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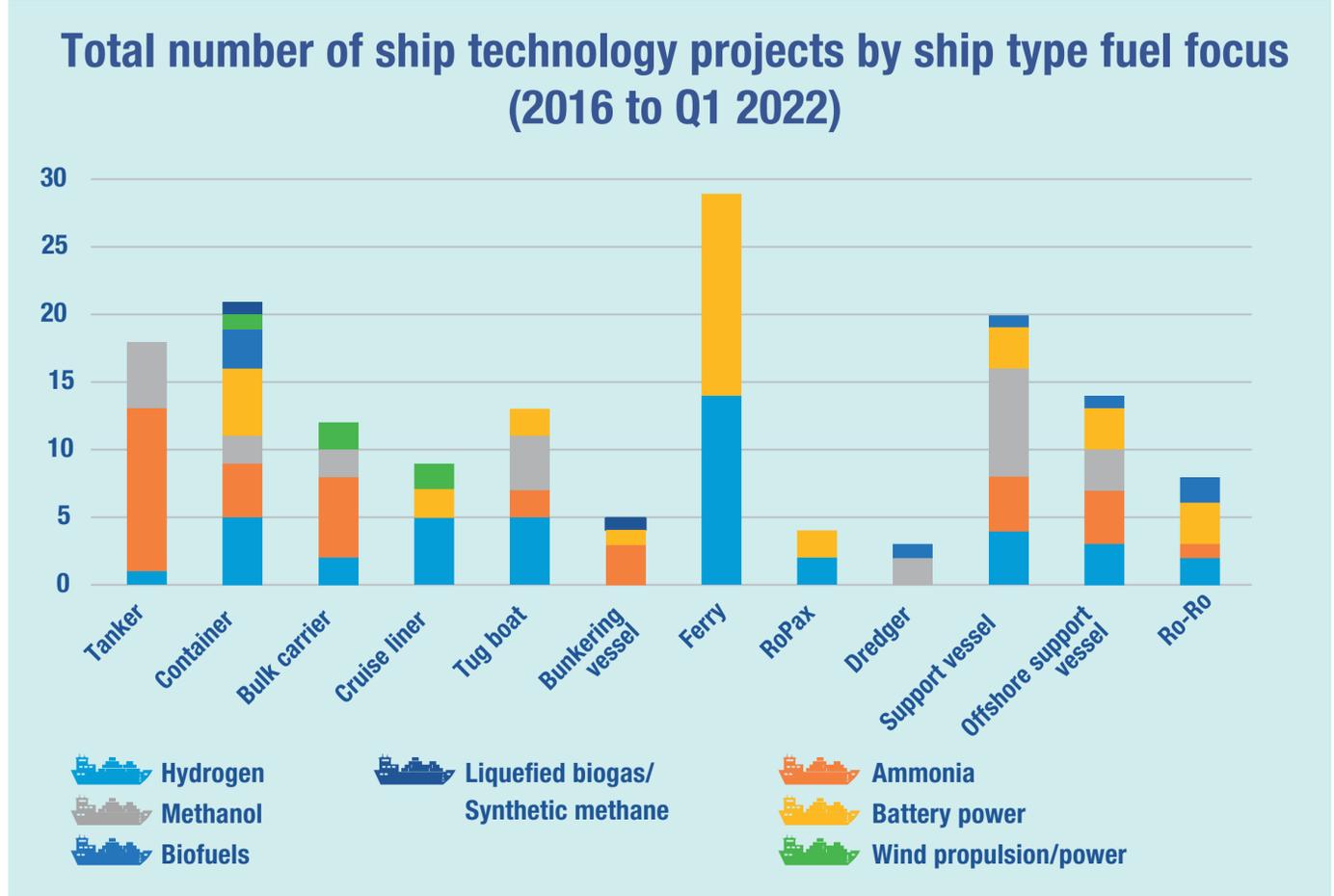
ARE MARITIME CLIMATE TARGETS OFF COURSE?

There's a dire need to clean up transoceanic shipping, but the technology isn't keeping up with the demand.

BY JEFFREY WINTERS

In September 2022, a report by the consultancy UMAS and funded in part by Lloyd's Register and the World Economic Forum looked at the progress toward one near-term goal: converting 5 percent of the volume of fuel for international shipping be made up of "scalable zero-emission fuels." These so-called SZEFS are alternatives to bunker and diesel fuel and span a wide range, everything from biofuel and methanol to hydrogen, batteries, or even wind power. The report, *Climate Action in Shipping: Progress towards Shipping's 2030 Breakthrough*, assessed readiness and stumbling blocks toward reaching zero-carbon goals.

Focusing on the technology and supply domain, where engineering will make the biggest difference, the report identifies 10 key actions needed to reach the 5 percent mark and found that progress was sharply divided. "Most industry actions are ascertained as not being on track," the report stated, "with the international and national public policy/NGOs actions being either fully on track or at least partially." It's critically important to move from pilot projects to production—and to build the infrastructure to support zero-emission shipping. The chart below shows where the industry is moving forward—and where it is off course.



ACTION	STATUS	2030 BENCHMARK
Cross-industry collaboration to develop smaller zero-emission ships	On Track	20 collaborations (by 2025)
Develop bunkering guidelines for SZEFS	On Track	
Ports on at least three continents set out decarbonization strategies and pathways to zero carbon bunkering	On Track	20 key ports have SZEFS availability
Key technological developments in maritime fuel cell technologies take place	On Track	Fuel cell alternatives to internal combustion engines become readily available
Large-scale maritime demonstration projects to demonstrate zero viability	Partially on Track	10 projects in operation
Government-energy industry collaboration to scale up SZEFS production	Partially on Track	Hydrogen production equals 0.60 EJ, or 5 percent by 2030
Key shipping industry actors commit to zero emissions by 2050	Off Track	All new orders SZEFS-ready
Develop large scale zero-emission fuel production facilities for maritime SZEFS demand	Off Track	At least 40 large production facilities totaling 40 GW principally for shipping
Majority of international shipping is zero-carbon	Off Track	More than half of all fuels are SZEFS (by 2050)
Develop small-scale green-zero emission fuel production facilities for maritime SZEFS demand	Off Track	At least 170 small production facilities totaling 17 GW solely for shipping

Source: *Climate Action in Shipping: Progress towards Shipping's 2030 Breakthrough*