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Transportation Emissions

New Report Warns Global Shipping Industry is Falling Behind Climate Targets

A new *Climate Action in Shipping* report on the decarbonization of the shipping industry has warned that the sector is not on track to meet its internationally agreed-upon targets for zero emission fuel adoption. The 2024 edition, titled *Progress Towards Shipping's 2030 Breakthrough,* found that the International Maritime Organization's (IMO) goal to have scalable zero emission fuels (SZEFs) comprise 5 to 10 percent of all shipping fuels by 2030, will not be met unless policymakers, fuel suppliers, and the shipping industry take significant and prompt action.

The report tracks industry progress towards decarbonization across five "system change levers:" supply, demand, finance, policy, and civil society. It is authored by the Global Maritime Forum's Getting to Zero Coalition, the University College London Energy Institute, and the United Nation's Race to Zero campaign. The authors classify the supply of SZEFs as "partially on track" due the growing number of projects being developed to sustainably produce hydrogen, ammonia, and methanol, which are generally considered to be alternative fuels the most promising for ships. However, they state that corresponding demand is "off track" due to a lack of vessels capable of using those fuels currently on order, and the long lead time associated with new ship construction. Policy and civil society are both deemed "partially on track" due to the potential impact of upcoming international negotiations regarding the pricing of greenhouse gas (GHG) emissions and the maritime industry's progress increasing the visibility of issues such as equity and the lack of seafarer training. However, the authors note that the stakeholders still need to take concrete action to turn these promising conversations into results. Lastly, finance was downgraded from "partially on track" in last year's report to "off track" this year due to a slowdown in funding for zero-emission fuel-compatible vessels combined with an increase in funding going towards conventional fossil-fuel ships.

In December 2024, the U.S. Department of Energy (DOE) released <u>An Action Plan for</u> <u>Maritime Energy and Emissions Innovation</u> which discusses strategies to reduce emissions in the U.S. maritime industry to support the goal of economy-wide net-zero The **Alert** newsletter provides monthly updates on transportation and air quality planning activities within the Delaware Valley.

March 2025

Save the Date

Monday

March 31, 2025

DVRPC New Jersey Transportation and Community Development Initiative

Application Period Closes

For more information visit: https://www.dvrpc.org/tcdi/

Wednesday

April 30, 2025

US DOT Maritime Administration Port Infrastructure Development Program

Applications Due

For more information visit: www.maritime.dot.gov/PID Pgrants

GHG emissions by 2050. The plan states that ocean-going vessels account for 3 percent of global GHG emissions today, and, with global seaborne trade expected to grow significantly, that figure could be as much as 17 percent by 2050 under a business-as-usual scenario.

Most large vessels use heavy fuel oils (HFOs) for their main engines with distillate fuel oils, such as diesel, being used for auxiliary power. According to the <u>U.S. Energy Information Administration</u>, HFOs are residual fuel oils. This means that they the among the heaviest useful products that can be extracted from crude oil once lighter and more valuable products such as gasoline, kerosene, and diesel have been boiled off. In other words, HFOs are the bottom of the barrel even among fossil fuels but are still used because they are widely available and inexpensive.

Despite the economic and technical challenges, the market for alternative marine fuels is growing somewhat. DOE's Action Plan states that while 92.6 percent of the world's fleet by gross tonnage still uses conventional fuels, about half of new ships on order are capable of using at least one "non-conventional fuel." However, among ships in operation and on order, the most common "non-conventional fuel" is liquified natural gas (LNG). LNG is still a fossil fuel, and according to DOE, "provides only modest GHG reductions... However, LNG dual-fuel engines can potentially be retrofitted to operate on methanol or ammonia in the long term and can use RNG (biomethane and e-methane) when they become available, which makes LNG-powered vessels an attractive transitional technology."

Besides LNG, the most popular alternative fuel by number of vessels on order is methanol. It is a form of liquid alcohol which DOE describes as "likely to be a key fuel in the decarbonization of both harbor craft and [ocean-going vessels]" in part because it is already produced and available in large qualities throughout the world. However, while methanol, as well as other alternatives being researched such as ammonia and hydrogen, have the potential to be produced renewably; currently they are often produced using carbon-intensive processes.

Funding Opportunity

Pennsylvania Department of Environmental Protection Opens RISE PA Grant Program to Lower Industrial Emissions

On February 26, the Pennsylvania Department of Environmental Protection (DEP) announced it was accepting applications for the first round of the Reducing Industrial Sector Emissions in Pennsylvania (RISE PA) grant program. The program will support industrial decarbonization by funding projects that reduce emissions and improve energy efficiency. Grants are available for companies that own or operate industrial facilities, including manufacturing facilities, steel mills, natural gas and oil systems, and coal mines, in Pennsylvania. While a wide range of projects may be eligible for RISE PA funding, the press release from DEP states that prospective projects must: "Benefit communities near industrial sites that have higher rates of toxic air pollution;" "achieve greenhouse gas emission reductions that are long-lasting and certain;" and "incorporate high labor standards, emphasize job quality, and support equitable workforce development." The press release also mentions that "Examples of eligible initiatives could include installing energy-efficient heat recovery systems to reduce the energy required to heat or cool an industrial facility, electrifying an industrial plant by swapping out diesel-powered generators with equipment that runs on electricity, and capturing coal mine methane from mining operations."

The \$396 million RISE PA program is made possible by the federal Environmental Protection Administration's (EPA) Climate Pollution Reduction Grants (CPRG) Program which was established by the Inflation Reduction Act of 2022. According to a <u>statement</u> from Governor Josh Shapiro, federal funding for RISE PA was part of the over one billion dollars made temporarily inaccessible to the Commonwealth by the federal funding freeze earlier this year, but as of February 24, the appropriated funds have been made available to DEP.

Projects seeking funding are categorized into one of three tracks based on their total project costs: small-scale, medium-scale, or large-scale. The small-scale track funds projects between \$50,000 and \$1 million and is only available to applicants that qualify as small to mid-sized manufacturers (SMMs), meaning that have fewer than 500 employees at the project site or company. SMMs are allowed to apply to medium and large-scale tracks if their project exceeds \$1 million, but non-SMM applicants cannot apply to the small-scale award track regardless of project size. Besides the additional applicant requirements, the small-scale award track also differs from the others by being administered by the Pennsylvania State University's Pennsylvania Technical Assistance Program (PennTAP) rather than DEP directly. As part of the application process for the small-scale award track, PennTAP will work with SMMs to perform energy and operational assessments to identify opportunities for waste reduction and energy-efficiency products at no cost to the applicant.

Applications are due by Friday, August 29, 2025. For more information and to apply visit <u>www.pa.gov/agencies/dep/programs-and-services/energy-programs-office/rise-pa.html</u>





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