

March 7, 2022

The Honourable Joyce Murray, P.C., M.P.  
Minister of Fisheries, Oceans and the Canadian  
Coast Guard  
House of Commons  
Ottawa, Ontario K1A 0A6

The Honourable Omar Alhabra, P.C., M.P.  
Minister of Transport  
House of Commons  
Ottawa, Ontario K1A 0A6

Dear Ministers:

**Re: Federal Regulations of Small Fishing Vessel Design**

The federal government's strategy in achieving net-zero emissions by 2050 is a multi-faceted approach that commits all sectors of the Canadian economy to take climate change seriously and to do their part to reduce the nation's carbon emissions dramatically. One sector of the economy that can make a dramatic contribution to GHG reductions is the small fishing vessel fleet, as there is a real opportunity to reduce this fuel consumption and the associated greenhouse gas (GHG) emissions from its current level by adapting existing technologies from other marine sectors.

Engineers Canada is the national organization that represents the 12 provincial and territorial engineering regulators that license the more than 300,000 members of the engineering profession in Canada. As the only national voice for the engineering profession, our organization has a long-standing history of working and collaborating with the federal government to help inform and develop legislation, regulations, and policies.

The current regulatory framework that governs the design of small fishing vessels in Canada has evolved over time to result in vessels designed not to reduce fuel consumption—but rather to circumvent regulations aimed at reducing catch capacity. Currently, a design must: meet a simple length restriction imposed by the Department of Fisheries and Oceans Canada (DFO) aimed at reducing the catch capacity of the vessel; and, at the same time, meet the minimum static stability requirements of Transport Canada's Small Fishing Vessel Regulations.

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To circumvent DFO's length restriction, vessels have become much wider and deeper. Static stability, though, is a function of vessel width, so by increasing vessel width, the static stability requirement is easily reached. However, this regulatory framework has resulted in vessels of such extreme proportions, moving over time from length-to-beam ratios of over 4.0 down to 2.0 or lower. Fuel consumption and, as a result, greenhouse gas emissions of such disproportioned vessels is as much as three times higher than vessels that have more reasonable length-to-beam ratios. As importantly, though, from a safety perspective, such vessels are too stable. While Transport Canada regulations specify the minimum stability, they place no restriction on maximum stability. Yet an excessively stable vessel has motions so extreme that crew members must tie themselves to the vessel to avoid being thrown around. This has resulted in several motion reduction strategies being employed for which there is no regulatory framework and has resulted in repeated loss of lives, capsized vessels, and environmental damage from spilled fuel. One notorious example was that of the *Ryan's Commander*, which was designed by an unlicensed practitioner, built in 2004, and capsized and sank later that same year. The loss of the vessel was a case study in the contradiction between regulations imposed by DFO and those imposed by Transport Canada as described by the report of the Transportation Safety Board of Canada.

The practice of engineering in Canada, including naval architecture, is regulated by provincial and territorial associations of professional engineers, as mandated by provincial and territorial laws and regulations. However, in many cases the federal government is exempt from those laws. In this case, Transport Canada is accepting work submitted by non-licensed individuals who are undertaking engineering work without following the requirements and standards set by the provincial and territorial jurisdictions. While it is not the mandate of Transport Canada to govern who practices naval architecture in Canada, it is responsible for reviewing work submitted by naval architects who design the vessels and produce the required stability books. By accepting the work of unlicensed practitioners, it is creating an environment of risk to the public whereby vessel operators believe if the work is accepted by Transport Canada, it must be correct.

However, while Transport Canada reviews the work to ensure the analysis meets the requirements of the regulations, it takes no responsibility to ensure the analysis and the data on which the analysis is based, are correct. Professional engineers are mandated, by terms of their licence, to ensure that the welfare of the public and the environment are paramount requirements of their work. Such licensure requires professional engineers to assume responsibility for the safety of their work, whereas no such accountability applies to non-licensed practitioners. Some professional engineers have taken the only step open to them and have exited the industry.

To facilitate a significant reduction in GHG emissions by the Canadian Small Fishing Vessel Fleet and to improve the safety of those involved in this industry, the federal government should undertake all steps required to create a new regulatory framework with respect to the design of small fishing vessels in Canada.

This new framework must be developed in a manner that ensures that:

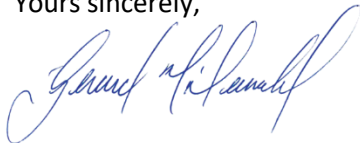
- Fishing vessel emissions are reduced from the extreme levels of the current fleet to a target in line with Canada's net zero goal.
- The safety of fishers is a paramount concern.
- Vessel fishing capacity limits are imposed in a manner that is effective in resource management, such as simply imposing either individual enterprise allocations or maximum trip catch limits for all fisheries, rather than the ineffective limit of length overall.
- Vessel design is performed under the supervision of a licensed professional engineer.

In developing this new regulatory framework, the federal government should:

- Undertake a multi-departmental review of the current regulatory framework to evaluate how the current framework can be modified to align with Canada's net-zero goal.
- Revise those regulations that have resulted in the development of fishing vessel designs that have sub-optimal emission profiles and safety performance.
- Put in place requirements that only qualified personnel, registered with provincial or territorial engineering regulators, are responsible for the design and/or modification of vessels, ensuring federal regulations are in line with provincial or territorial regulatory goals to protect public safety.
- Encourage the adaptation of vessel designs that are in alignment with current programs of relevant federal departments, such as DFO's [strategy](#) to help Canada meet its climate change targets and Transport Canada's [Sustainable Development Strategy from 2020-2023](#) to reduce greenhouse gas (GHG) emissions in the marine sector. Weaving climate change adaptation and mitigation strategies within fishing vessel regulatory amendments will support the federal government's overarching [Net-Zero Emissions by 2050](#) initiative.

Minister Murray and Minister Alhabra, your departments, along with the Transportation Safety Board, must work together to ensure a new regulatory framework with respect to the design of small fishing vessels in Canada that recognizes the authority of provincial and territorial engineering regulatory associations. Our subject matter experts would be happy to meet with you to further discuss these issues and the nature of our involvement. To schedule a meeting, please contact Joey Taylor, Manager, Public Affairs, at 613-232-2474 x213, or at [joey.taylor@engineerscanada.ca](mailto:joey.taylor@engineerscanada.ca).

Yours sincerely,



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