

Navy Shipbuilding: Searching for a Path to a Larger and More Distributed Fleet

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Presentation to the American Shipbuilding Suppliers Association

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Relevant Reports by CBO

Congressional Budget Office
OCTOBER 2020



The Cost of the Navy's New Frigate


On April 30, 2020, the Navy awarded Fiscal Year 2021 Maritime Materie a contract to build the Navy's new surface combatant, a 5,000-ton FFG(X). The report built on a study that gives the Navy options for building ships. In this report, the Office examines the costs of these options.

Several factors support the Navy's estimate:

Congressional Budget Office

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Costs of Submarine Maintenance at Public and Private Shipyards



APRIL 2019

- CBO estimates that the cost of maintaining a 3,000-ton submarine at a public shipyard is 40 percent more than at a private shipyard.
- The Navy estimates that the cost of maintaining a 3,000-ton submarine at a private shipyard is 40 percent more than at a public shipyard.
- If the Navy's estimate is correct, the cost of maintaining a 3,000-ton submarine at a private shipyard is 80 percent more than at a public shipyard.


1. Navy Secretary for October 7, 2019, *Groundwork and*

Notes: All years refer to the calendar year in which the report was published, and the fiscal year in which the report was published.

Congressional Budget Office

CBO


An Analysis of the Navy's Fiscal Year 2020 Shipbuilding Plan



Congressional Budget Office

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Alternatives for Modernizing the Navy's Sealift Force



OCTOBER 2019

Congressional Budget Office
Nonpartisan Analysis for the U.S. Congress

An Analysis of the Navy's Fiscal Year 2022 Shipbuilding Plan

SEPTEMBER | 2021

Congressional Budget Office
Nonpartisan Analysis for the U.S. Congress

An Analysis of the Navy's December 2020 Shipbuilding Plan





APRIL | 2021

In June 2021, the Department of Defense submitted to the Congress the Navy's 30-year shipbuilding plan for fiscal year 2022.¹ The Congressional Budget Office is required by law to analyze that plan and assess its costs. This report provides information that has not been included in the plan. The information was limited to the following:

- **Fleet Size.** Under the plan, the Navy would grow its fleet from 398 to 512 ships at some unspecified point in time. The plan does not specify the number of ships that would be needed to replace the ships that would be retired today to be replaced.
- **Cost.** CBO estimates that the cost of the Navy's fleet of 398 ships is \$25 billion to \$30 billion over 30 years, or \$833 million per year.
- **Missile Capacity.** The plan states that the number of missile launchers on the fleet would be 1,000. The plan does not specify the number of missiles that would be needed to be replaced.

1. See Department of Defense, *Long Range Plan 2022* (June 2021).

Notes: Unless this report specifies otherwise, all years refer to the calendar year in which the report was published.

Prospects for Building a Larger Fleet

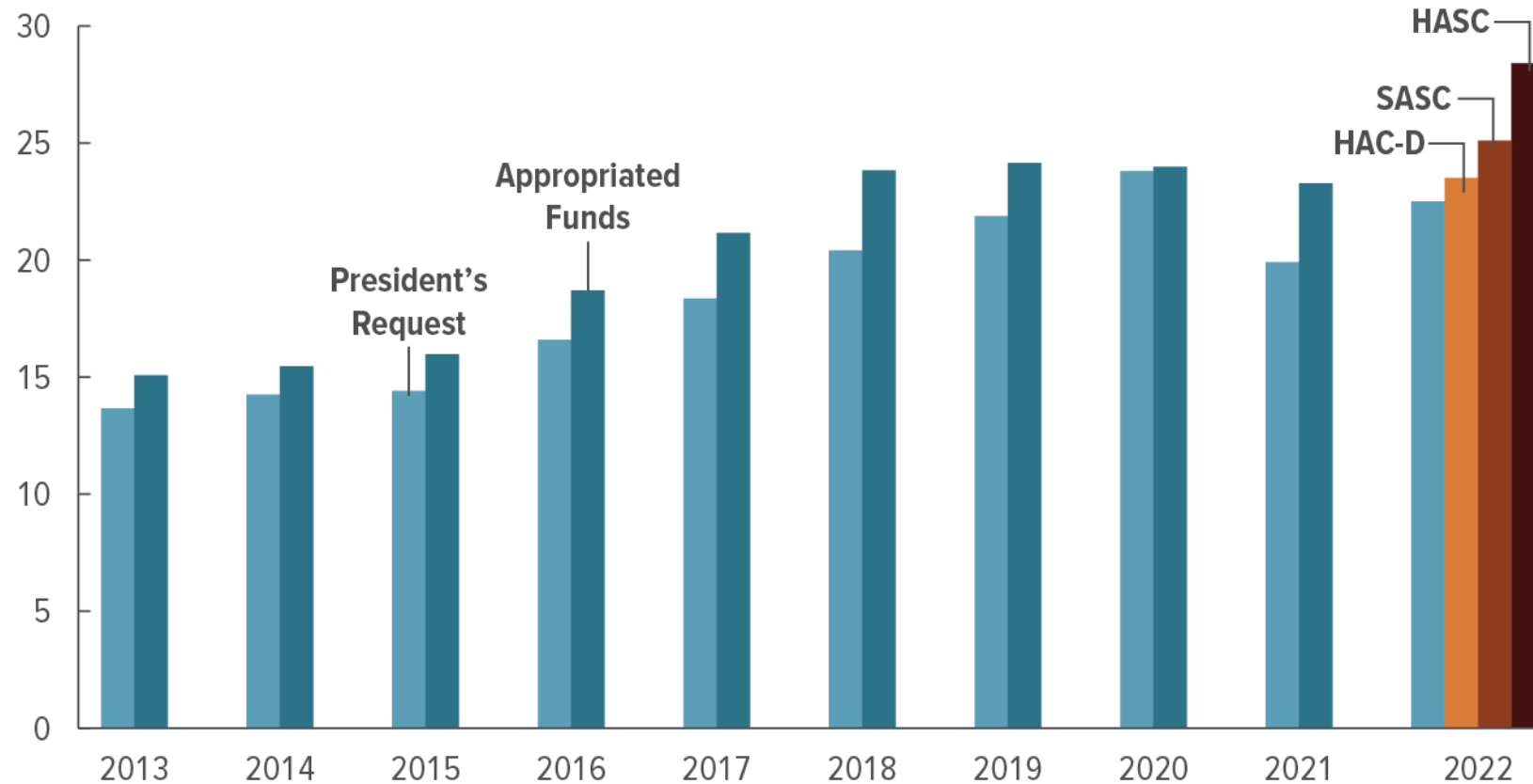
- Congressional Support for Shipbuilding
- Recent Navy Force Structure Assessments and Shipbuilding Plans
- Paying for the Navy's Shipbuilding Plans



Congressional Support for Shipbuilding

Shipbuilding Requests and Appropriations, 2013 to 2021

Billions of Dollars



The Congress has consistently appropriated more funds for shipbuilding than Administrations have requested.

Figures for the HAC-D, SASC, and HASC represent the amounts for shipbuilding in their respective appropriation or authorization bills, as ordered reported out of committee earlier this year.

HAC-D = House Appropriations Committee, Defense Appropriations Subcommittee; HASC = House Armed Services Committee; SASC = Senate Armed Services Committee.

The Navy's 2012 Shipbuilding Plan Compared With Enacted Appropriations in the Budget Control Act Era, 2012 to 2021

Ship Type	2012 Shipbuilding Plan	Enacted Appropriations	Difference
Aircraft Carriers	2	3	1
Ballistic Missile Submarines	1	1	0
Attack Submarines	19	20	1
Destroyers	16	22	6
Frigates	0	2	2
Littoral Combat Ships	32	27	-5
Amphibious Warfare Ships	6	7	1
Logistics and Support Ships	<u>30</u>	<u>28</u>	<u>-2</u>
Total	106	110	4
Large Combat Ships	44	55	11
Small Combat and Support Ships	62	55	-7

Recent Navy Force Structure Assessments and Shipbuilding Plans

The Link Between Force Structure Assessments and Shipbuilding Plans

2016 Force Structure Assessment  FY 2020 Shipbuilding Plan

2020 Future Naval Forces Study  December 9, 2020, Shipbuilding Plan

2021 Objective Force (Data in FY 2022 Plan)  FY 2023 Shipbuilding Plan (Expected)

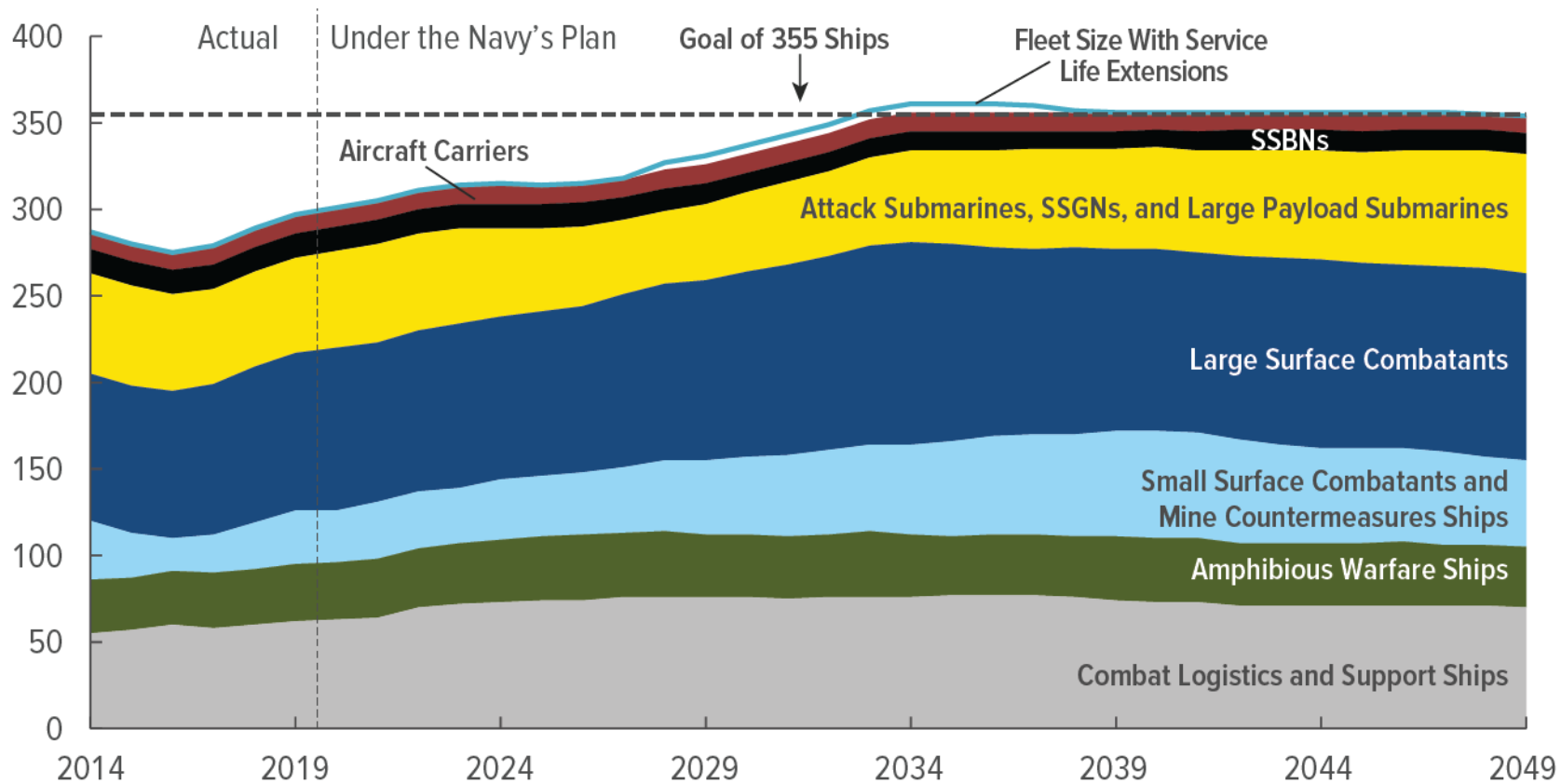


The Navy's Restated Goal for a Larger and More Distributed Fleet

Ship Type	2016 FSA Inventory Goals	FNFS Inventory Goals	FY 2022 Plan Objective Force	Memorandum: Today's Fleet
Aircraft Carriers	12	8 to 11	9 to 11	11
Light Carriers	0	0 to 6	0	0
Ballistic Missile Submarines	12	12	12	14
Attack and Large Payload Submarines	66	72 to 78	66 to 72	54
Large Surface Combatants	104	73 to 88	63 to 65	92
Small Surface Combatants	52	60 to 67	40 to 45	31
Large Amphibious Warfare Ships	12	9 to 10	8 to 9	9
Small Amphibious Warfare Ships	26	52 to 57	40 to 54	22
Logistics and Support Ships	71	96 to 117	83 to 104	63
Unmanned Surface Vehicles	n.a.	119 to 166	59 to 89	0
Unmanned Underwater Vehicles	<u>n.a.</u>	<u>24 to 76</u>	<u>18 to 51</u>	<u>0</u>
Total Manned Ships	355	382 to 446	321 to 372	296
Total Unmanned Systems	n.a.	143 to 242	77 to 140	0
Total Manned and Unmanned	355	525 to 688	398 to 512	296

Inventory of Battle Force Ships Under the Navy's Fiscal Year 2020 Shipbuilding Plan

Number of Ships



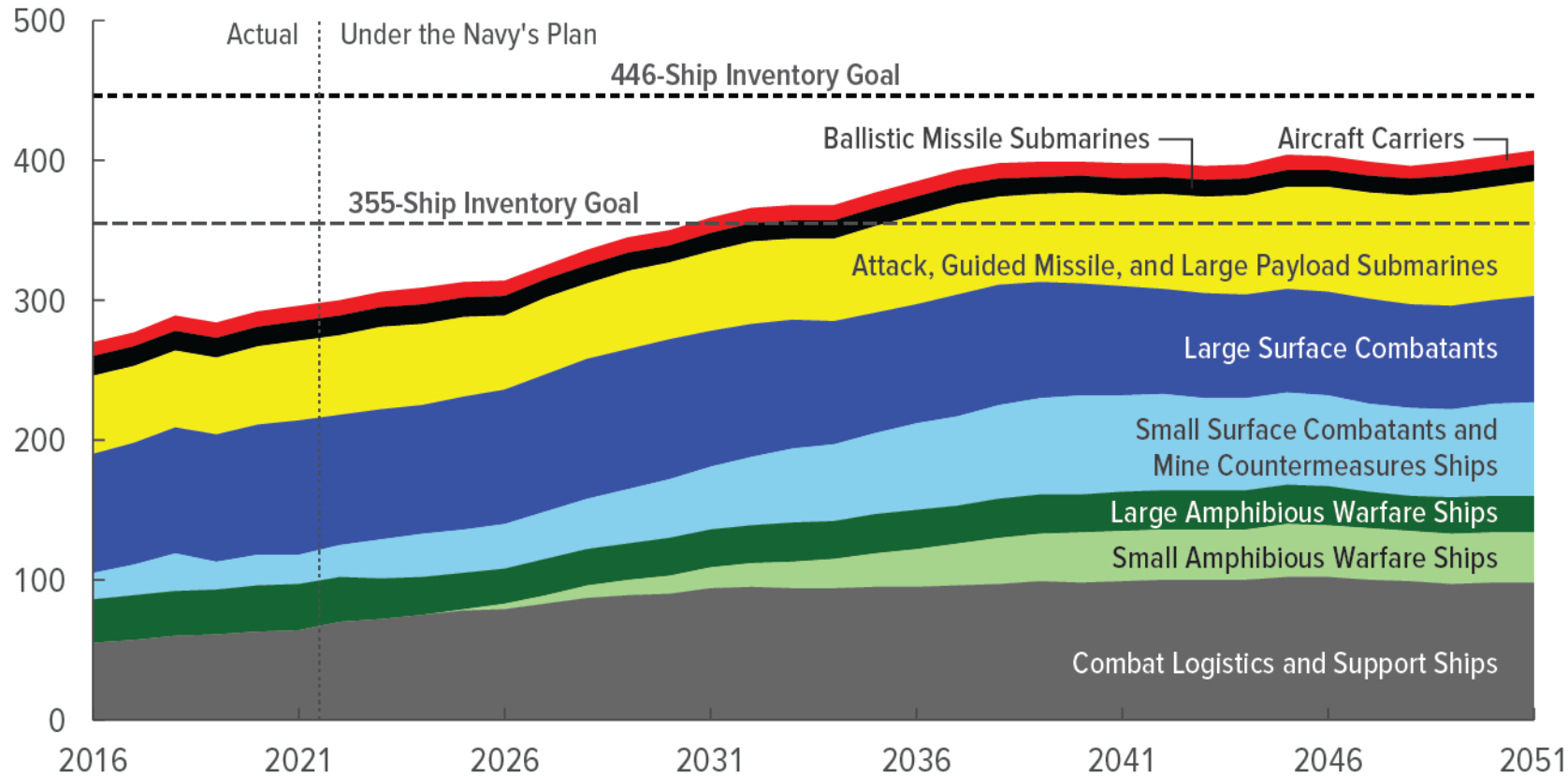
New-ship construction and service life extensions would increase the Navy's fleet to 355 ships under its FY 2020 plan.

Source: Congressional Budget Office, *An Analysis of the Navy's Fiscal Year 2020 Shipbuilding Plan* (October 2019), www.cbo.gov/publication/55685.

FY = fiscal year; SSBNs = ballistic missile submarines; SSGNs = guided missile submarines.

Inventory of Battle Force Ships Under the Navy's December 9, 2020, Shipbuilding Plan

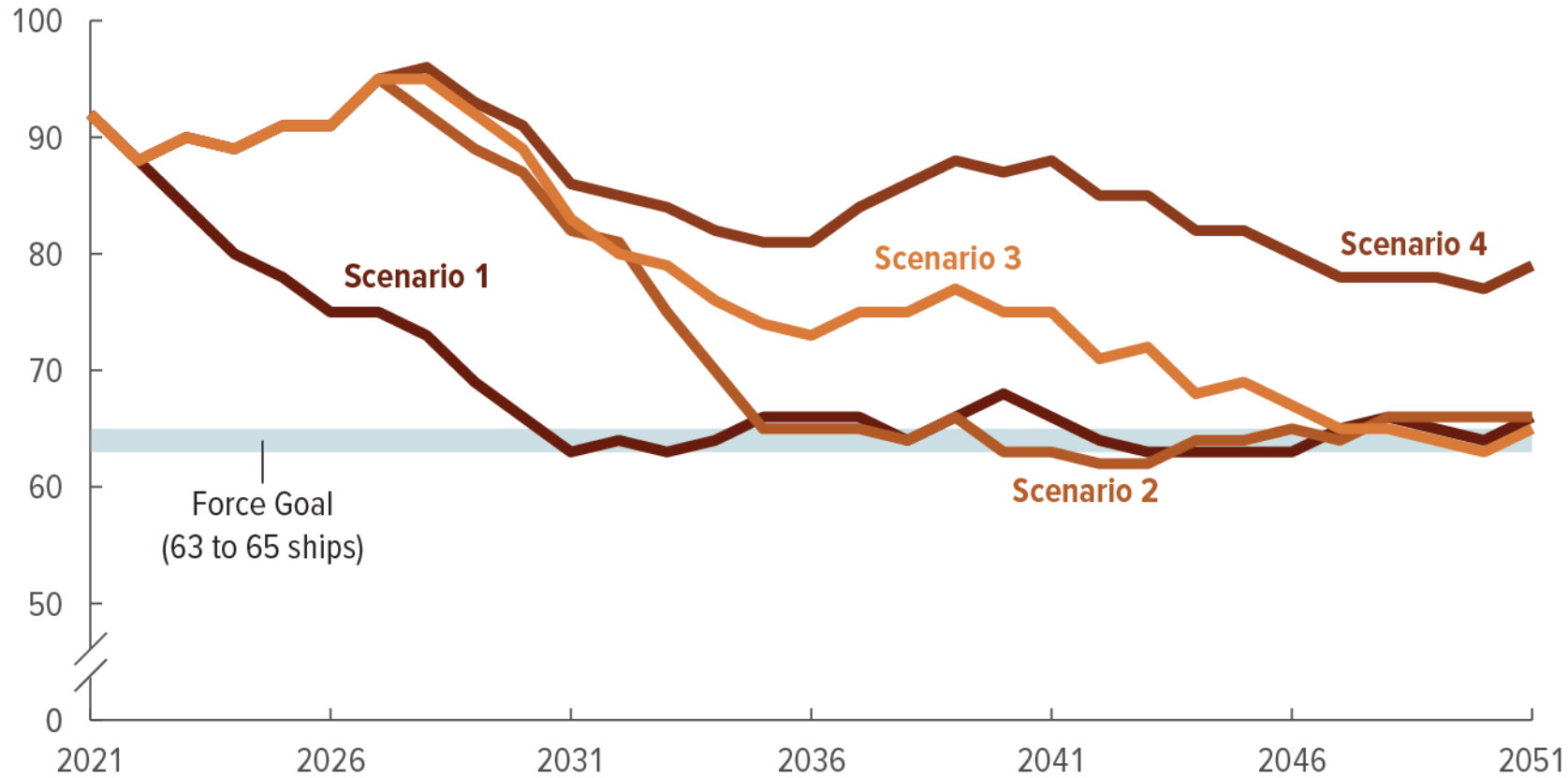
Number of Ships



As new ships entered the fleet, its composition would slowly shift. By 2051, the submarine force would be much larger, the number of small surface combatants would almost equal the number of large surface combatants, and small amphibious warfare ships would outnumber the large ones.

Reducing the Size of the Large Surface Combatant Force Under the 2022 Shipbuilding Plan

Number of Ships



The Navy could reduce its large surface combatant force by shortening the service life of existing destroyers, by decreasing the rate at which it procures new destroyers, or by combining both methods.

Source: Congressional Budget Office, *An Analysis of the Navy's Fiscal Year 2022 Shipbuilding Plan* (September 2021), www.cbo.gov/publication/57414.

Under Scenario 1, the Navy would retire ships quickly to meet force goals by 2030 and would maintain the size of the force with a steady-state build rate of 1.8 destroyers per year.

Under Scenario 2, the Navy would maintain a steady-state build rate of two destroyers per year and would reduce the size of the force with retirements by 2035.

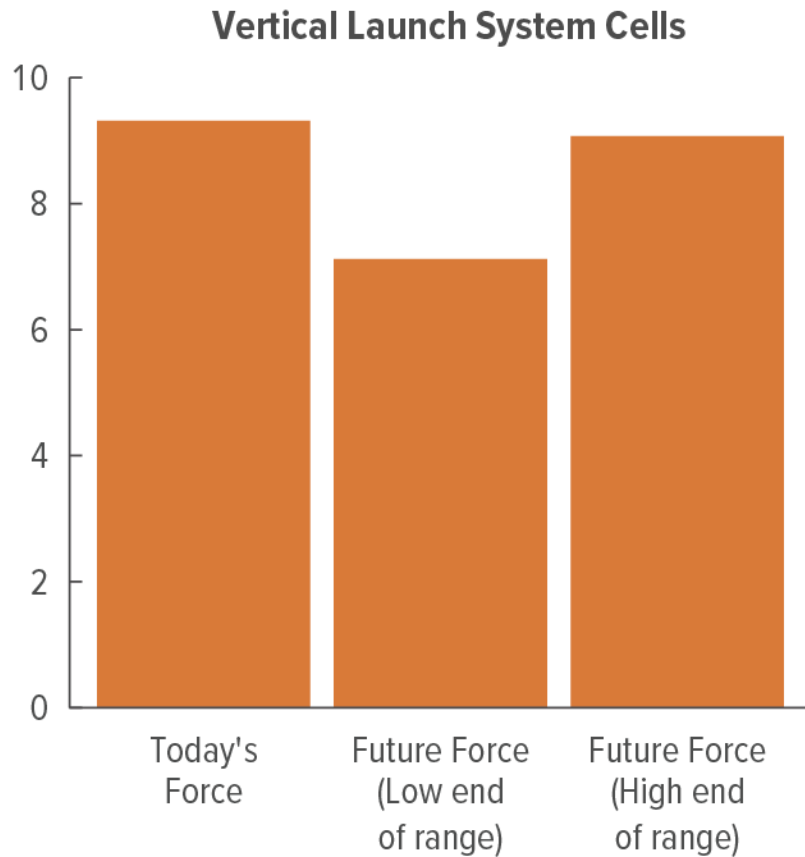
Under Scenario 3, the Navy would maintain the 35- to 40-year service life for destroyers and buy one new destroyer per year through 2036 and two new destroyers per year thereafter.

Under Scenario 4, the Navy would maintain the 35- to 40-year service life for destroyers and buy two new destroyers per year (the current rate of purchase).

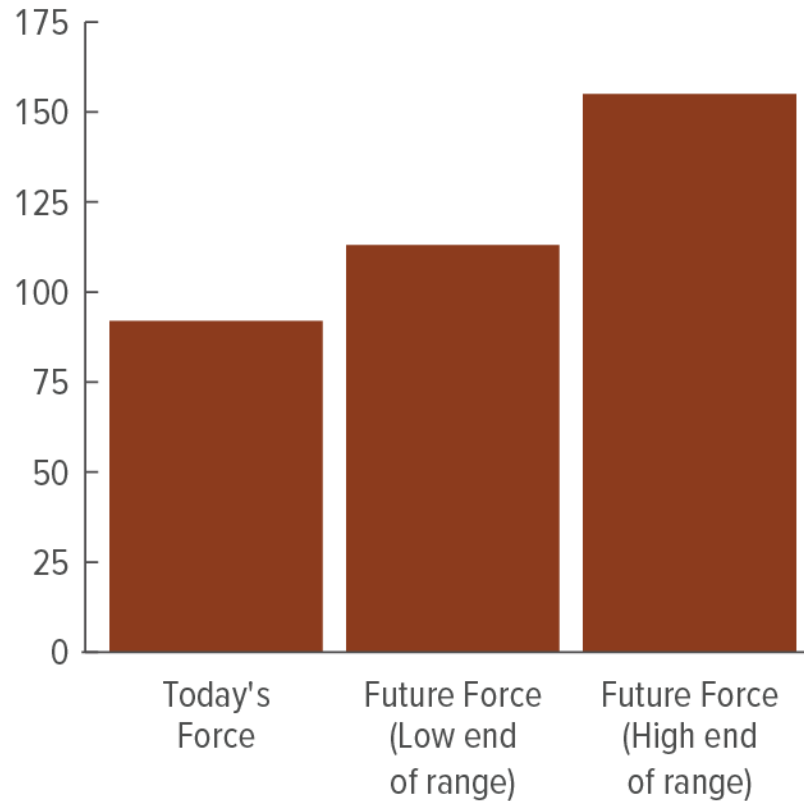
The Vertical Launch System Capability of the Surface Force Under the Navy's 2022 Shipbuilding Plan

Number, in Thousands

Number



Surface Combatants and Unmanned Surface Vessels Carrying Vertical Launch System Cells

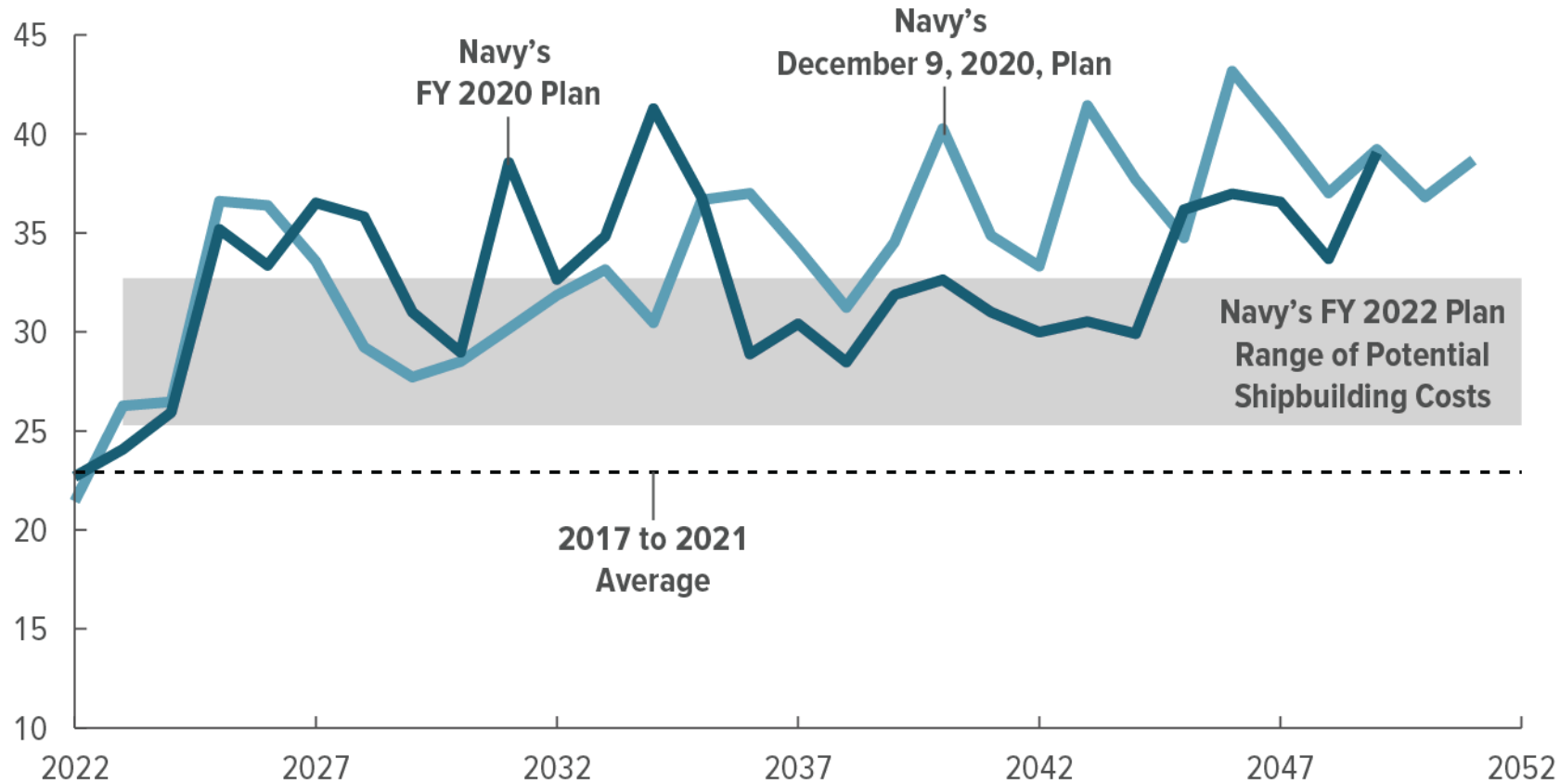


Under the Navy's 2022 plan, the surface forces (manned and unmanned) would eventually have between 3 percent and 24 percent fewer vertical launch system cells than today's fleet, but the cells would be deployed on 23 percent to 68 percent more ships.

Paying for the Navy's Shipbuilding Plans

Annual Shipbuilding Costs Under the Navy's Recent Plans

Billions of 2021 Dollars



The Navy's three most recent shipbuilding plans would each cost, on average, more than the Navy has received in appropriations over the past five years, the period with the highest amount of shipbuilding appropriations since the 1980s.