# Show Report

July 23, 2025

## ELECTRIC & HYBRID MARINE EXHIBITION 2025

Power Systems Research
*Data · Forecasting · Solutions™*

www.powersys.com | +1-651-905-8400 | info@powersys.com

As part of our ongoing effort to collect industry intelligence and information on new products, analysts from Power Systems Research regularly attend major trade shows around the world. We share our findings with you in these Show Reports.

## Marine Exhibition 2025: Industry Collaboration and Innovation

The Electric & Hybrid Marine Exhibition 2025 held June 24 - 26, 2025 featured increased corporate collaboration and demonstrated a focus on sustainability, the adoption of immersive technologies, and enhanced connectivity.

These development trends were built on a collaborative approach to maritime electrification and decarbonization and reflect incremental improvements as well as a strategic shift toward smarter, greener, and more autonomous marine operations.

Representatives of Power Systems Research attended the show to collect data on new products and to talk with exhibitors and attendees about industry trends.

The 2025 Exhibition emphasized port electrification, alternative fuels, and infrastructure development.

The 2025 show included renowned global leaders such as Torqeedo, PowerCell, MAN, Volvo Penta, Rolls-Royce, ABB, MG Energy, EPTechnologies, and Molabo underscored the serious investments being made in sustainable marine propulsion and clean technologies. Their participation highlighted the diverse range of

innovative solutions shaping the future of maritime transport.

The 2025 conference offered more than 100 speakers and new content focused on scalable charging infrastructure, alternative fuels, and strategic regulatory partnerships. There was a strong emphasis on practical pathways toward maritime sustainability and net zero emissions.

The 2025 edition placed greater emphasis on scalable solutions for a wider range of vessel types and port infrastructure.

The show was held at the RAI Amsterdam complex and lasted three days. About 200 exhibitors participated, including leading companies in electric and hybrid marine technology, propulsion, and charging infrastructure.

### Show Report Author

*Natasa Mulahalilovic is Marine Pleasure Boat Analyst-Europe at Power Systems Research*

### CONTACT US FOR DETAILS

+1 651.905.8400 | info@powersys.com

The 2025 show introduced dedicated stages for in-depth technology presentations and Q&A with manufacturers, such as battery comparison sessions.

The 2025 event included the Autonomous Ship Conference & Expo, expanding the event's reach into maritime automation and digitalization.

## KEY TAKEAWAYS IN 2025

There were several key takeaways from the 2025 exhibition including several major advancements and emerging trends that reflected broader shifts in technology and industry priorities:

- **Agentic AI and Autonomous Systems.** There was a notable emphasis on agentic AI—systems capable of autonomous decision-making and action. Demonstrations included AI agents managing complex vessel operations and supply chains with minimal human intervention, supported by new governance frameworks to ensure ethical and transparent deployment.
- **Quantum Computing and Enhanced Cybersecurity.** The 2025 event featured early-stage computing applications for marine logistics and security. These technologies promise to revolutionize route optimization, cargo management, and threat detection, with improved error correction and stability in quantum processors.
- **Sustainability and Decarbonization.** The 2025 expo placed even greater emphasis on sustainability, with innovations in battery technology, solid-state energy storage, and scalable charging infrastructure. There was a clear trend toward eco-friendly solutions, including new materials and energy-saving systems, aligning with the industry's urgent decarbonization goals.
- **Immersive and Augmented Reality.** New for 2025, exhibitors leveraged augmented reality (AR) and virtual reality (VR) for training, remote vessel maintenance, and operational planning, offering more immersive and interactive experiences for ship operators and crews.
- **5G/6G and Connectivity.** Enhanced connectivity through expanded 5G and early 6G demonstrations enabled real-time monitoring, remote diagnostics, and seamless integration of IoT devices on vessels and in port operations, supporting the move toward fully connected, smart maritime environments.

- **Broader Scope and Collaboration.** The 2025 show expanded its focus to include large commercial vessels as well a also smaller craft and port infrastructure, with increased collaboration between technology providers, regulatory bodies, and industry associations. This was visible in joint announcements and co-located conferences on automation and digitalization.
- **Incremental but Meaningful Innovation.** While the 2025 event did not introduce radically new hardware, it showcased steady, meaningful progress—particularly in software, system integration, and user experience. The trend was toward making advanced technologies more accessible, reliable, and scalable for widespread industry adoption.
- **AI-Driven Maritime Solutions.** The 2025 show highlighted a surge in practical applications of artificial intelligence, moving from theoretical discussions to real-world integration. Maritime systems showcased advanced AI for vessel optimization, predictive maintenance, and autonomous navigation, mirroring a global trend where AI is embedded in nearly every sector to drive efficiency and safety.

While there were many advances presented at the show, there are still major challenges to widespread use of these clean technologies. These challenges include inconsistent regulations across regions, safety and certification worries, limited infrastructure such as charging stations, and the high cost of new equipment. So, even though technology is advancing quickly, putting it into everyday use often remains difficult.

One important takeaway from the exhibition was that companies are working together more instead of competing against one another. They are focusing on joint projects, making sure their supply chains fit together, and testing new ideas together. Safety for batteries and having common standards for charging stations were seen as especially important areas for teamwork.

Even with economic and political uncertainties, companies remain motivated to move toward cleaner marine transport. They see this as both good for the environment and a smart business opportunity.

The event remains the premier platform for unveiling world-firsts in marine electrification, networking with industry leaders, and accessing the latest research and regulatory updates.

The next exhibition will be held in Chicago, August 20 - 21, 2025, indicating that this clean marine movement is growing worldwide. The Electric & Hybrid Marine Exhibition is becoming a key place for sharing new ideas, working together, and aiming for cleaner oceans and greener shipping.

## PRODUCT SHOWCASE

The Electric & Hybrid Marine Exhibition 2025 held in Amsterdam featured advances in batteries, charging and solid-solid state technology.

The exhibition showed a wide range of new technologies and solutions for clean marine power. These products included fully electric and hybrid engines, hydrogen fuel cells, alternative fuels, electric motors, advanced batteries, energy storage systems, power electronics, gearboxes, and other important parts and services for boats and ships. They showcase the remarkable vibrancy and rapid growth within the electric and hybrid marine sector.

Here is a sample of the products we saw at the show.

**Siemens: SINAMICS G220** high-performance frequency convertors pair with high-efficiency motors for clean marine propulsion. The **SINAMICS G220** stands out as a smart, flexible, and future-ready drive solution.

**ABB: Innovative AMXE200 Electric Motor offers power output in range** from 61 kW to 616 kW (82–837 hp), at 3500 to 5000 rpm, accommodating everything from light craft to more substantial vessels.

**Torqeedo: Deep Blue 50 Azimut Truster** is **designed for** large sailing yachts, heavy displacement vessels, and commercial operators; A new rotatable version delivers power of 50 kW continuous; up to 65 kW peak.

**Bosch Engineering GmbH:** Innovative marine electrification solutions **System Platform - EDSP** is a scalable propulsion package that integrates Bosch's motors (90 kW, 140 kW, 360 kW), inverter, control unit, and compatible transmissions.

**VOLVO PENTA:** New integrated Inboard Performance System, **IPS900E**, will be available in twin, triple, and quad configurations, delivering a power range from **440 kW to 2.26 MW**. This system will be integrated with energy management systems (EMS), DC grids, energy storage systems (ESS), and potentially marine gensets. Delivery planned for **Q4 2025**.

**EPTechnologies:** Generator Set for hybrid and electric marine applications, with outputs **8 kW to 350 kW**, DNV-GL classification

**EPTechnologies:** New Electric Motor Shaft Drive with power output 10-900 kW, rpm 400-3000

**EPTechnologies: Fenix Turnable Sail drive,** recent electric motors for sailing boats offering power from 25 to 60 kW and 500 to 2000 rpm, used by major German sailboat manufacturers, **Bavaria Yachtbau** and **Hanse Yachts**.

**EPTechnologies: Falcon 130X** - Electric outboard motor launched in 2024. Output power up to 130 kW at 3000 rpm. The 230-kW version is under development.

**Lehmann Marine:** The **CUBE** is a highly flexible, modular **LFP (Lithium Iron Phosphate)** battery system, configurable from a **few kWh** up to **several MWh** and suitable for both hybrid propulsion and electric only support in all types of boats.

**MG Energy Systems:** Debuting its **MG LFP 230 IP** LiFePo4 battery system – scalable via MG Master BMS to up to 1 MWh, each cell is 3.2V nominal and 230 Ah.

**ROYPOW Technology Ltd:** DNV-approved propulsion and Energy Storage Systems based on the LiFePO4 Batteries, for hybrid and fully electric solutions for pleasure and commercial boats.

**Corvus Energy:** Orca and **Dolphin Energy NxtGen** modular ESS and liquid cooled systems for hybrid and all-electric use for **high power, lightweight applications** like fast ferries, harbor tugs, CTVs, and offshore wind support vessels, DNV approved.

Corvus Energy has introduced Corvus Pelican Fuell Cell System research project funded by the Innovation Norway and the Research council, started in 2021. It is developed in collaboration with Toyota and other partners.

**Echandia Marine:** Air-cooled **Lithium Titanate Oxide** battery modules with high-power ratings (10 C continuous); 90 installations including Copenhagen ferries, Monslinjen and Scandlines have been completed, many others are in progress.

**Rolls-Royce Mtu: Hybrid Propulsion solution** with Electric motor of 165-473 kW power with combustion engine series 2000 up to 1939 kW or 4000 up to 3900 kW; 180 – 1920 kWh battery pack

**PowerCell Group:** Updated Marine **Hydrogen Electric System 225 kW**, DNV-GL approved.

Together with **e1 Marine** and **RIX Industries**, PowerCell demonstrated the world's first methanol-to-fuel cell power chain that converts methanol fuel into hydrogen on board ships. It is then used in a fuel cell to generate power. The 200-kW propulsion chain was successfully tested in various maritime applications, such as tugboats, push boats, and superyachts.

**World's largest fuel cell installation:** Two vessels owned and operated by Norwegian transport group Torghatten Nord, ferries powered with 6.4 MW of propulsion power.

**World's first hydrogen cell superyacht:** Feadship's 118.8 m mega yacht Breakthrough, launched in 2024.

**Esco Power:** The Belgium company Esco Power presented its Parallel Hybrid transmission **PHT900A** with up to 1250 kW diesel power and 350 kW electric power. Hybrid Electric Solution Package and Esco LFP Power Battery were also displayed. In 10 years of the industry experience numbered project were realized in Germany, UK, Norway, France and other countries.

**NT Systems:** Slovenian manufacturer of turnkey electric propulsion systems since 2018 displayed its compact solutions from 40 to 450 kW, modular and scalable up to 2400 HP

**Lechlanche:** The third-generation battery system ESS **Navius MRS-3**, high energy 65 Ah G/NMC Cells, providing 8.7 kWh per module, scalable and modular, DNV approved and selected by **Kongsberg Maritime** to supply a 5.2 MWh battery system for a new offshore wind farm construction vessel.

**Vulkan Integration services:** Presented **electric SAE Motor** providing power 389 - 839 kW, 2449 – 1715 rpm, and Hybrid fully integrated system H1000- SAE1/0, 200 kW and max 2600 rpm. The notable hybrid architect solutions were provided to **BIIM** Italy, **Venetian waterbuses**, mega yacht **Quinta Essentia** and **Tankoa's** 50 m super yacht.

**HD Hyndai Heavy Industry (EcoPhin):** Launched the very first **Himsen** ammonia dual-fuel engine for the marine industry. Around 15000 units have been produced in 24 years and delivered in 60 countries worldwide.

**Twin Disk:** MGE Series transmission model **5126SC**, ideal for serial-hybrid and diesel electric applications, power ratings for pleasure craft up to 902 HP at 2300 rpm, light duty up to 843 HP at 2300 rpm and medium duty up to 528 HP at 1800 rpm.

**MOLABO:** Electric Propulsion Systems – **Aries inboard drives** up to 50 kW, two Aries i50 drives power P**ort of Barcelona Commuter Ferry**. **Baltic Yachts** and **Frauscher** chose Molabo for some of their Alassio and Mirage pleasure boats models.

**MOLABO:** The 50-kW outboard electric motor **Aries 50**

**MOLABO** was awarded for New Propulsion Technology of the Year at Electric and Hybrid Marine Expo Europe in 2023 and 2024.

**VAN MEER:** EES based on L**ithium-Titanate-Oxide Technology** batteries, signed a 5-year agreement with shipyard **Damen Yachting** to supply their workboat division with DC Drive Systems and Energy Storage Systems

**Pon CAT (Pon Power):** CAT Marine Battery, LFP Technology, 28.5 kWh energy power, DNV and ABS approved

**Alternative Energies (France):** Maritime industry developer and integrator since 1997 presented his fully electric and hybrid realizations, equipped more than 100 boats currently in service (Marseille Electric Ferry, French Navy hybrid barges, JOOL-Smart Electric system for sailing catamarans – **Leopard Yachts**, **Beneteau** and **Dufour Yachts**.

**Freudenberg: Heavy Duty Fuel Cells,** Batteries and Systems for Yachts, Ships, Bus and Trucks, Methanol, LNG 500 kW or Hydrogen 900 kW Power Class; ongoing projects with German Superyachts manufacturers Lürssen and Cruise Ship Meyer Werft.

**Eco Power DNV Marine: Battery from China,** Huge range of LFB Batteries and battery packs, latest realizations: Inland Push Barge ships in the Netherlands, Fishing Supply Vessel shipyard in Norway, Inland Tourism Ferry in Germany

**MAN & Baumuller: Smart Hybrid Experience:** High performance hybrid marine propulsion system, MAN V12-2250 diesel engine combined with the Baumüller permanent magnet electric motor in options 200 and 400 kW, combined output 2500 HP, installations in workboats, ferries, and pilot boats. **PSR**

## LOCATIONS


Headquarters
St. Paul, USA
+1 651 905 8400
info@powersys.com

Beijing, China
+86 10 5737 9201
infocn@powersys.com

Brussels, Belgium
+32 2 643 2828
infobr@powersys.com

Campinas, Brazil
+55 19 3305 5657
infosa@powersys.com

Detroit, USA
+1 734 545 0474
infode@powersys.com

Moscow, Russia
+32 2 643 2828
inforu@powersys.com

Pune, India
+91 20 25671110
Mobile: +91 9960641110
infoin@powersys.com

Tokyo, Japan
+81 90 9139 0934
infojp@powersys.com


## About Power Systems Research

Power Systems Research (PSR), established in 1976, is the leading source of data, analysis and forecasting on the global production of engines and engine-powered equipment, including class 8 vehicles. One of its databases, EnginLink,™ includes production figures down to the model level for OEMs in key market segments, such as commercial vehicles. PSR's global research network includes eight offices and stretches across 200 countries and four continents.

**Power Systems Research**
*Data · Forecasting · Solutions™*