

# Legal risks of energy storage projects

Are there legal issues relating to energy storage?

As set out above, there are a wide variety of energy storage technologies and applications available. As a result there are a number of legal issues to consider, although the relative importance of such issues will be informed by the specific energy storage project design. revenue stream requirements e.g. double circuit connection.

What technology risks are associated with energy storage systems?

Technology Risks Lithium-ion batteries remain the most widespread technology used in energy storage systems, but energy storage systems also use hydrogen, compressed air, and other battery technologies. Project finance lenders view all of these newer technologies as having increased risk due to a lack of historical data.

What are the legal and contractual issues associated with a battery storage project?

The legal and contractual issues associated with development, construction, and operation of a battery storage project are similar to those of other power projects, but owners/developers should keep in mind some key issues, particularly around equipment supply contracts, real estate, and shared facilities.

Are energy storage projects a good investment?

Investors and lenders are eager to enter into the energy storage market. In many ways, energy storage projects are no different than a typical project finance transaction. Project finance is an exercise in risk allocation. Financings will not close until all risks have been catalogued and covered.

What are the safety requirements for energy storage technologies?

Safety: Minimum safety and operating requirements are common considerations for energy projects. Energy storage resources present additional safety concerns given their unique technological profiles. For battery storage technologies in particular, safety requirements should adequately address fire risks.

What are the challenges of a utility-scale battery storage project?

Utility-scale battery storage projects, like any energy project, present land use, permitting, environmental, and health and safety challenges. Developers must anticipate and address these issues to successfully meet project development timelines and goals.

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Anyone developing a battery energy storage project should be prepared to address two main issues. The first, and the topic of an earlier article, is the general contracting structure. ... Suppliers will often attempt to structure agreements to pass risk to the developer. Some suppliers may separate projects into individual orders to limit ...

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Many regions already have markets that let energy storage owners tap into some of these additional revenue streams, and others will follow as government policies change. Storage projects have unique risks stemming from unstable regulatory regimes, unprepared market structures, unique liability exposure, and unproven performance records.

As of July 2022, the effective laws, regulations and policies for the pumped-storage industry mainly include: "Pumped Storage Medium and Long-term Development Plan (2021-2035)," ...

It has traditionally been difficult to secure project finance for energy storage for two key reasons. Firstly, the nascent nature of energy storage technology means that fixed income lenders and senior debt providers are naturally risk averse. Battery storage has less of a track record than other renewable energy assets such as solar and wind ...

battery energy storage systems under public-private partnership structures January 2023 ... Battery storage projects in developing countries ... Each type of agreement will result in slightly different risk allocation between the parties. The four types

Key regulatory issues currently under review include ways to remunerate energy storage in wholesale electricity markets and ways to facilitate interconnection. Regulations affecting ...

Energy storage projects with contracted cashflows can employ several different revenue structures, including (1) offtake agreements for standalone storage projects, which typically provide either capacity-only payments or payments for capacity plus variable O& M ...

The United States and global energy storage markets have experienced rapid growth that is expected to continue. An estimated 387 gigawatts (GW) (or 1,143 gigawatt hours (GWh)) of new energy ...

Australia's push towards renewable energy has seen a sharp increase in utility-scale Battery Energy Storage Systems (BESS) projects. In 2023, Australia saw the strongest year for new financial commitments in large-scale storage and hybrid ...

Battery storage enhances integration of intermittent renewable energy; Project leaders should track lithium prices, effects of trade wars, COVID disruptions; Contract and ...

The development of renewable energy projects involves navigating complex legal and regulatory landscapes. These challenges range from energy storage and infrastructure adaptations to market competition and regulatory frameworks, impacting the widespread adoption of renewable energy technologies.

At first glance, renewable power generation has created, in the eyes of traditional industries, an investment nirvana. By understanding how these better-capitalised companies view renewables' merchant risk, we can identify where future energy storage projects should seek finance partners, says Charles Lesser, a partner at

Apricum - The Cleantech Advisory.

Banks like historical data to help assess risk, risk-weighted cost of financing and debt-service-coverage ratios. There is not a lot. The US Department of Energy reported recently that only 14 utility-scale batteries have been operating for more than 10 years. That is not just in the US, but globally.

How these risks are addressed contractually, who bears the legal risk of technology failure and whether there is any exclusion of liability under the legal framework will need to be carefully considered by the parties. ... an Advanced Compressed Air Energy Storage project in New South Wales, Australia which, once constructed, will be one of the ...

Renewable energy projects are often sited on portions of legal parcels for various reasons, including cost-effectiveness. ... Battery storage projects also carry with them a risk of fire. As a result, local jurisdictions are often focused on minimization and mitigation of fire risks that may be implicated as a result of the construction and ...

The United States and global energy storage markets have experienced rapid growth that is expected to continue. An estimated 387 gigawatts (GW) (or 1,143 gigawatt hours (GWh)) of new energy storage capacity is expected to be added globally from 2022 to 2030, which would result in the size of global energy storage capacity increasing by 15 times ...

In the last two years, at least two non-recourse project financings of standalone energy storage projects have closed in the U.S. For the energy storage market to reach its expectations, lenders and investors will have to get their heads around the unique risks posed by storage projects. Two Types

The development of PVESU project can alleviate the imbalance of supply and demand in clean energy market. As an effective means to attract private capital and promote the development of energy storage, risk analysis of PVESU project is a necessary condition to ensure the smooth operation of the project.

Risk plays a pivotal role in any energy construction project, and the allocation of risk is what a construction contract does. Project parties--owners, contractors and especially lenders--get comfortable with a certain level of risk based on what is customary for that type of project. However, sometimes one or another of these groups begins to think of the customary ...

This agreement marks the latest announcement of Excelsior's progress in 2024. In March, the firm announced the sale of a portfolio of 38 solar energy and solar plus storage projects from its Fund I portfolio to BlackRock's Evergreen Infrastructure Partners Fund. In April, Excelsior announced the launch of Lydian Energy, a portfolio company developing a pipeline of solar and battery ...

Every carbon capture and underground storage (CCUS) project is unique and requires customised engineering designs, procurement strategies, construction approaches and management systems. However, despite

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comprehensive analysis and skilled management processes, CCUS projects remain susceptible to technical and non-technical risks. This ...

The legal risks associated with the transformation of platform-based Energy Internet companies mainly pertain to the market access of such enterprises, energy-saving management for new and existing Energy Internet companies, regulation of energy storage, construction of power trading platforms, the establishment of integrated energy service ...

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