



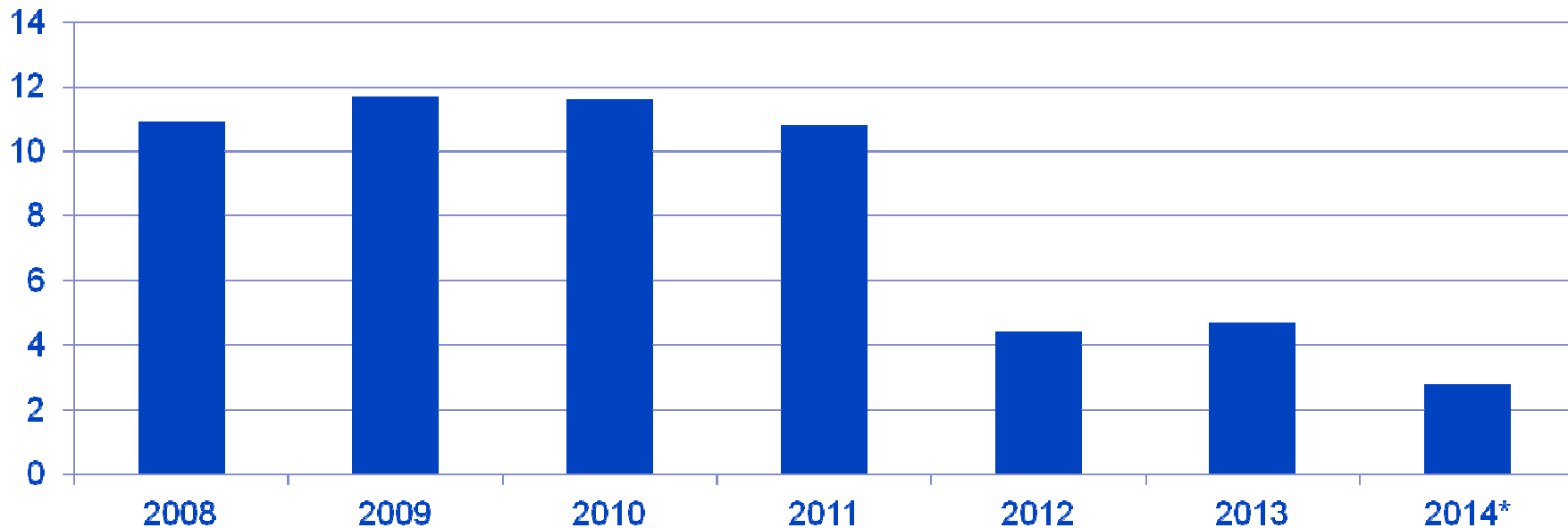
Towards flexible trade at the Finnish-Russian border

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## Russian import to Finland has collapsed

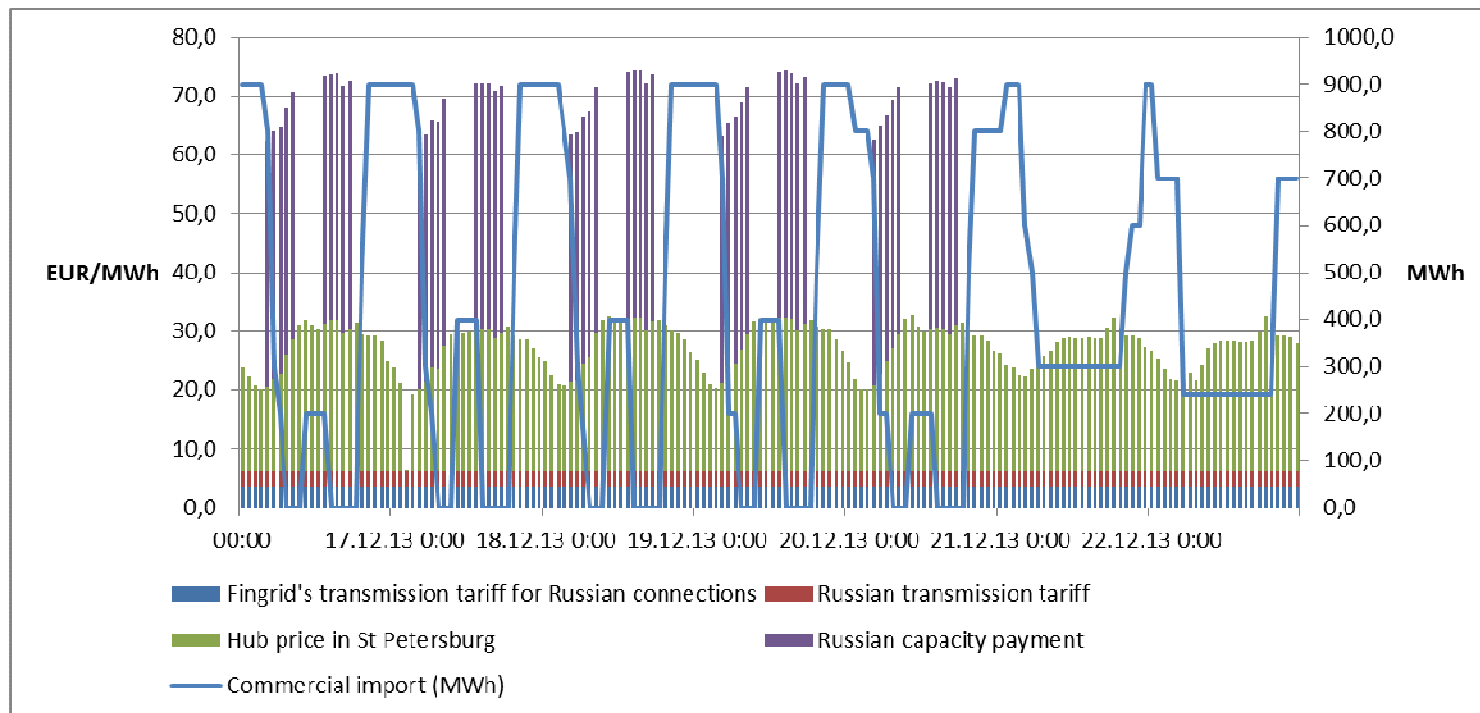
- Over 30 years a constant flow up to 1300 MW, due to low price of Russian power
- Price gap between Nordics and Russia has been narrowing
  - Russia: Capacity payment and rising gas price
  - Nordics: Increasing RES generation and decreasing CO2 price
- Price volatility in the Nordics is likely to increase → new opportunities for trade

### Annual electricity export from Russia to Finland (TWh)



## Russian power less competitive in Nordic market especially during capacity fee hours

- Reasons for reduced margin and flow: reduced spot price difference between the markets, Russian export has to pay capacity fees during peak hours.
- Strong daily fluctuation since capacity payments are paid during certain hours
- Typically no trade on either direction during capacity payment hours



## A flexible cross-border tariff would increase cross-border trade and socioeconomic welfare

- Present fixed border tariff is ~ 7 EUR/MWh (sum over both sides of the border)
- With low price differences, this can shut out some trade that would be socioeconomically beneficial
- Flexible XB tariff with no ex-ante payment is under study at Fingrid
  - Tariff depends on price differences between Finland and Russia
- Preliminary cost-benefit analysis shows new tariff structure could increase socioeconomic welfare
  - Welfare gain is especially large when average price gap between the markets is narrow
- Other improvements currently under study
  - Import/export areas in NordPoolSpot would share cross-border capacity among various Russian cross-border traders and improve transparency (under study at Fingrid)
  - Changing time of annual revision of Vyborg converter station (under discussion)

## Being flexible – a promising business case

- Increase in intermittent renewables generation in the Nordics calls for flexibility – and rewards from it
  - Reaction to price spikes / lows in day-ahead & intra-day market
  - Participation in reserve market
- Russian system based on flexible gas-fired power plants
- Modernization of Vyborg station would help to gain full benefit from flexibility



# Towards market based trading between EU countries and Russia – case Finland

## Turn of the year 2014/15

- trade in both directions (import/export), export 320 MW
- all trade through Nord Pool Spot
- NPS Market Surveillance/regulators covers the whole trade

## Agenda for 2015

- XB tariffs replaced with flexible XB tariffs based on price differences
- import/export area at Nord Pool Spot for Russian trade
- reallocate the revision time of the Vyborg converter station
- analyse the possibilities for reserve co-operation

## Vision towards 2020

- it would be beneficial for Russians to abolish the capacity payments for the export
- modernisation of Vyborg converter station would ease flexible trade
- implicit market coupling is a dream, while explicit auction is a more realistic market based target



Powering Finland.

