

water stuff & sun FACTSHEET

About Us

water stuff & sun is a German hydrogen start-up developing a disruptive storage and infrastructure technology for renewable energy. Our hydrogen (H₂) battery, a 2-in-1 storage and application solution, is the first technology to combine the safe and easy hydrogen distribution of renewable energy with its integration into various applications in a very cost-efficient way. Since our foundation, we have been working with internationally renowned European research institutes and industrial partners.

Technology

The H₂ battery cells – called SFEERS – are spherical high-pressure tanks filled with gaseous hydrogen. At the heart of each SFEER is a micro valve system integrated into the carbon fiber shell that regulates hydrogen flow like a conventional valve, but at a much lower cost and weight. The hydrogen cells combine two well-proven technologies – conventional high-pressure tanks and the microvalve system derived from satellite technologies.

With these tennis ball sized cells, the H₂ battery is very versatile and modular and can be used in a variety of mobile and stationary hydrogen applications. The next generation of energy storage is, compared to a lithium-ion battery, 95% lighter with up to 30 times lower costs, carrying the same amount of energy.

Motivation

Our goal is to make storage and use of renewable energy simple, safe, and less expensive than today's approaches - green hydrogen will finally be competitive with fossil fuels. The H₂ battery serves and simplifies the entire hydrogen value chain, eliminating the need for multiple compression or conversion steps and different storage means used between energy production and hydrogen use. Furthermore, low infrastructure investment requirements allow the H₂ battery system to be scaled up quickly. This means, for example, that green hydrogen for trucks, drones, planes, and other applications can be supplied at considerably lower cost than with the hydrogen supply chain that is currently available.

Key Facts:

Foundation: February 2017

Size: ~15 employees

Locations:

- Headquarter Unterschleißheim, Germany – system development & validation
- Branch: Uppsala, Sweden – microsystem technology

Managing Directors:

Thomas Korn
Jonas Flädjemark

Founders:

Thomas Korn
Jonas Flädjemark
Alvaro Sousa