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A review of energy storage system legislation in the US and the European Union

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Abstract— Purpose of Review:
This paper focuses on the current possibilities for energy storage systems (ESS) to participate in different power system services. ESS can provide multiple services such as spinning reserve, deferral upgrades, and energy management. However, this versatility of ESS poses a challenge for regulators in designing markets where ESS have prominent roles. We assess recent regulatory proposals in the US and the EU in order to understand their implications for ESS.

Recent Findings:
These proposals attempt to improve the current rules for efficient ESS deployment. Nevertheless, they have different approaches to the same problem. We discuss these differences in an attempt to shed light on the regulatory debate about ESS ownership and market design.

Summary:
The successful integration of ESS will depend on proper incentives to provide multiple services without hampering the current market structure. New asset definitions could help to define the roles of ESS as either a generation or a transmission asset.

Index Terms— Energy storage systems; Regulatory framework; Market design; Variable renewable energy sources; Asset definition

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