The Information Authority for the Workboat • Offshore • Inland • Coastal Marine Markets

Volume 36 • Number 1

Marine News

JANUARY 2025

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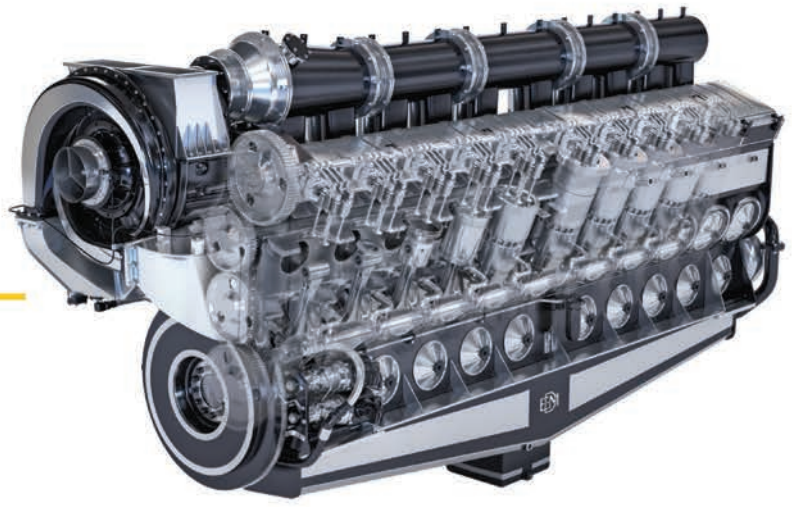

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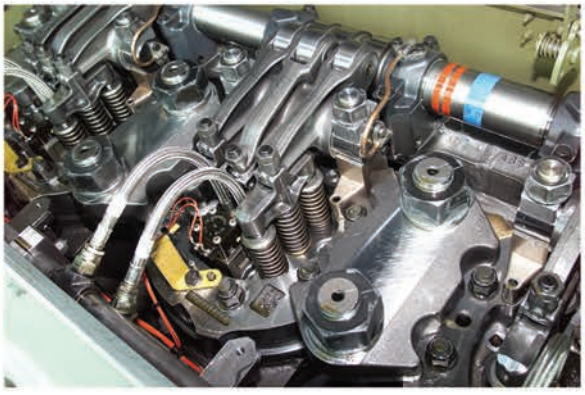

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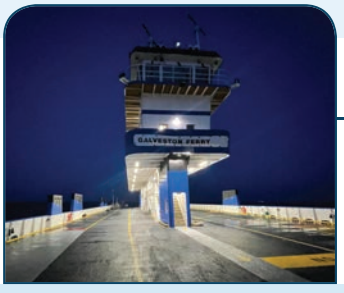

On the Cover

Siemens Energy has played a pivotal role in helping TxDOT achieve its goals of improving fuel efficiency and reducing the environmental impacts of the next generation of ferry vessels.

(Photo: © TxDOT)

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Editor's Note

Joseph Keefe, Editor,
keefe@marinelink.com

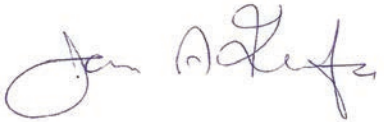
As the New Year kicks off, the air is fairly crackling with electricity. That's not because of the holiday lights; nor is it not meant to be a metaphor. This is also a good time to admit that I was wrong: I never in my wildest dreams thought that the electrification of marine vessels would evolve to where it is now. I believed that the so-called "hour of power" needed by harbor tugs and workboats would always necessitate the use of internal combustion engines. That's no longer true. Batteries have evolved to a point where increasingly smaller packages pack bigger power payloads.

The headliner for this edition, however, is Passenger Vessels and nowhere else is the use of hybrid and pure electric propulsion solutions more prevalent today. That's largely a function of point-to-point, regular routing where recharging can conveniently take place. As Barry Parker's focused article on the recapitalization of the domestic passenger vessel fleet shows, the many newbuilds hitting the water are far cleaner and more economical than their workhorse predecessors. Small and midsized yards are busy, and that's a very good thing. What's happening in those yards is all the more remarkable. To that end, also in this edition, Rhonda Moniz takes a close look at what Siemens Energy is doing to speed up the decarbonization of the passenger vessel industry. It just might surprise you.

This edition also digs deep into domestic dredging. We sat down with Dredging Contractors of America's CEO, Bill Doyle, in December. Never at a loss for words, Bill also shows himself to be the ideal leader for the nation's dredging companies, advocating on their behalf where necessary, and producing a plethora of data to back it all up. It turns out that dredging is far more sophisticated business than one might think, led by forward-thinking executives who have rolled up their sleeves to renew and improve an already impressive collection of niche workboats. That's a discussion you won't want to miss.

If all of the foregoing weren't enough, this month's edition also addresses one of the biggest worries on the American waterfront. The supply of qualified mariners is arguably inadequate for the next sealift crisis, but there are also concerns that what today's cadets are being trained to do, isn't what they'll be needed for. Armed with a raft of statistics and data, we look at all that, and more. Along the way, we discovered that the U.S. Maritime Administration is doing all it can to make sure that we've got adequate manpower. Actually, what we really need is more "woman" power. Turn the page and discover why.

Circling back to electricity – apparently the future of workboat propulsion – it is also clear that the advent of batteries and electric propulsion present their own unique challenges, especially in way of safety. All those new ferries and mariners need to be protected. It turns out that industry has that covered as well. In this edition, you'll find out how and why.



Marine News (ISSN# 1087-3864) is published bi-monthly (6 times per year) by Maritime Activity Reports, Inc. 118 E 25th St. New York, NY 10010-1062. Periodicals Postage Paid at New York, NY and additional mailing offices. POSTMASTER: Send all UAA to CFS. NON-POSTAL AND MILITARY FACILITIES send address corrections to Marine News 850 Montauk Hwy. #867 Bayport, NY 11705

Marine News

(ISSN#1087-3864) (USPS#013-952)

New York: 118 E. 25th St., New York, NY 10010
tel: (212) 477-6700; fax: (212) 254-6271
www.marinelink.com

CEO
John C. O'Malley • *jomalley@marinelink.com*

Publisher & Editorial Director
Greg Trauthwein • *trauthwein@marinelink.com*

Editor
Joe Keefe • *keefe@marinelink.com*
Tel: 704-661-8475

Contributing Writers
Robert Kunkel, Rhonda Moniz, Barry Parker, Jeff Vogel

PRODUCTION
Production & Graphics Manager
Nicole Ventimiglia • *nicole@marinelink.com*

SALES
Vice President, Sales & Marketing
Terry Breese • ***breese@marinelink.com***
Tel: 561-732-1185 Fax: 561-732-8414

Advertising Sales Managers
Lucia Annunziata • ***annunziata@marinelink.com***
Tel: 212-477-6700 **ext 6240** Fax: 212-254-6271

John Cagni • ***cagni@marinelink.com***
Tel: 631-472-2715

Frank Covella • ***covella@marinelink.com***
Tel: 561-732-1659 Fax: 561-732-8063

Mike Kozlowski • ***kozlowski@marinelink.com***
Tel: 561-733-2477 Fax: 561-732-9670

Gary Lewis • ***lewis@offshore-engineer.com***
Tel: 516-441-7258

CORPORATE STAFF
Manager, Marketing
Mark O'Malley • *momalley@marinelink.com*

Accounting
Esther Rothenberger • *rothenberger@marinelink.com*
Tel: 212-477-6700 **ext 6810**

Manager, Info Tech Services
Vladimir Bibik

CIRCULATION
Kathleen Hickey • *k.hickey@marinelink.com*
Tel: 212-477-6700 **ext 6320**

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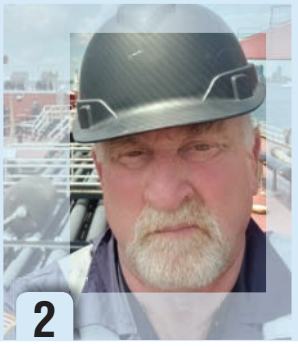


1 Mike Corrigan
Former energy industry executive Mike Corrigan joined Interferry in 2017 after 14 years in leadership positions at one of the world's largest ferry operators - BC Ferries in his native Canada - where he was president and CEO from 2012.

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 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.

5 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.

6 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.

By the Numbers

The BTS Biennial National Census of Ferry Operators

In mid-2024, the U.S. Department of Transportation's Bureau of Transportation Statistics (BTS) released the latest results from the biennial National Census of Ferry Operators (NCFO) for 2022. Unfortunately, this (potential) treasure trove of data from an important domestic workboat sector provides just a partial snapshot of its breadth and scope. That's because just 139 out of a possible 240 ferry operators responded. Hence, with only 58% of operators deeming the effort worthwhile, readers should interpret the data with a jaundiced eye. Why domestic ferry operators sometimes (regularly?) fail to weigh in is a mystery.

Over the past ten years, an average of 68% of ferry operators respond to this survey, but the latest numbers are even grimmer, dipping sharply from a high of 81% response rate in the 2018 numbers. All 240 in-service ferry operations were encouraged to participate in the 2022 NCFO by an advance letter and follow-up email sent by BTS in May 2023. Non-respondents were contacted by phone and email from July through December 2023 to further encourage participation. Non-respondents received up to three non-response phone calls and two emails over this timeperiod. Data collection was completed in December 2023.

Geographically, the 139 ferry responders represented 33 states, 2 U.S. territories, and 1 operation in Canada with routes to the United States. According to BTS, "… due to eligible operators who did not respond, as well as those choosing not to provide or make information public for select items, the numbers in this report likely underestimate the true total values. These underestimates would include vessels, terminals, segments and route-miles counts, and total passengers and vehicles boarding in calendar year 2022."

While the NCFO's frame of operators has grown over time, an inconsistent responding population means that care must be taken in comparing NCFO statistics from one census year to the next. For example, of the respondents that completed the 2020 and 2022 NCFOs, 123 ferry operators responded in both years. However, 43 operators responded to the 2020 NCFO but not to the 2022 NCFO, while 19 operators responded to the 2022 NCFO but not to the 2020 NCFO. One ferry operator responded to the NCFO for the first time in 2022.

The biennial census of ferry operators was first conducted by BTS in 2006, and since then there have been six additional data collections, including the most recent, the 2022 NCFO. The data collection is inclusive of all ferry operators within the United States and its territories, including ferry operators in American Samoa, Puerto Rico, and the U.S. Virgin Islands. The information collected from the census is maintained in the national ferry database containing information on ferry vessels, terminals, routes, ridership, funding, and more.

To date, BTS has collected the census data for 2005,

Table 1: Historical ferry operator participation in the DOT BTS NCFO

Report Year / Year Released	Total Ferry Operators	Total Operators Responding	Declined to Participate	PCT Operators Participating
2014 (2016)	215	128	87	**60%**
2016 (2018)	220	163	57	**74%**
2018 (2020)	224	181	43	**81%**
2020 (2022)	246	164	82	**67%**
2022 (2024)	240	139	110	**58%**
TOTALS / PCT	**1,145**	**775**	**379**	**68%**
AVERAGES	**229**	**155**	**76**	**68%**

2007, 2009, 2013, 2015, 2017, 2019, and 2022.

Over the years, *MarineNews* has reported on this data in a variety of ways, most recently in January of 2018. Notwithstanding the inconsistency of the data and industry participation, the numbers are nevertheless well worth looking at. And, we've even organized them to give some historical perspective.

The Latest BTS NCFO Data

A total of 618 vessels were reported in the 2022 NCFO, of which 89 percent were reported as in-service. Out of the vessel count, 14 are utilized by two different ferry operations leaving 604 unique vessels. The largest number of in-service vessels reported by state are 86 and 55 vessels, reported by New York and California, respectively. A ferry vessel can have its ownership and operation reported as private, public, or a combination of both. Of the reported vessels, the majority (45.9 percent) are privately owned and operated. Another 40.7 percent are publicly owned and operated.

Looking at the various statistics depicted in **Table 2**, we can see similarities across the board in reported numbers, and some real anomalies. For example, the drop in annual passengers carried from 2016 to 2022 is substantial, but it is also roughly equivalent to the percentage drop in ferry operator participation in the latest NCFO survey. If those numbers were true, then that trend would be a disturbing one, since one of the most important benefits of passenger ferries is that these platforms, in theory, take cars off the road. The net subtraction of those vehicles from the nation's highways equate to a reduction in air pollution, wear-and-tear on the roads, and traffic congestion. Actually, if all ferry operators had participated, and almost all of these ferries (99%) carry passengers, then the total count would likely be closer to 150 million passengers. That's progress we can applaud – if we could only measure it accurately.

The NCFO asks whether a vessel carries passengers, vehicles, and/or freight. The results show that the nearly all of the ferry vessels carry passengers with 98.9 percent reporting carrying passengers. Additionally, 44.1 percent carry vehicles and 19.3 percent carry freight. While the vast majority of ferries carry passengers, ferries also carry vehicles and freight. Of the 537 reported passenger vessels, 29 percent also carried vehicles and 4.8 percent also carried freight. A total of 13 percent of reported vessels carried passengers, vehicles, and freight. A majority of vessels (53 percent) only carried a single type of passengers or cargo. Of these, it was most common among passenger ferries. While 52 percent of passenger ferries carried only passengers, only 1.3% of all ferries carrying vehicles only carried vehicles and 2.9% of ferries carrying freight only carried freight. **Table 3** provides more data.

Of the 570 (92 percent) vessels that reported on fuel source, the data showed that diesel fuel is still the most widely popular. In addition to 468 vessels that used diesel and gasoline fuels, 25 vessels were using bio-diesel, 8 vessels used a diesel/electric hybrid, and 4 vessels used electricity. Nominally, it doesn't appear that the fleet is "greening" itself nearly as fast as we would like. That said; and with a whopping 42% of operators not reporting, there are most certainly more LNG, electric and diesel electric / hybrid platforms plying the waterfront. It would be nice to know the real count, don't you think?

TABLE 2: U.S. Ferries Through the Years ...

Year / Census Year	2005/2006	2007/2008	2013/2014	2015/2016	2022/2024
Operators Responding	230	213	128	163	139
Ferries in Service	N/A	669	476	609	550
Vessels Not in Service	N/A	40	23	43	68
Total Fleet Size	690	709	499	652	618
Ferry Terminals	541	496	441	560	468
Ferry Route Segments	382	349	741	880	837
Passengers Carried	108 million	106 million	115 million	119 million	91.6 million
Oldest Ferry	??	94 years	101 years	102 years	105 years
Average Age (yrs)	25	26	28	27	27
AVG Ferry Speed	14.0	14.1	15.0	14.0	13.3

By the Numbers

Vessel Characteristics

Ferry capacity, age, and speed are vessel characteristics collected by the NCFO. The average capacity on a passenger vessel is 346 persons, the median passenger capacity is 150, and the maximum is 5,200. The average capacity of vehicle carrying vessels is 40 vehicles. The median vehicle capacity is 27 and the maximum capacity is 197 vehicles. And, as can be seen in **Table 1** above, the average operating speed of the reported vessels is 13.3 knots, and the maximum is 35 knots. The average age of the reported vessels is 27 years, a number which, despite myriad fleet replacement programs spread out over the past decade, hasn't changed at all. Actually, I'd bet that it has. That's just one more statistic that needs closer scrutiny.

Passenger and Vehicle Boarding Counts by State

In 2022, ferry operations transported a reported total of 91.6 million passengers and 22.6 million vehicles within and to the United States and its territories. Washington and New York states carried the most passengers, 23.6 and 23.2 million passengers, respectively. Washington state also transported 10.8 million vehicles, over half of the total reported vehicles (47.8 percent). Again, these numbers – both the passenger and vehicle count – are likely to be grossly understated. And, if so, that's a good thing. It means that the ferry system(s) are thriving and providing real utility to their customers, while cleaning up the air we breathe at the same time.

What's the bottom Line?

The congressional mandate for the NCFO at BTS was first established in 2005 under the Safe, Accountable, Flexible Efficient Transportation Equity Act, which required that "The Secretary of Transportation, acting through the Bureau of Transportation Statistics (BTS), shall establish and maintain a national ferry database that shall contain current information regarding routes, vessels, passengers and vehicles carried, funding sources and such other information the Secretary considers useful." Subsequent to that The Fixing America's Surface Transportation (FAST) Act (Dec. 2015) continued the BTS mandate to conduct the NCFO and the requirement that the Federal Highway Administration use the NCFO data to allocate federal funds for ferry boat and terminal construction using a set formula. That formula is based on a percentage of the number of passengers and vehicles boarding, and route-miles served. And, that funding adds up to a ton of money.

The October 2024 edition of ***MarineNews***, for example, and in this very space, outlines nearly $300 million in funding for 18 projects across 14 states. You have to wonder if that funding number might be – say 42% – higher, had every one of the 240 ferry entities responded to the latest plea for data. Better, more robust data could well be the ticket to getting better federal funding for the nation's all-important ferry systems. That's because policy makers in Washington, DC are finally waking up to the fact that the intermodal equation includes a modern, easy-to-navigate connection to the greater waterfront. In the future 2026 survey – which will outline 2024 data – let's shoot for 100 percent participation that will show just how much more critical this ferry sector really is in our everyday lives.

Table 3: Benchmarking Today's Ferry Fleet – what it carries, and how it gets there …

Parameter (sample size) 2013	Percent 2014	Percent 2016	Percent 2022
Carry passengers	95.0	93.3	98.9
Carry vehicles	47.1	42.8	44.1
Carry freight	22.2	19.9	19.3
Propulsion: Diesel	94.4	91.7	92
Gas	3.2	3.4	0.0
CNG	0.0	0.0	0.0
Electric	0.6	0.6	0.6
Other Fuel (Bio) (467)	1.7	4.2	4.0

READ the latest full BTS NCFO report here: ***https://www.bts.gov/NCFO***

Patrick Murphy

President, Blue & Gold Fleet, LP

Patrick Murphy has been President of Blue & Gold Fleet, L.P., the San Francisco Bay Area's largest and premier provider of Bay Cruises and ferry service, since 2016. Murphy grew up in the Maritime business. His father, Roger Murphy, founded Blue & Gold Fleet in 1979. Patrick Murphy began his career in 1982, working part-time in the Box Office and as a Deckhand before receiving his United States Coast Guard's license in 1995 and was promoted to Captain in 1996. In 2005, Murphy advanced to Blue & Gold Fleet Operations Manager, and then to Director of Operations in 2009. Today, Murphy oversees an operation which has a fleet of twenty-two (24) inspected vessels, which accommodate from 225 to 787 passengers. Murphy holds a Business Administration degree from Southern New Hampshire University. Long involved with Passenger Vessel Association leadership duties, today he serves as PVA President. Listen in this month as he outlines the vision of PVA, its goals and the challenges facing the domestic passenger vessel and ferry industry today:

All images courtesy PVA

As we launch into the New Year, what would you say is the top priority for PVA and its membership?

The Passenger Vessel Association (PVA) represents a diverse gathering of passenger vessel operators as well as suppliers and vendors to the passenger vessel industry. Our vessel members operate Coast Guard certificated passenger vessels in every corner of the United States, in nearly every waterfront community, and aboard vessels of every shape and size imaginable. PVA members operate small overnight cruise vessels in picturesque Alaskan destinations and up and down the Mississippi River. There are large ferry vessels carrying hundreds of passengers in large urban environments to small ferries in rural communities. PVA ferries, such as mine, carry busy commuters to and from work and shuttle sightseers to breathtaking park and nature sites. PVA member operators also offer scenic dinner cruises aboard historic paddlewheel vessels on the Nation's inland rivers and they offer a variety exciting environmental cruises on our coastal waters. Annually, PVA members carry approximately 200 million passengers aboard their vessels. As such, PVA's top priority, and that of its members, is safety. Safety is at the core of what we as an association stand for. Safety guides our thinking, our actions, and everything we do.

Along with this steadfast commitment to safety, PVA will continue in 2025 and beyond to aggressively represent our members' interests in Washington D.C. The goal of our advocacy program remains focused on fostering a positive business atmosphere for our members while working to reduce regulatory burden on their businesses. In the coming months, our association will also focus energy and expertise on working with a new administration and a new Congress to ensure that our Industry's voice is heard and the issues that matter most to PVA members are communicated clearly. The following are a just a few of the issues that we will be emphasizing:

- ***Capitol Construction Fund (CCF)***

The CCF was expanded, through the work of PVA and key Members of Congress to include U.S. flag passenger vessel operators. The program allows private vessel operators to deposit income from their business operation into a tax deferred CCF account. PVA will continue to underscore the importance of this program, and preserve it, as many PVA members have participated as a result of this landmark expansion.

- ***Continued Funding for Coast Guard Programs***

PVA members rely on a strong Coast Guard for a variety of important services including annual inspections, plan revue, and mariner licensing. PVA will continue to persuasively advocate for needed funding for core Coast Guard missions that are critical to the passenger vessel industry

- ***Illegal Charter Enforcement***

Illegal charters are a growing threat in the Nation's ports, yet the public, and many in Congress, remain unaware of the significant safety threat that these illegal charter operators pose. Uninspected vessels and unlicensed crew operate vessels on charters and involve unsuspecting passengers in potentially unsafe situations. PVA is committed to alerting Congress to this ever-present threat and to urge that the Coast Guard be provided with the resources necessary to take steps to enforce current federal law to shut down these illegal operators.

- ***Shipyard Grant Program Funding***

PVA will continue to urge that Congress provide adequate funding for The Small Shipyard Grant Program. The program allows U.S. facilities to make capital improvements and modernize practices that help to make

them more competitive in the global market. The grants are also used support employee training programs. Many PVA member shipyards have received grants in the past.

What is the biggest challenge facing PVA members?

While 2024 has been a banner year for the majority of PVA members from a business standpoint, there are reports from many members that they are struggling to find qualified licensed mariners. Some of our member companies are looking to our Nation's maritime academies as a possible solution to the problem. PVA has been working with various maritime academies for several years now in anticipation of this need. The Massachusetts Maritime Academy, for example, regularly attends the PVA annual convention to help forge relationships with PVA members to promote employment opportunities for its cadets. Various maritime institutions, such as Mass Maritime, have cadets who do not wish to go to sea upon graduation and look to employers such as those in the passenger vessel industry after graduation.

How about for you and the Blue & Gold fleet locally? Are your issues and PVA's typically one in the same? Why or why not?

Blue & Gold Fleet is quite active on state and local issues that affect our core business. At the same time, we rely heavily upon PVA when it comes to advocacy work at the Federal level. From time to time, the lines between state and federal jurisdictions become blurred and we find ourselves working together on issues of local importance. Such has been the case for the emerging emissions rules from the California Air Resources Board (CARB) that affect PVA member vessel operators. PVA is very concerned about the California Air Resources Board's most recent amendments to the existing Commercial Vessel Air Emissions Harbor Craft rule. We feel that the implementation schedule imposed by CARB is not realistic for California passenger vessel operators, and some of the required technology that isn't commercially yet. In addition, some engine manufactures are pulling out of the market because they do not want to do research and development on what is only a California rule.

So far, the U.S. Environmental Agency (EPA) has not acted upon the state's request for a Clean Air Act waiver. Without EPA's approval, California cannot enforce the proposed amendments. It is not clear if the outgoing Biden EPA will grant the approval. If not, President-elect Trump will likely not support California's request to approve the EPA waiver.

Tell us a little about the Blue & Gold fleet – numbers, routes, locale, etc.

Blue & Gold Fleet has operated in San Fransisco since 1979 when it launched its first bay cruise aboard the MV Oski. Since then, the company has grown to a fleet of 24 vessels, with three vessels currently being constructed. The company provides regular ferry service to Sausalito and through its contract with the San Francisco Bay Ferry provides service to Alameda Harbor Bay, Main Street Alameda, Oakland, Richmond, Seaplane Lagoon, South San Francisco, Vallejo, and Oracle Park. Blue & Gold Fleet is accepted into the Coast Guard's Streamlined Inspection Program and is ISO 9001 and 14001 Certified. The company is projected to carry 3.2 million passengers in 2024.

Regulatory issues are always top of mind for any vessel operator. What's new from the U.S. Coast Guard (if anything); what is PVA as an advocacy group doing to respond, and what concerns PVA stakeholders the most?

In May, PVA provided comments to the Coast Guard's Notice of Proposed Rulemaking on Cybersecurity in the Marine Transportation System. The proposed regulation intends to establish broad cybersecurity requirements for U.S. flagged vessels and U.S. facilities subject to the Maritime Transportation Security Act of 2002 regulations. It is intended to address cybersecurity threats which are deemed to be increasing in the marine transportation system. In responding to this proposed regulation, PVA pointed out to the Coast Guard that the PVA Alternate Security Program (ASP) already includes cybersecurity assessment and mitigation guidance suggesting that any additional steps would be redundant. PVA stated further that the PVA ASP "framework has proved to be effective in allowing owners and operators to determine the best way to implement security requirements across the passenger vessel fleet."

Our concern about this proposed rule is not that cyber security is not a valid activity, but rather it is a matter of scale. The degree of response should be directly related to company size and directly proportional to the results of an assessment. A small passenger vessel operator should have the flexibility to respond and plan based on their level of cyber exposure. We believe that the PVA ASP provides adequate and effective

cyber security coverage for covered vessels and facilities.

PVA's Flagship Safety Management Program has been around a long time. List some long-term benefits of this program, and what members have improved as they employ the tool.

PVA's commitment to safety goes back to its roots as an organization and is institutionalized in the work of the PVA Safety and Security Committee, which has tapped into the extensive knowledge and expertise of its members to develop a variety of powerful training tools for PVA members to use in their company risk management programs. As these member resources have evolved, so too have the demands of PVA members for more sophisticated tools in which to enhance their safety practices. The Flagship Safety Management System (SMS) grew out of this demand and that of Congress and the Coast Guard for additional ways to improve safety aboard U.S. passenger vessels. As a result, a Coast Guard/PVA Quality Partnership working group was formed and tasked to create a voluntary alternative safety management system for the domestic passenger vessel industry.

Implementing a safety management system such as Flagship offers PVA members numerous benefits. First, it enhances employee safety by identifying and mitigating risks, which reduces workplace accidents and injuries. This leads to a healthier, more productive workforce.

Next, it ensures compliance with existing Coast Guard safety regulations. It will also help improve operational efficiency by streamlining safety procedures, reducing downtime caused by accidents. Additionally, implementing a Flagship SMS will help foster a positive company culture, and boost employee morale and engagement. Most importantly, implementing a Flagship SMS will improve a company's overall risk management program by providing a structured approach to identifying, assessing, and controlling vulnerabilities. Ultimately, it supports long-term sustainability by reducing financial losses from accidents and insurance premiums, leading to cost savings.

Your primary regulatory partner is the U.S. Coast Guard. What would PVA like to see changed or improved within the Coast Guard's domain in the coming year?

PVA has a professional relationship with the Coast

Guard which is approaching a 60-year lifespan. There is generally a sense of mutual respect which enhances our interactions and our appreciation for each other's missions is a direct result of this long-term connection. But the key to maintaining positive relations constant communications. At PVA, we have been advocating, whenever possible, for more Coast Guard Industry Days. We recognize that it is difficult for the Coast Guard to sponsor these events. This is why PVA, and PVA members, regularly offer to step in and host Industry Day meetings locally to foster an open dialogue between industry and the Coast Giard so that we can address pressing issues. In addition, many PVA members who are located in Coast Guard training ports have offered their vessels as training platforms during non-inspection times to assist the Coast Guard in training inspectors. We see this activity as being mutually beneficial.

The environment is important, no matter what sector of the marine industry and collective waterfront you operate in. Domestic passenger vessels know this only too well, especially with such a public-facing task of carrying hundreds of thousands of passengers monthly. That said; the PVA Green Waters program is a voluntary tool in the PVA toolbox. Have you used it to "green up" your carbon signature, and if so, how? What can all PVA members do to become better stewards of our environment?

PVA's Green Waters Program is designed to promote environmental sustainability within the U.S. passenger vessel industry. The program, which was launched in 2012 on Earth Day, encourages vessel operators to adopt eco-friendly practices that reduce their environmental impact,

focusing on cleaner operations, waste reduction, and energy efficiency. The program provides resources and guidelines to help companies employ best practices in pollution prevention, waste management, and energy conservation.

Through the Green Waters Program, PVA members gain access to industry-specific tools, share knowledge, and collaborate on innovative solutions to environmental challenges. The initiative also emphasizes the importance of reducing greenhouse gas emissions and improving fuel efficiency, aligning the passenger vessel industry with broader global sustainability goals. By joining the program, members demonstrate their commitment to protecting marine ecosystems while fostering a culture of environmental stewardship across the industry. Currently, there are nearly 500 PVA member vessels participating in the Green Waters program and the list continues to grow.

PVA has touted its PVA/USCG quality partnerships in the past. Describe these partnerships, what they focus on, and how they add value for PVA stakeholders.

The PVA/Coast Guard Quality Partnership Meeting is a long-standing forum where senior PVA and Coast Guard leaders meet twice a year to discuss issues of mutual concern in a non-regulatory environment. Chartered in 1996, the partnership is actually quite revolutionary in that it provides an important channel through which the leaders of our two organizations can communicate and work to explore and resolve issues before they become major problems. It establishes a forum that promotes frank and open discussions and that ensures that all parties are fully aware of the facts prior to any independent decision-making.

In recent years, numerous working groups, comprised of industry and Coast Guard experts, have been formed to work on specific problems. These working groups have produced excellent work products, guidelines, and tools that have been used to address a variety of non-regulatory needs. Some of the working group projects have included new fire load calculations, hull plate assessment tools, fire safety standards, and guidelines for reducing slips, trips, and falls.

Illegal charters impact the waterfront and PVA members in many ways. Competing with operators who run under the radar is not only a financial challenge, but their presence on the water undercuts safety and so many other best practices for compliant operators. The Coast Guard has long sought to end the practice. How are they doing in your opinion? Could more be done?

Much work has been done over the years in combating illegal charters and both PVA and the Coast Guard can take credit for a great deal of forward progress in this area.

PVA

However, there is still a great deal of work still to be done. This issue is still squarely on the Coast Guard's radar as major public safety issue thanks to PVA's vigilance in communicating the dangers associated with this growing trend and the Coast Guard's willingness to allocate resources to study and address the problem.

Illegal charter operators prey on the general public by advertising "boat charters" and "sightseeing trips" via online boat sharing websites and at marinas. The unsuspecting public falsely believes that an operator is legitimate, and qualified. Federal law authorizes civil fines for violations of commercial passenger vessel safety laws. The Coast Guard can order an operator to cease illegal operations by issuing a Captain of the Port Order. Violation of such an order is a criminal offense.

Several years ago, a Coast Guard officer interned with PVA to study the issue of illegal charters. He travelled to several ports and visited with PVA members to learn firsthand about the extent of the problem. He reported his findings to the Coast Guard. As a result, illegal charters and enforcement has been elevated in the Coast Guard's workload and is a regular agenda item during the PVA/Coast Quality Partnership Meeting.

Progress is being made as Coast Guard enforcement is up and prosecutions are increasing as evidenced by the conviction in New York this year of the owner and operator of an illegal charter boat, who was convicted in the deaths of two passengers.

Let's talk about ferries and passenger vessel growth. Nationwide, how's it going? Is passenger count up? Are fleet renewals and replacements keeping pace with the fleet(s) needs?

While estimates for ferry passenger counts are highly dependent upon local market conditions, it is safe to say that overall ferry ridership numbers are up for 2024, and large cities such as Seattle, New York and San Francisco have seen steady, if not dramatic increases in ferry ridership over the last several years. With the advent of virtual work and more flexible work schedules, we have also seen a need to modify ferry schedules to accommodate different ridership patterns. We will see increasing ferry ridership in 2025 and in following years and this is reflected in current and planned new builds and retrofits that we are witnessing in the Nation's ferry systems.

Ferry fleets nationwide, both public and private, are building new vessels to meet expanding or projected ridership demands. Federal dollars play a big part in some of these projects. As an example, New York City recently received a $10 million FTA grant to support operations of a new electric hybrid ferry serving Governors Island. In addition, the Port of San Francisco and the San Francisco Bay Ferry received a $55 million EPA Clean Ports Program Grant that will be used to construct a high speed 400 passenger zero emission vessel, to build a new ferry terminal in San Francisco's Mission Bay, and establish a maritime workforce development program.

Washington State's widely reported ferry expansion plan earmarks $3.98 billion to build a series of new hybrid electric ferries while also converting existing diesel-powered ferries to hybrid electric power. The program also includes shore power charging stations.

Physical Security for your many stakeholder's boats is a top priority. Where does PVA help in this regard? What constitutes the biggest risk in this area today, and what are you doing about it?

Security aboard U.S. flagged passenger vessels has always been a priority for our industry. This precedence is closely aligned with our attention to safety and it is ingrained in the fabric of who we are as an industry. Operating passenger vessels safely has always included a level of vessel security as we must know who is aboard our vessels at all times. But 9/11 and the Congressional passage of The Maritime Transportation Security Act of 2002 (MTSA) completely changed the game in that it required a greater level of security than had ever been experienced before. It required vessels and facilities to conduct assessments and develop security plans.

In response, PVA created the PVA Alternative Security Program (ASP) which provided, and still provides, an extremely effective option for PVA members to effectively implement security aboard PVA vessels and member facilities. Since then, hundreds of passenger vessels have been required to have a federal security plan and a majority of those vessels are successfully using the PVA ASP which is now in its 5th revision. The PVA ASP continues to provide a way for members to incorporate a risk-based security approach, which allows for more focused and effective security measures based on the specific threat environment of the vessel and its operations.

Column

Ferry Spotlight

Facing up to a World of Challenges

CEO Mike Corrigan outlines Interferry's mountain of objectives – including a game-changing campaign to keep ferries front and center in reducing GHG emissions.

Interferry's origins stem from the launch of a knowledge-sharing US networking initiative in 1976. Those relatively modest roots have grown beyond recognition into a highly respected global trade association with membership exceeding 270 companies – operators and suppliers – in more than 40 countries.

We have consultative status at the International Maritime Organization (IMO) and similar influence with many more of the world's maritime governance authorities. As the voice of the ferry community, the association acts on a huge range of regulatory and policy issues that feature in our 2024-2026 Strategic Plan and which also set the theme for our 48th annual conference held in Marrakech, Morocco, last October – Safety, Security and Sustainability.

Environmental sustainability represents the ferry sector's most immediate challenge. Replacing fossil fuels with alternative energy sources is crucial to meeting the ultra-demanding IMO target of a 20-30% cut in maritime GHG emissions by 2030 – the prelude to net zero by 2050.

Electrification offers an unrivalled solution for ferries. With typical crossings lasting between 30 minutes and two hours, ferry operators are already the prime trailblazers in adopting battery-based propulsion. However, the long-term future of their pioneering energy transition depends overwhelmingly on the urgent expansion of Onshore Power Supply (OPS).

Interferry has been lobbying governments, port authorities and electricity suppliers to prioritize OPS development for the past two years. Intensifying this campaign will be among our foremost objectives in 2025. The potential emissions savings are massive due to the worldwide scale of passenger and freight ferry services. At the last count, annual carryings totalled some 4.3 billion passengers – on par with airlines – as well as 373 million vehicles.

Currently, OPS deployment often lags up to ten years behind shipboard battery installations … and most existing facilities cater only for 'cold ironing' consumption at berth. Our lobbying notes that increasing capacity to enable charging of propulsion batteries will reduce the GHG footprint of ferries and ease demand for the limited supplies of alternative fuels. We also stress that governments should reinvest a

sizeable portion of revenues from carbon tax schemes in OPS provision.

Lack of sufficient landside electricity infrastructure has inhibited further orders for full-electric or hybrid ships for far too long, but now there are growing signs of change in Europe and not least, North America. San Francisco Bay Ferry Systems operator WETA – the Water Emergency Transportation Authority – is set to operate the first US battery-powered ferry fleet after securing local, state and federal funding for its Rapid Electric Emission-Free Ferry program, which includes the construction of OPS facilities. An initial five vessels are to be ordered, with the first due to operate in 2026. Elsewhere, Canada's BC Ferries is pursuing plans to order up to seven hybrid ships – capable of full-electric conversion – due to enter service from 2029-2037 as more OPS comes on stream.

Interferry is deeply involved in two other issues involving GHG emissions. The IMO's Carbon Intensity Indicator (CII), which dictates the allowance of fuel burned per nautical mile, is a major concern because a particular ferry's consumption will be greater on services with a high number of port calls due to operational acceleration and manoeuvring. We have recently proposed a balancing mechanism under which compliance is based on an operator's fleet average. We are also pushing hard for the IMO High-Speed Craft Code to be replaced by a High Speed and Light Craft Code – because removing the current minimum speed requirement will boost newbuild demand for low emissions lightweight craft.

Enhancing safety has always been central to Interferry's lobbying mission. We were participants in the European Union (EU) 2019-2023 FIRE SAFE research project, which highlighted the risks and containment of fires on ro-ro decks. The rapidly increasing market for Battery Electric Vehicles (BEVs) prompted much of the research. Armed with the findings, we are now heavily engaged in the IMO's development of requirements for the carriage of BEVs. Fundamentally, we will demonstrate that they pose no higher fire risk than combustion-engine vehicles; and furthermore, that a BEV fire can be kept under control by conventional drencher systems.

I am especially proud that Interferry also has a distinguished track record promoting safety in developing nations, which started in 2008 with a pilot scheme in Bangladesh. Our Domestic Safety Committee has since taken this support to new levels. Most recently, following a project in the Philippines in 2019, our attention has turned to Africa. Last April, we and the IMO co-hosted a two-day Africa Ferry Safety Seminar in Tanzania. It was attended by more than 100 pan-African ferry participants and 14 professionals from our worldwide operator and supplier membership. A follow-up workshop took place in October during our conference in Morocco – the first to be held in Africa.

We aim to create a comprehensive safety program that embraces what was discussed in both sessions. This includes crew training, proper ticketing to avoid overcrowding, cargo loading and stowage, incident reporting, replacement of old tonnage and the crucial need for political will.

Meanwhile, global geopolitical turmoil has seen security issues zoom into unprecedented focus. The logistics chain is at risk from cyber-attacks on maritime operational technology, while stringent IT-based border controls introduced by the EU raise the prospect of lengthier port calls.

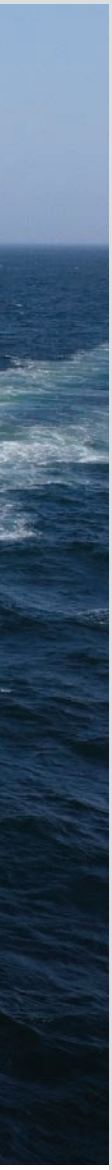
With such a portfolio of work on the horizon, it's little wonder that Interferry activity is a journey, not a destination. But our safeguarding of the ferry sector's interests is assured by the mantra that has fired our growth: ***we are Stronger Together…***

TxDot

THE TOTAL PACKAGE: SUSTAINABILITY, SAFETY & SIEMENS ENERGY

Siemens Energy's focus on the Decarbonization of passenger ferries doesn't stop at measuring stack emissions.

By Rhonda Moniz



The ocean sector finds itself in a critical moment, especially as the demand to decarbonize grows. Though long-haul is still the biggest emitter in the maritime industry, the need to decarbonize smaller commercial and coastal vessels, including cruise ships, passenger ferries, platform supply vessels (PSVs), offshore service vessels (OSVs), and research ships, is on the rise. Particularly, passenger ferries are pushing into uncharted waters, increasingly being scrutinized by municipal, state, and federal regulators for their environmental impact. Siemens Energy, a global pioneer of electrification and propulsion technologies, is now a significant force helping ferry operators tackle these issues head-on.

Combining the strengths of Siemens Energy as a systems integrator and a portfolio of innovative technologies will change how passenger ferries work. ***MarineNews*** recently sat down with Ed Schwarz, the head of the New Marine Unit Sales for the U.S. and Canada at Siemens Energy.

Schwarz holds a BS in Marine Engineering and Shipyard Management from the United States Merchant Marine Academy. His diverse background includes time spent as a shipboard Marine Engineer and has since seen him transition into leadership roles. In his most recent role as the Vice President of Sales at ABB Marine Systems' North and South America sales division, Ed was recognized for his significant technical contributions to the marine industry.

This month, our conversation turned to the demand for decarbonization in the passenger ferries sector, and where Siemens Energy is working to help operators integrate new technology for a greener future.

System Integration with Vision

"Siemens Energy thinks of vessel electrification as a total system propulsion approach," said Schwarz, adding quickly, "We collaborate with ship owners and naval architects to help design full electric, hybrid, or diesel-electric systems for their specific requirements." From power generation to energy storage to fuel alternatives, Siemens Energy unites a range of technologies into interconnected solutions to produce high efficiency, lower emissions, and long-term reliability. A Texas Department of Transportation (TxDOT) ferry project is an excellent example, and Siemens Energy is on board.

Schwarz talked about how early involvement helped Siemens Energy create a hybrid design that would be safe, reduce emissions, and meet the budget. By creating a hybrid design that incorporates advanced energy storage and recharging capabilities, Siemens Energy played a pivotal role in helping TxDOT achieve its goals of improving fuel efficiency and reducing the environmental impacts of the next generation of ferry vessels. "The ferry recharges at night and stores energy during operation, so it has a lower carbon footprint." The outcome was a high-tech ship pointing towards the future of passenger ferries and showing how seamless technology integration can lead to safer, more efficient, and environmentally friendly maritime transportation.

The company's BlueDrive PlusC system, for example, illustrates Siemens Energy's technical sophistication. This DC power and propulsion system is more fuel efficient, has fewer emissions, and is more redundant as it allows vessels to operate with variable speed generators. It easily interoperates with Siemens Energy's BlueVault battery energy storage solution, leveraging proven lithium-ion batteries to deliver secure, safe, and long-lasting energy storage. "Green ferry infrastructure is the lifeblood of a lot of these things," Schwarz said. "By having BlueVault, operators can cut engine run time emissions and ensure stable power supply, even when the demand is high. We're trying to build a system that's both efficient and sustainable. Operators can extend battery life with the modular system, preparing their boats for technological changes."

Hybrids: From Zero-Emission Ferries to Zero-Emission Pods

All-electric ferries are the ultimate emissions reduction goal, but Schwarz also pointed out that hybrid systems are sometimes the best bet for today's operator. "We're seeing hybrid electric boats with storage because they're an efficient, cost-effective route to decarbonization. Combining the battery with a conventional diesel engine can make these systems efficient, save fuel, and reduce emissions by up to 95% during certain times of operation, including docking and idling." Siemens Energy even adds hydrogen fuel cells to its hybrid systems for operators looking for zero-emission solutions. Schwarz emphasized the power of these fuel cells in tandem with batteries for marine vessels operating in areas without sufficient charging infrastructure.

The maritime industry wants zero emissions, but hybrid systems are the most achievable, rapid route for many operators. "The most popular systems are hybrid electric systems with storage because they are the lowest-cost so-

lution to deliver performance and sustainability," he said. Battery-powered, alternative-to-diesel power is fed into these systems for docking, idle time, and other lag times.

Schwarz emphasized automation and energy management to optimize processes and be sustainable. Siemens Energy's power management solutions manage energy delivery, monitoring, and balancing the grid so generators only start when needed and batteries kick in when necessary. "The automation system responds on its own to the vessel's energy demands, and then the captain can worry about navigating and staying safe while the system takes care of the work in the background," Schwarz explained.

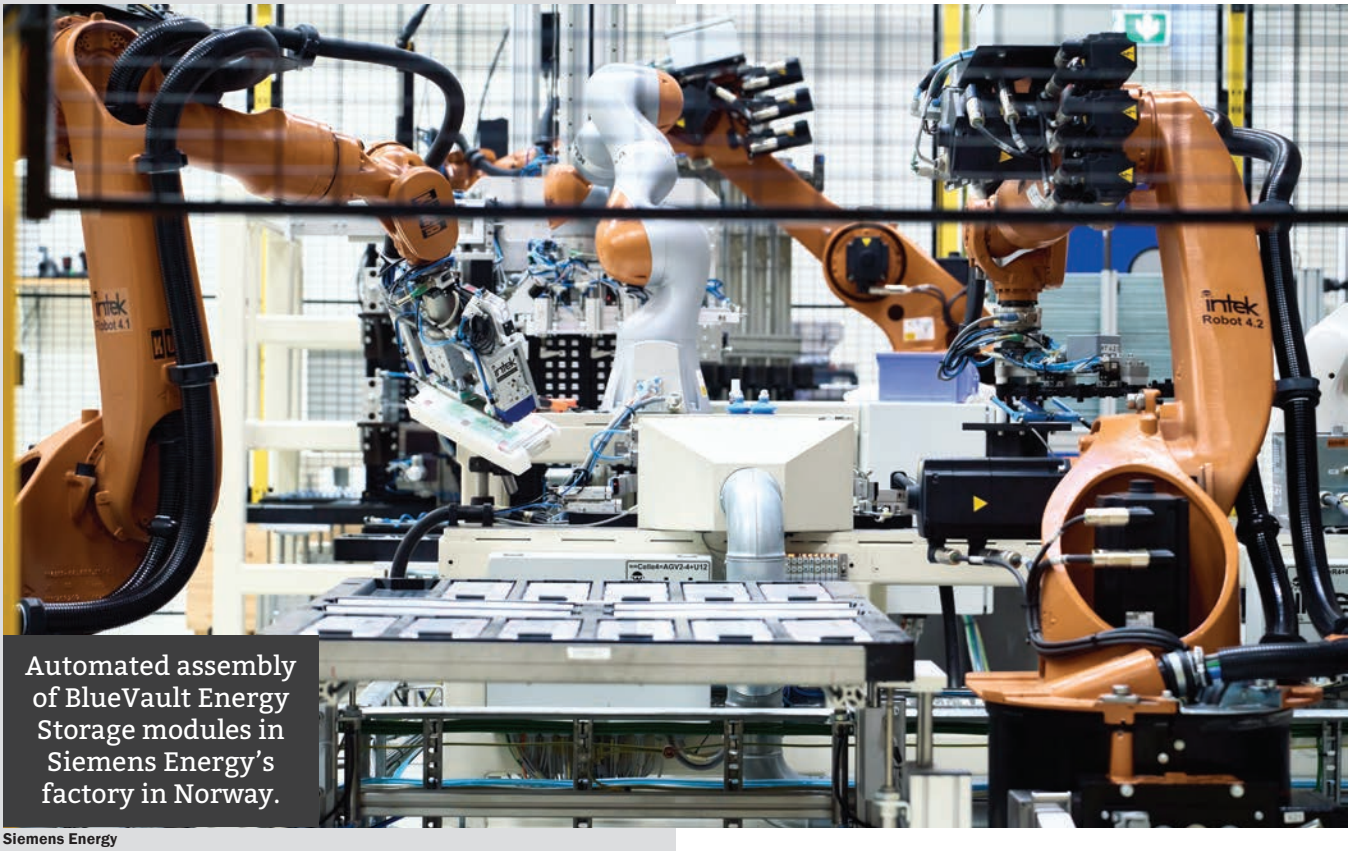
Domestic Ferries: Charting the Path Forward

As the marine sector shifts to decarbonization, Siemens Energy leads the charge. The company is deploying BlueDrive PlusC, BlueVault, and hydrogen fuel cells to give ferry operators the tools they need to stay abreast of changing regulations, meet sustainability targets, and do all of that safely. All that said, "There is no single 'one size fits all' approach to decarbonizing ferries," Schwarz insists, adding, "We as a systems integrator try to customize products to each operator's needs and potential. Hybrid systems, all-electric vessels, or other fuels, we're making the maritime industry more sustainable."

The green advantages of electrified ferries go beyond reductions in global greenhouse gases. Besides this, local levels of nitrogen oxides (NOx), sulfur oxides (SOx), and particulate matter (common in large port cities) can also be radically lowered. Schwarz cited a US ferry electrification project to illustrate how large-scale use of such technologies could clean the air in port cities.

As passengers' ferries come under pressure from local, state, and federal authorities to decarbonize, the shipyard is in for a significant change. Schwarz underscored Siemens' holistic electrification strategy. "We think about systems integration as the full propulsion system," he said. "Be it power generation, energy storage, propulsion, or automation – we build solutions tailored to the specific requirements of every ship." By consulting with owners and naval architects, a system that's not only cost-effective, also but future-proof can be achieved.

For example, the recent TxDOT project highlights the Siemens Energy strategy. In this project, the company par-



Automated assembly of BlueVault Energy Storage modules in Siemens Energy's factory in Norway.

Siemens Energy

Siemens Energy

Siemens Energy's BlueVault batteries use lithium-ion cells and are designed for safety and reliability, incorporating cooling and thermal runaway protection.

ticipated at the very beginning of the design to include hybrid propulsion with emission-reduction and safety and regulatory compliance. "This ferry recharges its batteries at night and operates with generators and battery power during the day, minimizing the use of fossil fuels," Schwarz said. "It's a model of what you can do in the industry today."

The Science Behind the System

At the heart of Siemens Energy's solutions is the BlueDrive PlusC system, an energy-efficient, modular DC power and propulsion platform. Unlike standard alternating current (AC), the BlueDrive PlusC is compatible with variable-speed generators that reduce fuel use by delivering energy in line with the vessel's needs. Not only does the system minimize emissions, but it also adds redundancy and safety by enabling interconnected operations in high-risk conditions.

The BlueDrive PlusC system is further supported by Siemens Energy's BlueVault batteries, which feature high-tech lithium-ion cells. They're built for safety and reliability, with state-of-the-art cooling and thermal runaway protection. Schwarz spoke to the necessity of these innovations, pointing out that "energy storage is now a major piece of decarbonization and allows ferries to run on electricity for months at a time." With the modular architecture of BlueVault, operators can increase the capacity of the batteries over time so they can comply with new regulations and respond to changing energy requirements.

Schwarz also mentioned the increasing potential of hydrogen fuel cells in addition to batteries. Siemens Energy has already used hydrogen in a number of projects and provides ferry operators with a ready-to-scale solution for long-term decarbonization. However, the firm is technology-neutral and custom designs every system to fit the ship and its specific use case. "What we do is find what works best for the owner, be it energy storage or hydrogen or some combination," Schwarz said.

Automation, Energy Management – and Safety, too

Power management built into siemens Energy's BlueDrive PlusC constantly analyzes and optimizes energy use. This makes generators only work when they need to, and the energy stored is used effectively to meet demand. Schwarz called this "energy management at work," it operates quietly in the background, decreasing emissions and increasing performance without human interaction. Safety is also integral to automation. Since Siemens Energy's systems ensure consistent power, blackouts can be avoided – an essential benefit for passenger ferries where reliability is crucial. Schwarz stressed this double-edged sword of automation: "You know, you want to keep the ship safe and efficient and do as little harm as possible to the environment."

But environmental savings do not stop at lowering greenhouse gases. Schwarz noted that ferries typically operate in residential or busy coastal areas where local nitrogen oxides (NOx) and sulfur oxides (SOx) emissions are also significant sources of air pollution. "If we reduce fuel use, we're not only reducing emissions globally, but we're also doing something tangible for communities where these ferries travel," he said. US ferry operators are already proving the value of this model, reducing greenhouse gases and other local pollutants while transitioning to hybrid and all-electric fleets – which is precedent for North American ferry fleets.

According to Schwarz, what makes Siemens Energy's solutions stand out is that they are flexible. Schwarz said that many passenger ferries have been built for decades, so future technological and regulatory changes should be considered. "With an electric distribution backbone, they can add more batteries, switch to new fuels, or become 100% emission-free by the time infrastructure matures." For ferry companies, this innovative route is the direct path to sustainability. In other words, whether the solution involves hybrid systems, automation, or next-generation energy storage, Siemens Energy has the resources and know-how to 'future-proof' today's ferries for tomorrow's challenges.

By marrying technical know-how with environmental savvy, the firm is enabling ferry operators to make green fleet changes easy. Summing up nicely, Schwarz advises, "Decarbonizing ferries is not just about cutting emissions, but about building a greener, more resilient future for the maritime sector. With Siemens Energy onboard, that future is already here."

AT LAST COUNT:
A Changing U.S. Mariner Demographic?

By Joseph Keefe

It has been quite a while (2019) since we last looked at the U.S. mariner population, its make-up and tried to make some sense of it all. Actually, it has been a LONG time since anyone did it, and *MarineNews* arguably does a better job in analyzing and compiling the data than anyone else. The numbers provide interesting fodder with which we can take a look at where mariners come from. In this edition, and with updates from Marad at my fingertips, we have a rich trove of data from which to make these, and other assumptions.

Almost ten years ago, a surge in license-track students at the nation's six state maritime academies (SMA) had matched Jones Act, blue water recapitalization efforts then underway. Ships were being churned out, mariner demand was high, and salaries had spiked. Almost made me wish I was back at sea. Almost. But by 2017, the deep draft employment situation had slowed, arguably at a very bad time. That's because collective seven maritime schools were cranking out approximately 1,100 licensed graduates annually.

Today, the blue water commercial employment situation continues to worsen, while at the same time, external threats to national security have heightened considerably. Similarly, the U.S. Flag deep draft vessel count continues to wane. That's because, in part, even with a fairly robust fleet replacement program underway, the ships tend to be bigger, carry more cargo and hence, the fleet modernization is anything but a one-for-one newbuild program. **Table 1** gives a snapshot of the commercial deep draft U.S. flag fleet.

***Table 1:** Blue Water U.S. Flag Count (>1000 GT)*

Category	2017	2022
Total Ships	181	178
Jones Act Eligible	99	93
Non-Jones Act Eligible	82	85

Source: Marad

The total number of graduates from the nation's maritime academies peaked in 2018, right around the same time license-track students also reached their apex. For the latter number, it has been all downhill ever since; with licensed graduates dropping precipitously from a high of 1113 (2016) to 810 in 2024. That's a 27 percent decline, in case you are keeping score. Total enrollment at the academies, with notable exceptions, is also down during the same timeframe.

Nevertheless, and averaging 902 unlimited licenses per year for a 17-year period dating back to 2008, fresh, shiny faced officers poured into the marine workplace. The percentage of each class that opts for the license track option is also down (57% in 2023 – down from a high of 68% in 2017). The average percent of graduates opting for licenses over the 17-year spread is about 59%. The 2024 numbers that Marad made available just before went to press, showed the percent of students opting for licenses up to 62%, but the actual number of licensed graduates dipped because of a total reduced graduating class. That's rock-solid data, for the most part, except for what has been recorded out of the TAMMA school, where for whatever reason, it can be seen that the data is all over the place, but the last six years of data (taken directly from Marad's meticulous records) can be considered accurate. Even that likely unrepresentative 17-year cumulative number doesn't move the collective needle very much.

Nevertheless, and over the course of the last 17 years, more than 15,000 domestic unlimited license mariners have been produced. That's ***a lot*** of mariners for a couple of hundred merchant ships employing reduced manning protocols. But, throw in the Military Sealift Command, which operates approximately 125 civilian-crewed ships that support the U.S. Navy's specialized missions, and maybe there aren't enough mariners to go around, after all. **Table 2** tells you all you ever wanted to know about domestic maritime academy students, but were afraid to ask:

Table 2: ***SMA & Kings Point Graduates, Licenses, trends & data at a glance ...***

		CMA	Maine	Mass.	Michigan	SUNY	TAMMA	USMMA	ALL	PCT LIC.
2008	***Graduates***	131	169	214	30	268	263	211	1286	
	Licensed	97	86	112	30	137	42	211	715	56
	Non-Lic.	34	83	102	0	131	221	0	571	
2009	***Graduates***	159	152	257	19	306	250	196	1339	
	Licensed	102	102	122	19	172	40	196	753	56
	Non-Lic.	57	50	135	0	134	210	0	586	
2010	***Graduates***	157	182	252	21	266	274	201	1353	
	Licensed	101	125	122	21	144	55	201	769	57
	Non-Lic.	56	57	130	0	122	219	0	584	
2011	***Graduates***	169	210	267	30	300	261	205	1442	
	Licensed	119	136	108	29	165	65	205	827	57
	Non-Lic.	50	74	159	1	135	196	0	615	
2012	***Graduates***	171	156	292	27	390	328	219	1583	
	Licensed	113	93	126	25	229	56	219	861	54
	Non-Lic.	58	63	166	2	161	272	0	722	
2013	***Graduates***	161	132	325	41	396	337	201	1593	
	Licensed	113	73	125	41	243	63	201	859	54
	Non-Lic.	48	59	200	0	153	274	0	734	
2014	***Graduates***	195	188	338	42	384	353	217	1,717	
	Licensed	134	117	121	42	241	79	217	951	55
	Non-Lic.	61	71	217	0	143	274	0	766	
2015	***Graduates***	186	229	324	44	405	411	224	1,823	
	Licensed	114	148	120	43	253	87	224	989	54
	Non-Lic.	72	81	204	1	152	324	0	834	
2016	***Graduates***	225	251	341	37	409	439	225	1,927	
	Licensed	122	172	169	37	287	101	225	1,113	58
	Non-Lic.	103	79	172	0	122	338	0	814	
2017	***Graduates***	224	244	343	47	442	103 (*)	174	1,577	
	Licensed	142	128	190	47	282	103	174	1,066	68
	Non-Lic.	82	116	153	0	160	0	0	511	
2018	***Graduates***	240	246	339	33	494	136 (*)	198	1,686	
	Licensed	124	142	178	33	289	136	198	1,100	65
	Non-Lic.	116	104	161	0	205	0	0	586	
2019	***Graduates***	260	202	380	46	431	108	200	1627	
	Licensed	139	114	148	46	280	85	200	1012	62
	Non-Lic.	121	88	232	0	151	23	0		
2020	***Graduates***	196	205	392	39	358	138	210	1538	
	Licensed	118	113	147	39	251	89	210	967	63
	Non-Lic.	78	92	245	0	107	49	0		
2021	***Graduates***	200	194	354	55	410	160	229	1602	
	Licensed	109	109	110	55	249	86	229	947	59
	Non-Lic.	91	85	244	0	161	74	0		

2022	*Graduates*	167	153	324	32	375	80	224	1355	
	Licensed	84	88	114	32	181	70	224	793	59
	Non-Lic.	83	65	210	0	194	10	0		
2023	*Graduates*	190	171	377	56	335	83	211	1423	
	Licensed	116	92	117	56	141	80	211	813	57
	Non-Lic.	74	79	260	0	194	3	0		
2024	*Graduates*	171	169	291	38	356	65	214	1304	
	Licensed	105	89	129	38	178	57	214	810	62
	Non-Lic.	66	80	162	0	78	8	0		
TOTALS	*Graduates*	3202	3253	5410	637	6325	3789	3559	26175	
	Licensed	1952	1927	2258	633	3722	1294	3559	15345	59
	Non-Lic.	1250	1326	3152	4	2603	2495	0	10830	
AVG	*Graduates*	188	191	318	37	**372**	223	209	1538	
	Licensed	115	113	133	37	**219**	76	209	902	59
	Non-Lic.	73	78	**185**	< 1	153	147	0	636	
	PCT Lic.	61	59	42	100	59	34	**100**	59	

And, because I like statistics and parsing the numbers, the seven Maritime Academies are ranked below in a defined set of parameters (**Table 3**).

Finally, and just for fun, courtesy of the U.S. Maritime Administration, we take a look at the current enrollment data for all of the schools in **Table 4**. Assuming no drop-outs, this equates to a likely average of 924 license graduates over the next four years, or roughly in keeping with current norms.

Counting Heads

So, you ask, how many licensed and credentialed mariners are available for work – especially in times of emer-

***Table 3:** The Maritime Academies ... by the numbers*

Category	CMA	MAINE	MASS	MICH	SUNY	TEXAS	USMMA
Most Graduates	6th	5th	2nd	7th	1st	3rd	4th
Most Licensed Grads	4th	5th	3rd	7th	1st	6th	2nd
Most Non-Licensed	5th	4th	1st	6th	3rd	2nd	7th
Highest PCT Licensed	3rd	4th	6th	2nd	5th	7th	1st

**17 years of data (sources: Marad and maritime academies)*

***Table 4:** 2023-24 Academic Year Total Enrollment snapshot ...*

Maritime Academy	Total Enrollment (AVG Class Size)	License Track Students of Total Enrollment	PCT Students in License Track Studies
California	713 (179)	489	69%
Great Lakes	169 (42)	169	100%
Maine	888 (222)	439	49%
Massachusetts	1271 (318)	603	47%
New York	1350 (338)	774	57%
Texas	362 (91)	293	81%
USMMA	930 (233)	930	100%
TOTALS	5683 (1421)	3697	65%

gency? We don't know. And that's because despite repeated requests to the U.S. Coast Guard – the regulatory body responsible for issuing these documents – the data hadn't been made available by the time this article went to press. We asked for these numbers in early November, and then were subsequently forced to file a FOIA request; all to no avail.

At a time when one of the most pressing issues facing the nation's maritime industry is how to find, train and keep qualified mariners, the organization in charge of that database can't pull up six simple data points. Marad puts the number at somewhere "around 200,000 mariners" but they probably don't have any more success peeling the numbers out of the Coast Guard than I did. It wasn't always like this. That said; we provide the latest information available, **Table 5**, for your inspection.

In the bad news department (it's always something), just 4,330 licensed mariners were churned out by the maritime academies in the five graduating classes since 2019. How many of the existing pool of mariners from the 2019 count have retired? We just don't know. But, if past trends are any indication, we may be in a lot of trouble. In 2017, for example, the U.S. Coast Guard advised that 30,377 unlimited tonnage mariners were available in the manpower pool. Fast forward to November 2019, that number – despite the record-breaking maritime academy output – had declined to 25,611; almost 15%. And if that weren't alarming enough, the total mariner pool was declining during the same timeframe.

Separately, the number of Coast Guard-issued unlimited tickets in 'Continuity' status (inactive and in need of training or recertification to renew) had climbed to an all-time high of 18,639, while countless others (myself included) have finally let the credentials lapse completely.

Growing Future Mariners

The obvious answer involves an effort to encourage and recruit more people to look at the waterfront as a career. Some of that means bringing that awareness down to the secondary schools and beyond into the elementary school classrooms. Various stakeholders have done admirably in that regard. Maritime Education Pioneer (Captain) Art Sulzer immediately comes to mind in that regard. Others have joined him in that effort.

Another avenue involves the recruitment of women into what has historically been (and still is) a male-dominated workplace. The most conspicuous watershed moment for women on the water was in the summer of 1974, when 14 women entered the U.S. Merchant Marine Academy at Kings Point. Another might be graduation day for the class of 1980 at the Massachusetts Maritime Academy, which was the last all male maritime academy graduating class in the United States. Never fear, and in the summer of 1977, six women found themselves unhappily doing pushups in the gym parking lot in Buzzards Bay, forever changing the landscape of the school. Some of these graduated in 1981.

So, you ask, how are we doing in the interim in changing that metric? Not too good, actually. Only 237 (11%) of the collective graduating classes of all maritime academies for the years 2017 and 2018 were female.

Kings Point – it is a federal school with heavy pressure from 'woke-Washington' – fared the best, with just under 20% of their graduates being female.

Marad's Dr. Shashi N. Kumar, Ph.D. and Master Mariner is a Deputy AA/National Coordinator MET at the U.S. Maritime Administration. Possibly no one else on the planet knows more about the U.S. mariner situation, and certainly, no one is working harder to define the issues facing the waterfront, and more importantly, bringing solutions to the table. Certainly, no one helped me more in terms of statistics and wisdom for this article. Bravo Zulu, Dr. Kumar.

According to Kumar, USCG (rough) data on credentialed mariners indicates that women are still around only 8% of the mariner population. The six SMA's collectively graduated about 10% women with mariner credentials in their Class of 2024 and the unofficial count for USMMA shows that women accounted for approximately 15% of their totals. Kumar told ***MarineNews***, "The USMMA has been working actively to enhance women recruitment. The incoming USMMA class of 2029 has about 22% female applicants, as opposed to less than 20% in the previous year."

Blued Water Mariners for a Brown Water World?

Actually, we have bigger problems: The number of privately owned/operated U.S. flag blue water hulls plunged to 178 hulls with only 93 of those Jones Act eligible. Hence, a nation whose U.S. merchant fleet consists of about 40,000 vessels, 99.5% of which can be considered brown water, no longer needs a robust supply of unlimited tonnage/horsepower licensed mariners. Or, do we? For my part, and as editor of ***MarineNews***, I tell people all the time that the heart of the U.S. Merchant marine and its fleet today rests firmly within its brown water sector. That's true today and it will still be true ten years from now. And, no; all the efforts to mandate the building of horribly overpriced LNG carriers won't change that.

At the Massachusetts Maritime Academy, efforts have long been underway to adjust the school's course line for future mariner education. About seven years ago, fully one-third of all deck graduates left Buzzards Bay with tug endorsements, and all deck license candidates (with a nod to brown water opportunities) were required to take three credit hours of diesel engine curriculum. And, it wasn't too long ago that the Military Sealift Command (MSC) offered employment to as much as 25% of MMA's graduating class. Only a handful of cadets were interviewed and offered employment in 2015. The class of 2016 attracted no MSC employment offers. This year, however, there were rumblings of mariner shortages at MSC. So, perhaps those jobs will start to materialize again.

At last count, about 47 ships remained in Marad's Ready Reserve fleet, in a reserve operating status (ROS). Marad remains rightfully and deeply concerned about the nation's ability to staff those vessels. Seven years ago, Marad said there wasn't enough manpower to float a credible sealift response to a conflict for more than three months. Today, that situation has likely worsened. And, that estimate is arguably Marad's most compelling reason to keep the U.S. Merchant Marine Academy open.

Moreover, the problem may not be whether there are enough mariners, but instead, whether enough with proper qualifications exist to competently man available tonnage. Gone are the days when deck officers could walk down the gangway of a boxship and directly onto a tanker. The advent of STCW ended all of that. From the engine side of the equation, almost one-half of ROS ships are steamships, an engineering discipline in short supply in the motorship era. Unfortunately, the steepest drop in available unlimited mariners, according the U.S. Coast Guard, is within the

Table 5

	2001	2004	2005	2006	2011	2017	2019 (*)	2024 (???)
Total Population	193,000	204,835	208,003	209,800	217,875	208,925	206,845	?
Ratings (MMC/MMD)	73,000	66,870	67,637	65,900	123,742	138,891	57,169	?
Licensed Mariners	85,000	95,789	99,023	102,100	145,292	147,937	150,302	?
Continuity Status	***	***	***	***	7,133	15,331	18,639	?
Unlimited Deck Lic.	8,721	9,178	9,171	9,200	11,524	13,271	14,390	?
Unlimited Eng. Lic.	9,680	10,500	11,925	11,500	13,271	17,106	11,221	?

Source: U.S. Coast Guard / (***) denotes data not then available / (*) USCG data, November 2019.

ranks of licensed unlimited horsepower engineers, where the last statistics available show these numbers to have dropped to their lowest levels since 2004.

Just 15 years ago, some SMA's teetering on the brink of extinction reinvented themselves and today, thrive with a slightly different, more diverse focus. That's a good thing. But, is what they look like today going to be the right platform to produce of the mariners and maritime professionals needed tomorrow? It all depends on who you talk to.

The Way Forward: Educating the Maritime Workforce

Narrative posted on the U.S. Maritime Administration WEB site claims, "As the Federal agency responsible for U.S waterbound interests, MARAD manages numerous operations around the world, all of which require a constant flow of skilled and readily-available mariners. This means MARAD is responsible for training and educating the next generation of mariners to carry out and improve the quality of U.S. maritime operations at sea and ashore, everything from shipbuilding, to port operations, to cybersecurity." And, if people like Dr. Kumar are any indication of that effort, then I think we're headed in the right direction.

Kumar insists, "There will be no shortage of mariners in this country if only we could have more women participation, like what is happening in other sectors of the economy. You may have heard of our EMBARC (Every Mariner Builds A Respectful Culture) program." He continued, "The primary focus of EMBARC Standards is to promote SASH PR (Sexual Assault Sexual Harassment Prevention and Response) measures, along with addressing other issues like bullying and any other prohibited behavior on our ships. In the long run, we hope this will help change the shipboard culture and women will be as comfortable as their male colleagues in pursuing maritime careers." Amen.

You can also access information on MARAD's other ongoing workforce-related actions at Educating the Maritime workforce @ https://www.maritime.dot.gov/maritime-workforce

MARAD's Strategic Plan for Mariner Retention can be found @ https://www.maritime.dot.gov/sites/marad.dot.gov/files/2024-02/MARAD%20Mariner%20Workforce%20Strategic%20Plan%20FY23-27.pdf

A DEEP DIVE INTO DREDGING WITH DCA'S DOYLE

There's more to domestic dredging than meets the eye. Dredging Contractors of America CEO Bill Doyle is just the guy tell you why.

By Joseph Keefe

William P. Doyle serves as the Chief Executive Officer of the Dredging Contractors of America (DCA). DCA represents the dredging industry on key issues before Congress and is an active partner to the U.S. Army Corps of Engineers, public port authorities, state and local governments, as well as allied construction and maritime organizations.

Immediately prior to this appointment, Mr. Doyle served as the Port of Baltimore's Chief Executive for three years. He shepherded Maryland's ports and terminal operations through the tumultuous downturn of cargo at the beginning of the COVID-19 pandemic and through the microchip shortage. Working closely with the Maryland Congressional Delegation and the U.S. Army Corps of Engineers, Mr. Doyle helped secure a $4 Billion Chesapeake Bay Restoration Project Agreement setting in motion dredging of Maryland's federal approach channels for the next 35 years. He was instrumental in the team effort commanded by U.S. Coast Guard Sector Maryland-National Capital Region in taking the lead on an entirely Jones Act dredging and marine construction operation coordinating the refloating of the then grounded, Evergreen Ever Forward (March 2022).

Doyle, a graduate of the Massachusetts Maritime Academy, also has a law degree from Widener University Commonwealth Law School. He is a marine engineer and lawyer and served nearly six years as a Presidential Appointee in the role of U.S. Federal Maritime Commissioner under the Trump and Obama Administrations – twice unanimously confirmed by the U.S. Senate. Previously, he served as the Director of Permits & Compliance for the Office of Federal Coordinator for Alaska Natural Gas Transportation Projects. Earlier in his career he served as Chief-of-Staff, In-house Counsel, and Director of Government & Legislative Affairs for the Marine Engineers' Beneficial Association (AFL-CIO).

In short, DCA couldn't have a more knowledgeable – or experienced – professional in its c-suite leadership role. But Doyle is more than a cheerleader. His advocacy on behalf of the nation's dredging community spans myriad aspects of this complicated but critically necessary business. This month, he weighed in on 'all-things-dredging' with *MarineNews*.

Domestic Dredging: competitive, bustling, and efficient, too

International dredgers characterize the American dredging industry as a "closed market." Still others insist that the Jones Act protects an uncompetitive, inefficient domestic waterfront. And yet, the Jones Act dredging arena is nevertheless highly competitive. So says Bill Doyle, Chief Executive Officer of the Dredging Contractors of America. Doyle adds, "With respect to the competitiveness of the U.S. dredging industry, there is an average of three bidders on unrestricted projects and small business set-aside projects. Additionally, there is an average of three bidders on hopper dredge projects." Hence, anyone who wants compete for work in the U.S. dredging arena today, had better sharpen their pencil first.

And, the business remains extremely busy, with no end to the backlog in sight. A closer look at the FY 2023 dredging season – as reported by Michael Gerhardt in the U.S. Dredging Report: An Analysis of the FY23 U.S. Federal Dredging Market, tells the full story.

For example, in FY2023, 56 different companies were awarded U.S. Army Corps of Engineers work with 21 large and 34 small businesses being awarded federal dredging projects. The scope of that work, explains

Doyle, is simply huge. "The total awards amounted to nearly $2.1 Billion – a 39% increase from FY22; 20% above the seven-year average of $1.7 Billion; with FY23 capturing highest award year on record."

Competition, nevertheless, and in times of robust demand, remains fierce. That's because the industry low bid, compared to the Government Estimate (GE) and Government Estimated Awardable Range (GEAR) provides ample proof of that metric. For example, 135 of 163 projects have available industry bid/GE comparisons and were not sole-sourced, while 85 of 135 had a winning bid lower than the GE; and 126 of the 135 (93%) had a winning bid lower than the GEAR. Of the 85 projects where industry was lower than the base GE, 63 projects were cheaper by more than 10%; 32 projects by more than 25%; 11 by more than 40%; and 4 by more than 50%. The savings to US taxpayers exceeds $700 million and equates to an average savings of 35% per project when compared to the GEAR.

Dredging Locally; Thinking Nationally

There is a saying that all politics are local, but when it comes to dredging, the outlook typically depends heavily on what's happening inside the Beltway. But unlike many other aspects of American life and policy-driven decisions, over time, the benign neglect of the U.S. waterfront has been a bipartisan event. That seems to be changing, of late. Nevertheless, the question of what will change on January 20th, and what will not, is on the minds of most waterfront stakeholders. Bill Doyle, for one, is not worried.

"The new Trump Administration will continue to support ports, infrastructure and jobs. President Trump will have republican majority in the House and Senate when he enters office on January 20, 2025. That said; dredging is bipartisan. The first Trump Administration was very creative in how it handled dredging."

Doyle illustrates that reality by reminding us that, for instance, Trump signed the FY2020 Energy and Water Development appropriations bill into law as part of H.R.1865 and included the first regional dredge demonstration program for the central Gulf Coast. This program was created to explore innovative ways of executing dredging in a logical and sequenced manner to seek efficiencies and cost savings and minimize disruptions to critical construction and maintenance dredging requirements across the nation.

The then, U.S. Senator Richard Shelby of Alabama shepherded $274,300,000 in appropriations for the Port of Mobile. That funding accounts for the full federal share for the construction of the deepening and widening of the Mobile's navigation channel. In addition, $85.35 million was allocated in the FY20 work plan to initiate construction of deepening the Mississippi River Ship Channel, Gulf to Baton Rouge (Louisiana) to 50 feet. The Gulf Coast is well represented in Congress this time around. Not to be left aside, Trump and Congress also set aside substantial funding for dredging projects in Boston, MA; Baltimore, MD; New York and New Jersey; and Oakland Harbor, CA. Doyle adds enthusiastically, "I think this time around will be more of the same, a continued focus on new construction projects, maintenance dredging and beach renourishment."

Dredging: on the cutting edge ...

Probably the last way you might ever expect someone to describe dredging is in terms of "high tech," "environmentally clean," and/or "innovative." But that's exactly what is

Curtin Maritime

happening in domestic markets. "We're always seeing the dredge industry improve and innovate – that's part of the competition between the this heavily saturated market in the United States," says Doyle, adding, "A relatively new entrant, Curtin Maritime, has really taken off in the clamshell market over the past five years."

According to Doyle, Martin Curtin, the founder of Curtin Maritime is an "on-the-deck-plates" type of guy, understands marine engineering and design, and is quick to sling a wrench if needed. Along the way, Curtin has taken clamshell dredges to the next level. The clamshell dredge DB AVALON, for example, built in 2022, is a market-first, hybrid-powered dredge vessel and is considered the lowest carbon footprint clamshell dredge of its class. The DB AVALON employs the latest hybrid technology, combined with the most energy-efficient Tier 4 generators in the market. Curtin claims their hybrid power source allows for generators two-thirds the size of a conventional dredge vessel, thereby reducing CO2 emissions by 30% less than the highest tier rated generator available. The two QSK60 generators manufactured by Cummins uses a proven Selective Catalytic Reduction (SCT) technology with a flow-through exhaust after-treatment system, using diesel exhaust fluid (DEF), to deliver ultra-low emissions.

The four banks of 20 battery modules each, are controlled by state-of-the-art software. It optimizes charge and discharge cycles by harnessing regenerative power from normal digging operations and re-charging the batteries, further reducing fuel consumption and greenhouse gas emissions. The DB AVALON has taken on some high-profile dredging projects in the Houston Ship Channel, San Juan Harbor in Puerto Rico and is now working in the Chesapeake Bay on the Baltimore approach channels. Curtin is continuing to expand and has plans for more technological advances with the construction of new dredges.

Building for tomorrow, today

Martin Curtin isn't the only U.S. operator building dredges for the U.S. Market. The broader U.S. dredge fleet, the U.S. private sector dredging industry, in particular, is in a great position. Bill Doyle explains, "The industry is keeping pace with its new construction of vessels and equipment. In fact, the U.S. dredging industry is in the midst of a $3 billion recapitalization with a focus on enhancing the capacity and efficiency of the fleet to meet the growing demands of federal and private sector projects. The industry's ability to deliver cost-effective solutions while contributing to environmental sustainability underscores its vital role in maintaining and improving the nation's waterways and coastal infrastructure." The chart shown below shows just how much is going on:

Order Book: Jones Act Dredging Private Fleet $3Billion and Growing

Company	Dredge Name	Dredge Type	Capacity	Shipyard	Status
Manson Construction	Frederick Paup	Hopper	15,000 CY	Keppel AmFELS (TX)	Expected delivery (2024)
Cashman Dredging	Mighty Quinn	Hopper (T & B)	4,000 CY	Feeney's Shipyard (NY)	In service (April 2023)
Great Lakes Dredge & Dock	Amelia Island	Hopper	6,500 CY	Conrad (LA)	Expected delivery (2025)
Great Lakes Dredge & Dock	Galveston Island	Hopper	6,500 CY	Conrad (LA)	Delivered/In service (2024)
Weeks Marine	RB Weeks	Hopper	8,550 CY	Eastern (FL)	In service (May 2023)
Callan Marine	General Bradley	Cutter Suction	28-inch	Halimar (LA)	In service (April 2022)
Callan Marine	General Arnold	Cutter Suction	32-inch	C&C (LA)	Delivered/In service (2024)
Callan Marine	General Marshall	Cutter Suction	18-inch	DSC (LA)	In service (April 2023)
The Dutra Group	ES-15	Split Hull Dump Scow	6,000 CY	Corn Island (IN)	In service (2019)
The Dutra Group	MS-16	Split Hull Dump Scow	6,000 CY	Portland (OR)	In service (2022)
The Dutra Group	CB Harry S	Liebherr 8300.2 Clamshell	35 CY Cable Arm	Conrad Amelia (LA)	In service (2022)
The Dutra Group	TBD	Hopper	10,464 CY	TBD (USA)	In final development
Orion Group	Lavaca	Cutter Suction	20-inch	Southwest Shipyard, TX	In service 2022
Callan Marine	Admiral Nimitz	Hopper	16,000 CY	TBD	Construction Tender released (June 2022)
Muddy Water Dredging, LP	Vaneta Marie	Cutter Suction	24-inch	DSC, Reserve, Louisiana	In service (April 2024)
Mike Hooks	Lorraine Hooks	Cutter Suction	27-inch	Mobile Pulley Works (AL)	n service (June 2023)
Curtin Maritime	TBD	Clam/Crane Barge/Scow		Lad Services /Corn Island	Delivery Expected (Q4 2024)
Curtin Maritime	DB Avalon	Clamshell	HL 242,000 lbs.	Curtin	In service (2022)
Curtin Maritime	Crown Point	Dump Scow	6,000 CY	Gunderson (Portland, OR)	In service (2022)
Curtin Maritime	Inspiration Point	Dump Scow	6,000 CY	Gunderson (Portland, OR)	In service (2022)
Curtin Maritime	Sand Point	Dump Scow	6,000 Y	Gunderson (Portland, OR)	In service (2022)
Marinex Construction	Wadmalaw	Cutter Suction	30-inch	Detyens Ship Yard (SC)	Nex service (2021)
Cashman Dredging	TBD	Split Hull Dump Scow	7,500 CY	TBD	Expected delivery (2025)
Callan Marine	Gen. MacArthur	Cutter Suction	32-inch	C&C (LA)	In service (2020)
Weeks Marine	JS Chatry	Cutter Suction	30-inch	C&C (LA)	In service (2019)
Great Lakes Dredge & Dock	Ellis Island	Hopper	14,800 C	Eastern (FL)	In service (2018)
Weeks Marine	Magdalen	Hopper	8,500 CY	Eastern (FL)	In service (2018)
Manson Construction	Robert M. White	Cutter Suction	30-inch	Halimar (LA)	In service (2018)

*C&C Shipyard is currently building two 28" Cutter Suction Dredges (CSD) on spec for sale or lease
** Industry has made additional capital investments in cranes, tugs, barges, scows, tender boats, survey vessels, boosters, pipeline, pontoons, etc.

The use of beneficial dredging material for tasks such as island building and coastal restoration is growing. Industry estimates put the use of dredged material at 30% of volume today, but the USACE wants to increase it to as much as 70% by 2030. Defined more specifically, reusing dredged material excavated from the seafloor, river and lake bottoms is known as beneficial use of dredged material. Such uses include rebuilding barrier islands, fish and wildlife habitat creation and restoration, beach nourishment, landfill cover, human recreation and land site remediation.

Beneficial use of dredged material in a harbor can have a significant impact on improving the condition of the harbor while also alleviating existing demand for development and use of new disposal sites. In FY23, 66% of the overall federal dredging program totaling 107 projects incorporated the use of dredged material for beneficial purposes, compared to 59% in 87 projects in FY22. And, while myriad projects have had a significant positive impact on local environments, a few specific projects are worth highlighting:

- **Buffalo River Dredging Restoring Wetland Habitat:** *The contractor is Cheboygan, Michigan based Ryba Marine Construction Company. With the retaining wall in place, dredge material is being beneficially reused to fill the old commercial slip near Wilkenson Pointe. This reuse of dredged material will transform the site into a wetland, restoring it to an aquatic habitat.*
- **Florida:** *Pinellas County is planning a full nourishment of Pass-a-Grille beach that will be performed in phases. During the first phase, between 5,000 and 10,000 cubic yards of sand from the Grand Canal project was placed between 1st Avenue and 6th Avenue. To fully nourish and restore Pass-a-Grille Beach, the County sought and received authorization from the U.S. Army Corps of Engineers to place an additional 140,000 cubic yards of sand from Pass-a-Grille Inlet between 1st Avenue and 22nd Avenue. This phase is divided into two sections. In the first section, sand will be placed from 1st Avenue to 9th Avenue. For the second section, sand will be placed from 10th Avenue to 22nd Avenue.*
- **South Carolina:** *Here, dredgers are reusing the excavated dredged material from the Charleston Harbor Post 45 Deepening project to restore Crab Bank. Crab Bank is a bird sanctuary located in the Charleston Harbor near the shoreline of the Old Village in Mount Pleasant. Beneficially using material from the deepened channel restored 32 acres of prime nesting grounds, giving shorebirds and seabirds much-needed habitat for increasing their populations this spring and those to follow.*
- **Maryland – Chesapeake Bay:** *A pair of vanishing islands off the coast of Dorchester County, Md., are to be restored using dredged sediment. The U.S. Army Corps of Engineers (USACE) Supplemental FY 2022 Workplan allocates $37.5 million in funding that guarantees construction of the Mid-Chesapeake Bay Island Ecosystem Restoration project. The project will use dredged material to restore island habitat at James and Barren islands and help protect the Dorchester County shoreline from erosion. The project began in September 2022 and the island sites will eventually replace Poplar Island in Talbot County as the state's primary receiving site for bay channel dredged sediment. The larger of the two, James Island, will have 2,072 acres restored, with 55% preserved as wetlands habitat and 45% as upland habitat. At Barren Island, 72 acres will be restored as wetlands and the project will also include the installation of breakwaters to protect island remnants and adjacent seagrass beds.*

Dredging: a key component of the Intermodal Equation

The domestic waterfront, finally sitting at the grownup's table in the U.S. Department of Transportation's intermodal discussion, is poised to both grow exponentially, and take the domestic economy with it, when it does. That's because the highways, trains and airports that span the fruited plain, coast-to-coast, are all but impotent without a secure and streamlined connection to our coastal ports, inland rivers and Great Lakes.

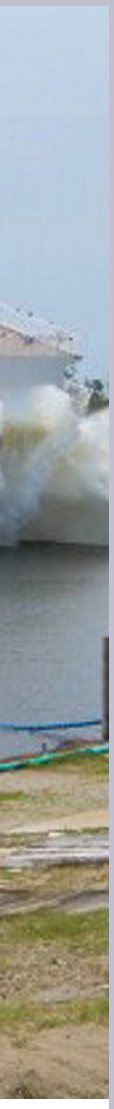
The collective waterfront represents the cleanest, and most efficient way to move cargo and people known to man. But none of that is possible without the dredging industry. Helping to spread the word, and herd the legislative cats, is DCA's Bill Doyle. And, you'd have to dig pretty deep to find a better choice for the job.

ESG

A JOLT FOR THE PASSENGER VESSEL INDUSTRY

The domestic passenger vessel sector answers the call for cleaner and more efficient platforms. It is truly an electric time to be a part of this niche industry.

By Barry Parker



In the shadow of a rapidly changing political landscape, the domestic passenger ferry sector is nevertheless seeing an increasing number of newbuild vessel orders. Older fleet vessels, some approaching financial and operational obsolescence – also environmentally undesirable on a waterfront that more than ever demands cleaner carbon signatures – are going the way of the dinosaur. Making this happen requires a creative, collaborative and determined approach.

A combination of innovative vessel designs and public-sector financing incentives is steering vessel operators towards fleets powered in part (and, in some cases, entirely) by electric power or alternative fuels now becoming available on a commercial scale. In urban areas, propelled by local pressure to pull commuters out of their cars and onto cleaner modes of transport has been a driving force. In many cases, private finance is leveraged with public finance, typically in the form of Federal and State monetary grants. Separately, river and coastal cruising, mainly supported by private money, is also seeing an uptick in activity. Both efforts have this important industry on a true course for future success.

An Electric Voyage: that ship has sailed

The Washington State Ferry System (WSF), the largest in the country (9.7 million passengers and 9 million vehicles in 2023), is in the midst of a major electrification program, hoping to electrify its fleet by 2050 at a considerable cost estimated (as of September 2024) to be around $4 billion. The state's Department of Transportation (WSDOT) declared, "… as the biggest contributor of greenhouse gas emissions among Washington state agencies, WSF burns approximately nineteen million gallons of diesel fuel to support nearly twenty million passengers every year. This innovative electrification program will drastically reduce greenhouse gas emissions and save millions in fuel costs." The ambitious plan involves the conversion of six existing diesel-powered vessels to hybrid-electric power and building 16 new hybrid-electric vessels, as well as deploying shore charging at 16 terminals. As many as 13 conventionally powered vessels will be retired.

In May, 2024, invitations went out to potential bidders on the first tranche (up to five vessels) of newbuilds with capacity for up to 160 automobiles. In September, 2024, prequalification bid packages were received from three yards: Nichols Brothers (on Whidbey Island), Eastern Shipbuilding Group (ESG), and Philly Shipyard. WSDOT expects two new hybrid-electric vessels to enter service in 2028 with an additional three vessels in service by 2030.

ABB, with vast experience in vessel propulsion systems, has been hired to work closely with WSDOT, who advised, "ABB will select and integrate the technology that will power the new vessels, from the engine and batteries to the propellers. They will design a complete propulsion system, oversee the timely delivery of equipment, and offer expertise in equipment installation and commissioning." Additionally, ABB would be involved extensively in training crews on both vessel operation and system maintenance.

Retrofitting of one existing Jumbo Mark II diesel vessel, Wenatchee (212 vehicle capacity) to hybrid power, has been underway since September 2023 at Vigor Shipyard's Harbor Island facility (in Seattle). WSDOT explained, a year into the job, "Major work completed to date on Wenatchee includes removal of two propulsion diesel generators, installation of electric power conversion and distribution equipment, upgrades to obsolete propulsion control equipment, reconfiguration of piping systems, and build-out of two new battery rooms. Ongoing work includes installation of thousands of feet of electric and fiber optic cable. From there, the battery modules will be installed." Two sister boats, Tacoma and Puyallup, are next in line for conversion to hybrid, with work beginning at the Vigor yard after Wenatchee's anticipated return to service in Summer, 2025. Next in line for conversion to hybrid electric will be WSF's Kwa-di-Tabil class vessels (748 passengers/64 vehicles), the CHETZEMOKA, SALISH, and KENNEWICK. Contracting will not begin until after the conversion work on the Jumbo Mark II boats is completed.

Follow the Money:

Federal funding plays an important role in funding both newbuild orders and retrofitting activity. In September 2024, the Federal Transit Administration (FTA, part of the U.S. Department of Transportation) awarded $299.3 million in grants across three programs – the Electric or Low-Emitting Ferry Pilot Program ($49 million), the Passenger Ferry Grant Program ($56.3 million), and the Ferry Service for Rural Communities Program ($194 million). These follow on to the $384 million that had been awarded in the previous year.

The biggest winners in the 2024 FTA funding rounds were

the Alaska Department of Transportation, which will be seeing $177 million of funds for enhancing service on the Alaska Marine Highway, and for the design and construction of a new diesel electric vessel, to replace the 60-year-old MATANUSKA (450 passengers, 83 vehicles), and to add wi-fi service to the fleet. The FTA explained, "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 lifeline."

Electric power also figured in other 2024 awards. Delaware River Bay Authority will be using $20 million to fund a new diesel-hybrid ferry, which will be replacing CAPE HENLOPEN (1981-built / 800 passengers / 100 cars). Separately, in Florida, the Jacksonville Transportation Authority will be getting $15.6 million to buy a new diesel hybrid-electric ferry to serve serving numerous communities on the St. Johns River. A host of terminals will be getting funds to support 'modernization', including the Maine Department of Transportation. In November 2024, Rhode Island-based Senesco Marine launched the CAPT. ALMER DINSMORE, a 154-foot vessel (250 passengers / 23 vehicles) powered by a hybrid diesel/electric system, built for Maine State Ferry Service (MSF) to serve the Rockland / Vinalhaven run.

Out on the left coast, in California, SWITCH Marine received U.S. Coast Guard approvals for its SEA CHANGE, a 75-passenger ferry with electric motor propulsion using 360 kW fuel cells powered by compressed hydrogen (supplemented by lithium-ion battery storage). That vessel will be operated by Blue & Gold Fleet, a contractor for San Francisco Bay Ferry (SFBF) in San Francisco Bay. The vessel, in a project six years in the making, is also the subject of high-level scrutiny in the Golden State. California Governor Gavin Newsom insists, "California is a global leader in the fight against the climate crisis, pioneering new technologies to ramp up clean energy and cut pollution — that's why the zero-emission SEA CHANGE is so exciting."

Switch Maritime (which had been helped early on by a grant from the California Air Resources Board, or CARB, and by support from heavyweights such as oil giant Chevron) recently announced plans for a much larger RoPax vessel (300 passengers, 80 automobile) in conjunction with partners LH2 Shipping and LMG Marin (a Seatrium subsidiary). The vessel, if built, would utilize a DNV-classed liquid hydrogen fuel source design, for a RoPax currently operating in Norway.

Green Marine: Many Routes to the Promised Land

Speaking at the November 2024 Marine Money event in New Orleans, Pace Ralli, CEO of Switch, told conference attendees: "About six years ago, we started looking at hydrogen as a way to get to zero emissions today in maritime." He stresses that the fuel cell technology "has been around for a while," and that Switch "… put together off the shelf equipment in a maritime application that had never been done before." He emphasized the need to explain the technology to numerous regulatory stakeholders (including the U.S. Coast Guard – which ultimately issued the COI) "… so they could get comfortable with it." He added that harbor craft and similar vessels would be a great fit for hydrogen technology.

The SFBF, meanwhile, says that it "…continues to make progress on its Rapid Electric Emission Free (REEF) Ferry Program, having secured more than $117 million to electrify its ferry service. The 2050 Service Vision commits the agency to focus on adding zero-emission vessels to its fleet through new construction and conversion of existing vessels, when feasible."

The Bay area stands to benefit from ferry-related electrification efforts in the Clean Ports Program, mainly aimed at the handling sector, administered within the U.S. Environmental Protection Agency (EPA). For example, the


American Cruise Lines

Victory Cruise Lines

"We now operate three ferries that cross the Mississippi forty times a day- we've been doing this for three and a half years ... in a contract with the Regional Transit Authority."

– Cliffe LaBorde,
Laborde Marine Services

Marine Money

Port of San Francisco was awarded a $55.4 million grant which will go towards these efforts, complemented by state agencies. In Alameda, the operator SFBF was awarded a $12.5 million grant from California State Transportation Agency (CalSTA) to assist in deployment of electric charging stations on its piers; part of a broader effort at ferry electrification. Also in the Bay area, operators Golden Gate Ferry and the Angel Island Tiburon Ferry were also developing designs for electrically powered boats. The financial details of those efforts are yet to be determined.

Across the country, in New York Harbor, a hybrid ferry designed by Elliott Bay Design Group (EBDG) is under construction at Conrad Shipyard for the Governor's Island / downtown Manhattan run. The 1,200-passenger vessel, replacing a 1956-built SAMUEL S COURSEN currently serving the route, will bring students and professionals to the one-time Coast Guard base in New York Harbor. Charging infrastructure on the island (home to the New York Harbor School, the Billion Oyster Project, and many climate-related non-profits) will be funded by a $7.5 million grant from the Federal Transit Administration.

Also in New York Harbor, the Staten Island Ferry has been looking at retrofitting electric power capability to a trio of boats. In October 2024, the New York City Department of Transportation (NYC DOT, operator of the service linking Staten Island to downtown Manhattan) announced that it would be testing the use of renewable diesel on JOHN J MARCHI (built 2005), with NYC DOT planning to transition from ultra-low sulfur diesel (ULSD) fuel to renewable diesel (with significantly less CO2 emission than the ULSD) across its fleet in the coming years.

Old School: Getting the Job done, too ...

In case you were wondering, conventional powered boats have not disappeared. Earlier this year, Steiner Shipyard from Bayou La Batre, Alabama, delivered CHARLES NORMAN SHAY, (149 passengers, 7 automobiles), powered by two 600-hp Caterpillar C18 engines to Maine State Ferries for its Rockland / Matinicus Island route. ESG is building LONG ISLAND, (1,000 passengers and 124 cars)

EBDG

ESG

with a pair of EPA Tier 4 Electro-Motive Diesel (EMD) 12 ME 23B engines for Bridgeport & Port Jefferson Steamboat Company (a subsidiary of McAllister Towing), with delivery anticipated in early 2025. Buckley McAllister, President of the ferry company, stressed its cross-sound routing as being vital in reducing pollution by enabling drivers to avoid congested stretches of I-95 and I-495.

Interplay with the commercial sector is also happening. In New Orleans, Gulf of Mexico crewboat operator LaBorde Marine Services subsidiary LabMar Ferry Service now operates small ferries linking Canal Steet with Algiers Point across the Mississippi River. At the Marine Money event, Co-owner Cliffe LaBorde told listeners, "We now operate three ferries that cross the Mississippi forty times a day- we've been doing this for three and a half years … in a contract with the Regional Transit Authority." The service deploys aluminum catamarans built at Metal Shark Boats with twin 715-hp Caterpillar C18 Tier 3 diesels supplying power.

Traveling in Style: private money buoys the luxury sector …

While much of U.S. passenger vessel orders are tied to public transportation, there is also a private side of the marketplace – complete with private finance. One such niche involves the transportation of affluent passengers to private communities. ESG's Allenton yard has begun construction on FALCON, a 150 passenger/ 30 automobile ferry with yacht-style finishes from a design by EBDG, for the upper end Fisher Island community in Miami Beach, Florida. Access to this elite private community is only by boat.

The river and coastwise cruising sector (where battery power is not a viable option) has been a growing niche in recent years. For the North American river and coastwise leisure cruise market, smaller is better. But, the entry of new players in this market – particularly Viking – has pushed the previously bare bones river markets to up their customer service and amenities. That's a good thing.

At the November 2024 Marine Money Forum in New York, John Waggoner, the CEO of the re-invigorated Victory Cruise Lines – a legacy brand, now revamped and beginning operations in early 2025 in the Great Lakes – said, "We find the sweet spot, both financially and operationally, to be around 200 – 250 passengers."

Also on the Marine Money panel, Peter Shaerf, deal-maker from AMA Capital, pointed to the importance of smaller vessels being able to visit smaller ports. "A lot of itinerary opportunity is with smaller ships," he said. Waggoner had previous involvement building up American Queen Voyages ("AQV", later- a subsidiary of Hornblower). AQV was, in fact, the seller, at an April 2024 auction, of the two ~200 passenger vessels, VICTORY I and VICTORY II, to be operated by Waggoner's new company – Victory Cruise Lines, redeploying a brand name that had been absorbed into AQV in late 2021. The two vessels, following their April 2024 acquisition, are being refitted and refurbished, and are set to debut on the Great Lakes in Spring 2025.

Guilford, CT-based American Cruise Lines (ACL), with six vessels already on order from its Chesapeake Shipbuilding yard, announced an order for an additional four ships. The rollout began in November, with the 100-passenger "Coastal Cat" AMERICAN LEGEND entering service, with as many as nine additional vessels to be delivered over the next three years. The first in the series (initially dubbed "Project Blue"), AMERICAN EAGLE and AMERICAN GLORY, were delivered in 2023.

The leisure passenger sector is gaining in importance, if the Marine Money agenda is any guide. The November 2024 event in New Orleans, normally devoted entirely to Jones Act commercial activity, included passenger cruise finance, for the first time in two decades of hosting this late-Autumn forum.

Full speed Ahead: the domestic passenger vessel business

It really doesn't matter which niche sector of this important domestic vessel business you look at. All are busy, for different reasons, with different funding sources and in myriad locations. It could be argued that the considerable federal money being thrown around will, eventually, yield exponential dividends for society; in terms of reduced health problems through a greener footprint, and reduction of highway wear-and-tear – and traffic – as more vehicles are removed from the roads. A solid return for taxpayers.

On the private, luxury side of the equation, demand for leisure travel and transport services where public money isn't forthcoming, shows little sign of abatement. No matter where you look – and how you look at it – the waterfront has electrified [!]

Safety & Pollution Control:

Bergan Marine Systems' BargeWatch provides a heightened sense of safety, all-but-certain pollution control, and peace-of-mind for tank barge operators everywhere.

An oil spill. It is your worst nightmare on any tank vessel. And it doesn't matter if you are the owner, charterer, mate on watch or the Captain. Everyone gets blamed and the cleanup and fines can overwhelm you. It doesn't have to be that way. That's because an ounce of prevention is worth a pound of cure. And, preventing tank spills is what Bergan Marine Systems' ***BargeWatch*** is all about.

- ***What is BargeWatch?***

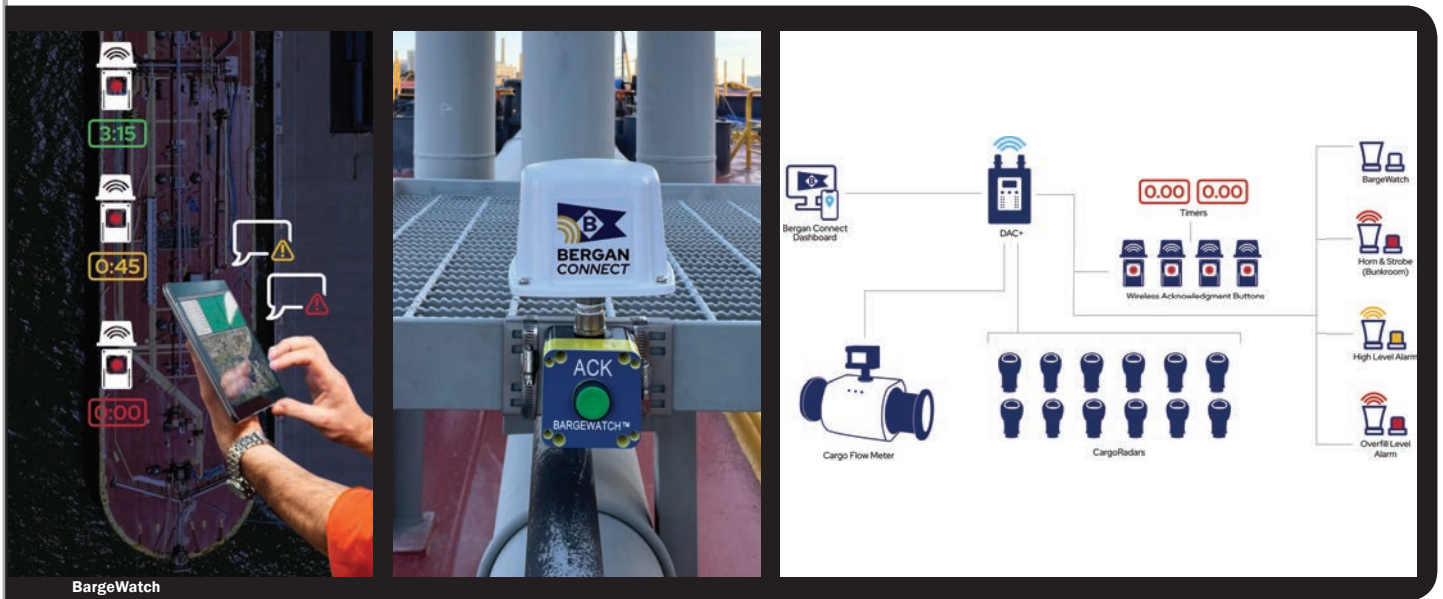
When handling liquid cargo, all personnel must be alert and aware to mitigate risk during loading and discharge. Being distracted, even for a moment, can lead to a catastrophe that endangers the crew, the environment, and nearby vessels. Maintaining alertness and constant monitoring of the vessel is essential to ensuring the safety of the personnel and the surrounding environment. BargeWatch is a comprehensive system that creates a safer environment during the loading and discharge of your barge by increasing communication with shore and deck personnel.

- ***System Components***

BargeWatch uses wireless acknowledgment buttons, timers, and Bergan Connect alongside your existing alarm and tank level system (even if it's from our competitors). If the barge goes a set amount of time without being monitored, alarms sound and all personnel are notified, ensuring no overfill goes unnoticed. A central cabinet coordinates components and sends information to Bergan Connect. Data is recorded and stored in your Bergan Connect dashboard, where personnel can monitor and track operations remotely.

- ***Connecting You to Your Vessel***

Bergan Connect not only allows you to monitor your vessel remotely, it provides you with the tools to analyze your vessel's data and enhance your operations. Through collaborations with technology partners, Bergan Marine Systems provides a range of data and analytical tools that turn your data from information into actionable insights.



BargeWatch

Lithium-Ion Batteries:

New Power Sources mean New Safety Challenges

In the headlong rush to reach the Promised Land of 'zero carbon' signatures, Lithium-ion batteries are becoming increasingly popular within the marine industry. At the same time, the new technologies present their own unique challenges. DENIOS, long a player in the design and manufacture of storage containers for hazardous materials, now offers a range of solutions for safely handing, storing, charging, and transporting Lithium-Ion batteries.

Lithium-ion batteries are popular for their power density, but they can be extremely dangerous if they overheat or are damaged. This can cause thermal runaway, or the overheating of a single cell which triggers a chain reaction that also burns neighboring cells. In addition to the heat generated from a lithium-ion battery fire, there are toxic gases created, causing individual cells to explode. Solutions to these issues come in many forms, but it all starts with education:

- ***Batteries 101: DENIOS Posters***

Lithium-ion batteries can be dangerous without the users even realizing there is a potential problem. DENIOS-US recently updated their full-color poster that helps users to recognize whether lithium-ion batteries are defective, and then safely handle them. This informative poster alerts users to common issues and walks them through visual checks, olfactory tests, in-device checks, and checks when charging to identify problems. The poster details an action plan to safely store the problematic batteries until professional collection can be arranged. Each poster includes space for users to insert emergency contact information so that it is readily available when needed most.

- ***Lithium Ion Stations***

Designed specifically for storing lithium-ion batteries, Lithium-ion Stations are ideal for storing new, questionable, damaged, defective, or End-of-Life lithium-ion batteries typically found in small handheld devices. Available in two standard sizes, they allow the storing and transportation of batteries from 1 KG to 10KG up to 100W, typically used for material handling equipment, and other on-board equipment. They feature two hours of fire resistance to protect against thermal runaway, deep discharge, mechanical deformation, or chemical reaction. Each unit includes thermo-dis-

All images courtesy DENIOS

sipative media (class D fire), and prominent visual identification to alert emergency personnel of contents and hazards. They follow guidelines within NFPA 704, IFC 608, FM 5-55 and applicable EPA regulations. DENIOS Lithium-Ion Battery Stations are ideal for the vessels and ports using them.

- ***Ion-Charge 90 Cases***

BatterySafe cases, designed specifically to transport lithium-ion batteries in accord with international regulations, feature cushions filled with Pyrobubbles – an extinguishing agent which provides protection against thermal runaway, and exothermic reactions. Reusable, easy to use, they have an operating temperature range from --4°F to 176°F, and a storage temperature range from 60°F - 86°F. Compliant with international regulations for transport and recycling for undamaged and non-defective, or End of Life (ELO) lithium-ion batteries, BatterySafe cases are available in several sizes, and offer peace of mind, knowing that the lithium-ion batteries are stored safely and compliantly.

- ***Firefighting blankets***

Lithium-ion firefighting blankets are specifically designed for the high temperatures generated from EV battery fires, contain the flames and reduce the risk of the fire spreading and associated collateral damage. Manufactured of high temperature fabric with a mineral coating on both sides, double seam overlap with steel thread processing allows these blankets to withstand temps to 2,372°F (1,300°C). Their open-pored fabric allows the use of fire extinguishers and sprinkler systems to create a cooling effect, while limited gas permeability prevents the cover from ballooning. Reusable fire blankets are available in three sizes, each with their own storage container. Four loops at the reinforced corners allow the blankets to be quickly and easily deployed. Lithium-Ion Fire Blankets are ideal for first responders, EV fleets, e-charging stations, ferries, and wherever electric transports are charged, used, stored, or serviced. Compliant with EC safety data sheet 91/115/EEC, DIN EN 13501-1, class A1, non-combustible, and electrostatic certificate according to DIN 54345-1, non-conductive, Lithium-ion fire blankets contain the fire until emergency responders arrive.

- ***Lithium-Ion Battery Charging and Storage Cabinets***

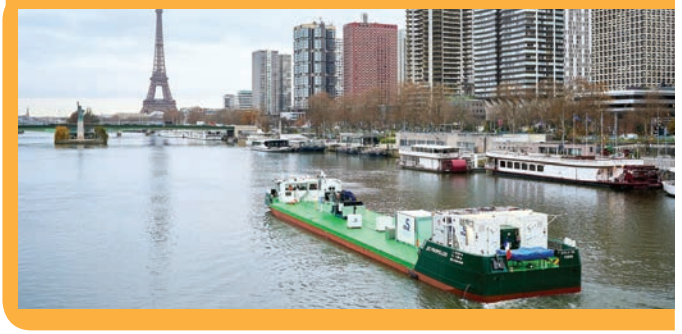
Their very high energy density can lead Lithium-ion batteries to spontaneously combust, become unstable, and can explode if heated. Charging lithium-ion batteries unattended overnight is a common practice. A defective battery, charger, or connection cable can generate heat and lead to a fire. Many of these issues are not apparent upon visual inspection. DENIOS has introduced its new Ion-Charge 90 storage containers designed specifically for lithium-ion battery charging and storage. With 90 minutes of fire resistance from outside to inside (type 90 / type tested in accordance with EN 14470-1) and for more than 90 minutes fire resistance for fires from inside to outside, these purpose-built containers protect against fire hazards due to thermal runaway, deep discharge, mechanical deformation, or chemical reaction. The cabinets are equipped with a transport base to ensure fast transportation. Lockable doors with a permanent self-closing function keep the contents safe from unauthorized personnel. Sockets for connecting chargers are included as are perforated shelves which help to dissipate heat build-up during the charging process. A collection sump located at the bottom of the cabinet is designed to catch any leakage which may occur from burning batteries.

Vessels

Gladding-Hearn Delivers First Crew Transfer Vessel

Gladding-Hearn Shipbuilding, Duclos Corporation, has delivered its first crew transfer vessel (CTV) to Patriot Offshore Maritime Services. This capable vessel will operate year-round, transporting 24 offshore workers and equipment to support the construction and O&M phases of USEC offshore wind projects. The resiliently-mounted superstructure is located aft of midship with port and starboard side decks and working/cargo decks fore and aft. The large foredeck is set up to carry two 20 foot ISO containers and to transfer the offshore workers over the bow. To facilitate wind-turbine landings, the bow is outfitted with a resiliently-mounted RG Seasight fendering system. On the bow is a 14.3 t-m, hydraulic knuckle boom crane with an 8.1-meter reach. The wheelhouse, with windows on all sides for nearly 360-degree visibility, is located on the second deck and accessible by interior stairs and an aft exterior ladder. It includes three shock-mitigating helm seats.

Pioneering Hydrogen-Powered River Vessel in France



The Sogestran Group has launched the ZULU 06, France's first hydrogen-powered river vessel, on the Seine in Paris. This first-of-its-kind hydrogen propulsion system in the French market represents a step forward in cargo transport at European waterways, demonstrating the potential for clean energy to revolutionize logistics. The ZULU 06 is developed through the EU-funded FLAGSHIPS project, which has spent six years pushing the boundaries of zero-emission waterborne transport. Stretching 55 meters in length, with a cargo capacity of 400 tons, the ZULU 06 is a purpose-built solution. The vessel, designed by LMG Marin, has a power generation system supplied by ABB Marine & Ports and two 200 kW hydrogen fuel cells delivered by Ballard. 300 kg of compressed hydrogen enables seven days of operational autonomy; an efficient and eco-friendly distribution in urban settings.

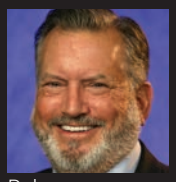
AAM to Build 150-Passenger Battery-Electric REEF Vessels

All American Marine recently announced a partnership with San Francisco Bay Ferry to build their 150-passenger battery-electric vessels. The project is intended to advance sustainable passenger transport in the San Francisco Bay Area while showcasing innovative maritime engineering. The 100' x 26' aluminum vessels will feature a state-of-the-art battery-electric propulsion system designed to provide efficient, emission-free operations. Designed to operate at speeds of 24 knots, they will offer rapid, quiet, and environmentally conscious ferry services.

A-O-S takes delivery of G-Class CTV

M/V Guarder is a hybrid-ready Crew Transfer Vessel (CTV) and the third G-Class vessel delivery taken by American Offshore Services (A-O-S) in 2024. The vessel is designed to transfer technicians and equipment to the expanding offshore wind industry, a service crucial for constructing and maintaining wind energy infrastructure. The G-Class series is built by Americans for the U.S. market. Designed and developed in partnership with Northern Offshore Services (N-O-S), the vessel is designed with a future-proof platform, meaning it is fully prepared to convert to hybrid. With the capacity to accommodate 24 passengers and a strong focus on comfort, Guarder stands out as one of the largest and most capable CTVs in the United States. This 30-meter, Jones Act-compliant catamaran is purpose-built to meet the demands of the offshore wind industry.

People & Companies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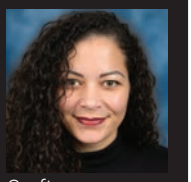
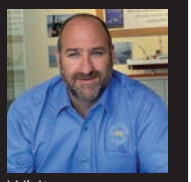
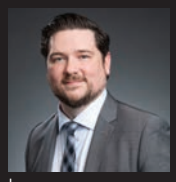
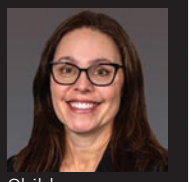
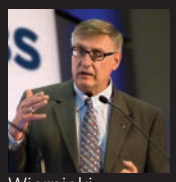

Craft


Baluyot


White


Lyman


Childs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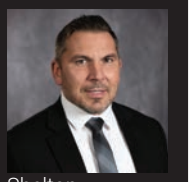
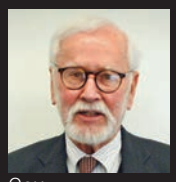
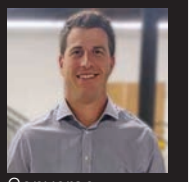

Shelton


Cox


Converse


Guyotte

Rahn elected SeaPort Manatee Chairman

Manatee County Commissioner Mike Rahn has been elected chairman of the Manatee County Port Authority.

MPT Welcomes Dr. Crystal Allen Craft as VP, Academic Affairs

MPT announced the addition of Dr. Crystal Allen Craft as Vice Principal of Academic Affairs.

Teledyne Oceanscience Promotes Baluyot

Teledyne Oceanscience announced the promotion of Jason Baluyot (JB) to the position of Product Line Manager - Oceanscience.

MISNA Announces Leadership Transition

The Maritime Information Services of North America (MISNA) announced the appointment of Stephen Lyman, Executive Director of the Maritime Association of the Port of NY & NJ, as its new President. Lyman oversees the Marine Exchange activities in the Port of NY & NJ. Lyman will succeed Captain Steve White, Executive Director of the Marine Exchange of Alaska, whose tenure as President concludes at the end of the year.

HII Announces New VP Quality & Engineering

Jennifer Childs has been named vice president of quality and engineering of HII's Ingalls Shipbuilding division.

ABS CEO Speaks at the White House

Speaking to the U.S. transportation industry and Government leaders, ABS Chairman and CEO Christopher J. Wiernicki recently spoke at the Sustainable Freight Workshop at the White House. Wiernicki emphasized the advantages of freight shipping and how it worked best by linking with other transportation sectors.

Shelton Named VP at Canaveral Port Authority

Steven Shelton has been named Vice President – Facilities Optimization at the Canaveral Port Authority.

Farewell Tributes for TMG founder Capt. John Cox III

Tributes have been paid to The Maritime Group (International) (TMG) founder Captain John M Cox III following his death at the age of 93. Captain Cox died peacefully in Seattle on November 21 after a short illness. He recently retired as chairman and president of The Maritime Group (International).

Greensea IQ Welcomes Converse as Director of Business Development

Greensea IQ announced the appointment of Brooks Converse as Director of Business Development.

NUWC Newport Analyst earns Civilian Service Award

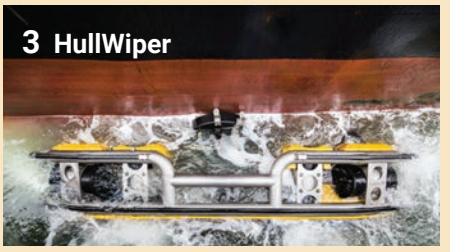
Martin J. Guyotte, a recently retired senior staff analyst from the Naval Undersea Warfare Center (NUWC) Division Newport Undersea Warfare Mission Engineering and Analysis Department, was presented a Department of the Navy Meritorious Civilian Service Award during a retirement ceremony in November.

Products

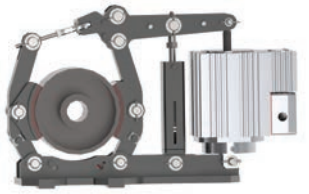
1 In-Mar Solutions

2 VETUS Maxwell

3 HullWiper



4 Force Control



1. In-Mar Solutions: Solar Solve offers marine vessels high-quality transparent sunscreens and blackout roller blinds.

Designed to provide maximum protection against harmful UV radiation and glare. Both our transparent sunscreens and blackout roller blinds are designed to withstand harsh marine environments and have been rigorously tested for durability and performance. They are easy to clean and require minimal maintenance, ensuring long-lasting protection for your vessel's interiors. Common names for the products include marine sunshades, boat window shades and blinds for ships.

www.inmarsystems.com

2. HPW Series Waterlocks from VETUS

The heavy-duty HPW series of waterlocks from VETUS can handle extreme conditions above 500 °F. A cost-effective option, these waterlocks feature rotating bodies and hose connections, a high-capacity water lift design, and excellent sound attenuation.

https://vetus.com/usa/exhaust-systems

3. Sustainable Hull Cleaning with HullWiper, Unidive Subsea

HullWiper specializes in the use of ROV's, delivering efficient, non-abrasive cleaning services that remove biofouling and help ship owners and operators comply with international environmental standards. The ROV is designed to prevent the spread of invasive marine species, improve vessel operational efficiency and reduce fuel consumption, offering a safer, greener alternative to traditional hull cleaning methods.

4. Force Control's BABAA-Compliant HYDRASTOP Thruster Brakes

Force Control Industries has introduced a of Build America, Buy America Act (BABAA) compliant thruster brakes under the brand name: HYDRASTOP. These spring-set, electro-hydraulic thruster-released brakes are available for 6-13" drums only, with plans to develop larger drums and a complete disc brake series. Thruster brakes statically hold and/or dynamically stop a load. Ideal for industrial applications like cranes, movable bridges, conveyors, stadium covers, mining drag lines, and marine deck equipment, they are designed to AIST Technical Report 11, they are available in torque ratings from 35-2,140 ft/lbs.

5 Furuno

5. Furuno's PS100 Touchscreen Navigation Planning

Furuno's PS100 Planning Station is a state-of-the-art marine chart planning table designed to meet the demands of the marine environment. The PS100 delivers a comprehensive suite of navigation functions on large, high-resolution 32", 43", or 55" touchscreen displays. The PS100/HATPSCOMP, a hardware and software solution, includes a purpose-built compact PC with the route-planning program pre-installed. This dedicated planning station computer and video processor ensures blazing fast, efficient rendering of all functions.

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01 | January 2025
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Passenger Vessels

- Dredging Report
- Training & Education
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E-Magazine Edition

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Maritime Workforce Development

E-Magazine Edition

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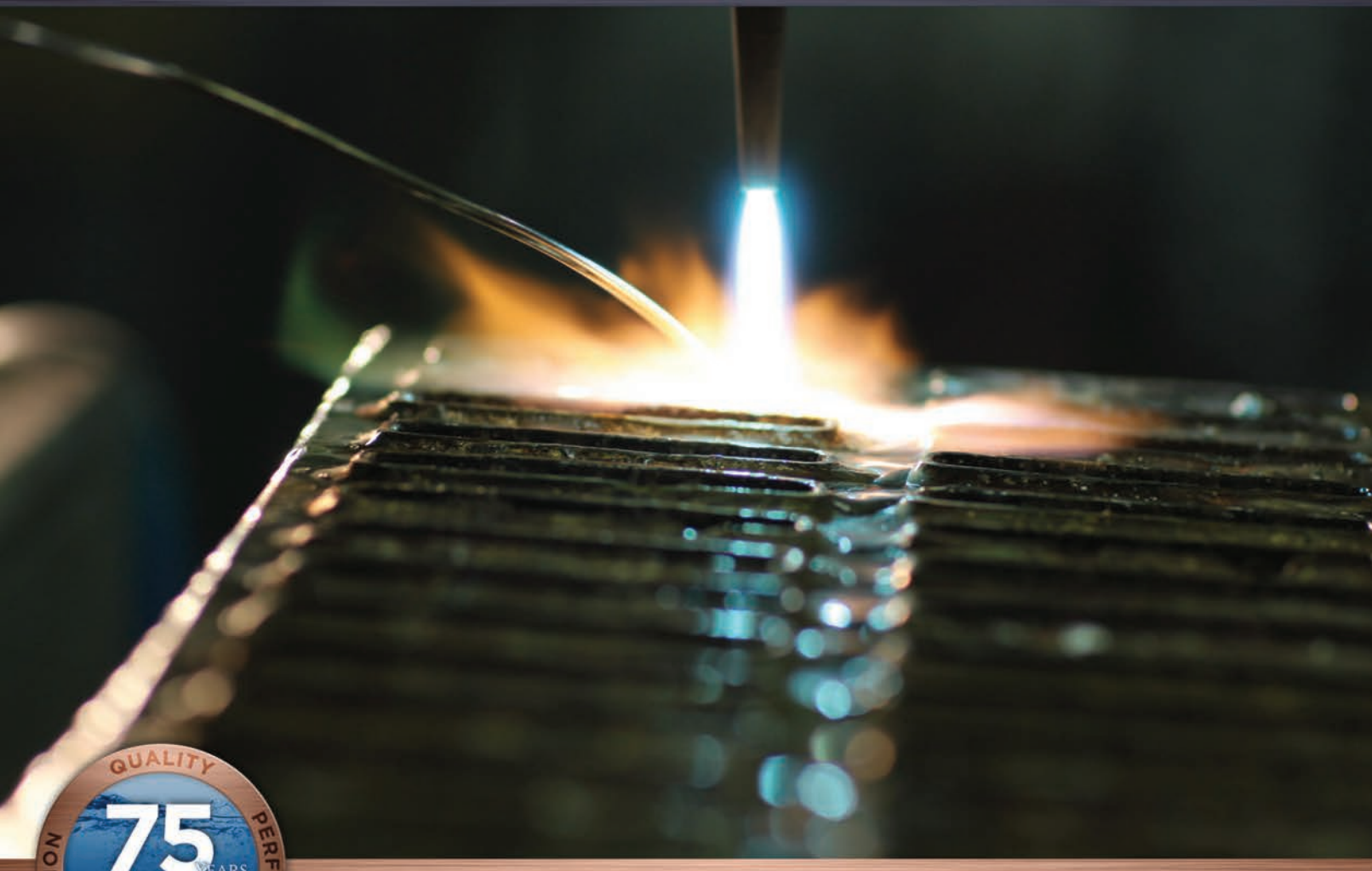

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