

# The energiser of the world

Since 2009, **EST-Floattech** has been building on intelligent energy storage systems and continues to contribute to clean, compact, safe and reliable energy. Before the company started to supply batteries, it was a system integrator in the marine market. Hence, the company's strong application and integration knowledge has paved the way to become one of the strongest suppliers of energy storage systems (ESS), with the company learning from market developments to become a value-added battery provider, leveraging its experience and track record to optimally serve clients in the marine and land-based industry.

**E**ST-Floattech, a Dutch technology company, develops the most compact and safest energy storage systems (ESSs) for fully electric and hybrid maritime applications and mobile energy applications.

Hybridisation is about taking advantage of the benefits of two or more engine configurations. EST works on combining batteries with alternative diesel engine configurations, marine fuel cells and solar panels.

EST believes that by increasing the level of electrification of maritime applications, it is possible to improve the overall efficiency and enable incorporation of many types of renewable sources. "Our customers trust us because we support them from the conceptual design to the final installation of the system on board," says Koen Boerdijk, sales account manager at EST-Floattech. EST is involved at the very early stage of design; this prevents any problems popping up during the commissioning and integration phase.

*"Our customers trust us because we support them from the conceptual design to the final installation of the system on board."*

## Koen Boerdijk

EST-Floattech collaborates with innovative companies, universities and researchers in energy technology. Continuous improvement is key for EST to evolve from the current lithium-ion battery (LIB) to next-generation high-capacity LIBs, all solid-state batteries, and lithium metal-based batteries, resulting in significant improvements in:

- energy density
- charge rate
- safety
- battery lifespan
- cost reduction.

## Safety features

EST-Floattech's flagship, the Green Orca 1050 – a DNV-GL certified energy storage system designed by EST's R&D team – has a raft of integrated safety features. Its unique active balancing and passive safety system is applied at the module and string level. Heat is dissipated by a simple off-the-shelf air con unit. The battery racks are a favourable option, as they can easily be installed in a modular fashion. EST's battery system can easily be integrated into new or existing systems and installed in vessels where space is an issue. In general, the company's batteries can benefit marine vessels in multiple ways.

## The ideal partner

The electrification of public transport, such as ferries, has made huge strides in reducing emissions and EST-Floattech has been active at the very start of the energy transition within this segment. As true Amsterdam lovers, the founders of EST-Floattech wanted to do something about

the noise and air pollution that the ferries caused in the city. Together with GVB, EST developed a solution for the first hybrid ferry in the Netherlands – the LJVEER. Along with the next few models in the LJVEER series (seven in total), ferries in Germany (Gaarden) and Sweden (Elvy) followed, and are now fully reliant on EST-Floattech's ESS. The crew and passengers can now enjoy noiseless trips, which simultaneously contribute to a cleaner environment.

We live in a time where several energy solutions are under development. One

such example is hydrogen technology, which is currently at a very early stage of development. In 2019, EST-Floattech became partner of a German consortium for a very innovative and prestigious concept: the first hydrogen-fuelled tug in the world. The German consortium includes Behala, Berlin harbour's warehousing and logistics company; Herrmann Barthel shipyard; Ballard Power Systems, a supplier of fuel cells; Anleg, a supplier of hydrogen tanks; ship electronics expert Rostock; Imperial logistics, a shipping company; EST-Floattech and TU Berlin.

"It's great to pioneer together with strong key partners and to be at the forefront in the field of this solution based on hydrogen fuels with batteries. As the new hydrogen vessel cannot be refilled quickly and easily at a bunker station, the conservation of energy was the most important element. Combined with our established marine battery technology, we enhanced a zero-emission marine solution," says Walter van der Pennen, business development manager at EST-Floattech.

Another segment of interest for EST is the aquaculture and fishery industry. With Norway's famous fjords becoming zero-emission zones by 2026, EST-Floattech's solutions have been widely adopted in Scandinavia. So far, 41 fishing barge projects are reliant on EST-Floattech's technology and the future looks promising.

However, in the energy storage market, it is not always viable to use the same technology for all applications. With sights set on the future, EST-Floattech is working on diversifying its product portfolio. With sights set on the future, EST-Floattech is working on diversifying its product portfolio. This year company introduced the Boost Charger, a mobile fast charger for harbours and road locations to electrify trucks and ships. ●

[www.est-floattech.com](http://www.est-floattech.com)