

Zonal Futures Magic Bullet?

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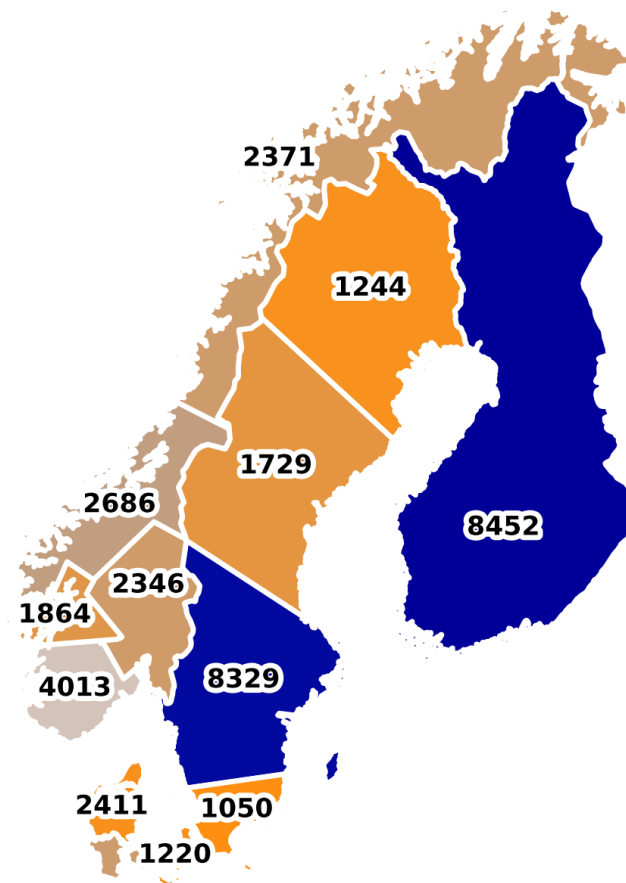
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Market Liquidity prerequisites

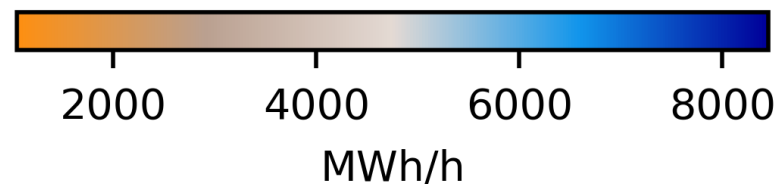
- Market Size
- Symmetry of market participants from buy side and sell side
- Volatility

Market Size

- Nordic market consists of 12 price zones
- Each price zone relatively small
- Nordic System price launched as a proxy solution to increase market size more than 20 years ago

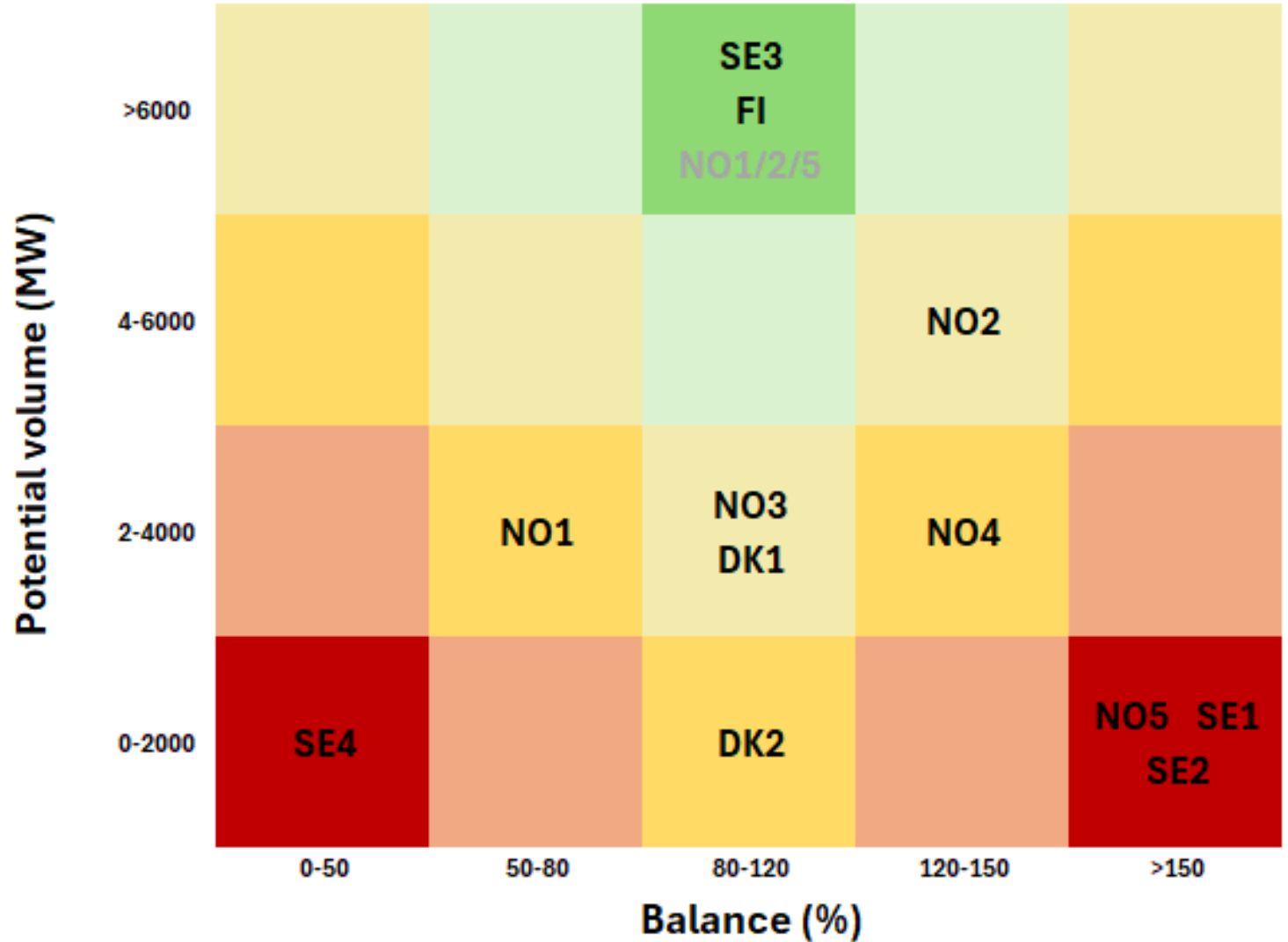


Map showing minimum of production or consumption



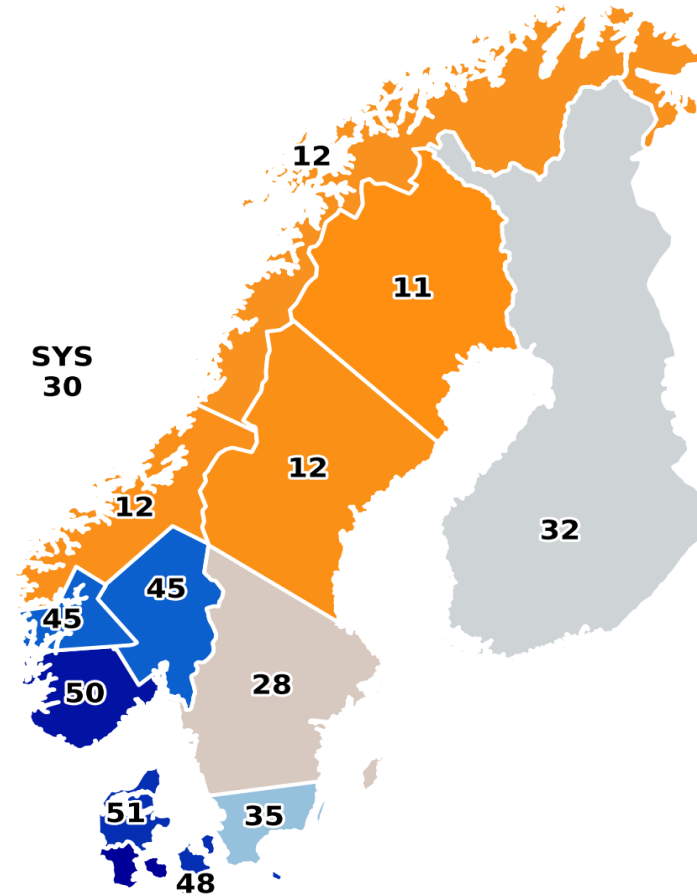
Symmetry

- Combining market size and supply/demand imbalance
- SE3 and FI symmetric and «large»
- Danish areas symmetric, but small
- SE1/2/4 and NO5 asymmetric and small
- NO1/2/5 combined could potentially trade like SE3 and FI

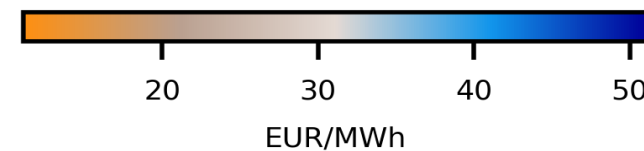


Volatilities

- Volatilities in Northern Areas is comparatively low
- SE3,SE4 and Finland has similar volatility as System Price
- Southern Norway Volatility comparatively high



Map showing Standard deviation of annual delivered prices since 2010



Zonal Futures vs. SYS+EPAD

- In principle exactly the same product
- Nasdaq did have «incorrect» handling of collateral for SYS+EPAD combo – Issue has been addressed
- Zonal futures possibly easier to handle from a clearing standpoint
- Sys+EPAD has advantage due to the ability of trading the combo asynchronous.
- System Price important for the functioning of a Nordic electricity market