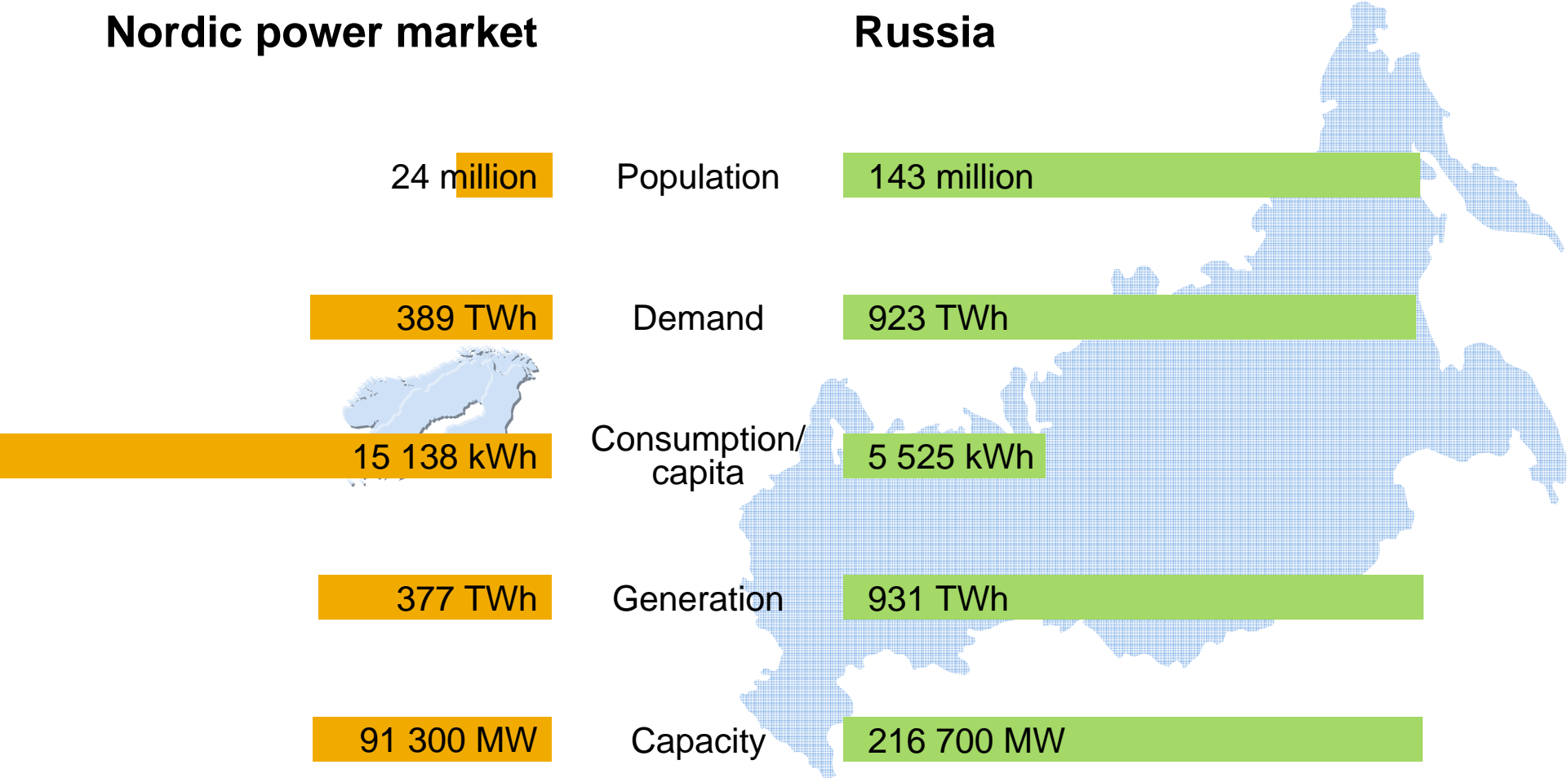
In Q3 of 2005, measured by trade volume, Russia became Finland's overall largest trading partner.

In relation to GDP, accumulated foreign direct investments are still only a fifth of the average level of the other European transition economies

Russia is a large country – power market twice the size of Nordic

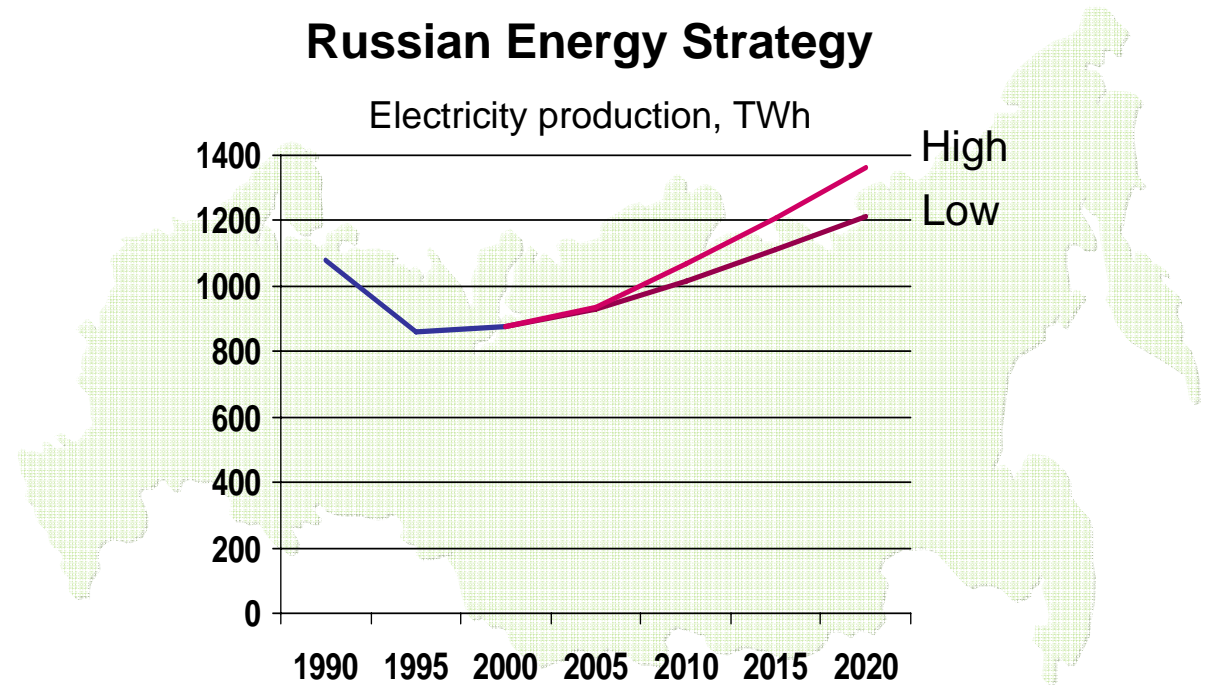
Nordic power market

Russia



From a western industry actor's perspective Russia is an emerging opportunity

- Power and heat sector reform
- Need for huge investments
- Need for efficiency improvement
- Strong growth potential



Development of Russian power industry – a Nordic/Western analogy

Unbundling of businesses by type of activity

Competitive businesses:

- Generation
- Sales

Regulated monopolies:

- Transmission
- Distribution

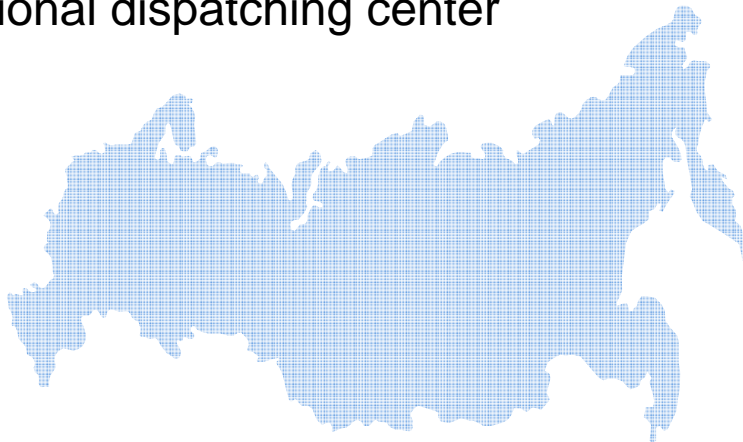
Market liberalisation in competitive businesses

Pricing model reform – from tariff regulation to competitive pricing

Characteristics of planned Russian power market

Day-head spot market

- Nodal pricing model (~8000 nodes)
- Participation to the wholesale market on power plant level
- Centralised dispatching
- Hydro planning carried out by regional dispatching center



Separate capacity market

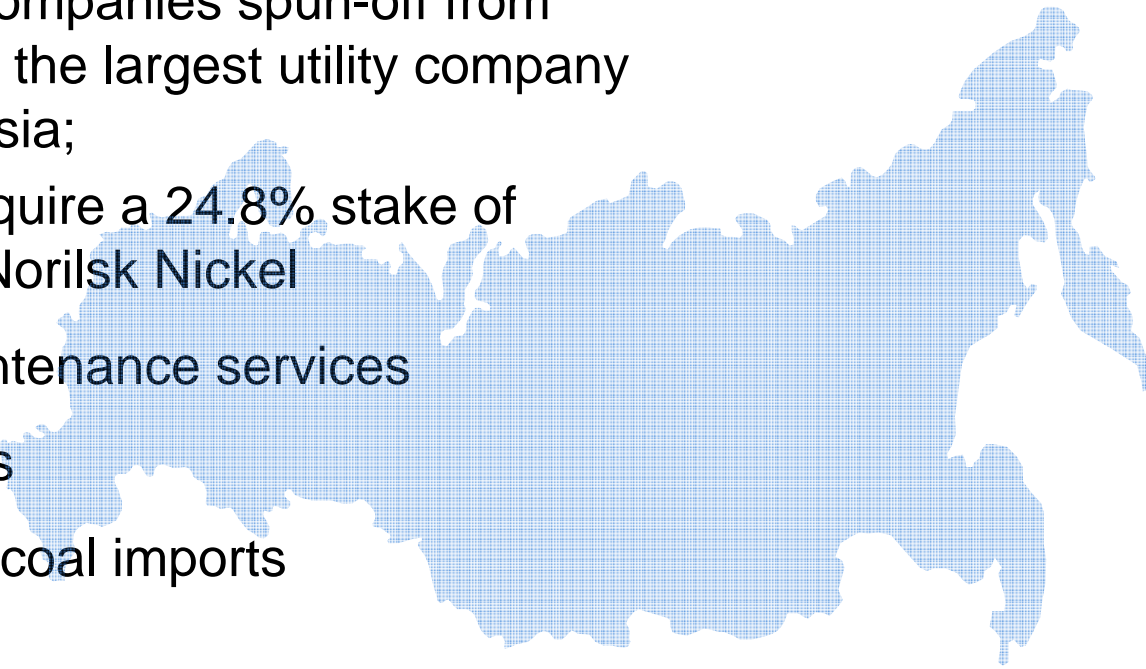
- Buyers need to buy capacity based on their peak load
- Capacity payments may depend on production type and geographical area

Long term contracts

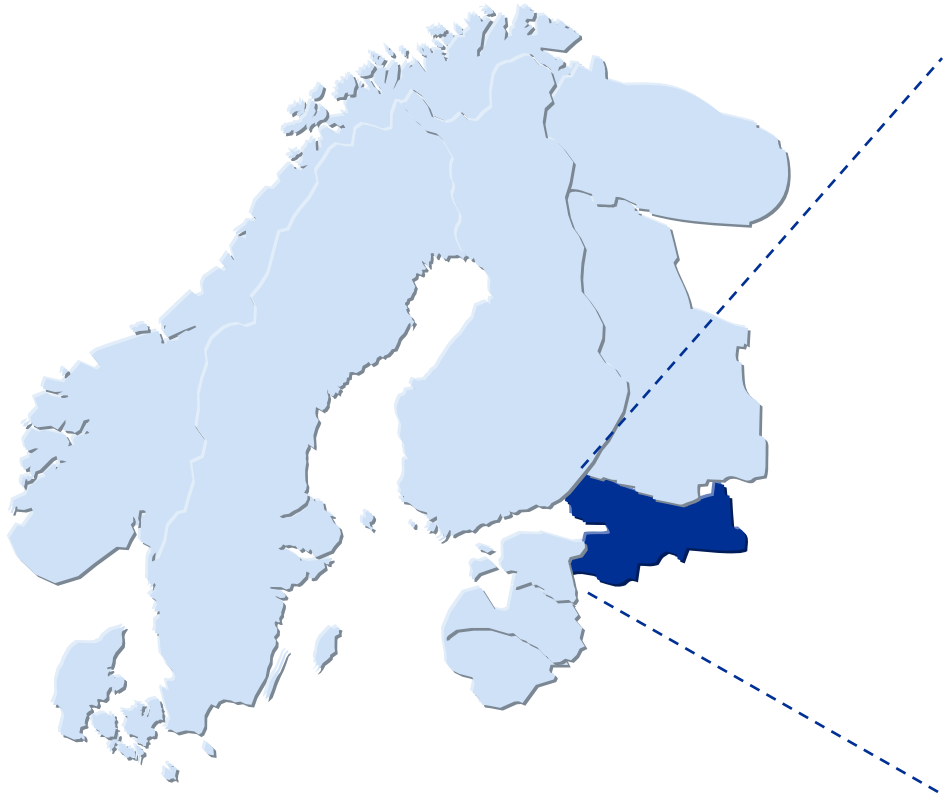
- Bilateral agreements where transmission costs paid by the buyer and/or seller
- No plans for exchange traded financial instruments

Fortum's current operations in Russia

- A ~1/3 stake in companies spun-off from OAO Lenenergo, the largest utility company in northwest Russia;
- Agreement to acquire a 24.8% stake of Kolenergo from Norilsk Nickel
- Operation & maintenance services
- Electricity imports
- Nuclear fuel and coal imports



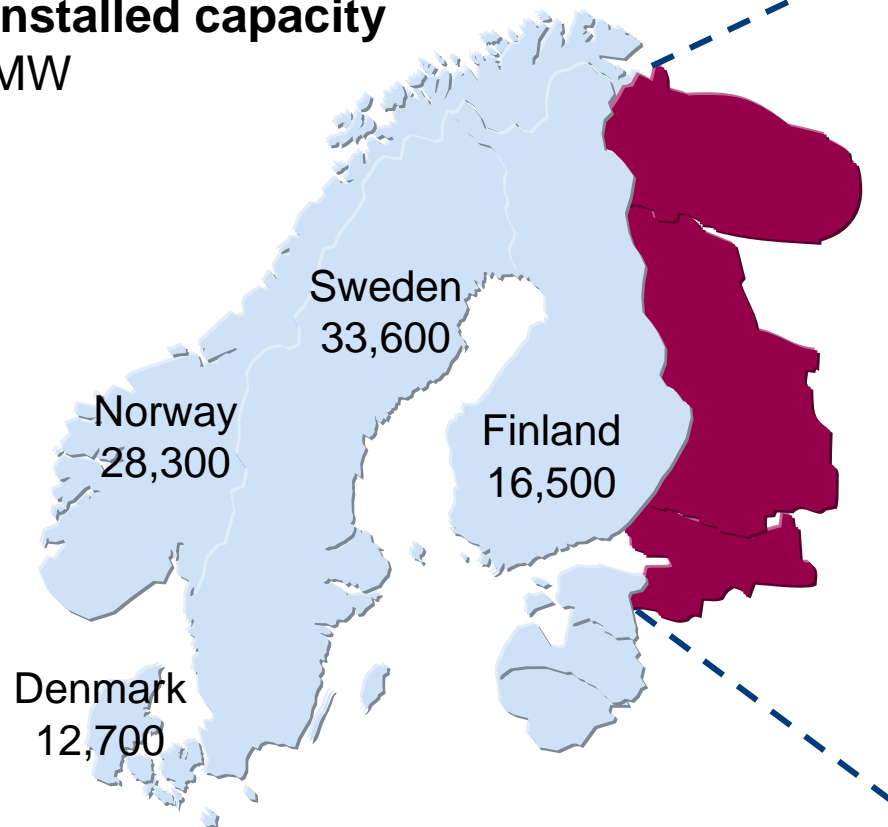
Fortum's strong foothold in NW Russia today originates from stake in Lenenergo



- Largest utility in northwest Russia
- 9 thermal and 6 hydro plants
- Power generation
 - capacity ~3,240 MW
 - production ~13.4 TWh/a
- Heat generation
 - capacity ~13,900 MW
 - production ~25.2 TWh/a
- Personnel ~12,500
- Fortum's share of the company about one third

TGC-1 operating as of 1 October 2005

Installed capacity MW



Territorial Generating Company TGC-1

- Production capacity ~ 5,750 MW, of which hydro 2,874 MW
- Third largest territorial generation company in Russia
- Started operation on 1 October 2005 based on a leasing model
- Transfer of assets into TGC-1's ownership targeted at the beginning of 2007
- Fortum's calculated share ~26% *)
- On TGC-1's Board of Directors Fortum has 3 representatives out of a total of 11 members

*) Direct owners of TGC-1 are initially Lenenergo 63%, Kolenergo 25%, Karelevergo 12%

