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CAPACITY MECHANISMS IN ELECTRICITY MARKETS REVISITED

Reinhard Haas
TU Wien, Vienna, Austria

Extended Abstract

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Abstract Summary

The core intention of this paper is to provide a critical review on how to introduce truly competitive electricity markets and the possible role of CP. It is triggered by the current discussion on how to integrate large shares of variable RES but the intention is to show how to head towards real competition in electricity systems, including all dimensions such as generation storage, but especially the customer side, see also Haas et al 2022.

The major objective of this paper is to analyze and provide insights on the conditions that will bring about a sustainable and competitive electricity system with higher shares of RES without escalating political interventions.

The objectives in detail are: (i) to explain how in the future a really competitive market-based electricity system without continuing governmental interferences can be brought about; (ii) to argue why CP will not contribute to such a system but rather retain the conventional system.

Our major conclusions are:

- Revised Energy-only-markets have to be introduced which allow temporarily shortage prices higher than short-term marginal costs and in times of excess electricity negative prices;
- All arguments in favour of capacity payments (CP) including aspects of market failure could be managed by a complete, wholly integrated market include supply-side as well as demand-side options, without government intervention in generation. This approach would provide the basis for a truly competitive electricity system;
- An important element of such a market will be flexibility options. But these will only be harvested if high price signals from the electricity markets trigger these options, when “the exploration principle in the markets work” (Erdmann 2012). Yet this will only be done if the market is not distorted by centralized capacity payments.

Presenting Author Biography

Reinhard Haas is retired university professor at Vienna University of Technology in Austria. His current research focus is on electricity market design for integrating large shares of renewables.