

MONTHLY REPORT for ICS**July 2026**Contents

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CARB/Clean Energy Institute Study – Updated Technology Assessment for Ocean Going Vessels (OGVs)

The CARB website for the potential OGV in Transit regulations may be accessed at <https://ww2.arb.ca.gov/our-work/programs/potential-ocean-going-vessel-ogv-transit-regulation> This website contains a copy of the above referenced report at the bottom of the home page under the OGV and technology assessment link (both the original 2018 and 2026 assessments). A good, shortened summary of the most recent study can be found at the bottom of the home page under the meetings and workshops link (workshop held February 4, 2026).

As previously briefed to members, the California Air Resources Board (CARB) is assessing the impact of ocean going vessels (OGVs) on California air quality. As part of this assessment, CARB contracted with the University of California (Irvine) Clean Energy Institute to update its previous study to provide a technology assessment for OGVs trading in California waters. These initiatives are part of the preparatory work for what we believe will be new regulations for OGVs in California waters. We believe there are significant legal challenges that will face California in proposing this initiative given that any new emissions regulations different from the current federal standards especially those applying to transportation modes engaged in interstate and international commerce would likely need to be authorized by EPA under the Clean Air Act, an unlikely result with the current Administration.

The study provides an assessment of alternative control technologies and fuels, emissions and air quality impacts and the projected impacts on deployment of any new regulations. Given the length of this report, the reader is urged to review

Reference to the Federal Register may be found at

<http://www.gpo.gov/fdsys/browse/collection.action?collectionCode=FR>.

References to legislation may be found at <https://www.congress.gov> at the center of the page.

pages 2-6 for a good summary of the assessment and conclusions. The major conclusions section on pages 260-276 provides a more detailed summary of the conclusions.

Task 1 is the technology evaluation section which uses a common template to evaluate the readiness stage of propulsion engines using methanol, ammonia, LNG, liquid biofuels, hydrogen/fuel cells, battery electric and hybrid systems and nuclear power followed by an assessment of aftertreatment systems including selective catalytic reduction, exhaust gas recirculation, scrubbers, diesel particulate filters, electrostatic precipitators, energy efficiency measures and technologies, shore side electrical power and carbon capture utilization and storage systems.

Task 2 provides an analysis of local, state, national and international programs and assesses the possible synergies across these programs and includes evaluation of programs from IMO, national and regional measures (EU, US, Canada, Japan, China and others), state level programs, and other initiatives underway by the maritime industry, engine manufacturers and shipbuilders.

Task 3 assesses the alternative fuels being considered (low carbon marine fuels, renewable diesel and biodiesel, LNG, methanol, hydrogen, ammonia and others) and their potential availability for use in ships trading in California waters.

Executive Summary

- Provides a history of California air emissions regulations relating to OGVs including the shore power and clean fuel regulations
- Notes current programs for vessels using LNG, methanol, ammonia, hydrogen, biofuels, battery-electric systems and nuclear power
- Technology assessment utilizes a common template to assess commercial readiness of technologies including technology description, system/network suitability and infrastructure needs, newbuild versus retrofit feasibility, emission reductions, technology readiness, economics and near term steps with the results being used to compare and contrast engines, aftertreatment, efficiency measures, shore power, carbon capture, batteries and nuclear options
- Assessment conducted of current and emerging policies at the international, national, state, regional/local and industry initiatives
- Regarding fuels readiness, LNG and bio-based diesels are the most mature with methanol and ammonia noted as near term candidates with readiness expected around 2030
- Hydrogen is seen as promising, but engine technology is not yet mature
- Fuel cells are seen as close to readiness for auxiliary power and batteries are seen as effective for short sea shipping and auxiliary power
- Nuclear faces significant challenges in terms of economics, regulation and public acceptance

- Conventional marine fuels require aftertreatment technologies to meet emissions standards
- LNG, methanol, ammonia and hydrogen reduce sulfur, PM and CO₂ emissions but challenges exist relative to NO_x emissions which require aftertreatment to meet the emissions standards
- Energy efficiency measures reduce GHGs and other pollutants with estimated reduction of between 10-30%
- Cost estimates across the various strategies and fuels vary widely
- Dominant fuels expected by 2050 include biodiesel, methanol and ammonia

Study's Overall Conclusions

- Active and planned development of low carbon marine fuels production facilities is adequate to meet demand projections through 2030
- Beyond 2030, supply expansion must reach a pace that is feasible (comparable to rapid expansion of fuel supply seen in the past) but challenging
- New bunkering capacity for non-fuel oils will be more challenging than for fuel oils but initial action to establish protocols and expand capacity are underway
- Shipyard capacity may pose a constraint on low carbon marine fuels demand growth based on current shipyard capacity and without accounting for displacement of "conventional" shipyard activity with retrofit activity
- Significant and coordinated international action is needed, although supply can in principal meet demand growth needed to meet IMO decarbonization targets
- Conduct further research focused on:
 - improving the understanding of capital, operating, and lifecycle cost trajectories as technologies mature and scale
 - developing clear guidance on when retrofits are technically and economically viable versus when newbuilds are preferred
 - improving the characterization of real-world emissions performance for alternative fuel engines under varying loads, routes, and duty cycles
 - clarifying long term engine durability, emissions control performance and system integration under sustained commercial OGV operations for alternative fuel engines including methanol and ammonia
 - identify technical advancements to support emerging technologies with long term promise for near and zero emissions including batteries, hydrogen fuel cells and nuclear powered vessels
 - assess how emerging technologies align with existing port, fuel, and electrical infrastructure
 - identify and track the development of fuel supply and bunkering capacity
 - identify and track the development of green corridors and related initiatives

- Develop and pursue an engagement strategy (with the US EPA) for influencing international NOx and SOx regulations via the IMO

Considerations for Members

- **Implications of Expanded State Regulation:** As previously noted, this technical study clearly foreshadows the operational and compliance hurdles that vessel operators will face if CARB proceeds with developing and enforcing additional in-transit air emission regulations within Regulated California Waters (RCW).
- **The Biofuel Regulatory Barrier:** While the report identifies biofuels as a primary near-term pathway to meet proposed Net-Zero Framework (NZF) standards, under current CARB OGV Fuel Regulations, neither biodiesel (FAME) nor renewable diesel (HVO) is permitted for compliance. CARB's current rules restrict compliant fuels to petroleum-based distillates, creating a severe policy bottleneck for early adopters.
- **The "Technically Feasible" Caveat:** Throughout the assessment, emerging low-carbon fuel systems are repeatedly labeled as "technically feasible." However, the authors repeatedly qualify this feasibility with significant commercial caveats, including high capital expenditure (CAPEX), extreme retrofit complexity, substantial structural and engine-room space limitations, and consequential losses in cargo-carrying capacity.
- **Overly Optimistic Deployment Timelines:** The report relies heavily on consultations with major engine manufacturers (such as Everllence and Wärtsilä) to conclude that the commercial scaling of alternative engines and aftertreatment technologies will keep pace with regulatory mandates once demand emerges. While technically grounded, this view is overly optimistic. It underestimates supply-chain constraints and ignores historical precedents—such as the early rollout of Ballast Water Management Systems (BWMS)—which were plagued by severe shortages of spare parts and qualified technicians. Furthermore, while the report acknowledges the necessity of crew training, it fails to evaluate the severe logistical and labor hurdles of training global crews on highly toxic and volatile fuels like ammonia and methanol.
- **Compliance Tracking and Data-Sharing Vulnerabilities:** Multiple sections of the assessment highlight significant technical gaps and unresolved challenges in emissions tracking and carbon accounting. These deficiencies represent a major exposure for vessel operators, who may struggle to verify that complex on-board systems are operating within certified tolerances, or to produce the verified data CARB will require to prove in-transit compliance.

- **The Scalability and Affordability Balance:** In general, the maritime industry remains committed to taking on the challenges of reducing air emissions. However, as demonstrated by the lack of consensus at the recent IMO NZF discussions, the technological feasibility of alternative fuels must be carefully balanced against their global availability, affordability, and the scalability of the associated bunkering infrastructure.

Summary Analysis: SHIPS Act Provisions in the FY2027 NDAA

The [House passed H.R. 8800](#) (FY 2027 National Defense Authorization Act) on July 22, 2026, incorporating the SHIPS for America Act as Title XXXVI through Amendment #313, with additional maritime provisions included under Title XXXV through Amendment #066.

The [linked analysis](#) outlines key changes to the core elements of the original SHIPS Act ([H.R. 3151](#)) and the White House's Maritime Action Plan.

Key highlights include:

- **Maritime Security Trust Fund (MSTF):** While retained in name with a \$20 billion cap, the NDAA version removes the dedicated funding mechanisms (e.g., tonnage taxes, duties, vessel penalties). The Fund will now rely on annual appropriations, creating uncertainty around long-term funding stability.
- **Cargo Preference:** Civilian agency cargo preference requirements are increased from at least 50% to 100%.
- **Tax Provisions Removed:** All Title VII tax-related provisions from the original SHIPS Act were excluded due to jurisdictional constraints.
- **Strategic Commercial Fleet (SCF):** The definitional section is omitted, though references remain—this will likely require correction in conference.
- **Shipbuilding & Workforce:** Programs such as the Commercial Shipbuilding Infrastructure Program (CSIP), Federal Ship Financing improvements, and mariner workforce initiatives are included, though in some cases modified or relocated within the NDAA.

Bottom line: The inclusion of the SHIPS Act in the NDAA represents meaningful progress toward strengthening U.S. maritime capacity—particularly in shipbuilding, workforce development, and national security. However, the shift to an appropriations-based funding model for the MSTF introduces significant uncertainty, and several key policy and tax elements remain unresolved.

Next steps: The Senate Armed Services Committee reported its own FY 2027 NDAA (S. 4784) on June 15, 2026, but Senate floor consideration has been delayed. When the Senate acts, differences between the two chambers will be reconciled in conference. Key issues to watch include restoration of a dedicated MSTF funding mechanism, resolution of the SCF cross-reference problem, whether the cargo-preference increase survives Senate review, and whether tax provisions move in a separate legislative vehicle.

Please review the [linked analysis](#) for a more detailed breakdown. We will continue to track developments closely and keep you informed as the process moves forward.

“Sonic Sea” Released for free viewing on You Tube

In 2016, CSA worked with our colleagues at the Natural Resources Defense Council (NRDC) and many others to develop a film, Sonic Sea, on noise in the oceans from a number of sources including military, E&P seismic, and commercial shipping. Narrated by Rachel McAdams and featuring Sting, it follows the stories of a number of environmentalists and scientists including Ken Balcomb who solved the mystery of a mass stranding of whales in the Bahamas.

Sonic Sea premiered on Discovery Channel in 2016 and went on to win the Emmy Awards for Outstanding Nature Documentary and Outstanding Music & Sound. Over the past decade, the film has been screened around the world at thousands of universities and schools, government agencies, museums, aquariums, and industry and community groups, and it has sparked real change. Previously the film was available for purchase on You Tube.

In honor of Ken Balcomb who passed away in 2022, the producers have now made the decision to make it available at no cost. The one hour film is well worth the time to view it and may be accessed on YouTube!

You can also access a social media toolkit here. The film’s website includes a classroom discussion guide, extra video content, and actions all of us can take to protect marine life.

Sonic Sea was produced by the Natural Resources Defense Council (NRDC) and Imaginary Forces in association with the International Fund for Animal Welfare (IFAW) and Diamond Docs. It was made possible by the Faucett Catalyst Fund and the Marisla Foundation. Our partners at Discovery were John Hoffman, Executive Producer and Jon Bardin, Supervising Producer.

CSA was proud to be a small part of this endeavor which highlights the impacts of sound in the oceans on living marine resources and which ultimately led to

international efforts to reduce sound from a variety of sources including the current work at IMO on underwater noise from commercial shipping.

IMO 2025 International Maritime Prize Awarded to Mr. Jeff Lantz

The members and staff of the Chamber of Shipping of America congratulates Mr. Jeff Lantz on his selection as the recipient of the 2025 International Maritime Prize. Jeff was nominated by the US government and was endorsed by the IMO Council on July 7th. The US government highlighted his long and distinguished career and technical expertise during his over two decades of service advancing the mission and objectives of the IMO and ILO. Prior to his retirement, Jeff served as the USCG Director of Commercial Regulations and Standards following a long career as a uniformed USCG officer, retiring as a Captain. Jeff also served as Chair of the IMO Council from 2009 to 2017. Jeff has been a friend of the industry for many years focusing on collaboration with the maritime industry on a number of regulatory issues. Thank you for your service, Jeff and congratulations on a job well done!

