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TESTIMONY

Challenges Facing the Navy's and Coast Guard's Shipbuilding Programs and the Shipbuilding Industrial Base

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Chairman Ezell, Chairman Kelly, Ranking Member Carbajal, and Ranking Member Courtney, thank you for inviting me to testify about the Navy's and Coast Guard's shipbuilding programs and the shipbuilding industrial base. This testimony is largely based on the Congressional Budget Office's analysis of the Navy's 2025 shipbuilding plan and of the Coast Guard's major cutter programs. The Trump Administration did not release a 2026 shipbuilding plan for the Navy, and the 2027 shipbuilding plan, sometimes called the Golden Fleet plan, is still forthcoming.

The Navy's Unmet Goals for a Larger Fleet

For more than 20 years, the Navy has endeavored to build a larger fleet. In that time, the Navy's goals for its manned fleet have ranged from 306 ships to, most recently, 381 ships. As a result, every 30-year shipbuilding plan the Navy has produced since at least 2011 has proposed building a larger fleet by purchasing more ships and, sometimes, by extending the service life of several ships or entire classes of ship. For a variety of reasons, the Navy has never been able to increase the size of its fleet as much as it envisioned in its shipbuilding plans (see Figure 1). Often, the resources required to build the larger fleet exceeded those that were made available to the Navy. In more recent years, the Navy and the shipbuilding industrial base have had the resources but have been unable to deliver the ships that the service has ordered in a timely manner.

Cost Growth in Major Shipbuilding Programs

Over the past decade, major Navy and Coast Guard programs have experienced substantial cost growth. Under the 2025 shipbuilding plan (which covers 2025 to 2054), the Navy budgeted more than $10 billion in cost-to-complete funding for shipbuilding.[1] Cost-to-complete amounts are the additional funding a shipbuilding program needs to pay for cost growth in ships that were already authorized and fully funded by Congress in prior years. Cost overruns have affected nearly every major Navy shipbuilding program, though the amounts have varied. In addition, the price per ship for major Navy and Coast Guard shipbuilding programs has also increased substantially, even after removing the effects of inflation (see Table 1).

The source of the increase in costs per ship varies by program, but inflation in the wake of the COVID-19 pandemic, workforce challenges in the shipbuilding industrial base, the feasibility of the original cost estimate, and difficulty completing the designs of new ships were common factors. Prominent examples of all four of those phenomena include the Navy's Constellation class FFG-62 frigate and the Coast Guard's new heavy icebreaker, the polar security cutter (PSC).

Where Ships Are Built

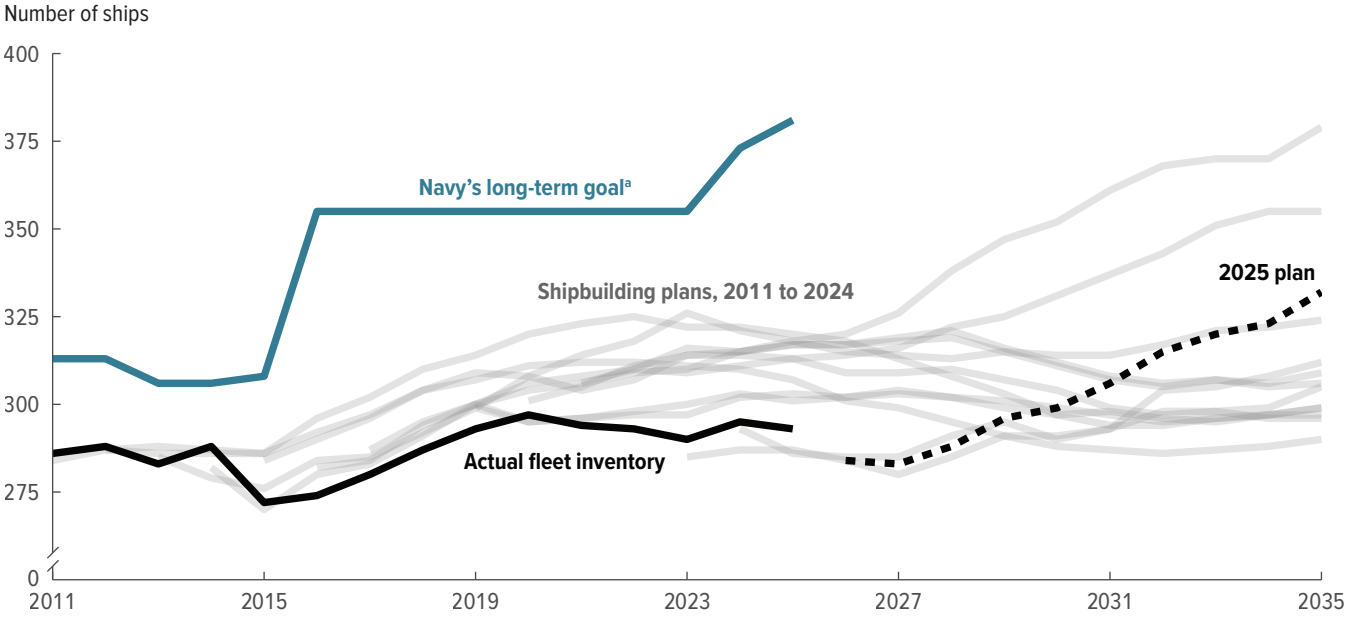
Although hundreds of companies are involved in building ships and their components, the Navy's and Coast Guard's ships are built primarily by eight shipyards:

- Austal Shipbuilding in Mobile, Alabama, which is owned by Austal Limited of Henderson, Western Australia, builds littoral combat ships, Coast Guard cutters, small support ships, and parts of submarines.
- Bath Iron Works in Bath, Maine, which is owned by General Dynamics of Reston, Virginia, builds destroyers.
- Bollinger Shipyards in Mississippi and Louisiana builds Coast Guard icebreakers, cutters, and patrol boats; Navy towing, salvage, and rescue ships; and oceanographic survey ships.
- Fincantieri Marinette Marine in Marinette, Wisconsin, which is owned by Fincantieri of Trieste, Italy, builds the Navy's new Constellation class frigate and previously built littoral combat ships.
- General Dynamics Electric Boat (hereafter, Electric Boat) in Groton, Connecticut, which is owned by General Dynamics, builds nuclear-powered ballistic missile and attack submarines.
- Ingalls Shipbuilding of Pascagoula, Mississippi, which is owned by Huntington Ingalls Industries of Newport News, Virginia, builds large and medium-sized amphibious warfare ships and destroyers. It also built the Coast Guard's national security cutters.
- National Steel and Shipbuilding Company, or NASSCO, in San Diego, California, which is owned by General Dynamics, builds large combat logistics and support ships.
- Newport News Shipbuilding in Newport News, Virginia, which is owned by Huntington Ingalls Industries, builds nuclear-powered aircraft carriers, ballistic missile submarines, and attack submarines.

1. Congressional Budget Office, *An Analysis of the Navy's 2025 Shipbuilding Plan* (January 2025), p. 16, www.cbo.gov/publication/60732.

Figure 1.

The Navy's Shipbuilding Goals and Plans Compared With Actual Fleet Inventory



Data source: Congressional Budget Office, using data from the Department of the Navy. See www.cbo.gov/publication/62258#data.

a. The Navy's long-term goal for the size of the fleet, as stated in various of the service's analyses of its future fleet, is not a goal for any particular year but the Navy's assessment of the ideal fleet size.

Delays in Navy and Coast Guard Shipbuilding

Many of the Navy's and Coast Guard's shipbuilding programs are currently experiencing schedule delays in addition to cost growth.

Delays in Navy Shipbuilding

Whereas in the 2000s the shipbuilding industry took 5 to 6 years to build destroyers and submarines, the shipyards now need 9 to 10 years, on average, to build those ships. (Those time spans are longer than they were when CBO published its analysis of the Navy's 2025 shipbuilding plan in January 2025, indicating that delays have continued to grow over the past year.) Nimitz class aircraft carriers took 7 to 8 years to build; Ford class carriers, by comparison, are taking 10 to 11 years to build on their current schedules. Similar comparisons can also be made between the previous and current production schedules for the Navy's amphibious assault and combat logistics ships, though the discrepancies are less pronounced for the latter (see Figure 2).

In early 2024, the Navy conducted a shipbuilding review that showed many of its programs were behind schedule. The review specifically highlighted the following ships, all of which have been delayed beyond their contracted delivery dates by varying amounts:

- The Ford class CVN-80 aircraft carrier, the *Enterprise*, which was delayed by 18 to 26 months;
- The first Columbia class ballistic missile submarine, which was delayed by 12 to 16 months;
- The Virginia class attack submarines, which were delayed by 24 to 36 months; and
- The first Constellation class frigate, which was delayed by 36 months.

The lead T-AGOS ocean surveillance ship is also delayed, but the Navy did not specify for how long. The ship was first authorized by Congress in 2022; its design is not yet complete, and construction has not begun.

The Navy's review indicated that although amphibious ships and DDG-51 destroyers were also "late to contract," the construction programs for those ships were considered stable and in line with their program managers' current estimates of their schedules.

Table 1.

Increases in the Price per Ship for Selected Navy and Coast Guard Shipbuilding Programs

Program	Time frame (fiscal years)	Total increase (percent)[a]	Annualized rate (percent)
Navy			
Ford class CVN-80 aircraft carrier	2024 to 2026	4	2
Ford class CVN-81 aircraft carrier	2024 to 2026	10	5
Virginia class SSN-774 attack submarine	2023 to 2025	5	3
Arleigh Burke class DDG-51 guided missile destroyer	2024 to 2025	16	16
Constellation class FFG-62 frigate	2023 to 2026	29	9
John Lewis class T-AO-205 oiler	2020 to 2024	21	5
Najavo T-ATS-6 towing, salvage, and rescue ship	2024 to 2026	22	10
Coast Guard			
Polar security cutter	2021 to 2025	55	12

Data source: Congressional Budget Office, using data from the Department of the Navy and the Coast Guard. See www.cbo.gov/publication/62258#data.

To calculate the percentage increase for Navy programs, CBO relied on the Navy's budget justification books for various years. For the Coast Guard's polar security cutter program, CBO relied on information that the Coast Guard provided to the Congressional Research Service and to CBO.

a. Percentage increases were calculated after the effects of inflation were removed.

A review of the Navy's 2026 budget justification documents reveals that, thus far, the Navy has made little progress in reducing delays. For example, according to CBO's analysis of the Navy's budget documents, delays in building the DDG-51 class destroyers have grown by 25 months over the past three years. Construction of Virginia class submarines has an average delay of four years from the delivery dates that were originally scheduled when the contracts with the Navy were signed up to a decade earlier. What makes the delays for those two programs particularly worrisome is that they are long-established shipbuilding programs that previously delivered ships in much shorter timelines. In addition, the delays increased slightly from 2025 to 2026, despite substantial investments to reduce them.

Delays in Coast Guard Shipbuilding

Some of the Coast Guard's shipbuilding programs have experienced similar delays. The Coast Guard's polar security cutter will take at least 10 years from the time Congress authorized appropriations for building the ship to its being commissioned. When the United States last built a heavy icebreaker in the 1970s, that gap was 5 years. Partly in response to the service's experience with the PSC, the Coast Guard awarded the first 2 ships of its new medium icebreaker program, the arctic security cutter, to a Finnish shipyard with the expectation that that company would be able to deliver the ships much faster. (Finland is the global leader in building icebreakers. Finnish companies are responsible for designing 80 percent of the world's icebreakers and building about 60 percent of them.)

In addition, the first 4 ships of the Coast Guard's offshore patrol cutter (OPC) program experienced construction delays and cost growth, in part because Hurricane Michael damaged Eastern Shipbuilding's shipyards in Panama City, Florida, in 2018. In response, the service awarded a second contract for OPCs to Austal Shipbuilding. The Department of Homeland Security canceled 2 of the 4 ships awarded to Eastern in the summer of 2025, and in November of that year, Eastern stopped work on the first 2 OPCs because of the financial strain the program placed on its business operations.[2]

Causes and Consequences of Delays in Naval Shipbuilding

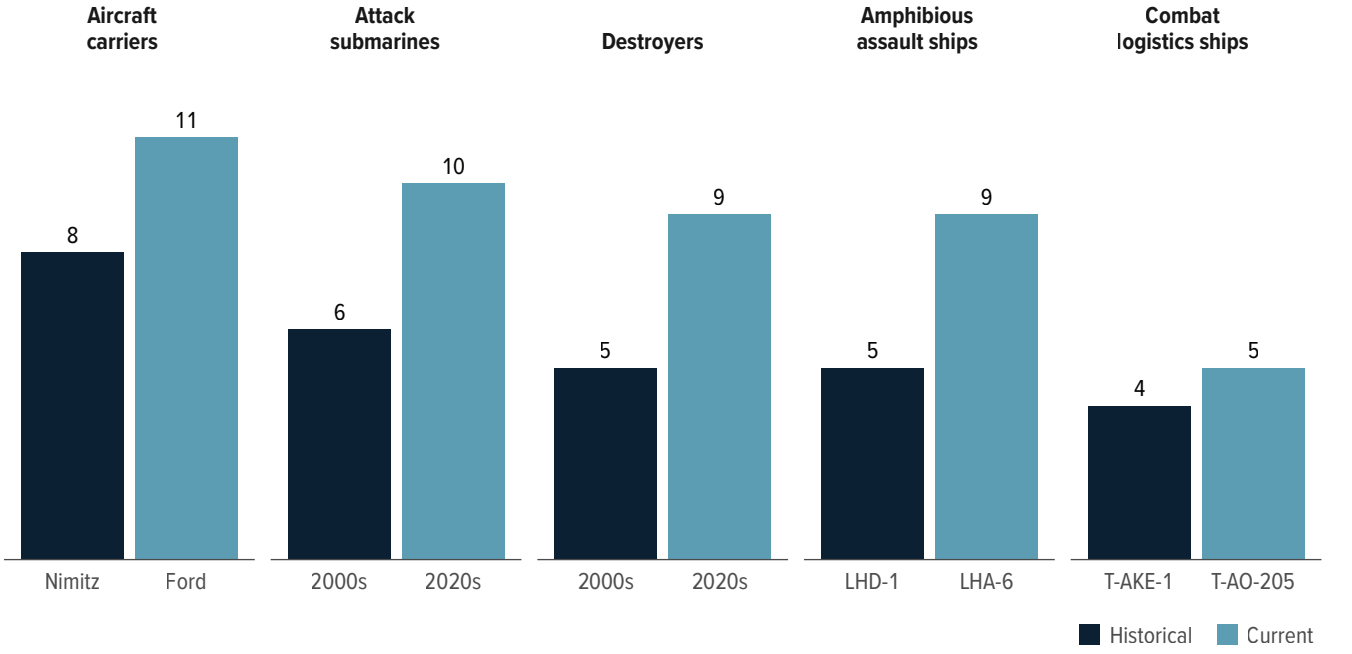
Of the many reasons for the increase in the amount of time it takes to build naval ships—including incomplete designs, changes sought by the Navy after construction begins, and, for more recent ships, the effects of the pandemic—workforce challenges probably loom the largest

2. Congressional Budget Office, *The Cost of the Coast Guard's Polar Security Cutter* (August 2024), www.cbo.gov/publication/60170. See also Ronald O'Rourke, *Coast Guard Polar Security Cutter (PSC) and Arctic Security Cutter (ASC) Icebreaker Programs: Background and Issues for Congress*, Report RL34391, version 298 (Congressional Research Service, January 21, 2026), www.congress.gov/crs-product/RL34391.

Figure 2.

Historical and Current Shipbuilding Construction Times for Navy Ships

Years



Data source: Congressional Budget Office, using data from the Department of the Navy. See www.cbo.gov/publication/62258#data.

Historical shipbuilding construction times are based on the time it took to build previous ship classes or the same class of ships in earlier eras. In either case, the values are based on ships built before 2010.

in recent years. Nearly all the major shipyards are having difficulty hiring and retaining workers, and a generation of longtime shipyard workers has retired or soon will. As a result, the workforces in many of those yards are, overall, less experienced than they were in the past.

Furthermore, fewer suppliers produce parts and components for naval ships today than in the past. For some ships, such as the Navy's submarines, approximately 70 percent of the suppliers of critical components have no competitors. In such cases, a single supplier of a critical component could disrupt ship construction if it encountered difficulties in production. Also, if the Navy wanted to purchase more ships than it currently plans to purchase, the supplier may have difficulty increasing production.

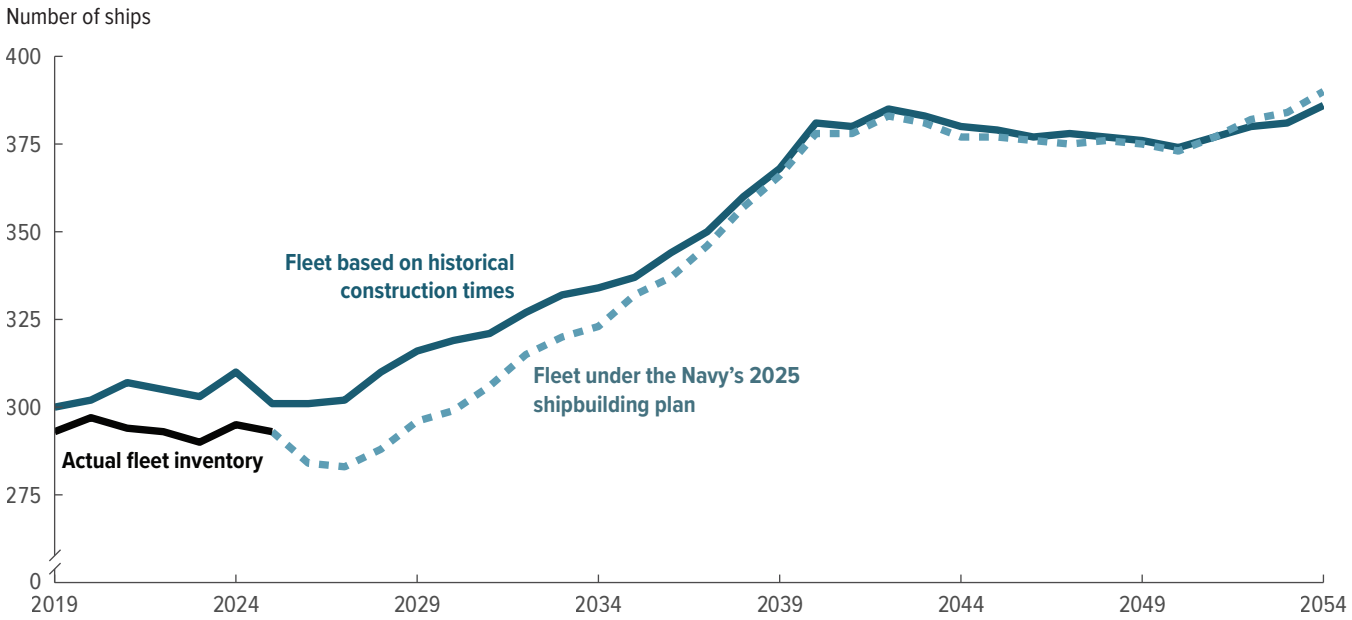
The cumulative result of the longer construction times is a fleet that is smaller than it would otherwise be. If the Navy and the shipbuilding industry could still build naval ships—particularly destroyers and submarines—as quickly as they did in the past, the fleet would exceed 300 ships today, CBO estimates on the basis of the number of ships that the Navy has already ordered (see Figure 3). From 2026 to 2030, the gap between the size of the Navy's existing fleet and the size it would have been under historical construction times averages 20 ships. Most of the ships represented by that shortfall are destroyers and submarines, which would be some of the Navy's most important ships in any future conflict with a great power rival, such as China.

Increased Burden on the Industrial Base Under the Navy's 2025 Shipbuilding Plan

If left unaddressed, the challenges facing the shipbuilding industrial base would only increase under the Navy's 2025 shipbuilding plan. Over the past decade, the amount of naval tonnage under construction has increased substantially (see Figure 4). From 2014 to 2024, that amount grew by 80 percent, from 68,000 tons to 123,000 tons. Excluding combat logistics and support ships, which tend to be large but not necessarily difficult to build, combat ship tonnage increased

Figure 3.

Size of the Navy's Fleet Under the 2025 Shipbuilding Plan Compared With the Size of the Fleet That Could Have Been Built If Construction Had Not Slowed in Recent Years



Data source: Congressional Budget Office, using data from the Department of the Navy and, for historical information, an array of other sources. See www.cbo.gov/publication/62258#data.

Historical shipbuilding construction times are based on the time it took to build previous ship classes or the same class of ships in earlier eras. In either case, the values are based on ships built before 2010.

by 65 percent in those years, from 47,000 tons to 78,000 tons. Combined with the conditions in the shipbuilding industry, those increases have left the nation's shipyards struggling to build the ships that the Navy has already ordered.

Combat Ships

Executing the Navy's 2025 plan would require further increases in the amount of naval tonnage constructed over the next three decades. Not all shipyards would be affected in the same way because the Navy's demand for different types of ships would vary over that time. Carrier construction would be relatively consistent and steady through the Navy's planning horizon. But construction of the remaining categories of combat ships—submarines, surface combatants, and amphibious warfare ships—would increase significantly: The average annual amount of tonnage under construction at shipyards that built those other types of ships would be 50 percent greater from 2030 to 2054 than it is today.

The increases in workload and complexity implied by the Navy's 2025 plan are considerable for the submarine industrial base, in particular. Not only would the shipyards produce a greater amount of submarine tonnage than they do today, but they would also produce a wider variety of submarines.

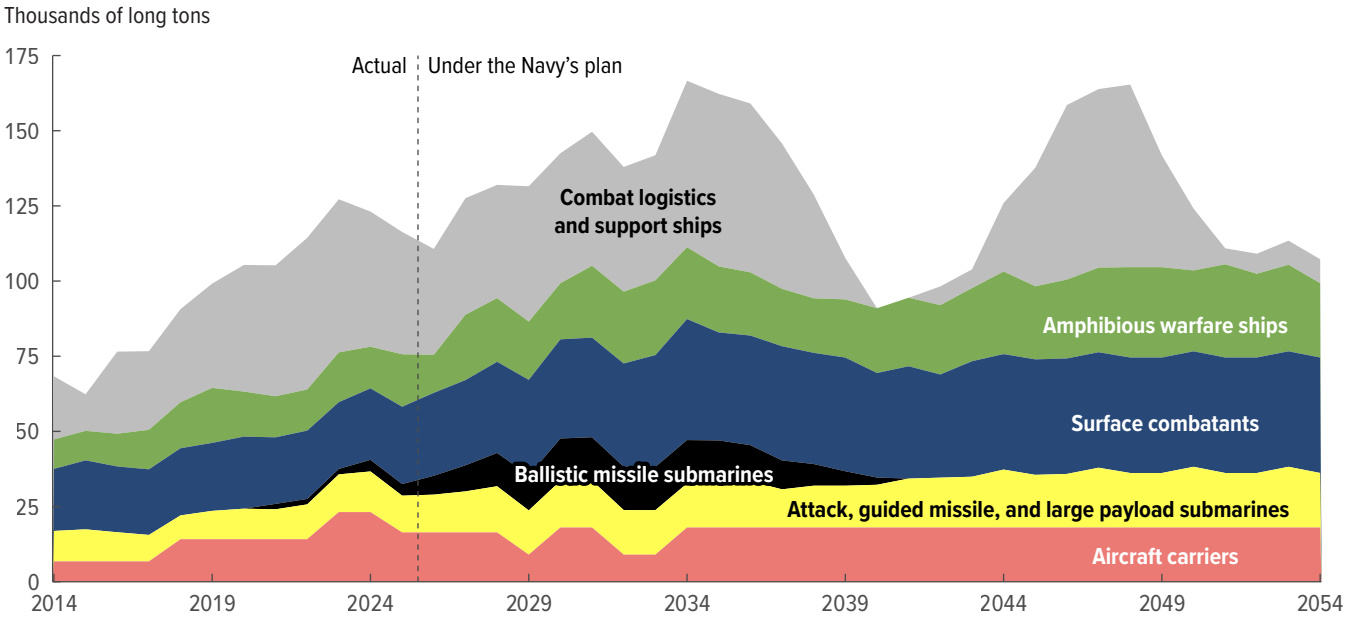
The amount of submarine tonnage under construction has grown by more than 70 percent since 2014. Under the 2025 plan, it would grow by an additional 70 percent by 2031—in other words, it would have tripled in 17 years. Those estimates do not include building replacements for any of the attack submarines that the United States will sell to Australia under the tripartite security pact among those two countries and the United Kingdom, which is known as AUKUS.[3] Although the additional burden placed on the submarine industrial base by replacing the AUKUS submarines would be small compared with the workload under the Navy's 2025 plan, it would nevertheless add another challenge to an already stressed production line (see Figure 5).

Moreover, the Navy currently takes about 10 years to build a new submarine. That means that for 10 years in the 2030s and 2040s, four types of submarines

3. The United States has agreed to sell between 3 and 5 attack submarines to Australia in the 2030s and 2040s. See Congressional Budget Office, *An Analysis of the Navy's 2025 Shipbuilding Plan* (January 2025), pp. 30–31, www.cbo.gov/publication/60732.

Figure 4.

Displacement Tonnage That Would Be Constructed Under the Navy's 2025 Shipbuilding Plan



Data source: Congressional Budget Office, using data from the Department of the Navy. See www.cbo.gov/publication/62258#data.

Displacement here is lightship displacement—the weight of the water a ship displaces without its crew, stores, ammunition, fuel, or other liquids. For submarines, CBO used Condition A-1 weight, which is similar to lightship displacement in surface ships. A long ton is equal to 2,240 pounds.

CBO calculated the annual amount of tonnage under construction by dividing the lightship displacement of a ship by its construction time span, beginning with the year the ship is authorized by Congress. For example, a destroyer that has a lightship displacement of 7,600 tons and is scheduled to be built from 2030 to 2036 would contribute 1,086 tons to the chart for each of those seven years.

(including ballistic missile submarines and large payload submarines) would be in production. The Navy is currently experiencing substantial cost overruns, construction delays, and missed delivery dates with three types of submarines in production (Columbia class ballistic missile submarines, Virginia class attack submarines, and Virginia class attack submarines with Virginia payload modules). Adding new classes of ships to the pipeline could further tax the ability of the shipyards and the Navy to manage production.[4]

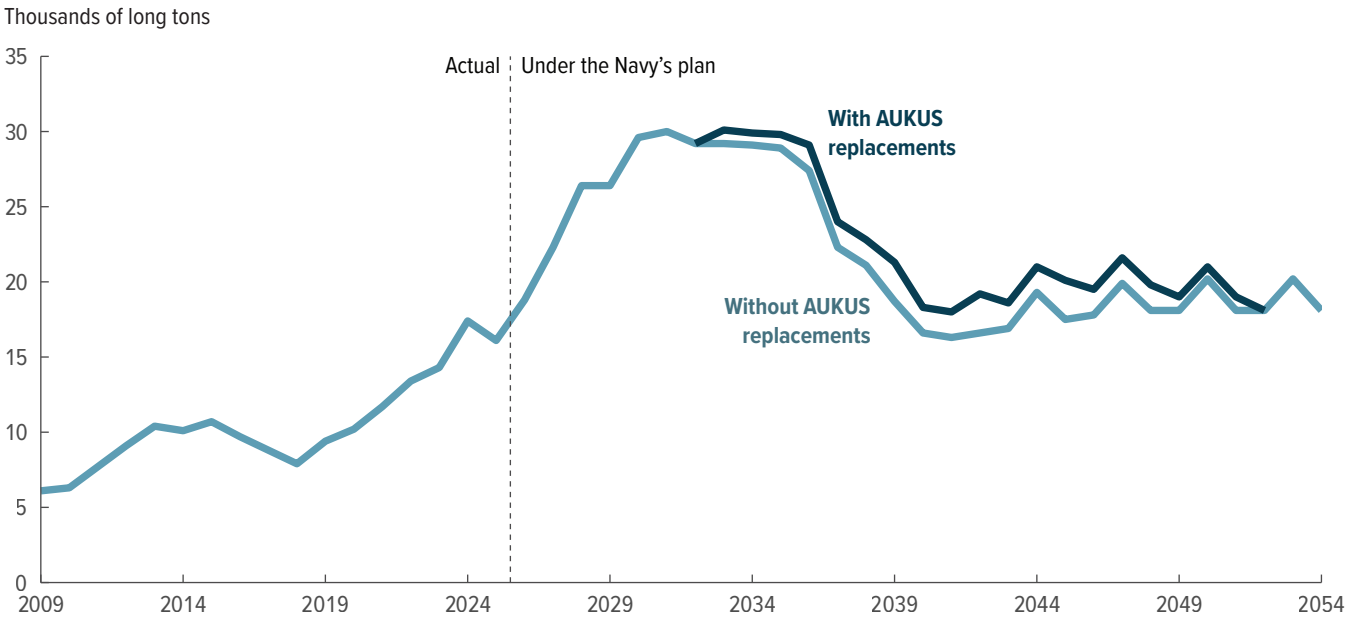
To address those challenges, the Navy plans to invest a total of about $10 billion (some of which it has already invested) in the new-construction portion of the submarine industrial base. (The service intends to invest an additional $8 billion to support the maintenance portion.) That money will go to almost every activity associated with building submarines: the recruitment, training, and retention of shipyard workers; infrastructure development; supplier development; improvement of manufacturing methods; and support for outsourcing parts of submarine construction to other shipyards that have the ability and capacity to do the work. (The Navy has also provided some financial support to the nation's surface combatant builders, though that amount represents just a fraction of the amounts it plans to invest in submarine construction.)

The Navy and the shipyards are increasingly outsourcing work to other facilities by using modular construction.

4. For additional information about challenges facing the Navy's submarine programs, see Anthony Capaccio, "New US Nuclear-Missile Submarines Hobbled by Billions in Growing Costs and Delays," *Bloomberg* (June 8, 2022), https://tinyurl.com/bddkjtdj; Megan Eckstein, "Submarine Industrial Base Under Strain as Virginia-Class Parts Wearing Out Early; Implications for Columbia-Class," *USNI News* (April 20, 2021), https://tinyurl.com/ycf2hfz2; and Congressional Budget Office, *The Capacity of the Navy's Shipyards to Maintain Its Submarines* (March 2021), www.cbo.gov/publication/57026.

Figure 5.

Submarine Tonnage That Would Be Constructed Under the Navy's 2025 Shipbuilding Plan, With and Without Replacements for Submarines Sold Under AUKUS



Data source: Congressional Budget Office, using data from the Department of the Navy. See www.cbo.gov/publication/62258#data.

A long ton is equal to 2,240 pounds.

AUKUS = tripartite security pact among Australia, the United Kingdom, and the United States.

For example, Austal Shipbuilding helps Electric Boat with submarine construction by building small sections of submarines, outfitting them with their internal components, and then transporting the modules by barge to the prime shipyard for insertion in a submarine undergoing final assembly. Overall, more than 20 companies are involved in outsourcing work for submarines that are being built by Electric Boat and Newport News Shipbuilding. To a lesser extent, the construction of surface ships also involves contributions from additional companies beyond the primary shipbuilders.

Whether those efforts will lead to an increase in the production of attack submarines remains to be seen. For the past two years, the rate of production has averaged only 1.1 submarines per year, even though the Navy has been purchasing them at a rate of 2.0 per year for most of the past decade. (The Navy purchased only one attack submarine in 2025.)

Combat Logistics and Support Ships

The yards that build combat logistics and support ships would face a particularly uneven workload. Under the 2025 plan, they would have a substantial amount of work through the mid-2030s as the Navy built out its large T-AO fleet oiler program and began construction of a new class of next-generation logistics ships. But then, for a period of about six years, the Navy would order very few of those types of ships. After that lull, the shipyards would experience a steep ramp-up as the Navy began replacing its class of T-AKE dry cargo ships.

Smoothing out the building profile of the combat logistics and support ships could eliminate the boom-and-bust cycle that the shipyards face—and it could be accomplished relatively easily. For example, under the Navy's 2025 shipbuilding plan, the service would purchase T-AO-205 fleet oilers at a rate of 1 per year from 2029 to 2033 before ramping up to 2 per year from 2034 to 2036, the last three years that the service would purchase such ships. A five-year period in which no large

combat logistics ships were purchased would follow before the Navy started purchasing the replacement for the T-AKE dry cargo logistics ship in 2042. To avoid that gap, which would be detrimental to the workforce of the yard that builds the ships, the Navy could instead buy 1 fleet oiler per year through 2039 and then start purchasing the replacement for the T-AKE two years earlier, in 2040, at a rate of 1 per year, allowing for a decades-long period of more continuous production for those types of ships.

Effects of the Golden Fleet Plan on the Industrial Base

In CBO's estimation, which is based on publicly available information, the Trump Administration's proposed Golden Fleet plan could lessen the burden on the shipbuilding industrial base in some areas, such as frigate construction, but increase it in others, such as the construction of large surface combatants. For example, the Navy's decision to cancel its Constellation class FFG-62 frigate program and start the FF(X) program could ease the burden on the industrial base involved in frigate production. In late 2025, the Navy announced that it would end the FFG-62 program: It would finish the 2 ships that were then (and still are) under construction but cancel 4 others that had been ordered.

The FFG-62 frigate is one of the more prominent examples of the Navy's troubled shipbuilding programs. The lead ship of the class was authorized in 2020 and was originally expected to enter service in 2026; now, it will not enter the fleet until at least 2029. In addition, as the Navy refined its design, the ship grew substantially in size, from 7,300 tons to more than 7,800 tons. Under the 2025 shipbuilding plan, the Navy planned to purchase 80 FFG-62 class frigates of two variants from 2026 to 2054—the Flight I, 2 of which are still being completed after the program was canceled in 2025, and an improved Flight II, for which construction was scheduled to start in 2036. The Navy planned to have 68 frigates in its fleet by 2054.

Shortly after the FFG-62 program was terminated last November, the Navy announced it would begin a program to build a new frigate, designated as the FF(X), that would be based on the Coast Guard's Legend class national security cutter. That ship displaces about 4,500 tons, making it about 40 percent smaller than the Constellation class. If the Navy plans to purchase the same number of FF(X)s under the Golden Fleet plan, then the amount of tonnage the shipbuilding industrial base would need to produce to assemble the future frigate force would decrease. Specifically, if the Navy plans to purchase 80 FF(X)s instead of the same number of the two versions of the FFG-62 and if the FF(X) does not increase in size substantially, then the total amount of tonnage demanded from the industrial base over the next 30 years would fall by 264,000 tons. Moreover, because the FF(X) is a smaller, simpler design than the FFG-62 turned out to be, shipyards that do not currently produce Navy ships could participate in the FF(X) program.

By contrast, plans for the new battleship could increase the burden on one of the most stressed sectors of the industrial base. The Administration announced in 2025 that it was going to start a new guided missile battleship program, designated as the Trump class, the first ship of which will be named the *Defiant* and designated as BBG-1. (Giving the first ship of a class a different name from the class name would be a departure from the Navy's practice, though it would be similar to the Coast Guard's naming conventions.) The Navy has estimated that the BBG would displace 35,000 tons or more and that the service would buy 15 to 25 of the ships.

Depending on what the Navy does with the other elements of its large surface combatant force, the BBG could represent an added burden beyond those in the 2025 shipbuilding plan. According to the Navy, the BBGs would be built instead of the 28 DDG(X) future destroyers that the service had planned to build from 2032 to 2054 to replace Arleigh Burke class DDG-51 destroyers. The DDG(X) notionally would have displaced 14,500 tons each, making it nearly 60 percent smaller than the BBG. Thus, even 15 BBGs would require the industrial base to build more tonnage than the 28 DDG(X)s would have, and 25 BBGs would amount to more than double the tonnage of the 28 DDG(X)s. Moreover, implicit in those comparisons is the assumption that the BBGs would be built over roughly the same period as the DDG(X)s would have been built, but if the Navy sought to build the battleship force sooner, as some have suggested, the burden on the shipyards and their workforces would be even greater.

Both Bath Iron Works and Ingalls Shipbuilding have indicated that they have the facilities and the technical expertise to build a 35,000-ton battleship. However, if the Navy continued building DDG-51s while it built the battleships, the amount of large surface combatant

tonnage would most likely increase even more in relation to the 2025 plan, which would further stress the workforce at both shipyards. Other companies could help build parts of the battleship, as currently occurs with submarine construction, but the additional burden on the prime yards would still be large. Statements from the Administration upon the release of the President's 2027 budget indicate that DDG-51 construction would continue, although it is unclear for how long or at what rate.

Contracting with additional shipyards to help build the FF(X), components of the battleship, amphibious warfare ships, or any of the Navy's other combat ships might help the service manage the increase in production, but doing so would come with its own concerns. For example, the first FF(X) would be built by Ingalls Shipbuilding, but the Navy has stated that one or more other yards would also build the ship to rapidly increase the size of the fleet. Even though the FF(X) is a less complex ship than the FFG-62, a yard new to the program would still face the difficult challenge of constructing a ship it has never built before. The shipyard would likely need time to learn how to build the new frigate. In general, any new shipyard engaged to build ships for the Navy would face a similarly steep learning curve, so delays could be widespread if the Navy contracted with new shipyards for multiple shipbuilding programs.

Effects of Program Uncertainty on the Industrial Base

One uncertainty that could negatively affect the industrial base is the possibility of future program cancellations. Since January 2025, the Trump Administration has canceled most of the ships in the FFG-62 program and 2 offshore patrol cutters. One of the last acts of the Biden Administration was to cancel a request for proposals for the medium landing ship program because the bids from industry proved far higher than the Navy anticipated. That program was then reconstituted with the intention of buying a vessel that was already available on the market and thus could be built with few design changes. Since moving in that direction, the Navy has ordered at least 12 medium landing ships with funds appropriated under the 2025 reconciliation act (Public Law 119-21) and the 2026 appropriations.

Unless carefully managed, ship cancellations can be disruptive to the shipbuilding industrial base because workers are laid off if there is no ship for them to build. Eastern Shipbuilding laid off workers in the wake of the problems and cancellations in the OPC program. In December 2025, Fincantieri Marinette Marine laid off a small number of workers after the FFG-62 cancellations. In February 2026, shortly after the frigates were canceled, the Navy awarded Fincantieri a contract to construct 4 of the revised medium landing ships, which will help offset the reduction in work on the frigates.

The Navy's new Trump class battleship program is intended to replace the DDG(X) future destroyer that the 2025 shipbuilding plan called for. If the new battleship was canceled in the future, the Navy's ability to design and start building a different class of surface combatants to replace the Arleigh Burke class DDG-51 destroyers that are slated for retirement starting in the 2030s would be delayed. Such a delay occurred in the 2000s after the Navy stopped building DDG-51 destroyers at the end of 2005 to start the Zumwalt class destroyer program. It ordered three Zumwalts in 2007 and 2009, but in 2010, the Navy reversed course: It did not order any more Zumwalts and instead restarted the DDG-51 program. In the meantime, the shipyards had invested in tools and equipment—and in training for their workforces—to build the Zumwalt. When the Navy changed direction, the shipyards had to restart their DDG-51 lines. From 2006 to 2010, the Navy ordered only 4 destroyers (3 Zumwalts and 1 DDG-51), whereas in the five years before 2006, the Navy generally ordered 3 destroyers per year. If the Trump class battleship was canceled in the future, it could take the Navy several years to begin producing a new class of destroyer. In the meantime, the Navy would be forced to continue building the DDG-51—a ship largely based on a design crafted in the late 1970s and early 1980s (though the current ships are equipped with the latest combat and weapon systems).

Effects of a Larger Fleet on Ship Maintenance

A larger fleet would place greater demands on not only the shipyards that construct new ships but also those that maintain the Navy's existing ships. The nation's four public shipyards perform nearly all the maintenance on the Navy's nuclear-powered aircraft carriers and submarines, and they have struggled to meet the Navy's goals, particularly those for the attack submarine force. The Navy would like to have no more than 20 percent of its nuclear-powered attack submarines (SSNs) in or awaiting maintenance. Currently, 33 percent of the service's SSN fleet is undergoing or awaiting maintenance—the

largest portion in any year since 2008 other than 2021, when 37 percent of the fleet was unavailable for deployment because the ships needed maintenance.[5]

Today, with a force of 48 SSNs, one-third of which are in maintenance, the Navy could at best deploy only 32 SSNs. Reducing the number of SSNs in maintenance to the goal of 20 percent by 2035, when the Navy projects it would have 54 SSNs, would increase the potential number of deployable submarines to 43.

Surface ship maintenance has also experienced delays and cost growth in recent years: Destroyers currently spend twice as much time in maintenance as the Navy projected in 2012.[6] If the Navy could meet the 2012 goal for destroyers' time in maintenance, the number of deployable ships would increase by 12.

The Navy will need to address those maintenance delays as it seeks to build up its surface combatant force. If it does not, it will be able to deploy fewer ships than suggested by the size of the future fleet. Put another way, reducing maintenance delays would increase the effective size of the fleet.

Indications of Improvement in the Industrial Base

Despite the challenges facing the Navy as it pursues its goal of building a much larger fleet, some evidence indicates that aspects of the shipbuilding industrial base are getting better. Attrition of skilled workers remains an issue across the shipbuilding industrial base, but several of the major shipyards report that the rates at which they are losing workers are slowing. Bath Iron Works and Electric Boat, builders of destroyers and submarines, respectively, report that their voluntary attrition rates have now fallen to less than 10 percent per year. Ingalls Shipbuilding's voluntary attrition rate has also fallen, to around 15 percent, and that was before the shipyard signed a new labor agreement that would increase wages by 18 percent immediately and by roughly 40 to 45 percent over the next five years, depending on the employee's trade and job performance.[7] On the other hand, ship designers at Bath Iron Works recently went on strike in pursuit of higher pay and better benefits. Had the strike continued, it could have slowed design work at that shipyard.

Substantial investments in the maritime industrial base—especially the parts of it that build submarines—may be starting to produce positive benefits. In particular, the money is being used to increase the production of parts and the number of suppliers. That effort alone may not increase the speed at which the industrial base can produce attack submarines, but it should at least reduce the base's fragility by lowering the number of critical parts that are produced by a single supplier.

Producibility and Stability in the Shipbuilding Process

Senior Navy leaders have said that they want to emphasize producibility and stability in future shipbuilding programs. Improving producibility means designing new ships, such as the new battleship, in a way that minimizes the number of labor hours needed to build them. For example, a larger ship design can lend itself to straighter installations of piping or electrical conduit, reducing the number of bends that would be needed if the design was smaller and thus tighter or denser. Fewer bends in piping or conduit would, in turn, reduce the amount of labor needed to install them.

In discussions with CBO and the Congressional Research Service, some senior Navy leaders have stated that they want to provide a stable ship design and a steady demand signal to the shipbuilding industry so that shipyards and their suppliers can build ships more efficiently. One way in which the Navy can increase stability in a shipbuilding program is by making few or no changes once a design is completed. Minimizing design changes allows shipyards to learn from one ship to the next, thereby reducing the amount of labor needed to build a class of ships over time. Changing a ship's design from one vessel to the next makes learning to build a ship class more difficult.

Another aspect of stability is consistency in the number of ships of a given class that the Navy purchases on an

5. Ronald O'Rourke, *Navy Columbia (SSBN-826) Class Ballistic Missile Submarine Program: Background and Issues for Congress*, Report R41129, version 283 (Congressional Research Service, December 4, 2025), www.congress.gov/crs-product/R41129. See also Congressional Budget Office, *The Capacity of the Navy's Shipyards to Maintain Its Submarines* (March 2021), www.cbo.gov/publication/57026.

6. Congressional Budget Office, *Maintenance Delays for Conventional Navy Ships* (December 2025), www.cbo.gov/publication/61507.

7. WLOX Staff, "Ingalls Shipbuilding Union Workers Approve New Contract With Largest Pay Raise in Company History," WLOX (March 13, 2026), https://tinyurl.com/5ckrs3e5.

annual basis. Providing the industry with a consistent and long-term procurement profile for a shipbuilding program would allow shipyards to plan construction, buy material ahead of time and in quantity, and keep disruptions in the construction process to a minimum. Using levers such as block-buy authority and multiyear procurement for ship programs that commit the government to purchasing a group of ships over several years can improve stability and provide those benefits.[8]

8. Block-buy authority and multiyear procurement are acquisition strategies that allow the Navy to purchase a group of ships over a specified period, effectively lowering the price of the ships by promising a steady stream of work for the shipyards. Though broadly similar, the two strategies are not identical. Block-buy authority is not regulated by statute, and it is more flexible (in that it is subject to less Congressional oversight) and less likely to carry cancellation penalties than multiyear procurement authority. But multiyear procurement authority allows the Navy to buy materials in large quantities for all ships covered under a given contract to minimize costs, whereas block-buy authority requires separate authorizations to purchase materials for more than one ship at a time. For more information on the two strategies, see Ronald O'Rourke, *Multiyear Procurement (MYP) and Block Buy Contracting in Defense Acquisition: Background and Issues for Congress*, Report R41909, version 145 (Congressional Research Service, December 4, 2025), www.congress.gov/crs-product/R41909.

In keeping with the Congressional Budget Office's mandate to provide objective, impartial analysis, this testimony makes no recommendations.

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