

Abstract

Liquidity and efficiency are of the most hot-topic regarding the power exchanges. Almost all energy policy measures in the world, and in the European Union affect the issue of energy markets directly or marginally, thereby affecting the liquidity of the market as well.

Liquidity and efficiency are closely intertwined concepts and neither can exist without the other. However, there is a possibility to differentiate them, because while liquidity is a measurable indicator, efficiency is a feature which is a consequence of the high liquidity. Based on the latter statement it is also true that low liquidity results in an inefficient energy market. Thus, it can be said that a market with higher liquidity is more developed and efficient than another with lower liquidity.

My goal with this paper is to determine the liquidity of electricity markets according to a novel and complex methodology so that they become comparable with each other. The complex methodology is important because if we evaluate particular energy markets individually, it is difficult to compare different them.

The comparison is extremely important because European power exchanges can be considered as competing entities. The monopoly of each country's energy exchanges is only guaranteed for a limited period of time, so there will be real competition between power exchanges. For this reason, it is important that power exchanges take appropriate market development measures in order to make the market operate as liquid and efficient as possible and thus gain an advantage in the above-mentioned competition.

The proper integration of renewable production will be the most important challenge for power exchanges in the near future. In Hungary, the production from the Feed-in Tariff system is already sold on the day-ahead market. The first METÁR (new renewable support scheme) tender has recently been successfully completed, which already obliges new renewable producers to sell their production on the competitive market. Based on the second METÁR tender already underway, renewable production to be integrated into the competitive market is expected to show a drastic leap within 3-6 years. Beyond all this, not only the amount of energy will increase, but a significant portion of the energy surplus will be transferred to the intraday market, rather than the day-ahead market. Regarding the intraday market, it is important to highlight that the few-hour forecasts work very well for photovoltaic production, so the proper scheduling and intraday trading will be much more relevant in the near future.

The task is clear, we need to prepare organized markets to accommodate renewable production in an appropriate way, avoiding anomalies that cause negative effects, such as large price spikes, negative prices, or an overly concentrated market.

The aim of my work is to identify the milestones that are essential for the great challenge of the 2020s. We have to achieve that the system integration of about 6,000 MW of solar cells, will not cause a problem for the Hungarian electricity market, but rather have positive effects. And for all this, it is essential to reveal the links between the different dimensions of liquidity and, by assessing them together, to identify the elements of the market that need to be improved.