

USE VERLADEN DER  
LED PROJEKTIEREN  
SCHNELL BEHEBEN!  
SIE SIND BEI DER  
EINBAU DER  
SOLAR ANLAGE  
SIND SIE BEI DER  
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SOLAR ANLAGE

# Battery storage system

The cornerstone of the Tilos microgrid is the energy storage system. This comprises of two energy accumulators (batteries) responsible for storing solar and wind energy during hours of excess generation and for delivering it back to the system during peak demand hours.

Batteries serve multiple roles. They contribute to the efficient management of the micro-grid, the maximization of renewable energy penetration and to grid stability, while allowing energy exports to the main grid, which will also benefit from the batteries' ancillary services for electricity transportation. Batteries can operate in both stand alone mode and grid connected mode.

The storage capacity of the NaNiCl<sub>2</sub> technol-

ogy batteries is 1.44 MWh/400 kW, providing thus a guaranteed power output of 400 kW for 5 hours per day. The batteries, put in place in September 2017 nearby the PV park, were manufactured by Italian company FZSonick after having been tested at Younicos' laboratories in Berlin. The proper operation of each component had previously been tested by the French Alternative Energies and Atomic Energy Commission (CEA). Greek company Eunice is responsible for managing the batteries during the operation of the entire system.

Battery functionality as well as system reliability strongly depend on the energy demand forecasting tools, developed during the TILOS project, as well as the demand side management strategies that aim at peak hour shaving.



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