

Ukraine's electricity market: a year after the reform

On July 1, 2019, Ukraine opened its electricity market, shifting from a regulated single-buyer model to a competitive liberalised model in line with the EU's 3rd energy package directives. The reform was implemented in a tight timeframe of only two and a half years – very quickly by European standards. Due to the haste, Ukraine launched its market in a half-baked state, without a comprehensive testing period and without having addressed important pre-requisites for a successful open market. After a year in operation, the market infrastructure is running with no major disruptions. However, regulatory gaps and a lack of competition have resulted in relatively high spot prices. Many structural problems remain unaddressed, impeding the further success of the reform.

Ukraine's electricity market has some distinctive features. There are two separate, not physically connected trading zones:

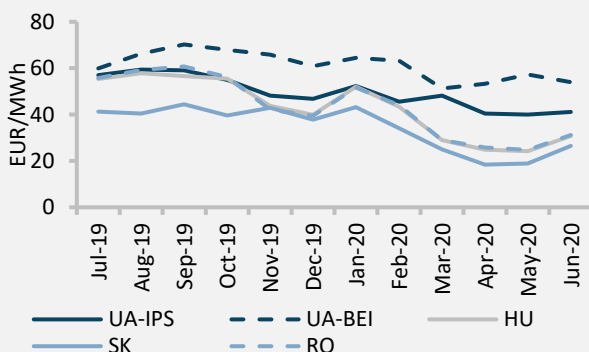
- Integrated Power System (UA-IPS), synchronised with UPS system
- Burshtyn Energy Island (UA-BEI), synchronised with the European ENTSO-E system. BEI's consumption is 5% of Ukraine's total.

UA-IPS has cross-border connections with Russia, Belarus, Moldova and Poland (only for export), while UA-BEI is connected with Slovakia, Hungary and Romania.

How did the market perform in its first year?

Since the start of trading, market-wide price caps were introduced to protect final consumers from a rapid price surge. The price caps were established for each market segment, except for bilateral agreements. On the day-ahead market (DAM), the caps were set at 73 EUR/MWh for peak and 33 EUR/MWh for offpeak hours.

Spot price dynamics



Source: UA Market Operator, Entso-e transparency platform

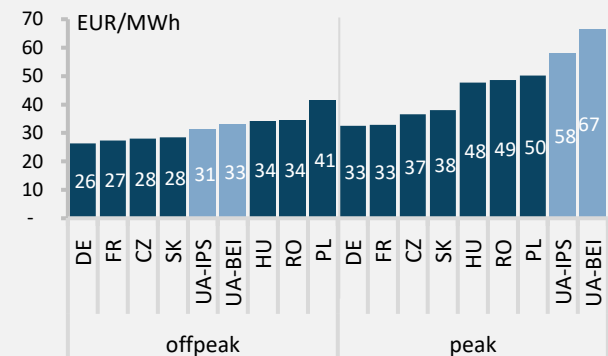
During the first three months, high average IPS spot prices of around 60 EUR/MWh could be observed. When COVID-19 effects reached the country in mid-March-20, the price in IPS dropped insignificantly. The price in Burshtyn even increased due to decreased imports. Most of the policies adopted aimed at reducing the volatility of spot prices. The price finally decreased in 4Q2020, after an increase of imports into UA-BEI and increase of cheaper nuclear output in UA-IPS.

Key problems remaining

Market concentration and lack of competition

Ukraine's electricity market is highly concentrated. The four biggest generators, state-owned Energoatom, Ukrhydroenergo, Centrenergo, and privately-owned DTEK cover around 85% of the country's electricity output. Nuclear power plants operator, Energoatom, covers ca. 50% of the country's demand. The BEI trading zone is even more concentrated: the single biggest producer, Burshtyn thermal power plant, is owned by DTEK and provides >90% of the power. The resulting average spot prices in Ukraine are among the highest in Europe and are limited only by administrative price caps.

Power prices in EU and Ukraine, Jul-19 to Jun-20



Source: LCU calculations, UA Market Operator, Entso-e transparency platform

Price caps are efficient in protecting consumers from price surges and limiting the revenues of dominant players. However, they are not effective in promoting competition and limiting market power. Dominant players tend to adjust their behaviour and bid close to price caps. At the same time, the caps in Ukraine are too low to allow scarcity prices to occur. This limits the development of a liberalised market in Ukraine, as the market can hardly send a clear (price) signal on where investors should focus on.

Limited cross-border trading

Ukraine's market rules allow free cross-border trading. However, imports from Russia were limited to day-

ahead and balancing segments. De-facto, imports from Russia are blocked since April 2020. The Ukrainian government is protecting domestic thermal generation from competition and wants to ensure Ukraine's energy security in this way. In reality, the imports were not exceeding 2% of total demand at its peak. The matter of cross-border trade with Russia lies in the political realm. While the energy regulator, NEURC, supports the competition on the market coming from imports, the government strongly opposes it. In BEI, the cross-border capacity is enough to cover more than half of the zone's peak demand, at least on paper. In reality, competition is limited to not more than 1/3 of peak demand and is close to zero during off-peak hours.

Subsidised electricity prices for households

Ukrainian households, irrespective of their incomes and consumption, are entitled to a fixed tariff which is below the market price. The difference between market and regulated price is subsidised via a public service obligation (PSO) imposed on state-owned nuclear (half of their output) and hydro generation (1/3 of output) companies. The current PSO forces these generation companies to sell electricity for household consumption at low prices, while recovering the costs through selling the remaining power on the market. The approach now used in Ukraine is widely criticised as it significantly distorts the market, limits competition and is not financially sustainable. It also gives an advantage to market players who are not affected by PSO, enhancing their market power.

Growing debts

Before the reform, the market accumulated around UAH 30 bn (back then EUR 1 bn) of debt, concentrated on the books of Energorynok, the market operator of the former single buyer model. According to the Law, these debts should have been resolved before the market opening. However, this didn't happen so far. Meanwhile, new debts started to accumulate, now exceeding UAH 25 bn after 9M 2020. The main part of debt is due to renewable energy support and subsidised prices for households, which are financed via transmission tariff. NEURC was reluctant to further increase the tariff since the beginning of 2020, referring to the protection of consumers from excessive final prices. The renewable energy producers were blamed, and a haircut to feed-in tariffs was adopted by the Parliament, with promises to repay existing debts. For now, the debts are still accumulating, magnified by some big consumers refusing to pay the transmission tariff. The source of debts from the previous market design was not addressed properly

either. The state-owned water supply companies and coal mines continue not paying for the electricity they consume, while being protected from disconnection. This results in growing debts on the balancing market, with no sources of funding so far.

Conclusion and outlook

The first 12 months of the new market were an expensive test period, which Ukraine desperately required before the reform implementation. Started in so-called 'safe mode', with various restrictions, gaps and distortions, an unprepared market management software, the wholesale market performance is still far from perfect. The spot market price is not a result of competition, but is rather a product of regulatory policies. Judging from EU experience, electricity market reforms take years to finalise. Ukraine has just started its long way towards a truly liberalised competitive market. But existing distortions are not an inherent, unchangeable feature of the market. Most issues can be addressed, provided there is a strong political will for substantial reforms, a clear vision of the target market model for Ukraine and a long-term implementation plan in place.

Author

Oleksii Mykhailenko oleksii.mykhailenko@gmail.com

This newsletter is based on analytical work of the "[Low Carbon Ukraine](#)" project and the publication on [Monitoring of Electricity Market Opening \(Memo\) #5](#). The project is part of the International Climate Initiative (IKI), funded by the German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety based on a decision of the German Bundestag and implemented by the consulting firm Berlin Economics.

Editors

Dr Ricardo Giucci, Robert Kirchner

[Subscribe / unsubscribe newsletter](#)

German Economic Team

www.german-economic-team.com

Financed by the Federal Ministry for Economic Affairs and Energy, the German Economic Team (GET) advises the governments of Moldova, Georgia, Ukraine, Belarus and Uzbekistan on economic policy matters. Furthermore, GET covers specific topics in other countries, such as Armenia. Berlin Economics has been commissioned with the implementation of the consultancy.