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Jennifer A. Carpenter  
President & CEO

October 5, 2021

Rear Admiral John Mauger  
Assistant Commandant for Prevention Policy  
U.S. Coast Guard  
2703 Martin Luther King Avenue SE  
Washington, DC 20593

RE: Request for Information on Coast Guard  
Programs, Regulations, and Policies for  
Addressing Climate Change (Docket  
Number USCG-2021-0233)

Dear Rear Admiral Mauger:

The American Waterways Operators is the national trade association for the tugboat, towboat, and barge industry. AWO's more than 300 member companies include the owners and operators of towing vessels and barges operating on the U.S. inland and intracoastal waterways; the Atlantic, Pacific, and Gulf coasts; and the Great Lakes. Our industry's 6,200 towing vessels and 33,000 barges comprise the largest segment of the U.S.-flag domestic fleet. The tugboat, towboat, and barge industry supports more than 270,000 jobs in related industries nationwide. Each year, our vessels safely, securely, and efficiently move more than 665 million tons of cargo critical to the U.S. economy, including agricultural products, energy cargoes, chemicals, steel, aggregates, and containers. Tugboats also provide essential services in our nation's ports and harbors, including ship docking, tanker escort, and bunkering. The U.S. tugboat, towboat and barge industry contributes over \$30 billion to the U.S. GDP annually.

On behalf of AWO's member companies, thank you for the opportunity to provide comments on the Coast Guard's request for information on its programs, regulations, and policies for addressing climate change. AWO members are deeply committed to environmental stewardship and to working with government partners to advance the protection of the marine environment while preserving the safety, security, and economic efficiency of marine transportation. In this spirit of that cooperation, AWO is pleased to offer these comments.

## **The Tugboat, Towboat, and Barge Industry is the Most Environmentally Responsible Mode of Freight Transportation**

The tugboat, towboat, and barge industry is not only an integral part of the U.S. intermodal transportation system, but also the most fuel-efficient, with the smallest carbon footprint, of any freight transportation mode. A single inland dry cargo barge can carry the same amount of cargo as 16 railcars or 70 tractor-trailers, whereas one inland liquid cargo barge can carry as much cargo as 46 railcars and 144 tractor-trailers. Because barges can move those cargoes on less fuel, they generate fewer greenhouse gas emissions: inland towing emits 15.6 grams of carbon dioxide per ton-mile as compared to 21.2 from freight rail and 154.1 from freight trucks – outperforming those modes by 30 percent and more than 1,000 percent, respectively.<sup>1</sup>

It is important to note that our industry is building on the natural advantages of barge transportation and continuously improving its stewardship of the environment. AWO member companies have adopted environmental policies and procedures and operate in compliance with environmental regulations, but are going further to reduce their environmental impact, from taking small but meaningful steps to making major investments. In 2020, AWO members formed an Environmental Stewardship Working Group that has developed a set of best practices to inform, support, and guide towing vessel and barge operators in areas including energy efficiency and air quality. These best practices include measures to reduce fuel consumption that are already widely understood and routinely implemented by our industry – such as throttle optimization to maximize fuel efficiency, consideration of routing schedules to minimize light and standby time, and utilization of shoreside electrical power where available – as well as recommendations to consider alternative fuels or propulsion systems when repowering existing vessels or planning to construct new vessels. Member companies are already engaged in projects of this type, including the construction of hybrid diesel-electric and fully electric tugboats.

As a result of our industry’s efficiency and ongoing improvement of its environmental performance, it is not part of the problem of climate change but part of the solution. Any effort to reduce greenhouse gas emissions must consider how to maximize the utilization of our industry and the marine transportation system as a whole.

## **The Coast Guard Should Support the Efficiency and Continuity of the Marine Transportation System**

As the Coast Guard has stated in its Federal Register notice, the agency’s missions contribute to the facilitation of safe, secure, and environmentally responsible commerce through its stewardship of the marine transportation system – “commerce that contributes so crucially to a vibrant U.S. economy.”<sup>2</sup> AWO would add that the Coast Guard’s facilitation of maritime commerce also crucially contributes to the advancement of the Administration’s urgent priorities of climate change mitigation, adaptation, and resilience. By facilitating the efficiency and continuity of maritime commerce, the Coast Guard ensures both that freight is not diverted

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<sup>1</sup> Texas A&M Transportation Institute Center for Ports and Waterways, “A Modal Comparison of Domestic Freight Transportation Effects on the General Public: 2001-2014,” January 2017.

<sup>2</sup> 86 Federal Register 36146.

to modes with bigger environmental footprints and that the marine transportation system is prepared to respond to the adverse effects of climate change.

Freight diversion has the potential to result if a mode of transportation becomes too unreliable and too costly. The amount of cargo transported annually by barge on the Mississippi and Ohio river systems, the Gulf Intracoastal Waterway, and the Columbia/Snake River System each year is the equivalent to 49 million annual truck trips.<sup>3</sup> The diversion of even a small amount of cargo from the waterways to the rails or highways would lead to increases in greenhouse gas emissions and reductions in air quality, which would be compounded by increases in congestion. It would also have negative safety consequences since our industry has the lowest fatality and injury rate of any freight transportation mode by many factors. Any actions the Coast Guard takes to preserve and enhance the reliability of the marine transportation system help to ensure the continued cost-effectiveness of maritime commerce and, therefore, can be considered to mitigate climate change.

One of the most important ways in which the Coast Guard supports the reliability of the marine transportation system is through its maintenance of aids to navigation (AtoNs), a mission area that is critical to navigation safety and efficiency. When AtoNs are missing or off station, risks to waterways users rise. On the inland waterways in particular, this can result in delays that increase costs for commercial vessel operators and their customers as well as increase greenhouse gas emissions due to idling. In recent years, the age of the Coast Guard's inland buoy tender fleet – which averages 55 years – has led to an increasingly untenable situation for both our industry and the Coast Guard in which buoy tenders are frequently down for repair when they are urgently needed. Commendably, the Coast Guard has recognized the importance of ensuring the continuity of its AtoN mission capability on the inland waterways and has established the Waterways Commerce Cutter (WCC) Program to recapitalize its inland buoy tender fleet. AWO believes that by supporting the safety and efficiency of the inland waterways, the WCC Program will also mitigate climate change. We strongly recommend that the Coast Guard accelerate the program to construct and deliver the WCCs as soon as possible and work with industry in the interim to ensure adequate levels of service are provided, particularly at critical times of high and low water.

Our industry is uniquely positioned to contribute to the mitigation of climate change but will also be exposed to increased risks due to its effects. As predicted by scientists and as demonstrated in recent years, rising global temperatures will make extreme weather events more frequent or more intense. Our industry and the Coast Guard have a long and successful history of close cooperation to prepare for, respond to, and recover from hurricanes, floods, droughts, icing, and other weather events that impact the condition of the waterways. That partnership will be essential to adaptation and resilience as the frequency and intensity of extreme weather events grow. To ensure the continuity of maritime commerce through the unpredictable effects of climate change, AWO urges the Coast Guard to continue to invest in its marine safety mission and incident management capabilities, to maintain strong relationships with industry stakeholders, and to restore the full operational capability of the WCC fleet.

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<sup>3</sup> Texas A&M Transportation Institute Center for Ports and Waterways, "A Modal Comparison of Domestic Freight Transportation Effects on the General Public: 2001-2014," January 2017.

Governmental efforts to address climate change have the potential to affect our industry, the economy, and the environment positively, by promoting efficiency and supporting learning, innovation, and investment to improve environmental performance – or negatively, by advantaging other modes or foreign competitors over domestic vessel operators, stranding economically viable assets, or dictating specific technological solutions. Although the Coast Guard has primacy in the regulation of commercial vessels, we recognize that it is not the only government agency with authority to regulate our industry. AWO has long advocated for a uniform regulatory regime for vessels in interstate commerce to stop a patchwork of inconsistent, overlapping, or conflicting rules from emerging. As federal, state, and international efforts to address climate change in the maritime sector take shape, AWO calls on the Coast Guard to help prevent such a patchwork by bringing its expertise in commercial vessel operation and equipment to bear in its work with its interagency partners (including the U.S. Environmental Protection Agency, the U.S. Army Corps of Engineers, the Maritime Administration, and the National Oceanic and Atmospheric Administration) and its engagement with state and international partners. The Coast Guard – as the agency with experience and preemptive authority in commercial vessel regulation, as well as a mission to facilitate maritime commerce – can play an important role in educating its partners about the domestic maritime industry to ensure its efficiency and continuity.

### **The Coast Guard Should Facilitate the Development and Integration of New Technologies**

Technological innovation holds tremendous promise to help our industry reduce its environmental impact, and in particular, its greenhouse gas emissions. The pace of technological development in this area is fast and expected to get faster, in contrast with the deliberate pace of the Coast Guard’s rulemaking and policymaking processes. As the Coast Guard considers changes to its regulations and policies to address climate change, AWO urges the agency to establish a framework that fosters rather than restricts the integration of new low-carbon and zero-carbon technologies in the maritime industry by adopting a proactive oversight posture and by drawing on the expertise of private sector, interagency, and international partners.

The decision to construct a new towing vessel as a platform for new technologies is complex, requiring partnership between the owner/operator, the customer, the shipyard, naval architects and marine engineers, and technology vendors, among others. Regulatory uncertainty and delay can be an impediment to this decision-making. The Coast Guard’s plan review process requires these parties to approach the cognizant Officer in Charge, Marine Inspection (OCMI), Marine Safety Center, and Office of Design and Engineering Standards on a case-by-case basis to work through the regulatory implications of any novelty in vessel design, construction, and operation at their own considerable time and expense. The process does not allow for conceptual conversations and does not reflect how difficult it is for vessel owners/operators and other stakeholders to invest resources in the design of vessels with alternative fuels and propulsion systems that reduce or eliminate greenhouse gas emissions when there is uncertainty about the regulatory ramifications and approval timeline and a risk that the design will not be accepted by the Coast Guard. To provide the regulatory certainty needed to

encourage investments, the Coast Guard should acknowledge the environmental and economic benefits of low-carbon and zero-carbon technologies and adopt a proactive posture that encourages early engagement with a goal of accelerating, and thereby supporting and increasing, the development and deployment of these technologies in the U.S.-flag fleet. The Coast Guard should also balance the existing discretion afforded to individual OCMIs to approve alternative arrangements against the need for regulatory certainty and consistency by establishing clear national policy on the approval of low-carbon and zero-carbon technologies and the impacts of those technologies on vessel design, equipment, crewing, and other operational requirements.

Further, the Coast Guard can accelerate the development and deployment of low-carbon and zero-carbon technologies by leveraging the concurrent efforts of private sector, interagency, and international partners to support the evaluation and implementation of these technologies. Many such technologies are in use or at a more advanced stage of development outside the United States. If the American maritime industry is to maintain its competitiveness, the Coast Guard needs to identify and eliminate obstacles to the deployment of these technologies in the U.S.-flag fleet. To facilitate their adoption domestically, AWO urges the Coast Guard not to begin its evaluation of these technologies at square one; instead, the agency should consider what efficiencies may be achieved by incorporating the work of other flag states or classification societies into its plan review and design verification testing processes or delegating standard-setting and testing to third parties with technical expertise. We encourage the Coast Guard to work with EPA, which is responsible for the certification of marine diesel engines to domestic emissions standards, to resolve issues with the approval of hybrid or dual-fuel engines that meet international standards and are commercially available in other countries so that they become an option for domestic vessel operators; this would enable emissions reductions and encourage domestic engine manufacturers to offer similar products. AWO also strongly recommends that the Coast Guard utilize the expertise of its federal advisory committees to increase its understanding and inform its decision-making on the integration of low-carbon and zero-carbon technologies in the U.S.-flag domestic fleet and the construction of infrastructure to support their operation. The partnership between the Coast Guard and the Chemical Transportation Advisory Committee to guide the development of design criteria and other regulations and policy for vessels fueled by or carrying liquefied gas is a model for timely and successful federal advisory committee engagement.

These principles – adopting a proactive posture, establishing clear national policy, and leveraging the efforts of private sector and international partners – also apply to areas in which our industry is implementing innovative technologies to support the development of renewable energy resources that will help mitigate climate change, such as offshore wind energy. AWO agrees with the Administration that offshore wind energy promises environmental and economic benefits to the nation, including reducing our reliance on fossil fuels, strengthening the domestic supply chain, and creating American jobs, and member companies are already making large investments to take part in this emerging industry. The Coast Guard should acknowledge these benefits and facilitate the approval of U.S.-built vessels to support the growing offshore wind market.

## Conclusion

Thank you again for the opportunity to comment and for your commitment to working with stakeholders to address climate change. AWO would be pleased to provide additional feedback or answer any questions as they arise.

Sincerely,

A handwritten signature in black ink that reads "Jennifer Carpenter". The signature is written in a cursive style with a large initial "J" and a long, sweeping underline.

Jennifer A. Carpenter  
President & CEO