

Energy market developments in the Nordic countries

Panel discussion at the Bruegel Institute

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The Nordic Electricity Sector

The first international electricity market

Norway's restructuring of its electricity sector in the early 90's followed by Sweden in the mid 90's created the first international market place for electricity – Nord Pool.

Subsequently Denmark, Finland and more recently Estonia and Lithuania joined Nord Pool.

The Nordic electricity market is widely viewed as a success

- Today about 75% of the region's wholesale electricity is traded on Nord Pool.
- Trade across borders are increasingly important
- Probably one of the more competitive markets for wholesale electricity in the world

The Nordic Electricity Sector

Some Key characteristics

- (Essentially) an energy only market
- Unbundling of generation and transmission
- Wholesale electricity is sold in the market place
 - About 200 producers
 - The largest producer, Vattenfall, has less than 20% market share
 - Vattenfall, Statnett, Fortum and E.On have less than 50% market share
- Generation mix
 - Dominated by hydro power in Norway and Sweden
 - Swedish and Finnish nuclear power is also important
 - Other termal power mainly in Finland and Denmark
 - Support schemes for renewable energy (feed-in-tariffs in Denmark, joint certificate market in Sweden and Norway) increase the amount of intermittent power.

The Nordic Electricity Sector

Some Key characteristics

- The high voltage grids are publically owned and regulated monopolies
 - Energinet, Fingrid, Statnett, Svenska Kraftnät, Elering and Litgrid
 - The national transmission owners are responsible for system operation
 - They share the ownership of Nord Pool
- Nord Pool's cornerstone market is its day ahead market and is complemented with well developed financial instruments
- The region is divided into price areas to handle bottlenecks
 - 2 in Denmark and > 4 in Norway.
 - 4 in Sweden since last year (historically 1)

Presumptions behind the Nordic model

- Market solutions for the short run supply of wholesale electricity are possible
- Ambivalent view on market solutions to generate enough investment
 - Witness support schemes for renewable energy
- Transmission is a natural monopoly and must be regulated

Market integration towards Europe:

An important obstacle

- Transmission being a natural monopoly may be viewed as an excuse for controlling transmission at national levels
 - Suspicions that bottlenecks are pushed to the borders (between Sweden and Denmark, but also between Norway and Sweden)
 - Strong political support for limiting exports and therefore small incentives to invest in cross border transmission

Market integration towards Europe:

(Potential) Solutions

- Supranational system operator (but seems politically difficult)
- Important role of EU in limiting the practice of pushing bottlenecks to the border
 - Complaint to DG-competition triggered the partition of Sweden into price areas
 - Has led to a more efficient use of the Swedish grid and to price signals conducive to efficient investments in generation and transmission (in Sweden)
 - But is it sufficient to induce investments in cross border transmission ?
- Bottleneck rents: a good business
 - This view appears more prevalent in Norway than in Sweden
 - But the national monopolies are likely to give rise to oligopolistic rents
- Is there a role for more competition in transmission ?