A Study on the Development of a Power Trading Platform and Competition Regulation

Chen, Jong-Shun*
Wang, King Min
Gao, Ming-Zhi

Abstract

The purpose of this study is firstly to understand how the structure of Taipower's power trading platform operates as well as the plans for its future development, secondly to investigate the main development trends, influences and cases of advanced countries in the promotion of power trading platforms, and finally, to explore, from the structural and behavioral aspects, the main competition issues for the development of these platforms. Furthermore, the pre-diagnosis and evaluation of the trading platforms are conducted and the results are used as a reference for the Fair Trade Commission to develop power market competition initiatives and handle power industry-related cases in the future.

The research results help clarify the relevant market definitions of the electricity trading platforms. In terms of the product market, the electric energy futures and the spot market can be regarded as the same product market, and the "reserve capacity" and "ancillary services" should be separated and regarded as two separate product markets because they are not substitutes for each other. The real-time electricity balance market should, due to the very short time from the real-time dispatching and very limited substitution with other electric energy markets, be regarded as a single independent specific energy market. In terms of the geographical market, transmission constraints may determine its boundaries. When the transmission constraints are completely binding, the two ends of the transmission congested line will form two market areas. The extent to which the congestion area can be regarded as a different geographic market should be determined by the main regulator as appropriate.

Date submitted: January 13, 2022 Date accepted: June 27, 2022

* Chen, Jong-Shun, Assistant Research Fellow, Chung-Hua Institution for Economic Research (CIER); Wang, King Min, Research Fellow, CIER.; Gao, Ming-Zhi, Associate Professor, Institute of Law for Science & Technology, National Tsing Hua University.

As for the analysis of the structural and behavioral aspects of the power trading platform, the market structure of “three markets and one adjustment procedure” is not conducive to fair competition and economic efficiency, and will also harm the benefits of consumers. In the behavioral analysis, the results indicate that there is insufficient information disclosure, and there are serious concerns about the withholding behaviors and strategic bidding behaviors of the pivotal company. The current disclosed information can not sufficiently assist the regulatory authority in testing and identifying such behaviors. Finally, a pre-diagnosis and assessment of the current power trading platform is conducted based on structure and behavioral testing, and remedial recommendations accordingly proposed. These will serve as a reference for the Fair Trade Commission to develop power market competition initiatives and handle power industry-related cases in the future.

Keywords: Electricity Trading Platform, Ancillary Service Market, Market Power, Structural Test, Behavioral Test, Competition Initiative.