

JOINT MEDIA RELEASE

Singapore, 25 March 2025 | **For Immediate Release**

Singapore Introduces New Standard for Electric Harbour Craft (e-HC) Charging Infrastructure

*New Technical Reference establishes the specifications and safety requirements
for electric harbour craft charging and battery swap systems
to support Maritime Singapore's decarbonisation goals*

The Maritime and Port Authority of Singapore (MPA) and Enterprise Singapore (EnterpriseSG), through the Singapore Standards Council (SSC), have published Technical Reference (TR) 136¹ to guide the development of charging infrastructure and battery swap systems for electric harbour craft (e-HC). This initiative supports Singapore's efforts to decarbonise the domestic maritime sector².

2. TR 136 establishes the safety requirements for the e-HC charging infrastructure and battery swap systems. It includes measures to protect personnel and property from electrical and mechanical hazards during the installation and operation of the charging systems. The TR also establishes the technical requirements to promote interoperability.

3. TR 136 incorporates widely adopted industry standards on electric vehicle charging systems, such as the Combined Charging System. It is also aligned with local electricity supply conditions and codes such as the TR 25 Electric Vehicles Charging System, as well as international standards including the IEC 61851 on electric vehicle charging system and IEC 62840 on electric vehicle battery swap system. This ensures that service providers can readily adopt the standard.

4. Adopting TR 136 will strengthen users' confidence in e-HC charging and battery swap system providers, while giving ship owners, port operators, and charger operators greater assurance in the safe operation of e-HCs. The adoption of the TR is expected to have positive spillover effects with new business opportunities in areas such as charging systems and battery technologies, and upskilling prospects for the maritime workforce.

5. TR 136 was developed by the Working Group (WG) on Electric Harbour Crafts Charging System, which was appointed by the Electrical and Electronic Standards Committee (EESC) under the purview of the SSC. This WG comprises government and industry stakeholders such as MPA, charging equipment and battery suppliers, e-HC manufacturers

¹ TR 136 is available for purchase from the Singapore Standards [e-shop](#).

² In support of Singapore's 2050 national net zero target, from 2030, all new harbour craft operating in the Port of Singapore will have to be fully electric, be capable of using B100 biofuel, or be compatible with net zero fuels such as hydrogen.

and operators, testing, inspection and certification organisations, academic experts, and institutes of higher learning. Please refer to Annex A for the list of stakeholders in the WG.

6. Mr Teo Eng Dih, Chief Executive, MPA, said: “TR 136 is a critical step towards developing a safe, robust, and interoperable charging infrastructure for electric harbour craft in Singapore. By setting clear safety and operational guidelines, the new standard will give industry players greater confidence in electrification and pave the way for wider e-HC adoption.”

7. Ms Choy Sauw Kook, Director-General (Quality & Excellence), EnterpriseSG, said: “Standards have always played an important role in enabling pathfinders to drive industry development. By providing local operators with clear guidelines on how to adopt electric charging infrastructure in a safe and reliable manner, the TR 136 will accelerate the electrification of harbour craft and, in turn, the decarbonisation of the maritime sector in Singapore. Enterprise Singapore will continue to work closely with MPA and various industry partners, to develop standards that advance the interests of the maritime industry.”

8. Er. Lim Say Leong, Co-Convenor of the Working Group on Electric Harbour Crafts Charging System, said: “During the development of TR 136, the working group consulted widely with marine industry players as there were no international standards that could be adopted. These efforts were necessary and important to ensure that TR 136 is robust and implementable by key stakeholders in the electric harbour craft ecosystem.”

9. Mr Ng Bingrong, Co-Convenor of the Working Group on Electric Harbour Crafts Charging System, said: “We thank all partners who have contributed to the TR 136, and will continue to work with all relevant stakeholders to ensure the TR 136 evolves with technology and industry needs. The working group welcomes feedback from users to further improve TR 136.”

10. MPA and EnterpriseSG will organise a closed-door seminar on 28 March 2025 at the sidelines of Singapore Maritime Week 2025. Key representatives from MPA, the WG, and industry will present their insights and expertise through technical sharing and a panel discussion at the seminar.

11. As part of the broader effort to encourage adoption of e-HCs, MPA organised a socialisation event on 10 March 2025 to facilitate business matching between the wider group of potential e-HC operators, developers, charging infrastructure providers, financiers, and insurers. The event provided a platform for stakeholders to better understand the technical aspects, cost of ownership, and business model considerations associated with e-HCs.

12. Financing for e-HCs is available under the Enterprise Financing Scheme-Green (EFS-Green), which enables companies to better access green financing that allows them to develop their capabilities and establish a strong sustainability record. As part of this, EnterpriseSG provides risk-sharing of up to 70% to catalyse lending by seven participating financial institutions³. Additionally, local banks DBS, OCBC, and UOB, through engagements

³ The participating financial institutions for the Enterprise Financing Scheme-Green are CIMB Bank Berhad (Singapore Branch), DBS Bank Limited, The Hongkong and Shanghai Banking Corporation

with MPA, have expressed strong interest to offer financing solutions for e-HC operators and owners⁴.

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Limited, Maybank Singapore Limited, Overseas-Chinese Banking Corporation Limited, Standard Chartered Bank and United Overseas Bank Limited.

⁴ The loan application(s) will be subject to the corresponding bank's internal credit assessment.

Annex A: List of Organisations in the Working Group

ABB E-Mobility Pte Ltd
American Bureau of Shipping
Bureau Veritas Marine (Singapore) Pte Ltd
DNV Singapore Pte Ltd
Energy Research Institute @ Nanyang Technological University, Singapore
Eng Hup Shipping Pte Ltd
igus Singapore Pte Ltd
Jurong Port Pte Ltd
Lloyd's Register Singapore Pte Ltd
Maritime and Port Authority of Singapore
OM 88 Pte Ltd
PaxOcean Engineering Pte Ltd
Pyxis Maritime Pte Ltd
Raitan Pte Ltd
RINA Services S.p.A
Seatrium Limited
Shell Singapore Pte Ltd
Siemens Energy Pte Ltd
Singapore Institute of Technology
Sunlight Electrical Pte Ltd
Victory Pte Ltd
Yinson Green Technologies Pte Ltd

About the Maritime and Port Authority of Singapore (MPA)

MPA was established on 2 February 1996 with the mission to develop Singapore as a premier global hub port and international maritime centre, and to advance and safeguard Singapore's strategic maritime interests. MPA is the driving force behind Singapore's maritime and port development, taking on the roles of maritime and port regulator and planner, international maritime centre champion, national maritime representative, and a champion of digitalisation and decarbonisation efforts at regional and international fora such as at the International Maritime Organization and the International Organization for Marine Aids to Navigation. MPA partners industry, research community and other agencies to enhance safety, security, and environmental protection, facilitate maritime and port operations and growth, expand multi-domain capabilities, and support the cluster of maritime ancillary services and manpower development. MPA is responsible for the overall development and growth of the maritime multi-domain and the Port of Singapore.

For more information, please visit www.mpa.gov.sg/

About Enterprise Singapore

Enterprise Singapore is the government agency championing enterprise development. We work with committed companies to build capabilities, innovate and internationalise. We also support the growth of Singapore as a hub for global trading and startups and build trust in Singapore's products and services through quality and standards.

Visit www.enterprisesg.gov.sg for more information.

About Singapore Standards Council

The Singapore Standards Council (SSC) facilitates the development, promotion and review of Standards and Technical References in Singapore. This work is done through partnerships with the industry, academia and government organisations, under the national standardisation programme overseen by Enterprise Singapore.

About Singapore Maritime Week 2025

SMW is an annual gathering of the international maritime community to advance key industry issues and exchange ideas to bring the sector forward. Driven by MPA, in collaboration with industry stakeholders and research and educational institutions, SMW brings together key opinion leaders and industry leaders through conferences, dialogues and forums.

The range of activities and events organised by MPA, industry stakeholders and research and educational institutions, as well as the cosmopolitan profile of participants, reflect the vibrancy and diversity of Singapore as a global hub port and leading international maritime centre.

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