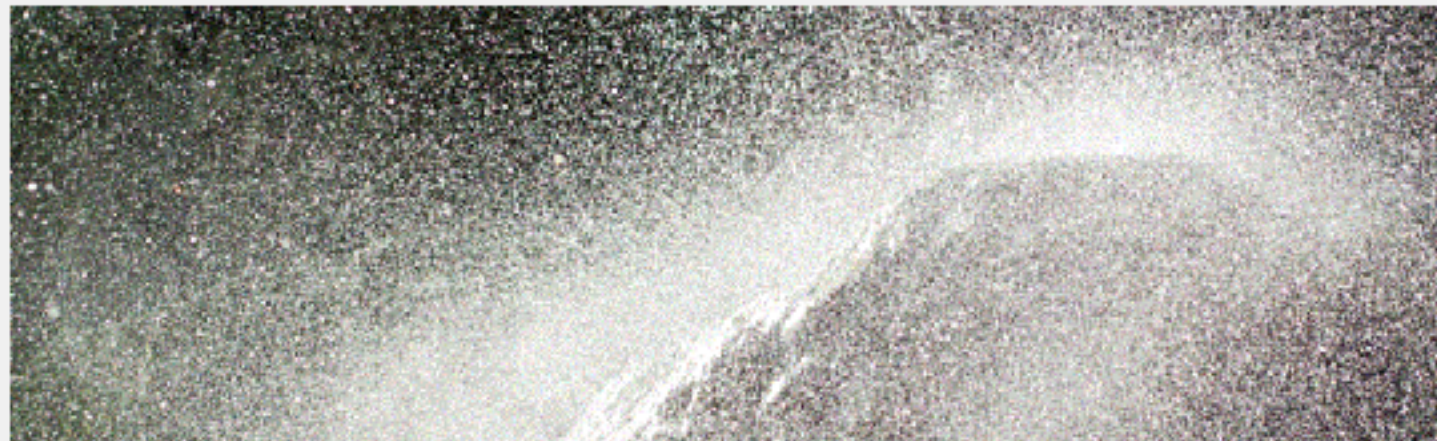




The Electricity System in Sweden and Northern Europe

Petter Johansson

pettjoh@kth.se

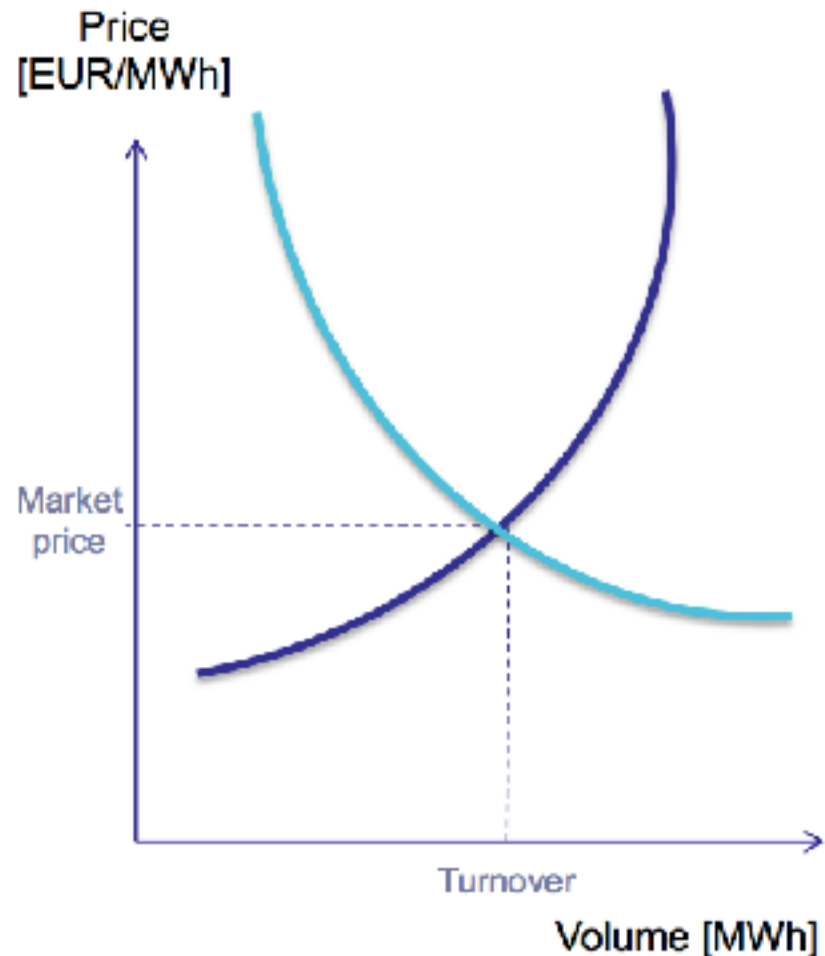
[DAY-AHEAD MARKET](#)[INTRADAY MARKET](#)[INTEGRATED EUROPE](#)[TRANSMISSION SYSTEM
OPERATORS](#)[MARKET MEMBERS](#)[BIDDING AREAS](#)[FINANCIAL MARKET](#)

The power market

Power is a vital element that supports our modern lives at home and at work. As power production and transmission capacity has been extended over the years, transmission of power between countries has become more common. As a result a dynamic market has evolved where power can be bought or sold across areas and countries more easily.

The day-ahead market

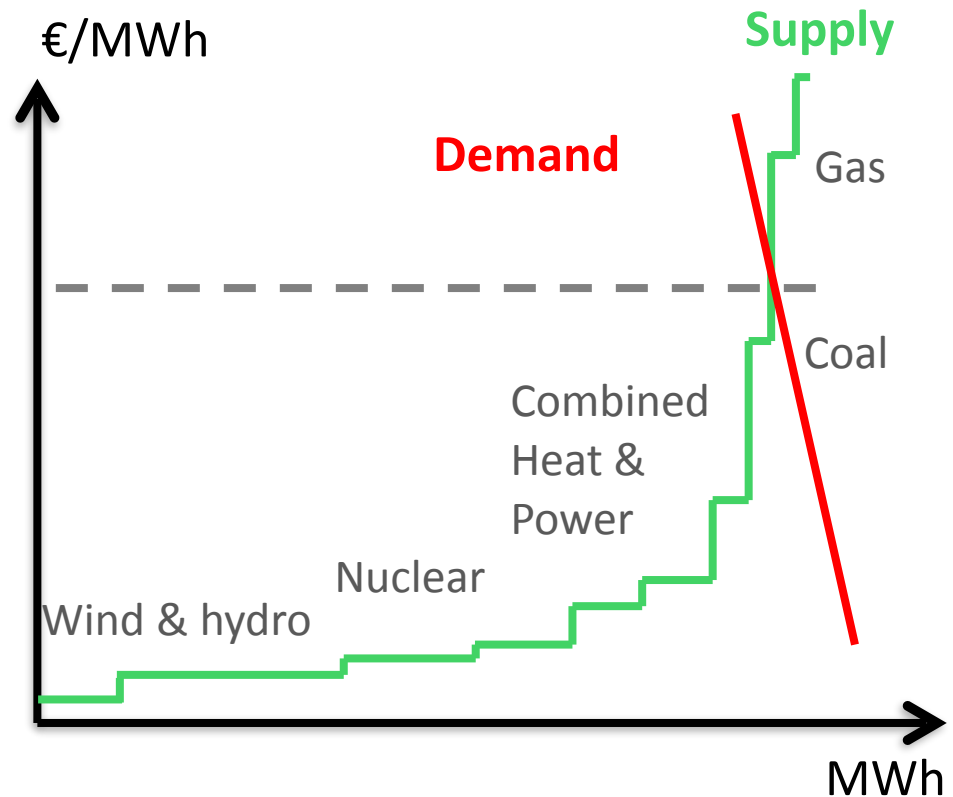
- An auction of power for delivery the following day
- Prices are calculated based on supply, demand and transmission capacity (how much power can be moved from one area to another)
- Liquidity is key: A market with a lot of power traded in and out leads to depth in the market and reliable index prices



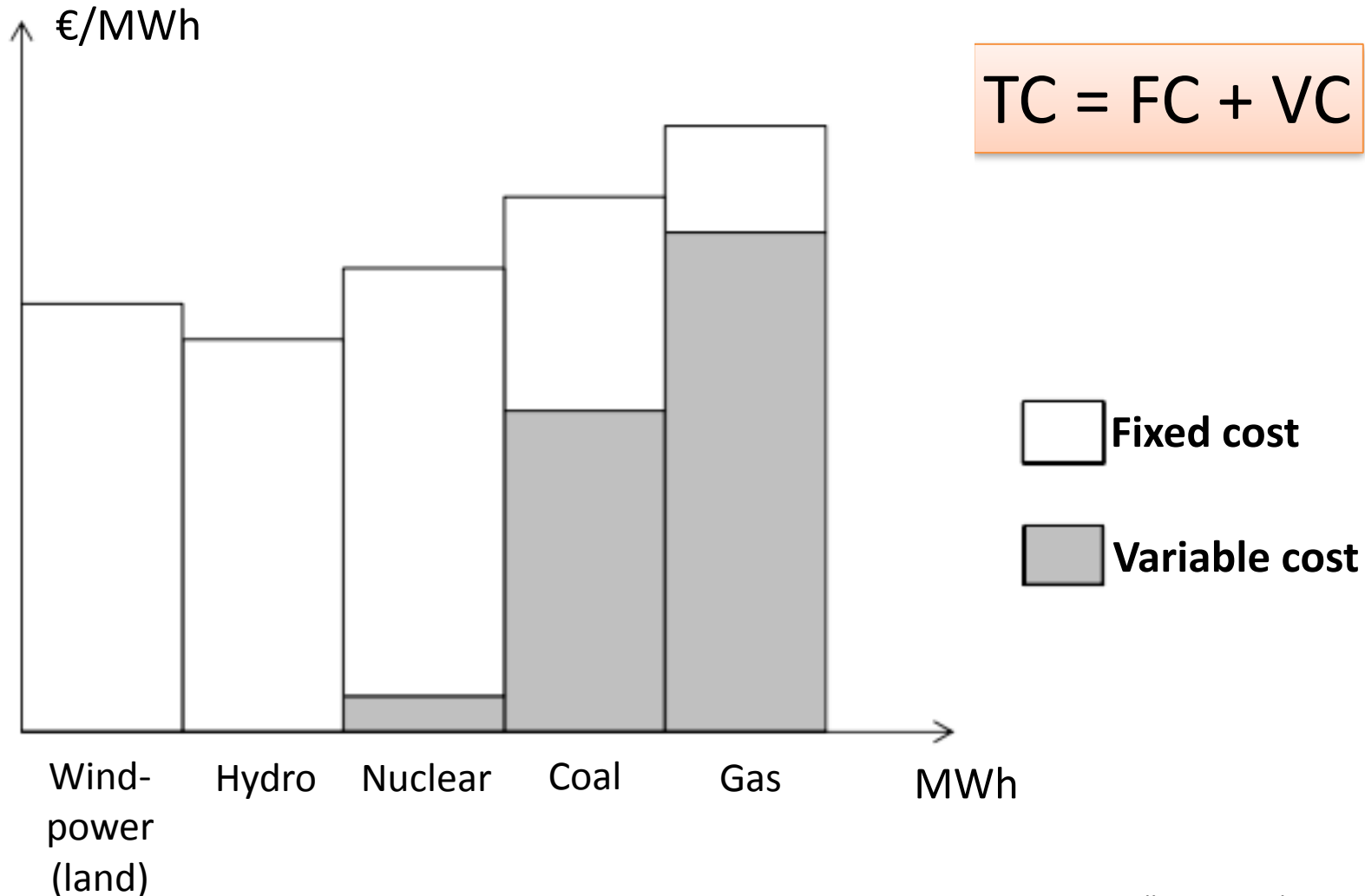
Electricity market

Price on electricity steer the production output

Supply- demand curve depend on the variable cost for different production types
-> The lower the variable cost, the more the production type outcompetes its alternatives

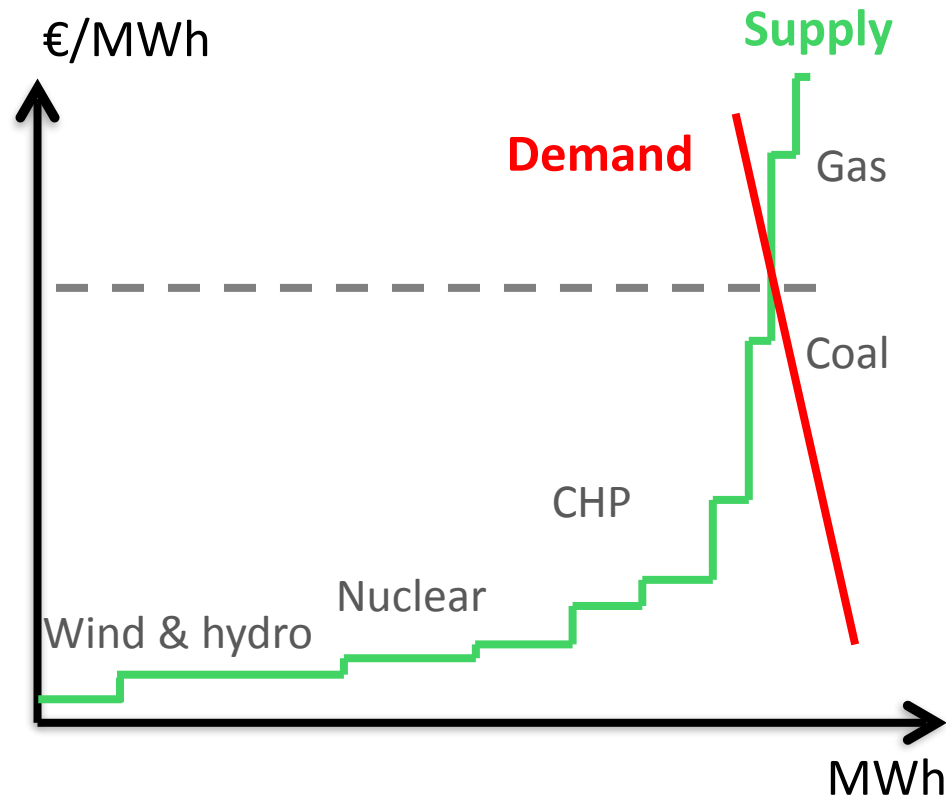


Electricity market - prices on different energy sources (types of power plants)



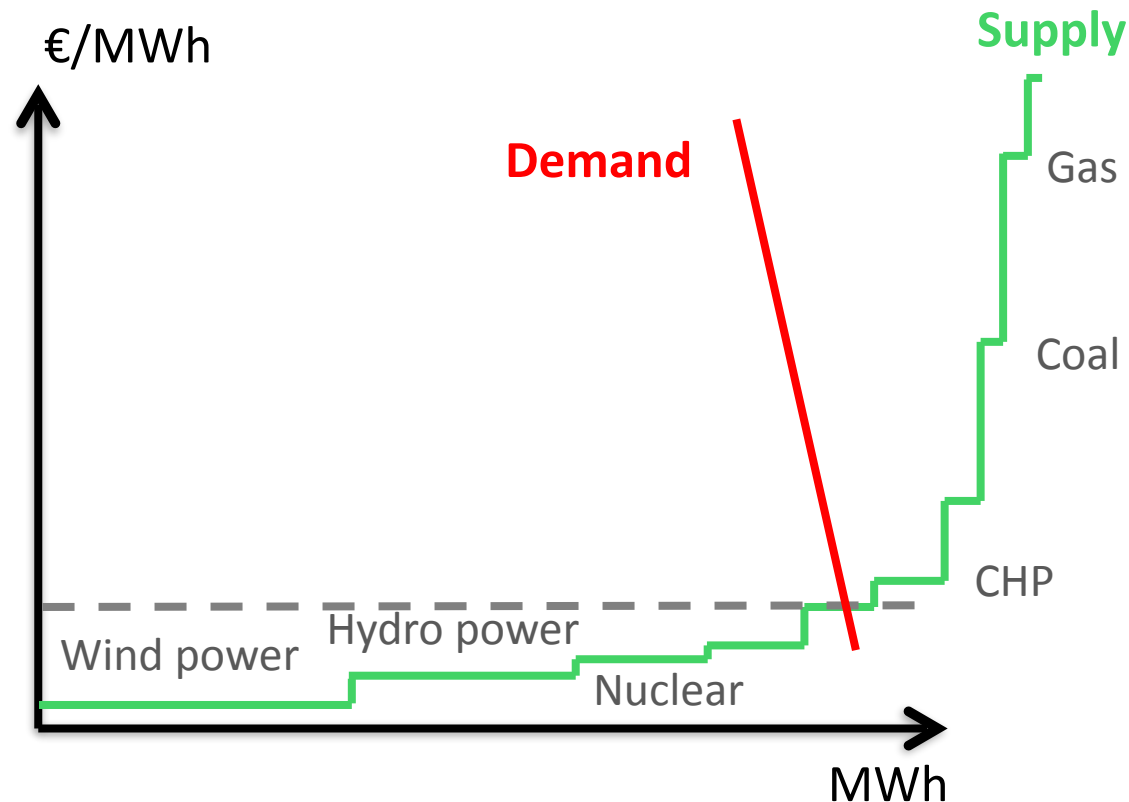
Paradox of renewable energy

Paradox = Renewable energy production runs at a loss despite going "first in line" and always gets its produced electricity sold at the market



Paradox of renewable energy

Paradox = Renewable energy production runs at a loss despite going "first in line" and always gets its produced electricity sold at the market



pettjoh@kth.se