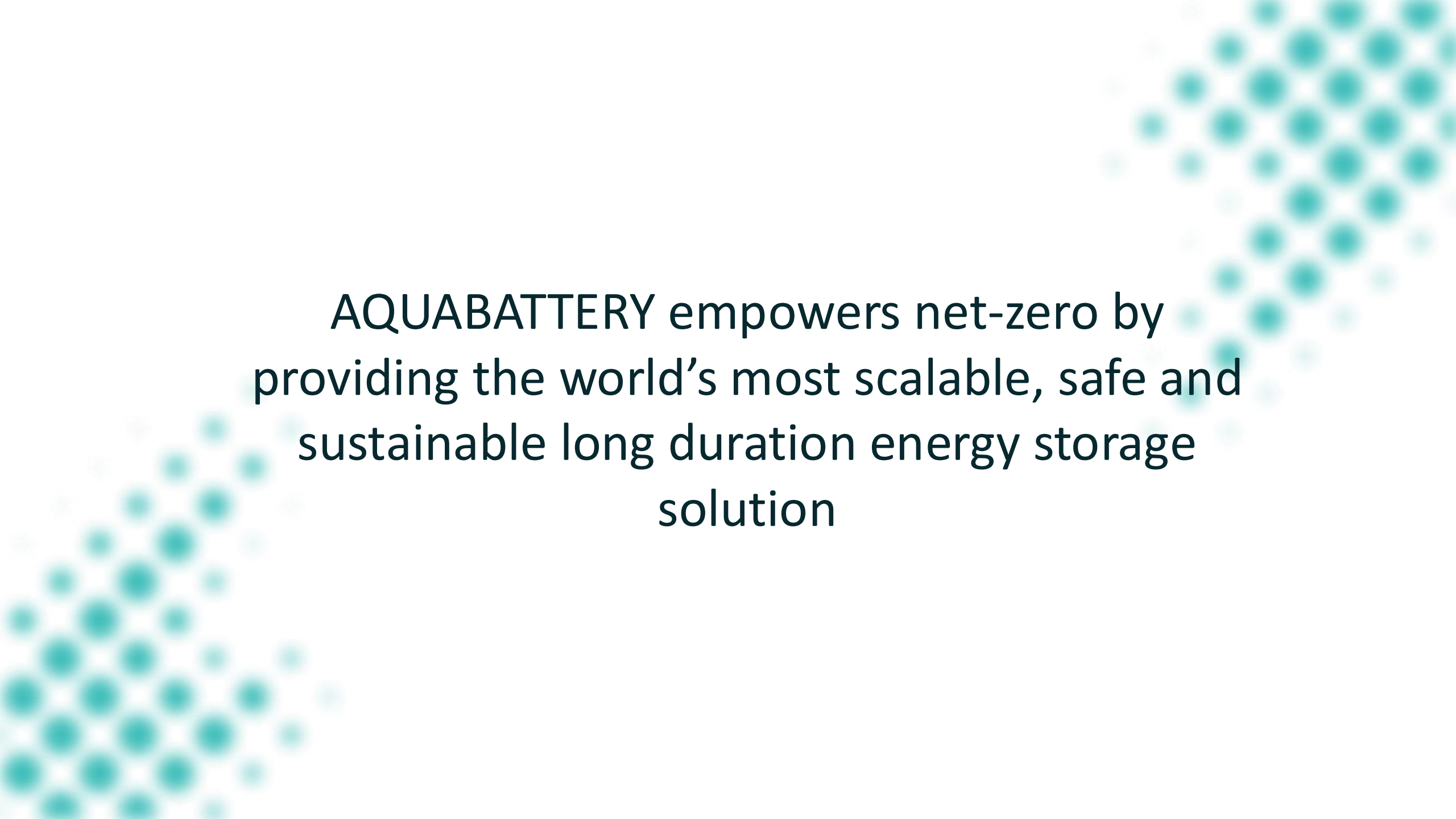




AQUABATTERY

Euro-CASE 2024

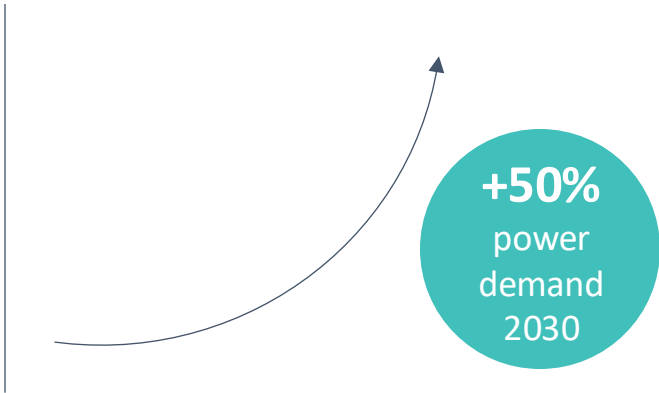
Dr. Ir. Jiajun Cen
E: jiajun.cen@aquabattery.nl
T: +31 (0) 172 850106

The image features a white background with decorative clusters of teal dots in the top-right and bottom-left corners. The dots vary in size and opacity, creating a soft, abstract pattern.

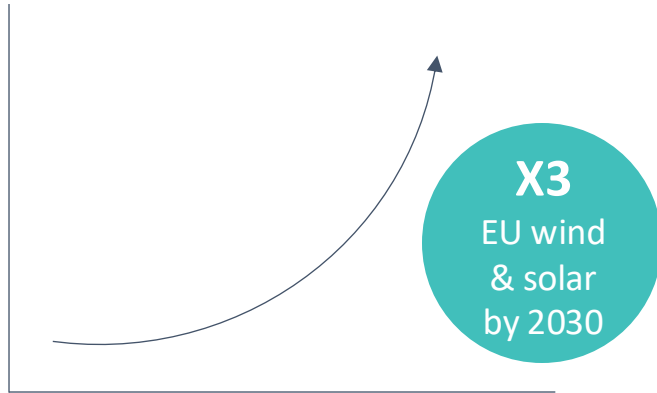
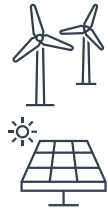
AQUABATTERY empowers net-zero by
providing the world's most scalable, safe and
sustainable long duration energy storage
solution

THE WORLD IS WORKING TOWARDS NET-ZERO

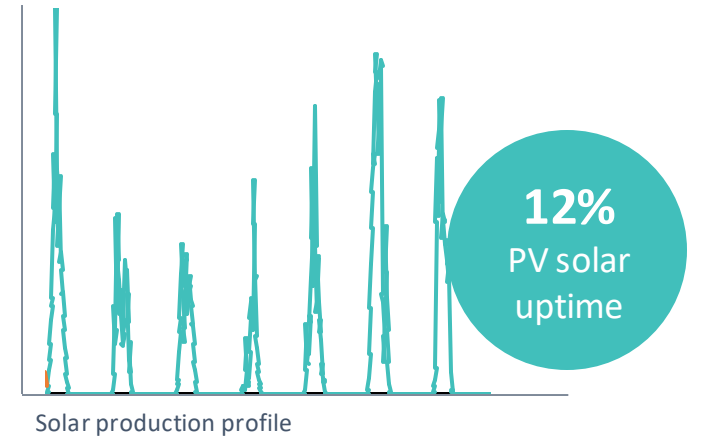
Electrification drives power demand



Net-zero ambitions drive high renewables growth



Meaning more power demand with intermittent supply



OUR STORAGE SOLUTION: STORING ENERGY IN TABLE SALT & WATER

POWER MODULE

Consisting of membrane stacks

determines amount of electricity deliverable at discharge (expressed in kW / MW)

ENERGY MODULE

Consisting of reservoirs with saltwater, base and acid solutions

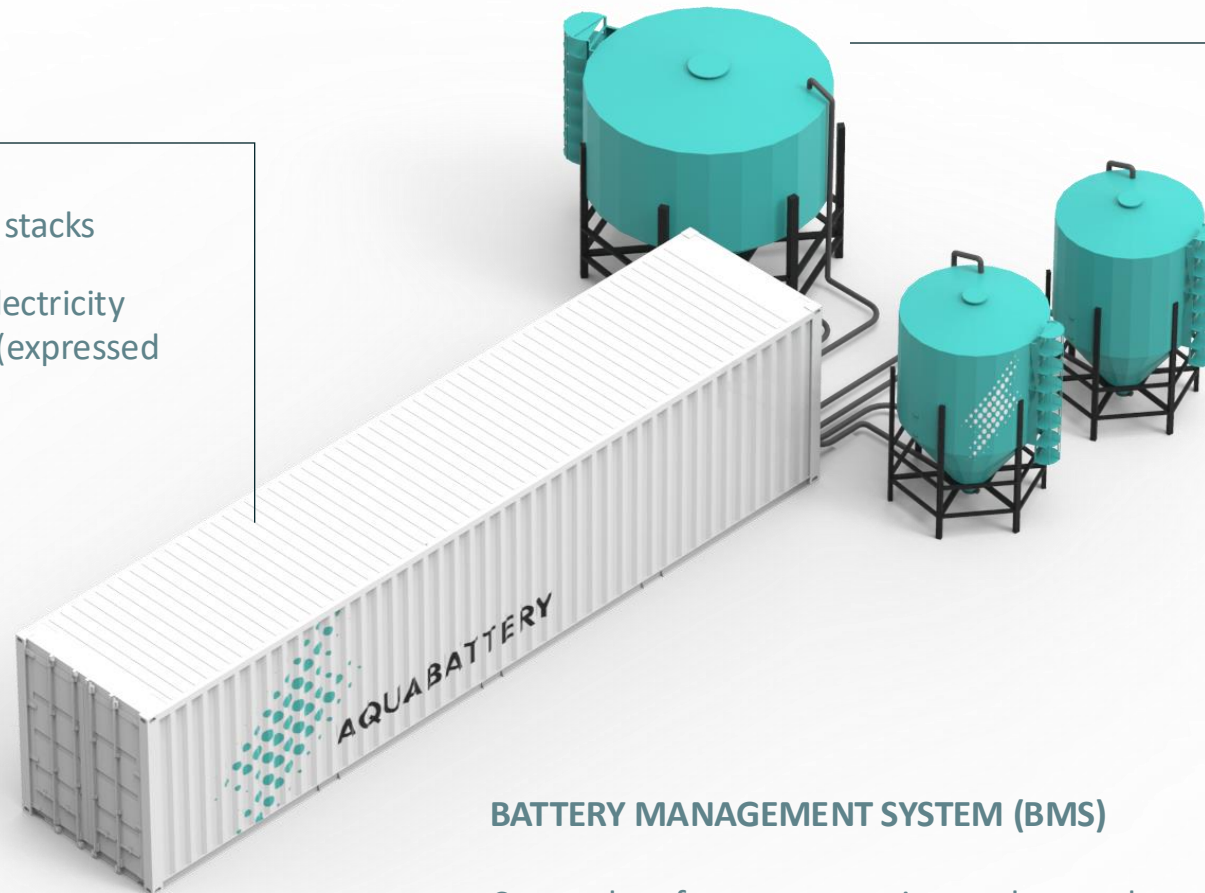
determines amount of electricity contained within the system, and constitutes the duration of electricity delivery (expressed in kWh / MWh)

BATTERY MANAGEMENT SYSTEM (BMS)

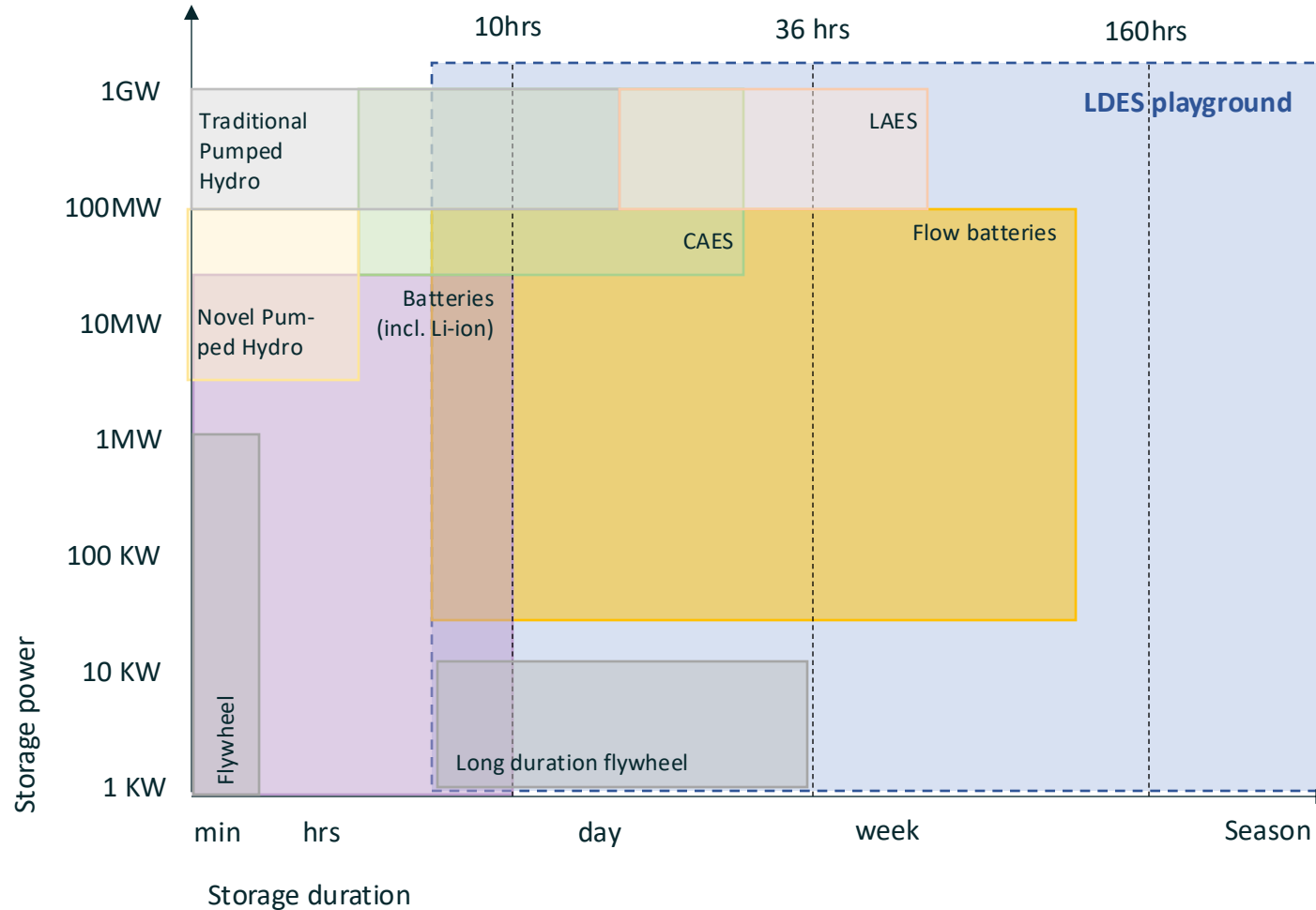
Controls software, to monitor and control system operations



[How it Works](#)
(opens in YouTube)



FLOW BATTERIES ADDRESS AN LDES MARKET SEGMENT THAT IS NOT WELL ADDRESSED BY OTHER TECHNOLOGIES



- Traditional Pumped hydro and compressed air storage rely on availability of specific natural circumstances; hence they are only feasible in specific locations and at very large power scales;
- Thermal energy and hydrogen not included in this overview due to their low round-trip-efficiency for electricity storage;
- Li-ion batteries are not fit for the same applications as LDES; however, customers are primarily familiar with Li-ion and hence at present we do consider them an alternative because customers do so.

DEMONSTRATED IN THREE IN-FIELD PILOTS SO FAR

2017



Pilot I: Green Village Delft, NL

Size: 1 kW/ 10kWh

- Partner: green Village, TU Delft
- Energy storage in concentrated salt water and fresh water has low energy density. Decision to store energy in acid and base

2021



Pilot II: Pantelleria, IT

Size: 1kW/7 kWh (new technology)

- Partner: local energy company S.MED.E. Pantelleria
- 50% of energy components purchased locally at site, showcasing local scalability

2022-2023



Pilot III: WSRL, Gorinchem NL

Size: 1 kW/30 kWh

- Partner: Waterschap Rivierenland (WSRL, Dutch water board)
- Technology scaling & battery management system enhancement



Disclaimer

The content of this document is proprietary and confidential information of AquaBattery B.V. It is not intended to be distributed to any third party without the written consent. Certain statements in this presentation, including statements relating to future product sales, performance, deliveries and production, potential markets for energy storage sales, and expected timelines and features of products and services, are “forward-looking statements” that are subject to risks and uncertainties. These forward-looking statements are based on management’s current expectations, and as a result of certain risks and uncertainties, actual results may differ materially from those projected.

Copyright © 2023
AquaBattery B.V.
All Rights Reserved.