
NORD POOL SPOT

EUROPE'S LEADING POWER MARKETS

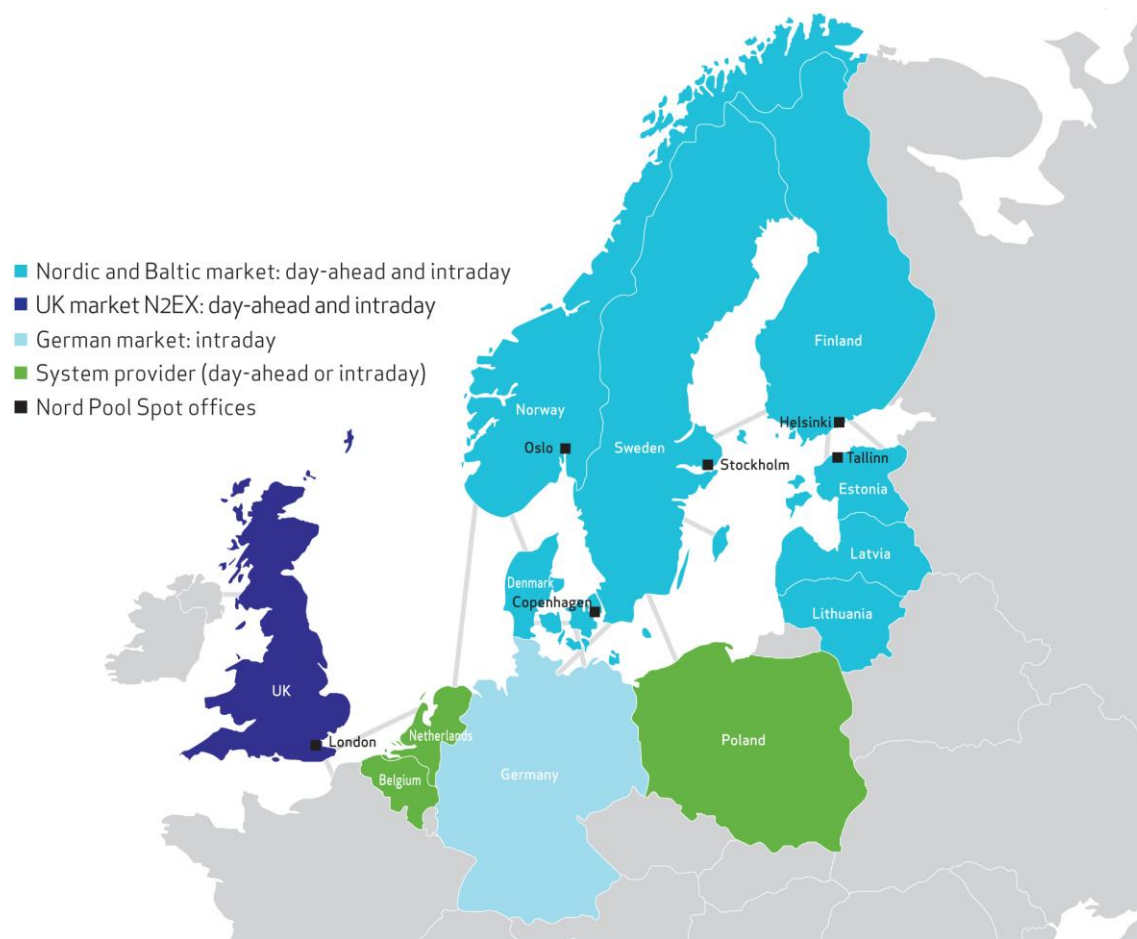
CROATIAN POWER EXCHANGE WORKSHOP
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Content

- Nord Pool Spot: history, growth, experience & stakeholders
- Nordic Market Model
- Common European Market
- Development in SEE & Nord Pool Spot role

Europe's leading power market

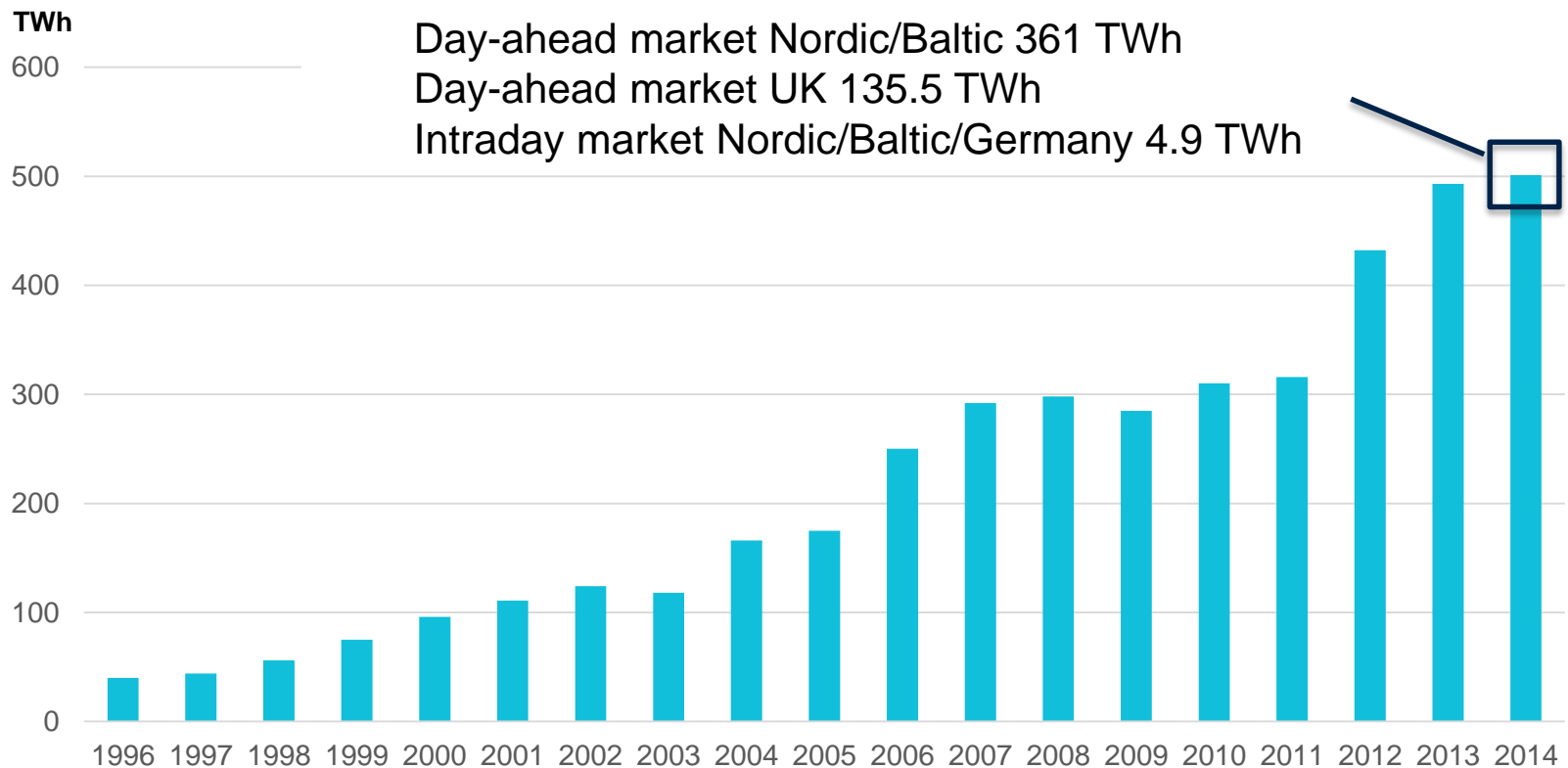


Our history

- 1991:** The Norwegian power market is deregulated
- 1993:** The **power market** is established by the Norwegian TSO as 'Statnett Marked'
- 1996:** Rebranded to Nord Pool as **Sweden** joins - the world's first international power market
- 1998:** **Finland** joins Nord Pool
- 1999:** The first international **intraday market** is introduced (Elbas)
- 2000:** The Nordic market becomes fully integrated as **Denmark** joins
- 2002:** Nord Pool Spot is established as a separate company for short term power trading
- 2008:** Financial part of Nord Pool sold to NASDAQ Commodities
- 2010:** The **UK market N2EX** is launched by Nord Pool Spot and NASDAQ Commodities. **Estonia** is opened as a market.
- 2012:** **Lithuania** is opened as a market.
- 2013:** The Baltics are completed as **Latvia** is opened as a market
- 2014:** Nord Pool Spot take sole ownership of the UK market. North-Western European power markets are coupled. Nord Pool Consulting is launched

Growth

A total of 501 TWh traded in 2014



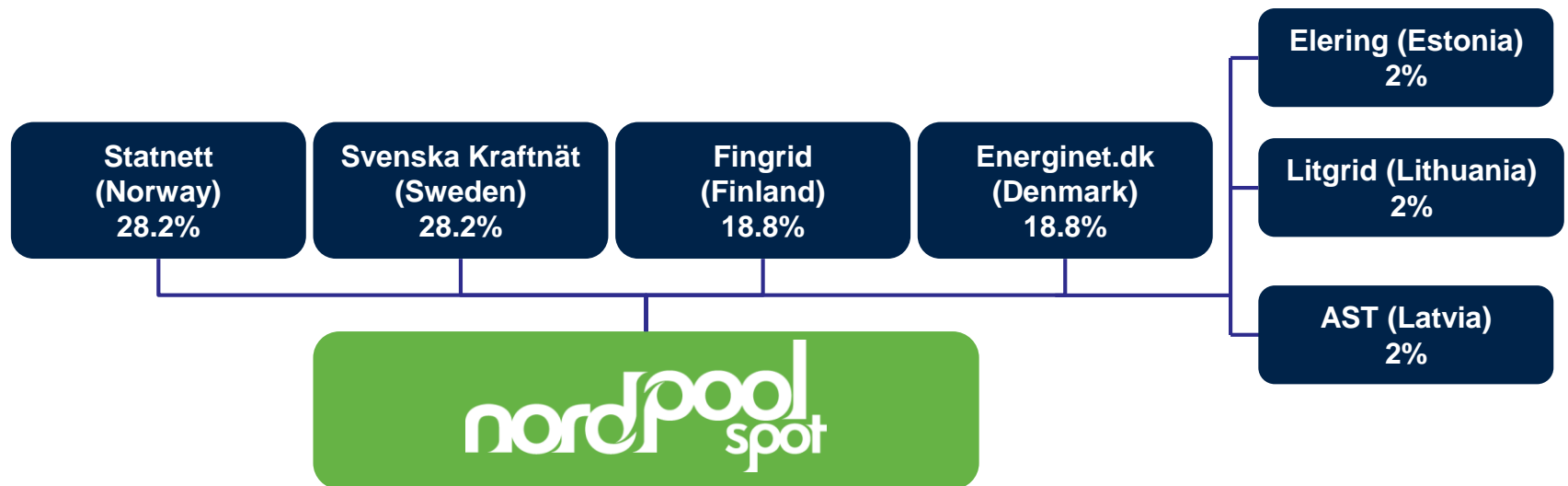
Our role

- To provide liquid, efficient and secure power markets to our customers
- To provide accurate information to the whole market, ensuring transparency
- To provide equal access to market for everyone wanting to trade power
- To be the counterparty for all trades; guaranteeing settlement and delivery



Stakeholders

- Owned by the Nordic and Baltic transmission system operators
- Regulated by the Norwegian Water Resources and Energy Directorate (NVE)



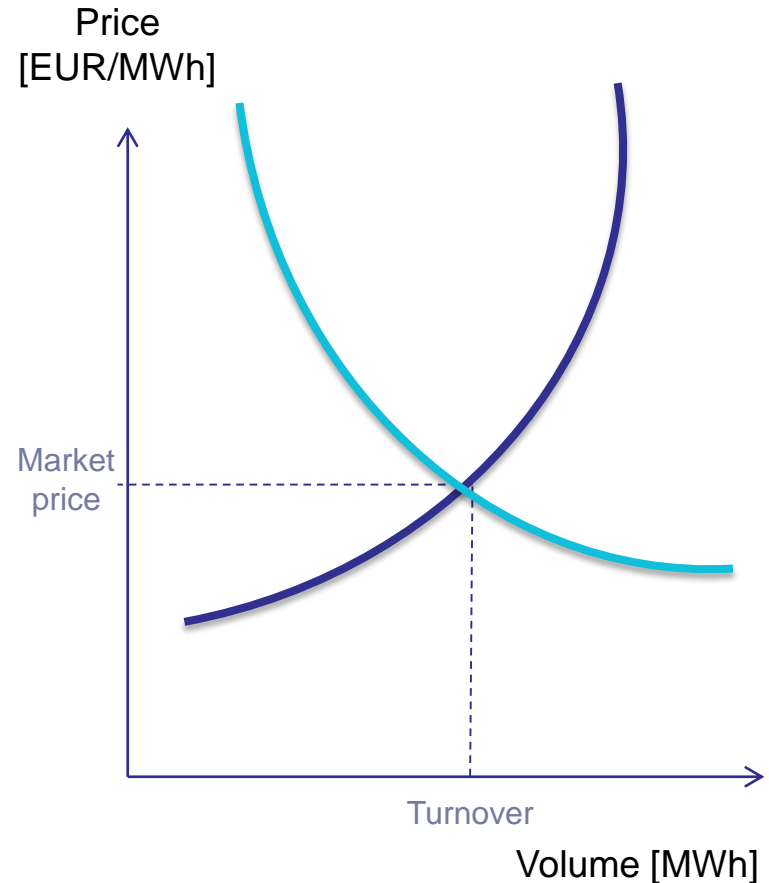
Our customers

- 380 customers from 20 countries trade in the Nord Pool Spot markets
- Our customers are typically power producers, suppliers and traders
- Large end-users also trade on the markets and buy power directly through Nord Pool Spot rather than through a supplier



The day-ahead market

- An auction of power for delivery the following day
- Prices are calculated based on supply, demand and transmission capacity (how much power can be moved from one area to another)
- Liquidity is key: A market with a lot of power traded in and out leads to depth in the market and reliable index prices



The intraday market

- The day-ahead and intraday supplement each other, with the intraday market acting as a balancing market to the day-ahead
- The intraday market is continuous, and power trading takes place until 30 minutes before the power is delivered
- The intraday market offers customers opportunities for risk reduction as well as increased profit
- TSOs publish their power transmission capacity to the intraday market – if transmission capacity is available, neighbouring countries can trade
- Members ‘offer’ how much power they want to sell and buy and at what price. Trading is then set based on a first-come, first-served basis between a seller and a buyer



Common European market

- The Nordic countries have been integrated for almost 20 years, with the same concept of market coupling now used throughout whole Europe
- Efficient use of transmission capacity by trading energy across borders
- Close cooperation between TSOs, Power Exchanges and National Regulators across Europe



Common European day-ahead market

A fair and transparent determination of day-ahead power prices is a key factor for the success of the integration of the European power market.

- Price Coupling of Regions (PCR)
 - The initiative of 7 Power Exchanges to develop a single price coupling solution
- Multi-Regional Coupling (MRC)
- EUPHEMIA
- 2.4 PWh



Development in the SEE region

- In year 2015 Nord Pool Spot signed Cooperation & Delivery agreements with CROPEX and IBEX.
- The Croatian project is progressing well and we jointly focus now on successful launch of Croatian Market.
- These developments can contribute to further integration of spot markets in SEE and will be a vehicle for quick and efficient integration in to MRC.



A recent example of integrating markets

Baltics – step by step

- 2008 - BEMIP Plan – strategic EU initiative
- 2008 Nord Pool Spot joined the NPS BEMIP project
- Cooperation with Baltpool – Lithuanian PX. Launched January 1st 2010.
- Estonian bidding area was opened on April 1st, 2010
- June 18th 2012 – Lithuanian Power Exchange operation was taken over by Nord Pool Spot
- 3rd June 2013 - Latvian bidding area was opened
- 4th Feb 2014 Baltic is going live with PCR simultaneously with Nordic and CWE

**Regional initiatives formed integrated Baltic Market
that is today fully integrated with Nordics and Europe!**



Baltic & Balkan: similarities

Baltic:

- Small to medium size markets. The Baltic region - 23 TWh, 0,7% of the EU final electricity consumption.
- Lithuania was isolated area from the start.
- 95% of consumption is traded via NPS.
- Biggest players active in all countries, regional customers.
- Political support to Nord Pool Spot as a strategic partner.

Balkan:

- Small to medium size markets. Croatian market – 18TWh.
- Some countries might be isolated from the start, but should be coupled as soon as possible.
- Biggest market players support regional development.
- Strong support from stakeholders and regulators for creation of transparent and efficient Market place in the region.

Active role

- Having technical solutions, necessary legal arrangements and expertise Nord Pool Spot will take an active role in further development of SEE region.
- We will provide input, support and actively participate in discussions initiated by Energy Community for further development of Electricity Markets in SEE region.



Our Experience

- NPS is Co-Owner of PCR Euphemia and PMB (PCR Matcher-Broker). It enables us to offer services to other PXs in Europe wishing to use PCR in stand alone setup in a country or region.
- The pan-Europe Target Model for Intra Day Continuous Trading is very much based on NPS Elbas concept. The NPS Elbas Trade Solution will be ready and efficient to use by NPS, and also towards other PXs wishing to be provided with services, to connect with XBID in the future.



What we can offer?

- Having more than 20 years experience in PX business we are proud of our achievements and can provide other PXs with robust, reliable and efficient technical solutions as well as professional advice on Market Design.
- We have been serving other PXs already since year 2000!
- Sharing our business experience is one of our main goals and we are looking forward to further development of partnerships in SEE region.



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**THANK YOU FOR YOUR
ATTENTION**

