

AMOGY

Emission-free marine
fuel for a
sustainably-driven
future

11.16.2023



Global Presence

Funding raised to date

\$220M

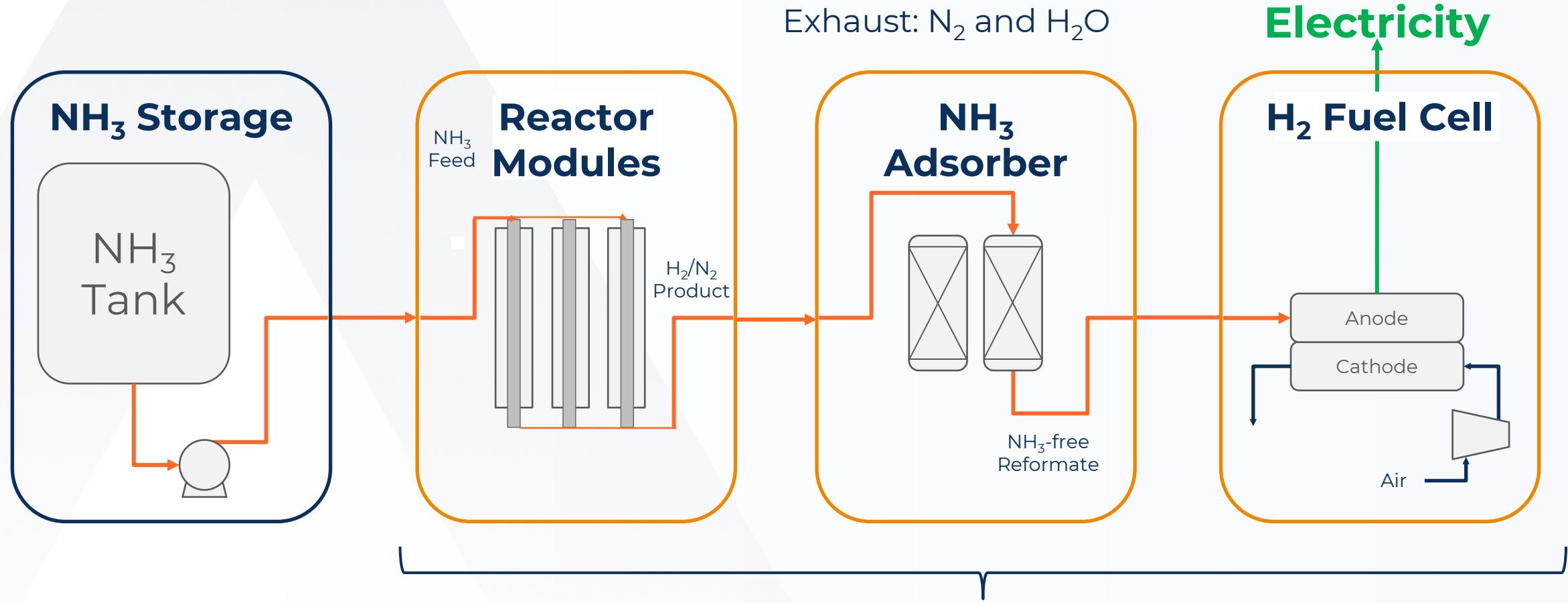
Founded: Nov 2020

Employees: 180+

Headquarter: Brooklyn, NY



NH₃ to Electrical Power



Amogy Powerpack

NH₃ to Electrical Power



DRONE

Jul 2021



TRACTOR

May 2022



CLASS 8 TRUCK

Jan 2023



TUGBOAT

2024

5kW**100 kW****300 kW****1000 kW****TRL****4****5****6****7-8****Powerpack System**

Manual control

Automated at steady state

Full system automation

Full system automation standards / code compliance

Reaction SystemLab scale catalyst
AutothermalBench scale catalyst
Modular design50kW module
Fast startupDurability certified catalyst/reactor
Continuous unreacted NH₃ removal**Test Environment**

Hovering in test field

Test drive & implements
Corn fieldHighway-speed test drive
Closed course trackPublic waterway sailing
(Hudson River & Port of NY)

Well-understood as a Chemical

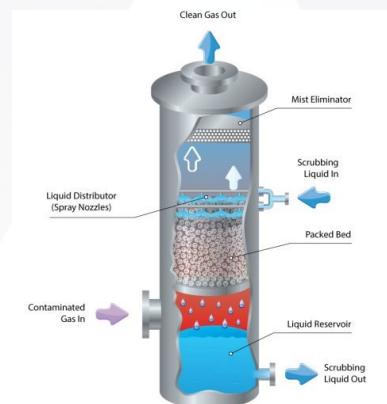
Safe handling of ammonia is not new

Odor threshold
5 PPM

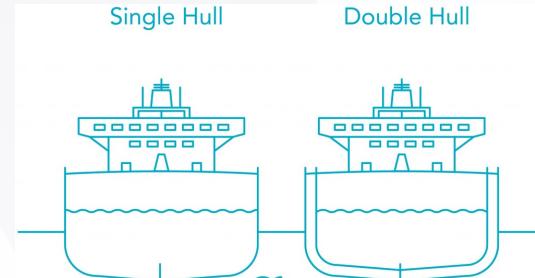
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OSHA PEL*
50 PPM

NH₃ scrubbers absorb trace ammonia



Double hull vessels prevents spills



Download Amogy's latest white paper
"Debunking Myths about Ammonia's Safety and Scalability" here:

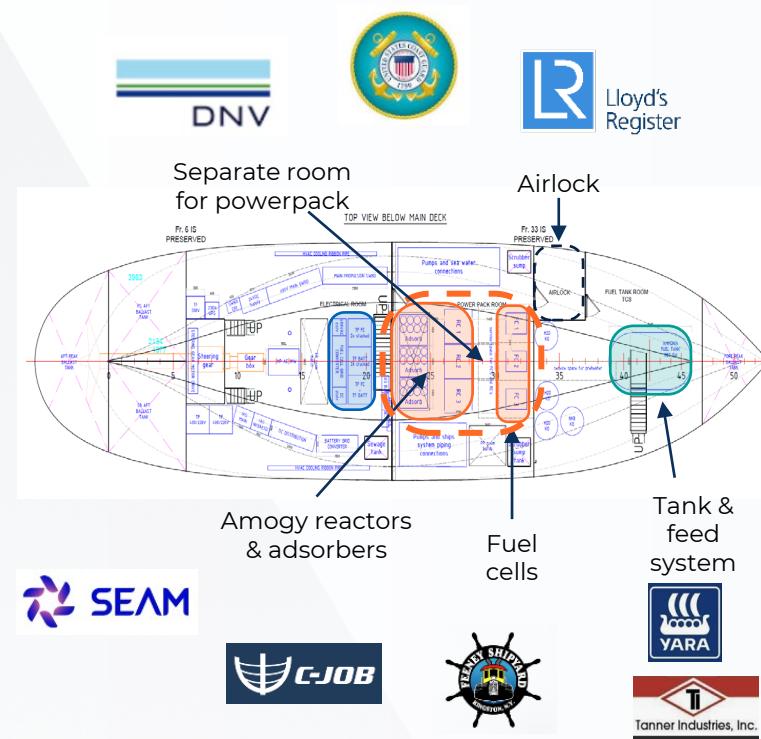


*OSHA PEL: Permissible exposure limit of an employee averaged over an 8-hour work shift

Lack of Regulations as a Fuel

Regulatory Challenges

- ❑ Lack of requirements for usage (IMO, IACS)
- ❑ Lack of requirements for bunkering (IMO, Flag)
- ❑ Lack of requirements for storage (Flag, IEC, OSHA, EPA)



Amogy Tugboat

- ❑ Usage: Partnership with the USCG Center of excellence for LNG to develop flag requirements for the IMO. HAZID/HAZOP with DNV.
- ❑ Bunkering: Developing bunkering procedures based on Cargo transfers and LNG Bunkering
- ❑ Storage: Applied the more stringent requirement of NIOSH at 25 ppm in the design.

Close Collaborations with Regulatory Bodies

Tugboat Demonstration



Productization



Broader Deployment

Containerized solution for on-deck
(400 kW)



Integrated engine room solution
(200 kW)



2024

2025

2026+

Class Societies



HAZID/HAZOP; AiP

Technology Qualification

Unit Approval

Type Approval

Enforcers



Education; Safety
Assessment

Continuous Engagement

Flags



Inclusion of Ammonia in GF/IGC Code



Thank You

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