

Storing the Power of Sun: How to Make the Most Out of Coupling Solar with Battery Storage

By [SPW](#) | March 19, 2019

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2018 witnessed unprecedented records for the economics of solar-plus-storage, demonstrating a variety of value streams and thus making the tale of this marriage all the more compelling. The plummeting costs of batteries, particularly lithium-ion, paired with changes in net metering policies, have forged opportunities for cost-effective use of solar+storage. According to Wood Mackenzie Power & Renewables, in 2019, the U.S. energy storage market is poised to take over South Korea's, gaining 21% of the total global energy storage deployment, which is estimated to reach 7.9 GWh.



Deploying battery storage provides the flexibility to deal with and adapt to any changes in the system. In many parts of the world, the recent extreme weather conditions and increasingly-common outages have ushered in an appetite for resilient energy systems. The desire to adopt renewable energy is growing across various industries. In particular, solar installations have experienced bountiful growth with new installations reaching over 100 GW. Specifically, many corporations are increasingly turning their gaze towards solar to keep their pledge of deploying 100% clean energy in the coming two decades (i.e. RE100). This growing interest calls for further future deployment of solar

energy and presumably batteries to help counteract the intermittency associated with the energy produced by the sun.

How and when you operate storage have an immense impact not only on the amount of revenue generated but also the costs incurred. Coupling solar with storage is not as simple as it may seem at first glance. To generate solar power, all that is required are rays of sunshine and solar panels. Battery storage, on the other hand, posits a certain number of requirements, the absence of which keeps the lights off. In pursuit of realizing the true value of solar-tied storage, it is incumbent on asset owners and operators to be well-informed in order to prevent this incredible technology — that has the potential to transform the industry — from falling into a dreary slog of financial and energy loss. In order to better decipher the convoluted realm of pairing solar with storage, [this white paper](#) published by Solarplaza peers beneath the underlying drivers, use cases, different connection and battery types as well as key considerations to successfully operate a solar-plus-storage project.

What's included?

- Use cases & applications of solar+storage
- System Designs: To DC or not to DC?
- The impact of battery type & key performance metrics
- Crucial O&M considerations

[Read Solarplaza's white paper here.](#)