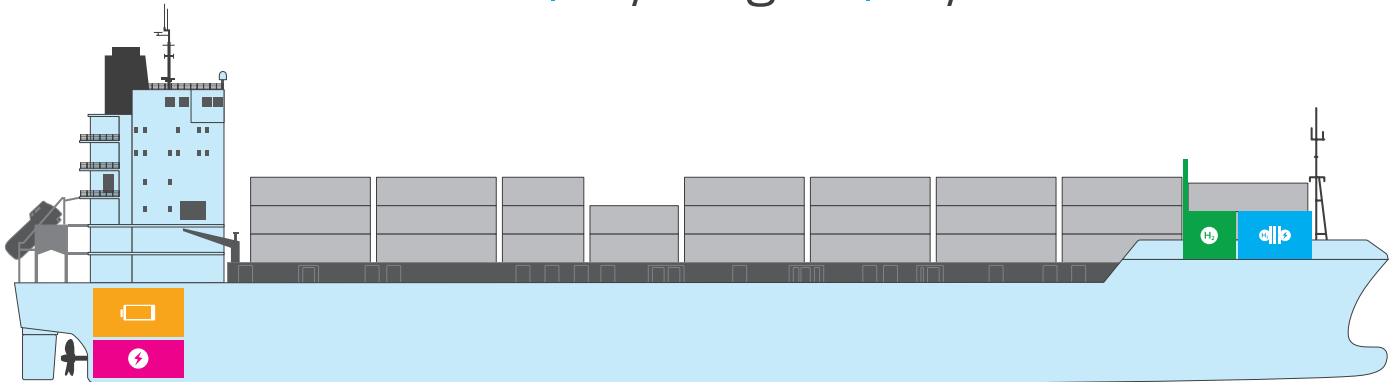


# Emission-free ship conversion

Electric | Hydrogen | Hybrid



■ Electric motor   ■ Battery module   ■ Hydrogen tanks   ■ Fuel cell

## Ship | Boat | Yacht retrofitting

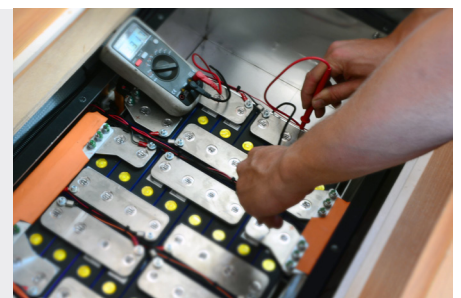
### Sustainable solutions for existing ships

With our expertise in shipbuilding, electrification and engineering, we are your experienced and competent partner, from the first consultation on. Starting with an optional feasibility study and funding consultation, we offer the conception, development and conversion of your vessel and carry out the installation and after-sales service for your emission-free energy solution based on clean energy, batteries or hybrid power generation systems (electric and/or hydrogen).

By working closely together with our clients, we identify the power requirement via data logging, create load profiles and design a battery or fuel cell system based on the results and according to our clients' requirements. We also collaborate with the relevant classification societies and flag states to have the concept assessed and approved according to the norms and standards for maritime industry application.

#### Our services

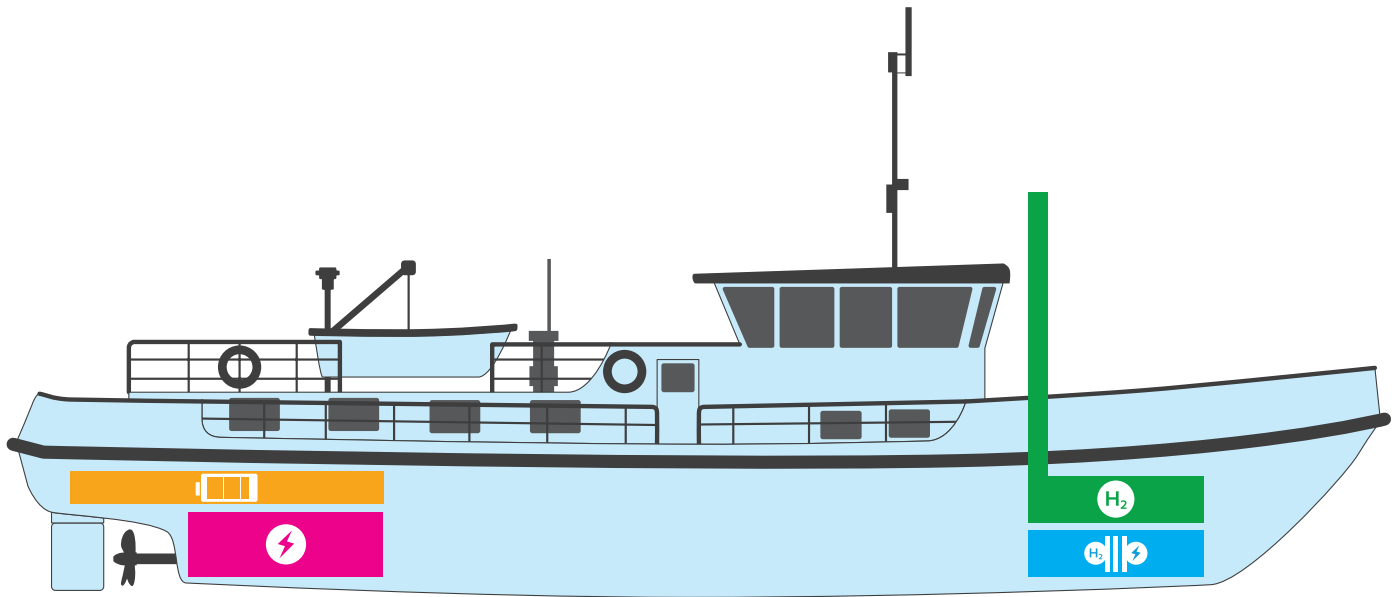
- Concept development & feasibility studies
- Customization & engineering services
- Classification & certification
- Funding consultation
- Fuel cell systems sales, maintenance & after-sales services



## Emission-free – commitment to climate protection

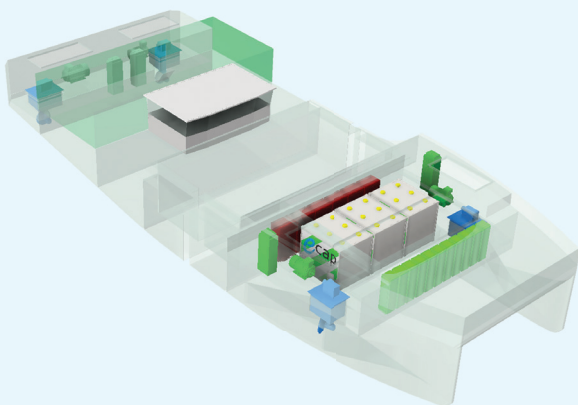
### For a green maritime industry with

- Emission-reduction/free power generation
- Newbuilt or retrofit
- Available fundings
- Low-maintenance electric drive
- Maritime applicable fuel cell system
- Type approved maritime battery system



■ Electric motor   ■ Battery module   ■ Hydrogen tanks   ■ Fuel cell

## Project example: H<sub>2</sub> conversion of inland waterway vessel



### Engine room retrofit to H<sub>2</sub> drive – 1,000 kW

#### H2EPS (Hydrogen Electric Power System)

- Fuel cell systems (in total 1 MW)
- Battery system for buffering
- Power management system

#### 3 x 10 ft. tank container (exchangeable)

- H<sub>2</sub> storage bottles for approx. 245 kg H<sub>2</sub> per tank
- Integrated tank system
- Complete safety installation

▶ 22 tons CO<sub>2</sub> emission saved per day