Bundle Buy a Welcome Investment, AWIBC Says

A CH-53E Super Stallion assigned to Marine Medium Tiltrotor Squadron (VMM) 163 (Reinforced), 11th Marine Expeditionary Unit, hovers over the flight deck of San Antonio-class amphibious transport dock ship USS Portland (LPD 27), during flight operations in the Pacific Ocean, April 10, 2026. CREDIT: U.S. Marine Corps | Lance Cpl. Luke Rodriguez

The Amphibious Warfare Industrial Base Coalition (AWIBC) is a trade coalition of suppliers of systems, components, parts, and services toward the construction and sustainment of the U.S. Navy's amphibious warfare ships. Recently, Paul Roden, chair of the AWIBC, responded to questions below from Senior Editor Richard R. Burgess.

Has AWIBC membership increased or decreased over the last year?

RODEN: The Amphibious Warship Industrial Base Coalition is a robust and growing organization. We continue to see strong interest from suppliers who recognize the importance of a unified voice in advocating for the stability of our nation's defense industrial base that supports the men and women of our Navy and Marine Corps.

Is the amphibious warship industrial base in better or worse shape than last year?

RODEN: We are incredibly grateful for recent funding in support of amphibious warships, including the multi-ship buy for LPD 33, LPD 34 and LPD 35 as well as LHA 10. However, our most recent survey data shows that less than 10% of our suppliers are operating at full capacity due to inconsistent demand signals. As this new funding is placed on contract, it will help rejuvenate production lines and inject much-needed stability into the industrial base.

With all of the efforts to shore up the shipbuilding workforce, how healthy is the workforce of the suppliers?

RODEN: The most critical factor in the health of the industrial base workforce is stable and predictable funding. Our survey data shows a direct link between inconsistent demand and the challenge of maintaining a skilled workforce. With a clear and consistent demand signal from the government, we can unlock the full capacity of a domestic industrial base that is 100% committed to delivering the ships our warfighters need.

How did the well-funded reconciliation law affect the amphibious warfare ship suppliers?

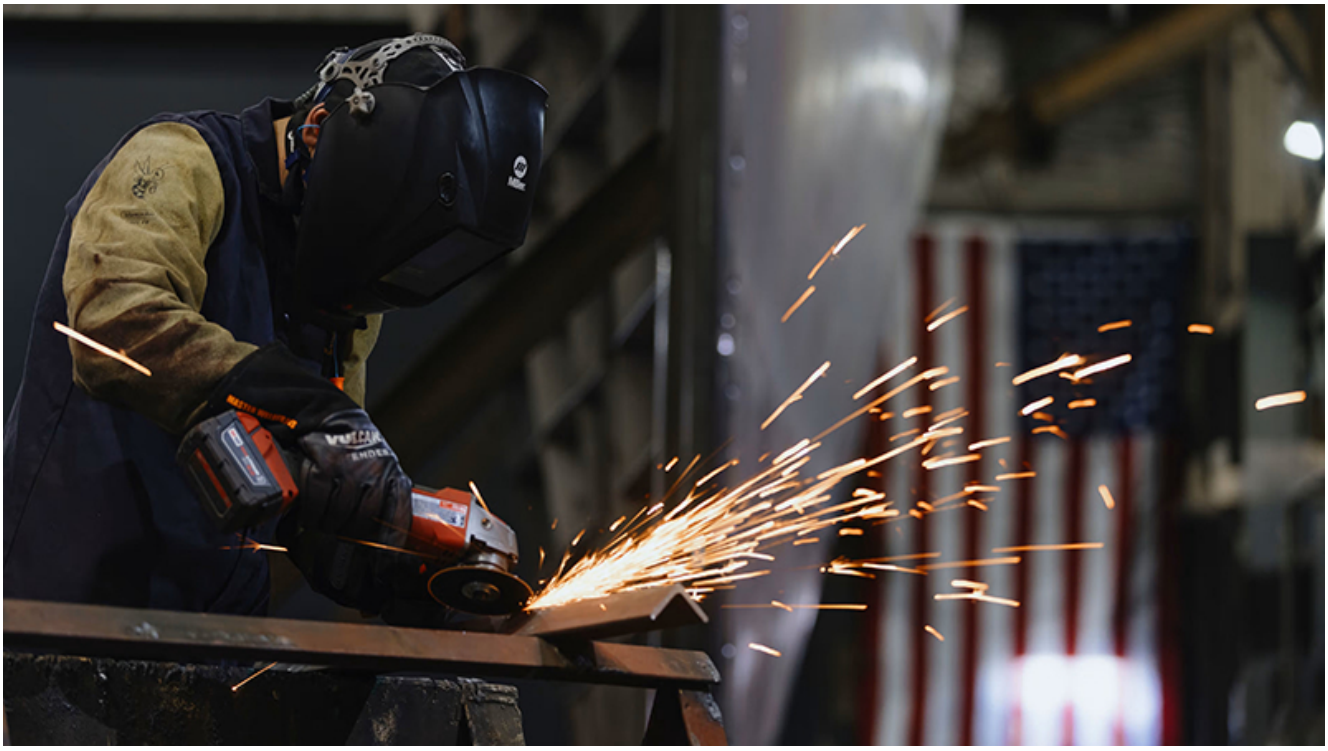
RODEN: The funding for the bundle buy was a significant and welcome investment. That funding is helping to rejuvenate idle production lines and inject much-needed stability across the amphibious warship industrial base. More than 50% of suppliers agree that the multi-ship buy has added predictability,

helping plan for on-time deliveries. It was a crucial investment for the suppliers in our coalition and we are grateful for that support.

Are you seeing any improvements in amphibious warfare ship construction schedule stability?

RODEN: While the recent funding was a significant and welcome commitment, true schedule stability can only come from consistent and predictable funding through multi-year appropriations. To the extent that many of our suppliers support new construction across both amphibious ships and other critical naval assets, stable funding benefits the entire shipbuilding industrial base committed to delivering America’s maritime dominance.

New U.S.-Korean ASV on Track to Be On Water This Fall



An image of a Korean shipbuilder Anduril released upon announcing its teaming with HD Hyundai. Credit: Anduril Industries.

By Vicky Uhland, *Seapower* Correspondent

In October, Anduril Industries (Booth 130) is set to debut its first ship in a new class of autonomous surface vessels in collaboration with HD Hyundai and Edison Chouest Offshore.

Anduril's 60-meter, 500-plus-ton ASV is aimed the U.S. Navy's medium unmanned surface vessel (MUSV) program, which focuses on building a distributed, autonomous surface fleet that can nimbly coordinate operations in order to deter threats.

MUSV is in response to the growing expense of using manned platforms to defend commercial shipping and maintain sea control, said Cory Emmons, Anduril's general manager of surface dominance.

Emmons said because of lead-ship building difficulties from legacy production models in the U.S., Anduril chose to partner with Hyundai to cut production time. Anduril is also partnering with Edison Chouest Offshore for U.S. ship production, while Hyundai will mostly build ships for

Anduril’s global clients.

“The U.S. Navy has been clear: Scale is what matters. A single autonomous ship doesn’t move the needle,” according to an Anduril blog. “Commercial shipbuilders are essential to this effort because they already operate at scale, producing large numbers of reliable vessels efficiently, on time and on a disciplined budget.”

Production on Anduril’s first ASV began in November, and Anduril has been conducting daily at-sea testing of vehicle autonomy, mission autonomy and container payloads on a surrogate vessel using the company’s high-assurance software. “We’re analyzing all potential hazards on the [sea] surface,” Emmons said.

Along with potential naval applications, Emmons said Anduril’s ASV fleet could be used commercially for sea bed and continental shelf exploration for oil and gas companies. “It’s an emerging market,” he said.

Changing Polar Region Presents New Challenges and Opportunities for Navy, Coast Guard, Industry

Coast Guard Cutter Storis (WAGB-21) transits past West Seattle on its way to its temporary homeport at Coast Guard Base Seattle, Oct. 3, 2025, after its August 2025 commissioning in Alaska. The cutter is the Coast Guard's first polar icebreaker acquired in over 25 years, but more icebreakers are on the way. Credit: U.S. Coast Guard | Petty Officer 3rd Class Daylan M. Garlic-Jackson

By Erika Fitzpatrick, Seapower Correspondent

The U.S. military and allied nations are ramping up their strategic offensive and defensive capabilities in the Arctic to confront an expanding presence from adversaries such as China, Russia, Iran and North Korea, said Vice Admiral Doug Perry, U.S. Navy Commander of Joint Force Command Norfolk, at Sea-Air-Space on Monday, April 20.

"We have to acknowledge that is not a situation we want to allow to continue, to the detriment of free nations and certainly [of] the United States," Perry said during a polar issues panel moderated by Dr. Abbie Tingstad, professor of Arctic Research at the Center for Arctic Study and Policy at

the U.S. Coast Guard Academy.

The Arctic polar region is primarily ocean, surrounded on its edges by the eight member states of the Arctic Council: Canada; the Kingdom of Denmark, which includes Greenland and the Faroe Islands; Finland; Iceland; Norway; the Russian Federation; Sweden; and the United States, where Alaska includes a 1.5-million-square-mile exclusive economic zone in its surrounding waters.

Council decisions are achieved in agreement with six "permanent participants" that represent Aleut, Arctic Athabaskan, Gwich'in, Inuit, Saami, and Russian Indigenous people, who have inhabited the Arctic for millennia and are about 10% of the 4 million Arctic residents.

The Arctic in the last four decades has warmed three times faster than the worldwide average, according to a 2024 Arctic Council report, by its Arctic Monitoring and Assessment Programme. The has led to new concerns, collaborations, and potential conflicts among Arctic nations, all touched on by the Sea-Air-Space panelists.

For instance, Russia is revitalizing assets throughout the high north, including air bases; granting oil and gas rights to China; and refilling liquid natural gas tankers that are now built for the Arctic's northern sea route. Although some of the Russian Federation's long-range aviation is focused elsewhere, Perry said its northern fleet is "large unimpacted by the Ukrainian fight."

A More Arctic NATO

Those are emerging threats, Perry said, but on the plus side: "Also what has changed in the last couple years is that Finland and Sweden joined NATO."

With the exception of Russia, Perry works directly with these and other Arctic nations in his other role as the director

of the U.S. 2nd Fleet Combined Joint Operations from the Sea Centre of Excellence (CJOS COE), established in May 2006. Representing 13 nations, CJOS is the only such center based in the United States and one of 27 NATO-accredited COEs worldwide to collaborate on maritime-based joint operations.

Perry said Arctic allies and partners in his geography under NATO are shoring up defenses against new Russian capabilities; increasing domain awareness and readiness through synchronized, scheduled exercises; and providing deterrence through an enhanced presence in the region.

Cooperation is key because it's an "ugly endeavor" to operate ships, icebreakers and submarines in the harsh Arctic climate "all the time," Perry said, adding that it's not feasible to operate foot patrols across Greenland and Canada. "It's not achievable and it would be really expensive."

But allies must be a regular show of force in the region. "That's where the missiles are going to fly – they're going to fly over the polar region," Perry said, "whether they're coming from North Korea or China or Russia, and so we need to understand how to defend against that."

Icebreakers on the Way

And "the icebreakers are coming," said an excited Vice Admiral Nathan Moore, deputy commandant of Operations at the U.S. Coast Guard. "For us in the Coast Guard, that is something that we have not been able to say – well, ever." Two of three planned heavy icebreakers, being built at "world record speed," should be operational in fiscal 2028.

This bigger fleet – including 11 Arctic Security Cutters – expands USCG patrol capabilities amid a 37% rise in U.S. Arctic maritime traffic, including of foreign military vessels traversing the area. "There's a lot of icebreaker capacity coming," Moore said. He added that allies have

broadened their focus beyond search and rescue and pollution response to safety and sovereignty.

USCG still has to designate Arctic-trained personnel to command the new vessels and figure out how to supply, maintain and sustain the fleet in the remote region. For instance, Dutch Harbor, on Alaska's Amaknak Island in Unalaska, is seven or eight days away by sea from the deep waters of the high north.

That's why it's essential to maintain relationships with allies, who operate deep water ports and bases the United States needs to use, Perry said.

Although there are challenges, the United States and partner nations still have immense knowledge that positions them well to compete in the region, said retired Navy Vice Admiral Bill Merz, a former submarine commander who is now senior vice president of Aerospace and Defense Technologies at Oceaneering.

"It's a fascinating place to operate," Merz said of the Arctic, teaming with life and spectacular visuals above and below the ice. But the operational environment is ever-changing and dangerous, he said, describing a cacophonous riot of crashing and shifting floes of varying thicknesses in areas that are almost impossible to map.

Leverage the Magic

Allied Arctic nations can partner with industry to gain even more intelligence of the region. The U.S. oil and gas industry, he said, has unparalleled experience operating on the ocean floor for long stretches, including with uncrewed vehicles that can function without human intervention for months. "So, there's a lot of magic there," he said.

He conceded that China's Navy is disciplined and will be a regional player eventually. "But I tell you, they got a lot to

learn," Merz said. "There's a difference between showing up at the Arctic and living and sustaining yourself in an environment where … communications are horrible, navigation's tough" and there's very little, if any, infrastructure.

"That understanding is a tremendous advantage that we have and that we need to take advantage of," he said. "And as we bring industries and the navies together, that's a powerful partnership."

Maritime Industrial Base in Crisis, New CMS Report Finds

By Matt Reisener

America's maritime

industrial base (MIB) is in crisis. Decades of deindustrialization, inconsiste

nt
po
li
cy
su
pp
or
t,
la
bo
r
at
tr
it
io
n
an
d
in
cr
ea
si
ng
ly
gl
ob
al
iz
ed
su
pp
ly
ch
ai
ns
ha
ve

le
ft
th
e
Un
it
ed
St
at
es
st
ru
gg
li
ng
to
pr
od
uc
e
sh
ip
s
on
ti
me
an
d
on
bu
dg
et
,
al
l
wh
il

e
st
ra
te
gi
c
co
mp
et
it
io
n
at
se
a
in
te
ns
if
ie
s.
A
me
ri
ca
’s
M
IB
i
s
un
ab
le
to
su
pp
or

t
th
e
ne
ed
s
of
it
s
Na
vy
,
co
mp
et
e
wi
th
ri
si
ng
na
va
l
an
d
sh
ip
bu
il
di
ng
po
we
rs
su
ch

as
Ch
in
a,
or
re
li
ab
ly
co
nt
ri
bu
te
to
th
e
pr
ot
ec
ti
on
of
Am
er
ic
a’
s
mo
st
vi
ta
l
na
ti
on
al

interests in the decades to come.

However, many of the United States' maritime allies are experiencing similar challenges to their domestic shipbuilding industries and have adopted creative approaches to solving them. The United States must utilize the experience, knowledge and resources of its allies to develop the best strategy possible for building a stronger, more resilient MIB.

Accordingly, the Center for Maritime Strategy conducted a study of America's allied maritime industrial base to examine how five American allies (South Korea, Italy, Canada, Sweden and the United Kingdom) build commercial and naval ships, how they support their shipbuilding industries and what lessons America can learn from its allies about how to revitalize its MIB.

Each country faces similar shipbuilding challenges to America but has taken a different approach to addressing them. Although South Korea and Italy have successfully maintained strong commercial and naval

shipbuilding sectors, Canada and the United Kingdom have largely allowed their commercial sectors to atrophy while primarily focusing on warship construction, while Sweden has seen both sectors significantly diminish and maintains only marginal naval shipbuilding capabilities. Many of America's allies have successfully maintained strong MIBs by streamlining the process for designing and building ships. Among the countries studied, the most successful nations at sustaining strong commercial and naval shipbuilding industries have found ways to minimize late-stage design changes, build a greater variety of ships based on a common design and establish a shipbuilding culture which emphasizes delivering ships on time and under budget.

Similarly, the study illustrates how government investments in their MIBs can set their shipbuilding industries up for success, including by training the next generation of skilled tradespeople and supporting greater supply chain resilience. America's most successful shipbuilding allies have also heavily invested in integrating new technology into their shipyards, fully embracing automation, digitization and artificial intelligence to support their work – often with strong government support for these efforts.

America can build a stronger, more capable MIB by partnering with and learning from its allies. Accordingly, this study provides recommendations for how America can apply these insights to support its MIB while embracing greater multilateral maritime cooperation.

CMS and speakers from the allied nations in the report will host a panel discussion on the new report on Tuesday, April 21 from 3:30-4:30 p.m. in the Cherry Blossom Ballroom.

Recommendations

Reforming the Design and Build Processes

- **Design, then bend:** Only begin vessel construction once the design is 100 percent complete to avoid disruptions.
- **Make VCMs the norm:** Use vessel construction managers (VCMs) to oversee all government shipbuilding projects to streamline production and design processes.
- **Embrace modularity:** Creating common designs to be used across multiple types of ships could reduce delays in the design process and increase interoperability.

Embracing New and Emergent Technologies

- **Digitize, automate, and get "smart":** Integrate automation, digitization, and AI in shipyards to empower—not replace—the existing workforce.
- **Build ships to sail, engineer them to last:** Increase operability by incorporating condition-based maintenance (CBM) in ship design to reduce the unpredictability of maintenance and repairs
- **Cross the digital divide:** Embrace digitization by allocating Shipyard Infrastructure Optimization Program budgets to digitization, consulting mariners to address their needs, building worker trust in digital systems, and avoiding disrupting essential shipbuilding processes.

Increasing Allied Cooperation

- **Leverage maritime alliances:** Expand opportunities to collaborate with allies on shipbuilding, modeling existing frameworks like AUKUS, MASGA, and OCCAR.
- **Build a "bridge" over troubled waters:** When American yards are at capacity, construct the initial ships in a multi-vessel purchase in allied ports while simultaneously investing in U.S. shipyards to eventually onshore construction.
- **Use allied ports in a storm:** Engage U.S. maritime allies to provide drydock and port access to the U.S. Navy, especially those with maritime infrastructure in the Pacific.
- **"All hands on deck" for skilled labor:** Supplement the domestic shipbuilding labor pool with high-skilled migrants from allied countries.

Ensuring On-Time Delivery

- **Incentivize success:** Offer financial incentives (but not punitive fees) for on-time and on-budget delivery of ships.
- **Small blocks stack just as well as large ones:** Order ships in smaller blocks to allow greater flexibility in design and capabilities and avoid cascading delays across larger block buys.

Training Current and Future Shipbuilders

- **Educate, empower, lead:** Expand shipbuilding apprenticeship opportunities and increase support to trainees.
- **Engineer the future of naval architecture:** Expand existing and create new naval architecture and marine engineering programs to address labor shortages.

Strengthening U.S. Supply Chains

- **If you need it, print it:** Increase additive manufacturing capabilities and training opportunities to mitigate supply chain gaps and reduce overreliance on sole-source manufacturers.
- **Build supply chain contingencies:** Reduce supply chain vulnerabilities in a conflict by developing contingencies which identify alternate sources and lean on dependable allies.

Revitalizing Commercial Shipbuilding

- **Chart a collaborative course:** Facilitate collaboration across government and industry to strengthen America as a competitor in the commercial shipbuilding sector.
- **Shared insight, collective impact:** Share best practices to encourage cooperation among U.S. and AMIB companies to strengthen the shipbuilding industry.

Read the full report here.

Q&A: Fincantieri Marine Group CEO George Moutafis

Fincantieri Marine Group CEO George Moutafis, right, tours company facilities. *(CREDIT: Fincantieri Marine Group)*

In February 2026, Fincantieri Marine Group (Booth 1223) issued the following release:

“As you may have seen in NAVSEA’s press release, the U.S. Navy tapped Fincantieri to build four of the first wave of Medium Landing Ships (LSMs) for the Marine Corps. Our $1B investment over the last 18 years to create concurrent production lines across our Wisconsin system of shipyards has positioned us to be a prime player in the American shipbuilding renaissance. This announcement represents a good start of follow-on workload, part of the framework agreed with the Navy to

ensure stability following the announcement in November. Details are still being worked out between us and the Navy, and we will communicate any developments, as soon as they solidify. Our intent is to quickly build as many vessels as the Navy will trust us with, in the LSM class and other classes that our armed forces require, to contribute to our nation's needs."

Fincantieri Marine Group CEO George Moutafis later discussed the LSM program's vessel construction management (VCM) concept with Senior Editor Richard R. Burgess.

The Vessel Construction Management concept proved successful with Philly Shipyards and its National Security Multi-Mission Vessel (NSMV) program. What advantages and disadvantages do you see with the VCM concept?

MOUTAFIS: Advantages: I trust our Navy wants to see whether this mechanism can deliver quality vessels fast, by streamlining oversight and creating unity of effort. Such benefits can be achieved if the concept is applied in its intended form:

A key aspect is to empower the VCM to make decisions on construction, favoring schedule, without compromising quality and without seeking constant guidance or approval from the Navy. When combined with a complete and final design and a commercial-type relationship between the VCM and shipbuilders, this can be truly powerful and harness efficiency in decision-making and speed.

So, overall, this concept is aimed at simplifying things. From that vantage point, this approach aligns perfectly with our goal of fast serial production of naval vessels, and we are ready to continue our partnership with the Navy and help them test this concept.

Disadvantages: More than disadvantages, it will be key for all parties involved (the Navy, the VCM, the shipbuilder(s) to

embrace the concept, draw the relevant lines and collectively ensure we do not fall into mishaps of the past that might jeopardize what this concept is trying to achieve.

The U.S. Navy has issued a request for proposal for a vessel construction manager to oversee the acquisition of the new Medium Landing Ship. This strategy is designed to maximize commercial practices to accelerate delivery, improve cost discipline, and expand the U.S. shipbuilding industrial base, with a contract award anticipated for mid-2026. *(CREDIT: Naval Sea Systems Command*)

With the VCM chosen as the LSM program management concept, what changes will Marinette have to institute to accommodate the concept?

MOUTAFIS: We are ready. In Wisconsin we have a system of yards where we have executed successfully programs for our Navy, for our Coast Guard, but also for commercial customers, under a variety of contractual setups.

We will wait to see the details of how the Navy will position itself towards the program and how the VCM will seek to exercise oversight and work with us. We are ready to adjust to whatever those requirements are.

At first glance, an oversight and collaboration similar to the one witnessed during the NSMV program and a "build-to-print" design, for now, appear to alleviate some demands in terms of administration and engineering, allowing us to swiftly get into what we do best: swift serial construction … but it all remains to be seen.

What adjustments, if any, will be needed for your workforce as you shift from LCS production to the LSM?

MOUTAFIS: Using a "build-to-print" approach allows construction to happen quicker. Plus, it minimizes change and prevents extensive and time-consuming design iterations.

We will need to review all the technical details, but we do not foresee major adjustments to workforce. Our system-of-yards configuration ensures agility in the workforce, rendering them able to jump from Navy standards to commercial or ABS standards.

And with the right level of sustained demand signal, we will be able to improve efficiency and speed, which will be a win for all parties. Our system of yards can accommodate multiple parallel lines, almost concurrently.

How is Marinette fairing with the nationwide shortage of skilled shipyard workers?

MOUTAFIS: No doubt, shipbuilders and the related

trades remain in high demand. We have expanded our recruiting efforts over the previous few years, and we are blessed to say that our efforts worked. Last year alone we hired nearly 800 employees and improved our retention by 50%.

Our Wisconsin operations saw positive feedback on several new initiatives over the previous 18 months, aimed at stabilizing the workforce. Efforts like cash bonuses to incentivize employee retention and tax-free subsidized childcare had a positive effect on our employees and our operations.

In years past Marinette had difficulty in retention of shipyard workers because of housing shortages in the region. Has that situation been alleviated to any degree?

MOUTAFIS: Yes, there has been a concerted effort by the local communities and developers to expand the number of local housing options that closely align to our growing workforce and their families. We believe this is less of an issue given the development and community support over the last couple of years in Northeast Wisconsin.

Is Marinette continuing with cooperative relationships with community colleges for workforce development? What is your assessment of the cooperation?

MOUTAFIS: Yes, we are continuing and seeking to expand our network of such collaborations. We have a continuously growing relationship with Northeast Wisconsin Technical College to not only reinforce the need to up-skill current employees, but also to introduce new technologies and digital tools to attract the shipbuilders of the next generation.

Imagine a not-so-distant future replete with examples of shipyard welders leveraging cobots (collaborative robots) to weld in places where it’s difficult for humans to easily work. That is the future of shipbuilding

and why we’re equipping our employees with digital tools like exoskeletons for demanding and repetitive tasks and augmented and virtual reality that allows workers on the deckplates to communicate challenges directly to the engineering team using a wearable digital device.

Raytheon Doubled ESSM Production in 2025

An Evolved SeaSparrow Missile is launched from a Mk 29 launcher aboard USS Carl Vinson (CVN 70) in 2010. (CREDIT: U.S. Navy | Mass Communication Specialist 3rd Class Patrick Green)

By Richard R. Burgess, Senior Editor

Raytheon Missiles & Defense (Booth 911) doubled production of the Block II RIM-162 Evolved SeaSparrow Missile (ESSM) in 2025 as it addressed the increased demand from the U.S. Navy

and its partners in the NATO consortium, a company official told *Seapower*.

“Last year, we produced over 350 ESSM missiles, which more than doubled what we were able to deliver in 2024,” said Misty Holmes, vice president for the Shipboard Organization within the Naval Power division. Her portfolio includes the ESSM, the Rolling Airframe Missile and the Standard family of surface-to-air missiles. She noted Raytheon delivered the 500th Block II version of the ESSM last September.

“We’re continuing to increase production this year to deliver over 400 all-up rounds, and we have a North Star in terms of our production capacity to go beyond 700 per year to meet that increased demand signal and service the needs of all of our customers’ navies,” Holmes said.

The ESSM, which became operational in 2004, is a short-to-medium shipboard surface -to-air missile deployed on several classes on U.S. Navy ships, including many guided-missile destroyers, aircraft carriers and amphibious assault ships. The missile is designed to counter advanced, highly maneuverable threats, and features a warhead specifically designed to defeat hardened anti-ship cruise missiles. In 2007, a surface-to-surface/anti-low-velocity air threat capability was introduced on the missile. The missile was developed by a consortium of 12 NATO nations and has been acquired by Japan through direct commercial sales.

“I believe that gives ESSM a unique and a distinct advantage in today’s munitions programs over those that are solely developed and managed by one nation,” Holmes said. “The consortium is NATO’s largest and most successful cooperative weapons project, and it’s been together for over 15 years supporting international military industrial cooperation.

The Block II ESSM, which became operational in 2020, features an active guidance system in addition to semi-active guidance,

reducing the need for shipboard radar illumination.

“This particular capability does come with significant digital processing margin,” Holmes said, “[A]s we are focused on innovation, [we] can continue to upgrade this capability to keep it ahead of pace with the threat to ensure that we’re keeping our ships and our Sailors, both U.S. and international allies, safe and coming home.”

Recent conflicts in Ukraine and the Red Sea have spurred demand for such weapons as the ESSM, which was fired against Houthi missiles and drones during 2023 and 2024.

“I do see this as a multi-factor issue, Holmes said. “We are seeing increase in the defense budget across numerous of our customers largely in Europe as well as others due to the threats, the war in Ukraine, the realization of expenditures in the Red Sea and others. So, we are seeing that increased demand signal come in pretty globally.”

Holmes said Raytheon is focused on the increased demand signal.

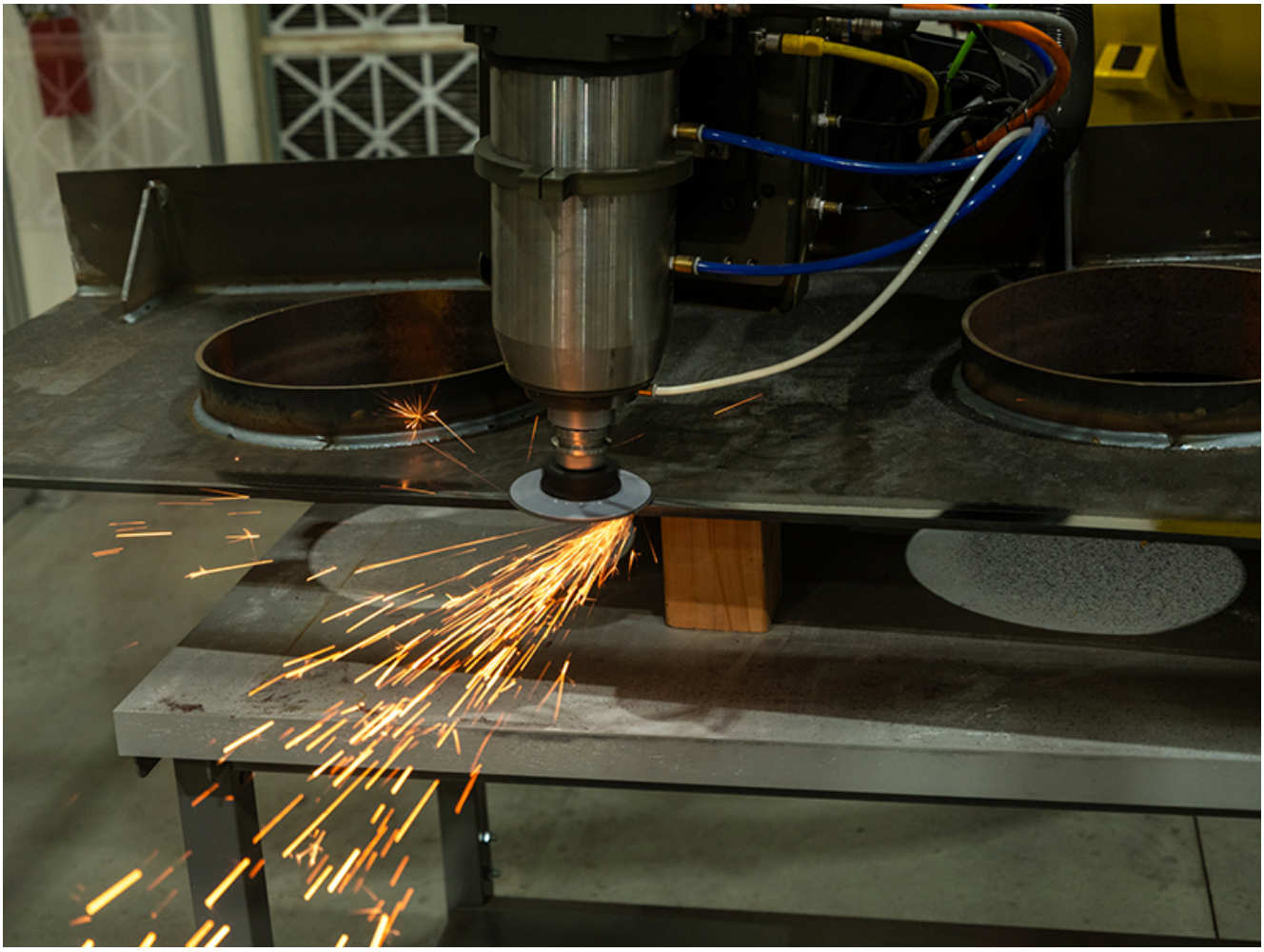
“This production really does showcase exceptional program performance that has been heavily supported by a very robust supply chain that’s been meeting and exceeding targets, and that supply chain is extremely diverse and global, she said. “Our suppliers, in ESSM’s case, are not just suppliers, there are partners, international industrial-based partners. Two areas that have been really big on this production are our industrial partners delivering on their contracts to make all those components ready for integration, and then the dedicated action by the Raytheon factory teams to improve throughput and remain focused on the goal that we have to meet and exceed our production targets. We’ve been working on test efficiencies, optimization and throughput to ensure we can continue to improve on our delivery.”

Is Raytheon working on a Block III ESSM? Holmes would only

say, “We are working on enhanced kinematics and maneuverability, things that will keep this weapon system ahead of the threat for the next few decades. But we’re eager to participate with the U.S. in the consortium in their next significant variant.

“We don’t sit back and rest on our laurels that what we’ve delivered is good enough,” she said. “We’re constantly adding capability to the suite of capabilities to make sure [that we are] staying ahead of the threat and those are investments we’re making in future ESSM capabilities as well in terms of funding new research and development ahead from government requirements.”

HII Moves Further into Physical AI for Shipbuilding



A GrayMatter Robotics technology performs autonomous grinding to an HII foundation project that used internal research and development funds.

By Brett Davis

Shipbuilding giant HII (Booth 923) has added another artificial intelligence partner to its shipbuilding program, taking another step toward adding “physical AI” to the process of constructing Navy ships.

In early April, the company announced it signed a memorandum of understanding with Carson, California-based GrayMatter Robotics to explore integrating GMR’s physical AI into shipbuilding operations, including for surface preparation, coating and inspection.

The companies will identify and potentially pursue future opportunities in four areas that include autonomous shipbuilding capability development; integration of GMR

technologies with other shipbuilding technology initiatives; workforce training to extend automation; and acceleration and scaling of unmanned system production.

“Our shipbuilding throughput was up 14% in 2025 and we are looking for an additional 15% increase in 2026,” said Eric Chewning, HII’s executive vice president of maritime systems and corporate strategy. “By working with new partners like GMR we can further augment our workforce and speed up U.S. Navy shipbuilding production.”

This follows on to a similar announcement from February, when HII signed an MOU with Ohio-based Path Robotics to incorporate physical AI for welding.

HII said much of the work that would be pursued by these companies currently is “hands-on and highly skilled,” but AI-driven technologies “offer promising opportunities to support these critical processes by reducing repetitive work and improving consistency to help accelerate delivery timelines and meet the U.S. Navy’s growing demand.”

Chewning said the introduction of physical AI is just one step of a series of actions HII is taking to improve shipbuilding, from increasing its supplier base to hiring and retaining new workers to making capital investments.

“And finally, what brings us here today, we are investing in new industry 4.0 technologies like digital engineering, additive manufacturing, enterprise AI and physical AI to drive overall shipyard efficiency,” he told reporters in a call about the announcement. “By working with new physical AI partners like GrayMatter Robotics and integrating them into our high-yield production robotics initiative, or HYPR, we can further augment the AI workforce and speed up the shipbuilding process by bringing automation into more areas of production.”

So far, shipyard automation remains limited to repeatable

activities, where one robot might do a single task 100,000 times, but “there’s a broader set of industrial use cases where we need a single robot to do a hundred thousand tasks just once,” Chewning said. “And that’s where physical AI is a game changer and our partnership with GrayMatter Robotics is so important.”

Ariyan Kabir, GrayMatter Robotics’ CEO and cofounder, said his company’s technology will help HII do the work it needs at a time when there aren’t enough skilled workers to do it.

“These are physically brutal tasks,” he told reporters on the press call. “These require incredible precision and we don’t have enough people, skilled people anymore in the U.S. to do these jobs, who are capable of doing these jobs. And that is the problem we solve at GrayMatter Robotics. We build physical AI systems that learn how to perform these skilled manufacturing tasks autonomously – no pre-programmed robots – robots that understand complex material physics and environmental physics, the physics of force friction, contact tool wearing out, temperature and humidity affecting the material behavior, so on and so forth.”

HII will discuss its physical AI efforts at 1:30 p.m. today at its booth, along with the CEOs of its new physical AI partners.

STEM Expo Enchants

Students with Science, Games and Fun

Kids raise their hands to answer a question during a Mad Science presentation

The annual STEM Expo kicked off Sea-Air-Space 2026 by giving students of all ages a look at the various technologies that underpin the maritime world of the sea services.

Attendees got examples of chemical reactions from Mad Science presentations, learned some of the principles of aerodynamics, saw how many marbles an aluminum foil boat could hold, and more, including getting a close-up look at welding to build ships.

STEM Expo sponsor HII featured a variety of exhibits at its booth, including the marble-carrying boats and welding systems. John Walker, 043 facilities manager at Newport News Shipbuilding, helped students work with an introductory

welding program.

“This introduces these kids to things that they’re probably not exposed to on a daily basis,” he said. “Even at the schools, they probably don’t talk a lot about welding, or fitting up steel, or even shipbuilding. So, STEM is very important to expose these kids to this type of technology and the things we do at the shipyard.”

The Navy League created the STEM Expo to give students interested in science, technology, engineering and math an opportunity to enjoy interactive workshops and hands-on demonstrations while accessing real-world career information.

Students are captivated by dry ice during a Mad Science demonstration at STEM Expo.

HII’s Buzz Donnelly, vice president of customer affairs and a former Navy carrier pilot and ship commander, said he has “spent a lot of time reaping the benefits of forums like this.” He said the STEM event is a great lead-off event for

local visitors and for Sea-Air-Space attendees from all over the world to share with their families.

“It’s extremely important to what we need as a defense industry, because these are the future engineers, the future tradesmen and laborers, that our heavy labor-centric force structure depends on. Regardless of how much we modernize with technology, automation, robots and cobots, we still rely on the people,” Donnelly said.

An attendee gets up close and personal with a pair of virtual-reality goggles at STEM Expo

“Having these young folks here today to see how exciting all the different aspects are, from the shipbuilding to the missiles and aerospace industry, [and] medicines here, is just a real motivating opportunity for them to get them excited about all the things that we do in this industry, to get excited about school, and I know for certain we’re going to have some of them that come in and benefit our nation and this industrial base in the future.”

Exhibitors at the event, which was also sponsored by Smart Learning Solutions, included universities, defense-related government agencies, science organizations and others.

HII Recognizes Australian Firms at Sea Air Space 2025, Advancing AUKUS Industrial Integration

Representatives from five Australian companies were presented with certificates recognzing their participation in HII-led supplier development initiatives. *Photo credit: HII*

NATIONAL HARBOR, Md. – At the HII booth during the U.S. Navy League's annual Sea Air Space 2025 Expo, representatives from five Australian companies were presented with certificates recognizing their successful participation in HII-led supplier

development initiatives and received a Newport News Shipbuilding (NNS) supplier identification number.

The supplier development initiatives include state-led Supplier Capability Uplift Programs, which will feed into the new Australian Submarine Supplier Qualification (AUSSQ) program, announced by Deputy Prime Minister Richard Marles on March 6, 2025.

Eric Chewning, executive vice president of strategy & development for HII; Cullen Glass, vice president of supply chain management for HII's Newport News Shipbuilding; and Michael Lempke, president of the global security group at HII's Mission Technologies division, presented certificates to:

- Century Engineering (South Australia)
- MacTaggart Scott Australia (South Australia)
- Hofmann Engineering (Western Australia)
- Levett Engineering (South Australia)
- VEEM Ltd. (Western Australia)

The supplier identification number signifies that, upon full certification through the AUSSQ process, these companies are qualified to participate in the NNS supply chain in support of nuclear-powered submarine construction.

Also in attendance were Rear Adm. Ian Murray, Australian Defence attaché; Linda Dawson, deputy director general for industry, science and innovation, Western Australian

Government; and Sir Nick Hine, executive director of H&B Defence and former second sea lord of the Royal Navy.

This milestone reflects deepening industrial integration under the AUKUS trilateral security partnership between Australia, the United Kingdom and the United States. HII's work, under contract with the Australian Government, supports the development of sovereign industrial capabilities and enables Australian companies to enter U.S. defense supply chains.

Sea-Air-Space: Lockheed Martin Touts Readiness to Build 'Golden Dome' Missile Shield

Lockheed Martin’s Dan Tenney speaks with reporters at Sea-Air-Space 2025. *Photo credit: Lockheed Martin*

A representative from Lockheed Martin said at Sea-Air-Space 2025 the firm is “ready now” to help the nation stand up the

“Golden Dome” missile defense system, a new priority of the Trump administration that resurrects some aspects of the Reagan-era Strategic Defense Initiative.

“What does it mean to be ready now? I think it means we have systems that are fielded, they’re operational, they’re proven,” said Dan Tenney, vice president of Strategy and Business Development for Lockheed Martin’s Rotary and Mission Systems section. “They’re actually in operation today.”

A Jan. 27 White House executive order calling for America to develop its own version of Israel’s Iron Dome air defense system unleashed a flood of activity in the defense community. This comes as the government develops the fiscal 2026 defense budget request to Congress, which reportedly could approach $1 trillion, to jumpstart Golden Dome and to support the many other defense priorities.

A March 19 story published by DOD News confirmed the Pentagon is working to bring the Golden Dome from concept to reality.

“Consistent with protecting the homeland and per President Trump’s [executive order], we’re working with the industrial base and [through] supply chain challenges associated with standing up the Golden Dome,” said Steven J. Morani, acting undersecretary of defense for acquisition and sustainment, in the article. “This is like the monster systems engineering problem. This is the monster integration problem.”

This is also a costly proposition. So far, the United States has funneled around $3 billion to Israel – an 8,500-square-mile country roughly the size of New Jersey – for batteries, interceptors and other costs related to Iron Dome, which it stood up in 2011, according to a 2023 Congressional Research Service report.

Establishing a missile defense system covering the entire United States – with a land area of nearly 3.8 million square miles – is estimated to cost billions of dollars annually and

present many more barriers to success.

Nevertheless, Tenney said Bethesda-based Lockheed Martin is well positioned to assist.

“We think the future is really going to be around this integration,” Tenney said. “We do operate from seabed to space,” he said, with deep experience developing systems in global positioning, missile warning and tracking, radar, missile defense, high-energy lasers and other capabilities.

“When I think about Golden Dome,” Tenney said, “in so many ways I think we’re going to use existing systems but bring them together.”