

The Nordic Power Market

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International Affairs



Agenda

- Liberalisation in the 1990s
- The establishment and importance of Nord Pool
- Market structure and development
- NordREG and the ongoing work to further improve the market

Liberalisation in the 1990s

- The Nordic countries have a long tradition of power exchange since their generation structures complement each other
- Deregulation started in the mid-1990s and by 2000 all Nordic countries are deregulated
- All four Nordic countries have chosen to cooperate in the Nordic electricity market
- The purpose was to create better conditions for competition, and thus to improve utilisation of production resources

The establishment of Nord Pool

- The liberalisation process in the middle of the 1990s was followed by an integration of the Nordic power markets
- The establishment of Nord Pool, the Nordic electricity exchange, was an important part of this integration
- Today, we have a common Nordic wholesale electricity market

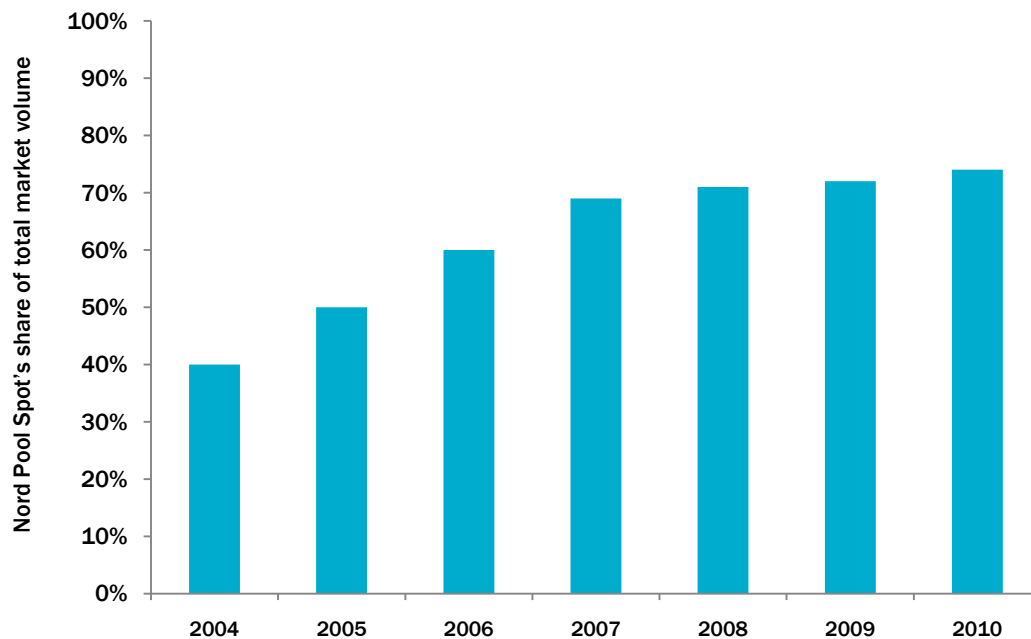
Important features of the Nordic market

- All interconnector capacity is given to the power exchange Nord Pool Spot for day-ahead trade
- Through an implicit auction the trade is cleared for each hour the coming day, and interconnector capacity is allocated simultaneously
- This will lead to a situation where electricity will flow from surplus areas as long as there is transmission capacity available

Important features of the Nordic market

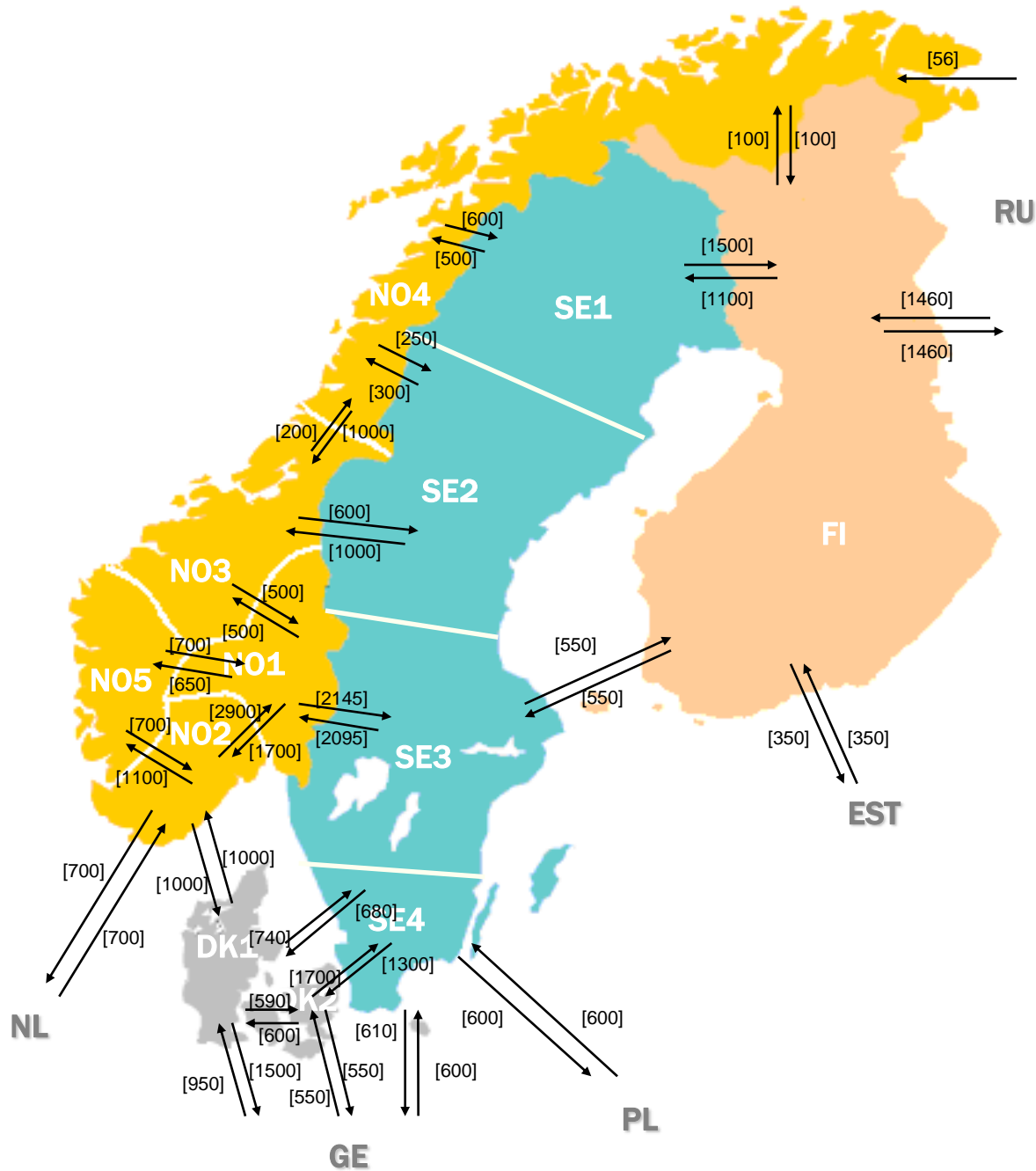
- When there is no congestion, the price is the same in the whole area
- This "uncongested" price is always calculated and is called the system price
- In case of congestion, prices will differ between areas such that all transmission capacity is used efficiently

Liquidity at Nord Pool Spot



**A high liquidity
generates a
neutral,
transparent
reference price
for both the
wholesale and
retail markets**

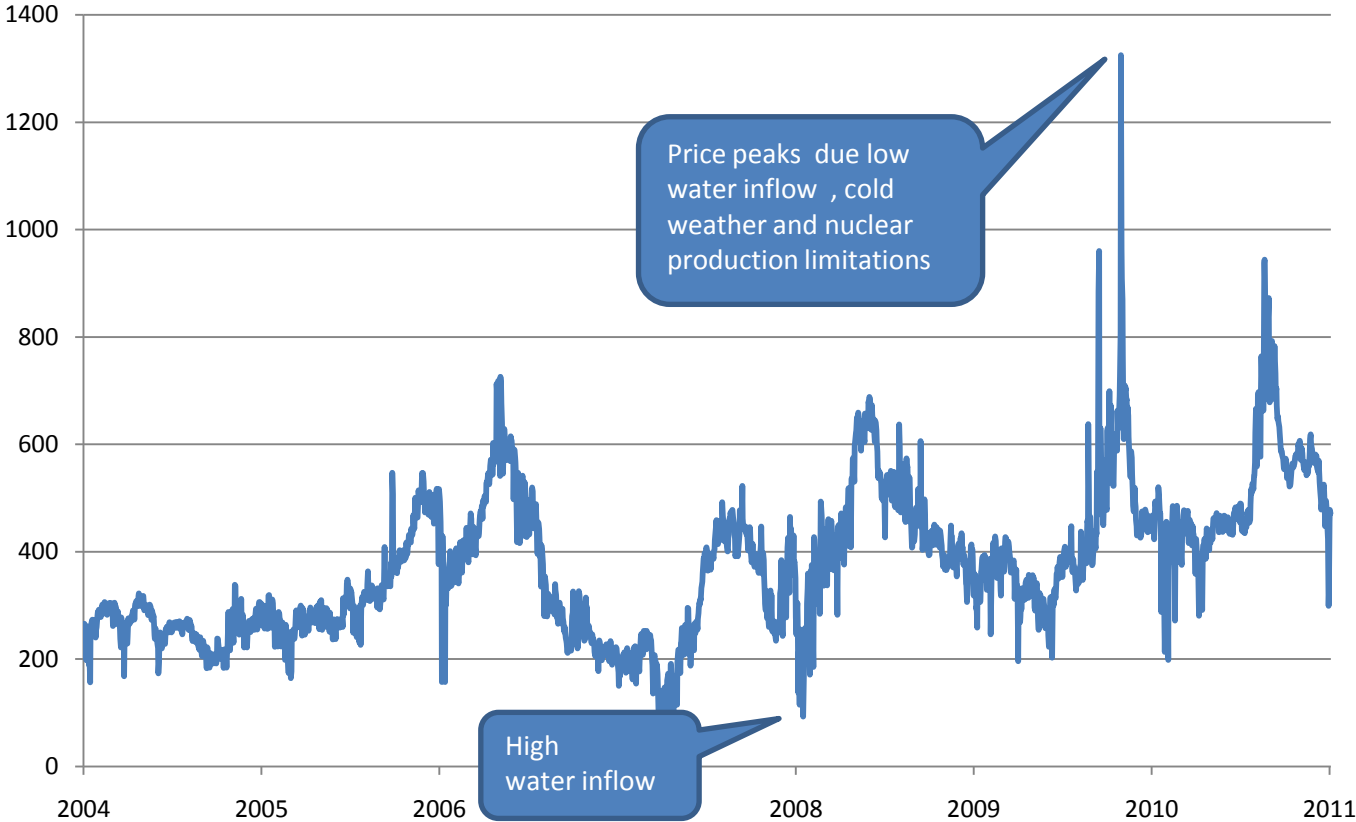




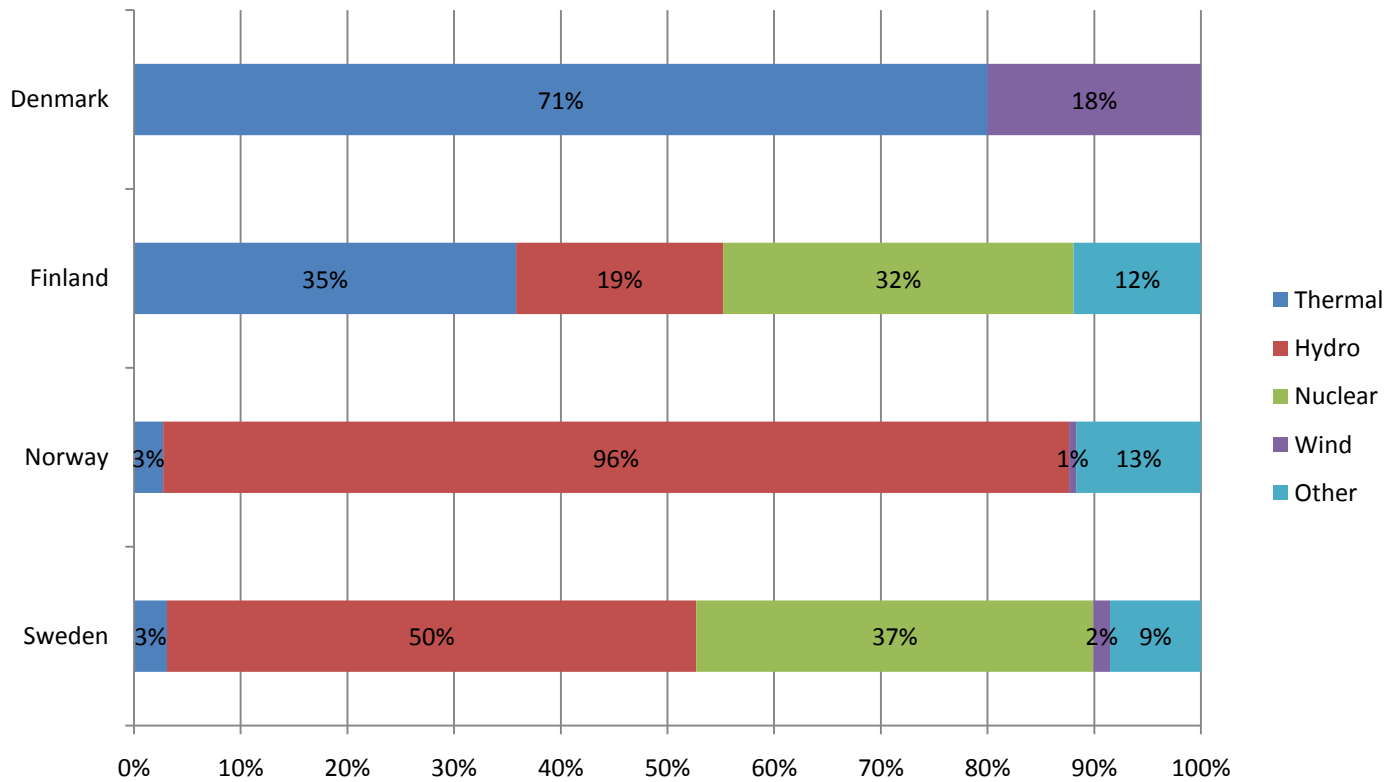
Substantial grid reinforcements in the Nordic transmission system

- **Norway to Denmark (Jutland) (new Skagerrak connection), 2014**
- **Sweden – Norway, South (Extension of the South Link into South-West Link), 2015/2016**
- **Sweden – Norway, North – South axis (420 kV AC line Ørskog – Fardal), 2013**
- **The Arctic region (420 kV AC line Ofoten – Balsfjord – Hammerfest), 2014/2016**

Development of the spot price

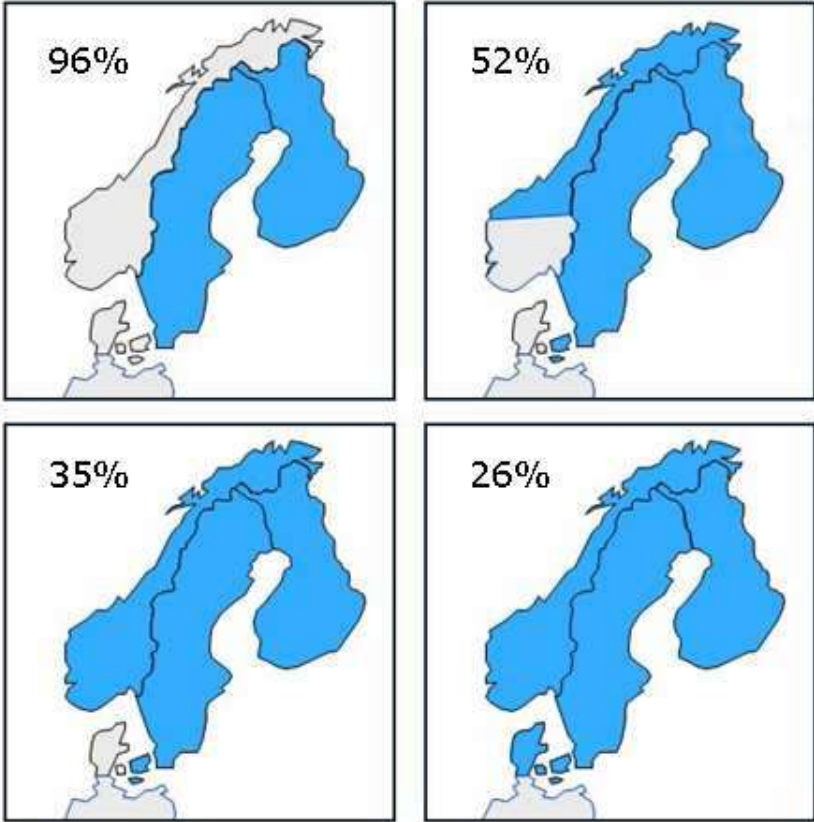


Hydro based power system

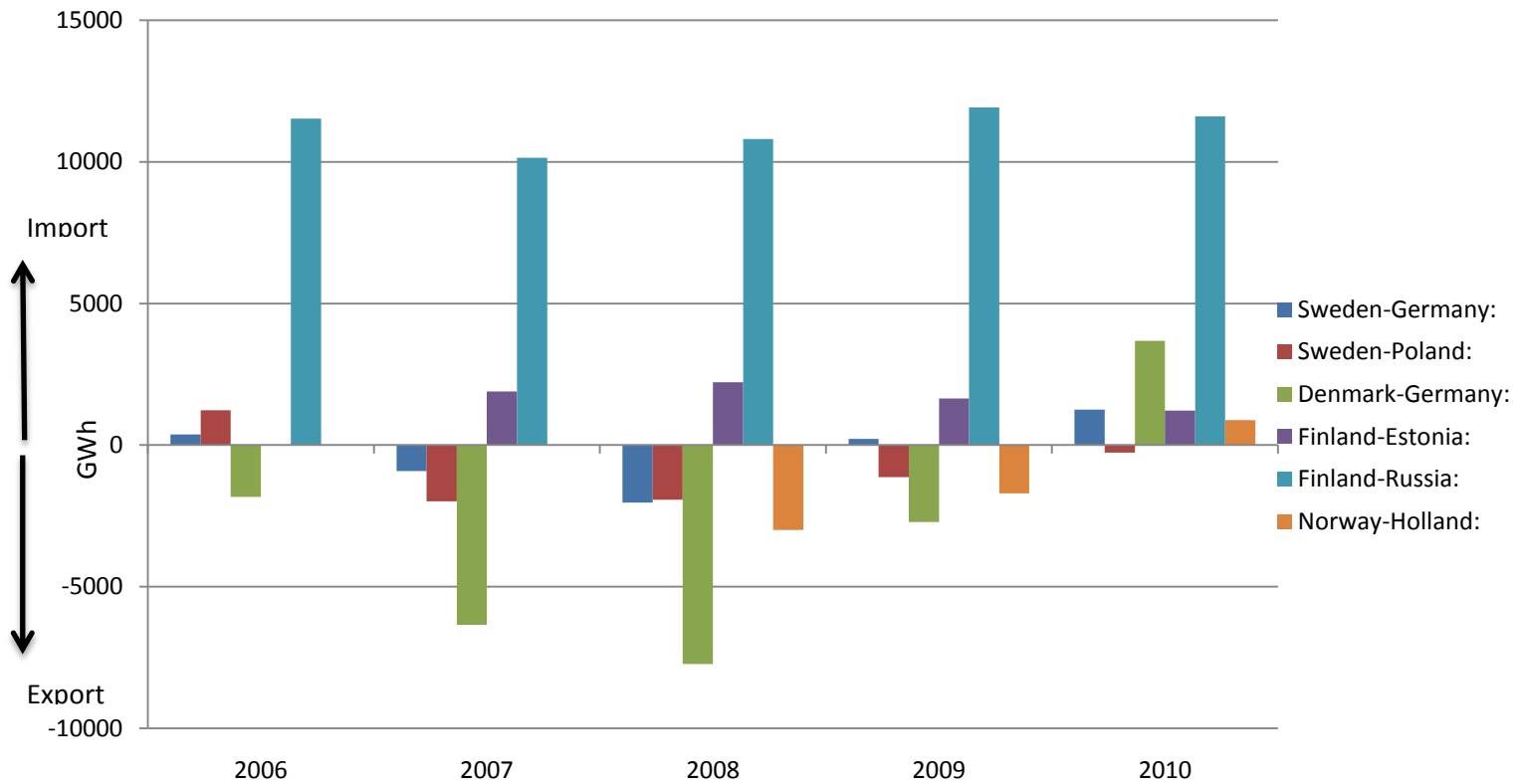


Congestion leads to sub markets

In case of congestion,
prices differ across
the Nordic market



Cross-border trade



Cooperation between the Nordic energy regulators

- NordREG was established in 2002 through a Memorandum of Understanding
- Our mission is to promote legal and institutional framework and conditions necessary for developing the Nordic and European electricity markets

Ongoing work within NordREG to further develop the Nordic market

- **A common Nordic retail market**
 - Implementation in 2015
- **Possible improvements of the wholesale market function**
 - Increased demand elasticity
 - Transparency of Nord Pool Spot

Thank you!

www.nordicenergyregulators.org

www.ei.se

