

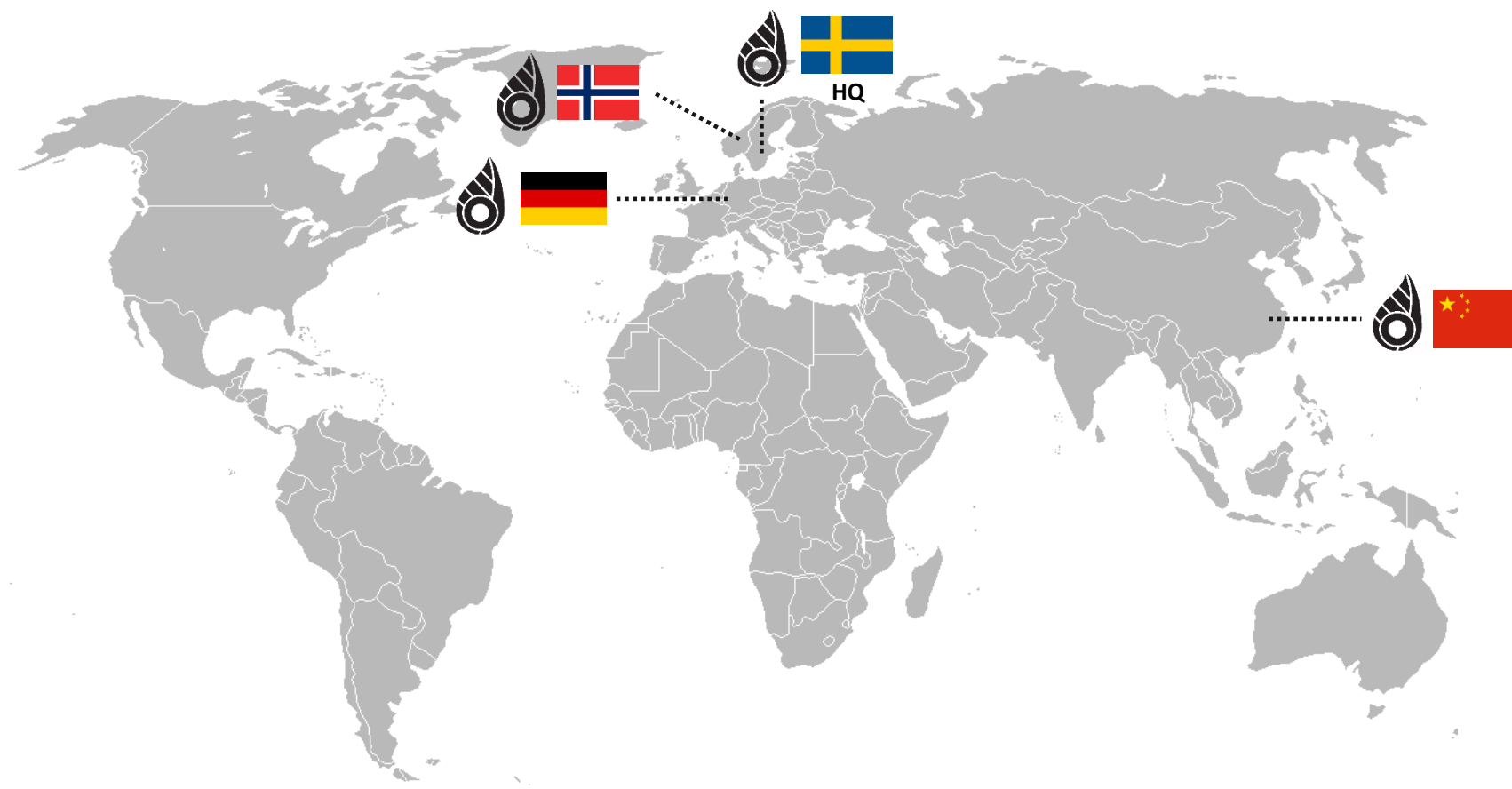


POWERCELL SWEDEN AB

Vätgas – vägen till noll emission!
Andreas Bodén, SVP Strategic Sales

true zero emissions

POWERCELL SWEDEN AB



Leading Fuel Cell technology built on
27 years of R&D & IP

Spin-out from the Volvo Group in 2009

Listed on NASDAQ since 2014,
with more than 38,000 shareholders

HQ in Sweden with global presence

Strategic partners to drive business



true zero emissions

SEGMENTS WITH INDUSTRIAL DEPLOYMENT

Marine



Passenger Vessels



Fast Ferries



Cargo Vessels



Large Yachts

Stationary



Prime Power



Back-up Power



Peak Shaving



Shore Power

Off-Road



Material Handling



Mining Equipment



Agricultural Machinery



Construction Equipment

On-Road



BOSCH

Invented for life

The time to act is now

NET ZERO IS NOT ENOUGH



The IMO has declared a strategy to reduce the carbon intensity of international shipping.

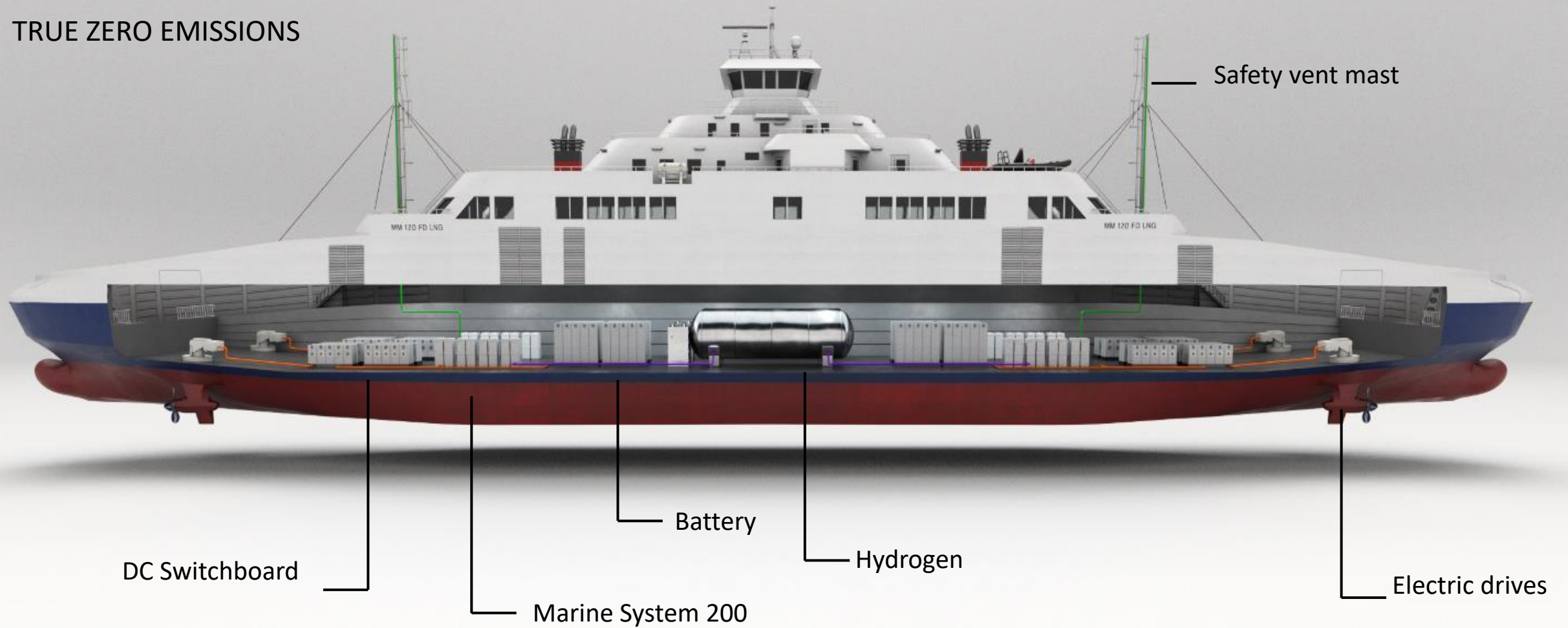
A declaration to reduce CO₂ emissions per transport work as an average across international shipping to 70% by 2050.

The total annual GHG emissions from international shipping should be reduced by at least 50% by 2050, compared to 2008.

Source: www.imo.org/en/MediaCentre/HotTopics/Pages/Reducing-greenhouse-gas-emissions-from-ships.aspx

The vessel

TRUE ZERO EMISSIONS



Fuel alternatives

TRUE ZERO EMISSIONS



AVAILABLE TODAY

Compressed hydrogen (CH_2)

Liquified hydrogen (LH_2)

FUTURE POTENTIAL

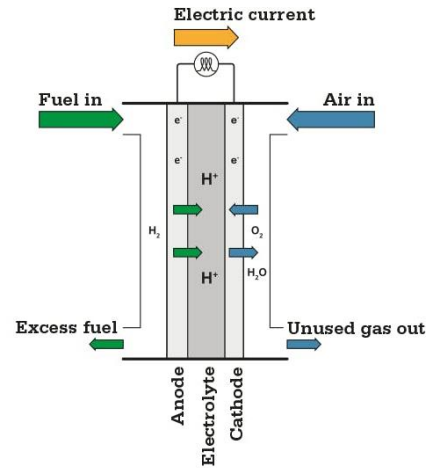
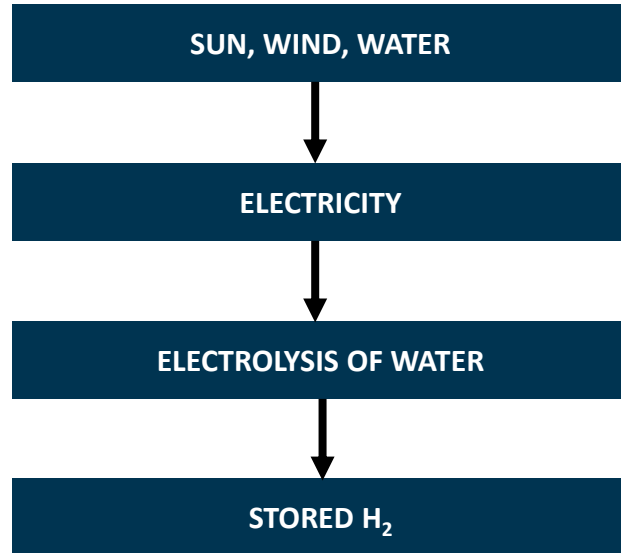
E-methanol (e MeOH)

E-ammonia (NH_3)

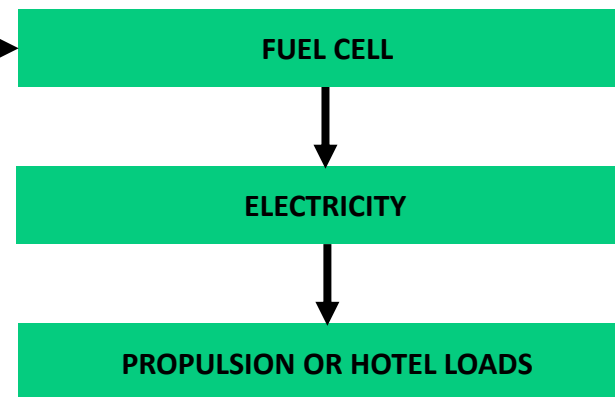
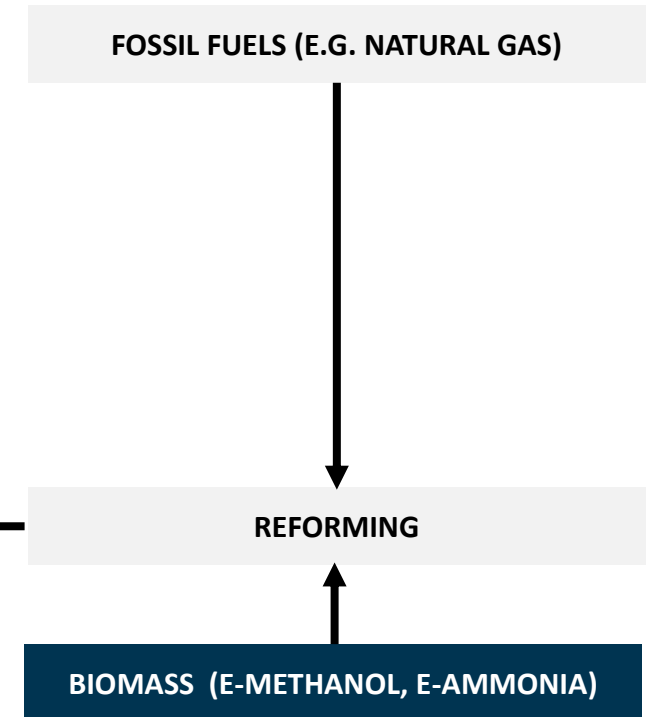
true zero emissions

NET ZERO IS NOT ENOUGH

IDEAL

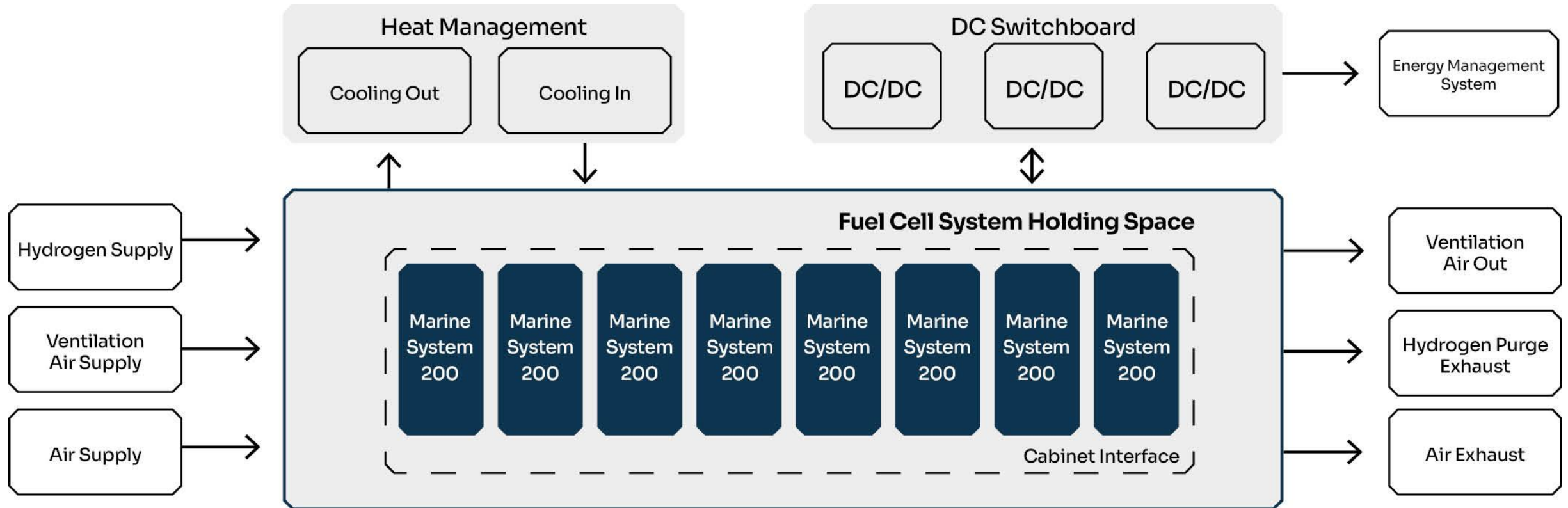


ALTERNATIVE



System boundary

TRUE ZERO EMISSIONS



Marine System 200



Scalable to MW



High power to weight



Energy efficient



Designed for class approval



Easy service
Low maintenance cost



Electric integration test

- 1 Test results of 236kW gross power per system
- 2 Parallel system test successfully executed
- 3 Auxiliary fuel cell test successfully executed
- 4 Interface data verified

FAT - done





PowerCell is currently
delivering a 3,0 MW fuel
cell system on LH₂.

3 DAYS AUTONOMY ON ZERO EMISSIONS

OR

1 WEEK OF HOTEL LOAD

Supporting your journey

TRUE ZERO EMISSIONS

We support your journey from feasibility analysis to commissioning and service and maintenance, working with you over the lifetime of your vessel.



The time to act is now

LEARN BY DOING



ACTION

Zero emission solutions result in lasting environmental solutions

IN ACTION

9'600'000 tonnes of CO₂ emitted per vessel

Based on a 6.4MW ferry running on diesel at 5'000 hours a year

Thank you for listening!

For further information please contact:

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HYDROGEN FUEL CELL SOLUTIONS FROM POWERCELL SWEDEN AB