

# **Navigant: Solar plus storage turning variable green power into a dispatchable resource**



Storage-plus-renewable energy projects, in particular solar, are expected to play an important role as electric utilities develop their strategies for the grid of the future. The risk and cost associated with battery technology continues to decline, enabling utilities to transition large-scale renewables from intermittent to dispatchable energy resources.

The utility-scale energy storage market has seen a steady growth since 2011, with more than 8.9 GW of non-pumped hydro storage projects coming online over the past seven years, according to Navigant Research, "How Utilities Can Look Beyond Natural Gas with Cost-Effective Solar Plus Storage Strategies."

One of the technologies driving market growth is lithium-ion batteries, the report said. The latest analysis showed that lithium-ion batteries accounted for 29.4% of non-pumped storage capacity and 70% of advanced battery capacity developed since 2011.

Due to the advancements in lithium-ion battery technology, Navigant Research expects that PPA prices for projects combining energy storage and renewable resources will continue to decline as their adoption expands. Storage-plus PPAs are

already less expensive than the LCOE for combined cycle natural gas in the United States, the report found.

“In 2018, storage-plus made its first shift from the validation and first-mover adopters to diffuse adoption led by utilities,” Alex Eller, senior research analyst with Navigant Research, said in a statement. “The accurate valuing and positioning of storage-plus by utilities will continue to drive the market in coming years.”

Regulators and utilities should push for all-resource solicitation to take advantage of the price disruption in the area of storage-plus renewable energy and to meet aggressive renewable portfolio standard targets in the process, the report said.