

Perspectives on the Navy's 2023 Shipbuilding Plan

January 12, 2023

Presentation at the Surface Navy Association's 35th National Symposium

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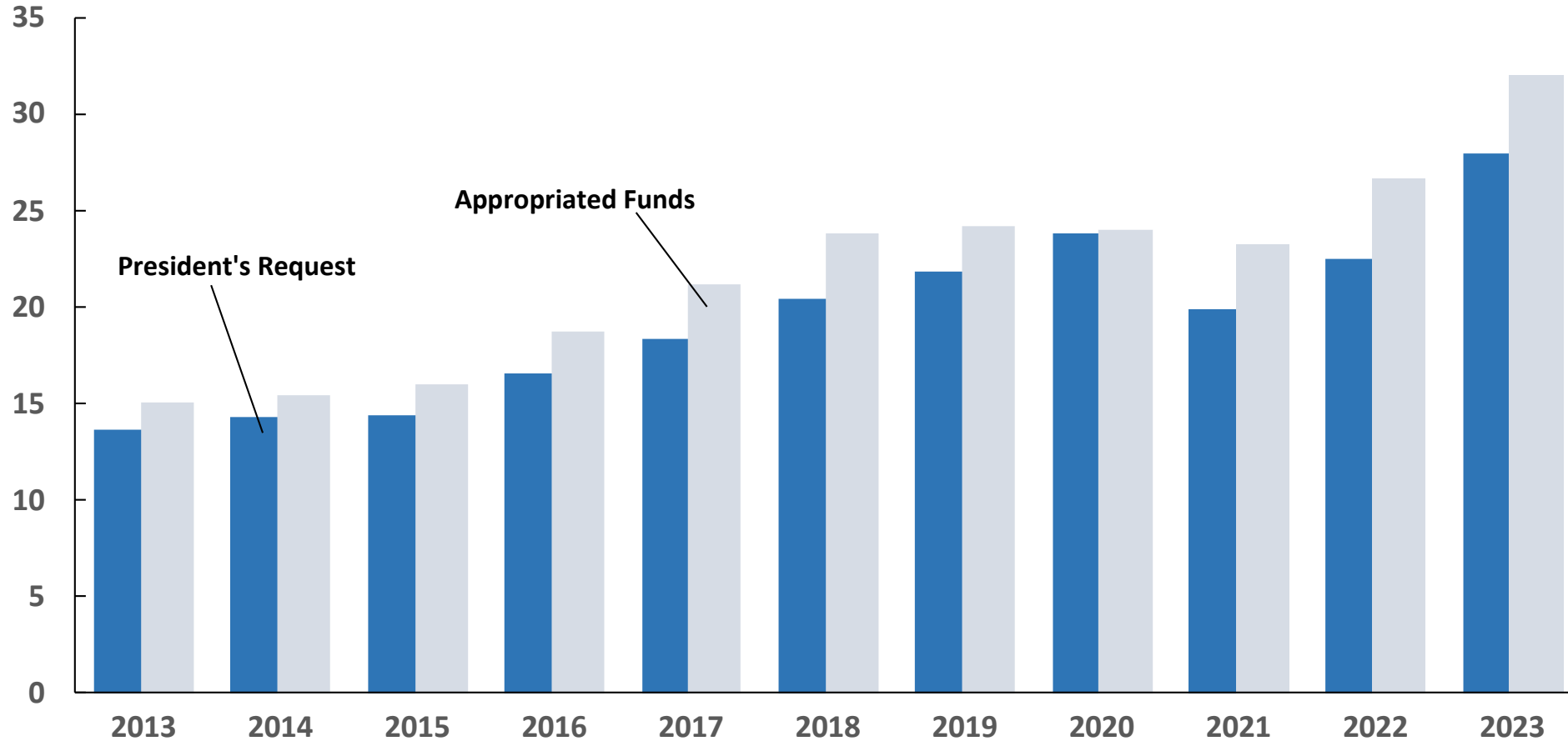
The Navy's Shipbuilding Plan for Fiscal Year 2023: Background and Analysis

- Congressional Support for Shipbuilding
- The Navy's Evolving Force Structure Analysis and Shipbuilding Plans
- CBO's Analysis of the Navy's 2023 Shipbuilding Plan
 - Purchases and Their Effects on Inventory
 - Costs
 - Measures of Capability

Congressional Support for Shipbuilding

Shipbuilding Requests and Appropriations, FY 2013 to FY 2023

Billions of Dollars



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



Congressional Action on Shipbuilding for FY 2023

	President's Request	HASC	SASC	NDAAs	HAC-D	SAC-D	Omnibus Bill
	Ship Purchases						
Destroyers	2	3	2	3	2	3	3
Submarines	2	2	2	2	2	2	2
Frigates	1	2	1	1	1	1	1
Amphibious Ships	2	1	1	1	1	1	1
Logistics and Support Ships	<u>2</u>	<u>5</u>	<u>2</u>	<u>4</u>	<u>2</u>	<u>4</u>	<u>4</u>
Total	9	13	8	11	8	11	11
	Shipbuilding Budgets (Billions of dollars)						
New Combat Ships	23.9	27.0	24.5	26.7	23.8	27.1	26.7
New Logistics and Support Ships	0.9	2.3	0.9	1.5	0.9	1.5	1.5
Other	<u>3.1</u>	<u>3.3</u>	<u>4.0</u>	<u>4.4</u>	<u>3.0</u>	<u>3.3</u>	<u>3.8</u>
Total	27.9	32.7	29.3	32.6	27.8	31.9	32.0
Amount Above President's Request		4.8	1.4	4.7	-0.1	4.0	4.1
Percentage of Increase Above FY 2022 Amounts	23%	15%	17%	19%	18%	19%	20%

FY = fiscal year; HAC-D = House Appropriations Committee, Defense Appropriations Subcommittee; HASC = House Armed Services Committee; NDAAs = National Defense Authorization Act for 2023; SAC-D = Senate Appropriations Committee, Defense Appropriations Subcommittee; SASC = Senate Armed Services Committee.

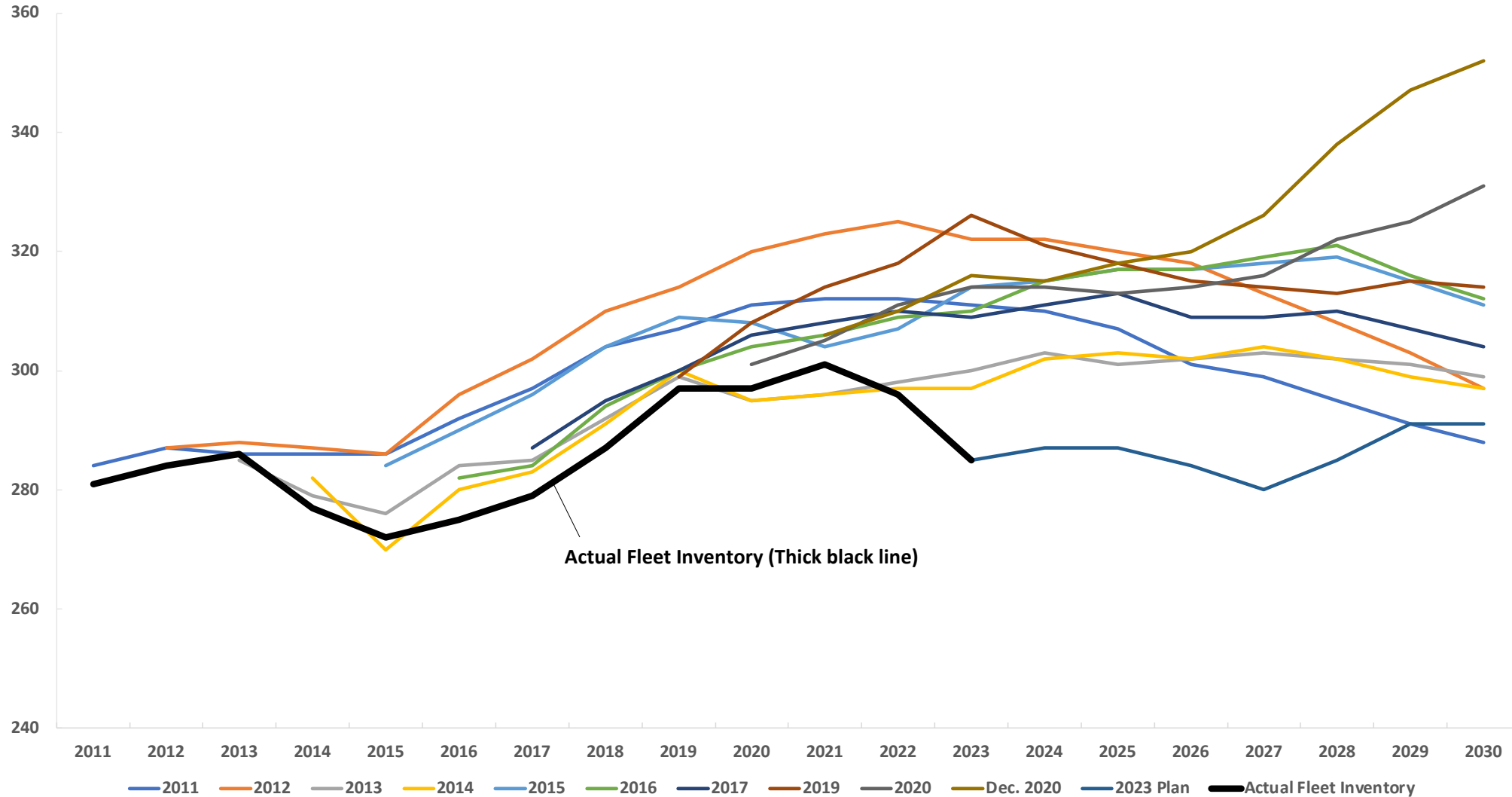
The Navy's Evolving Force Structure Analysis and Shipbuilding Plans

The Navy's Inventory Analysis and Goals, Circa 2018 to 2022

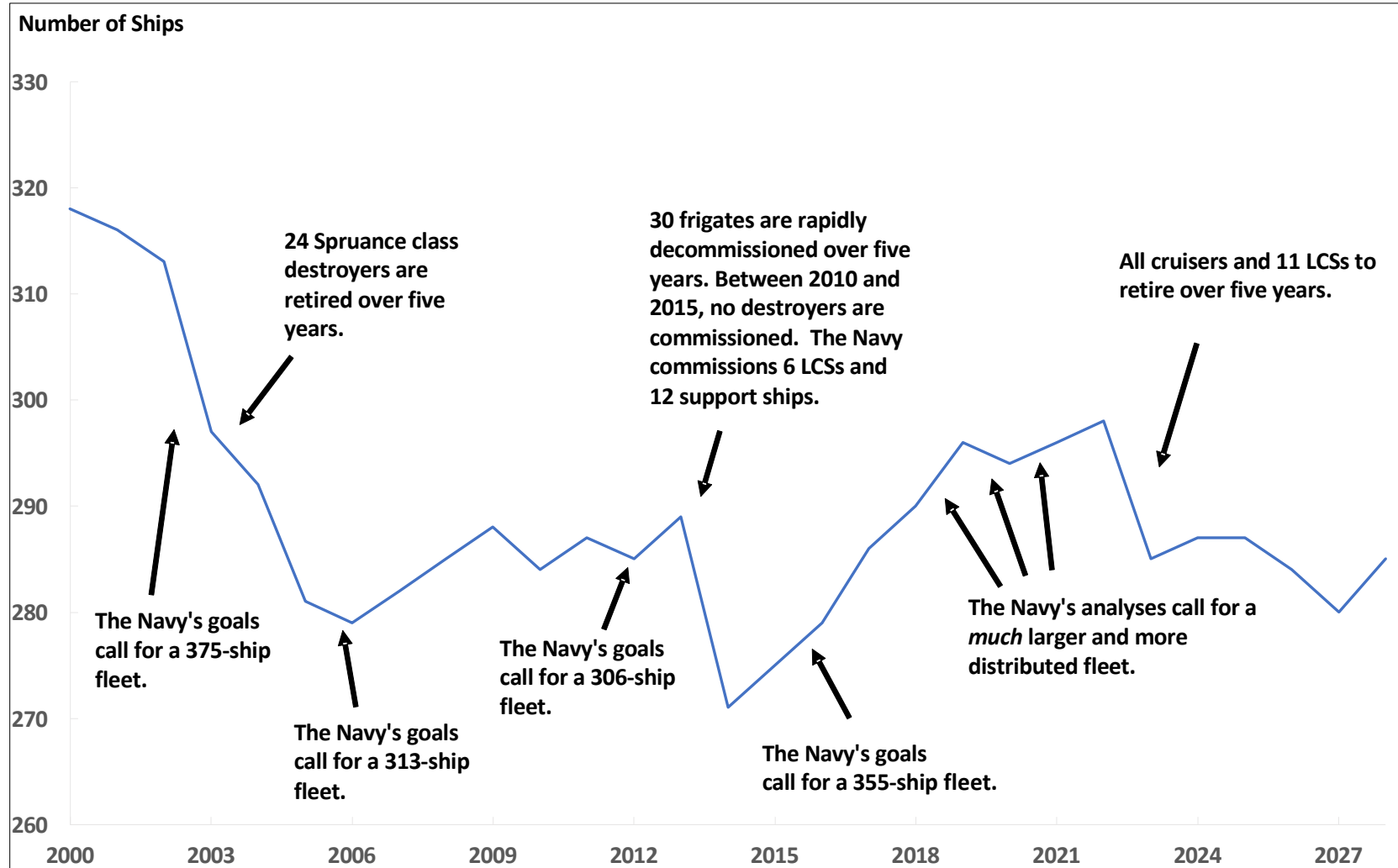
	2020 Future Naval Forces Study (December 2020 plan)	2020 Integrated FSA (Reported in 2023 Plan)	Future Naval Forces Study Future Fleet Architecture (Reported in 2023 Plan)	Navy's 2022 Shipbuilding Plan	Chief of Naval Operations' <i>Navigation Plan 2022</i>
Aircraft Carriers	8 to 11	12	8 to 11	9 to 11	12
Light Carriers	0 to 6	0	0 to 6	n.a.	0
Ballistic Missile Submarines	12	12	12	12	12
Attack and Guided Missile Submarines	72 to 78	66	58 to 70	66 to 72	66
Large Surface Combatants	73 to 88	96	72 to 80	63 to 65	96
Small Surface Combatants	60 to 67	56	47 to 60	40 to 45	56
Large/Midsize Amphibious Ships					
Amphibious Assault Ships	9 to 10	10	6 to 10	8 to 9	10
Midsize Amphibious Ships	52 to 57	41	30 to 43	16 to 19	21
Light Amphibious Warships				24 to 35	18
Combat Ships Subtotal	286 to 329	293	233 to 292	238 to 268	291
Logistics and Support Ships	<u>96 to 117</u>	<u>97</u>	<u>78 to 136</u>	<u>83 to 104</u>	<u>82</u>
Total, Manned Battle Force Ships	382 to 446	390	337 to 404	321 to 372	373
Unmanned Surface Vessels	119 to 166	27	81 to 153	59 to 89	Unknown
Unmanned Undersea Vessels	24 to 76	18	18 to 50	18 to 51	Unknown
Total, Unmanned Vessels	<u>143 to 242</u>	<u>45</u>	<u>99 to 203</u>	<u>77 to 140</u>	<u>About 150</u>
Total, All Ships and Vessels	525 to 688	435	440 to 540	398 to 512	About 523



The Navy's Projections of Its Fleet Under the Past 11 Shipbuilding Plans, Compared With Actual Inventories



Early Ship Retirements Have Undermined the Navy's Goals to Increase the Size of Its Fleet



This chart does not reflect the Navy's proposal, in 2015, to adjust the way battle force ships are counted.

LCS = littoral combat ship.



CBO's Analysis of the Navy's 2023 Shipbuilding Plan: Purchases and Their Effects on Inventory



The Navy's Five-Year Shipbuilding Plan, 2023 to 2027

	2023	2024	2025	2026	2027	Total
Columbia Class Ballistic Missile Submarines	0	1	0	1	1	3
Virginia Class Attack Submarines	2	2	2	2	2	10
Arleigh Burke Class Destroyers	2	2	2	2	2	10
Constellation Class Guided Missile Frigates	1	2	1	2	1	7
America Class Amphibious Assault Ships	*	0	0	0	0	0
San Antonio Class Amphibious Transport Docks	1	0	0	0	0	1
Light Amphibious Warships	0	0	1	1	2	4
John Lewis Class Oilers	1	2	1	1	1	6
Next-Generation Logistics Ships	0	0	0	1	1	2
Support Ships	1	0	2	3	1	7
Total	8	9	9	13	11	50
T-ARC Cable Laying Ships	0	1	0	0	0	1
Used Sealift Ships	2	2	2	2	2	10
Large Unmanned Systems	0	0	3	4	5	12
Total, Shipbuilding Costs (Billions of dollars)	27.9	28.9	30.9	33.0	29.9	150.6

* = The Administration counts an amphibious assault ship as being authorized in 2023, although the Congress authorized that ship in 2020.



Steady-State Ship Purchases Required to Meet the Navy's Inventory Goals From Circa 2018 to 2022

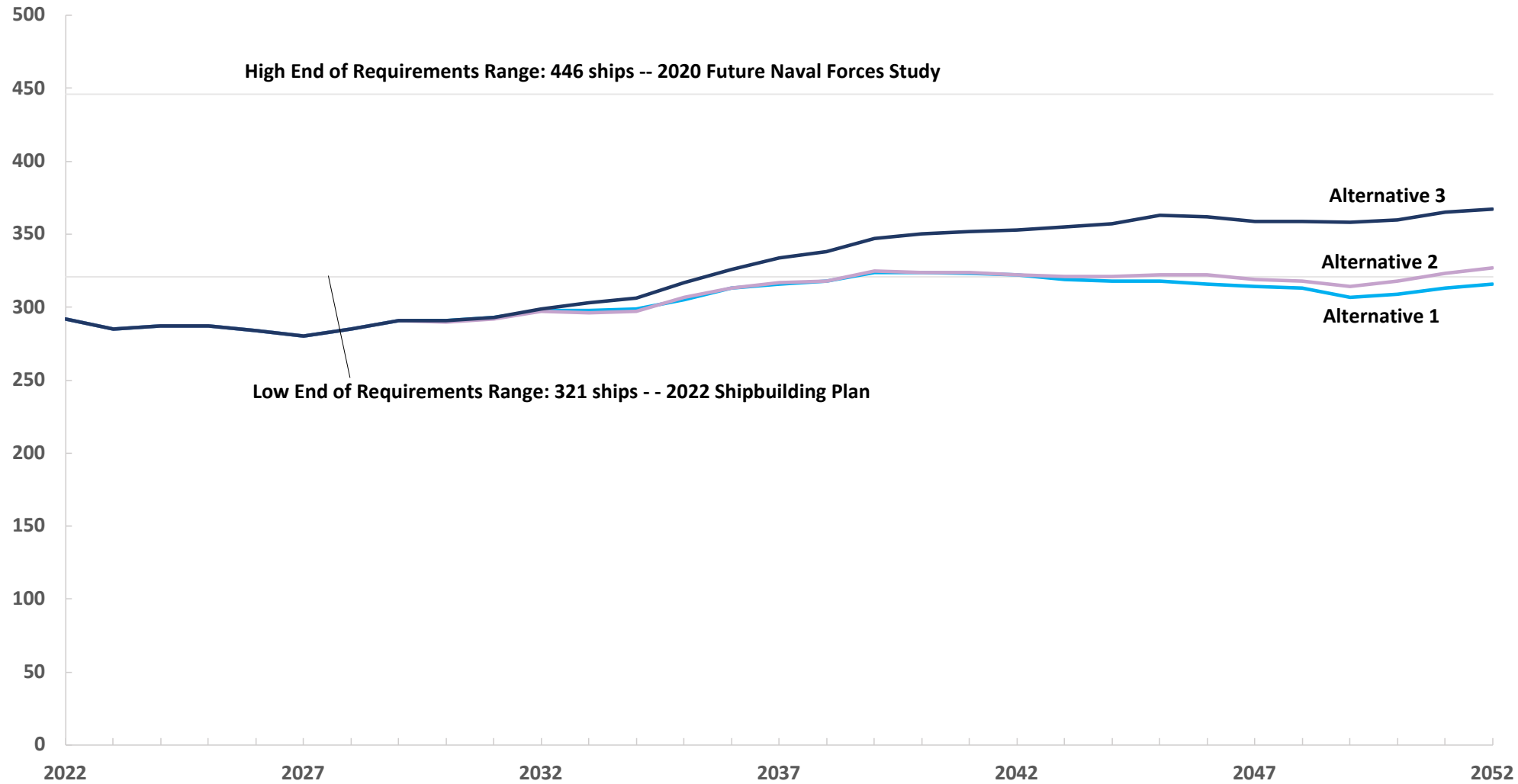
Inventory Goal	Average Annual Ship Purchases, by Service Life			Memorandum: FYDP Average
Large Surface Combatants				
Service Life (Years)	<u>30</u>	<u>35</u>	<u>40</u>	
96 Ships	3.2	2.7	2.4	2.0
63 Ships	2.1	1.8	1.6	2.0
Small Surface Combatants				
Service Life (Years)	<u>20</u>	<u>25</u>	<u>30</u>	
67 Ships	3.4	2.7	2.2	1.4
40 Ships	2.0	1.6	1.3	1.4



Ship Purchases Under the Navy's 2023 Plan

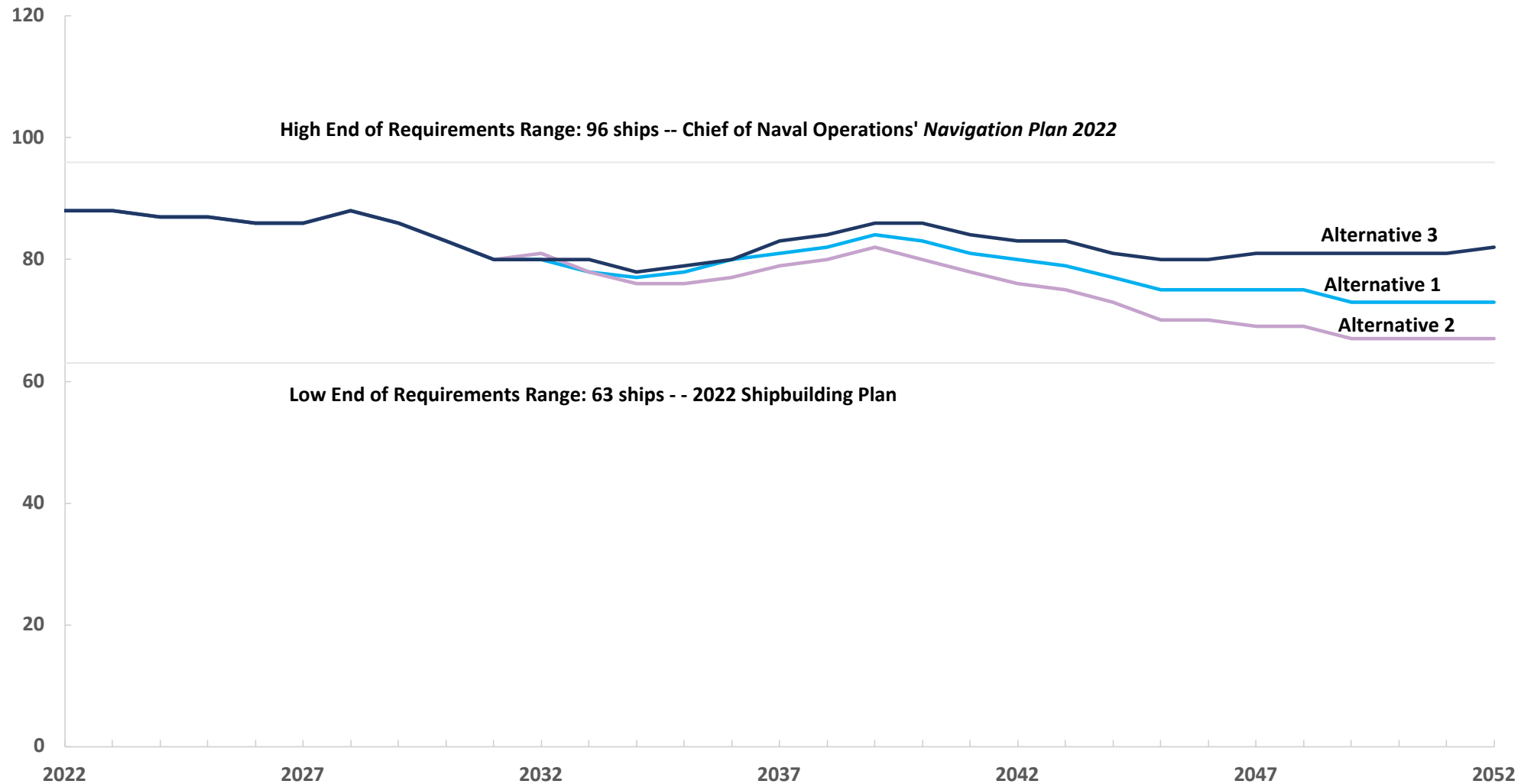
	Alternative 1	Alternative 2	Alternative 3
Aircraft Carriers	5	5	7
Ballistic Missile and Large Payload Submarines	15	17	15
Virginia Class Attack Submarines With VPMs	23	33	27
Virginia Class Attack Submarines Without VPMs	0	16	0
SSN(X)s	31	17	33
DDG-51 Flight IIIs	16	18	17
DDG(X)s	38	29	47
FFG-62	17	11	17
FFG-62 Flight IIs	35	44	40
Large and Midsize Amphibious Warfare Ships	10	13	14
Light Amphibious Warships	40	34	49
Combat Logistics and Support Ships	<u>52</u>	<u>57</u>	<u>74</u>
Total	282	294	340

Battle Force Ships: Requirements and Projections Under the Navy's 2023 Plan



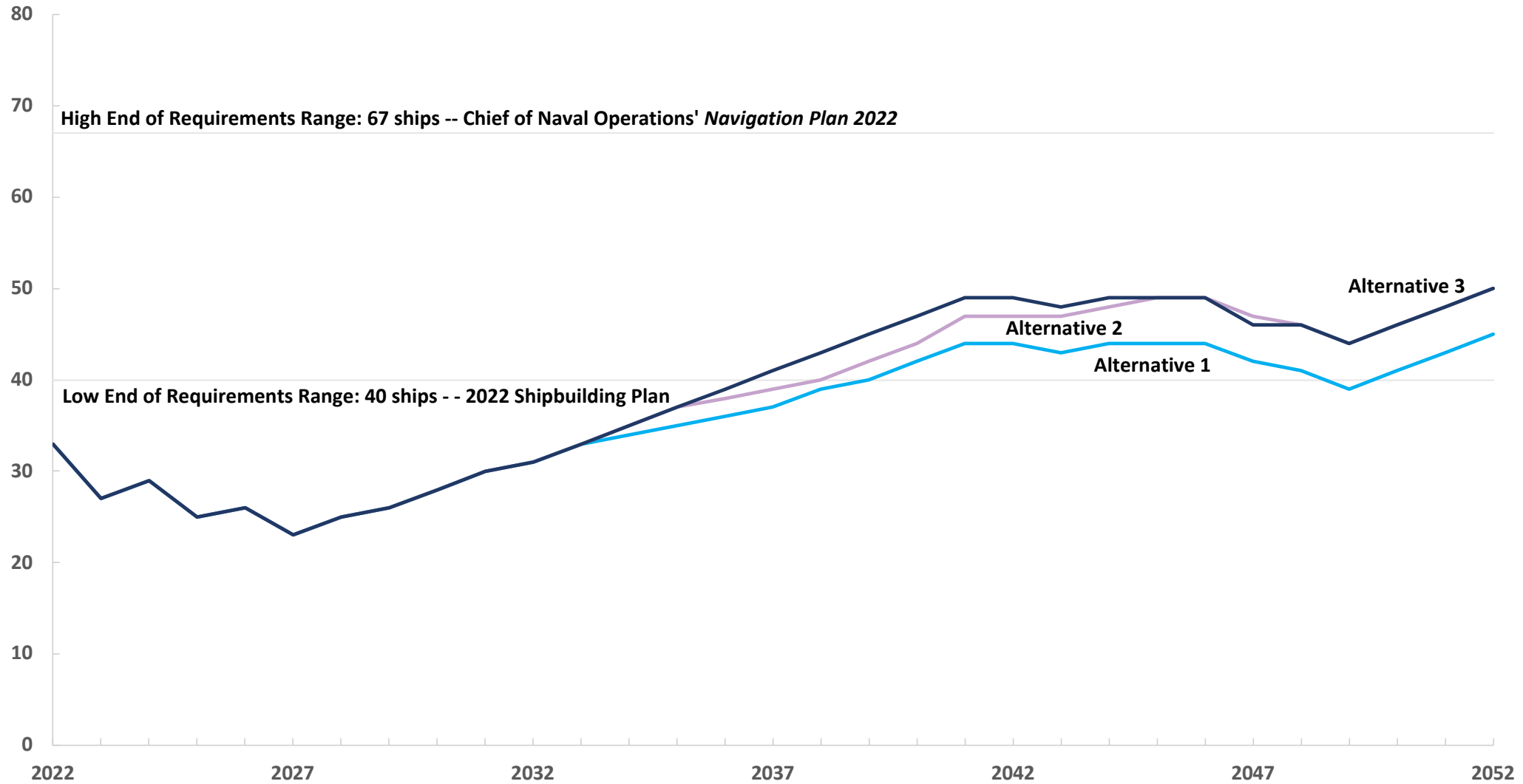


Large Surface Combatants: Requirements and Projections Under the Navy's 2023 Plan





Small Surface Combatants: Requirements and Projections Under the Navy's 2023 Plan



Why Is There a Mismatch Between the Navy's Shipbuilding Analysis/Goals and Ship Purchases?

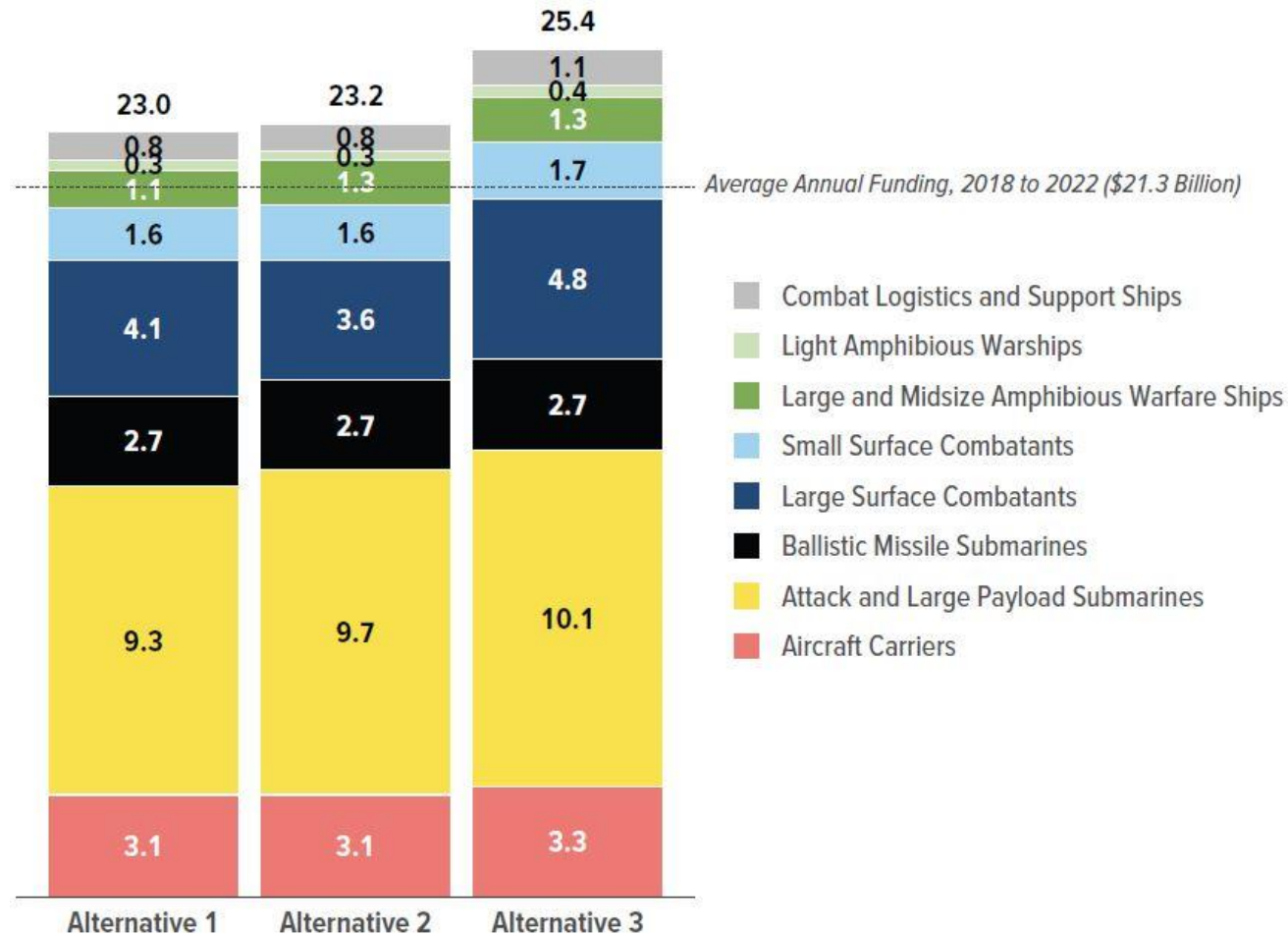
The mismatch is the result of many factors, including:

- Costs,
- Natural lag,
- Bureaucratic inertia,
- Congressional skepticism,
- Constraints on the industrial base,
- The shipbuilding industry's preference for building existing product lines,
- Tension between wartime needs and peacetime operations, and
- The lack of a natural constituency for a more distributed fleet.

CBO's Analysis of the Navy's 2023 Shipbuilding Plan: Costs

The Navy's Estimates of Average Annual Costs of New-Ship Construction Under Its 2023 Plan, by Ship Type

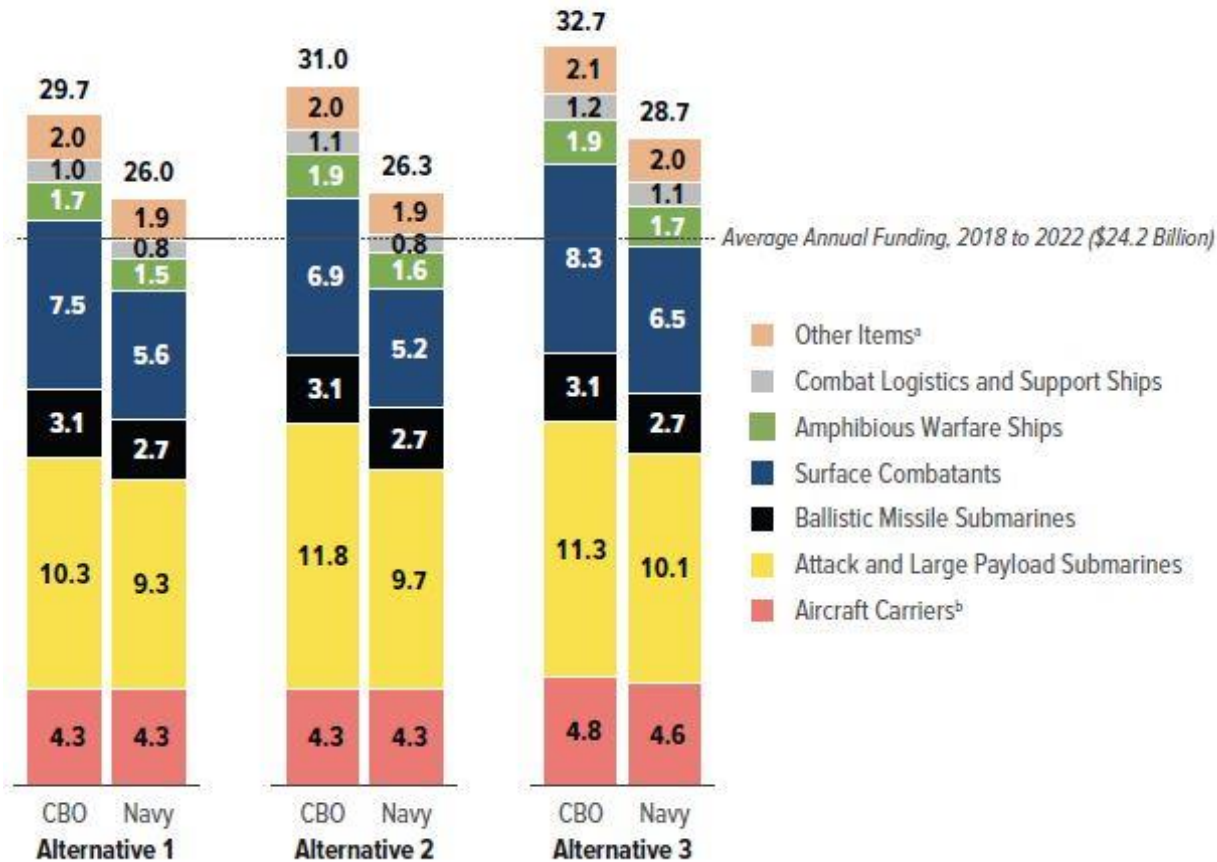
Billions of 2022 Dollars



The Navy estimates that building new ships would cost from \$23 billion to \$25 billion per year, on average, under the three alternatives in its 2023 plan.

Average Annual Total Shipbuilding Costs Under the Navy's 2023 Plan, as Estimated by CBO and the Navy

Billions of 2022 Dollars



CBO estimates that the alternatives in the 2023 shipbuilding plan would cost more than the Navy anticipates.

Source: Congressional Budget Office, *An Analysis of the Navy's Fiscal Year 2023 Shipbuilding Plan* (November 2022), www.cbo.gov/publication/58447.

a. Includes construction of ships that are not part of the Navy's battle force (such as oceanographic survey ships or sealift ships), outfitting and postdelivery activities (including the purchase of smaller tools and pieces of equipment that are needed to operate a ship but that are not provided by the manufacturing shipyard as part of ship construction), efforts to extend ships' service life, service craft, and smaller items.

b. Includes funding for building new aircraft carriers as well as refueling the nuclear power plants of aircraft carriers already in the fleet.

Major Cost Drivers of the Navy's 2023 Plan: The DDG(X)

The Navy estimates that the average cost of the DDG(X) would vary from \$2.3 billion to \$2.4 billion per year—10 percent more than the estimated cost of the DDG-51 Flight III in the Navy's 2023 shipbuilding plan.

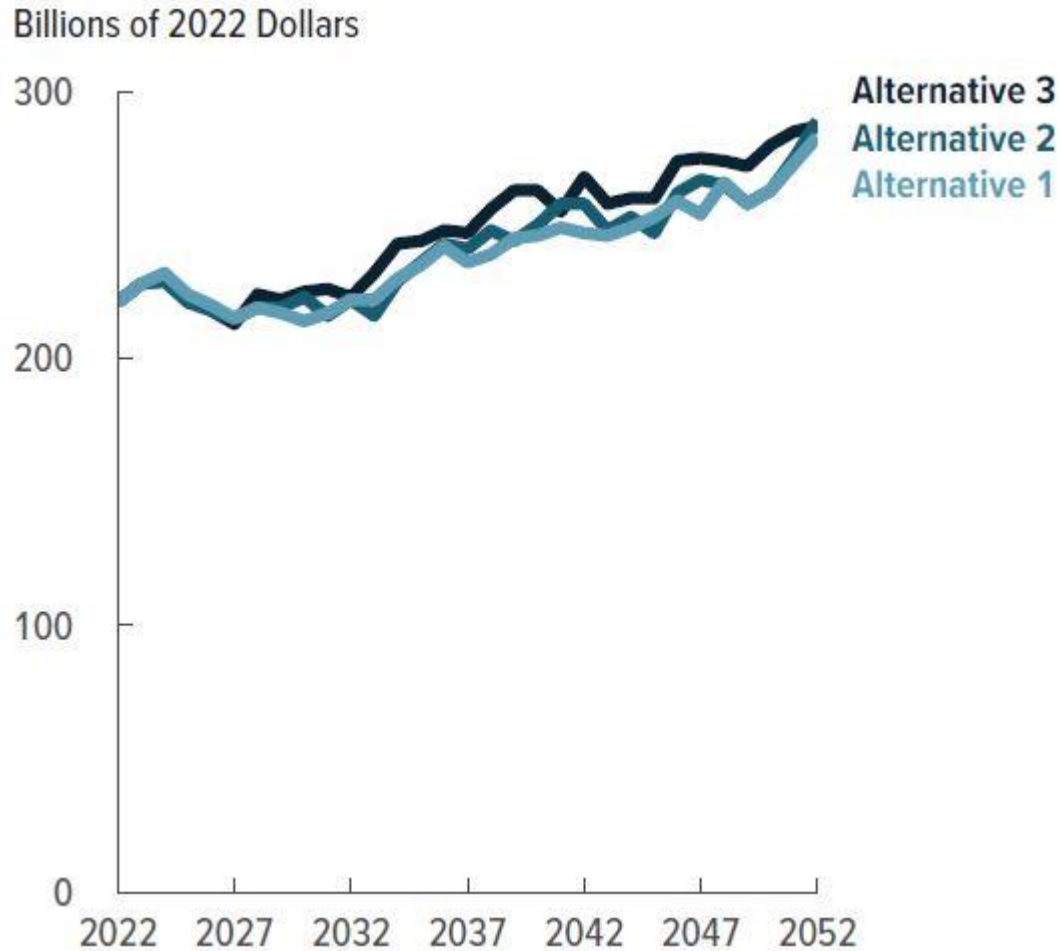
The Navy has indicated that the DDG(X) would displace 13,500 tons—40 percent greater than the displacement of the DDG-51 Flight III.

The Navy hopes that the reuse of combat systems with a new hull and new mechanical and electrical systems will keep costs down.

The transition from the CG-47 to the DDG-51 did not result in a substantial reduction in the cost-to-weight ratio. (It did result in a less expensive ship because the DDG-51 was a smaller ship.)

CBO estimates that each DDG(X) would cost, on average, between \$3.1 billion and \$3.4 billion, depending on the timing and number of ships purchased.

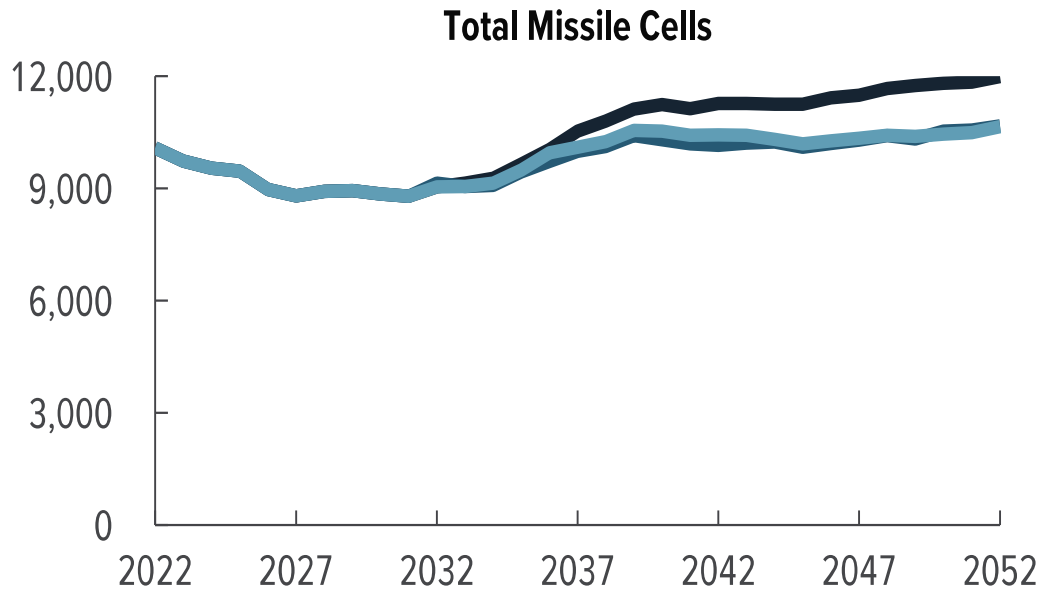
CBO's Estimate of the Navy's Total Budget Under Its 2023 Plan



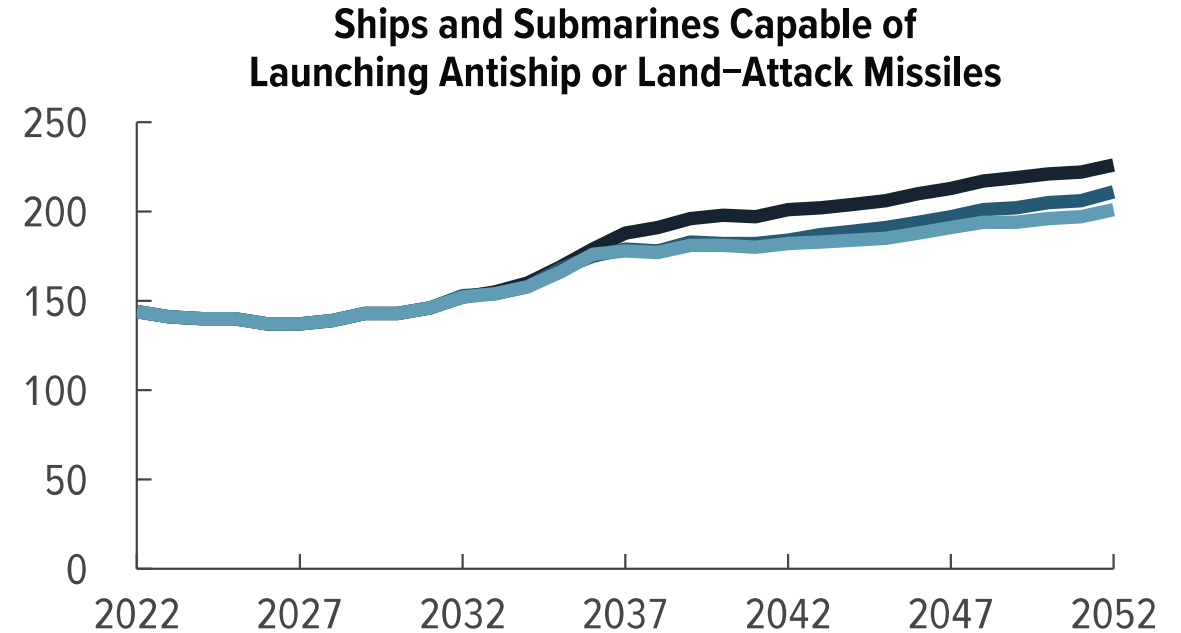
As the fleet grew in size under the alternatives in the 2023 plan, the Navy's total budget would grow from \$220 billion today to roughly \$290 billion by 2052.

CBO's Analysis of the Navy's 2023 Shipbuilding Plan: Measures of Capability

Measures of Lethality *and* Distribution of Firepower Under the Navy's 2023 Plan



The number of total missile cells decreases by 13 percent in 2031 before growing by 6 percent in 2052 under Alternatives 1 and 2, and by 19 percent under Alternative 3.



The total number of ships and submarines capable of launching missiles falls by 5 percent in 2026 before growing by 23 percent in 2052 under Alternative 1, 30 percent under Alternative 2, and 36 percent under Alternative 3.