

Kyiv Energy Policy Talks

Theme Paper – 19 February 2016

“Moving towards a functioning competitive electricity market in Ukraine”

Addressing the Problem:

Security of supply situation Ukraine

Over the last several decades, reforms in many electricity sectors worldwide were framed by deregulation, and were accompanied by the establishment of new and different types of electricity markets and trading mechanisms. The main motivation behind the electricity market deregulation was to create an efficient trading process that allowed the forces of competition, and to create a market with robust system security and reliability. Also it was meant to fairly balance the interests of consumers and producers by using least-cost generation sources. Reform, ultimately, was supposed to reduce electricity prices over time (assuming that they first reached cost-recovery levels).

A Competitive wholesale market structure usually follows a traditional three-part segmentation - unbundling generation, transmission, and distribution, which emphasizes competition in the generation market.

Also, a competitive electricity market provides a centralized framework and effective regulation that are designed to produce an economical electricity service. Certain prerequisite conditions are critical, amongst the most important is that the competitive market presumes **a sufficiently large number of competitors, with no barriers to entry or exit.**

In competitive electricity markets, real-time operation of the electricity system requires coordination between TSO and MO, and among market participants, in order to ensure continuous balance between electricity supply and demand. Therefore, balancing mechanism enables market participants execute balancing actions and procedural adjustments in their positions to maintain balance and reliability of the system.

The Balancing Market is an integral part of the overall electricity trading processes. While electricity trading timetable extends from months to years before the actual trade can take place, deviations from the settlements can be occurred in real time. Within balancing market buyers and sellers are able to submit bids and offers for their deviations in bilateral contracts.

In Ukraine, some elements of providing for a Competitive Electricity market are in place or being put in place.

Currently, there is a process to pass a new Electricity Law (taking over from Law No 663) which will underpin the reform the electricity market with a new Electricity Model consistent

with the Third Energy Package / Energy Community commitments. The New Market Model takes over from the WEM established in 2005.¹ The NMM is going to be one based on Bilateral contracts market, a Day ahead market and other markets (replacing the existing Wholesale Electricity Market (operating since 2005)).² This is now the increasingly standardised new electricity market model that is springing up in most EU MS and which stipulates:

- Regulated Third party access – so independent suppliers and customers can do deals together using the main transmission grid
- Unbundled sector– so Generation, Transmission and Distribution are separate businesses or companies
- Opportunities to build new Generation
- An independent TSO and Market Operator
- Independent DSOs (subject to size thresholds)
- Open downstream/retail market (including companies and households)
- Independent National Regulatory Authority (independent from Govt and Industry)

In built into this approach are also complimentary actions involving market rules, network codes and a raft of secondary legislation / regulations that will comprise the rules and procedures governing the new market model. The market rules (based on a market design) will create the procedures for the wholesale buying and selling of electricity with the rationale that as there are many more risks involved – owing to the nature of electricity demand / supply and its inability to be stored – there should also be many more risk-minimising opportunities or instruments available to the organisations. This, in essence, is the rationale for the different “markets” – long term contracting, day ahead, spot, balancing, ancillary services, forward and futures which can develop, which will reduce risks if played correctly. The net result is a more efficient, less costly set of operations which – assuming other actions happen – will result in lower prices to end-users.

¹ Wholesale Electricity Market (WEM) is the core part of the electricity market in Ukraine (over 90% of electricity is supplied through the WEM) and the only institutionally arranged electricity market in the country. In compliance with the Law of Ukraine “On the Electricity Sector”, power plants are obliged to sell electricity produced exclusively to the WEM. Besides, the Law allows particular groups of power plants to sell electricity bypassing the WEM. The WEM is arranged based on a “single buyer” model. The WEM was created as a contractual association of professional market participants – holders of the NERC’s licenses on electricity generation, distribution and supply. All WEM participants have to sign the Wholesale Electricity Market Members Agreement (WEMMA) and fulfil its conditions and requirements, the WEM Rules and other WEMMA Annexes. Commercial relations in the WEM are regulated by bilateral contracts between the WEM members and the state enterprise Energorynok. Existing WEM does not have segments of direct bilateral contracts with consumers, balancing market and market of ancillary services. Currently, only hourly spot “day ahead” electricity market is functioning in the framework of the WEM. Its competitive segment functions on the principle of one-side auction with large TPPs, which are dispatched on the basis of the price and capacity bids submitted to Energorynok. All other power plants are dispatched on a priority basis (taking into consideration system constraints set by the TSO) and sell electricity to SE Energorynok at the “cost plus” fixed tariffs approved by the National Commission that Performs State Regulation in the Power Sector (NERC).

² On 5 Nov 2015, the Energy Community Secretariat together with the EC submitted a letter to the Prime Minister calling for a swift adoption of the new Electricity Law as the law is crucial for implementing Ukraine’s commitments under the Energy Community Treaty with the deadline being 1 January 2015 for the adoption of the Third Energy Package compliant law.

Achieving a Competitive Wholesale Electricity Market

A key point, however, for Ukraine is whether the structure of the electricity generation market will facilitate competition between generation-owning organisations. This is important as most of the cost-savings are realised in operations in the generation sector (compared to the transmission or distribution of electricity – which are generally natural monopolies and so regulated).

In Ukraine, the Energy sector is dominated by thermal power plants, nuclear power and hydro generation. Generally, (but not always), nuclear power operates as baseload power, hydro generation can provide peaking power (and other services) and thermal power can operate both as baseload and mid-merit plant with some peaking services depending on the thermal technology. **As the ownership of the generation sector is a mix of state ownership and private sector ownership and includes only a limited number of players, this potentially will limit competition so that the market will not work effectively even after the New Electricity market is operating after July 2017.**

There is a range of possible, non-mutually, exclusive solutions that can be considered to reduce the likelihood of minimal competition. These can range from:

- Specifically promoting new generation (IPPs) to be built (although this takes time);
- Increasing the opportunities for electricity trading through interconnectors (greater cross-border trading – again, this take time to happen);
- Privatising existing state-owned generation assets / power plants and selling them to owners not currently owning generation power plants or distribution businesses in the sector;
- Encouraging or legislating private sector owners to divest some of their generation plants to other owners (a divestiture);
- Allowing for Virtual Power Plant (VPP) auctions where the capacity of different power plants is auctioned to interested third-party users and the commercial management of the capacity is managed by a third party for a period of time (eg 3 – 5 years);
- Encouraging through the market rules greater incentives for long term contracts. This allows owners to fix their revenues into future by taking a long term forward contract. This then reduces incentives to raise market or spot prices – which a non-competitive market structure allows. However, this solution only works if forward contract prices do not depend on the spot price;
- Limiting the price bids of generation power plants (which may be undertaken by an owner at his central bidding office utilising his portfolio of power plants);

Generally, a Regulator is the institution which has the authority to monitor the market and to recommend or put limits (or a cap) on price bids. An important role in monitoring and if necessary enforcing the competitiveness of the market will also fall to the Antimonopoly Committee.

An important aspect of the reform of the Ukrainian electricity market is, of course, of financial nature: How will liquidity in the market be increased and how quickly can that work? What will happen to the existing debts in the current market? How will the support to renewables and CHP be financed? How will the necessary support to vulnerable consumers be financed and how much will it cost?

This gives rise to our questions that will guide the discussion:

- 1. What conditions in terms of the structure of the market will need to be in place to establish a workable market model that will result in a competitive wholesale electricity market? What are the expected benefits and problems with the new electricity market model?**
- 2. What legal, policy, regulatory and other measures should be undertaken in the next 18 months by the Government to maximise the chances of a successful transition by the Electricity Industry into the new market model? How quickly can this happen?**
- 3. What should be the future power generation mix? Which role will Renewable Energy Sources have? What future role for Thermal Power Plants? To what extent, and how, will the ongoing electricity reforms benefit Ukrainian and other consumers? How will prices develop? How will support to vulnerable consumers be financed?**