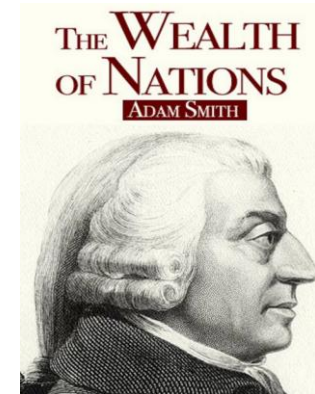
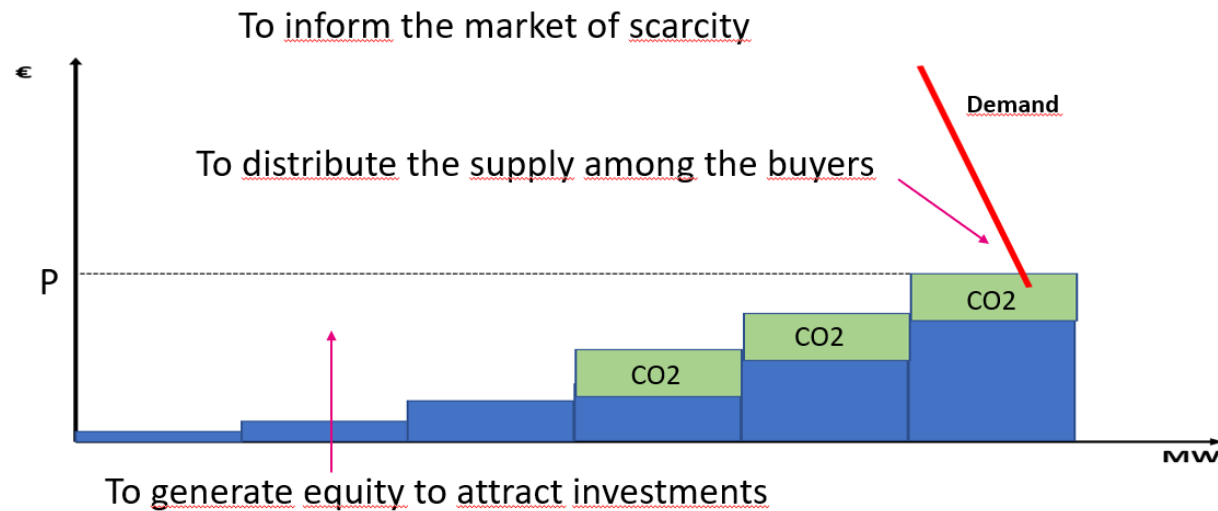


Nordenergi on Market Design

NordREG Wholesale and Transmission Developments Webinar
5th December 2022

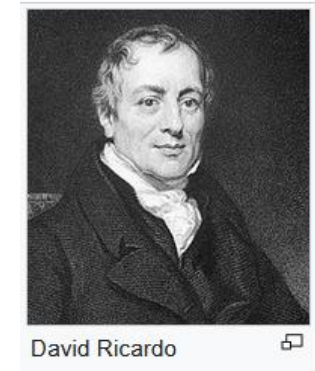
An socioefficient allocation of resources - efficient pricing and trade!

Three main objectives of the market price



Comparative advantages – gains from trade

	Portugal	England
wine	80	120
cloth	90	100



We agree with ACER

“The current energy crisis is in essence a gas price shock, which also impacts electricity prices.”

“Day-ahead market integration delivers cheaper electricity across Europe and facilitates the growth of renewables while increasing overall welfare.”

“... ACER finds that the current electricity market design is not to blame for the current crisis. On the contrary, the market rules in place have to some extent helped mitigate the current crisis ...”

“Overall, in 2021, cross-border trade delivered an estimated 34 billion Euros of benefits while helping to smoothen price volatility.”



There is always room for improvement!

But...

Distinguish between short and long run respectively!

High price is a symptom of scarcity

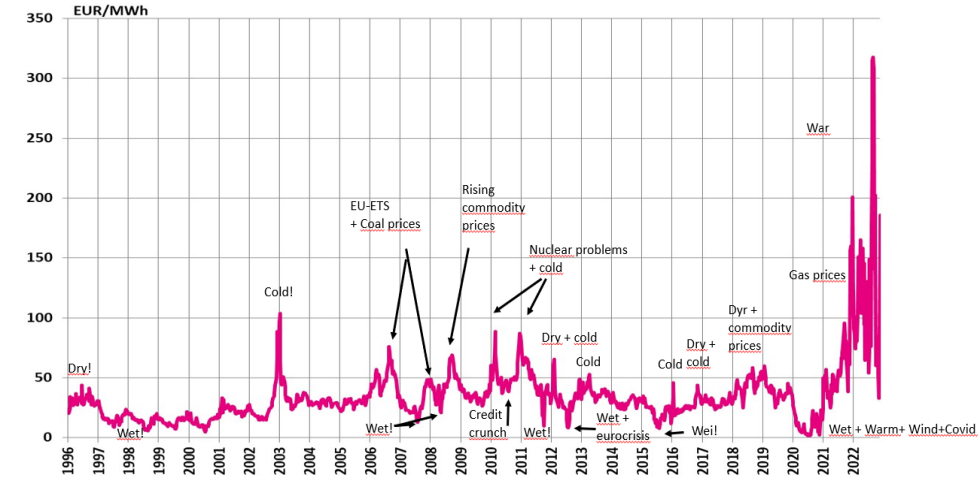
wich market design in itself won't solve
short term -> redistribution/compensation

Eyes on the price -

What is the problem to be solved?

Haste make waste!

System price, weekly average



On future market design

- ⌚ Overall goal: climate goals and net zero power system
- ⌚ Efficient allocation of resources – the market is a tool, not the goal
- ⌚ Increasing shares of variable production capacity
 - ⌚ Short term price signal is important to enable flexibility
 - ⌚ Efficiency in trade and power exchange
 - ⌚ Security of supply must be addressed
 - ⌚ Sufficient hedging opportunities
 - Consumers (politicians)
 - Producers
 - Investors

Challenges

- ⦿ Differences in “portfolios” – there is no silver bullet!(?)
- ⦿ Regulation is restrictive – Directives, Regulation incl. Network Codes
- ⦿ Regulation is permissive – subsidies, reliefs and exceptions
- ⦿ Politicians take decisions
- ⦿ Current implementation – CEP, NBM (e.g. aFRR-C, mFRR-C, ISP15, 1P/1B), FCA
- ⦿ Permitting process

Inadequate infrastructure

- ⦿ Increased need for transmission capacity
 - ⦿ Balance out non-firm power production
 - ⦿ Increase in trade
 - ⦿ Bidding zones
 - Power production locked in
 - Deterioration of the financial market

System operation

- ⦿ Ancillary services in a squeeze
 - ⦿ Increased need with rising share of non-firm capacity
 - ⦿ Decreased supply with closing of firm capacity

- ⦿ Unclear willingness to pay
 - ⦿ Historically excess supply ($p > 0$)
 - ⦿ Importance of tariffs and terms for connection to the grid
 - ⦿ Allocation of financing can be discussed (grid-market)

Four challenges for the electricity market

- ⦿ Climate
 - ⦿ EU ETS should be the main tool
- ⦿ Energy
 - ⦿ Given time, the current market can deliver
- ⦿ Adequacy/Power balance
 - ⦿ Technological development can make individual SoS possible (but acceptable?)
- ⦿ "Functionality" of the power system
 - ⦿ TSO's sole responsibility

“Functionality” of the power system

- ⌚ System operations and transmission capacity
 - ⌚ Unambiguously the task of TSOs!
 - Stronger governance from the government
 - Stronger supervision from the regulators
 - TSOs or ISOs? Longer run – Nordic ISO?
 - Increased transparency is necessary
 - TSOs needs to specify and quantify the need for when and where ancillary services are necessary and their remuneration in a long term perspective.

The mission of the TSOs must be to always strive to uphold transmission capacity, regardless of the production mix ***decided by the market!***

An ambitious Nordic target for transmission capability!

Who should carry the risk to reach a rapid electrification?

- ⦿ Flagship projects will be accomplished by bilateral agreements
- ⦿ But a general increase in demand?
- ⦿ "Electrified" goods in the industry must be competitive in the market, who should do this assessment?
- ⦿ What is the responsibility of
 - ⦿ Energy industry?
 - ⦿ Customers?
 - ⦿ Government?