



Ampt Completes 240 MW Delivery to the Largest Solar+Storage Project in Latin America

Ampt String Optimizers Increase the Performance and Decrease the Cost of DC-coupled Energy Storage

Fort Collins, CO — May 12, 2022 — [Ampt](#), the world's #1 DC optimizer company for large-scale photovoltaic (PV) systems, today announced that it has completed delivery to the largest solar+storage project in Latin America. The 240 MW solar power plant uses Ampt String Optimizers to link the PV system to 560 MWh of DC-coupled energy storage. The optimized system sets a new standard for using longer-duration storage in transmission-level applications.

Located in the Atacama Desert plateau, the PV+storage power plant is situated in the heart of Chile's mining industry which requires large amount of power to operate. The abundant sun and low temperatures of the high-altitude region make it an ideal location for efficiently producing solar energy. The system will generate, store, and supply a renewable source of energy to support the copper mining operations of Sierra Gorda SCM. It includes high-power bifacial PV modules to maximize production during the day, and 112 MW of lithium-ion batteries capable of supplying firm power to the grid for 5 hours.

To maximize performance and achieve the best economics, the 240 MW power plant uses Ampt String Optimizers to connect the PV system to the energy storage system through a shared DC bus – commonly referred to as a “DC-coupled” architecture.

Ampt String Optimizers are DC/DC converters that are used in large-scale PV plants to lower the cost and improve performance of DC-coupled solar+storage systems. With Ampt optimizers, power is delivered at a high and fixed voltage rather than the variable and lower voltage of systems without Ampt. The higher voltage operation allows the entire system to operate at a lower current for a given power. This reduces the costs of electrical components such as cables, battery converters, and inverters to lower the total capital cost of the power plant.

In addition, Ampt String Optimizers improve system performance by doing maximum power point tracking (MPPT) on each string of PV modules and then transferring that power to the DC bus at a constant voltage. The string-level MPPT increases lifetime energy production compared to the centralized MPPT of other systems. Ampt's predictable DC bus voltage simplifies battery and inverter controls and improves grid responsiveness of the power plant.

The 240 MW power plant is noteworthy for its innovative technology as well as for the value streams delivered to various project stakeholders. Beyond supplying a clean, renewable source of energy to the copper mining operation, the PV+storage system relieves congestion on transmission lines while providing capacity firming to the network. Moreover, the long duration battery system mitigates the market risk of high and low energy pricing events and curtailment by allowing the solar energy to be stored and dispatched at peak demand times to maximize its value.

Importantly, the energy storage system allows the transmission operator to avoid the massive investment to upgrade transmission infrastructure that would otherwise be required to transport excess

solar energy from the remote desert location of the copper mine in the north to the high demand areas in the center of Chile.

“We are pleased to be part of this record-setting PV+storage power plant,” said Levent Gun, Ampt CEO. “It truly sets the standard for transmission-level use of energy storage to enhance grid reliability while benefiting from the energy independence and lower cost of renewables.”

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 and follow [Ampt@LinkedIn](https://www.linkedin.com/company/ampt).

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