

# Research on the Domestic Electricity Market and Related Issues

## ABSTRACT

*Key Words : Liberalization of electricity industry, Fair Trade Act, Independent System Operator, Authority of electricity industry, Illegal behavior pattern*

The research aimed to evaluate the fair competition of liberalization of domestic electricity industry and its required supporting measures and propose policy recommendations based on the analysis of possible issues about the “concurrence” between the Fair Trade Act and the Electricity Act. These issues may be encountered during the promotion process of relevant policies regarding liberalization of electricity industry.

According to the research results, major findings and policy recommendations could be summarized as below:

### 1. Issues faced in domestic electricity market

Several issues which occur in the current electricity industry are: (1) Great obstacles to the development and construction of large-scale power plants for market supply; (2) the increasing number of grid congestion areas; (3) the unbuckled relationship between supply cost of electricity and market price of electricity; and (4) insufficient incentives and supporting measures for the development of distributed energy resource, demand response, energy storage system, as well as virtual power plant, smart grid, micro grid, etc.

### 2. Issues needing to be clarified in the amendment draft of the Electricity Act

Although the degree of liberalization of electricity industry regulated in the current amendment draft of the Electricity Act has significantly increased comparing

to the previous amendment drafts proposed in the past, several issues still need to be clarified, including: (1) potential concerns about the unfair competition of the power grid company while simultaneously operating other upstream electricity generator and/or downstream electricity retailer; (2) unclear time-table regulations of the schedule and the scope of medium-size and small-size customers' right of optional choices for their retailers; (3) The ambiguous role and function between the ISO and power grid company need to be further clarified; (4) the jurisdictional independence of regulatory agency for electricity industry should be guaranteed.

### 3. Issues about the amendment draft of the Electricity Act and the fair competition of electricity industry

The research generalized potential issues regarding the fair competition of electricity industry, referred to illegal behavior patterns against the Fair Trade Act, including:

(1)The anticompetitive behavior patterns which may occur in the wholesale market: merging behaviors of improper mergers and acquisitions among power plants, concerted behaviors of price controlling among power plants, the improperly rejected trading of power generation market by electricity players, restrictions on power generation market (IPP and so on) for entering the retailing activity, abuse of dominant market power against other electricity players (IPP and so on), obstacles to trade of power generation facility, and refusal to provide supplementary power for new electricity entrants.

(2) The anticompetitive behavior patterns which may occur in the transmission and distribution market: the potential obstacles to the fair competition caused by grid power company operating other electricity players, external uses of information obtained from power grid operation by electricity players, improper discriminative behaviors of power grid company, external uses of information obtained from

electricity dispatching, improper discriminative behaviors during the electricity dispatching, and refusal of the electricity dispatching.

(3) The anticompetitive behavior patterns which may occur in the wholesale electricity market: the concerted behavior of market pricing among retailers, the restricted trading behavior conducted through tying, fraudulent behaviors of publishing false service information, behaviors of hindering competitors from entering the market, electricity supply at unfair prices for certain interested parties, improper electricity rate set up in the partial electricity supply contract, refusal to sign the partial electricity supply contract, improper refusal of the partial electricity supply, overly high electricity rate for returned customers, improper removal or change of supplementary electricity supply contract between independent power generation players, improper establishment of last resort of supplying electricity, improper removal or change of electricity demand response contract, improper request for compensation for breach of contracts, termination of trade of other products or service, improper use of information of customers, combination of multiple behaviors of hindering the access to the market.

#### 4. Related recommendations in response to the market with fair competition under the liberalization of electricity industry

According to the abovementioned results of the research, the recommendations which can be immediately adopted by Fair Trade Commission as well as recommendations for medium-term and long-term perspectives were proposed. The recommendations which can be immediately adopted by Fair Trade Commission referred to the matters which limit competition including monopoly, M&A, and coalition as well as other unfair competitive behaviors current electricity industries are involved in. Fair Trade Commission may set up regulations related to the fair trade based on its duty in accordance with Fair Trade Act, review practical cases

related to Fair Trade Act, investigate market activities and economic status, and punish those cases breaching Fair Trade Act. Fair Trade Commission may conduct, in advance, market power screening test, such as HHI test, SSNIP test, and the post-profit market test to examine whether vendors violate Fair Trade Act. Moreover, Fair Trade Commission should follow up regularly and establish a complete reporting mechanism to prevent illegal behaviors related to anti competition and unfair competition. In addition, for issues which need to be clarified in the amendment draft of the Electricity Act, Fair Trade Commission should also propose professional opinions on enforcement of competition policies for the reference of related electricity entities during amendments to prevent anticompetitive behaviors in advance.

Facing the rapid development of “energy internet” as elaborated by Rifkin(2014), distributed energy resource (DER), renewable portfolio standard (RPS), energy management information system(EMIS), demand response (DR), battery energy storage system (BESS), virtual power plant (VPP), smart grid, micro grid have caught the public imagination and market niches over the world. Being the authority of market competition, the Fair Trade Commission should constantly envisage on the cutting-edge of relevant technology development and controversial cases mostly for contestable competition in the advanced countries. Policy implication for promoting competition can be illuminated from those cases. The core value of the energy internet is to maximize the market mechanism for competition based on the virtual platform, where every consumer could be potentially a producer, i.e., “prosumer”. For this point, we suggest FTC to conduct more analytical works in the near future.