



DNV Report Finds PV+Storage Plants Cost Less with Ampt's Fixed DC-coupled Configuration

Independent analysis compares capex costs of fixed DC-, variable DC-, and AC-coupled configurations for a 100 MWac PV system with 6 hours of energy storage

Fort Collins, CO — September 12, 2022 — [Ampt](#), the world's #1 DC optimizer company for large-scale photovoltaic (PV) systems, today announced that an analysis conducted by [DNV](#), the independent expert in risk management and assurance, found that Ampt's fixed DC-coupled energy storage configuration lowers PV+storage system capital costs when compared to other DC- and AC-coupled solutions.

The newly published [report](#), prepared by DNV, compares the balance of system materials and labor costs of the three different solar-plus-energy storage configurations for a 100 MWac PV system that is paired with 600 MWh (6-hours) of energy storage. The results of DNV's independent analysis show that the Ampt fixed DC-Coupled configuration saves between 18.7 and 29.6 percent of impacted component costs compared to the other DC- and AC-coupled configurations.

Ampt String Optimizers are DC/DC converters that improve system performance by doing maximum power point tracking (MPPT) on each string of PV modules and then delivering that power at a high and fixed voltage rather than the variable and lower voltage of systems without Ampt. These [features](#) reduce the current requirements of the entire system which lowers the costs of electrical components such as cables, battery converters, and inverters. Ampt's predictable DC bus voltage also simplifies battery and inverter controls to improve grid responsiveness of the power plant.

In preparing the report, DNV recommended the power electronics used in the comparison systems based on its view that those solutions represent current leading alternatives to the Ampt design. DNV then used industry research, equipment manufacturer quotes, and its experience to calculate the capital expenses for the balance of system of each design. The report includes drawings, an itemized list of components, and a cost breakdown for each of the three PV+storage configurations that were compared. It also explains the differences between the configurations and the cost savings in the Ampt fixed DC-coupled solution.

"DNV is recognized globally for its independence and technical expertise," said Levent Gun, Ampt CEO. "We appreciate their due diligence in preparing this report."

The DNV report is available for [download](#).

Ampt is exhibiting at RE+ on September 20-22 at the Anaheim Convention Center in California. Please visit us in booth 1252 to learn about our award-winning products including our new i50 String Optimizer which will be on display.

About Ampt

Ampt delivers innovative power conversion and communication technology that are used to lower the

cost and improve performance of new PV systems, repower existing systems, and enable lower cost DC-coupled storage. With installations and experience serving markets around the world, Ampt is the number one DC optimizer company for large-scale systems. The company is headquartered in Fort Collins, Colorado and has sales and support locations in North America, Europe, and Japan as well as representation in Asia, Australia, and the Middle East. For more information, visit www.ampt.com.

Contact:

Ampt

Mark Kanjorski

info@ampt.com

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