



## Explicit and implicit capacity auction



Explicit auction is when the transmission capacity on an interconnector is auctioned to the market separately and independently from the marketplaces where electrical energy is auctioned. Explicit auction is considered as a simple method of handling the capacity on the international interconnections in Europe. The capacity is normally auctioned in portions through annual, monthly and daily auctions. Since the two commodities, transmission capacity and electrical energy are traded at two separate auctions, there is a lack of information about the prices of the other commodity. This lack of information can result in an inefficient utilization of interconnectors, i.e. less social welfare, less price convergence and more frequent adverse flows.

With implicit auction, the day-ahead transmission capacity is used to integrate the spot markets in the different bidding areas in order to maximize the overall social welfare in both (or more) markets. The flow on an interconnector is found based on market data from the marketplace/s in the connected markets. Thus the auctioning of transmission capacity is included (implicitly) in the auctions of electrical energy in the market. In implicit auctions, the transmission capacity between bidding areas (price areas/control areas) is made available to the spot price mechanism in addition to bid/offers per area, thus the resulting prices per area reflect both the cost of energy in each internal bidding area (price area) and the cost of congestion. Implicit auctions ensure that electrical energy flows from the surplus areas (low price areas) towards the deficit areas (high price areas) thus also leading to price convergence.

Implicit auction signifies the concept used for both 'market coupling' and 'market splitting'. There is not necessarily any difference in the calculation algorithms or principals used for market coupling and market splitting. What differentiates market coupling from market splitting is how the algorithm is operated and owned, and which results from the central calculation the local markets use subsequently.