

# The wind power trap and the Nordic market

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# The wind power trap

- ✦ Producers are strictly forced to bid their marginal costs in the Nord Pool day-ahead market
- ✦ For wind power this will imply a near 0 bid
- ✦ Normally, wind power will not be the marginal generation source, and therefor wind power will be able to cover their fixed costs.



# The wind power trap

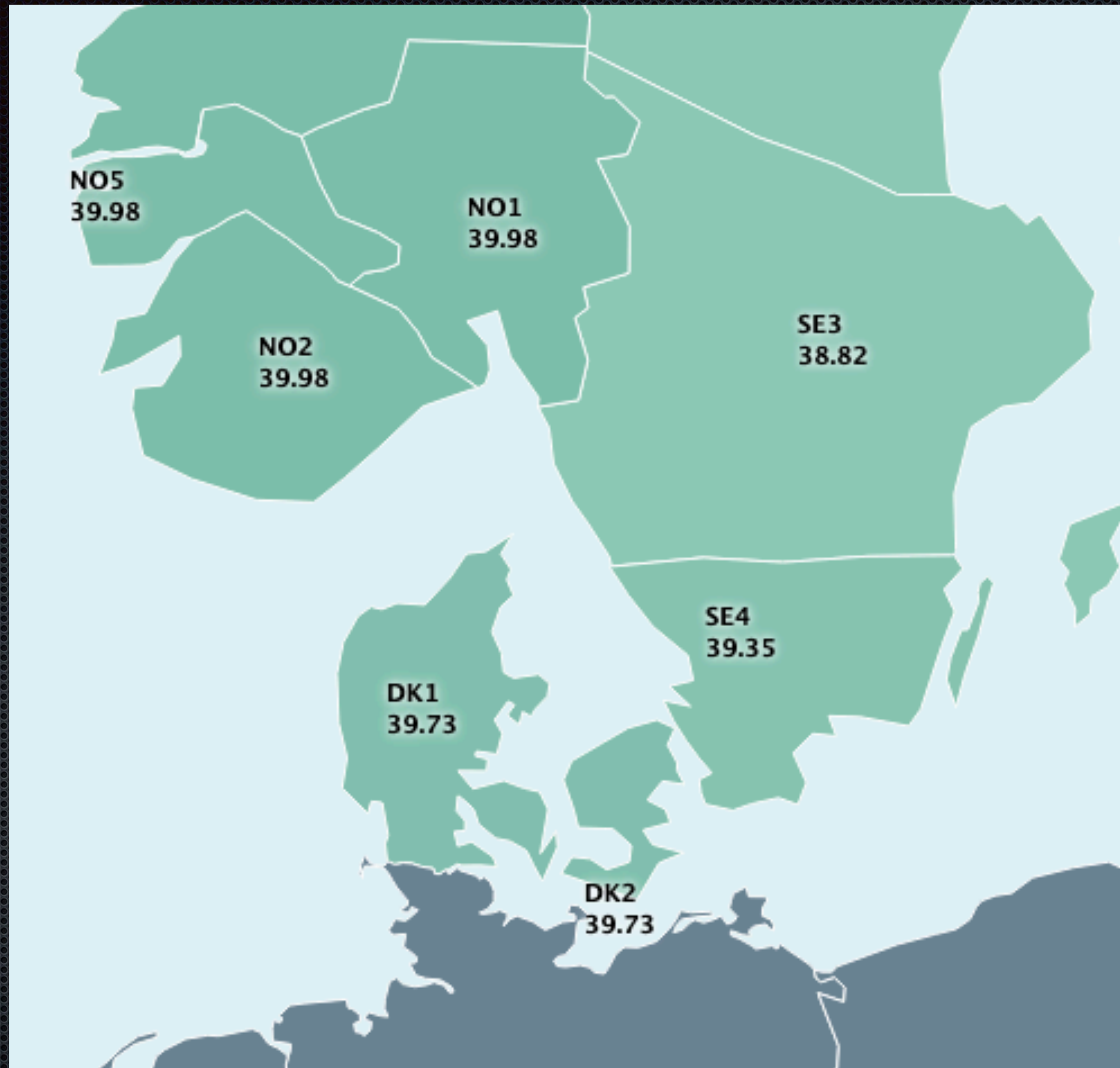
- ✦ But in periods of suppressed demand (Covid 19) wind power can become the marginal source and drive prices to 0 or negative.
- ✦ This effect is strengthened by the tendency of wind power to be more highly correlated in the upper quantiles of wind power production.
- ✦ ... and the pattern of congestion in the upper quantiles of wind power production



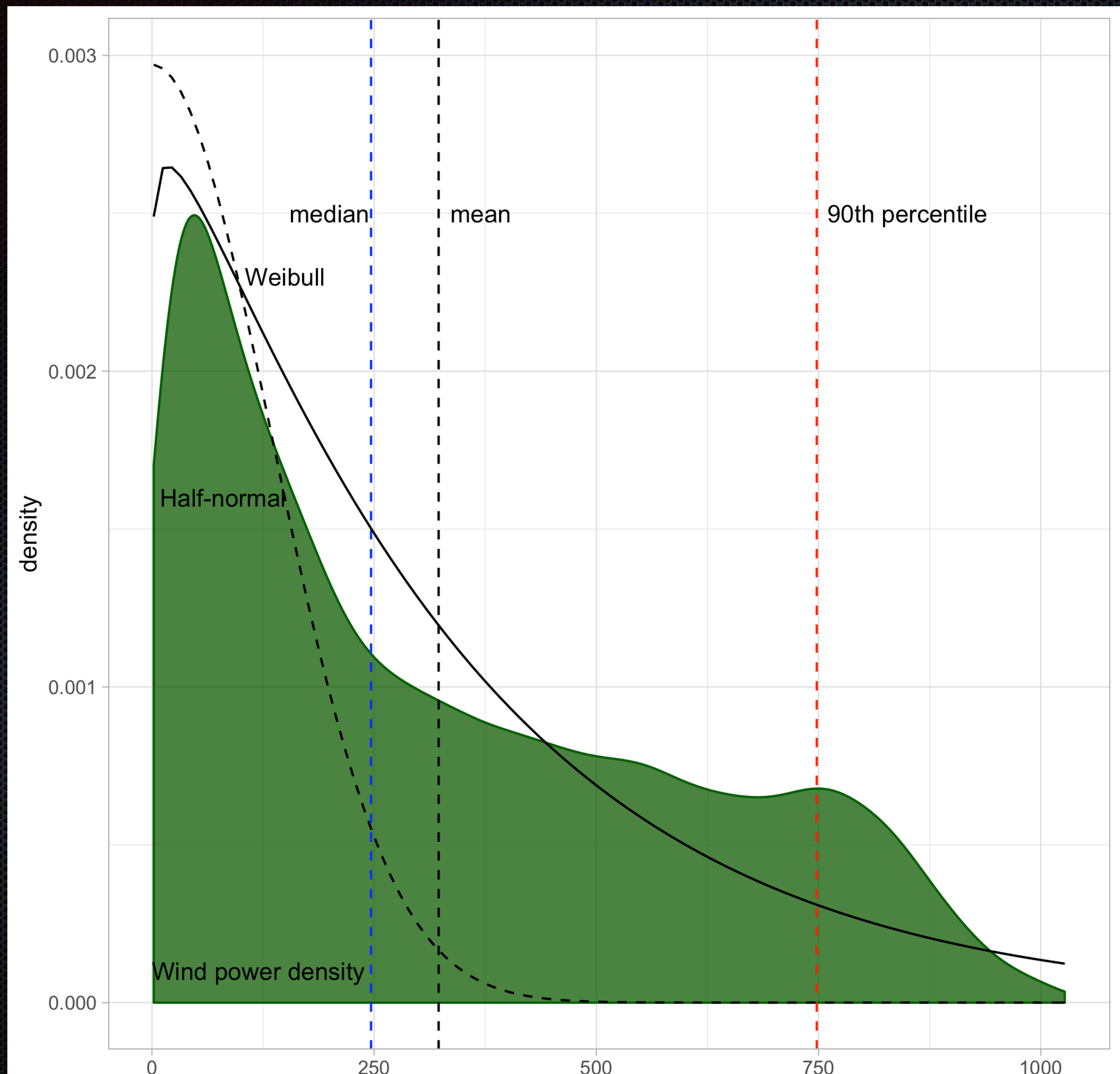
# Wind power trap

- ✦ Can lead to unforeseen losses for wind power investors
- ✦ + Heavy losses for power plant and other owners with high fixed cost and inflexible generation.
- ✦ Missing-money problems for necessary investments in wind power and flexibility.
- ✦ But may also present opportunities for storage assets under the correct regulations.











Percentile, Wind DK1

