



Congressional Budget Office

Presentation on CBO's Projections of the Costs of U.S. Nuclear Forces, 2014 to 2023

CRS Seminar

"The Cost of Nuclear Weapons": Program and Budget Issues for Congress
January 29, 2014

Michael Bennett, National Security Division

This presentation provides information published in *Projected Costs of U.S. Nuclear Forces, 2014 to 2023* (December 2013).

See www.cbo.gov/publication/44968

Projected Costs of U.S. Nuclear Forces, 2014 to 2023

- CBO projected cost of operating, maintaining, and modernizing U.S. nuclear forces over the next 10 years
 - As directed by the Congress in 2013 National Defense Authorization Act
- Approach:
 - Analyzed Department of Defense (DoD) and Department of Energy (DOE) budgets line-by-line to identify relevant programs
 - Projected budget lines out to 10 years, based on agencies' long-range plans for each program
 - Estimated potential cost growth beyond budgeted amounts based on historical averages
 - Also estimated nuclear-related costs

Costs of U.S. Nuclear Forces

(Billions of dollars)

Category	2014	Total, 2014 to 2023
Projected Budgeted Amounts for Nuclear Forces		
Nuclear delivery systems	9.7	136
Nuclear weapons, supporting laboratories, and naval reactors	8.3	105
Subtotal	18.0	241
Command, control, communications, and early-warning systems	5.1	56
Total Budgeted Amounts, Nuclear Forces	23.1	296
Additional Costs Based on Historical Cost Growth		
	n.a.	59
Total Estimated Cost of Nuclear Forces	23.1	355
Memorandum:		
Projected Budgeted Amounts for Other Nuclear-Related Activities	20.8	215

Source: CBO based on information from DoD and DOE

Notes: Other Nuclear-Related Activities include legacy costs of nuclear weapons and infrastructure, costs for threat reduction and arms control, and costs for missile defenses and other defenses

Primary Sources of Uncertainty

- Uncertainty about the cost of current plans
 - Cost growth estimated based on historical averages, but actual growth for specific systems could be higher or lower
 - Estimate incorporates judgments on which programs to include, and what fraction of costs to include for systems with both nuclear and nonnuclear roles (bombers; tactical systems; command, control, communications, and warning)
 - 25% of B-52 and Long Range Strike-Bomber (LRS-B) costs assigned to nuclear role
- Changes in plans
 - Budgetary pressures, changes in strategy, arms control, adjustments to deal with difficulties in development programs

Projected Budgeted Amounts for Triad, 2014 to 2023

(Billions of dollars)

Department	SSBNs	ICBMs	Bombers	Other	Total
DoD	71	20	29	11	132
DOE	11	4	10	n.a.	25
Total	82	24	40	11	156

Source: CBO based on information from DoD and DOE

Notes: The table reflects budgeted amounts for the departments of Defense and Energy, and it does not include potential cost growth. The amounts shown should not be considered independent estimates by CBO of the costs of U.S. nuclear forces.

SSBN = ballistic missile submarine; ICBM = intercontinental ballistic missile; n.a. = not applicable.

Does not include costs for tactical systems or command, control, communications, and warning systems.

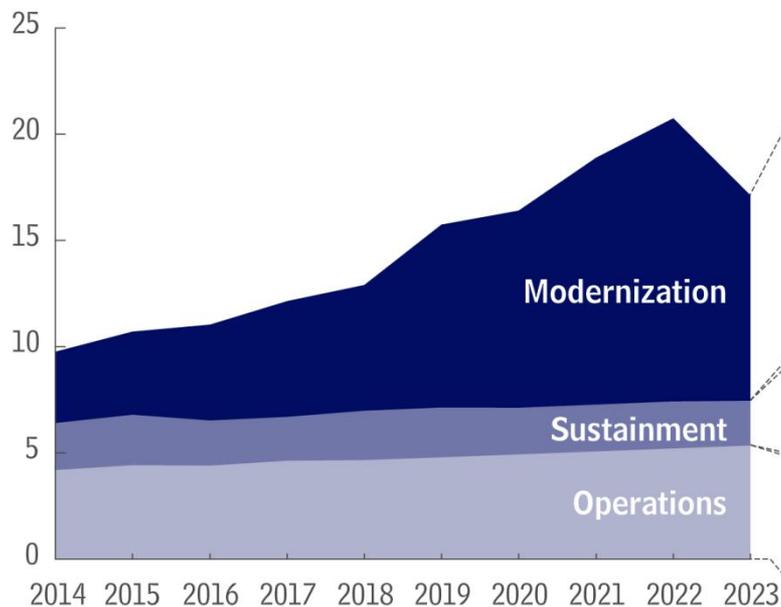
Bomber costs reflect 25% of B-52 and Long Range Strike-Bomber costs and 100% of B-2 costs.

DOE's costs reflect amounts specific to particular warhead types, and do not include other costs of nuclear laboratories and supporting activities.

Projected Budgets for Operating, Sustaining, and Modernizing the Strategic Nuclear Triad

(Billions of dollars)

Budgets, by Type of Activity



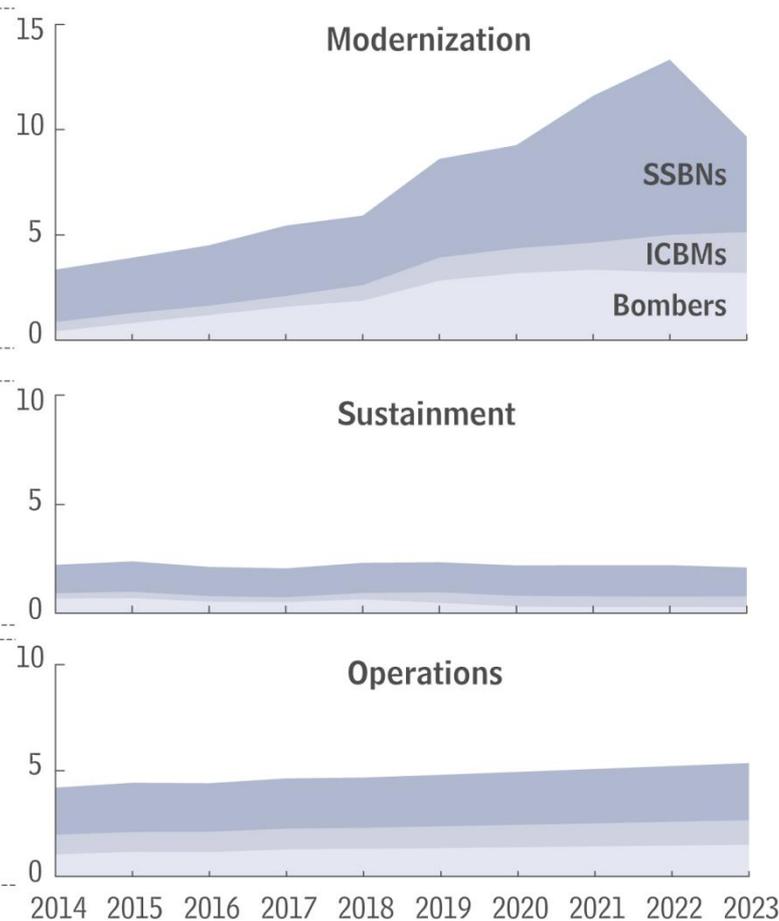
Definitions for this analysis:

Modernization = Department of Defense (DoD) research, development, test, and evaluation (RDTE) and procurement for replacement systems or major life-extensions of existing systems; Department of Energy (DOE) life-extension programs for warheads

Sustainment = all DoD RDTE and procurement NOT in modernization; DOE warhead sustainment

Operations = all DoD military personnel and operation and maintenance

Budgets for Each Type of Activity, by Leg of Triad

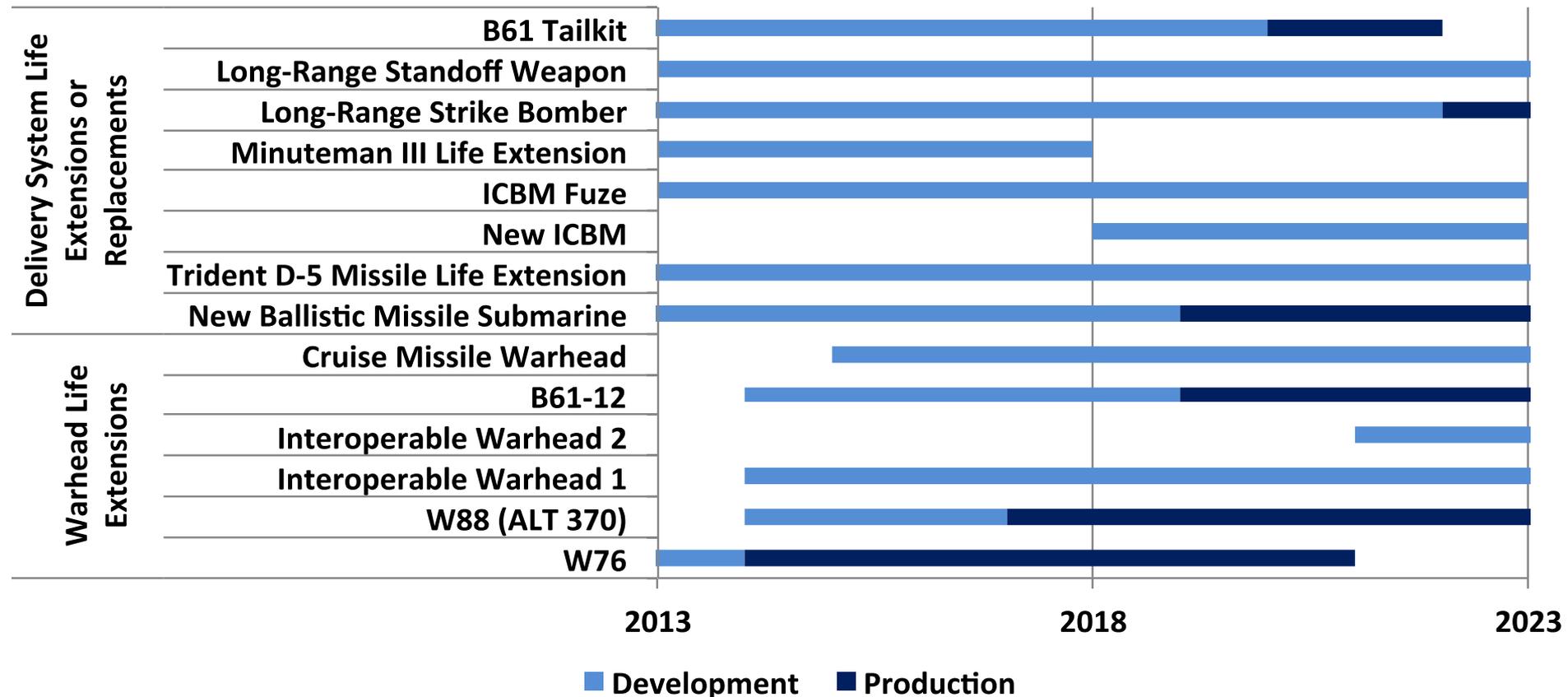


SSBN = ballistic missile submarine

ICBM = intercontinental ballistic missile

Approximate Modernization Program Timelines

Many programs will not yet be in, or will have just entered, production by 2023



For delivery systems, production is assumed to begin in the first year when estimated annual procurement funding exceeds research, development, test, and evaluation funding