
Experiences from the deregulation of the electricity market – relevant for a biomass market place?

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Eurel A/S:

- Business development within deregulation of electricity markets – competence from electricity markets world-wide
- Eurel A/S is part-owner of Enviro Energi

Enviro Energi:

- Market and sell renewable energy and green certificates in the Norwegian and international market, and provide consultancy services to project developers and participate in the development of new, renewable power plants

Background (Bjørnar Otterstad)



- Economic education from University of Oslo
- Worked in several ministries in Norway, State Pollution Agency and research institute Sintef
- Consulting for ministries, Nordpool, regulator and main grid company in connection with the “New Energy Act 1991” in Norway
- Established market places for OTC-trading in Norway, Sweden, Finland and Denmark in 1992-1997 (founder of SKM – sold to EnBW in 1998)
- 1998-2001 CEO of Calpol in California
- Since 2002 board member of Eurel, and from summer 2003 also CEO

The Norwegian electricity market prior to 1992



- Local monopolies with local plans for regional development
- An wholesales market that did not function
- The regulatory framework had to be changed in order to create a market
- The energy legislation enabled competition and outlined framework for how the market should be organised, but several issues was left to the participants and regulator to organise

Relevant regulations and framework with similarities to biomass



- Transportation cost pr. km. Distance between seller and buyer
- New regulation for transmissions lines
- Division between delivery and abstraction, and implicit keep the element of distance
- Measurement kWh. (with limits for voltage and frequencies etc.)
- Reference price in new spot market with open admission and transparency

- A pre-requirement for a well function market is simplicity towards the customers
- The spot price Eurocents/kWh or fixed price for a period
- Energy loss from transmission lines to consumers
- Cost for transmission lines
- Cost for regional lines
- Distribution costs shall include all costs, except costs of power

- System for compiling all cost (transmission, distribution) in one tariff towards end consumers
- Large variations in transport cost, but decoupled from the electricity market. Is this also possible for bio?
- Developed products that became standardised products both in the wholesale and end consumer market

The role of the Authorities



- Nordpool for spot exchange and the regulation power (balance market) on behalf of system-operator.
- System operator takes care of the main grid and is also responsible for peak-periods.
- The Norwegian Water Resources and Energy Directorate (NVE) important, especially for regulation/control of the prices from distribution companies
- Competition Authorities (prevent market-power)

- Weight/volume as kWh
- Biopool as Nordpool, but private
- Public facilitation for a market
- Delivery point (like price-areas in main grid)
- Storage (like regulation market)
- Standardised forwards and financial contracts.
- Import/export

The actors



- Customers: Industry, heat producers, private
- Suppliers: Forestry, agriculture, waste
- El., oil, gas, excess heat is the alternatives
- Interesting with cooperation with the electricity companies given that this marketplace can be coordinated with el. trade
- Transport/distribution/storage: Saw mills, petrol stations, stores etc.
- Public: Framework, incubation

Flexibility is main challenge in Norway's energy supply



- Increase supply of biomass is important for the electricity market
- The Californian experience also possible here
- Lack of incentives for flexibility
- Need of new market-solutions for electricity contracts, which give consumers access to sell back electricity to the market in high price periods.
- Energy companies might participate in the establishment of a common marketplace for bio and electricity in Norway.

New product – increases market place interests and biomass consumption



Product:

Market place offer end-consumers to buy x kWh at a fixed price for a certain period, with option to sell unused/access kWh at any given point (e.g. when spot prices > purchasing price).

- Increased interest from industrial actors to participate in marketplace:
 - Electricity vol. traded > biomass volume
 - Complementary operational/risk competence
 - Opportunities for more advanced risk management (e.g. dry year scenario)

- Increased biomass consumption:
 - “be your own energy portfolio manager” – with limited downside and possibly large upside