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Volume 36 • Number 3

Marine News

MARCH 2025

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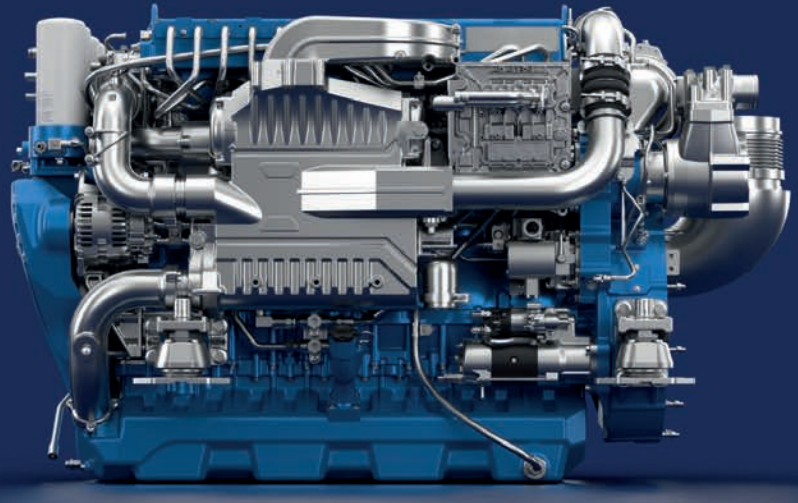

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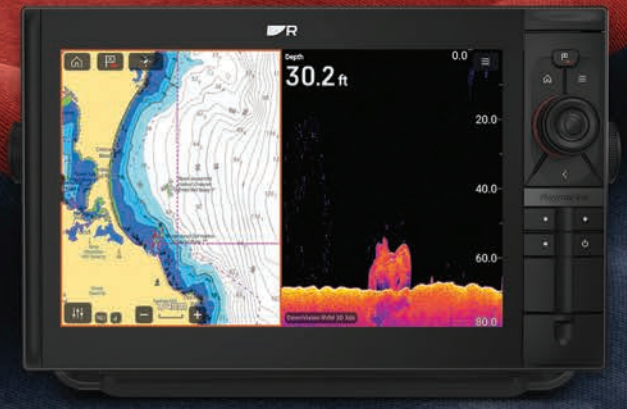

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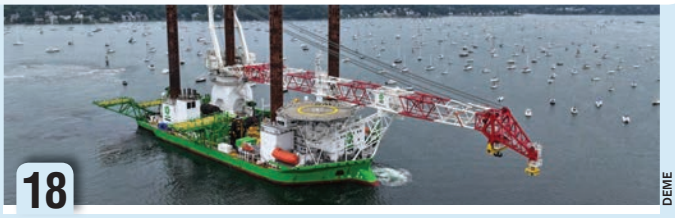

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Editor's Note

Joseph Keefe, Editor,
keefe@marinelink.com

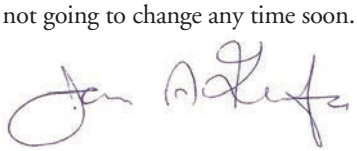
The final two months of 2024 and the first two in 2025 that followed were, in a word, a whirlwind for me. I could very well be talking about the recent elections, but instead, I reference the renewed privilege of being trusted at the helm of ***MarineNews*** after a five-year hiatus in retirement. The work is never easy, nor boring. At the same time, my enjoyment in seeing the finished product never ends. As I pass the baton back into better hands, [my] long-suffering readers should know that I intend to continue contributing to this brand; as needed and as directed by the publisher. I look forward to it.

This edition of ***MarineNews*** is particularly strong; ticking all boxes on the editorial calendar with impactful submissions, and a raft of information which will no doubt strengthen your brand, products and services. Maritime attorney **Jeff Vogel** returns to our pages this month with a tightly woven synopsis of what's happening inside the Beltway. And, the whirlwind there is spinning particularly fast these days. There is much emphasis in the so-called mainstream media about the impacts of DOGE and the new President's policy changes on the general economy. As Mr. Vogel shows us, the impact to the collective domestic waterfront is, and promises to be even more impactful.

Separately, and no less important, our feature article is based in part on an unusually candid interview with **Kasper Karlsen, Global Chief Operating Officer of the Svitzer Group.** Svitzer doesn't operate a single vessel in the Jones Act arena, but what their 4,000 employees do (and how they do it) on board 456 far-flung boats located in 141 ports and 37 countries around the globe, in a word, matters. Domestic mariners and operators of our impressive fleet of ~4,000 workboats can, and should take notice. The story starts on page 26.

Regular ***MarineNews*** contributor **Rhonda Moniz** is back this month, reporting on the enormously vital U.S. oceanographic research community, which depends on a complex network of ships and institutions for scientific discovery at sea. The University-National Oceanographic Laboratory System (UNOLS) is the central organization that provides scientists with access to advanced research ships and technology to explore the world's oceans. The challenges of keeping those ships afloat and in compliance is daunting. Follow along as Rhonda tells us why.

As always, no issue of ***MarineNews*** is complete without our long-running INSIGHTS feature. AWO President & CEO **Jennifer Carpenter** this month weighs in on the onerous California 2022 amendments to the Commercial Harbor Craft rule, a move that industry leaders, including AWO's Carpenter, have called both "draconian and dangerous." They are spot on. Turn the page to find out why. Meanwhile, and for our domestic waterfront, the New Year's first quarter has been nothing short of a whirlwind. That's not going to change any time soon. Looking ahead, you can keep abeam of new developments right here in these pages. I will be here, reading – and writing – right alongside you.



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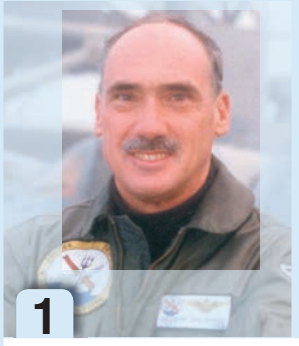

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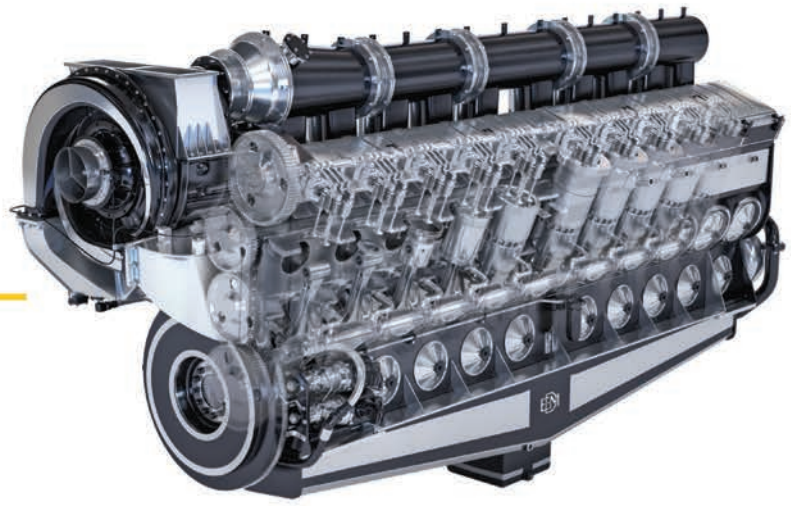
Marine Systems, Inc.



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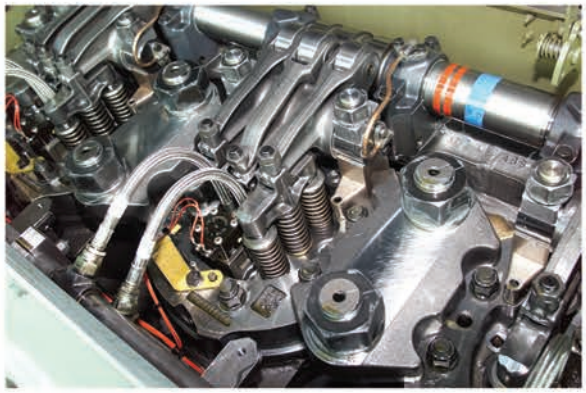

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By the Numbers

U.S. COAST GUARD'S 2023 RECREATIONAL BOATING STATISTICS

The U.S. Coast Guard in mid-2024 released its 65th annual (2023) Recreational Boating Statistics Report. There were 564 boating fatalities nationwide in 2023, continuing a downward spiral that has continued since 2016. This is good news; almost a 20% drop in just eight years; and a 17% drop since 2001. Moreover, and since 2001, injuries are down markedly (almost 50%), as are total accidents (60%). Beyond the joy in a markedly reduced death rate, you ask, *"Why should I care? I'm [pick one] a brown water mariner, an inland towboat operator and/or a passenger vessel or ferry operator on U.S. domestic waters."*

For starters, recreational mariners are typically do not receive anywhere near the kind of training afforded to commercial mariners. That said; this recreational demographic involves a whopping 11,546,512 hulls. Hence, the +/-40,000 commercial vessels that share the same harbors, coastal and inland waterways on a daily basis need to be aware who they are dealing with, and an elevated domain awareness as to the risks involved thereof.

It was (retired) U.S. Coast Guard Commandant **Thad Allen** who put it best when he told ***MarineNews*** long ago, the biggest issue with recreational boaters was that "the general public understands that driving an automobile is a privilege, but at the same time, they consider being able to drive a boat as a basic right." Unfortunately, this hasn't changed.

Since ADM Allen issued that advice, efforts have been made to improve boater safety. The USCG annually does an admirable job in benchmarking this important, far-ranging marine sector. So, how are we doing? The numbers don't lie, but they do need to be organized properly to have maximum impact. That's where ***MarineNews*** comes in. **Table 1** gives you the current – and historical snapshot:

In 2023, navigation rules violations were a contributing factor in 53% of accidents, 34% of deaths, and 60% of injuries. That's because only 15% percent of deaths occurred on vessels where the operator had received a nationally-approved boating safety education certificate. Sure, the Coast Guard recommends that all boaters take a boating safety course that meets the National Boating Education Standards prior to getting out on the water. Today, just six states do not require training. That's the good news. But requirements vary widely from state-to-state, touching upon many variables, including date of birth. On the other hand, the most recent safety numbers means that they are making progress. Let's hope so.

The easy conclusion to make is that some sort of federal, mandatory training for all would go a long way to preventing recreational accidents, but that hasn't necessarily proven to be true in the commercial sectors. Implementing such a mandatory scheme, especially at a time when de-escalation of regulatory regimes is the rule, would likely be met with robust resistance. Remember that in the United States, general consensus is that individual states have the right to govern commerce on their own waterways. That's why we have individual state pilotage schemes; not some wide-ranging federal system.

On the commercial side, the catchphrase "Standards of Training, Certification, and Watchkeeping" or STCW has become the accepted panacea for improving safety underway. This costly, time-consuming training is never ending and viewed by many as an overhyped, underperforming solution. Similarly, a review of a half-decade of safety performance on the nation's inland waterways under the Coast Guard's so-called subchapter M towboat rules shows little if any improvement in the towing industry's safety signature.

Table 1: By-the-Numbers, **Recreational Boating in 2023 looked something like this:**

1: the number one leading known contributing factor in fatal boating accidents is Alcohol.
4.9: The fatality rate per 100,000 registered recreational vessels, down from 5.3 in 2018.
19: Percent of accidents involving personal watercraft, exactly the same as recorded in 2018.
17: Percent of fatal boating accidents where alcohol was leading factor, down from 19% in 2018.
63: Millions of dollars in property damage, up from $46 million in 2018. Merely a reflection of inflation?
44: Percent of accidents involving motorboats of any kind, down from 50% in 2018.
75: Percent of fatal boating accidents where the victims drowned. This number remains steady.
75: Percent of deaths where operator did not receive boating safety instruction. This number unchanged.
87: Percent drowning victims who weren't wearing a lifevest (this number is unfortunately rising).
2,126: Number of Recorded Injuries – down 15 percent from those recorded in 2018 (2,511). Good news!
3,844: Number of recorded accidents – down significantly from 4,145 in 2018. More good news!

If anything has been proven to work – and work well – in promoting safety and reducing accidents, it has been the Coast Guard's 35-year quest to eliminate drug and alcohol abuse by professional mariners. Sadly, it is still common for recreational waterway users to pack up the cooler with beer for a day of fun on the water. Predictably, the number one leading known contributing factor in fatal boating accidents is Alcohol.

But where does the most risk present itself, especially in terms of recreational boaters sharing waterways with their commercial, licensed brethren? Funny you should ask. **Table 2** lays out the top 10 destinations for boat registrations, and not coincidentally, the same for recreational vessel fatalities, all in a historical trending document.

Fully 54% of all recreational vessels reside in just 10 states, accounting for 45% of all fatalities. And, it shouldn't come as any surprise that Florida, with the most registered vessels, and the longest boating season also leads the league in annual fatalities. Even one injury, death and/or accident is too many. The numbers say that safety is increasing, and faster than the number of recreational hulls is declining. Since 2001, the number of boating deaths has decreased about 17% on an annual basis. Injuries are down an impressive 50%, as are total annual accidents (-40%). But, then, the hull count is also down 10% during that same time frame. **TABLE 3** is an excellent snapshot of what is happening, nationwide.

When it comes to recreational boating safety, size matters. Where the length of the vessel was known in 2023, 4 of every 5 boaters who drowned were using vessels of less than 21 feet LOA. The fleet size is decreasing dramatically over time. In fact, 10 percent fewer registered recreational hulls were on the water in 2023 than were recorded in 2001. In the 22 years that followed, 1.3 million recreational hulls went away. That has to count for some of the decrease in deaths, accidents and injuries. Collisions (w/vessels, objects, groundings) were the most frequent first event in accidents, attributing to 56% of accidents, 24% of deaths, and 53% of injuries. Digging deeper; operator inattention, improper lookout, operator inexperience, excessive speed, and machinery failure ranked as the top five primary contributing factors in accidents. Add alcohol, the NUMBER ONE cause of contributing factors to all boating accidents, shake thoroughly, and you've got a recipe for disaster.

A final mention for professional, commercial mariners everywhere: The variables above are excellent reasons to sharpen your bridge watch, post another lookout and make sure the Radars are working correctly. Overreliance on electronics and technology has led to a degradation of watchkeeping skills. Hence, you'll want to glance up from the video displays and look out the window once in a while. That's because, despite a clear improvement in recreational boating safety performance, there is an excellent chance that the inebriated weekend boat driver off your port bow won't be yielding the right-of-way.

TABLE 3: Nationwide Trends

	Injuries	Deaths	Accidents (*)	Number of Hulls
2001 (High Year)	4,274	681	6,419	12,876,346
2018 (last MN analysis)	2,511	633	4,145	11,852,969
2023 (latest data)	2,126	564	3,844	11,546,512
Difference (change / since 2001)	*(2,148)*	*(117)*	*(2,575)*	*(1,329,834)*
PCT Change	*-50%*	*-17%*	*-40%*	*-10%*

(*) In 2001, a rule change increased the threshold of when an accident needs to be reported, and when it does not. Source: U.S. Coast Guard

TABLE 2: Top 10 Boat Registration States & Fatality Rates

	2023		2018		2017		2016	
State / Totals	**Boats Registered**	**Deaths**	**Boats Registered**	**Deaths**	**Boats Registered**	**Deaths**	**Boats Registered**	**Deaths**
USA (total)	11,546,512	564	11,852,969	633	11,961,568	658	11,861,811	701
Florida	922,915	56	925,141	57	918,255	66	905,298	70
Michigan	815,317	21	795,374	22	798,544	20	794,137	38
Minnesota	811,085	9	819,317	14	825,658	14	817,560	17
California	672,103	33	670,102	34	745,641	50	697,412	47
Wisconsin	611,024	28	614,750	21	624,353	25	611,240	20
Texas	559,355	33	562,424	38	565,422	63	573,425	53
S. Carolina	366,322	24	551,477	16	534,726	13	518,269	23
Ohio	649,051	10	573,050	17	541,898	20	505,082	12
New York	430,569	18	444,103	20	444,710	22	448,480	22
N. Carolina	339,851	20	359,361	30	358,171	15	367,225	23
Top 10 AVG	**617,759**	**~ 25**	**631,510**	**~ 27**	**635,738**	**~ 31**	**623,813**	**~ 33**
TOTALS / PCT of fleet	**6,177,592 (54%)**	**252 (45%)**	**6,315,099 (53%)**	**296 (47%)**	**6,357,378 (53%)**	**308 (47%)**	**6,238,128 (53%)**	**325 (46%)**

Source: U.S. Coast Guard (2016-2018 & 2023 data)

View the 2023 Recreational Boating Statistics at: ***https://uscgboating.org/library/accident-statistics/Recreational-Boating-Statistics-2023-Ch2.pdf***

Column

Infrastructure Watch

Time to Remedy Inefficiency in Executive Order 12322

By Tracy Zea, President/CEO, Waterways Council, Inc.

The members of Waterways Council, Inc., (WCI) the national organization that advocates for a modern, efficient, well-maintained system of ports and inland waterways, recently met in Washington, DC with Members of the 119th Congress to discuss WCI key and related priorities for 2025.

An ancillary issue that WCI is looking to address is the removal or modification of an antiquated 1980s Executive Order (EO) 12322 that mandates any federal or federally assisted land or water resources project proposal must first be submitted to the Office of Management and Budget (OMB) for review before being presented to Congress for approval.

Some background is required: The U.S. Army Corps of Engineers' Civil Works mission is to develop, manage, and protect the Nation's water resources to "support national security, democracy, and prosperity." Program areas include Flood Risk Management to reduce the risk of flood damage; Navigation; Environmental Restoration to protect and restore aquatic ecosystems; and Emergency Response to provide disaster relief services.

The Corps was created in 1824, when President James Monroe signed into law a bill to improve navigation on the Ohio and Mississippi Rivers. And while Corps' projects are large and complex, the Civil Works mission has evolved over time to incorporate new regulations, policies, shifts from political pressures, and unfortunately, bureaucracy that is often cumbersome. And infrastructure projects with such colossal impact on the U.S. economy and communities are sometimes controversial and politically sensitive.

To offer transparency and promote public involvement, Corps' water resources projects are developed and recommended to Congress for authorization after an extensive public planning process that ensures the project is economically justified, environmentally acceptable, and technically achievable.

The modern-day Corps Civil Works program is often connected with the Reagan Administration, which made seismic policy changes in the 1980s that reformed how projects are justified, how they are funded by adding cost-share requirements from non-federal partners, how conservation is considered in the process, and how oversight by the Administration's OMB became integral.

But President Jimmy Carter mistrusted the Corps' ability to recommend projects that were economically justified and to protect the environment and this sowed the seeds for policy changes to come. Proving the phrase "all politics are local," the project at the center of President Carter's attention was a proposed dam project on the Flint River in his home state of Georgia. In 1977, he announced a major review of 320 water resource projects, after questioning their compliance with environmental laws and doubting that many projects remained justified under the existing economic conditions. Ultimately, Carter suggested eliminating funds for 19 water resources projects, sparking backlash from Congress and a debate on whether certain water projects were worthy of investment from American taxpayers.

Following Carter's defeat in 1980, the incoming Reagan Administration maintained the previous Administration's priority to reform the Corps of Engineers. And in 1981, Reagan issued Executive Order 12322 to mandate that OMB review, prior to Congress, any federal or federally assisted land or water resources project proposal.

But over the last several decades, OMB has broadened its interpretation of the EO to withhold nearly all information, including outyear funding needs, up-to-date project capabilities, approval of innovative acquisition strategies, and other information critical to Congressional decision-makers.

While perhaps once intended to improve coordination and remove duplicative processes, the EO has now effectively created an unnecessary choke point for basic, fact-

In 1981, President Reagan issued Executive Order 12322 to mandate that OMB review, prior to Congress, any federal or federally assisted land or water resources project proposal.

Image Public Domain/DVIDS

based data and information. This information is often not budget-sensitive or based on policy; instead, it allows OMB to overrule the judgement of technical experts, economists, scientists, and professional engineers. An example of over-reach of government, there are real-world consequences of mislabeling almost all basic, factual information as "budget sensitive" by OMB which results in negative and sometimes devasting impacts on the Corps' relationships with their project partners and the general public. The lack of transparent and objective information, coupled with inconsistent communication, has eroded trust in the Corps' ability to execute its water resources projects effectively. Today, it often takes decades for the Corps to complete a single project. As timelines slip and cost overruns continue to grow, our Nation cannot afford this unnecessary bureaucracy. In many ways, this 44-year-old Executive Order has unfairly contributed to today's view of the Corps not being more efficient in building critical navigation or other water resources projects. **WCI is urging that the Trump Administration revisit EO 12322 and address the excessive bureaucracy that delays the economic benefits and access by shippers to world-stage competition that results from modern, efficient waterways' infrastructure.**

Insights

Jennifer Carpenter, AWO

NAVIGATING A REGULATORY STORM: CALIFORNIA STRIKES AGAIN

Onerous emissions rules are certainly no stranger to the maritime sector at large, arguably none more so than those that work and live in California. The U.S. West Coast state is a global shipping hub, with a coastline spanning more than 800 miles and 11 major ports. It also is known for its penchant for creating and enforcing maritime rules, rules that on occasion transcend the technology and the fiscal means to enact them. Enter **Jennifer Carpenter**, *President and CEO of the* **American Waterways Operators (AWO)**, *the national advocacy group for the tugboat, towboat and barge sectors. In a recent interview, Carpenter discusses the impact of California's controversial amendments to the Commercial Harbor Craft rule, the broader implications for maritime operators, and AWO's top agenda items under the new Trump administration.*

The Regulation

The maritime industry is facing a significant challenge on the West Coast as new regulations threaten to upend operations, drive up costs, and exacerbate existing supply chain disruptions. At the heart of the issue is California's 2022 amendments to the Commercial Harbor Craft rule, a move that industry leaders, including AWO's Carpenter, have called both "draconian" and "dangerous." These regulations, which aim to enforce stringent emission standards on harbor craft, have been met with fierce opposition from industry stakeholders, citing safety concerns, technological infeasibility, and severe economic consequences.

Carpenter was clear that it is California regulators, rather than the state legislature, that took the lead in mandating new emissions technology on harbor craft, including tugboats that play a crucial role in guiding ocean-going vessels in and out of ports. It was the impetus of Carpenter's recent letter to Governor Gavin Newsom for a reprieve.

The problem? The mandated equipment simply does not exist for maritime use. According to Carpenter, maritime labor, vessel owners, and even the U.S. Coast Guard have voiced strong concerns about the potential hazards posed by these requirements. "Mariners' lives could be at risk, vessels could be at risk of fire, and the environment could be at risk," she warned.

Despite bipartisan recognition in the state legislature that these regulations were impractical and unsafe, Governor Newsom vetoed a bill that sought to suspend the requirements until they were proven safe. As a result, the industry now faces an uncertain future, with operators struggling to comply with unattainable mandates.

An Emissions Reg Double Standard

Further frustrating maritime operators is the perceived regulatory inconsistency. While the California Air Resources Board (CARB) withdrew its request to enforce similar emissions rules for the trucking and rail industries, it pushed forward with its requirements for the maritime sector. Under the Clean Air Act, California must receive approval from the Environmental Protection Agency (EPA) to enforce such stringent emissions standards. In a controversial move, the EPA granted partial approval to CARB's harbor craft regulations in the final days of the Biden administration.

However, even this partial approval acknowledged issues

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Insights

Jennifer Carpenter, AWO

Image courtesy AWO

Watch the full interview with Jennifer Carpenter on *Maritime Reporter TV*, scan the QR code:

with the regulations. According to Carpenter, the EPA's attempt to strike a middle ground has done little to alleviate industry concerns. The process of petitioning for extensions is burdensome and costly, requiring operators to hire engineering firms to prove that compliance is impossible. Worse yet, California regulators have a history of disregarding engineering evidence in past disputes, leaving vessel owners in a precarious position.

The fallout is already being felt. A survey conducted by the Pacific Merchant Shipping Association found that 85% of its members reported shortages in tug availability. This shortage has led to delayed vessel departures, increased operational costs, reduced efficiency, among other problems. Uncertainty could result, too, in vessel owners being hesitant to invest in California operations, with some considering shifting their maritime assets elsewhere.

This could prove problematic for not only California, but the U.S. economy as a whole as tug operators serve as the backbone of maritime commerce, facilitating the transport of goods in and out of ports. If key players are forced out of the market by regulation, the entire supply chain will suffer.

Relief from Washington?

While California hashes out its regulatory web, Carpenter and AWO have there attention, too, firmly on the new Trump administration, which in and of itself presents both opportunities and uncertainties. The AWO sees three primary policy objectives as essential to stabilizing the industry: preserving the Jones Act, maintaining critical port and waterway infrastructure, and ensuring pragmatic, effective regulations that safeguard people, communities, and the environment without stifling innovation.

Carpenter and AWO are naturally a Jones Act defender, saying the Jones Act is a cornerstone of U.S. maritime policy, crucial for both national security and economic stability. Ensuring robust infrastructure for ports and waterways is equally vital, particularly as the industry contends with extreme weather events and shifting commerce patterns. Above all, the industry is advocating for regulations that strike a balance between environmental responsibility and economic viability.

Carpenter and the AWO remain committed to advocating for the practical solutions that balance environmental goals with operational realities.

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Column

Washington Watch

A Maritime Reflection on the First 30 Days

The first thirty days of the new Trump Administration have brought sweeping changes throughout the federal government. We take a pause to assess where things stand for maritime stakeholders and what may be coming next in Washington, DC, for our industry.

By Jeff Vogel, Shareholder, Cozen O'Connor's Transportation & Trade Group

A Maritime Directive

For those that work in the U.S maritime space, it is axiomatic to state that all aspects of the maritime industry are critical to our national security. U.S. flag vessels and merchant mariners not only support U.S. economic prosperity, but also build the key sea lines of communication to support military operations. Similarly, our ports and marine terminal operators provide the critical intermodal connection to provide the constant flow goods needed by our Nation and warfighters. Of course, our shipbuilding industrial base is essential to ensuring American power and influence throughout the world. However, for reasons that remain unclear, when discussing our national security within Washington, DC, the U.S. maritime industry often remains an afterthought.

Thankfully, that historic trend appears to be changing under the leadership of National Security Advisor ("NSA") Mike Waltz. There was resounding enthusiasm when President Trump announced the appointment of then-Congressman Waltz to serve as the NSA. In his time as the representative for Florida's 6th District, Waltz made it clear that he not only considered the maritime industry to be a critical part of our national security, but that he was ready to champion for additional government support. Notably, Waltz was one of the lead authors of the bipartisan, bicameral Congressional Guidance for a National Maritime Strategy, which aimed at developing a clear strategy to reinvigorate the United States as maritime nation to counteract China's influence over the world's oceans. In the report, Waltz stated, "We must act now, before it is too late, and make a once in a generation investment in the future of America's maritime power."

In his current role, Waltz appears to be carrying this message forward, establishing a maritime directorate that will be crucial to establishing – and implementing – a clear maritime strategy. This directorate unequivocally demonstrates the commitment of the President and NSA Waltz to integrating the U.S. maritime industry as part of the national security apparatus. This type of early and clear attention to our industry should yield significant opportunity for counteracting the years of neglect that have historically plagued U.S. maritime development.

Tariffs and Cargo

As predicted, tariffs have been a cornerstone of the first 30 days of President Trump's second term. The long-term impacts on cargo flowing through U.S. ports remains unclear, with additional tariffs and threats of reciprocity changing minute-by-minute.

The more immediate impact on the U.S. maritime industry, however, has been the freezing of programs administered by the U.S. Agency for International Development ("USAID"). Three food aid programs provide a critical cargo base for U.S.-flag carriers in international trade: Food for Peace (also known as "PL-480"), which is administered by USAID, and Food for Progress and McGovern-Dole, which are administered by the U.S. Department of Agriculture ("USDA"). At least 50 percent of the cargo generated by these programs is mandated to be carried aboard U.S.-flag vessels, pursuant to the Cargo Preference Act of 1954 (the "CPA 1954"). Under each of these programs, U.S. food is purchased through USDA (including wheat, sorghum, pulses, rice, corn, soybeans, and vegetable oil) and is transported to recipient nations, with African countries representing the largest recipients.

While Food for Progress and McGovern-Dole appear to have been restored, the future of PL-480 is far less clear, with the Administration signaling its intent to effectively shutter USAID. While USAID's track record of complying with the requirements of the CPA 1954 is far from perfect, the loss of PL-480 cargoes nonetheless would be a significant blow to many U.S.-flag operators, in addi-

tion to the accordant impact on U.S. farmers. There are, of course, pending legal challenges regarding the freezing of USAID operations and there may be alternative administrative measures for PL-480, such transferring the program to USDA, which has a history of not only complying, but exceeding, the U.S.-flag requirements of the CPA 1954.

Efficiency and Leadership

The reduction of the federal workforce is, of course, not restricted to USAID. The actions of the Department of Government Efficiency ("DOGE") have dominated headlines, with probationary worker terminations and deferred resignations reducing the workforce across federal agencies. The reductions are not limited to staff, as the Administration terminated Admiral Linda Fagan, the first female Commandant of the U.S. Coast Guard, on day one. A statement issued by the Department of Homeland Security asserts that Admiral Fagan "was terminated because of her leadership deficiencies, operational failures, and inability to advance the strategic objectives of the U.S. Coast Guard." Admiral Kevin Lunday assumed the duties of the Acting Commandant and a permanent Commandant is yet to be nominated by President Trump.

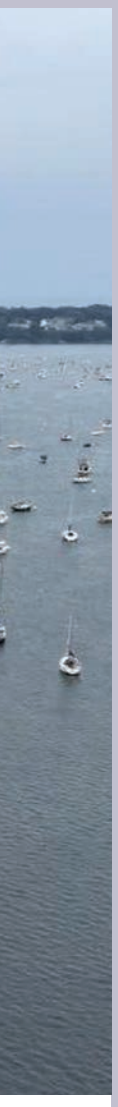
Other maritime agencies also face leadership vacancies, which is typical at the beginning of any new Administration. The Maritime Administration ("MARAD") is yet to have a Maritime Administrator nominated, nor has the President appointed a Deputy Administrator or Chief Counsel (which positions do not require Senate confirmation). The shortages within MARAD are not only at the top, as confirmed by a February 13th Government Accountability Office ("GAO") report entitled Maritime Administration: Actions Needed to Help Address Workforce Challenges. GAO found that MARAD had a 12.3 percent vacancy rate (116 vacancies out of 941 authorized full-time positions) in addition to facing further near-term challenges with 43 percent of the staff being retirement eligible in the next four years. If, as noted above, the Trump Administration is focused on rebuilding the U.S. maritime industrial base, it will need to be creative in doing so with a depleted MARAD staff. Additional reliance on partnerships with private industry, such as the Vessel Construction Manager model that continues to successfully deliver National Security Multi-Mission Vessels (as discussed in prior articles) may help to address the staffing deficiencies, while creating further commercial opportunities for maritime stakeholders. **Indeed, if the first 30 days are any indication, President Trump's second term could lead to a genuine rebirth of the U.S. maritime industry.**

DEME

Unwinding the Morass that is U.S. OFFSHORE WIND

In the last decade, changing U.S. Administrations have become increasingly tumultuous, as the swings in priorities and directives have a real, material impact on business. Read on for insights on the current and future of U.S. Offshore Wind.

By Barry Parker

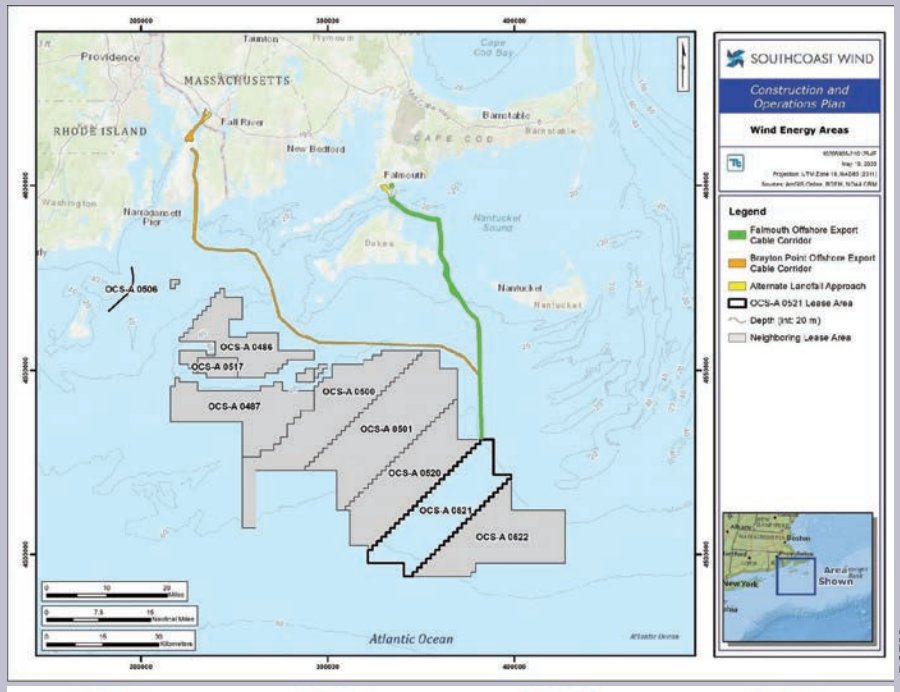


In the weeks preceding his late January inauguration, then President-elect Donald Trump referred to wind turbines (both onshore and offshore) as "garbage in a field" and described electric power produced through offshore wind as "…the most expensive energy ever…"

In the same briefing, Trump said "We're going to try to have a policy where no windmills are being built." In those waning days of the Biden administration, reports were emerging that New Jersey congressional Representative Jeff van Drew (Republican in U.S. House, representing a district including parts of the Jersey Shore) was drafting language for an "Executive Order", subsequently signed by President Trump, halting U.S. Department of the Interior (DOI) activity on offshore wind for at least six months, while a detailed study of its impacts would take place. New leasing of tracts on the Outer Continental Shelf (which precedes any development on projects) would be stopped completely.

Political appointments drive the leadership of Bureau of Offshore Energy Management (BOEM, part of DOI)- which oversees the offshore leasing process. Indeed, the DOI (under Trump appointee Doug Burgum) can certainly stymie BOEM's labyrinthine approval process for the components of projects previously given the green light. The law firm Holland & Knight (H and K), in a Feb 2025 advisory, said that: "President Donald Trump's Wind Energy executive order (EO) indefinitely withdraws all areas of the Outer Continental Shelf (OCS) from any new or renewed wind energy leasing activity. Though existing offshore wind leases remain valid, they are subject to review with the possibility of terminating or amending those leases."

The approvals process is a multi-year affair with twists and turns around environmental, site assessment and construction plans. Consider the lengthy times involved in of SouthCoast wind (which was given an "OK to proceed" in the waning days of the Biden administration, at end 2024) The project's winning lease sale bid, submitted by predecessor company Mayflower Wind, had occurred six years earlier-in late 2018. Initial requests for expressions of interest from potential bidders in the lease sale date back another eight years- to 2010, 14 years prior to the final go-ahead! All going well, starting in 2027, 2.4 GW of electricity could be produced from this project in waters south of Martha's Vineyard and Nantucket.



BOEM

BOEM

Lawyers at H and K, writing about the impacts on the approvals process, generally, caution that "Federal agencies cannot issue new approvals, rights of way, permits, leases or loans for onshore or offshore wind projects pending a comprehensive assessment and review of federal wind leasing and permitting practices, with no clear timeline for when this may occur."

When actual legislation is pointed at offshore wind, Executive Orders are not sufficient to change the trajectory. Offshore wind investment benefits greatly, on the financial side, from the Biden-driven Inflation Reduction Act, of 2021 (the IRA). A report from the Congressional Research Service (CRS) explains: "The primary federal tax provision supporting offshore wind is the energy investment tax credit (ITC). It provides a 30% tax credit for offshore wind projects that begin construction before January 1, 2026." The CRS report adds that: "Section 13502 of the IRA provides a new tax credit for the domestic production of wind components and related goods such as specialized offshore wind installation vessels. For offshore wind vessels, the credit is 10% of the sales price." Congressional action, in the form of new legislation, is required to undo provisions already in the law," H and K explains.

In the week following the Inauguration (and Executive Orders), a Project Finance publication from the international law firm Norton Rose stated: "Many people have been asking whether the freeze on disbursements affects tax credits under the Inflation Reduction Act. It does not. Tax credits are allowed by statute. They cannot be rescinded or denied by executive order. Any rollback would require action by Congress." In the same advisory, Norton Rose contemplated a different angle, musing that: "Many of the backers of the US offshore wind projects are large foreign-owned utilities and oil companies that have spent tens to hundreds of millions of dollars on the projects. If such projects were ultimately cancelled, some could have claims under bilateral investment treaties."

Edison Chouest SOV ECO EDISON working on Ørsted projects.

Ørsted

The one time goal of "30 by 30" (30 GW of wind generated electricity by 2030) is being dramatically sliced. On Jan. 21, 2025, one day after Trump's inauguration and the flurry of Executive Orders, analysts Rystad Energy offered that: "The US currently has around 2.4 GW of advanced-stage offshore wind developments that have reached final investment decision and are under construction, which are unlikely to be impacted by the order. Moderate risk amid the unfavorable investment climate is present for 10.5 GW of projects which secured necessary permits but have not reached investment decisions. The remaining 25 GW of early-stage projects are unlikely to see any progress under the <Trump> administration."

A number of projects that had not yet gained BOEM's imprimatur were completely scuttled in 2023 and 2024, due to purchasers of electricity being unable to commit due to rising costs and the inability of developers to successfully rebid. The long list of cancelled projects is well known; most recently, in early February, 2025, Shell pulled the plug on participation in the Atlantic Shores Offshore wind project (a joint project with EDF Renewables that had aimed to produce 2.8 gW of electricity), causing the State of New Jersey's Board of Public Utilities (NJBPU) to cancel the bidding process for a pending offshore wind solicitation.

Though the Biden years had seen forward progress on offshore wind (where project development times might be half a decade, or longer, as noted), actual activity in the sector, was still in its nascent stages. A presentation by the trade group Oceantic pegged the electricity actually being produced at end 2024 in commercial projects at 310 MW (a subset of the 2.4 GW in Rystad's reckonings).

Not surprisingly, the politics surrounding offshore wind are complicated. The offshore service industry generally benefits from actions friendly to offshore oil and gas ac-

tivity – and applauded Trump's Executive Order "Unleashing American Energy", setting the stage for a reversal of Biden moves to stymie leasing and development on the Outer Continental Shelf. But offshore wind has also presented opportunities for participants. Oceantic, in a November, 2024 presentation (held at an American Bureau of Shipping event in New Orleans) highlighted the importance of offshore wind to U.S. yards and vessel operators, pointing to $1.8 billion of "vessel orders and shipyard upgrades". Though existing production represents a small fraction of the 2.4 GW of electricity which Rystad sees as highly probably moving forward, the benefits to U.S. flagged offshore service vessels are already apparent.

Consider the Vineyard Wind 1 project in waters south of Martha's Vineyard and Nantucket, producing electricity since early 2024; a look at MarineTraffic.com, or other ship tracking websites, shows a cluster of service vessels. An end-2024 article by Jennifer Carpenter (President and CEO of American Waterway Operators, or AWO) and Ann Reynolds (Vice President at American Clean Power Association), appearing on the Real Clear Energy website, described the action succinctly: "the Vineyard Wind 1 project off the coast of Massachusetts uses a U.S.-built, crewed, and flagged Service Operation Vessel (SOV), the CADE CANDIES, from the Gulf of Mexico. The same project is also using tugs and barges, the NICOLE FOSS and the FOSS PREVAILING WIND, to bring offshore wind components out to the site. But it is not just those vessels. Guice Offshore's GO LIBERTY and Coast Line Transfers CAPT. LES ELDRIDGE are also supporting the construction. The SEACOR HAWK is helping commission Vineyard Wind 1's offshore substation, and the HORNBECK MYSTIQUE is installing the transmission cables."

Other projects are seeing Jones Act compliant vessels deployed; Revolution Wind (Ørsted and Eversource),

C-Innovation

though employing a host of non U.S. vessels, is seeing Edison Chouest's 2024 built ECO EDISON, described as "…first-ever American-built, owned, and crewed offshore wind service operations vessel (SOV)…" onsite; it is also slated for work at South Fork Wind (already producing 132 mW) and another project with construction set to commence in 2025- Sunrise Wind (off the eastern tip of Long Island). In an Ørsted release following the SOV's christening in May, 2024, Gary Chouest, President of Edison Chouest Offshore was quoted saying: "… several of our vessels supported the construction of the first utility-scale offshore wind farm, South Fork Wind Farm…" In the mid-Atlantic, Dominion Energy linked 2.6 gW Coastal Virginia Offshore Wind (CVOW) will utilize the U.S. built Wind Turbine Installation Vessel (WTIV) CHARYBDIS, which saw a milestone in February 2025 with sea-trials commencing following construction at the Seatrium shipyard in Brownsville, Texas.

The Trump Administration actions might be viewed against the bigger picture surrounding wind power from the waters off the U.S. coasts; existing projects are moving ahead, albeit tortuously, towards Rystad Energy's amalgam of 2.4 GW (highly probable) and 10.5 GW (moderate risk). Vineyard Wind 1 (the project where AWO detailed the vessel line-up) actually began producing electricity in early 2024 but slowed down mid-year due to issues with faulty turbine blades. These were resolved later in the year; the project also saw favorable court decisions in December, 2024, overcoming a pair of legal challenges from the fishing industry. Another project, In the waters of the "New York Bight", the 810 MW Empire Wind 1, continues to move forward after New York State committed to a power purchase deal. Equinor, in full control of the project (following a Spring, 2024 deal with oil major bp- previously holding a 50% stake), announced at end 2024 that it had "…now secured a project financing package of over $3 billion." At CVOW, monopile installation has been ongoing in 2024 and will continue into 2025 as CHARYBDIS comes online.

Even though Jones Act vessels have achieved some penetration into the wind sector, many of the boats working projects are registered outside of the United States. This situation (with undertones related to national security) has rankled operators of suitable Jones Act compliant vessels, who have, in some cases, struggled to compete with low cost foreign crewing.

One group representing vessel owning stakeholders, The Offshore Marine Service Association (OMSA), has had a long-standing interest in oil and gas, but has more recently become involved in wind as its members deployed their boats into the Northeastern waters. In a letter to its membership, OMSA described the Trump administration's Day 1 pause on new wind leasing as: "… a critical opportunity to reassess the industry's direction." In a statement circulated on Day 2 of the new administration, OMSA asserted that: "It's time to reset and prioritize American jobs and vessels…" OMSA's President, Aaron Smith, stated: "By addressing these systemic issues, we have an opportunity to ensure that offshore wind is delivering on its promise by creating jobs for American mariners, supporting U.S. shipyards, and reinvesting in the American economy."

During the Biden years, as offshore wind was gaining traction, OMSA had supported the American Offshore Worker Fairness Act legislation (AOWFA, introduced into the 118th Congress, in late 2023, by Louisiana's Senator Bill Cassidy as S.3038). The aim of the proposed legislation (which sought to amend portions of the Outer Continental Shelf Lands Act dealing with vessels working offshore) was to ensure that foreign flagged vessels working in U.S. offshore waters, including those serving offshore wind projects, employ American mariners or crew from the country where the vessel is registered- rather than employing workers from low-wage nations. The legislation as it was proposed, would have required these foreign mariners to comply with background check requirements applicable to U.S. mariners- including holding TWIC cards.

The jury is out on whether a resurgence in offshore oil and gas related exploration and production will occur and pull U.S. assets back into those trades. OMSA, based in New Orleans, is not objecting to offshore wind, per se, but, as projects move into their implementation phases, the organization hopes that the "benefits" flow back to the U.S. work force. "While offshore wind offers tremendous potential for economic growth and job creation in the U.S., OMSA agrees that over-reliance on foreign renewable energy companies, foreign vessels, and foreign mariners to build American offshore wind farms undermines these benefits and is deeply problematic," OMSA said in its January 21 statement.

Feature

What's in Your Workboat?

A closer look @ ACBL MARINER

American Commercial Barge Line last year welcomed its new flagship, the twin-screw towboat *ACBL Mariner*. Designed by **CT Marine** and built by **C&C Marine and Repair**, ACBL Mariner is truly a beast on the river, measuring 200 x 54-ft., propelled by a pair of **Louisiana CAT**-supplied **Caterpillar** C280-12 main engines that together produce 11,000 hp.

The engines are paired with two **Reintjes** WAF 6755 reduction gears from **Karl Senner, LLC**, while generator power comes from three **Caterpillar** 275-kw (kW) generators. The towboat is outfitted with **CT Marine** CT28-SL nozzles housing 124-in. diameter stainless-steel, five-blade fixed pitch propellers (the industry's largest) and features **Twin-DIFF** flanking and steering rudder systems.

With scale comes efficiency of operation, and according to Randy Chamness, ACBL's VP of vessel operations. "When you look at it at cost per ton mile and cost per operating hour, there's no vessel in the industry that will be able to match what this boat."

The numbers, by any metric, are impressive, as *ACBL Mariner* is able to push approximately 75,000 tons of cargo, pushing up to 46 loaded barges southbound and 56 barges northbound. [ACBL said it plans to expand the northbound tows to 64 barges under the right navigational conditions].

"When comparing this 11,000 HP class towboat to smaller 6,000 HP class towboats frequently used for main-line operations, this larger horsepower vessel will increase efficiency by 20% or more on both a cost per ton mile and CO2 emission per ton mile basis due to the increase in tow size and tonnage capacity," said Patrick Sutton, SVP, ACBL. With accommodations for a crew of up to 12, the vessel incorporates a floating, spring-mounted [**CT Marine SoftMOUNT**] superstructure for onboard comfort.

The M/V ACBL Mariner is the most powerful and capable towboat ever delivered to the U.S. inland river system. Turn the page for a full view – courtesy ACBL – of this amazing new towboat.

ACBL Mariner Main Particulars

• Length:	200 feet
• Width:	50 feet
• Draft:	11 feet
• Fuel Capacity:	135,000 gallons
• Shipyard:	C&C Marine & Repair
• Designer:	CT Marine & Hyperion Marine Group
• Engines:	Caterpillar 280-12
• Engine Supplier:	Louisiana Cat
• Reduction Gears:	Reintjes WAF 6755H
• Gear Supplier:	Karl Senner LLC
• Propellers:	Hung Shen, 124-in. dia.
• Kort Nozzles:	CT Marine CT28-SL [built by Rice]
• Fire Suppression:	Herbert Hiller
• Flanking Rudders:	CT Marine TwinDIFF
• Generators:	CAT C9.3
• Steering System:	Engine Monitor inc.
• Superstructure Isolation:	CT Marine SoftMOUNT
• Fender System:	Schuyler
• Search Lights:	Carlisle & Finch
• Electronics:	Furuno
• Winches:	Patterson Mfg.
• Rivermax Facewires:	Gemini


M/V ACB
Designed by CT Marine &
Vessel
& Ala
Generators
CAT C9.3
Fire Suppression
& Detection Systems
Herbert Hiller
Steering System
Engine Monitor Inc.
Propellers
Hung Shen
Kort Nozzles
CT Marine CT28-SL
Built by Rice
Flanking & Steering Rudders
CT Marine TwinDIFF™
Reduction Gears
Reintjes WAF 6755H
Main Engines
CAT 280-12


L Mariner
& Hyperion Marine Group
l Monitoring
rm System
ACBL
Search Lights
Carlisle & Finch
Wheelhouse Electronics
Furuno
Deck Winches
Patterson Manufacturing
ACBL MARINER
AMERICAN COMMERCIAL BARGE LINE
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MARINER
Rivermax Facewires
Gemini
Superstructure Isolation
CT Marine SoftMOUNT™
Fender System
Schuyler

All images © Svitzer

SVITZER:

THINKING GLOBALLY; PERFORMING LOCALLY

Operating one of the world's largest marine fleets of any kind, it is Svitzer's local footprint that speaks volumes for its diverse and far-flung workforce and assets. Strengthened by a multi-national team, providing value in more than three dozen countries, Svitzer stands out every day.

By Joseph Keefe

On 30 April 2024, Svitzer was listed on Nasdaq Copenhagen (SVITZR) as a result of the previously announced separation from its former parent company, A.P. Møller - Mærsk A/S. Danish national Kasper Karlsen has been Global Chief Operating Officer of the Svitzer Group since December 2022. Prior to that, Karlsen held various senior leadership positions within Operations, performance improvement and business transformation while employed by Maersk Drilling dating back to 2007. He holds a Master of Science in Naval Architecture and Marine Engineering from Technical University of Denmark and has completed management and leadership programs at IMD Business School, the Massachusetts Institute of Technology – Sloan School of Management and DTU Executive School of Business.

Mr. Karlsen leverages all of those professional assets and experience, every day, as COO of the world's largest and most diverse workboat operator. In late February, he sat down with *MarineNews* to provide a state-of-the company report, and a candid glimpse of what's coming next.

By-the-numbers: 4,000 employees, 456 boats, 141 ports, 79 nationalities & 37 countries

Founded in 1833 as a salvage company, Svitzer has over time gone into harbor towage and then, just as deliberately, they exited the pure salvage business. "Today," Karlsen says, "we focus on the core, which is harbor towage and terminal towage. Salvage is unpredictable. Waiting for the next disaster is not a business model that suits us."

The Svitzer global footprint is varied, and deep. Nevertheless, Kasper Karlsen insists that all its different moving parts is the real strength of the firm. "It is definitely a challenge. We operate in many countries with many nationalities, many cultures. We hire local crew as much as at all possible." He adds, "We also train local crew as much as possible and obviously that poses challenging challenges in actually making sure that the service delivered to our customers will remain at a consistently good level." To do that, he says, means organizing Svitzer's global operations to four regions.

"We cover the entire globe," he says, continuing, "We are on all six continents and our corporate culture is very much about giving empowerment to the regions, but actually all the way up to the vessels because we believe that actually when it comes to towage and keeping each other safe and delivering to our customers, our people on the tugs are actually the experts. We also want to make sure that we can say that we have a 'Svitzer DNA' throughout the organization. That's where my function comes into the picture, being responsible for our safety culture and systems." This entails having a Svitzer standard on safety and training, that then allows local leaders to always use that as a measuring stick.

All of that, says Karlsen is obviously important from a safety and procedural point of view, but, he admits, "We also use our global footprint in many other ways. It's an advantage to have a scale like we have and examples of where we use that is when it comes to engagement with key vendors – particularly for new buildings." When it comes to the shipyards, engine and thruster OEM's, the tug designers, the world's largest towage company can use that

"We have looked at different future fuel solutions and also electrification. We've deselected ammonia, because of toxicity. We have deselected hydrogen for now, because of space constraints. Methanol, we have looked closer into and, yes, we are building a dual-fuel methanol tug, as we speak. "It'll actually not be a fuel cell because we, for now, deselect the fuel cell technology and went into batteries instead. So, it'd be a battery, dual-fuel methanol tug."

– Kasper Karlsen, COO, Svitzer

leverage to impact quality and the pricing of newbuild tugs. That advantage also extends to after-sales service, especially when something goes wrong on the maintenance side.

Svitzer took delivery of 11 vessels in 2024, and 23 in the year prior, with 13 more in the pipeline for 2025 and 2026. There is a definite pattern for these newbuildings. Kasper explains, "We're building for the markets we're in. As an example, Brazil, because of the tax machine there, we build tugs for Brazil in Brazil; for Europe, the Middle East, Asia, we build a lot in Turkey. We are working closely with top tier yards in Turkey, but we also have a pipeline in China with a top tier yard there. Historically we build in other locations also, but those are the main locations we build in right now."

That global reach and market leverage is especially important today, as operating margins are constantly being pressured. "Labor costs are up; inflation levels fluctuate, and the geopolitical climate is changing. So, there is always a price pressure and a cost focus that we need to take into account and, obviously, as the largest, we are trying to use that advantage to the best of our ability."

Beyond that, Svitzer creates partnerships and works closely with the yards, equipment manufacturers and the tug designers. This Karlsen says, is an effort to lead and "move" barriers of the industry. He adds, "We have embarked on a proprietary tug design, the TRAnsverse tug, that we believe is a big innovative leap in the tug industry actually going forward."

Decarbonization:
Svitzer's Deliberate, and Ambitious Plan

Today, the elusive goal of the "net-zero, decarbonized" Promised Land dominates the waterfront. When it comes to this moving target, Svitzer is anything but tone deaf. The first methanol hybrid fuel cell tugboat recently made news, and Svitzer was at the heart of that project. At the same time, Svitzer's corporate efforts to "green" the planet are anything but new.

The TRAnsverse tug design offers significantly enhanced dynamic Bollard Pull performance, generating 50% higher forces than traditional ASD tugs, particularly at speeds above 3 knots.

"First of all, we have already five years ago defined our decarbonization strategy and targets. We are aiming to reduce our direct emissions by 50% in 2030, compared to 2020 levels, so we're halfway there and did actually achieve reductions of 24% in 2023. We are also aiming at becoming carbon-neutral in 2040. That's quite an ambitious target that we've set for ourselves, especially considering that we have 450+ vessels, many of which will actually keep operating throughout until 2040 and beyond."

How Svitzer approaches this challenge is telling. "We have looked at different future fuel solutions and also electrification. We've deselected ammonia, because of toxicity. We have deselected hydrogen for now, because of space constraints. Methanol, we have looked closer into and, yes, we are building a battery hybrid dual-fuel methanol tug, as we speak," explains Karlsen, adding, "It'll actually not be fitted with a fuel cell as first announced because we, for now, deselect the fuel cell technology as we did not find it mature enough for our desired application."

Karlsen also points to the rapid development and evolution within the electrification area, but, with caveats. "It is becoming more and more evident that that electrification is a part of the end solution; not everywhere, but it will be a solution that is applicable many places and most places in the longer term. We started with the first battery hybrid tugs actually more than 10 years ago in Australia with small batteries. So, we have extensive experience with those. We just recently bought another battery hybrid tug that will be delivered this summer and

then we have the next one which is the one with the dual-fuel methanol engines also. So, we are definitely embarking on the electrification journey and we are convinced that that's the part of the end game."

Karlsen admits, "It is very challenging. I would be lying if I said that it was easy getting our customers and their customers to pay a premium for green towage. But I'm also confident that we can move the needle further. Obviously, there are areas in our operations where it's less mature and in other areas where it's more mature. But just by the mere fact that we have around 450 vessels where many will be operating way beyond the target deadlines that we set, we will rely heavily on drop-in fuels to reach those targets and we rely heavily on finding commercial solutions to fund this, bearing in mind that green towage will assist our customers in decreasing their emissions in their value chain – their scope 3 emissions. We are also welcoming the right regulations helping the transition on the way."

The Hour of Power:
at Svitzer, ICE aren't going away

If "decarbonization" has been the buzzword for marine vessels – whether it be blue or brown water – the next biggest thing has been the rapid advancement of battery technology. Lighter units, more payload (kW per battery), smaller packages packing more punch, all leading to the totally electric tugboat. That's what naval architects are telling us.

That advice flies in the face of the time-honored maxim of "the hour of power," or, more simply put, that very short period of time where a tugboat is required to exert maximum bollard pull. Conventional wisdom held that this required a diesel engine to achieve that dependable, maximum power. ***MarineNews*** asked the COO of the world's largest and most far-flung tugboat operator: Do you provide service to your harbor clients using completely electric towboats? And, the answer was a resounding "no."

Karlsen says simply, "No, we don't. And, with the battery technology we have right now, this is not a likely scenario. That is also why when we say that we build battery electric tugs – and even some yards even call them full electric – it'll always for us be a hybrid of some sort. And then, you dimension your battery according to your operating profile. But you always have to have a combustion engine such that you can say (a.) take me home or (b.) take me to peak load solution. You can then choose to run the combustion engine on biodiesel.

"But right now, fully electric is not a solution that's viable for tugs in my mind. It will always be a hybrid where you can boost for peak, you can make sure that you can get home, and also for the ones where you have firefighting equipment on board, then you can run your firefighting pump on the diesel combustion engine."

We pressed Karlsen. Never? He paused, responding, "Someday maybe, right? Because the technology is going so, so fast. You never know and for the right applications, for a small harbor tug, then I would not say that it can never happen, but right now we are not looking at a tugboat with only a battery solution. We simply don't see that

The Svitzer Taurus features a double-ended hull with Azimuth thrusters on both ends, allowing for omnidirectional movement and exceptional maneuverability.

the technology is there and we're not ready to run that risk. We will have to have a booster and a 'take me home' solution as well on board."

That's a risk-based solution. A prudent risk-based solution from the world's largest towboat operator.

Svitzer believes that safety and dependability foster a more certain greener world. To that end, Scope 3 emission management is where Svitzer lays the keel of their environmental stewardship.

Scope 3 emissions, defined in layman's terms, can be defined by an oil rig sitting in the U.S. Gulf of Mexico with four service boats attending to it. The carbon footprint for that vessel also includes the carbon footprint of the four boats that are hanging around doing what they're supposed to be doing.

Karlsen nods enthusiastically, and says, ""That's exactly the commercial solutions we work on. When we provide towage service to our customers, then we become part of their carbon footprint and what is called their Scope 3 emissions. Our solution is that they get at a modest premium, a green tug job. For example, we've had all of our fleet in the UK on HVO, so that generates a lot of carbon savings. Those carbon savings we can use in tug jobs provided elsewhere in the world where they want a green solution. That's how it works. We're not planting trees. We're not offsetting as such, but we're insetting from other parts of our own operations to benefit the big picture."

Karlsen continues, "I support regulations if it forces the right behavior and the right transition, but it is a fine balance. We need to make sure it doesn't impose a lot of non-value-adding bureaucracy." Going green doesn't always create the other kind of green. Svitzer understands this.

Another aspect of Svitzer's global decarbonization strategy is a digital system that actually monitors and manages our Masters such that we try to incentivize to have the right behavior when sailing the tugs. Karlsen describes an AIS-based system that measures the movements of tugs and gives equal rating to tug masters on how they operate. "We call it the "Aim for 8" campaign. Around eight knots when you're mobilizing and demobilizing is a reasonable speed in order to actually get to the job, but also where the power curve is not too steep, so you don't burn too much excess fuel, and you still have time to get to the job."

So, we try to make a healthy competition out of that. And that has saved quite a lot of CO2, but also fuel. There's a lot we can do when we talk about energy efficiency, just looking at behavior. The next thing is how do we work together with the pilots in ensuring that we also do the jobs, not only safe and efficient, but also fuel-efficient.

A garden variety example of this collaboration might be when the pilot's got both spring lines out fore and aft and he still wants full power alongside the pier. Svitzer's Karlsen asks: Do we really need to be wasting this fuel or pushing it out the stack? "That extra fuel is extra cost and, at some

point, the customer needs to pay for that and it's also their Scope 3 emissions. So, whatever we can do to make the job more efficient, will actually benefit the entire ecosystem and not the least, our customers."

Incentivizing good behavior wasn't invented by Svitzer, but they recognize its value in day-to-day operations. For Svitzer, Karlsen says that initially it involved a simple monthly report where anyone could see the scores and nobody wants to be in the bottom. "So, that's just part of the competition. And then we had put up some challenges of 'who's most improved over the last three months' and things like that. And then, what we did was to offer vouchers or something for crew welfare to get it off the ground. So, they can go out for dinner or they could buy a PlayStation for the boat or whatever they want to do."

Karlsen says that this is now how operations should go and behaviors have changed. Eventually, this means not penalizing nor incentivizing, but it is what is expected as minimum performance and every tug and its crew have an impact on the energy transition.

Looking Ahead

In 2023, Svitzer reduced the CO2 intensity of its global fleet by 24% – primarily through the conversion of tugs from marine gas oil to low-carbon fuels and through its global 'Aim for 8' behavioral change initiative which was expanded from Europe and Australia into its AMEA and Americas regions.

But, fleet management at Svitzer goes far beyond simple engine and fuel choices. With some fleet tugs, and others not-so-much, Svitzer's diverse asset base sometimes requires manual input for performance data, as opposed to digital automation. Whatever the source, insists Karlsen, the most important decisions involve how that data is used. "What's important for us is reliability. Are we responsive when agents or customers calls? Are we able to provide the tugs? Will the tugs be there on the spot at the right time as requested? And are they performing the job safely and efficiently? Those are the main things."

Already well ahead of its ambitious decarbonization goals, Svitzer is unwilling to compromise safety and efficiency along the way. Leaving no stone unturned when it comes to searching out the best ways to green its carbon footprint, one size does not fit all for the world's largest tugboat operator. When you leverage the knowhow and diverse input from 4,000 employees hailing from 79 different companies, operating 456 boats ports in 37 countries, its not hard to see why.

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RESEARCH VESSELS
& THE FUTURE OF OCEAN STUDY

The U.S. oceanographic research community depends on a complex network of ships and institutions for scientific discovery at sea. The University-National Oceanographic Laboratory System (UNOLS) is the central organization that provides scientists with access to advanced research ships and technology to explore the world's oceans. We recently spoke with ***Bruce Applegate, Chair of the UNOLS Council and Associate Director at Scripps Institution of Oceanography****, to explore UNOLS' operations and future plans.*

By Rhonda Moniz

Understanding UNOLS and the U.S. Academic Research Fleet

Contrary to common misconception, UNOLS does not own or operate a fleet. Instead, it facilitates coordination among the U.S. Academic Research Fleet (ARF). ARF includes 17 ships that fall into the global, ocean and coastal/regional class vessels. UNOLS's main objective is to provide equal access to research vessels for federally funded scientists across all institutions. "The great thing about our ships is that everyone involved in their operations and management shares a singular focus—supporting the best possible oceanographic research," Applegate explained. "From physical oceanography to geophysics and marine ecology, our fleet enables groundbreaking science."

Technological innovation significantly enhances oceanographic research capabilities. UNOLS is implementing new technologies to improve operational efficiency and broaden research possibilities. Woods Hole Oceanographic Institution is developing two smaller containerized remotely operated vehicles (ROVs) as a significant advancement. The new ROVs will enhance the widely used Jason system by offering greater flexibility and deeper access for deep-sea research tasks.

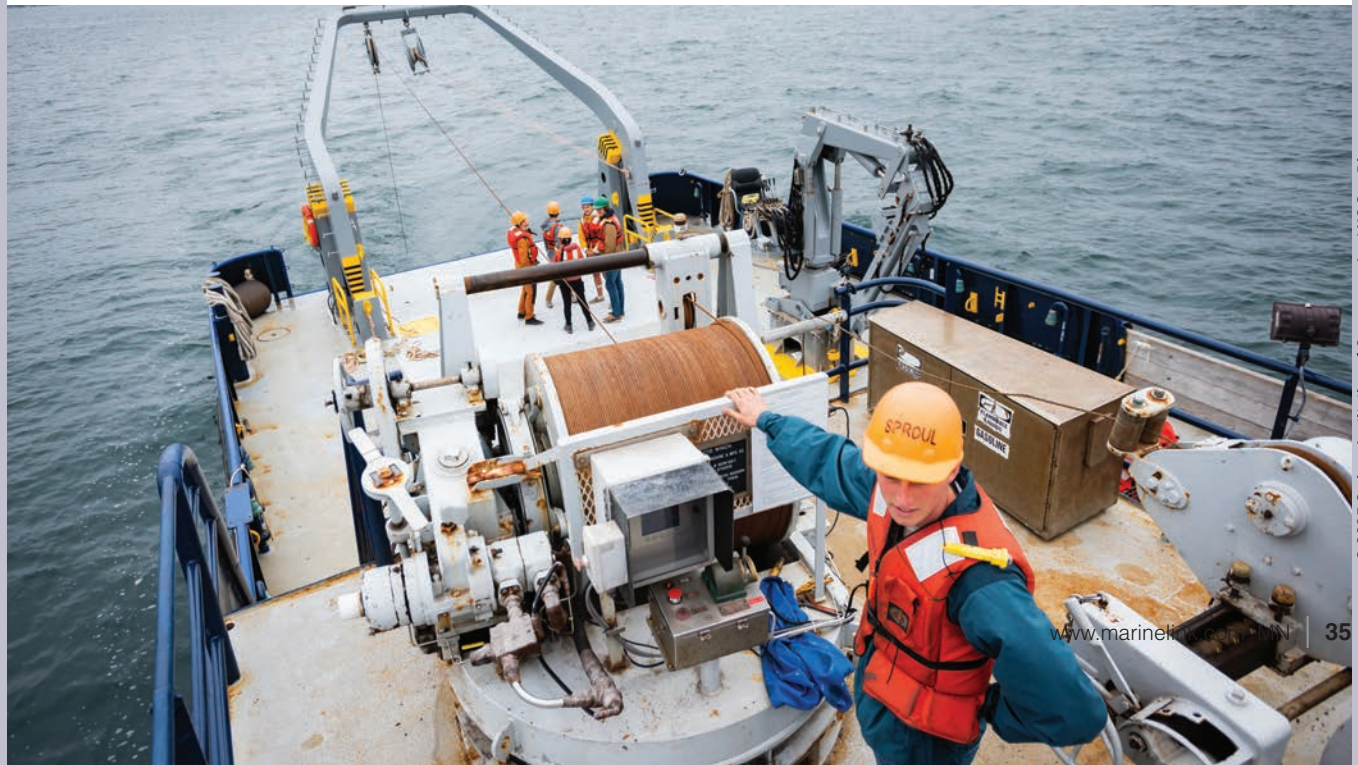
Another area of focus is the continued improvement of seabed mapping technology. "Mapping sonars and multibeam echo sounders have been around for a while, but we are continuously upgrading these tools to enhance resolution and data quality," Applegate noted.

Moreover, autonomous systems are increasingly being used to supplement traditional ship-based research. "With autonomy, we can deploy a swarm of sensors alongside ships, transforming data collection from a single track-line profile to a broad swath of information," he said. However, challenges such as range, power supply, and system reliability mean that ships will remain indispensable as mobile command centers for these autonomous platforms.

Fleet Ops and Workforce Development

The decline in available research vessels is one of the most pressing issues facing UNOLS and the ARF. Over the past few decades, the U.S. fleet has shrunk from 34 ships to just 17, limiting research opportunities. "The demand for sea-

Students spent the day aboard the Robert Gordon Sproul as part of Fiamma Straneo's Observational Physical Oceanography 176 class. The purpose of the cruise was to train and expose students to the collection of physical oceanographic observations including CTDs, shipboard ADCP, underway data, surface ocean data, bathymetry, and surface drifters. As well as the ships safety protocol and hand on experience with the ships equipment. Students spent the day launching, retrieving, testing and calibrating small scale CTDs they built in the Scripps Makerspace and comparing their data to the larger CTD.



Scripps' Jennifer Mackinnon and Drew Lucas were among an international team of oceanographers and meteorologists who took part in an Office of Naval Research-funded project called MISO-BoB (Monsoon Intra-seasonal Oscillations in the Tropical Indian Ocean and the Bay of Bengal). It was one of the most comprehensive attempts to understand the South Asian monsoon, one of the most economically important natural events in the world. MISO-BoB broke ground in its use of specialized technology and cooperation among researchers in India and the United States among other countries.

based research far exceeds our capacity," Applegate said. "We need more global-class vessels that can work in the world's harshest conditions."

Workforce shortages present a significant challenge in addition to fleet size constraints. Hiring and keeping mariners, technicians, and scientists in their positions becomes more challenging over time. UNOLS tackles workforce shortages by supporting the Marine Advanced Technology Education (MATE) program and STEM-SEAS initiative that educate students about oceanographic research careers.

Undergrad Students spend the day aboard the R/V Robert Gordon Sproul.

RVs Addressing Global Challenges

Research vessels play a critical role in tackling pressing marine science challenges. Oceanographic research informs policies that protect marine ecosystems and coastal communities, from studying climate change impacts and ocean acidification to assessing earthquake risks along fault zones.

Applegate highlighted how past missions have led to significant discoveries, including hydrothermal vents, deep-sea ecosystems, and insights into earthquake mechanics. "Some of the greatest discoveries in ocean science have been serendipitous," he said. "Being at sea with the right tools and people allows us to make observations that fundamentally change our understanding of the planet."

Funding and the Future of UNOLS

Oceanographic research holds significant value yet continues to struggle with ongoing funding difficulties. UNOLS depends mainly on financial backing from the National Science Foundation (NSF) and the Office of Naval Research (ONR) yet existing funding fails to satisfy expanding research needs. "If we doubled our budget tomorrow, we would still have enough scientific projects ready to use that additional capacity immediately," Applegate emphasized.

UNOLS has identified fleet recapitalization as its primary focus for future development. A significant investment will be required for replacements as several top-tier vessels will complete their service life by the end of the next decade. Applegate alerts that the United States trails its global peers in oceanographic capability as China rapidly builds its fleet. "If we want to maintain our leadership in ocean science, we need a stronger commitment to fleet renewal," he stated.

UNOLS maintains its dedication to providing U.S. scientists with essential tools, technology, and access that enable them to achieve revolutionary findings as oceanographic research advances. UNOLS helps define ocean research's trajectory by integrating advanced sensors, expanding autonomous systems capabilities, and pushing for greater federal support.

"The work we do impacts everything from weather forecasting to national security," Applegate concluded. "Investing in ocean science today ensures a better understanding of our planet for future generations."

Hybrids: e1 Marine's Vision for Methanol-to-Hydrogen Tech

The marine industry at large slowly evolves on fuel transition, as the questions on regulation, technology and finance of emerging technologies cumulatively works to stunt growth. Enter Dave Lee, Executive Director, e1 Marine. Lee is certainly no stranger to advanced marine technology, as he also serves as VP of Innovation and Technology @ Maritime Partners, and held a similar position previously with ABB. Read about the e1 Marine plan to effectively enable hydrogen as a marine fuel, helping to pave the path for others to follow.

By Greg Trauthwein

Maritime's Future Fuel: Methanol-to-Hydrogen

It's been said and written time and again: there is no silver bullet solution to the maritime industry's future fuel conundrum, premised on the not the technology itself, rather the diversity of maritime vessels and routes.

e1 Marine's approach to hydrogen is pragmatic. Rather than relying on the logistical challenges of traditional hydrogen supply chains, the company leverages methanol—an abundant, widely available commodity. Using advanced reforming technology, e1 Marine converts a methanol and water mixture into fuel cell-grade hydrogen, offering a clean, efficient alternative for maritime applications.

"We're not just adapting hydrogen for maritime use; we're engineering a solution that fits seamlessly into the industry's operational realities," says Lee. This technology aligns perfectly with Maritime Partners, a major player in the Jones Act space, which fully acquired e1 Marine to spearhead innovation across its fleet of 1,900 vessels.

Navigating Challenges, Finding Opportunities

Despite the promise of alternative fuels, Lee acknowledges the industry's resistance to change. "The maritime sector is inherently conservative, and selling new technology can feel like an uphill battle," he admits. However, the urgency of regulatory pressures and the environmental imperative are accelerating the shift away from diesel. Lee highlights the "confluence of technology, regulation, and financing" as the primary challenge. Operators face a barrage of fuel options—blue, green, gray hydrogen, and more—creating confusion and hesitation. Additionally, the high upfront costs of new technologies without clear regulatory mandates slow adoption.

Yet, e1 Marine is undeterred. Maritime Partners' Hydrogen One project, a pioneering vessel powered by e1 Marine's technology, is breaking new ground. Working closely with the U.S. Coast Guard and Lloyd's Register, e1 Marine is navigating uncharted regulatory waters to establish new standards for hydrogen-powered vessels.

While U.S. policy shifts influence the pace of domestic adoption, Lee notes that global momentum for sustainable maritime fuels remains strong. "The U.S. is part of the puzzle, but innovation is being driven globally, especially in the EU, Scandinavia, and China," he explains. Regardless of political fluctuations, the long-term trend towards decarbonization is clear, propelled by both regulatory frameworks and generational shifts in environmental priorities.

The STAX Engineering Partnership

A standout project set to launch in 2025 showcases e1

Watch the full interview with David Lee on *Maritime Reporter TV*:

SCAN ME

Marine's practical application of its technology. In partnership with STAX Engineering and funded by California's South Coast AQMD and CARB, e1 Marine will deploy a methanol-to-hydrogen generator to power emission capture barges. This system, capable of generating 150 kW, will reduce emissions during shore-side operations, addressing reliability issues with traditional shore power.

e1 Marine's journey is more than a technological venture; it's a bold statement on the future of maritime energy. By addressing the industry's pain points with innovative, scalable solutions, e1 Marine is not just keeping pace with the fuel transition—it's leading it.

As Lee reflects, "We're here to pave the road. Without pioneers willing to break through, the industry will stay stagnant. Our mission is to prove that sustainable, hydrogen-based maritime operations are not just possible—they're the future."

Dave Lee,
Executive Director, e1 Marine

Uncrewed Maritime Vessels *Must* Leverage AI

By George Galdorisi

In September 2024, the 33rd Chief of Naval Operations, Admiral Lisa Franchetti, issued her Chief of Naval Operations Navigation Plan for America's Warfighting Navy. This Navigation Plan embodies "Project 33" in recognition of the fact that Admiral Franchetti is the 33rd Chief of Naval Operations. Project 33 sets targets for enabling the U.S. Navy to make strategically meaningful gains in the fastest possible time. This Plan has several components:

- The readiness component of the Navigation Plan has the goal of eliminating ship, submarine and aircraft maintenance delays and restoring critical infrastructure that sustains and projects the fight from shore.
- The people component of the Navigation Plan notes the goal of recruiting and retaining the force needed to fill officer, chief petty officer and enlisted ranks and delivering a quality of service for Navy personnel.
- The operational component of the Navigation Plan involves creating upgraded command centers for the Navy Fleet commanders and training for combat to ensure that the Navy has a warfighting advantage over its adversaries.
- Finally, the goal to scale robotic and autonomous systems to integrate more platforms at speed focuses on capitalizing on the inherent advantages that uncrewed systems bring to any navy.

While the first three components of Project 33 represent areas that the Navy has been seeking to improve for some time, the most intriguing part of the CNO's Navigation Plan is the goal of scaling robotic and autonomous systems to integrate more platforms at speed.

The "Why" Behind the Commitment to Uncrewed Systems

Unmanned capabilities not only keep sailors out of harm's way, but they provide opportunities to greatly expand the sea service's warfighting capacity at less cost than traditional Navy vessels. The Navigation Plan adds more granularity to the "why" behind the Navy's commitment to unmanned surface vessels. It notes that robotic and autonomous systems, by augmenting the multi-mission conventional force, will provide opportunities to expand the reach, resilience, and lethality of the combined manned-unmanned Navy team.

A short-term goal articled in the Navigation Plan is to integrate proven robotic and autonomous systems for routine use by the commanders who will employ them and to incorporate mature unmanned capabilities into all deploying carrier and expeditionary strike groups by 2027. The anticipated use of these unmanned capabilities will focus on key operational challenges across critical mission areas.

Focus On the Hybrid Fleet

The Navigation Plan puts special emphasis on the Hybrid Fleet. As Admiral Franchetti noted, absent a large infusion of resources, it will not be possible to build a bigger traditional navy in a few short years. Therefore, the Hybrid Fleet concept—a mix of 350 crewed ships and 150 uncrewed maritime vessels—is seen as a viable path to put enough hulls in the water to accomplish the Navy's myriad global missions.

Navy officials have been laying the keel for the future Hybrid Fleet via experimentation and other efforts, such as standing up Task Force 59 and Task Force 59.1 in the Arabian Gulf, establishing the disruptive capabilities office, and "operationalizing" the integration of unmanned platforms into numbered fleets beginning with the U.S. 4th Fleet. The Navy is moving from experimentation to integrating robotic and autonomous systems across other numbered fleets.

The U.S. Navy's commitment to a Hybrid Fleet represents a sound concept-of-operations to put more hulls in the water by fielding relatively inexpensive large- and

medium-size unmanned maritime systems in lieu of trying to build more expensive surface combatants. Indeed, the unit price of an Arleigh Burke destroyer is $2.2 billion in 2024 dollars, while the cost of large- and medium-size unmanned maritime systems is a fraction of that cost.

Making Uncrewed Systems Affordable

While the unit cost of uncrewed systems makes them a seemingly affordable option, the devil is in the details. For years, if not decades, uncrewed systems of all kinds, especially uncrewed maritime systems, have been mired in a manpower-intensive paradigm.

One of the most pressing challenges for all navies is to reduce the prohibitively burdensome manpower footprint currently necessary to operate uncrewed systems. Manpower makes up the largest part of the total ownership cost of naval systems. If uncrewed maritime systems are to make up a significant part of any navy, the need to move beyond the "many operators, many-joysticks, one-vehicle" paradigm that has existed during the past decades for most uncrewed systems is clear and compelling.

For this reason, uncrewed systems (and especially uncrewed surface vessels) manufacturers are not only focused on the performance characteristics of their platforms (speed, endurance, stealth and other attributes), but are now inserting AI-technologies into their boats in order to make them more autonomous, aiming for a new concept of operations where one operator can effectively control multiple uncrewed surface vessels, which, themselves, will be "working together and communicating with each other" through the use of advanced AI concepts.

While the list of companies that produce uncrewed surface vessels is large—and growing—there are some that have been leading this effort. These manufacturers have fielded USVs (such as Saildrone, MANTAS, Devil Ray, Corsair, GARC, LRUSV and others) that have—or are planned to have—various levels of autonomy "baked in."

It is beyond the scope of this article to do a deep dive into how all these uncrewed surface vessels will operate more autonomously than earlier generations of USVs. As just one example, the T12 MANTAS and T38 Devil Ray, both built by Maritime Tactical Systems, Inc. (MARTAC), have demonstrated various levels of autonomy in a number of U.S. Navy and Marine Corps exercises, experiments and demonstrations.

For example, the MANTAS and Devil Ray both have AI-technologies that enable them to abide by the Convention on the International Regulations for Preventing Collisions at Sea (COLREGS). In one Navy exercise, a MANTAS ran a 25-waypoint autonomous mission around San Diego harbor, demonstrating COLREGS compliance.

An ST Engineering vessel equipped with the AUTONOMAST system, conducts autonomous navigation and force protection maneuvers during an Unmanned Surface Vessel (USV) capabilities demonstration at Marine Corps Base Hawaii (MCBH).

U.S. Marine Corps photo by Lance Cpl. Terry Stennett

As these events continued, Navy event planners were keen to explore even more ambitious uses of AI-enabled technologies for USVs. During exercise Integrated Battle Problem 21, a T38 Devil Ray made a 150-mile round trip autonomous transit from San Diego to San Clemente Island while autonomously dropping two objects.

Working with U.S. Fourth Fleet, a T38 Devil Ray made autonomous, high-speed intercepts at more than 70 knots, as well as follow-on demonstrations designed to show how autonomous craft could trail and intercept drug-smuggling vessels. High speed for the uncrewed surface vessels are key to keeping up with narco "go fast" boats. For this mission, the intercept speeds need to be performed at, or in excess of, 50kts.

More Uncrewed Surface Vessels & More Autonomy

To be clear, this is not a shout-out to one USV manufacturer, but simply "grabbing the headlines" from several transparent and well-chronicled Navy and Marine Corps events. The Sea Services have plans for an ambitious series of exercises, experiments and demonstrations this year and beyond that are intended to further "wring out" AI-enabled technologies.

If the uncrewed surface vessel industry is to thrive, it must leverage what the U.S. Navy and Marine Corps have achieved during these events and others and find ways to leverage AI-technologies more fully going forward. As the ability of these uncrewed maritime systems to perform a plethora of missions becomes increasingly dependent on a high degree of autonomy, we will likely see more emphasis on what's inside the craft, not just attributes highlighted at trade shows. Whether used in the military or private sector, needing fewer operators will make uncrewed surface vessels increasingly affordable.

Rock Steady: The Artemis EF-12 Escape

On the second full day of this year's Passenger Vessel Association's 2025 Maritrends conference, the weather probably couldn't have been much nicer; especially when it involved a tour and test ride on the new Artemis Technologies EF-12 Escape.

The high-end water taxi, in the process of being introduced to US markets, was everything its creators promised, and perhaps just a little more. On Tuesday morning, cruising in brilliant sunshine, its full capabilities were on full display.

Fully satisfying the brown water industry's thirst for the Promised Land of "zero carbon footprint," the EF-12 creates zero emissions and minimal wake during every trip, thanks largely to its advanced hydrofoil technology. Gliding smoothly above the water at speeds as fast as 30 KT, this vessel has no need for stabilizers, as the "foiling" design is in use at all times; whether at high speeds, cruising slowly, or alongside another vessel or pier. In other words; rock steady.

David Tyler, Artemis' co-founder and managing director, North America, was on board for this morning's demonstration, and as his skilled crew of mariners deftly handled the high-tech boat, he explained the "ins and outs" of its design. For example, and with advanced battery systems fore and aft, the vessel can be fully charged in as little as 60 minutes. And, he added, the vessel's carbon fiber design is 40% lighter – and if built in series with economy of scale, also less expensive – than a comparably sized aluminum vessel, something that's critically important as marine batteries continue their evolution into lighter platforms that pack more power. Until that happens, weight will always be a consideration. Artemis, nevertheless, has that covered.

A 15-minute test ride showed the vessel to be steady as a rock, even at top speeds, and it cornered on a dime at everything from 0 to 25 knots. As of now, DNV and/or Lloyds will be Artemis' classification societies of choice, but the vessel will meet all Coast Guard standards for domestic passenger vessels. Their largest version, the F-24 will carry 150 passengers and fall under the Coast Guard's subchapter T class.

Artemis technology was borne of the fastest sailboats in the world, and accomplished yacht sailor David Tyler instantly knew that the concept had real applicability in the workboat world. As of today, his creations are fully electric, but he conceded that future versions intended for other niche sectors – such as patrol boats – might involve a hybrid solution. For now, the Artemis fully electric design is already penetrating the pilot boat and crew transfer vessel (CTV) markets in Europe. And, for good reason.

Offshore wind and oil & gas operators have become acutely aware of the need to have personnel arrive at the job sites ready to work. And, that means not having been throwing up for a two-hour ride. With the Artemis technology able to operate seamlessly in conditions up to 3.5 meters of sea and swell, all personnel experience an almost motionless ride. Similarly, pilot associations yearning for more stable platforms, both on the way out to the ship and alongside while disembarking and embarking, are starting to take a hard look at Artemis. Safety and comfort – that's the ticket for these operators.

With a 50-mile range, the Artemis EF-12 satisfies the needs of a range of possibilities within the workboat realm. Where they ultimately find their sweet spot is still unknown. Passenger vessels – catering to perhaps the most demanding of cargo – are a good place to start. The PVA Maritrends Convention, against the quaint backdrop of the historical Savannah, GA waterfront, was similarly, an excellent place and time to show the marine industry, how, and why.

Joseph Keefe

Charleston Pilots Return 10-Year-Old Pilot Boat to Gladding-Hearn for Refit

Charleston Branch Pilots have returned a pilot boat to Gladding-Hearn after 10 years of continuous service for the port of Charlestown. The all-aluminum vessel will be repowered, and refitted with a new Seakeeper 40 gyro stabilizer. The 65' Fort Ripley was designed by Ray Hunt Design and Gladding-Hearn and built by the Somerset, Mass., shipyard in 2014. With a top speed of 28 knots, it was the first commercial vessel in the United States powered by Volvo Penta IPS drives with twin forward-facing, counter-rotating propellers.

The three existing 700 Bhp Volvo D13 diesel engines will be replaced with three new Tier-4-rated 700 Bhp D13 engines, along with new triple Volvo Penta IPS 1050 propulsion systems, including new shafting, IPS-30 pods, the EVC control system and displays in the wheelhouse. Engine speed and pod steering are controlled by three joysticks, one on the wheelhouse console and two at aft docking-stations. "The IPS system saves weight and space for additional fuel or accommodations and has proved to increase maneuverability and consume about 30 percent less fuel," explained Peter Duclos, the shipyard's co-president and director of sales.

The Seakeeper gyro stabilizer, installed in the space of a redundant fire pump, is expected to reduce vessel roll up to 80 percent. The 4,000-pound gyro requires structural modifications for a substantial foundation located in the tank room. "The is our second Seakeeper gyro installation on a pilot boat. Its effects are noticed mostly at rest or slow speeds but it improves vessel feel and handling at speeds," explained Duclos.

Other work on the Fort Ripley includes servicing the Humphree interceptors, bilge system, HVAC system and replacing the wheelhouse windows with electrically-heated windows.

Vuyk Engineering Rotterdam launches new SWATH SOV Series

Vuyk Engineering

Vuyk Engineering Rotterdam launched its new Small Waterplane Area Twin Hull (SWATH) Service Operation Vessels (SOVs) series.

A standout projects in the Vuyk Engineering portfolio is the Groenewind, the world's first DP2 twin-hulled SWATH SOV. Developed in collaboration with DEME, this vessel is designed to operate efficiently in high sea states, featuring a slender hull that minimizes fuel consumption, advanced DP2 technology for precise positioning, and a motion-compensated gangway for safe crew transfers. The Groenewind project exemplifies Vuyk Engineering's commitment to delivering high-quality, customized solutions from conceptual design to final delivery.

The new Vuyk SWATH SOV 40P and 60P are vessels engineered for optimal performance in rough sea conditions. Both designs share specifications, including a length of about 70 meters. These compact and efficient vessels are engineered for high workability in rough sea conditions, offering excellent motion behavior, low resistance in waves, and flexible mission equipment, for example, the Bring-to-Work system or a gangway tower system. Crucially, these vessels are specifically designed to maintain optimal performance while handling wave heights greater than 3.5 Hs, ensuring reliability and safety in the most demanding environments.

Vessels

New Ferry Design for Caribbean Route


Incat Crowther

Incat Crowther designed a new 24-m passenger fast ferry for Caribbean operator Smith's Ferry Services. Built by Australian shipyard Aluminium Marine in Brisbane, the new ferry will transport 149 passengers at speeds of up to 28 knots and has been designed for the busy Charlotte Amalie (U.S Virgin Islands) to Road Town (British Virgin Islands) tourism route.

The main deck can transport 118 passengers in air-conditioned comfort. It boasts a large service kiosk, two bathrooms, and luggage space. The ferry has also been designed to be handicap accessible and has two spaces for people with wheelchairs on its main deck. The vessel's upper deck features premium outdoor seating for 40 passengers and protected storage boxes for luggage. The vessel's wheelhouse provides the vessel's captain with an excellent line of sight, ensuring safe operations in almost any sea condition.

The vessel is powered by two MAN 2862 LE454 EPA Tier 3 compliant diesel engines rated for 588 kilowatts (kW) in a continuous duty application. Rikky Baynes, Operations Manager at Smith's Ferry Services, said: "We required a vessel that not only delivered a premium customer experience but one that was also operationally efficient and tailored to the sea state conditions we experience on the Caribbean Sea." "Incat Crowther has delivered on this brief by designing a vessel that will provide a step change in comfort and operational reliability for people traveling between the US and the British Virgin Islands," said Mr. Baynes.

Mooring Boats for Amman

Two RAmbler 1400 mooring boats, Amman Khatulistiwa 01 and Amman Khatulistiwa 02, owned by PT Amman Mineral Nusa Tenggara (AMNT), one of Indonesia's largest copper-and-gold mining companies, a subsidiary of PT Amman Mineral Internasional Tbk, were recently built by PT Dumas Shipyard in Surabaya, Indonesia. The completion of these vessels' construction was supervised by PT IMEC International Services (IMEC), which provides project management and naval engineering services for AMMAN.

These boats are designed for operation at the port of Benete in West Nusa Tenggara, Indonesia, and will mainly be used for handling mooring lines for large LNG ships. Additionally, they are equipped to perform line towing, pushing, and oil spill recovery. During sea trials, they easily exceeded the required performance standards.

The vessel is configured as a dayboat with a crew of two persons. Inside the compact wheelhouse a small pantry and dinette seating is provided. The lower accommodation has two berths and toilet, along with considerable storage. Access to the engine room is through a watertight door from this space.

The vessel has a single chine hull form for maximum roll damping which also simplifies construction. A rope guard cage protects the wheelhouse. Aft, the bulwarks are lower to prevent fouling by towlines. The mast and radar can fold to reduce air clearance under the flared hull of larger ships.

For light towing the vessel can use a forward towing bitt or an aft bitt with towing hook as well as bow pushing fenders. During oil recovery operations a skimmer can be deployed on the aft deck where a clear 3m x 3m deck space is available for recovery equipment. A crane is provided to deploy this equipment and for general cargo use.

Main propulsion machinery is two Caterpillar C7 diesel engines, rated at 209 kW at 2300 RPM. Propellers are 5 blade, 900mm diameter Kaplan style in Kort nozzles. A single generator provides 220V AC power. Large battery banks charged by a generator and or main engine alternators, provide DC power supply for the vessel's essential loads, e.g. navigation equipment, communication, lighting, engine room pumps and deck machineries. Wet exhausts are used for main engines and the generator.

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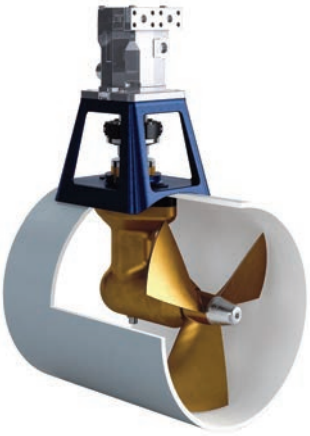

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3. Savage A41 Welding Helmet

ESAB introduced the SAVAGE A41 automatic welding helmet which features an internal digital user interface to adjust auto-darkening filter (ADF) parameters, a shade range extended to 8-13 (compared to 9-13 for the SAVAGE A40) and a streamlined external Grind Mode that switches the lens to shade 4 for grinding and some cutting processes. It is lightweight (17.6 oz.) and its ultra-clear True Color lens technology provides a view of the weld puddle and surrounding area, enabling precise bead placement.

4. InTankFITT Container

Scienco/FAST and UniBallast, B.V. launched the portable InTankFITT Container, a containerized version of its filterless Ballast Water Treatment System (BWTS), InTank. Designed to address the growing regulatory and operational challenges in ballast water management, this solution is designed to be: a compact and portable design which provides operational efficiency. The filterless design eliminates the need for a complex and lengthy filtration process, reducing operational downtime and maintenance requirements. Fitted to a port-based ballast water reception barge, InTank's non-filter and in-tank treatment makes receiving water from a discharging vessel very simple.

5. Lighting Autonomous Ops

Glamox won the contract to light four 120 x 18.6m, 399-pax autonomous-ready ferries, which when delivered in 1H '26 are expected to be the first in the world to operate independently, without human intervention. Tersan Shipyard is building the vessels for Fjord1 and awarded Glamox the contract. Glamox will provide a total of approximately 2,160 marine-certified lights to light the interior and exterior of the four vessels. The four battery-powered ferries were designed by HAV Design AS of Norway.

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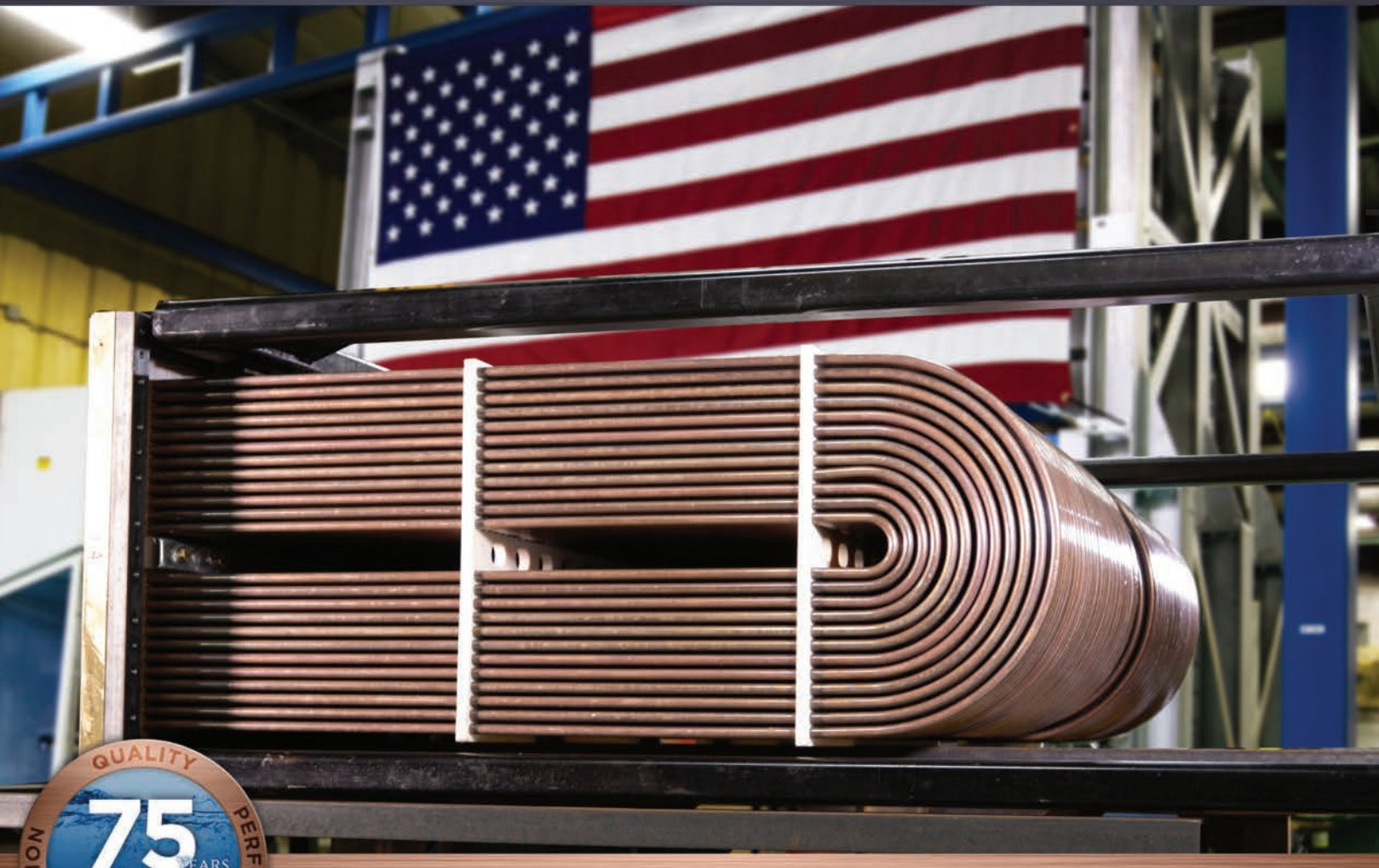

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