

A DEBATE ON STRATEGIES FOR ELECTRICITY MARKET ENLARGEMENT: THE CASE OF MIBEL

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Overview

The enlargement of electricity markets is a target for most policymakers. As it is well known electricity differs from other commodities at the point that it is hard to be stored, in a large scale. As such, one way found to overcome this issue, as well as to avoid electricity wastes, is exchange the electricity between countries. Beyond saving electricity, is even more important to assure security in the electricity supply to prevent blackouts. Indeed, exchanging electricity efficiently, without harming the agents, bring up a few decisions to make. Electricity markets are constituted by different types of agents, in which, retailers, wholesalers, and cosumers reveal to be the main players. One stragegy that promote several advantages concerning the management of electricity produced are the interconnections (Koltsaklis et al., 2016). Besides, the electricity prices and taxation are important factors regarding the negotiation between wholesalers and retailers. However, the timing when electricity is consumed is also a crucial aspect for the management of the electricity produced. The regulatory jurisdictions are still being applied for each country, instead as a whole, and this could comprise the implementation of strategies regarding the enlargement of electricity markets (Dutton and Lockwood, 2017). In first times after electricity markets liberalization, the electricity was supplied by companies vertically integrated (Kyritsis et al., 2017). This means that the same company was responsible for generating, transmitting and distributing electricity to end-users. In fact, the establishment of interconnections should be allowing the unbundled of energy services, opening the acess to the network, and improving the quality of the services (Oseni and Pollitt, 2016).The electricity interconnections implementation are still facing several challenges, such as, the lack of consensus in politic interests and the need of large invesments. However, the interconnections seem to play a key role regarding the electricity market enlargement, indeed, it is rising the competitiveness between wholesalers. Since the liberalization of electricity markets, electricity prices were determined according to the levels of demand, the mix of electricity generation, and the electricity coming from cross-border markets. Thus, these different components of electricity prices could induce several behaviours, following strategies to achieve the utmost profit. This reveals the main motivation to this paper, by discussing which strategies are being practiced in favour of the enlargement of the electricity market. This paper is mainly focused in interconnections strategies, price differentiation and strategies between wholesalers and retailers, and consumption habits.

Methods

This paper has been structured as a review article. It provides an exhaustive revision of the literature, Besides revise the literature, this study goes further by the critically analyse of the literature, it identifies the major gaps on the atual knowledge regarding the effectiveness of the strategies to deepen the market, actually. Moreover, measures and strategies are analysed, to realise their contributions to the enlargement of the electricity market.

Results

Renewable energy sources, specially wind power and solar photovoltaic are characterized by their intermittent electricity generation. Indeed, if those renewable sources stop producing electricity, other conventional ones must be activated to guarantee supply. Conversely, the conventional sources are flexible, once they are ready-to-use in cases when there is no available natural resources to generate electricity through wind power and solar photovoltaic. However, this standby mode is associated with high costs. Thus, the interconnections can contribute for saving generation costs, through the sharing of renewable sources between cross-countries, benefiting from the already installed capacity. Furthermore, interconnections encourages trade, reduces the occurrence of bottlenecks (which could translate a maket inefficiency), increases the probability of the penetration of renewable sources in the electricity system, and incentives the importation and exportation, in times of scarcity and surplus of electricity, respectively. Still, assessing the transmission capacity (in its effective use and installed capacity) is difficult in many aspects such, physics, political, and economic. Besides, the reability aspects must be also considered (Cepeda et al., 2009), i.e., is necessary to certify if the exporter and the importer country is able to send and receive energy,

respectively. In fact, the interconnections also have economic effects, namely in the constitution of wholesalers and retailers electricity price. Commonly, there are differences in electricity prices among countries, for example, the importer country will practice a higher price than the exporter country. Is this how it should be? How would consumers lead with this reality? In electricity markets, there are also being applied different contracts, such future and forwards contracts. Indeed, the notion of price convergence should be well understood by all market participants, to prevent the occurrence of arbitrage and market splitting episodes. Besides, if the interconnections increase the electricity price in the importer country, consumers would not be receptive to this reality. Could this be comprising the interconnections? Or should it be a way to incentivize consumers to produce their own energy? Nevertheless, between deals and deliveries, is necessary to take into account of how producers would behave. For example, how would they handle with times of delivery? And, how will producers react if they run into a deal in which they predict to lose profit? Will they still decide to sell the electricity? This paper contributes to literature by advancing some responses to these critical questions.

Conclusions and Discussion

Several questions remains as unanswered, in the electricity markets integration. In fact, implementing interconnections takes time, and there are still many steps to achieve the efficient electricity market. First, producers have to feel comfortable to sell electricity in a market where exists many bids hour by hour. Second, not all producers act with the same strategy. Third, the associated costs of producing electricity also differ from producer to producer. Indeed, producers will always behave to achieve the utmost profit. Hence, supposing that all the different scenarios (mentioned above) are acting at the same time, different results will outcome. Furthermore, consumers must feel reliable in changing their consumption habits. The energy transition is being marked by the introduction of renewables, in the system. So, the change of consumers habits could be a solution to incorporate accurately the renewable sources. Thus, this analysis will be helpful to policymakers refine the public energy policies, improving the efficiency of electricity markets.

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