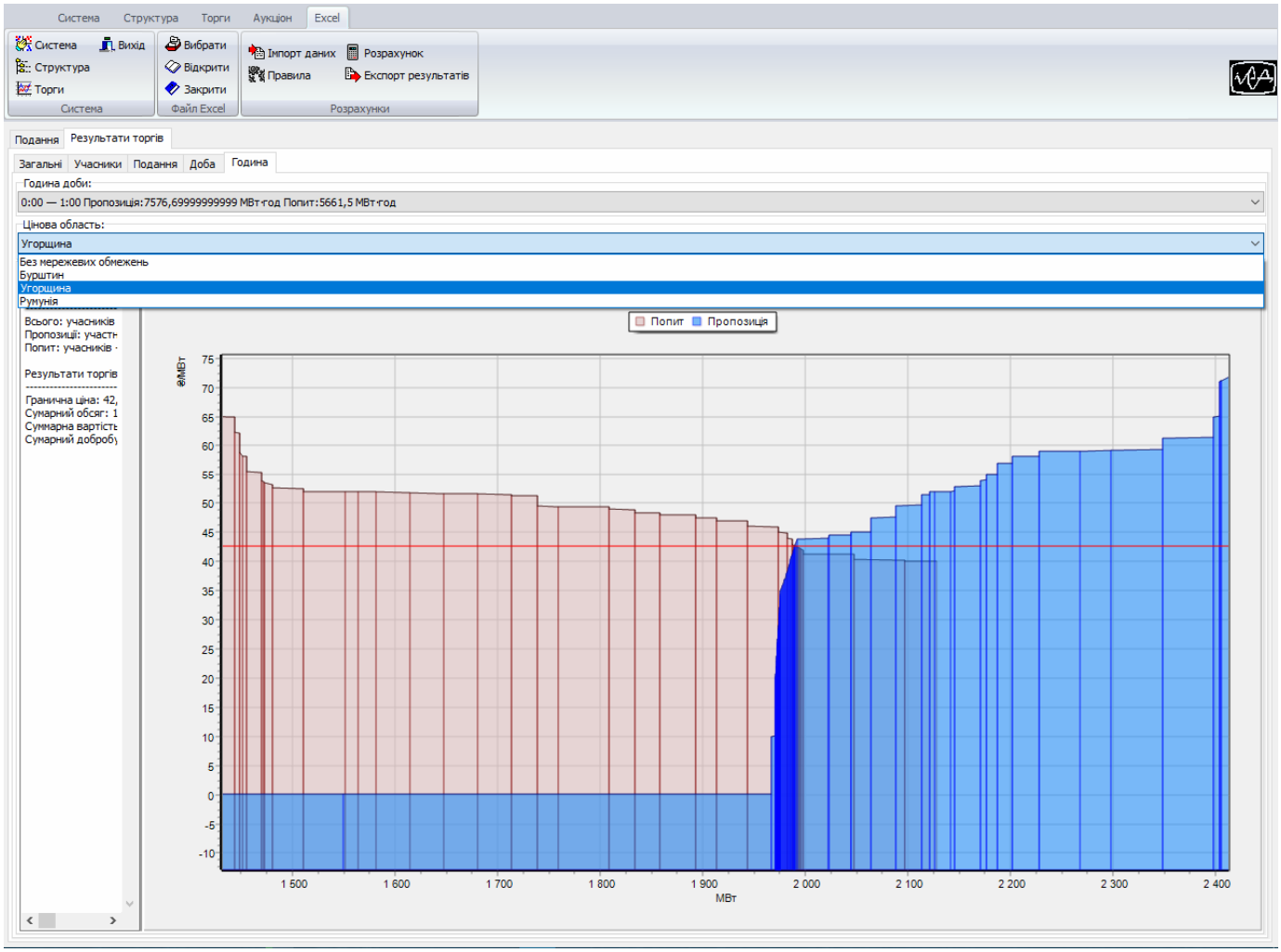
1.17. MODEL OF INTERCONNECTION OF ELECTRICITY DAY-AHEAD MARKETS (DAM)

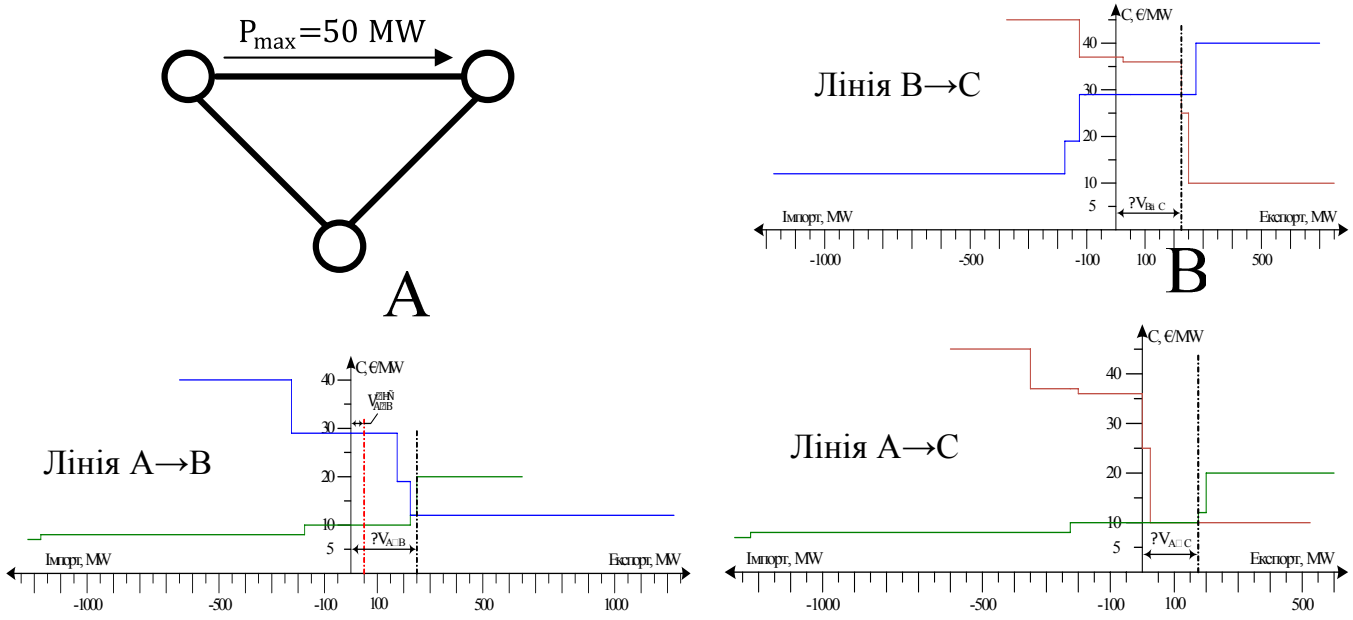
The software model is designed for DAM modeling at the various ratios between supply and demand for electricity, as well as interconnection of a default number of markets taking into account the network constraints.

DAM model analyzes applications / offers of linear and discrete types. The use of these types of applications allows to simulate DAM with both inelastic and elastic demand (Pic. 1).



Pic. 1. Example of the visualization of DAM results

Network constraints between price zones are taken into account in the model on the basis of a developed proprietary method (Pic. 2), which is based on the NEC apparatus with an expanded functionality of Decentralized Market Coupling (DMC) method.



Pic. 2 Example of iterative process of market combination

The model of market interconnection visualizes calculation results and provides more effective search of DAM welfare, in contrast to the models based on the Flow-based market coupling method. The advantage over DMC-based models is an ability to use NEC apparatus in order to interconnect a default number of markets.