



# ENERGY STORAGE UPDATE 2018

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Battery energy storage is the most significant development for the electric grid since the explosive growth in renewables deployment over the past decade. Battery storage projects are gradually becoming mainstream in California, and efforts to promote energy storage are moving rapidly throughout the country, with particular growth in New York, New Jersey and Massachusetts. These developments are driven by a host of factors, including critical needs to integrate intermittent solar and wind generation into electric grids to achieve sustainability goals, continuing decreases in the capital cost of new battery systems, favorable federal and state regulatory and procurement climates, certain tax benefits, and greater demands by end-use customers for resource choice and flexibility in a quickly evolving energy market. This boom in battery storage presents a tremendous opportunity for market participants, including developers, utilities, lenders, investors, contractors and equipment vendors. At the same time, the opportunities have created a unique set of commercial and legal issues and challenges for participants.

# INTRODUCTION

Focusing on these opportunities and challenges, this article is the third in Orrick's series of articles covering the development of the energy storage industry. Based on our experience in the past few years engaged on transactions in this rapidly growing market, both inside and outside the United States, this article provides a current update on the following important topics:

- **Commercial Factors for Project Viability and Financeability:** Key commercial factors that ensure battery storage projects are viable and financeable, which in the case of non-utility owned projects is the existence of a long-term offtake revenue contract to provide a steady stream of project cash flow, and in the case of both utility and non-utility owned projects, the existence of EPC (or vendor) performance guarantees providing unique battery-specific acceptance tests and continuing guarantees to ensure proper construction and long-term performance.
- **Battery Storage Contract Structures and Issues:** Key contract and commercial structures being used to implement battery energy storage projects in the U.S. market, including energy storage tolling agreements, capacity sales agreements, hybrid power purchase agreements, utility services agreements and host customer agreements, and a description of the key issues involved with those structures.
- **Regulatory Developments:** Key federal and state energy regulatory developments that are facilitating the deployment of energy storage systems.
- **ITC and Tax Issues:** Key tax issues associated with battery energy storage projects, including the rules establishing eligibility of battery systems for the federal investment tax credit when the systems are integrated with solar or other renewables generating projects.
- **State Procurement Developments:** Key developments in state level procurement and other laws that are promoting battery energy storage in a growing number of states.
- **Storage Market in the United Kingdom:** Key developments in the deployment of battery energy storage projects in the United Kingdom.

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# BACKGROUND

The storage industry has recently been boosted by the successful completion of the first wave of non-recourse battery energy storage project financings and the increase in utility procurement of battery storage projects and products. Since publication of our earlier energy storage articles, private developers have successfully closed hundreds of millions of dollars of financings for large battery projects. At the same time, utilities have procured hundreds of megawatts of utility-owned battery projects through EPC, BOT or similar contractual acquisition structures and have executed numerous contracts for battery project services and products.

Of course, the successful development and financing of any type of energy or infrastructure project requires many different building blocks, including site control, permits, interconnection, regulatory exemptions, EPC, O&M,

PPA/offtake revenue contracts, and others. Although each of these is important, our experience has revealed that the most unique and critical issues to ensure the viability and financeability of battery storage projects arise primarily in two areas. For non-utility owned projects, the first area of focus is a dependable offtake revenue contract to provide a steady stream of project cash flow. These contracts have a number of structures, and involve many issues unique to battery storage technologies. The second area involving unique issues, for both utility and non-utility owned projects, is the existence of EPC, installation, long term services/O&M or other project contracts that combine battery system acceptance tests and continuing performance guarantees to ensure proper construction and long-term performance.



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