

Technical deployment of aggregator business models

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Abstract-

The proliferation of Distributed Energy Resources (DERs) is paving the way for new energy-efficient services that aim to make end-users more active. According to the literature, these services will be managed by a central figure, aggregators. This paper proposes several business models to accommodate them in the electric power industry. Several potential alternatives are identified from the study of different design elements, such as the control strategy, architecture, and signals that need to be exchanged. These alternatives are then tested by analyzing pairwise relationships between all the actors involved (Aggregator-Prosumers, Aggregator-DSO, and Aggregator-TSO). Every business model is first explained individually, including how contracts would operate, in order to determine their advantages and drawbacks. Finally, a comparison of all the alternatives is put forward together with an overview of the main initiatives that have already been implemented.

Index Terms- Aggregator; Business model; Design elements; Flexibility

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