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Markets for efficient decarbonization: revisiting market regulation and design

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Abstract-

In the 1980s, some seminal works such as markets for power: an analysis of Electric Utility Deregulation by Joskow and Schmalensee and Spot Pricing of Electricity by Schweppe et al. set the foundations for electric power system restructuring toward a fully liberalized, marginal price-based market environment in which generators and end users trade. Even then, it was clear that the task was not going to be easy, but an increasingly and always significant portion of the industry and academic community thought that it was at least possible. More than three decades after the first power markets were implemented, the entire "power sector community" continues to discuss the suitability of relying on short-term market prices as an efficient signal to drive investments, especially in the current context in which not only traditional generators but also end users can decide to invest in energy supply resources, and an increasing amount of new generation investments have zero or close to zero variable costs, which some people see as a threat to the short-term market paradigm.

Index Terms- Market design; Energy Transition; Decarbonisation; Demand participation; Capacity Mechanisms

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