



Benefits from Co-operation – A view from Germany

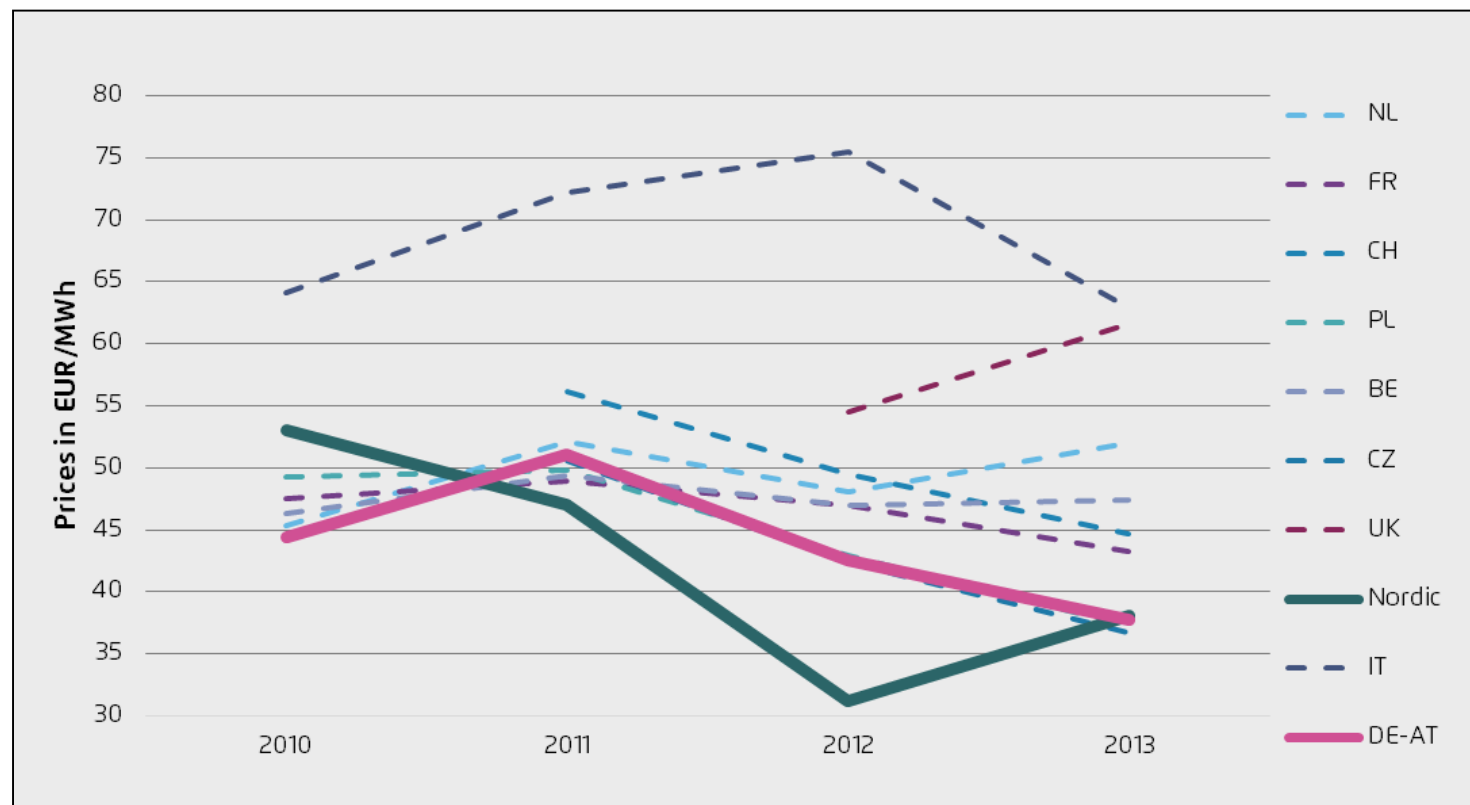
Nordic Energy Ways in Europe –
What's in it for us?

DR. PATRICK GRAICHEN | BERLIN, 02.06.2014



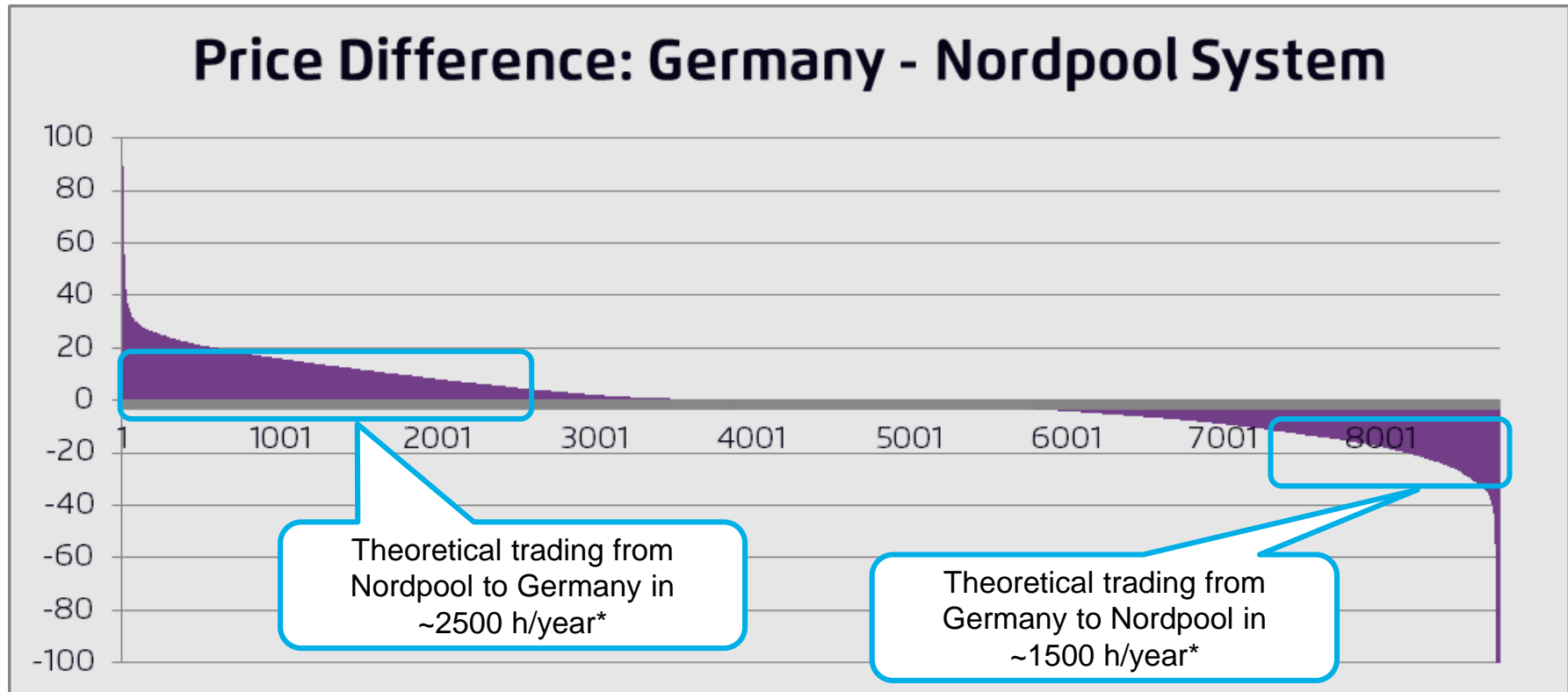
On average, Germany and Nordics have both very low wholesale power prices...

Wholesale power prices in Europe 2010-2013



Source: Power exchanges

...but there is a case for trade because the prices are not the same all of the time...



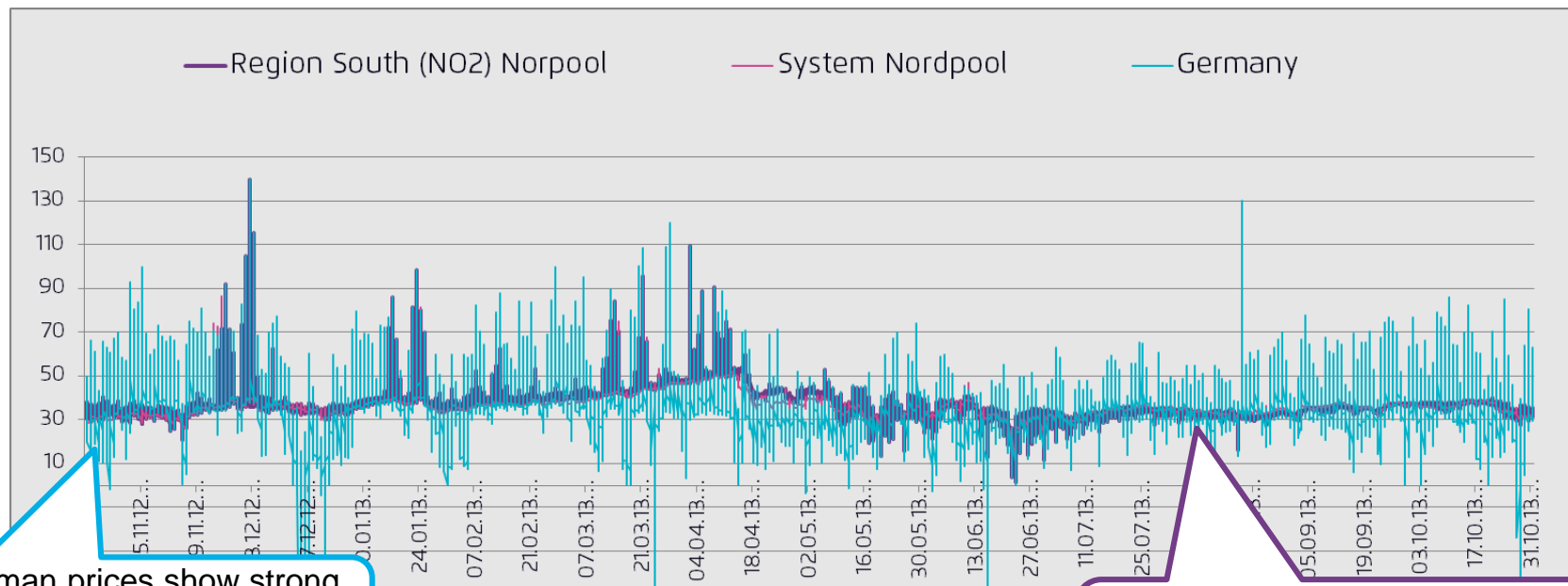
Price difference duration curve

*assuming trading would take place at ~10 EUR/MWh price difference; Nov. 2012 – Oct. 2013

Source: Power exchanges, own analysis

...and price variation in Germany is a lot higher than in the Nordic Countries.

Spot Market Prices in Germany and Nordpool, Nov. 2012- Oct. 2013, EUR/MWh



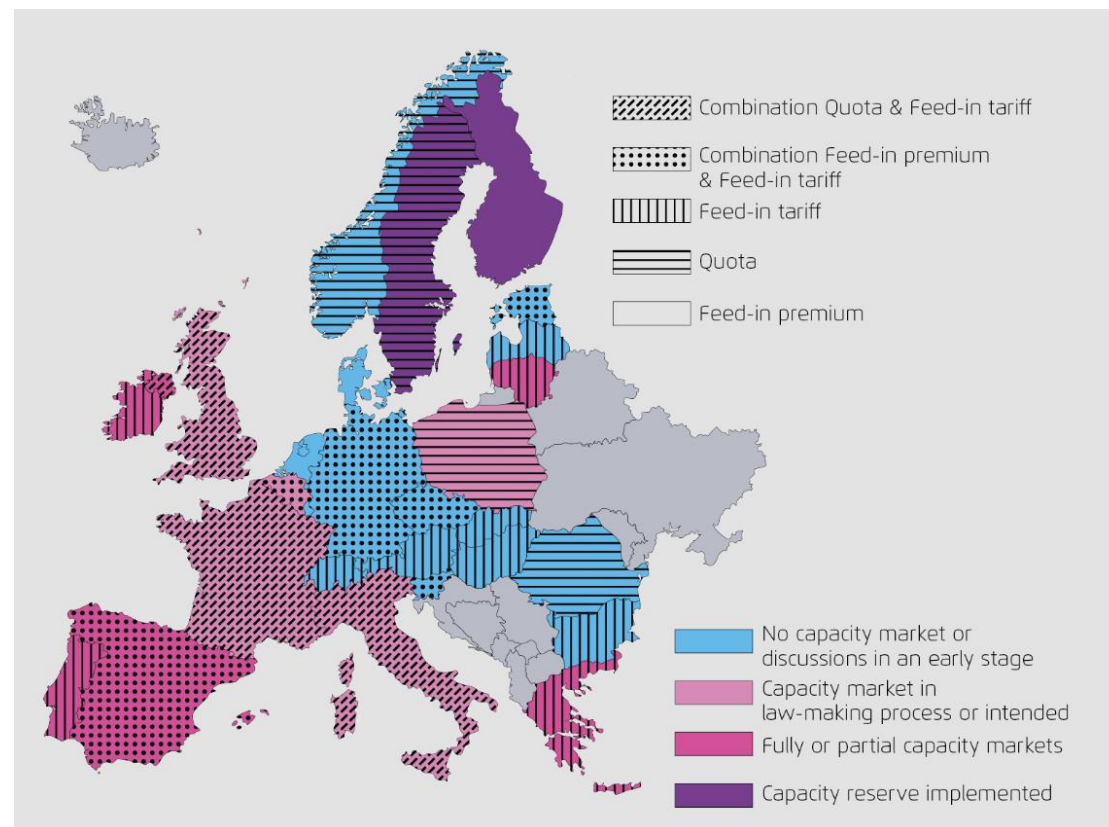
German prices show strong daily variation (~10 to 60 EUR/MWh)

Prices in Nordpool (System and South) have low daily variation

Source: Power exchanges

European cooperation embraces cheaper energy systems for all of us...

Approaches to renewables and resource adequacy in the EU



Cooperation between European Member States yields lower costs through:

- Joint balancing markets to maintain grid stability,
- Reduced need of reliable capacities to meet peak demand
- Fewer balancing requirements as variability of renewable sources decreases over larger geographical areas
- Lower price volatility

Source: Own Illustration

... but requires further policy adjustments

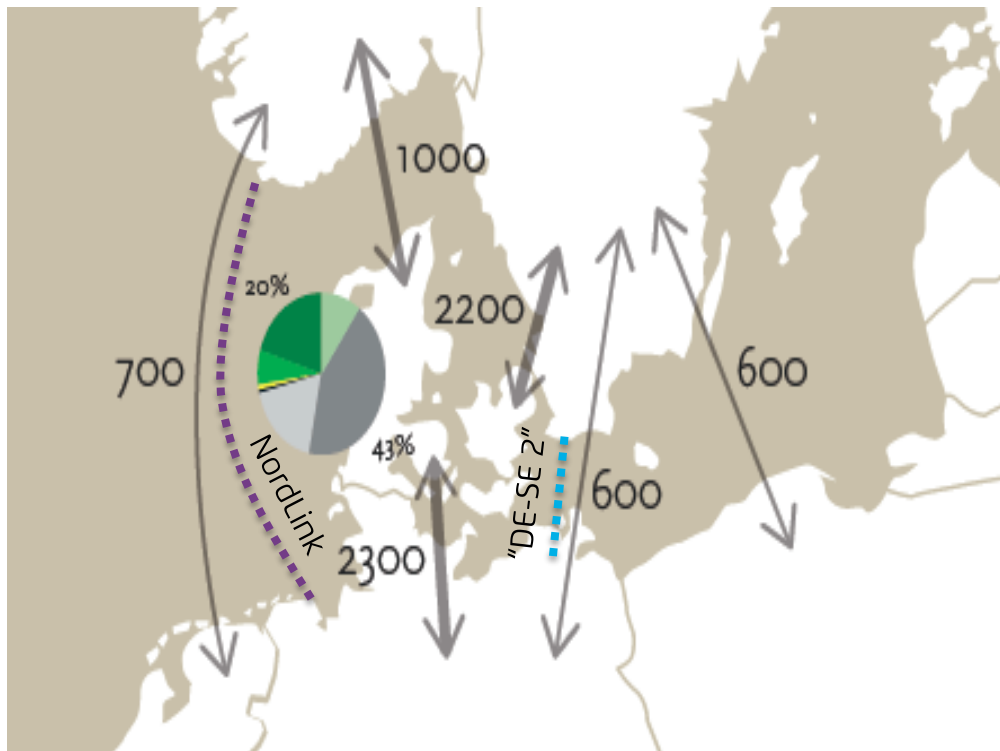
Challenges and open issues for regional approaches

- New power market design tackling reliability
- Governance and organisational structures
- Planning and building of additional transmission
- Different short- and medium-term policy objectives and redistributive effects as potential stumbling blocks?

- Nordic experience on market design and governance indeed helpful
- Still, all power markets in Europe face yet unaddressed challenges requiring comprehensive treatment everywhere

To better benefit from each other, more interconnectors between Nordics and Germany are necessary

Links with Denmark, Sweden; Upcoming with Norway and Sweden



- Currently some 3000 MW interconnection capacity between Germany and Nordics
- Available (NTC) capacity for markets is smaller
- Potential new cables:
 - NordLink DE-NO: 1400 MW
Investment decision in 2014
Pot. operational in 2018
 - Second cable DE-SE:
Feasibility study (pot. operational in 2020s)

Source: NAG (2013), TenneT, 50Hertz

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Thank you for your attention!

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