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Marine News

OCTOBER 2024

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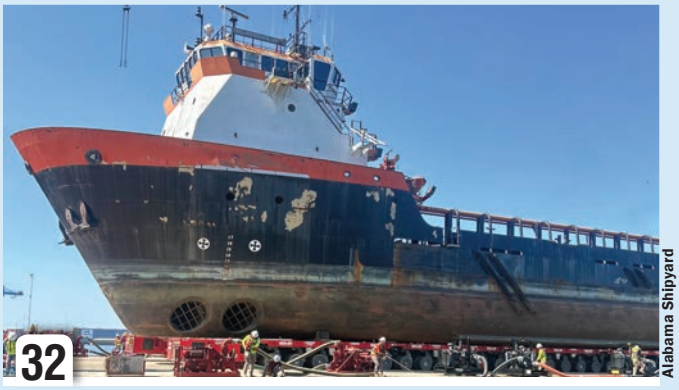
Vineyard Wind



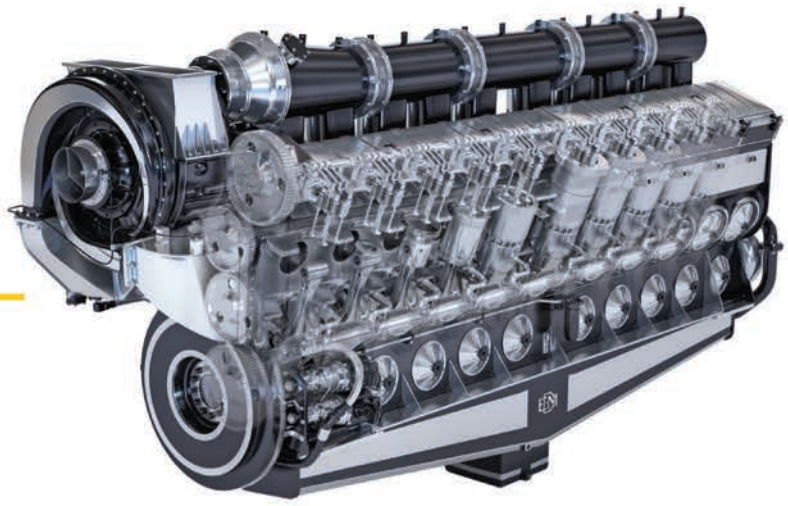
Alabama Shipyard

On the Cover

Alabama Shipyard is currently converting a third offshore support vessel into a passenger and freight ferry for the Woods Hole, Martha's Vineyard and Nantucket Steamship Authority.

(Photo: Alabama Shipyard)

Marine Systems, Inc.



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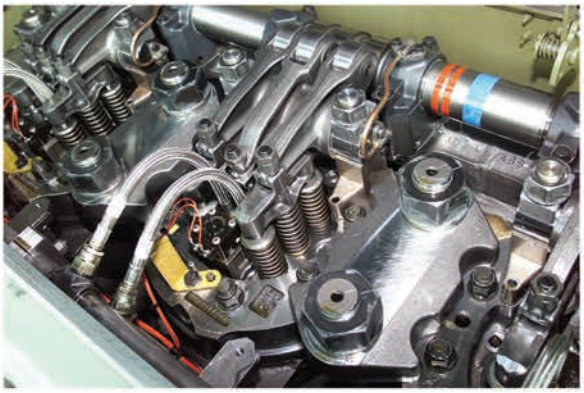

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Editor's Note

Eric Haun, Editor,
haun@marinelink.com

Admittedly, "the media", including the maritime trade press, tends to devote much of its focus to the latest and greatest. New and shiny objects—novel designs, equipment innovations and vessel deliveries—often dominate the headlines. These things are important, undoubtedly, especially in the context of the industry's perpetual drive to improve safety, efficiency and profitability, but there's much more to consider in the broader picture.

Equally as important, if not more so, are efforts to make best use of the fleets already on the water, whether through performance-boosting upgrades or conversions that breathe new life into existing assets. Great examples of this can be seen every day at ship repair yards across the U.S., where vessels are routinely overhauled to maximize their useful life. While these projects are rarely glamorous or exciting*, their significance is immense.

In this issue, I'm excited to share several stories highlighting this theme. We begin with a conversation with Lane Roberts of Nichols Brothers Boat Builders and Everett Ship Repair in the Pacific Northwest. This edition also showcases a series of OSV conversions at Alabama Shipyard, which will produce "new" passenger and freight ferries for the Woods Hole, Martha's Vineyard, and Nantucket Steamship Authority.

**I find ship repair exciting, but I'm unusual.*

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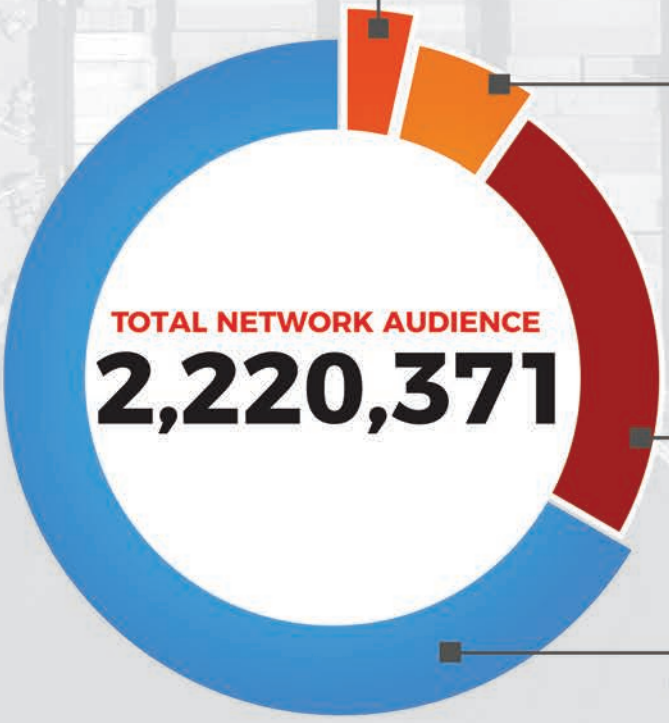

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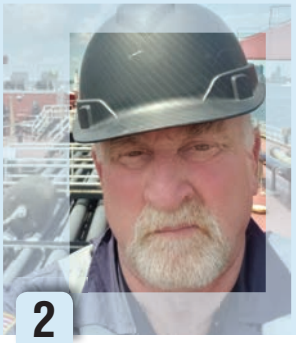
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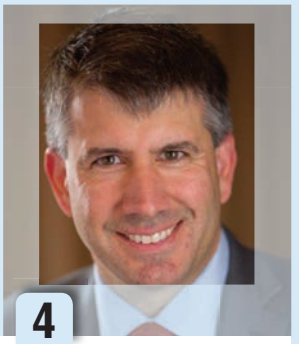
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PE, PMP, is principal in charge and VP of strategic expansion at naval architecture and marine engineering firm Elliott Bay Design Group. He has more than 30 years of maritime industry experience.

2 Robert Kunkel,
president of Alternative Marine Technologies and First Harvest Navigation, served as the Federal Chairman of the Short Sea Shipping Cooperative Program under the DOT's MARAD from 2003 until 2008. He writes regularly for *Marine News*.

3 Edward Lundquist
is a retired naval officer who writes on naval, maritime, defense and security issues. He is a regular contributor to *Maritime Reporter & Engineering News*, *Marine News* as well as *Marine Technology Reporter*.

4 Erik Milito,
a veteran energy industry association executive, is president of the National Ocean Industries Association (NOIA), a trade group representing America's offshore energy industry.

5 Rhonda J. Moniz
is an expert in diving technologies, underwater forensics, and subsea systems, with a career spanning scientific diving, ROV/AUV piloting and underwater exploration and conservation. She is also a seasoned journalist, filmmaker and podcast host.

6 Barry Parker
of bdp1 Consulting Ltd provides strategic and tactical support, including analytics and communications, to businesses across the maritime spectrum. He is a freelance writer and regular contributor to this magazine.

7 Jeff Vogel
is a shareholder in Cozen O'Connor's Transportation & Trade Group. He focuses his practice on strategic and operational matters affecting the United States maritime industry and on government contracts across all industries.

8 Kevin Williams
has more than 25 years' experience in the maritime industry, starting as a cadet, working at shipping and dredging companies before joining NOC. He also has a business degree and a degree in engineering and management, is a chartered engineer with the Naval Institute and is currently doing a MSc in Sustainable Maritime Operations.

By the Numbers

US Awards Nearly $300 Million to Support Ferry Upgrades

The U.S. Department of Transportation's Federal Transit Administration (FTA) has unveiled nearly $300 million in grants from President Biden's Bipartisan Infrastructure Law aimed at transforming and expanding ferry systems across the United States. This substantial investment will support the modernization of ferry services, which are vital for millions of Americans.

Each year, ferries facilitate approximately 56 million trips nationwide, playing a crucial role in transporting people and goods, bolstering local economies, and providing essential connections for communities with limited transportation options.

"Ferries serve Americans who depend heavily on this form of transit because of where they live—and the Biden-Harris Administration is making sure people have access to more reliable, cleaner ferry service," said U.S. Transportation Secretary Pete Buttigieg. "These funds will make it easier for Americans to move about their day while also protecting the rivers and waterways they depend on economically."

The FTA's grants will support 18 projects across 14 states. These initiatives will focus on various improvements, including the replacement of outdated vessels with electric ferries that cut greenhouse gas emissions, expansion of ferry fleets, and the construction of new terminals and docks. Notably, eight of the funded projects will advance environmentally friendly propulsion technologies, such as electric ferries and charging infrastructure.

"This historic funding for FTA's Ferry Programs will enhance ways for people to travel by water," said FTA Acting Administrator Veronica Vanterpool. "We applaud ferry agencies for taking the big step toward electrification, increasing reliability, and bringing their aging ferry systems into a state of good repair."

The funding is divided among three competitive grant programs:

- **FTA's Ferry Service for Rural Communities Program:** Allocates $194 million to four projects in two states to improve ferry services in rural areas.
- **FTA's Passenger Ferry Grant Program:** Provides $56.3 million to eight projects in seven states for new ferry services, and the repair and modernization of vessels, terminals, and facilities in urban areas.
- **FTA's Electric or Low Emitting Ferry Program:** Grants $49 million to six projects in five states for the acquisition of electric or low-emission ferries, promoting cleaner alternatives and energy storage systems.

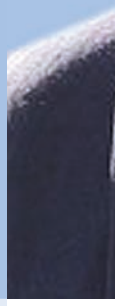
The projects selected for funding were chosen from 43 eligible proposals totaling $638.7 million in requests. This funding, part of the largest investment in public transit in U.S. history, is set to enhance ferry services, modernize aging infrastructure, and promote low-emission technologies across the country, the FTA said.

State	Project Sponsor	FTA Ferry Program	Project Description	Amount
Alaska	Alaska Department of Transportation & Public Facilities (DOT&PF)	Rural Ferry	The Alaska Department of Transportation & Public Facilities will receive funding to install sys-tem-wide wireless connectivity to its ferry ves-sels to allow access to the internet between ports. The project will enhance the travel experi-ence for customers and improve operational efficiency for the entire ferry system.	$5,000,000
Alaska	Alaska Department of Transportation & Public Facilities (DOT&PF)	Rural Ferry	The Alaska Department of Transportation & Public Facilities will receive funding to build a new ferry to replace a 60-year-old vessel. The new ferry, which will feature a diesel-electric propulsion system, will serve rural southwest Alaska, improving service, reducing greenhouse gas emissions, and preserving a vital transit life-line.	$106,418,096

Alaska	Alaska Department of Transportation & Public Facilities (DOT&PF)	Rural Ferry	The Alaska Department of Transportation & Public Facilities will receive funding to improve operations on the Alaska Marine Highway Sys-tem, which runs 3,500 miles and serves more than 30 communities with limited transporta-tion options. The federal support will add service to remote communities and improve the condi-tion and quality of passenger ferry service.	$66,050,400
California	Golden Gate Bridge, Highway and Trans-portation District	Electric/Low-Emitting	The Golden Gate Bridge Highway and Transpor-tation District will receive funding to buy a new low-emission ferry to replace an older vessel nearing the end of its useful life. The new ferry will reduce emissions, enhance service and relia-bility for passengers, and relieve congestion on Bay-area roads by providing a viable alternative to congestion.	$4,900,000
California	San Francisco Bay Area Water Emer-gency Transporta-tion Authority (WE-TA)	Electric/Low-Emitting	The San Francisco Bay Area Water Emergency Transportation Authority (WETA) will re-ceive funding to build two, new electric ferry vessels to support the agency's emission free ferry ser-vice between downtown San Francisco, Treasure Island and Mission Bay. The project will reduce congestion and provide fast, clean, and reliable ferry service to growing neighborhoods with limited street access.	$11,514,000
Delaware	Delaware River and Bay Authority	Electric/Low-Emitting	The Delaware River Bay Authority will receive funding to buy a new diesel-hybrid ferry to re-place a vessel originally built in 1981 as part of daily transit services on the Cape May-Lewes Ferry route. Upgrading to a hybrid vessel will provide more environmentally sustainable ferry service between Cape May, NJ and Lewes, DE.	$20,000,000
Florida	Jacksonville Trans-portation Authority	Passenger Ferry	The Jacksonville Transportation Authority will receive funding to buy a new diesel hybrid-electric ferry to provide service between the city of Jacksonville and surrounding com-munities. The new vessel will reduce greenhouse gas emis-sions, promote environmental sustainability and provide a seamless, safe, reliable, and efficient connection for residents and visitors to north-east Florida, including rural Nassau County.	$15,600,000
Georgia	Chatham Area Transit	Electric/Low-Emitting	Chatham Area Transit will receive funding to buy new electric charging stations to support its Sa-vannah Belles Ferry fleet. The project will im-prove the efficiency of the fleet, including two new diesel-electric hybrid vessels that are ex-pected to join the fleet later this year.	$691,000
Illinois	Rock Island County Metropolitan Mass Transit District (Me-troLINK)	Electric/Low-Emitting	The Rock Island County Metropolitan Mass Transit District (MetroLINK) will receive funding to buy a new a battery-electric ferry, charging equipment to support a zero- emission ves-sel along the Mississippi Riverfront, and to make land-side improvements. The project will im-prove service, reliability, and state of good repair and improve air quality for passen-gers taking the ferry across the Mississippi River between Illinois and Iowa's Quad Cities.	$8,000,000
Louisiana	Plaquemines Port Harbor & Terminal District (PPHTD)	Passenger Ferry	The Plaquemines Port Harbor & Terminal District (PPHTD) will receive funding to replace two ferry landing barges on the Belle Chasse-Scarsdale evacuation route as well as a maintenance barge. The project will improve safety and gen-eral state of repair as the PPHTD provides vital east-west ferry service for Plaquemines Parish residents and com-muters from St. Bernard and Jefferson Parishes.	$4,732,022
Massa-chusetts	Massachusetts Bay Transportation Au-thority/City of Quincy MA	Passenger Ferry	The city of Quincy, MA, in partnership with the Massachusetts Bay Transportation Authority (MBTA) will receive funding to modernize the Squantum Point Park Ferry Pier with a new pier, float and ramp system. The project aims to en-hance regional maritime transportation, con-necting Quincy, Boston, Milton, Weymouth, Braintree, and other communities to downtown Boston's employment, healthcare and other services.	$4,224,246
Maryland	Anne Arundel County, Maryland	Electric/Low-Emitting	Anne Arundel County will receive funding to buy electric vessels to initiate new ferry service be-tween Annapolis, the city of Baltimore and Mat-apeake Park. The proposed service would ac-commodate workers, residents and visitors and use existing port facili-ties at all three locations.	$3,895,000
Maine	Maine Department of Transportation	Rural Ferry	The Maine Department of Transportation will receive funding to modernize rural ferry termi-nals in the towns of Lincolnville and Islesboro that were originally built in 1959. This project will provide the infrastructure needed to sup-port the future operation of a new hybrid elec-tric vessel that will service these communities. The improvements will include expanded dock-ing space for safe and efficient boarding and charging equipment.	$16,568,000
New Jersey	NJ TRANSIT	Passenger Ferry	New Jersey Transit will receive funding to install new equipment that will build resilience at the New York Waterway Weehawken Ferry Mainte-nance facility. The wave attenuator will play a critical role in preventing waves, high tides and floods from harming vessels and impacting ser-vice.	$6,328,309
New York	County of Suffolk, NY, Department of Public Works	Passenger Ferry	Suffolk County, in partnership with Cross Sound Ferry Services, will receive funding to mod-ernize its ferry terminal to maintain passenger safety and ensure a state of good repair.	$1,120,000
New York	New York City De-partment of Trans-portation	Passenger Ferry	The New York City Department of Transporta-tion will receive funding to improve its mainte-nance capabilities at its Staten Island Ferry St. George Terminal. The funding will enhance pas-senger safety and improve state of good repair.	$5,750,000
Virginia	Virginia Department of Rail and Public Transportation	Passenger Ferry	The Virginia Department of Rail and Public Transportation will receive funding to modern-ize the passenger ferry slips at its Jamestown Scot-land Ferry Facility to maintain pas-senger safety and ensure a state of good repair.	$5,048,650
Washing-ton	Kitsap County Pub-lic Transportation Benefit Area Au-thority	Passenger Ferry	Kitsap Transit will receive funding to buy a new ferry to replace an older vessel that operates between Kingston, WA and downtown Seattle. The project will improve service and reliability on a critical route to jobs, schools, doctors, and other essential services.	$13,500,000

Lane Richards

VP of Service Sales, Nichols Brothers Boat Builders and Everett Ship Repair



Lane Richards has worked in the maritime industry for 22 years. He began his career in the trades prior to a successful transition to project management and various sales management roles.

After a short but successful stint at Nichols Brothers Boat Builders, Richards transitioned to head up the commercial sales effort at Puglia Engineering's Fairhaven Shipyard prior to returning to Nichols Brothers in 2019. There he began work with their team in planning and subsequently standing up a dedicated repair yard on the Everett waterfront. Presently he is focused on business development and strategic growth initiatives for both Nichols Brothers and Everett Ship Repair as VP of Service Sales.

By Eric Haun

All photos courtesy Everett Ship Repair

What motivated you to pursue a career in the maritime industry?

My dad built boats for just shy of 50 years, and I grew up down the road from the yard where he spent the first 38 of those years. The comradery and work ethic at that place were strong.

I remember any time our dog went missing I'd go down to the yard and find her wandering around looking for him. For the most part, the yard crew knew me (and my dog) and if anyone saw me hanging out at the gate they'd send the dog up. I was in grade school with a lot of the other guys' kids, and whether I was on summer break taking my dad lunch, or running around one of the new boats that had just been launched with a bunch of other shipyard kids during a christening party, it just felt like a big family.

Shortly after high school I went to work for a supplier in the industry, and after about 12 years with that company I got an opportunity to work for a shipyard. I've loved this industry from an early age, and in my opinion, the future is bright for anyone willing to put the work in.

How has Everett Ship Repair evolved and expanded its operations since opening in 2019? Will you please give an overview of its current facilities, equipment and capabilities?

ESR started out with a dry dock, its dockmaster and a handful of folks and borrowed equipment from sister company, Nichols Brothers. As we close in on five years of operations, we're 120+ heads strong with two dry docks, a fully outfitted yard and an expanding footprint within the Port of Everett. The previous tenant that operated a yard only had about 500 feet of waterfront and three or four acres of uplands. When we leased the site, the existing footprint was not sufficient as our dry dock was too large to operate where the previous dock sat, so the port included the north side of Pier 3 as part of our footprint. Today we have access to the south side of Pier 3 (800 feet long with deep water) as well as the 900 feet of waterfront at the port's newly minted Norton Terminal for in-water service work.

Thanks to the award of a few small shipyard grants and investment from our ownership, we have brand new air compressors, UHP Waterjets, rolling stock and crane capacity, along with every shop and associated equipment you'd expect to find in a repair yard. Our large drydock is 436 feet (loa) by 110 feet in between the walls and is rated at about 8,000 tons lifting capacity. The smaller dock is 220 feet (loa) by 62 feet between the walls and about 2,000 tons of lift.

How is the company investing—in technology, facilities, people, etc—to ensure future success?

We are currently looking at robots that work with our blasting equipment to improve production rates and increase safety in surface prep, automated welding equipment and exploring laser ablation. Additionally, we just commissioned a few new machines in our machine shop and are looking at green energy initiatives like broad power monitoring for identify opportunities to reduce carbon footprint in our operations.

However, the biggest investments that we have been making for the past couple of years are in our people and processes. For a young yard that has grown fast, there is plenty of low hanging fruit in this area. Simply put, it is smart, hard-working people that are all rowing in the same direction, to the same drumbeat that are going to take us

to the next level. We were recently lucky to have hired a new general manager, Jon Shaton. Jon is a Navy veteran and has worked in commercial and government ship repair and new construction on every U.S. coast. His last stop was building frigates on the Great Lakes and he possess all of the tools and knowhow to guide the yard in the direction we need to go. We have a talented group of project managers, admin support, production management and crafts people that continue to up their game as we grow. The apprenticeship program we run in concert with our sister yard, NBBB, feeds us a steady stream of young, hungry up and commers.

Our recently approved Master Ship Repair Agreement (MSRA) with the U.S. Navy, which governs process and facility standards, coupled with our various workforce development initiatives has us positioned well to continue and expand on a path of rapid growth.

How much of Everett Ship Repair's workload is commercial vs government projects, and how does this balance shift? Where do you see greatest opportunity going forward?

In the first couple years of operation, we had to continually remind ourselves to "walk before we run". But as we rounded our second year in business, the complexity of work began to ramp up along with our capabilities. While we are still probably heavier on commercial work, we just had an MSC ship on our pier for in-water service and currently have a Navy Caisson in dock. We'd like to see a bit more government work in the yard, but our commercial customers have always been and will continue to be critical to our business. We are confident that we can succeed in this balanced approach, and we have a plan for executing this mix with eyes wide open to the importance of how we segregate these business lines.

Photo courtesy Everett Ship Repair

In the short term, we see opportunities to support both commercial and government customers with the addition of deepwater pier space as well as remote work at Naval Station Everett. We are watching NSE's growth closely and believe that our proximity to the base and strong value proposition rooted in commercial ship repair positions us well to support the government as the number of ships grows there in the coming years.

How are recent technological advancements impacting the ship repair industry? Are advances in areas such as digitalization and automation, for example, having any impact?

While ship service, repair and major conversions have always and will always rely on skilled trades people, digitalization and technological advancements certainly provide advantages. As front-end planning has evolved from physical templates and drafting tables to CAD and 3D scans of existing structures, the improvements in a shipyard's ability to detail out every aspect of a job has advanced by leaps and bounds. If you fail to plan, you plan to fail.

Out on the dock floors, our trades people are learning to run robotics, and by doing so, are reducing injuries and improving quality and efficiencies.

Yes, there has been positive impacts from technological advancements, but I believe the advantages in higher value to our customers, quality of life for our trades people and the shipyards bottom line are only going to increase in the coming years and decades.

All photos courtesy Everett Ship Repair

What are the biggest challenges currently facing the Everett Ship Repair, or even the ship repair industry in general, and what is the company doing to address these challenges?

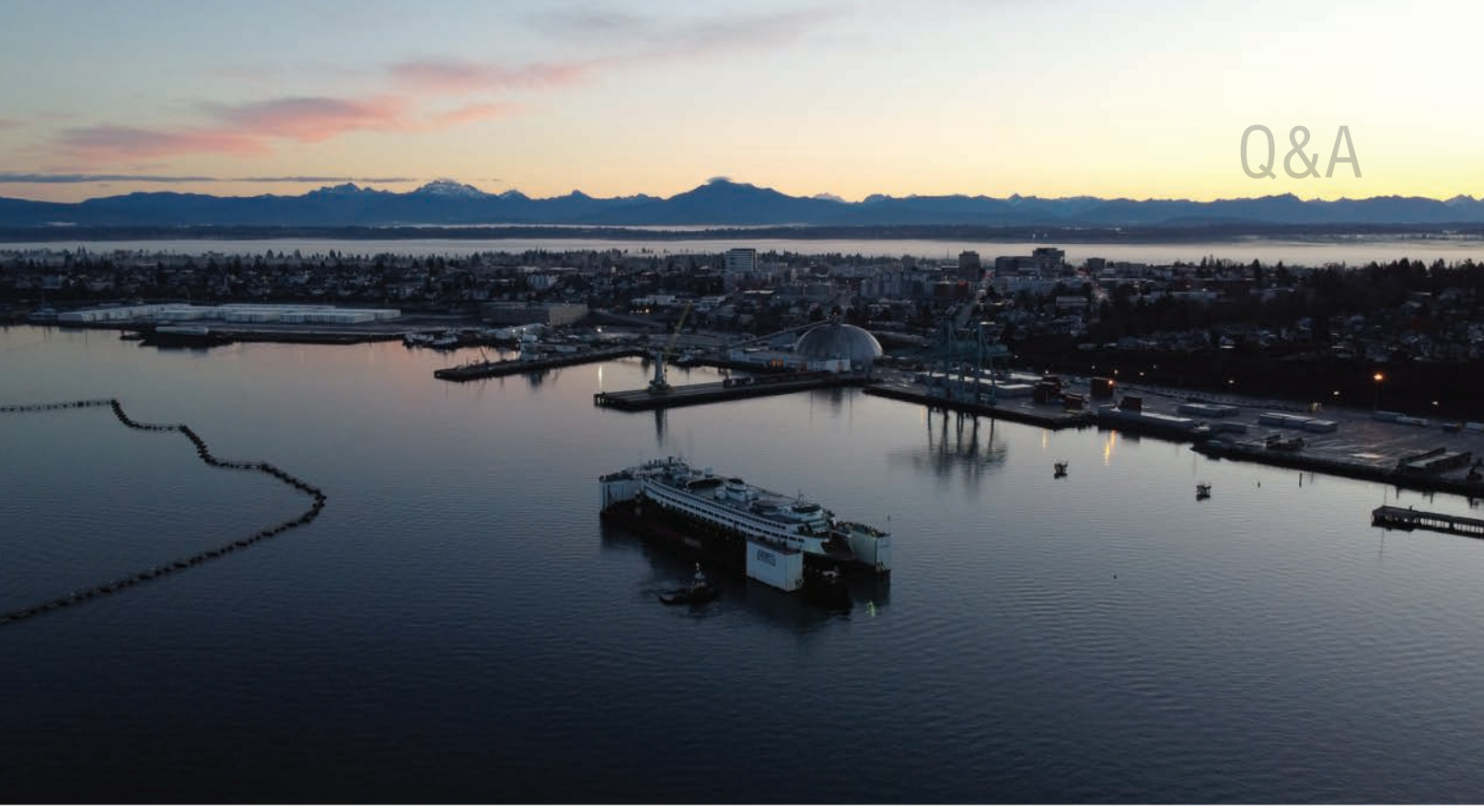
For most businesses employing blue collar trades, ship repair included, the biggest challenge is finding the people willing to do the work. We address this issue in many ways, but namely through engaging with the numerous workforce development organizations in the Puget Sound area, our own in-house apprenticeship program, paying competitive wages and generally providing an environment which enables rapid upward mobility to employees in a positive, forward thinking and operating environment.

As ESG continues to grain greater focus across all industries, what steps is Everett Ship Repair taking to promote sustainability and reduce environmental impact?

As the youngest shipyard on the US West Coast, regulated by the stringent Washington State Department of Ecology along with the latest regulations administered by federal EPA/Clean Air we are likely one of the cleanest yards on the waterfront. Regulators will, over time, get some of the older legacy yards/permit holders up to snuff, but we have, from day one, been set up to meet a higher bar regarding ESG when compared to our competitors.

Can you share a recent success story or project that exemplifies your company's capabilities?

While I do not comment on specific customers or vessel names, it always feels good to deliver projects early and under budget. We recently did this on a complex project for a large fishing vessel owner as well as an early delivery for a major ferry operator with a pressing need to get their vessel back in service.



Column

Electrification

High Voltage, High Cost:

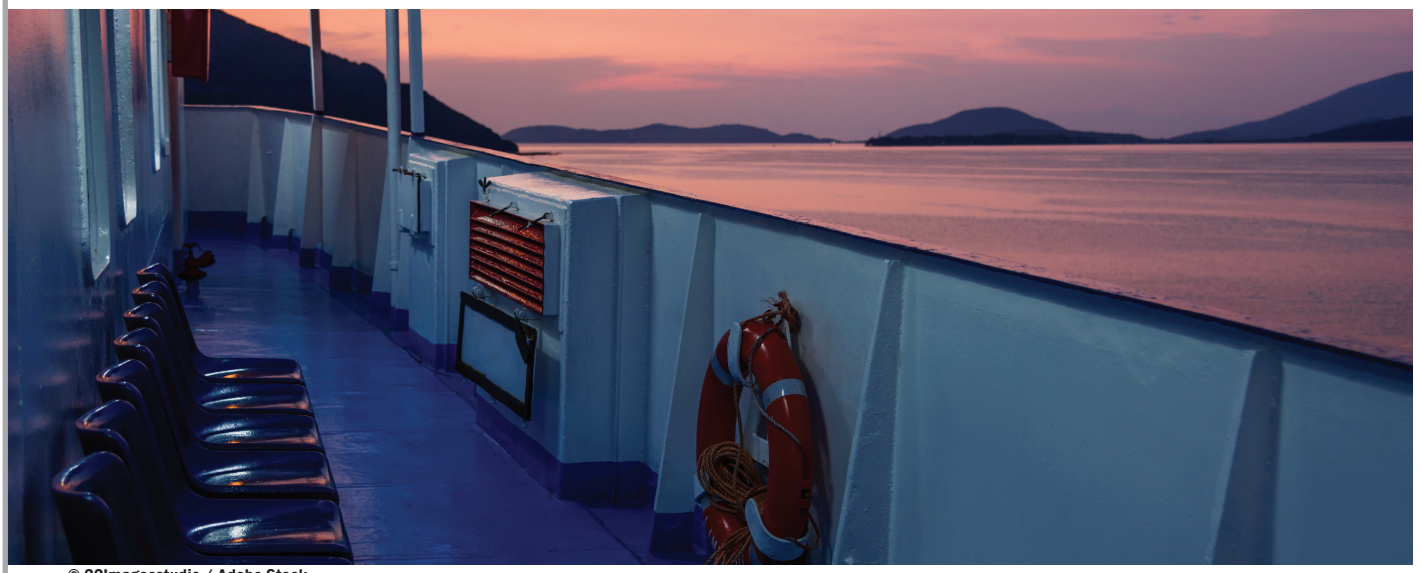
The Economic Challenges of Vessel Electrification

By Michael Complita, PE, Principal in Charge & VP Strategic Expansion, Elliott Bay Design Group

Over a half-billion (yes billion) dollars of seemingly free money is being offered by the Federal Transit Authority through 2026 to update and expand passenger ferry service across the United States. Additionally, significant funding is available specifically for construction or conversion to electric propulsion. Whether you are a public or private operator, this may seem like a once-in-a-lifetime opportunity to upgrade your fleet, and since someone else is paying for it, surely it makes sense to embrace the trend toward battery power. Before you commit, buyer beware that free money comes with a cost, and electrification will undoubtedly be very expensive.

Over the past decade, Elliott Bay Design Group (EBDG) has supported operators on dozens of electrification and hybridization projects ranging from tour boats and small passenger-only harbor ferries to the nation's largest passenger vehicle vessels. We work closely with our clients to ensure they understand both the pros and cons of electrification and potential grant funding options. Each new project begins with a discussion to explore together the approach that will best meet their needs and budget. In our experience, the following are essential questions that every operator should consider when evaluating an electrification grant:

- **How much are you willing to spend out of pocket?** Grant funding typically requires a "cost share". In other words, you will need to put some skin in the game. Depending on the program this can be 50% or more of the total construction cost. It is not uncommon for a grant funded electrification project to end up costing the owner significantly more out of pocket than self-funding a similar vessel powered by modern clean diesel.
- **Have you considered the shoreside infrastructure you will need to charge your new vessel?** An electric ferry will typically run 30 to 60 minutes on a full charge. As such, it will need to be recharged between each trip. To "fast-charge" during a normal unloading and reloading cycle will require a high-capacity charging system in-



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cluding large and expensive components on the dock to manage the power transfer. Permitting and installation of this equipment will add 30% or more to the total project cost. Charging time may also require changes to your current scheduling.

- **Does your local power grid have capacity?** Many routes well suited to electrification have been stymied by the lack of available grid capacity. Power providers may also be unwilling to invest in the additional infrastructure necessary to meet your vessel's demand.
- **Have you factored in the "fuel" cost?** A gallon of diesel costs the same regardless of what time of day you burn it. In regions with surge power pricing models, peak energy cost hours are also usually peak ferry operating hours. Though an electric ferry won't require fuel in the conventional sense, you may ultimately not see a significant reduction in operating cost.
- **Do you have the budget for a grant writer?** A successful grant pursuit will likely require a significant investment of both time and money up front and there is no guarantee that your application will be selected. If you are successful, you will also need to be prepared to invest additional effort over the course of construction to document and apply for progress payment.
- Other long-term cost considerations include spares and maintenance for both the vessel and dock side systems, battery bank replacement and crew training.

The appeal of a quiet, clean and efficient new electric boat at little to no out-of-pocket expense is universal, and most short-run ferry and tour routes are ideal candidates from a technical perspective. In reality, when all factors are considered, integrating an electrified power system can increase the costs as much as two or more times compared with a conventional diesel-powered vessel. As an example, a new build electric ferry project in the Pacific Northwest was put on hold earlier this year due to a projected shortfall of approximately $13 million in total program budget based in part on shipyard bids for vessel construction exceeding the anticipated cost of $26.6 million. Additionally, a regional operator EBDG is working with is reconsidering a conventional diesel replacement despite their desire for an electric boat based on similar funding concerns.

In other cases, an electric or hybrid system is an ideal alignment of both need and resources. In California, new regulations require all short-run ferries to be electrified by 2026 and operators are leveraging significant additional State level funding to support their transition. Projects in both the Gulf and Northeast Regions are also moving ahead based on recent budget validation.

Through thoughtful planning and careful consideration of the total cost including shoreside charging infrastructure, on-shore battery energy storage and modern vessel propulsion technologies, electrification is a viable and environmentally considerate option for many ferry operations. Other options that should be given equal consideration before beginning any newbuild or conversion project include hybrid systems and state-of-the-art advancement in clean diesel emissions reduction. Before committing to any approach, it is also important to understand and consider the true cost of seemingly free money.

Column

Sustainability

Navigating a Safe Future for Us and Our Marine Environment

By Kevin Williams, Head of Research Ships Engineering at the UK's National Oceanography Centre

Navigating our oceans safely is always at the center of our maritime operations, whether it's while deploying instrumented moorings, weighing up to tens of tons and measuring multiple kilometers in length, or working in remote, ice-packed regions.

World Maritime Day 2024 (September 26) – 50 years since the SOLAS convention was adopted – is reflecting on how we continue to navigate a safe maritime future. It's a course we need to chart together, as an industry.

As a research organization focused on understanding and protecting our ocean, a key part of that safe maritime future is keeping the environment we operate in safe. Coming from a small British island, St Helena, I'm very aware of the risk to island communities from rising sea levels and more extreme weather events, resulting from climate change.

National Oceanography Centre

As an institute, we're here to understand these complex dynamics to help protect the ocean and its ability to continue to sustain us, whether that's as a route for more than 90% of global trade, as a major source of food or as the engine of our climate systems.

It's a wider challenge that all in the maritime sector face as we seek to reduce the environmental impact of our vessels and vessel systems.

At the National Oceanography Centre (NOC), we've a goal to have net zero emission operations by 2040, 10 years ahead of wider UK net zero goals. It's a tough challenge but one that we're keen to tackle.

In collaboration with the UK's Natural Environment Research Council (NERC), we've been conducting trials of hydrotreated vegetable oil (HVO) as an alternative fuel for our two research vessels, the RRS James Cook (delivered 2006) and the RRS Discovery (delivered 2013).

The fuel we use is a major part of our carbon footprint. But there are challenges to finding alternatives. One is cost. HVO is a great alternative to the low sulphur marine gas oil we otherwise (LSMGO) use. It's one of the more stable biofuels under the conditions we operate in, which range from high temperature regions to the Arctic. HVO, by the way it is processed, removes moisture and, therefore, reduces bacteria growth, so it doesn't degrade over time. It's also a "drop in" fuel, so we don't need to alter our engines at all. While there's a small drop in calorific value, we have found it to be negligible.

But HVO costs substantially more than the LSMGOs we otherwise use. We're talking almost three times as much.

There's also a wider challenge. We're a small part of the global maritime fleet, one which is more likely to dock in a remote port like Punta Arenas or Nuuk in Greenland than a

major hub where alternative marine fuels are more available.

That lack of access to infrastructure is a challenge that limits our ability to use these fuels. We have been able to take on HVO in Aberdeen, Scotland, as well as via pipeline and other locations by road tankers but for our next UK visit, which will be to Southampton, we have had to consider options including, again, road tankers to get the fuel to us or a bunker barge to bring it round from the Thames.

In addition to that, there are a number of alternative fuel options – LNG, ammonia, methanol, hydrogen – but no clear indication which will prevail, this again limits what is available where. These fuels are also for retrofits or new builds.

We're also looking at a hybrid battery solution which would enable us to run on just one engine efficiently, at, for example 90% load, instead of two at 60%, while holding station using dynamic positioning and performing science activities. Running one engine would reduce the fuel load, increase the time between engine overhauls for the less used engines, and reduce component wear as the engines would be running at a more optimal load. When we're delivering more power than we need, that excess power can then be banked back into our batteries in a virtuous cycle.

To install batteries comes with challenges, one being finding the space for them and the second being their weight and how that impacts stability. Our studies so far suggest it's feasible.

However, long-term certainty over our ability to invest and what we invest in, whether that's types of fuel or alternative power sources, are challenges that we and many – including those with the ability to build refueling infrastructure – face in this environment.

It's not just hardware that impacts our footprint. Marine planning, or where we go and when, can also help. We look at our science expeditions and make sure we have fewer stops between them, that one ends where another can start, but also weather routing, so we're more efficient and the ship is concentrating on science days not transit time.

There are other quick wins we've already taken, like converting to LED lighting onboard, using frequency converters to reduce load use on items like pumps, and even having bicycles on board that staff can use when dockside for lower-footprint travel. The science teams also ensure freezers and laboratories are turned off when not in use.

But with vessels that are 10-15 years old, there are limitations on what we can do, which is another challenge many others face.

Of course, it's not just all about our ships and maritime operations. Across our wider organization, other initiatives include converting the roof of our Southampton site to Zinc, enhancing the energy efficiency of the building, using 100% recyclable materials, increasing the number of electric car charge points, improving the efficiency of our laboratories and gaining IOS14001 environmental management accreditation.

Overall, we have a commitment to sustainability and environmental responsibility and we are fully committed to the journey we are on to decarbonize shipping, underpinning how we operate in a way that's safe towards the environment we aim to help preserve.

OpEd

Offshore

Anchoring America's Energy Future: The Vital Role of Offshore Energy

By Erik Milito, President, National Ocean Industries Association

Amidst sensational headlines and questionable policy decisions from Washington, D.C., the U.S. offshore energy sector stands resilient. This vital industry not only powers our nation with reliable energy but also enables hundreds of thousands of jobs across all 50 states and strengthens national security. From the Gulf of Mexico to the burgeoning offshore wind farms along the East Coast, the resilience and innovation of this sector are critical to driving economic growth and ensuring our nation's energy security.

The Gulf of Mexico has long been a cornerstone of U.S. offshore oil and gas production, recently safely producing close to 2 million barrels of oil per day with a small footprint. Yet, recent developments from Washington have cast a shadow over the region.

2024 marks the first year since 1958 without an offshore oil and gas lease sale in the Gulf. Only three lease sales are scheduled over the next five years.

These policy decisions are inconceivable given the Gulf's role as a wellspring of stable, affordable and lower-carbon energy that drives economic growth and generates billions in government revenues.

The recent ruling by the U.S. District Court for the District of Maryland, siding with environmental activists against the Gulf of Mexico Biological Opinion (BiOp), poses significant challenges. By vacating the BiOp effective December 20, 2024, the court has nullified a crucial regulatory framework, potentially leading to potential permitting slowdowns, operational delays and overwhelmed agencies.

This decision could open the door to an unpredictable regulatory environment, deterring investment and jeopar-

Chevron

dizing economic growth, tax revenues and jobs. Without an active BiOp, nearly every permit or plan would require individual Endangered Species Act (ESA) consultations, which could significantly slow down, and potentially halt, the process.

Additionally, it risks increasing energy prices and forfeiting geopolitical advantages to countries like Russia and Iran by limiting domestically produced energy.

Industry is also closely watching the anticipated December 2024 release of the expanded Rice's whale critical habitat. Previous attempts to bypass regulatory processes and limit public input have cast doubt on this decision, supported by incomplete and flawed science.

The designation could reintroduce mitigation measures that harm energy, industrial, commercial and every marine activity in the Gulf of Mexico without providing meaningful protection for the whales. These restrictions could also impact ships bringing fuel to Florida's Gulf Coast, cargo ships from Houston and food exports from the Mississippi, disrupting vital supply chains and economic activities.

Despite these challenges, the Gulf of Mexico continues to innovate and produce the energy that lifts society.

New projects in the deepwater Gulf are advancing with groundbreaking techniques. Chevron's Anchor project, which achieved its first oil in August 2024, exemplifies the industry's commitment to innovation, safety, and efficiency. As the first deepwater high-pressure development to begin production, Anchor uses 20,000-psi subsea technology to tap into reser-

voirs at depths of 34,000 feet.

This achievement required the collaboration of numerous companies. For instance, Chevron contracted Transocean's newly built Deepwater Titan, an eighth-generation drillship, to drill and complete the project's subsea high-pressure production wells. The Deepwater Titan and its sister ship are the first rigs in the world equipped with a 1,700-ton hoisting system, a 20,000-psi well control system and a 10,000-psi mud system.

Other frontier HPHT projects, like Beacon Offshore Energy's Shenandoah Project and bp's Kaskida Project, are poised to follow and build upon the Gulf region's impressive resilience and status as a premier global energy basin.

There has also been progress in developing new offshore wind projects in the U.S. The South Fork Wind project, a joint venture between Ørsted and Eversource, is New York's first offshore wind farm and the first commercial-scale offshore wind farm in federal waters. With 12 turbines generating 132 MW of renewable energy, South Fork Wind will power approximately 70,000 homes.

While the power generated from offshore wind projects may be local, the economic significance, including the supply chain, has a national footprint. States like Louisiana, Texas, North Carolina and Florida have already realized jobs and investments from supporting offshore wind projects.

Consider the ECO Edison, the first-ever American-built, owned and crewed offshore wind service operations vessel (SOV), constructed by Edison Chouest. This vessel will play a pivotal role in the operation and maintenance of wind farms, serving as a base for technicians and equipment. Built by over 600 workers across shipyards in Louisiana, Mississippi and Florida, and sourcing components from 34 states, the ECO Edison exemplifies the significant financial investments and collaborative efforts driving the U.S. offshore wind industry forward.

Furthermore, there is an additional pipeline of more than $14 billion in proposed additional investments to ports, manufacturing, vessels, workforce development, and research.

As the U.S. gears up for another election cycle, the political landscape casts a long shadow over the future of offshore energy. However, offshore energy policy does not need to become a contentious issue with debates polarized along party lines.

Offshore oil and gas and offshore renewable energy projects offer significant benefits, including job creation, energy security, and environmental stewardship and conservation. It is crucial for policymakers to recognize the importance of a stable and supportive regulatory environment for offshore energy. By pursuing federal policies that prioritize all-of-the-above energy sources and enable innovation and investment in offshore oil and gas and renewable energy, the U.S. can ensure a lasting and secure energy future.

Ørsted

Column

Washington Watch

An Election Awash with Maritime Implications

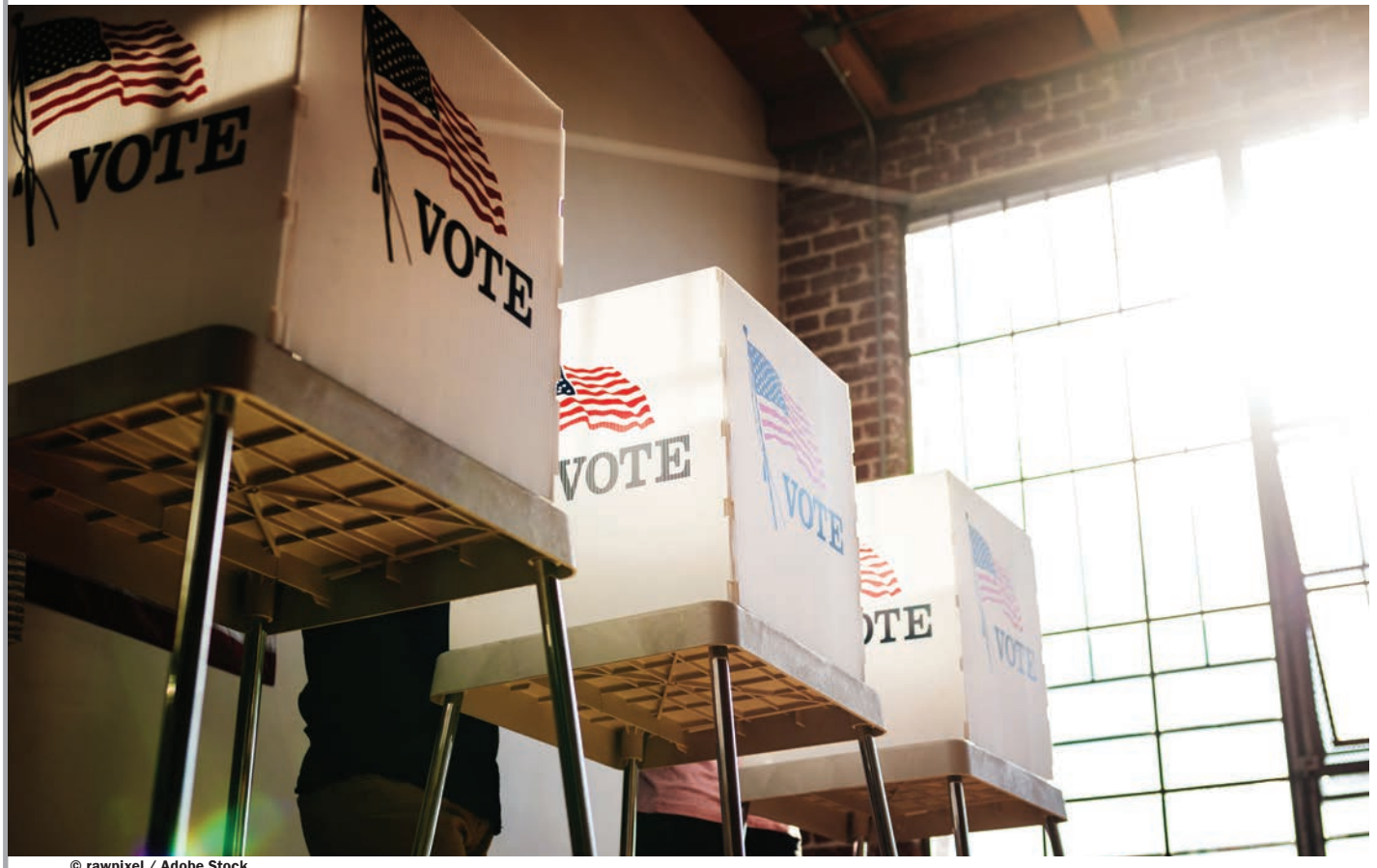
By Jeff Vogel, Shareholder, Cozen O'Connor's Transportation & Trade Group

With a critical election fast approaching – in which the Executive Branch, House and Senate are all up for grabs – it is essential to consider the election's potential impact on the maritime industry before heading to the voting booth.

Maritime impact on the election

At the time of writing, we are two weeks away from the expiration of the current six-year master agreement between the United States Maritime Alliance (USMX) and the International Longshoremen's Association (ILA) with no new agreement in sight. ILA's leadership has made it clear that their members are prepared to stop work at ports along the East and Gulf Coasts if an agreement is not reached before the October 1 deadline.

The potential ILA strike places the Biden Administration – and in turn the Democratic nominee, Vice President Kamala Harris – in a challenging position. As the deadline approaches, the Administration is increasingly faced with the question as to whether they will invoke the Taft-Hartley Act. Under the Act, the President can direct the Attorney General to obtain an injunction from federal court, arguing that the ILA strike could imperil national health or safety.



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Column
Washington Watch

Under such injunction, the USMX and ILA would be subject to an 80-day colling offer period during which time ILA workers would be required to continue working, giving the sides additional time to reach an agreement. President Bush invoked the Taft-Hartley Act in 2002, following an 11-day International Longshore and Warehouse Union strike, following the expiration of the union's master agreement with the Pacific Maritime Association.

Invoking the Taft-Hartley Act is strongly opposed by the ILA, and would be viewed as an action against labor union interests. On the other hand, a strike could impact the U.S. economy, including the flow of consumer goods, depending on how long it lasts. Moreover, a strike would likely create negative media coverage, and validate voter perceptions of weakened economy, potentially costing Vice President Harris critical votes. As such, the ongoing USMX-ILA negotiations have increased in importance, going far beyond the waterfront to potentially impacting the votes of numerous Americans.

A new Merchant Marine Act

In the background of the election is perhaps the most important piece of maritime legislation in the last fifty years. Led by Senator Mark Kelly (D-AZ), the bill aims to rebuild the U.S. maritime industry (literally and figuratively) through the investment of billions of dollars in U.S. shipbuilding and support for U.S.-flag vessels in international trade, amongst numerous other provisions. The legislation builds upon the April 2024 bipartisan, bicameral Congressional Guidance for a National Maritime Strategy, issued by Senator Kelly, Senator Marco Rubio (R-FL), Rep. Mike Waltz (R-FL-6) and Rep. John Garamendi (D-CA-8). In the guidance, the Congressmen asserted that "[d]ecades of neglect by the U.S. government and private industry has weakened our shipbuilding capacity and maritime workforce, contributing to a declining U.S.-flag shipping fleet to bring American goods to market and support the U.S. military during wartime."

Sen. Kelly's legislation takes direct aim at reversing this neglect, to help counterbalance the strategic influence of the People's Republic of China in the maritime domain. While Senator Kelly is looking to introduce the bill in the current Congress, it is unlikely that any action will be taken until after the election in the next Congressional session. As such, the next Congress – undoubtedly including many rookie Congressmen whose views of the U.S. maritime industry are unknown – may be tasked with considering the most important maritime support bill since the Merchant Marine Act of 1970. It took 54 years support bill of this magnitude to develop, and another bill of this importance may not develop for another 54 years. As such, this election will have lasting impacts for maritime stakeholders, as the bill's success could lead to a revitalization of the U.S. maritime industry and its failure could result in the industry's continued neglect lamented in the Congressional Guidance for a National Maritime Strategy.

House and Senate balance of power

Directly related to the consideration of the Senator Kelly's bill is the potential rebalancing of power in both chambers of Congress. Democrats are seeking to retake control of the House that they lost two years ago, while Republicans seek to regain a majority in the Senate for the first time in four years. Of greatest interest are control of the committees with direct jurisdiction over the maritime industry - the House Transportation and Infrastructure Committee (House T&I) and the Senate Committee on Commerce, Science and Transportation (Senate Commerce). Both committees have jurisdiction over the U.S. Coast Guard (USCG), Maritime Administration (MARAD), Federal Maritime Commission (FMC) and certain aspects of the U.S. Army Corps of Engineers, among numerous other federal agencies.

If the Senate were to flip, Senator Ted Cruz (R-TX), would likely assume the role of Chair of Senate Commerce (assuming he wins reelection). Sen. Cruz's record of supporting the U.S. maritime industry is spotty at best. While he has strongly supported streamlining MARAD's review process for deepwater ports, to increase crude oil exports, he has advocated for defunding MARAD's Port Infrastructure Development Program, which provides critical federal funding to improve the safety, efficiency and reliability of the movement of cargo through U.S. ports. Similarly, Sen. Cruz's record on the Jones Act is concerning, including his support for an amendment to the Coast Guard Reauthorization Act of 2019, which would have greatly expanded the availability Jones Act waivers.

If the Democrats seize control of the House, leadership of the House T&I Committee is less clear. Ranking Mem-

ber Rep. Rick Larsen (D-WA-2) may seek the chairmanship, which would be welcome news for the U.S. maritime industry. Rep. Larsen has been a staunch advocate for all sectors of the maritime industry, providing vocal support for the Jones Act, and critical support programs, such as the Maritime Security Program.

Presidential impact

Of course, any discussion of the election's impact would be incomplete without consideration of the next President's impact on the maritime industry. Vice President Harris received early support from the Seafarers International Union and has been working steadily to build support from the rest of the maritime base. Toward the end of his term, President Trump similarly courted maritime interests, as his Administration's Buy American, Hire American report issuing before the election stated that the Jones Act "helps ensure America has a robust domestic shipbuilding capability, which is a critical element of our defense industrial base" and "helps ensure our nation has a merchant marine work force sufficient to serve both our commercial and military needs." However, the real impact of the next President on the maritime industry will not be revealed until they begin the nomination process, filling critical positions that impact maritime stakeholders on a daily basis, such as the Secretary of Transportation, Secretary of Homeland Securit, and the U.S. Maritime Administrator. Accordingly, even when the election ends, numerous questions about its ultimate impact on the maritime industry will remain unanswered.

Vineyard Wind

OFFSHORE:

Feedering for the Win(d)

By Rhonda Moniz

With clean energy projects maturing in U.S. waters, the nation's offshore wind industry is poised to grow substantially, requiring a robust industrial base. A feedering model using domestic tugs and barges to transport turbines to offshore wind sites, is positioned at the heart of this emerging growth.

Currently, the entire global fleet of wind turbine installation vessels (WTIV)—except for Dominion Energy's Charybdis currently under construction at the Seatrium AmFELS yard in Brownsville, Texas—is flagged, owned and operated outside of the U.S. Because of the Jones Act, which limits the transport of marine cargos from U.S. points to vessels that are domestically built, owned and crewed, foreign WTIVs are unable to pick up wind turbine components from shore to install them offshore.

During the construction of the United States' first commercial wind farm off Block Island, the installation vessel used for the project picked up its components from Canadian ports. In the years since, the feedering model has emerged as perhaps the best viable method of deploying America's offshore wind infrastructure. The model involves a close partnership between U.S. and foreign players. From U.S. ports, domestic tugs and barges carry wind turbine components to WTIVs stationed offshore.

US vs. Europe: Cost and efficiency

While there are commonalities between offshore wind installations in Europe and the U.S., they also differ markedly in regulatory regimes and operational models.

In Europe, where offshore wind has been maturing for a much longer period of time, installation projects benefit from integrated vessels that are specially equipped to handle the transport and installation of turbine components in one go. Instead of having to anchor multiple vessels and deal with the logistical complexities of a wider spread of vessels, WTIVs can receive turbines from land and then install their cargo at sea. European firms have invested in a large fleet of custom-made WTIVs—primarily built at Asian yards—to handle the increasing scale and complexity of commercial offshore wind farms.

By contrast, the U.S. offshore wind industry is much younger and is relatively constrained. To comply with domestic maritime regulations, recent projects such as South Fork and Vineyard Wind have relied on American tug-and-barge companies that ferry wind turbine components from U.S. ports, where they're staged, to WTIVs stationed offshore. For Vineyard Wind, Foss Maritime tugs and barges transported GE turbines to DEME Offshore's installation vessel.

The all-in-one approach being employed in Europe, in general, reduces logistical complexities, lowering costs and decreasing onsite installation times. The ability to perform transport and install tasks using a single purpose-built vessel creates economies of scale and simplifies logistics while eliminating the need for multiple extra vessels and the associated cost.

Analysts have said the feedering model, on the other hand, creates additional logistical challenges and expenses, and it can even hurt productivity. More vessels are involved in completing a single installation, which can add cost and

Vineyard Wind

reduce overall efficiency. In addition, feeder vessels are more prone to weather disruptions, present additional risk in terms of stability and collisions, and increase the handling (and exposure to damage) of delicate components.

In the U.S. context, where no U.S.-built WTIVs are presently available, the added costs and challenges associated with feedering are unavoidable—for now. Once operational, likely in 2025, the U.S.-built WTIV Charybdis will be able to both transport and install turbine components. But there will be challenges, including port infrastructure limitations that prevent access for large WTIVs. In addition, a sole Jones Act installation vessel cannot meet the needs of an entire industry that sees its project pipeline growing. Feedering will still be a necessity.

It's worth noting that the feedering method also presents its own set of unique advantages. In fact, the model has been executed to great success for foundation installation for jackets, monopiles, suction bucket jackets and gravity-based structures. The model also helps to build up a U.S. maritime workforce, creating new jobs and keeping mariners employed. And it allows WTIVs to remain on-site, maximizing their time spent installing components and reducing the idle time waiting for parts to be delivered. In addition, under certain circumstances, it can serve as a workaround for port restrictions or the challenge of transporting unique foundation designs.

As such, the U.S. offshore wind industry, although it faces many ongoing challenges ahead, has a business-critical path available for implementation: the feedering model. Although this model is more complex, typically more expensive, and has a higher risk than the traditional energy supply model used for decades in many other areas of the world, it is necessary.

Advancements in technology

One of the biggest bottlenecks in the U.S. offshore wind industry is the availability of the right kind of vessels. In particular, as offshore installation activity continues to ramp up over the coming years, more high-power offshore tugs and large deck barges will be needed. According to Spinergie, the current fleet of Jones Act compliant barges suitable for offshore wind is 167, most of which is aged at 20 years and up.

Components are transported out for Vinyard Wind 1 construction.

Barge Master

WTIV availability is also expected to present potential bottleneck challenges in the U.S. as well as European and Asian markets. Charybdis' arrival to the Jones Act market could bolster the U.S.'s transition to a new sustainable energy sector by scaled-up offshore wind capacity, but it is only a single vessel, and many more will be needed to meet projected demand.

As the U.S. begins to scale up its domestic offshore wind energy sector, it will need to increase its fleet and ensure adequate technology is available. For example, motion compensation equipment—like the kind developed by Barge Master and used in support of Vineyard Wind 1 construction—is essential to prevent large components of wind turbines from becoming unstable when lifted from a barge to a WTIV, especially in a harsh offshore environment.

To help address the challenge of lifting turbine components from a moving barge, Friede & Goldman has developed the BargeRACK concept. The ABS-approved system uses a trussed rack fitted to the transom of a self-elevating vessel to lift feeder barges out of the water, thereby eliminating motions between the installation vessel and the barge while lifting and installing wind turbine components, reducing risk and increasing safety. COSCO Shipping has reportedly entered into an agreement to build a WTIV compatible with this technology.

Another new concept has emerged that allows purpose-built barges to connect into a specially designed jackup WTIV via a locking mechanism that stabilizes the barge. Leveraging this innovation, the Maersk Sturgeon WTIV will be built by Seatrium in Singapore and used in turbine installation in the U.S. Northeast. According to Maersk, the solution can delivery up to 30% productivity gains.

Environmental considerations

With the growing scale of the offshore wind market, there is an increasing focus on reducing the industry's environmental impact. Although wind farms produce zero-carbon energy, building and installing them still take their ecological toll. Once again, the higher carbon footprint of the feedering model – involving numerous vessels – contrasts sharply with the European design, which is closely integrated and utilizes fewer ships.

To keep it cleaner, offshore wind developers are also looking into greener technologies for tugs, barges, and WTIVs – namely, hybrid or electric propulsion systems, and alterna-

tive fuels such as methanol for the installation vessels – and how those can help drive down the emissions associated with ferrying components out to the wind turbines. Moreover, developers are also starting to consider emissions over the whole lifecycle of a wind farm. This means considering the energy (as well as materials and manpower) required to sustain wind farms year after year. The industry will need to invest in greener technologies and more efficient vessel operations to make a significant dent in its environmental footprint.

Lessons learned and expanding capacity

Early U.S. offshore wind projects have offered invaluable lessons about planning for the future: how vessels (and their drivers) and installation teams communicate and react to unforeseen weather and timing delays, miscommunication or equipment failures.

Among the more challenging of these issues is the availability of vessels. It is one of the areas in which Europe has advantages over the U.S. due to its decades of experience developing offshore wind. The U.S. currently has a fraction of the WTIV and barge capacity it will need. With each new project scheduled to open, the risk of bottlenecks associated with multiple projects competing for a limited number of vessels increases. The U.S. needs to invest in domestic shipbuilding and a fleet (tugs, barges and WTIVs, among other vessels) to match.

In the near term, the feedering model will continue to be a vital component in the U.S. offshore wind supply chain. With only one WTIV currently under construction in the U.S., offshore wind developers can expect to rely on feedering with a foreign-flagged WTIV for installation.

While the cost and efficiency challenges of the feedering model are high and urgent, the financial and operational levers to address these issues and to improve the model are just as numerous, and targeted investments in vessel capacity, new technologies and environmental sustainability will be critical to the continued success of the rapidly growing U.S. offshore wind industry.

Meanwhile, in the longer term, as more U.S.-built WTIVs potentially come online, the U.S. may eventually migrate toward a more vertically integrated model similar to Europe's. To date, there have been no further WTIV builds announced in the U.S. So, for now, feedering is likely to be the backbone of U.S. offshore wind development, helping to bring the country's ambitious clean energy targets within reach.

Blades are installed at the South Fork wind farm.

Ørsted

Maersk's new Sturgeon WTIV concept promises efficiency gains.

Maersk

All photos courtesy Alabama Shipyard

OSVs Gain New Life

By Eric Haun

Faced with an aging fleet, the Woods Hole, Martha's Vineyard and Nantucket Steamship Authority has turned to converted offshore support vessels (OSV) to breathe new life into its ferry operations.

The operator announced its purchase of the OSVs HOS Shooting Star and HOS Lode Star from Hornbeck Offshore Services in 2022, to replace its open-deck freight vessels Gay Head and Katama, and several months later, the operator exercised an option to acquire a third OSV, HOS North Star, to replace its vessel Sankaty.

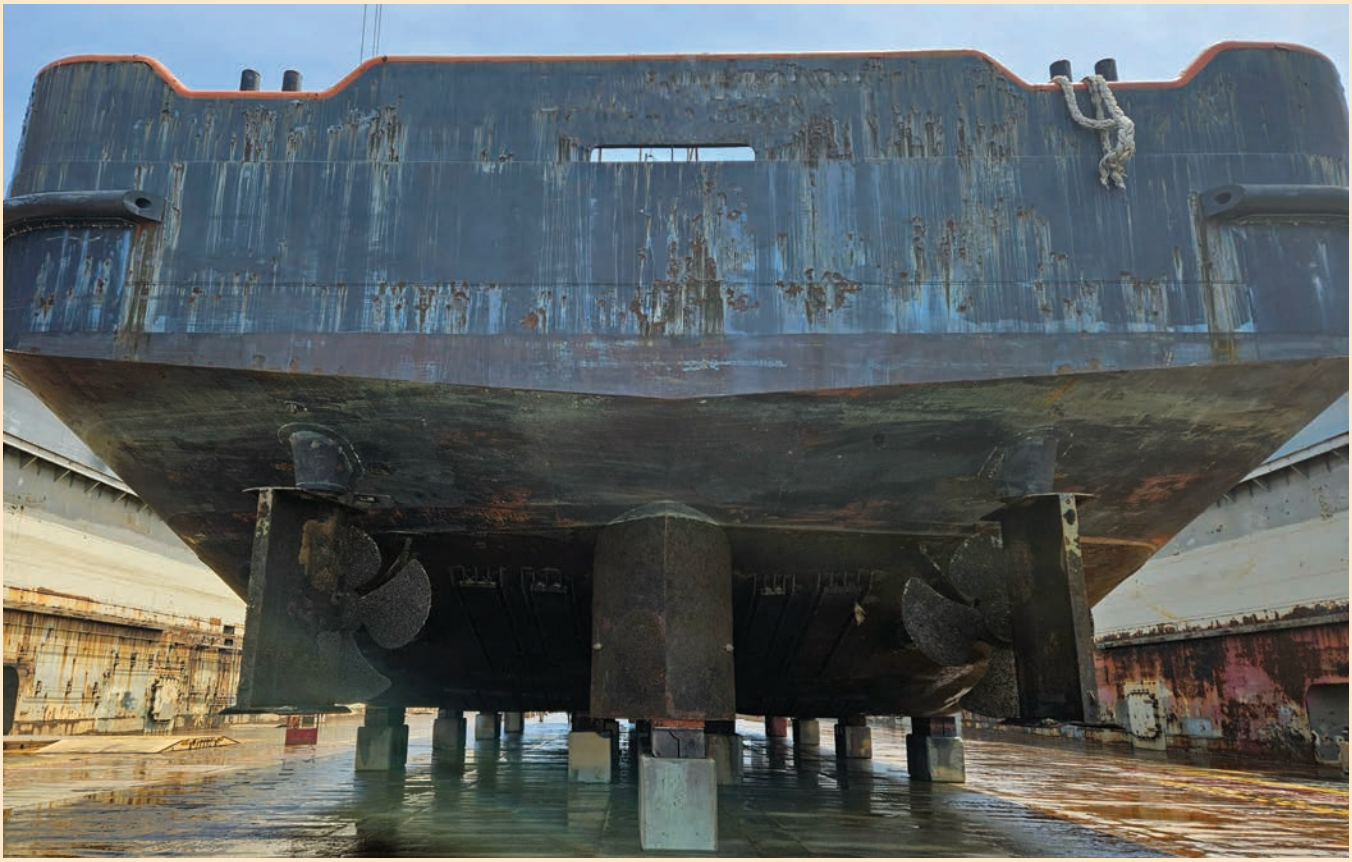
A study commissioned by the Steamship Authority identified the existing freight vessels as having an expected useful life of less than five years, while the newly purchased OSVs have an estimated remaining useful life of at least 25 years.

Initial cost estimates for the acquisition, conversion and re-activation of the first two OSVs is approximately $30 million, the Steamship Authority said when it announced the deal. The third OSV purchase was made possible through an agreement with the Cape Cod Regional Transit Authority (CCRTA) yielding $28.1 million in additional federal funding becoming available to the Authority.

"The purchase and conversion of available OSVs is the most efficient, rapid and cost-effective path to upgrade our fleet and best serve the vehicle and freight transport needs of island residents and visitors," Steamship Authority general manager Robert B. Davis said in a statement back in 2022. "The similar design of the vessels also promotes economies of scale through interchangability of vessels for service needs, inventory of spare parts and crew training."

The Steamship Authority is already familiar with the OSV conversion model. Gay Head, Katama and Sankaty, like the three sister vessels that are being converted to replace them, came to the U.S. Northeast following previous lives as OSVs supporting the offshore oil and gas industry in the U.S. Gulf of Mexico.

The first two of the current conversions are nearing the finish line at Alabama Shipyard and will soon be delivered to their new owner under the names Aquinnah and Mono-



moy. The third OSV, to be renamed Barnstable, entered the yard in August to officially commence its planned 11-month conversion journey.

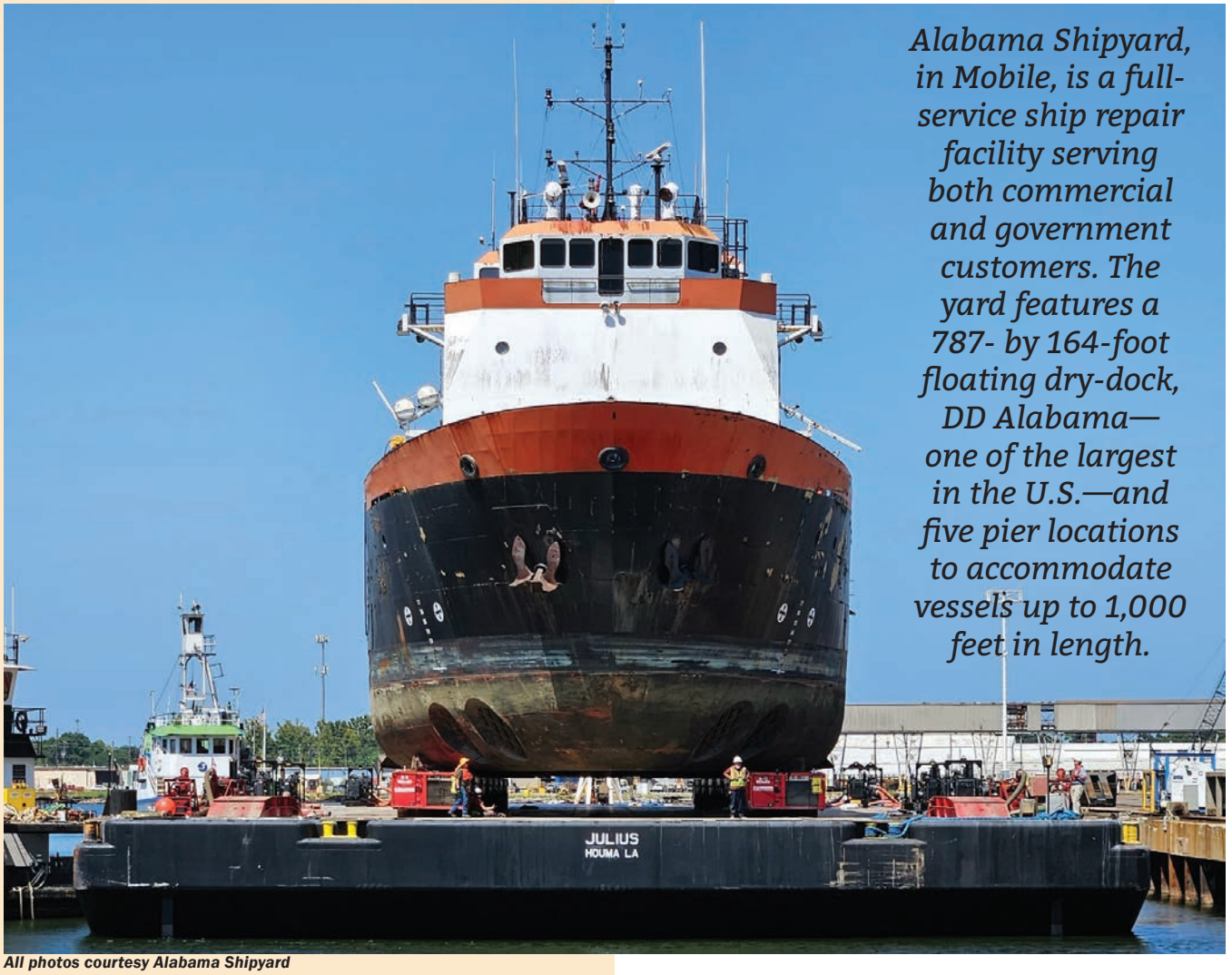
Built by Atlantic Marine, Inc. in Jacksonville, Fla. in 2008, the vessel is 240 feet long and 54 feet wide in its current state, offering a substantial platform for its new role as a passenger and freight ferry, said Ryan Schnoor, senior project manager at Alabama Shipyard.

"Its original design and ample deck space are ideal for its conversion into a ferry," Schnoor said. "The existing infrastructure provides a solid foundation for modification and the vessel's flat aft deck makes it suitable to accommodate a range of vehicles and passengers."

Upon arrival to Alabama Shipyard in August, the OSV was transferred to land, enabling initial work to begin.

"The vessel will undergo significant modifications, starting with the removal of a 24-foot midbody section to shorten its length," Schnoor said. "It will then be lengthened with the addition of a stern deck extension to align with existing ferry landings."

The result will be a vessel that is about 14 feet longer and 10 feet wider; its final dimensions will be 245 feet in length and 64 feet in breadth. The vessel will also be fitted with deck sponsons on both port and starboard sides for the accommodation of seven lanes of vehicles, and its public lounge area will be redesigned to include restrooms



Alabama Shipyard, in Mobile, is a full-service ship repair facility serving both commercial and government customers. The yard features a 787- by 164-foot floating dry-dock, DD Alabama—one of the largest in the U.S.—and five pier locations to accommodate vessels up to 1,000 feet in length.

All photos courtesy Alabama Shipyard

and seating for passengers.

Schnoor added that the propulsion and steering systems will be thoroughly overhauled, and the controls, navigation and emergency equipment will be upgraded to meet current regulations.

After all structural modifications are complete, the vessel will be relaunched and final outfitting and through testing will begin ahead of final delivery in the second half of 2025.

"The challenges of this project are primarily related to the complex coordination that is required for the various modifications. Sequencing the structural, electrical, piping and outfitting changes in a precise order to ensure the vessel meets the customer's requirements is a key challenge," Schnoor said.

"Another challenge is the confined working environments within the vessel," he added. "Much of the work takes place in tight spaces, where only a limited number of personnel can operate simultaneously."

To overcome these challenges, Alabama Shipyard is employing detailed planning and coordination strategies, Schnoor explained. "This includes developing a comprehensive project schedule that sequences each project phase and ensure that resources are allocated properly."

"Alabama Shipyard's ongoing conversion projects underscore how traditional maritime practices can be adapted to meet contemporary needs," Schnoor said. "By successfully transforming OSVs into ferries, the shipyard has demonstrated its expertise, adaptability and proficiency at repurposing vessels for new roles."

The Woods Hole, Martha's Vineyard and Nantucket Steamship Authority has served as the transportation lifeline to the islands of Nantucket and Martha's Vineyard year-round since 1960, and today is the largest ferry service to the islands. It transported more than 2.9 million passengers and more than 690,000 vehicles to and from the islands in 2023.

Tech Files
Deck Machinery & Cranes

New Foldable Knuckle Boom Crane from Palfinger

Palfinger Marine in September unveiled its new PFM 2100 heavy-duty foldable knuckle boom crane developed specifically for use on workboats and other service vessels as well as in the aquaculture industry.

Equipped with the company's patented P-Profile, the PFM 2100 is both compact and lightweight yet still heavy-duty, combining a strong lifting capacity with a wider outreach and high working speeds. It has nine boom extensions, offering an outreach of up to 29 meters. At this maximum outreach, the PFM 2100 provides a load capacity of over 4,000 kilos. Additionally, the PFM 2100 features a high-end flow control valve, enabling the simultaneous use of multiple hydraulic functions and facilitating swifter, smoother, and more accurate crane movements.

Following an intensive test phase with the PFM 2100 prototype including a lifetime endurance test, Palfinger Marine said it received the first orders even before the crane had been officially launched. "We see a growing demand for larger cranes with greater outreach and we are proud to be once again using our expertise to set the standard in the field of marine technology," said Johannes Nußbaumer, global product manager for marine and wind cranes at Palfinger Marine.

JonRie Escort Winches Ordered for Two McAllister Tugs

McAllister Towing recently placed an order for series 240 JonRie Escort Winches to be installed aboard the tugs Vicki M. McAllister and Janet M. McAllister. The company is undertaking modifications of both tugs, and replacement of the hydraulic winches aboard was seen as the wisest decision.

"Brandon has done well with everything he's undertaken," said Martin "Marty" Costa, veteran engineering manager at McAllister Towing, a reference to Brandon Durar, president of JonRie Division at Markey Machine in Seattle. "The entire fleet had been outfitted with JonRie not so long ago. JonRie winches are familiar, readily operable, and easy to troubleshoot as well," he added.

Durar also recalls his McAllister winch business fondly. "In the early 2000s, we outfitted McAllister's Navy YTB tugs with hawser winches. After these three conversions, we provided all the hawser winches for McAllister's new tug-build program down at Eastern Shipbuilding in Panama City, Fla."

"Later, we went back to outfitting McAllister's YTB conversion program but now the conversions were for twin-engine 4,000HP ASD tugs, installing our 230 series hawser winches on the bow. McAllister also converted two YTBs for the US Navy in Tacoma, Wash., an effort headed up by Marty Costa. These tugs the YT-800 (Manhattan) and YT-801 (Washtucan) are still in service up in Bremerton, Wash."

Since that time, JonRie winches have appeared on a number of other McAllister tugs, both new and old.

The JonRie Series 240 Escort Winch delivers 15 tons of bare-drum line pull at 75 feet/min. line speed, with speed increasing to 150 ft/min. at mid-drum. The model accommodates 600 feet of 8.5" circumference synthetic line.

Palfinger Marine

JonRie

Brake-holding capacity is a robust 300 tons bare-drum. Supplied with the winch is a skid-mounted HPU with a 60HP/460VAC electric motor. The HPU includes a counterbalance valve to prevent motor overspeeding; the unit has both a foot pedal and joystick for operation; safety features include an emergency-release button.

The winches will be delivered in 2025.

Ampelmann E5000 Gangway for Subsea 7

Ampelmann earlier this year signed a contract with Seaway7 to supply an E5000 gangway to support the construction of a major U.S. offshore wind project.

The E5000 is the biggest motion compensated system in the world, Ampelmann said. With a lifting capacity of 4,600kg, it can enable both safe and efficient personnel transfers as well as cargo operations in variable sea states. Based on the proven technology of the E1000, it can switch between crane and gangway mode in less than a minute. Because of its high cargo bearing capacity, the E5000 is particularly well equipped to lift heavier generators, including fuel and cables, that are required for larger turbines.

The project supporting Seaway7, which marks the first tour of duty of the E5000 outside of Europe, is also a continuation of Ampelmann's involvement in the emergent U.S. offshore wind market on the heels of recent engagements in South Fork and Vineyard Wind. In fact, amid growing demand in the region, Ampelmann—headquartered in the Netherlands—has been expanding its local presence with trained operators and new offices in Providence, R.I. and Boston.

"Over the past year the company has invested in hiring and training local operators as well as other operational support personnel," said Joseph Gabriel, Ampelmann's business developer for U.S. wind. "We are excited to see this system operating in the U.S. for the first time and we are particularly thankful to be working with Seaway7 on this project."

MacArtney's All-electric eLARS

MacArtney has delivered the world's first all-electric Launch and Recovery System (eLARS), in collaboration with Jan De Nul, who is focused on advancing sustainable energy solutions. The eLARS was developed for Jan De Nul's offshore support vessel Symphony and its cable trencher, Swordfish, marking a significant departure from conventional hydraulic systems.

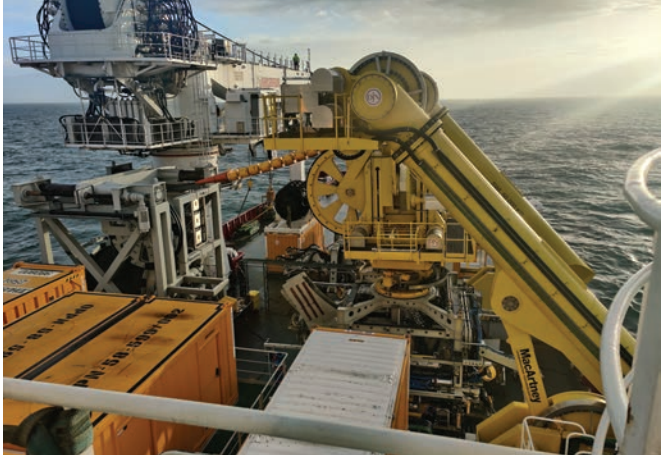
The eLARS, built on MacArtney's proven technology, offers reduced downtime and increased efficiency, while its design minimizes maintenance costs by eliminating the need for spare parts, regular hose changes, and filter replacements, according to the manufacturer. Additionally, the absence of pressurized oil over water improves safety and environmental sustainability. Its compact design optimizes deck space for more effective installation and operation.

A standout feature of the eLARS is its intelligent self-assessment capability, which allows for preventive maintenance by alerting users to potential failures before they escalate. The system also includes a high level of redundancy, ensuring continuous functionality even if some electrical systems fail. Moreover, the integrated control system can be operated remotely from shore, streamlining operations further.

The eLARS package consists of an eA-Frame, Docking Head, and Winch, with the eA-Frame reaching a leg height of 14 meters and a safe working load of 50 tonnes, supported by advanced PLC technology for full remote control.

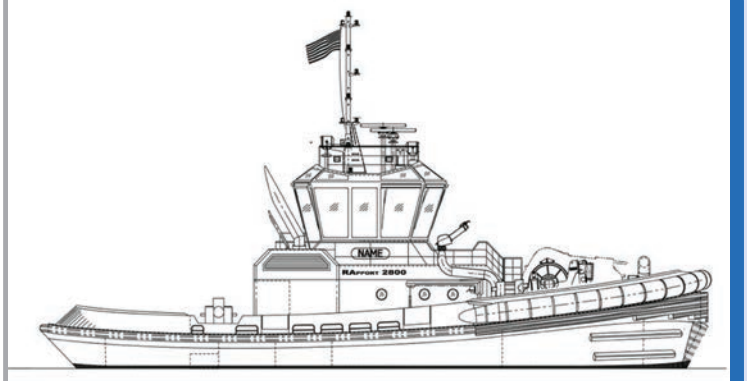
Ampelmann

MacArtney



Vessels

Gulf LNG Tugs



Gulf LNG Tugs

Gulf LNG Tugs of Port Arthur has ordered four new escort tugs to serve the Port Arthur LNG export facility in Texas. Two will be constructed by Master Boat Builders in Coden, Ala., and two by Sterling Shipyard in Port Neches, Texas.

Gulf LNG Tugs—a joint venture comprised of Bay-Houston Towing, Moran Towing Corporation and Suderman & Young Towing Company—said the new high horsepower, highly maneuverable RApport 2800 tugboats have been designed by naval architect Robert Allan Ltd. specifically for the Port Arthur LNG export facility.

The new 92- by 40-foot tugs feature a compact design providing increased maneuverability in ship handling and escorting through waterways and will offer a bollard pull capacity of more than 85 metric tonnes. Each will feature EPA Tier-4 emission standard Caterpillar 3516 E main propulsion engines connected to Kongsberg US-255 FP-Z drives. Additionally, the tugs will be outfitted with a Markey DESF-48-100 Electric Class III hawser winch, including a Render Recover feature for full bollard pull capacity. Each tugboat will be equipped with firefighting capabilities that exceed ABS Fire Fighting Vessel 1 (FFV1) classification.

Patriot State

TOTE Services

Patriot State, the second vessel in a series of new training ships for the U.S.' state maritime academies, was christened during a ceremony at Philly Shipyard ahead of scheduled delivery to Massachusetts Maritime Academy in the coming weeks. The newbuild will replace TS Kennedy, a 1960s-built break bulk cargo freighter converted to a training ship in the early 2000s.

The vessel is the second of five being built by Philly Shipyard under the U.S. Department of Transportation Maritime Administration's (MARAD) National Security Multi-Mission Vessel (NSMV) program, designed to provide a purpose-built, state-of-the-art training ships for the nation's state maritime academies.

Each new NSMV is built with instructional spaces, a full training bridge and space for up to 600 cadets. In addition, each ship features hospital facilities, a helicopter pad and the ability to accommodate up to 1,000 people in times of humanitarian need. The NSMVs can also provide needed roll-on/roll-off and container storage capacity for use during disaster relief missions.

The series' first ship, Empire State, was delivered to SUNY Maritime College in 2023, and Philly Shipyard is currently constructing the final three ships in the NSMV series, State of Maine (Maine Maritime Academy), Lone Star State (Texas A&M Maritime Academy) and Golden State (California Maritime Academy), for scheduled delivery in 2025 and 2026.

Resilience

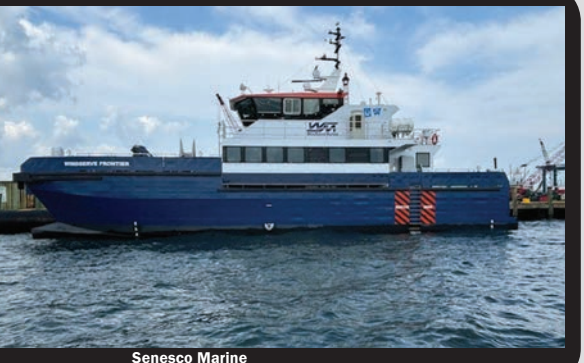
Snow & Company

Resilience, a new hybrid research vessel designed by Incat Crowther and built by Snow & Company in Seattle, has been delivered to the U.S. Department of Energy's Pacific Northwest National Laboratory (PNNL). The 15-meter hybrid electric-diesel aluminum catamaran will help PNNL sustainably expand its research activities in the Sequim Bay region of Washington state.

Resilience's 28 m2 main deck is equipped with an A-Frame, boom crane and movable davit in addition to a foldable swim platform. Designed to support the work of six scientists, the USCG Subchapter T vessel also features multiple research workstations and convertible sleeping arrangements for multiday assignments.

While RV Resilience can travel at speeds of up to 23 knots on its two Volvo Penta D8-510 main diesel engines, it can quickly transition to a silent, all-electric mode capable of speeds of up to 7 knots. The vessel is equipped with 113 kWh of Spear Trident batteries, Danfoss electric motors and Twin Disc gearboxes. This silent, all-electric mode will allow the PNNL researchers to conduct their activities with minimal noise pollution, allowing for enhanced research capabilities when taking sensitive acoustic measurements.

WindServe Frontier


Senesco Marine

Senesco Marine held a launch and christening ceremony for WindServe Marine's new Jones-Act-compliant crew transfer vessel (CTV), WindServe Frontier. The BMT-designed aluminum catamaran is 29 meters long with a 9-meter beam and 1.7-meter draft. It is equipped with Volvo Penta D13 main engines (515kW at 2,300 RPM) and a Volvo Penta IPS 900 propulsion system. Its service speed is 24.5 knots, with top speed capabilities of 27 knots.

Notably, WindServe Frontier is the first CTV in the WindServe fleet that has been built as hybrid-ready, meaning it has been constructed with extra space on board to accommodate a retrofitted battery pack in the future.

The USCG Subchapter L vessel is built to ABS class and features a pair of Kohler Marine generators, Toimil T-12505M/2 forward deck crane, Hercules AAW-150 anchor windlass, First Electric automation system, Reygar BAREFleet vessel monitoring system, Starlink internet, DirecTV satellite television and KPM suspension seating. The vessel has capacity for up to 6 crew members and 24 passengers.

WindServe Fronteir is the fifth CTV in the WindServe Marine fleet, following the 19.7-meter WindServe Odyssey delivered in 2020, and the 27-meter CTVs WindServe Genesis and WindServe Journey delivered in 2023, and the WindServe Explorer launched earlier this year. The company also has another 29-meter-long CTV, WindServe Spartan, on order.

Vessels

Raven

BRIX Marine

Aluminum boatbuilder BRIX Marine has launched a new custom-built whale watching vessel for Allen Marine Tours, in Alaska. The new vessel, Raven, a 4818-HTC passenger catamaran, is the second vessel BRIX Marine has developed for Allen Marine, following the launch of the Eagle in September 2023.

According to the builder, Raven is designed to enhance the whale-watching experience in Alaska's waters, focusing on passenger comfort, safety, and sustainability. The vessel features a 48-foot hull, a 17' 6" beam, and a lightship weight of approximately 31,000 pounds. It is powered by four 450-horsepower Yamaha outboard engines and has a 600-gallon fuel capacity. The vessel can accommodate up to 49 passengers and three crew members.

BRIX Marine said Raven's advanced features designed to enhance the passenger experience include graphite carbon fiber interiors, low-glare marine paint, and non-skid deck coatings. The vessel also features an advanced HVAC system, custom galley, Freedman Glitz seating, and comprehensive electronics and navigation systems. Safety features include a USCG-approved safety package, 20- and 35-person life rafts, and Fireboy tank room fire suppression systems. Entertainment and connectivity are provided through a Fusion stereo system, a wireless PA system, and Garmin navigation electronics.

American Liberty


American Cruise Lines

American Liberty, the third new Coastal Cat in American Cruise Lines' series of 100-passenger ships, was christened in Newport, R.I. Built by Chesapeake Shipbuilding in Salisbury, Md., American Liberty is the newest ship in American's ongoing Project Blue series of 12 new small ships for river and coastal cruising in the U.S. Several more ships in the series are already under construction, including the fourth Coastal Cat, American Legend, which is set to begin cruising in November 2024, plus four more Patriot Class ships.

Accommodating 100 passengers, American Liberty has four decks and showcases the same catamaran bow as previous sister ships. It features private balcony accommodations, including single and double-occupancy staterooms as well as suites. American Liberty also offers indoor and outdoor lounges, a main restaurant, casual café and fitness center.

Coast Guard MLBs

Steve Strohmaier / U.S. Coast Guard

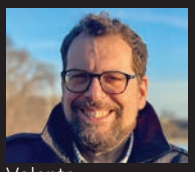
The U.S. Coast Guard exercised an option to extend its contract with Birdon America for a program to upgrade its fleet of 47' Motor Lifeboats (MLB). The modification, announced on July 25, extends the term of Birdon's 47' MLB Service Life Extension Program (SLEP) contract through Order Years 6-10 and will allow up to another 72 MLBs to receive significant overhauls and upgrades.

The Coast Guard's primary search and rescue platform, the 47' MLB is an all-weather fast response vessel used to patrol vast areas of the country's coastline. These vessels are designed to operate in surf up to 20 feet, heavy weather with seas of 30 feet combined with 50 knot winds, and are rollover capable, meaning that if capsized, the vessels self-right and can continue operations.

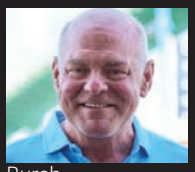
In 2019, Birdon America was awarded a 10-year contract to perform a 20-year service life extension for the U.S. Coast Guard's 47' MLB fleet and extend the useful life of the fleet through 2047.

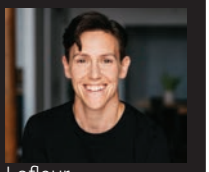
The company, a subsidiary of the Australia-based Birdon Group, has since established full-rate production facilities in Bellingham, Wash. and Portland, Conn. to facilitate a bi-coastal delivery process, and to date has delivered nineteen MLBs to operational units, with another nineteen currently undergoing SLEP. With the July 25 modification, up to 117 total vessels can be delivered through 2029.

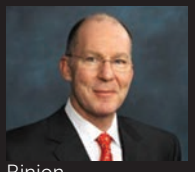
People & Companies

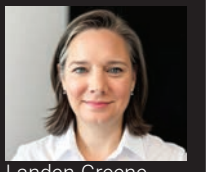

Valente


Marcotuli

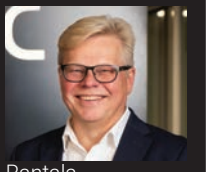

Burch


Lafleur

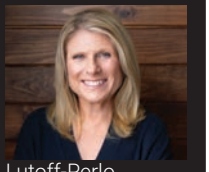

Binion


Landen-Greene


Schneider


Rantala


Hudspeth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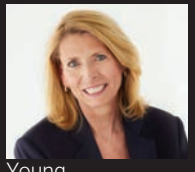
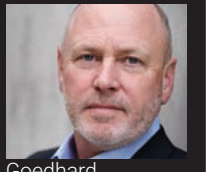
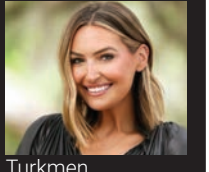

Young


Goedhard


Flack


Turkmen

Titan Names Valente CEO

Titan, a ship repair and fabrication company with yards on the U.S. West and East Coasts, appointed Francesco Valente to replace CEO Jim "Marco" Marcotuli, who is retiring after five years leading the company.

Burch Takes Control of Gunderson

Dee Burch is now the sole proprietor of shipbuilder Gunderson Marine & Iron. Recently acquiring all shares of GM&I, Burch assumes the role of president, managing day-to-day operations.

Lafleur Named Davie President

Canadian shipbuilder Davie has appointed Maxie Lafleur as president, bringing in a business executive from outside the shipbuilding sector to help drive growth.

Binion Tapped to Lead Rand Logistics

Rand Logistics has named Greg Binion interim CEO after CEO Dave Foster announced his retirement following a 40-year career in the maritime industry.

Landen-Greene to Head C-Job Houston

C-Job Naval Architects has appointed Heidi Landen-Greene as president of C-Job Houston, overseeing sales and engineering teams located in the company's office in the city and overall U.S. operations.

New Leadership at Cadmatic

Software solutions firm Cadmatic appointed Dr. Detlef Schneider as its new CEO to succeed Jukka Rantala, who has led Cadmatic for 23 years.

EBDG Hires Hudspeth

Joe Hudspeth has joined naval architecture and marine engineering firm Elliott Bay Design Group as director of sales.

Lutoff-Perlo Named Board Chair at Hornblower

Hornblower Group has appointed Lisa Lutoff-Perlo as Chairwoman of the Board.

Young Joins SEACOR Board

SEACOR Marine appointed Lisa P. Young as an independent member of its board of directors, expanding the board from five to six members.

NBBB/ESR Hires Goedhard

Bart Goedhard was named director of sales and marketing for shipbuilder Nichols Brothers Boat Builders and sister company Everett Ship Repair.

Flack Joins WSC

Trade group the World Shipping Council has appointed Tamekia Flack as its new Director of U.S. Government Relations.

NOLA Terminal Hires Turkmen

NOLA Terminal announced it has hired Taylor S. Turkmen as its new business development manager.

Products

1 VETUS Maxwell

2 In-Mar Solutions

4 MAN

1. Heavy Duty Windscreen Wiper

Heavy-duty wiper has a thermal cut-out in case of excessive operating temperature. Self-parking on either side, 2 speeds/2 shaft lengths. Fully adjustable wipe from 62º - 92º. Stainless steel parts and meet EMC requirements. 12 or 24 VDC.

https://vetus.com/usa/

2. In-Mar Solutions: Wynn Marine Type C & Type D, HeavyDuty Straight Line Wipers

Wynn Type C (internal motor) and Type D (external motor) Straight Line Wipers offer the most advanced design of linear action window wiping systems for marine and other specialized applications. Optimum window coverage can be achieved and enhanced by utilizing a twin-bladed or dual-arm/blade design.

www.inmarsystems.com

3. Scania DI13 Engine

"This is our most advanced marine engine so far," said Fredrik Järild, Scania's head of sales for power solutions, describing the company's new 13-liter DI13 marine engine for propulsion and auxiliary use. The IMO Tier III engine delivers up to 8% improvement in fuel consumption compared to the current generation at the same power output; that translates to a potential saving of up to 6.7 liters of diesel per engine hour at full load. It is compatible with biodiesel blends and HVO fuels. It has increased maximum power and capability to perform with tough heavy loads but is also prepared for light or medium duty or hybrid use.

4. MAN D3872 LE432 Engine

MAN Engines has launched the MAN D3872 LE432 workboat engine, a V12 powerhouse with a 30-liter displacement and an output of 1,213 kW at 2,100 rpm, ideal for medium-duty applications like wind farm supply vessels and ferries. Production has begun on higher-output variants (1,471 and 1,618 kW) for lighter applications. The engine features a redesigned cylinder head for optimized flow, improved coolant delivery, and a new common rail injection system for low fuel consumption and emissions. With a high power density, the top variant, the D3872 LE433, delivers 1,618 kW while weighing just 2,720 kg.

5 Kongsberg Maritime

5. RD-AZ-2300 Thruster

Kongsberg Maritime has launched a new Rim-drive Azimuth Thruster, the RD-AZ-2300. The RD-AZ-2300, with a propeller diameter of 2,300mm, sits between the existing RD-AZ-1900 and RD-AZ-2600 models and is suited for vessels operating in demanding environments such as offshore wind farms, where precise maneuverability and low noise levels are crucial. In adherence to DNV's Silent R classification, the RD-AZ-2300 also provides significant advantages to underwater research vessels by reducing underwater radiated noise (URN) below sea levels.

2024 Editorial Calendar

Marine News

January 2024

E-Magazine Edition

Design & Construction: Advances in Naval Architecture, Marine Engineering & Shipbuilding

February 2024

U.S. Offshore Wind

- Passenger Vessels
- Mariner Training & Education
- Safety Equipment

Event Distribution:
CMA: Mar 12-14, Stamford, CT

March 2024

E-Magazine Edition

U.S. Inland Waterways Transport: Operations, Infrastructure & Dredging

April 2024

Towboats, Tugs & Barges

- 2024 Shipbuilding Report
- Navigation Technology
- Power & Propulsion

Event Distribution:
OTC: May 6-9, Houston, TX

May 2024

E-Magazine Edition

U.S. Maritime Workforce: From Offshore to Inland Waterways & Shipyards

June 2024

Combat & Patrol Craft

- Navy & Coast Guard Shipbuilding
- Autonomous Vessels
- Workboat Communications Wind

Event Distribution:
Multi-Agency Combat Craft (MACC)
Marine Money Week, New York, NY

July 2024

E-Magazine Edition

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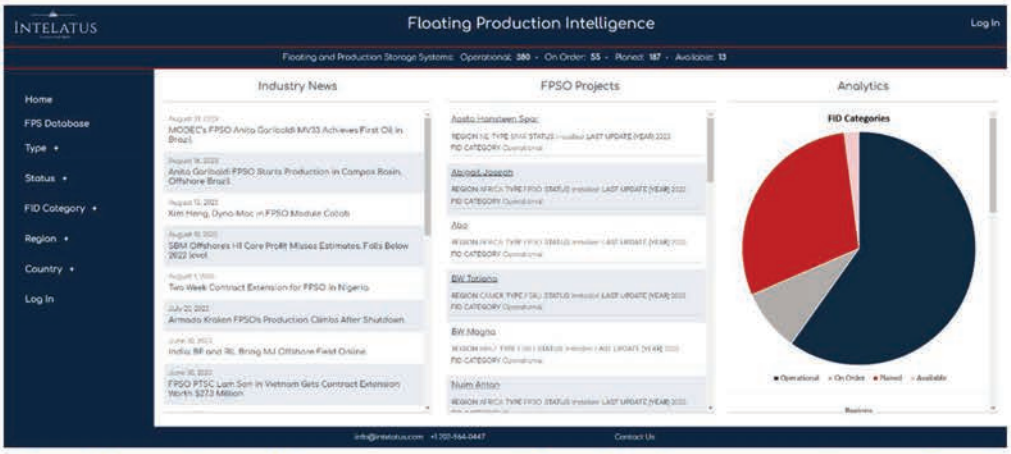

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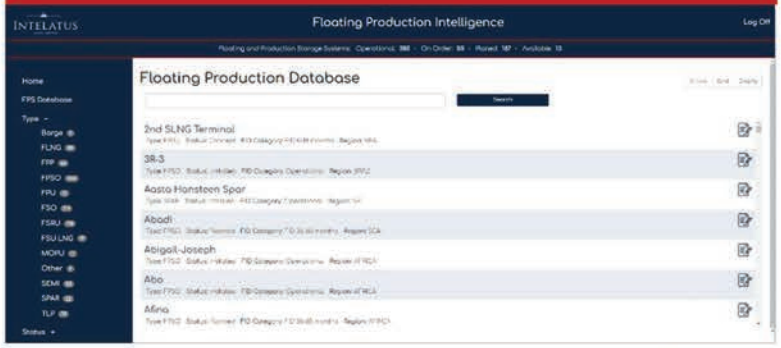

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