

EXPRESSION OF INTEREST (EOI) FOR FINANCING AND INSURANCE SOLUTIONS TO SUPPORT THE ADOPTION OF ELECTRIC HARBOUR CRAFT IN SINGAPORE

FREQUENTLY ASKED QUESTIONS

Purpose of EOI

Question 1 What does MPA aim to achieve with this EOI?

- Answer
- Financing. MPA seeks competitive financing solutions which can lower financial barriers of the adoption of electric harbour craft.
 - Insurance. MPA seeks competitive marine insurance solutions to help mitigate financial risks involved in the adoption, ownership, and operation of electric harbour craft.

Through this EOI, MPA aims to raise awareness of the green transition of the domestic harbour craft sector. The inputs received through this EOI will help us better understand the challenges faced by the industry and aid us in developing relevant policies/sector-wide schemes and tools to support and accelerate the adoption of electric harbour craft in Singapore. It also provides an avenue for the industry to highlight areas, where if addressed, may serve to keep the overall cost of adoption of electric harbour craft competitive when compared to current cost of ownership of conventional vessel operating on internal combustion engine (ICE) propulsion.

These financing and insurance solutions may also be adopted or adapted for other aggregated types of electric or net-zero fuelled vessels in future.

Question 2 What do participants stand to gain by taking part in this EOI as participants can already provide financing and insurance solutions to the harbour craft sector even without this EOI?

Answer

MPA would prioritise working with shortlisted Participants from this EOI exercise to co-develop suitable solutions to cater to the financing and marine insurance needs of electric harbour craft owners and operators, including assessment of regulatory, technical and/or other forms of support.

Question 3 Is there a guaranteed demand for electric harbour craft, through this EOI?

Answer

At this juncture, there is no guaranteed demand that MPA is committing to, nor is there a guaranteed demand that MPA can commit on behalf of the harbour craft sector. MPA will evaluate the proposals and assess such requests accordingly.

Question 4 **Is this EOI meant to come up with an “endorsed” list of financiers/insurers that electric harbour craft owners/operators must obtain their financing/insurance from?**

Answer MPA does not intend to come up with a mandated list of financiers/insurers that electric harbour craft owners/operators should get their financing/insurance from. The aim of this EOI is to invite proposals from a wider group of industry players so as not to preclude ideas from interested parties.

MPA would prioritise working with shortlisted Participants from this group to co-develop suitable solutions to cater to the financing and marine insurance needs of electric harbour craft owners and operators, including assessment of regulatory, technical and/or other forms of support.

We note that industry demands will gradually be addressed by financing/insurance players as electric harbour craft become more prevalent and as the corresponding risks are better understood and can thus be dealt with more effectively.

Question 5 **Does this mean that only final “MPA-endorsed” financiers/insurance companies can work with electric harbour craft owners in future?**

Answer We envisage an open market where electric harbour craft owners may choose to engage any company that they wish to.

Relevance to Electric Harbour Craft Related EOI/CFPs

Question 6 **How does this EOI relate to (i) the previous EOI for the design and development of best-in-class electric harbour craft reference designs released in July 2023, and (ii) the Call-for-Proposal (CFP) to carry out pilot trials of charging points for electric harbour craft at selected locations?**

Answer This EOI is part of a series of initiatives by MPA to decarbonise the domestic harbour craft sector through electrification.

- In 2020, MPA and the Singapore Maritime Institute (SMI) released a joint call for proposals to research, design, build and operate a fully electric harbour craft, and had supported two consortiums led by Seatrium New Energy Limited (formerly known as Keppel FELS Pte Ltd) and SeaTech Solutions International (SP) Pte Ltd.

- On 10 July 2023, MPA released an EOI to call for proposals on the design and development of best-in-class electric harbour craft reference designs.
- On 29 August 2023, MPA released a CFP to carry out pilot trials of charging points for electric harbour craft at selected locations.

These are on top of the other regular engagements with stakeholders of the harbour craft sector such as the Harbour Craft Forum and Harbour Craft Safety Forum that MPA organises.

Question 7 How does this EOI and the optional finance component of the earlier EOI on design and development of best-in-class electric harbour craft reference designs relate to each other?

Can MPA share more about the types of solutions proposed by participants under the optional finance component of the earlier EOI on design and development of best-in-class electric harbour craft reference designs?

Answer The earlier EOI on design and development of best-in-class electric harbour craft reference designs included proposals for broad concepts of financing and/or insurance solutions. This EOI is targeted at financial institutions, intermediaries, insurers, and insurance brokers, with a view to receive more comprehensive proposals on financing and insurance solutions.

MPA has reached out to Participants who had provided their submissions for the optional financing/insurance component of the previous EOI to invite them to expound on their earlier concepts through this EOI, if they wish to. The participants from the earlier EOI could also be non-financial institutions.

As MPA is in the midst of reviewing the submissions for the earlier EOI, we are unable to comment on the proposals submitted.

Question 8 Are the financing and insurance solutions proposed for this EOI only for electric harbour craft of designs which will come out of the previous EOI released in July 2023 calling for proposals for the design and development of best-in-class electric harbour craft reference designs?

Will proposals that cater to the designs coming out of the EOI for design released in July 2023 be considered more favourably?

Answer The financing and insurance solutions need not be constrained to or specifically catered to the electric harbour craft designs which will come out from the earlier design EOI released in July 2023.

Our current assessment framework does not distinguish the financing and insurance proposals arising from the previous EOI from those that are submitted in this financing/insurance specific EOI.

Question 9 How will MPA evaluate the financing and insurance proposals submitted under the optional scope of the design EOI vis-à-vis the proposals submitted under this EOI?

Answer MPA has reviewed the financing and insurance proposals submitted under the optional scope of the design EOI and will give them due considerations when evaluating them under the design EOI.

MPA has also invited participants who submitted financing and insurance proposals under the optional scope of the design EOI to provide more detailed proposals under this EOI for financing and insurance solutions.

Question 10 Why is MPA not waiting till after the outcomes from the design EOI are out before releasing this EOI for financing and insurance solutions?

Answer New electric harbour craft designs must be approved by MPA from 2027 according to reference designs and safety standards, to cater enough time for design reviews and construction.

To support this, the electric harbour craft from the previous EOI for design should be ready for commercial adoption before 2027 – this means that its design and relevant supporting mechanisms, which includes financing and insurance solutions, should be ready by 2025 to cater for sufficient time for construction, testing, commissioning and design validation.

MPA is releasing this EOI for financing and insurance solutions now, to engage the industry early in view of these timelines.

Requirements of the EOI

Question 11 Can we submit the Proposals as a consortium?

Answer We welcome participation by consortiums. Proposals by consortiums should make clear the roles of each party. There should be a single point-of-contact for MPA to liaise with should there be a need for subsequent clarifications of the proposal.

Question 12 **Do we still need to submit two separate proposals if our consortium includes financiers and marine insurer partners thereby allowing us to provide a packaged product for both financing and insurance?**

Answer Participants should still differentiate their proposals into the financing and insurance components but may make reference to the possible packaged solution if both components were to be offered as a single product.

Question 13 **My company does not have experience/track record in financing/insuring harbour craft, but we are still keen to explore ways to participate to support owners/operators in this transition towards electrification. Can MPA introduce us to other players who might be looking for partners?**

Answer In such instances, Participants may consider partnering other players to submit proposals as consortiums.

Participants may reach out to MPA (IMC@mpa.gov.sg) if they are keen to explore working with other industry players on this project. MPA will endeavour to facilitate the necessary introductions where appropriate.

Question 14 **What are the details that should be included in the proposals?**

Answer Participants may refer to Appendix A of the EOI document.

For financing (where applicable):

- Illustration of financing solution
- Risk assessment of financing solution
- Financing terms and facility
- Sponsors/fund guarantors and liquidity providers
- Structuring considerations
- Charter contract requirements
- Recourse mechanisms

For insurance (where applicable):

- Scope of marine insurance coverage (including policy terms, limits, and exclusions)
- Underwriting capacity
- Indicative policy premium pricing (or broad pricing policy)
- Booking structure of premiums and reinsurance business structure
- Financial rating/standing of the company
- Training programme or maintenance programme for adopters of electric harbour craft
- Other insurance-linked considerations

Participants, where appropriate, may wish to include comparisons between their proposed solutions and industry benchmarks.

Question 15 Can an overseas solution provider participate in this EOI?

Answer Participation in this EOI is not restricted to Singapore-based companies. Overseas Participants may wish to provide an explanation on how they intend to distribute their products/solutions and engage their stakeholders without a physical presence in Singapore.

Question 16 How should our proposals account for the lack of information at this point in time, such as the eventual electric harbour craft designs and charging operations/modalities?

Answer MPA notes that requirements of this EOI may not be so well defined at this juncture given the concurrent design and charging infrastructure workstreams. Therefore, this exercise is structured as an Expression of Interest (EOI) and not a call-for-proposals (CFP).

Participants may include relevant assumptions to justify the pricing models of their solutions. Where possible, Participants may provide some indication of the pricing models of the solutions and/or to make price comparisons as a factor of that of conventional harbour craft.

Evaluation of Proposals

Question 17 Who will evaluate this EOI and potentially the RFP? Will the RFP be closed or open?

Answer The evaluation panel will be chaired by MPA and will comprise members from the industry, industry associations, and other government agencies. MPA will avoid any potential conflict of interest when appointing members to this evaluation panel. Members of the evaluation panel outside of MPA may be required to sign a non-disclosure agreement (NDA) to safeguard the protection of information.

MPA may subsequently launch a Request for Proposal (RFP) to implement the financing and/or insurance schemes based on the returns received from this EOI. MPA will subsequently assess the approach on whether it will be an open or closed RFP process.

MPA also reserves the right to approach one or more EOI participant(s) directly after the EOI is closed and commence

negotiations on implementing the financing and/or insurance schemes without going through an RFP.

Question 18 **The assessment criteria as listed in the EOI document appears to be quite broad. Why is that so?**

Answer Given that the EOI is calling for the industry to propose financing and insurance solutions in support of the broader aim of supporting the adoption of electric harbour craft in Singapore, MPA will evaluate these proposals based on these broader assessment criteria which may apply to the varied types of solutions we may receive.

Question 19 **How does MPA plan to handle commercially sensitive information?**

Answer MPA will only share information submitted by Participants in the EOI with the evaluation panel, for the purpose of assessing the Participant's Proposal. Members of the evaluation panel outside of MPA may be required to sign a non-disclosure agreement (NDA) to safeguard the protection of information.

Where any part of the submission is marked as confidential, MPA will seek the consensus of the Participant (consortium) to share the material with the evaluation panel or other intended recipients of the information.

Electric Harbour Craft & Harbour Craft Sector in Singapore

Question 20 **What cost parameters are you able to share?**

Answer When MPA and the Singapore Maritime Institute (SMI) released the joint call for proposals in 2020 to research, design, build and operate a fully electric harbour craft, technology cost was estimated to be 1.6 to 2 times the cost of current diesel-based technologies. To prepare for eventual adoption by the harbour craft sector, the cost factor was ambitioned to strive towards a sustainable level (e.g., no more than 1.2 times) compared to a conventional vessel operating on internal combustion engine (ICE) propulsion.

Based on the proposals received from the industry for the EOI for design of electric harbour craft, the estimated prices of base level solutions range between SGD 2 to 4 million per vessel. Ships that incorporate other features such as composite materials and hydrofoiling technology are expected to cost more. Some proposals included business models involving battery swapping operations, where the battery was accounted separately as a service and operating cost. Participants had estimated a useful

lifespan of 20-25 years which would require two or three replacements of batteries. MPA is still in the midst of evaluating the proposals received for that EOI.

Question 21 Can you provide more information about the landscape of the harbour craft sector in Singapore?

Answer There are approximately 1,600 propelled domestic harbour craft performing a range of essential marine services within the Port of Singapore, including the delivery of ship supplies and bunker as well as towage and launch services. A study conducted by the Maritime Energy & Sustainable Development (MESD) Centre of Excellence titled “A Study on the Future Energy Options of Singapore Harbour Craft” has profiled the harbour craft. You may wish to take reference from the study.

Traditionally, ownership models comprise a mix of sole proprietors, small/large fleet owners/operators operating in Singapore’s domestic harbour craft sector. The industry is self-organising to improve marine services delivery against the backdrop of the decarbonisation transition. MPA had observed that some stakeholders in the harbour craft sector (including harbour craft operators, battery technology providers and integrators, battery recycling service providers, digital solutions and demand optimisation providers, etc) have come together to form consortiums, cooperatives or alliances as part of this reorganisation.

Question 22 Who issues the harbour craft licenses and how long do these licenses last?

Answer MPA issues the harbour craft licenses and each license is typically valid for a period of 12 months from the date of issuance.

Question 23 What are MPA’s views on the battery swapping and direct charging modalities for electric harbour craft?

Answer MPA and the Singapore Maritime Institute (SMI) had released the joint call for proposals in 2020 to research, design, build and operate a fully electric harbour craft, and eventually supported two consortiums led by Seatrium New Energy Limited (formerly known as Keppel FELS Pte Ltd) and SeaTech Solutions International (SP) Pte Ltd. One electric vessel operates on a battery swapping model, while the other operates on a direct charging model.

There is place for both modalities as MPA continues to assess and evaluate their respective advantages and disadvantages.

MPA is working with the industry, academia, and relevant government organisations, to develop a Technical Reference (TR) for electric harbour craft charging systems which would ensure safe, efficient, and interoperable operation of direct charging points and battery swap.

Regulatory and Fiscal Support

Question 24 **What forms of regulatory or fiscal support is MPA willing to consider providing?**

Answer MPA is currently not considering undertaking any direct equity investments nor owning assets. MPA may however, consider suitable risk-sharing arrangements that Participants may propose.

MPA, where necessary, may facilitate regulatory clearances and approvals within MPA's authority or may facilitate discussions with other government agencies in the implementation the financing and/or insurance solutions.

Question 25 **Will MPA be engaging other agencies/authorities, particularly for other sources of funding support that can go towards this initiative?**

Answer We are unable to state a comprehensive list as we will have to first review the proposals that come through. Participants who are intending to incorporate funding schemes administered by other agencies/authorities may wish to state these considerations within their proposals.

Question 26 **Will MPA be adjusting some of the tariffs pertaining to harbour craft to support owners and operators through this transition?**

Answer Today, we have the Green Port Programme that allows harbour craft that uses low or zero carbon fuel in the Port of Singapore to enjoy up to 30% port dues reduction.

As the industry works towards decarbonisation, MPA will continue to review the tariff structures in support of owners and operators through this transition.

Timeline

Question 27 **Can there be any time extension given for the submission of proposals?**

Answer At this moment, no time extension is catered and all proposals should be submitted by 19 December 2023, 2359 hrs Singapore time.

Question 28 **What will be the process and activities after the EOI closes on 19 December 2023?**

Answer MPA will review, evaluate, and assess the submitted proposals in 1H 2024. Following which, MPA may launch a Request for Proposal (RFP) to implement the financing and/or insurance schemes based on the returns received from this EOI. MPA reserves the right to approach one or more EOI participant(s) directly after the EOI is closed and commence negotiations on implementing the financing and/or insurance schemes without going through an RFP.

Financing-related

Question 29 **What types of financing solution is MPA looking for?**

Answer MPA is open to various financing solutions from the financing industry which can help support the adoption of electric harbour craft.

Participants may wish to note that MPA is currently not considering undertaking any direct equity investments nor owning assets. MPA may however, consider suitable risk-sharing arrangements that Participants may propose.

Insurance-related

Question 30 **What types of insurance solution is MPA looking for?**

Answer MPA is open to various insurance solutions from the insurance industry which can help support the adoption of electric harbour craft. The proposal should include the details as stated in Appendix A of the EOI document, including the exclusions or limitations associated with the proposed solutions.

MPA may consider suitable risk-sharing arrangements that Participants may propose.

Question 31 **If I want to submit proposals for hull and third-party coverage, must I submit 2 separate proposals – one for hull and another for third-party?**

Answer Participants may wish to combine possible options under 1 proposal. There should be 1 submission per company (unless the company is also submitting other proposals under a consortium).

Question 32 **The EOI seeks for insurance companies to provide a benchmark rate for electric harbour craft. However, insurance companies need individual track records of client to come up with a price range. How should I submit the proposal in view of this constraint?**

Answer Participants may indicate a range of pricing for the proposed policy/policies. Where appropriate, Participants may also state the assumptions (e.g., archetypes of companies) used to derive at said pricing.

Question 33 **Does the insurance proposal cover both the electric harbour craft and battery charging/battery swap stations?**

Answer The insurance solution proposed should be for the electric harbour craft.

Question 34 **Do we have to address construction risks?**

Answer Participants may wish to include considerations pertaining to construction risks within your proposals in a separate section as they may be applicable to the previous EOI focusing on design and development of best-in-class electric harbour craft reference designs. Shipyards and ship builders may require such insurance coverage to mitigate construction risks.

Question 35 **From the insurer's perspective, is the insured party the owner of the harbour craft?**

Answer Yes, the owner of the harbour craft is expected to be the insured party under this EOI.

Question 36 **MPA is requesting details on training and/or maintenance programmes that can be developed as part of the insurance solution. Without knowing the technology, design and battery modality of the chosen electric harbour craft reference designs, it would be challenging for us to come up with details of such training or loss prevention programmes. How much detail is MPA expecting in the proposals with regard to these requirements?**

Answer Noting the concurrent workstreams on the design and charging infrastructure of electric harbour craft, Participants may incorporate such details on a best effort basis. From MPA's perspective, it would be useful to learn about the differences between a conventional craft and an electric one, particularly in the areas of underwriting and loss prevention.

Others

Question 37 **Why is MPA asking for information on carbon credits that may be generated from carbon reductions achieved as a result of this move to electrify the harbour craft sector?**

Answer The intention of the electrification of the domestic harbour craft sector is in support of Singapore's 2050 national target and our Nationally Determined Contributions (NDCs). That said, MPA will engage Participant(s) to discuss any potential use of these carbon credits (if any) generated from carbon reductions achieved as a result of the Project.

Question 38 Can I submit in PowerPoint version?

Answer The main proposal should be in Microsoft Word and/or PDF formats. PowerPoint documents may be submitted only if the Participant wishes to convey certain schematics or concepts using the animation features available on PowerPoint.

Question 39 Who can I reach out to if I have questions pertaining to the EOI after this industry briefing session?

Answer Participants may send your queries to IMC@mpa.gov.sg.

Question 40 When will participants expect to know the outcome of their submission?

Answer The closing date for the EOI is on 19 December 2023. MPA will process and evaluate these proposals, and target to provide an update on the outcome of this EOI exercise by the end of 1H of 2024.