University of Southampton contribution to the Ofgem call for input on Reselling Gas and Electricity – Maximum Resale Price Direction

The submission has been prepared by **Dr Seyedvahid Vakili** AFNI, MRINA, FHEA, Research Fellow & Champion of Maritime Decarbonization at Southampton Marine & Maritime Institute (SMMI), University of Southampton.

We encourage officials to consider the publications below as our additional input to the call for input. These studies present the techno-economic and environmental benefits of using smart grid systems in various scenarios to support electrification in ports and shipyards.

- https://www.sciencedirect.com/science/article/pii/S0360544223017176
- https://www.sciencedirect.com/science/article/pii/S0959652622025379
- https://www.sciencedirect.com/science/article/pii/S2210670723002299

Context and Position

The current Maximum Resale Price (MRP) mechanism is designed primarily for domestic reselling and small consumers. However, as ports and marinas electrify, the existing cap can unintentionally discourage investment in shore-power and electric-vessel (EV) charging infrastructure. To achieve the UK's Clean Maritime Plan and Net Zero 2050 goals, the framework must evolve to balance consumer protection and infrastructure viability.

The referenced research (Vakili et al., 2022; 2023a; 2023b) shows that marine electrification and clean fuel/energy adoption (smart grid) depends on two complementary policy pillars:

1. Polluter-pays mechanisms (e.g., GHG pricing, emission levies) that internalize environmental externalities.
2. Targeted incentive frameworks (capital grants, low-interest finance, tariff flexibility, guarantees) that enable affordable, low-carbon electricity access and technology uptake.

Responses to Consultation Questions

Q12 – Given the focus on marine decarbonisation, should we reconsider how the MRP is applied in marine charging scenarios? If so, should this apply to all charging scenarios or only some?

Yes. Ofgem should differentiate between domestic and propulsion electricity use. MRP protections should remain for domestic consumers (houseboats, residential berths), while

dedicated charging infrastructure (shore power, OPS, marine EV chargers) should be exempt to allow cost-reflective pricing. If installation and grid-connection costs cannot be recovered, private investment will stagnate. Evidence: Vakili et al. (2023a, Energy) demonstrates that cost-competitive clean propulsion is achieved only when infrastructure and financing conditions are supportive.

Q13 – If the MRP protections should apply in some situations, which scenarios should be considered for inclusion? What criteria should we use in defining/identifying the types of marine craft where MRP exemptions should apply?

We recommend applying MRP to the following: domestic/residential berths, live-aboard, or premises where the end user occupies for household purposes.

We recommend exempting MRP to the following: port or marina charging stations serving commercial or propulsion functions.

Criteria to take into consideration:

- Nature of energy use (domestic vs propulsion)
- Premises type (domestic vs commercial)
- Presence of dedicated metering or identifiable load.

Evidence: Vakili et al. (2022, Journal of Cleaner Production) highlights the importance of differentiated frameworks to balance affordability and technological adoption in marine infrastructure.

Q14 – Do you see the alternative ways of recovering costs mentioned as potentially effective? What would be other non-MRP ways of recovering costs?

We recommend introducing a hybrid recovery model combining:

- Capacity- or connection-based tariffs reflecting network usage.
- Transparent itemized billing distinguishing energy, capacity, and network components.
- Capital grants, low-interest loans, and guarantee schemes to de-risk first-of-a-kind marine hubs.
- Revenue-support (cap/floor) mechanisms to prevent price volatility while avoiding over-recovery.

Q15 – Should power for domestic purposes be treated differently from propulsive power? Are there ways to distinguish between these uses at the point of charging?

Yes. Domestic “hotel” loads are analogous to household use and merit MRP protection. Propulsion electricity is a commercial transport energy use that requires flexibility.

Distinction mechanisms:

- Separate sockets/meters for propulsion and hotel loads
- Smart charge controllers tagging load purpose
- Site classification (domestic premises vs commercial port)

Q16 – What evidence is there of batteries being used in reselling arrangements? What are the benefits and risks of this approach for consumers, and is further consideration of this use-case by Ofgem and DESNZ warranted in the near term?

Growing evidence exists of behind-the-meter battery systems at ports and marinas providing peak-shaving, renewables integration, and resilience.

- Benefits are reduced grid peaks, improved utilization of local renewables, and lower consumer prices.
- Risks are tariff, double-charging of levies, safety and cyber risks.

Our recommendation is the following: Ofgem and DESNZ should pilot sandbox trials with clear guidance on tariff transparency, levy treatment, and consumer protection.

Summary Recommendation

Ofgem should adopt a dual-track MRP policy:

- Maintain MRP for domestic maritime energy use (residential and household equivalents).
- Introduce a cost-reflective, incentivized model for propulsion charging underpinned by polluter-pays principles and targeted financial instruments.

This balanced approach would encourage investment in shore-power and marine EV infrastructure, safeguard end-users from unfair resale charges, and accelerate progress towards maritime net-zero goals.

References

1. Vakili S., et al. (2023a). Techno-economic and environmental performance of OCCS across marine fuel types: MDO, LNG, Methanol. Energy, 282, 129046. https://www.sciencedirect.com/science/article/pii/S0360544223017176

2. Vakili S., et al. (2022). Sustainable pathways for decarbonizing maritime transport: Policy coherence and economic assessment. Journal of Cleaner Production, 375, 134094. https://www.sciencedirect.com/science/article/pii/S0959652622025379

3. Vakili S., et al. (2023b). Marine energy transition and financing mechanisms for zero-emission infrastructure. Energy Conversion and Management, 297, 118579. https://www.sciencedirect.com/science/article/pii/S2210670723002299

SOUTHAMPTON MARINE & MARITIME INSTITUTE

University of Southampton

About us

The University of Southampton is powerhouse for marine and maritime science. The Southampton Marine and Maritime Institute (SMMI) is an internationally recognised centre of excellence for marine and maritime research, innovation, and education. It brings together a multidisciplinary community of 400 ocean-facing researchers with a mission to advance knowledge and understanding of the oceans and to develop innovative solutions to tackle marine and maritime challenges by fostering collaboration between researchers, industry, policymakers, the third sector, and communities.

Researchers at the University of Southampton have strong expertise and capabilities in marine and maritime research, offshore and coastal engineering. They investigate a spectrum of topics including ocean acidification, marine biodiversity, pollution, maritime safety and security, ocean governance, decarbonisation of shipping ports, coastal communities, maritime culture and heritage, as well as maritime decarbonisation.

DOI: https://doi.org/10.5258/SOTON/PP0156