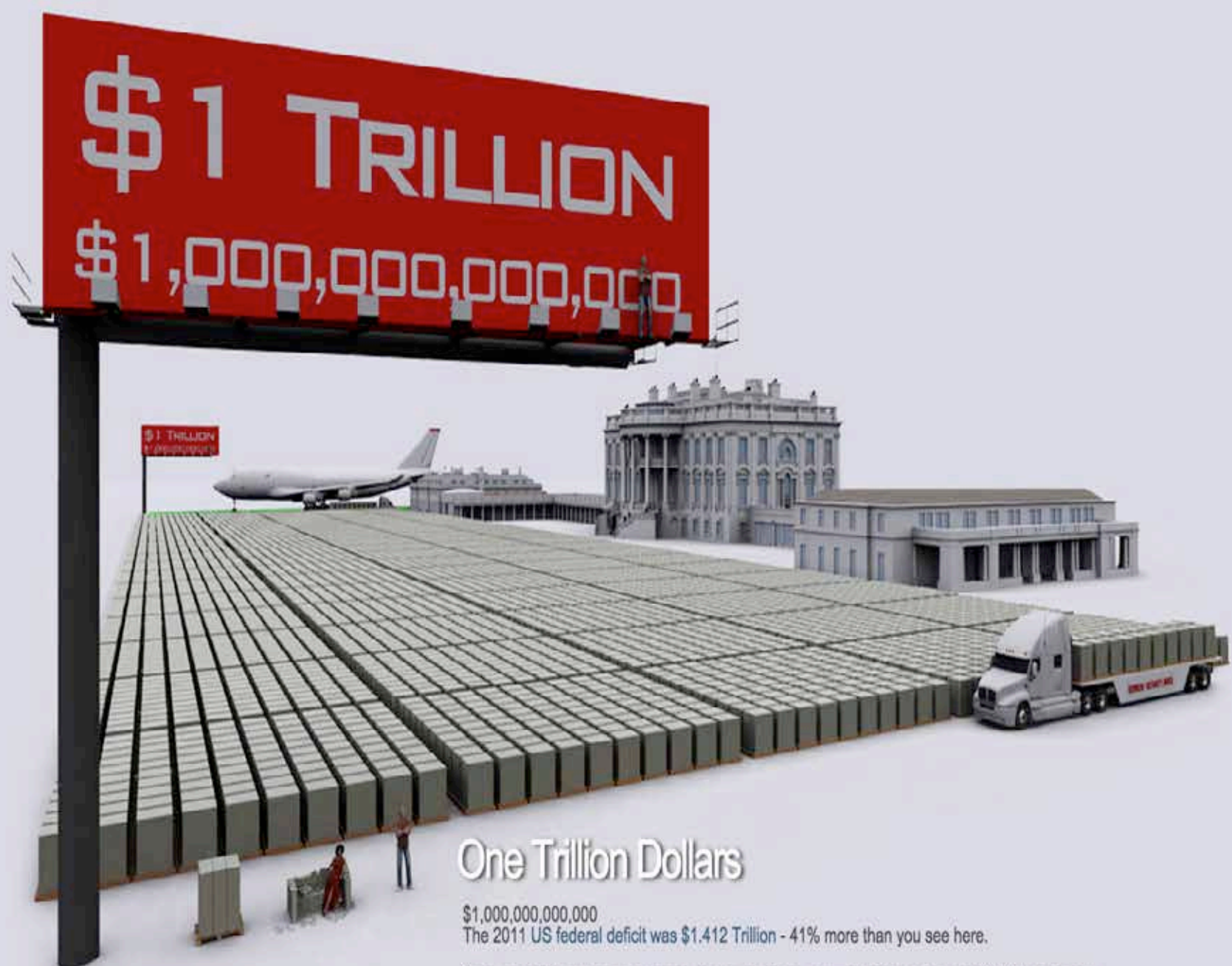


Is the US Nuclear Arsenal Worth a Trillion Dollars?



Tom Collina
Policy Director, Ploughshares Fund
April 2016



One Trillion Dollars

\$1,000,000,000,000
The 2011 US federal deficit was \$1.412 Trillion - 41% more than you see here.

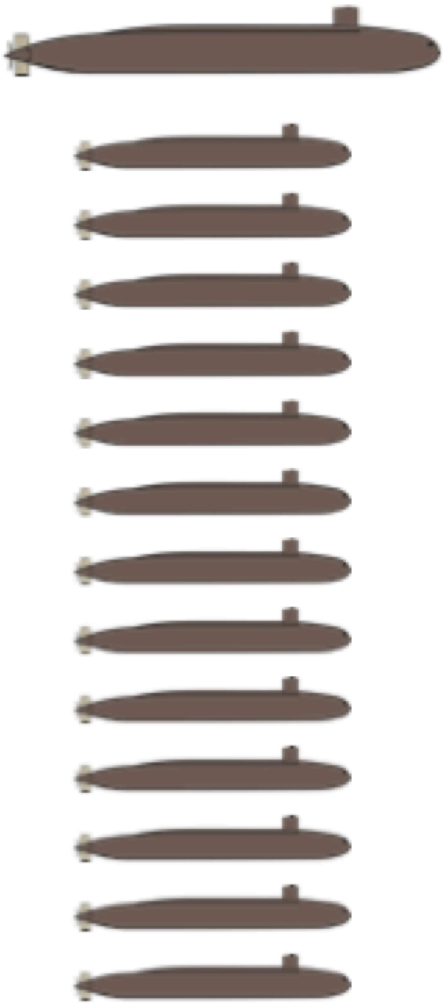
If you spent \$1 million a day since Jesus was born, you would have not spent \$1 trillion by now...
but ~\$700 billion- same amount the banks got during bailout.

What would you do with \$1 Trillion?

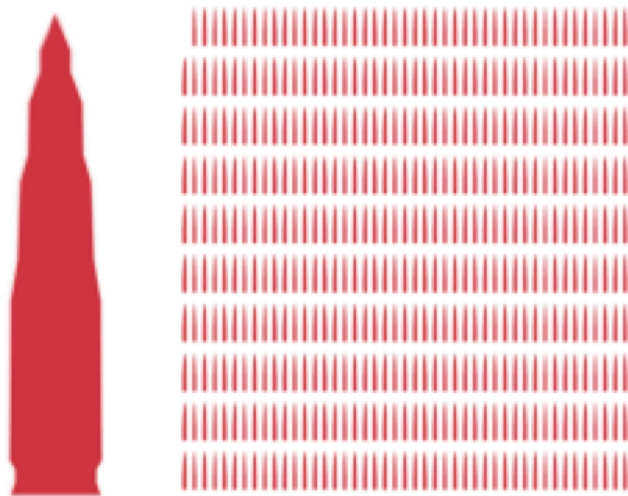
- Pay off national student loan debt (\$1.3 T)
- Rebuild national infrastructure
- Move to low-carbon economy, etc

- Or address higher priority global threats—
 - Terrorism
 - Proliferation
 - Cyber, etc

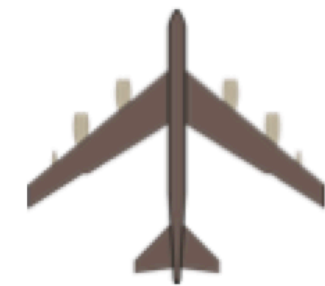
The Nuclear Triad



14 Ohio-class
Ballistic Missile Submarines

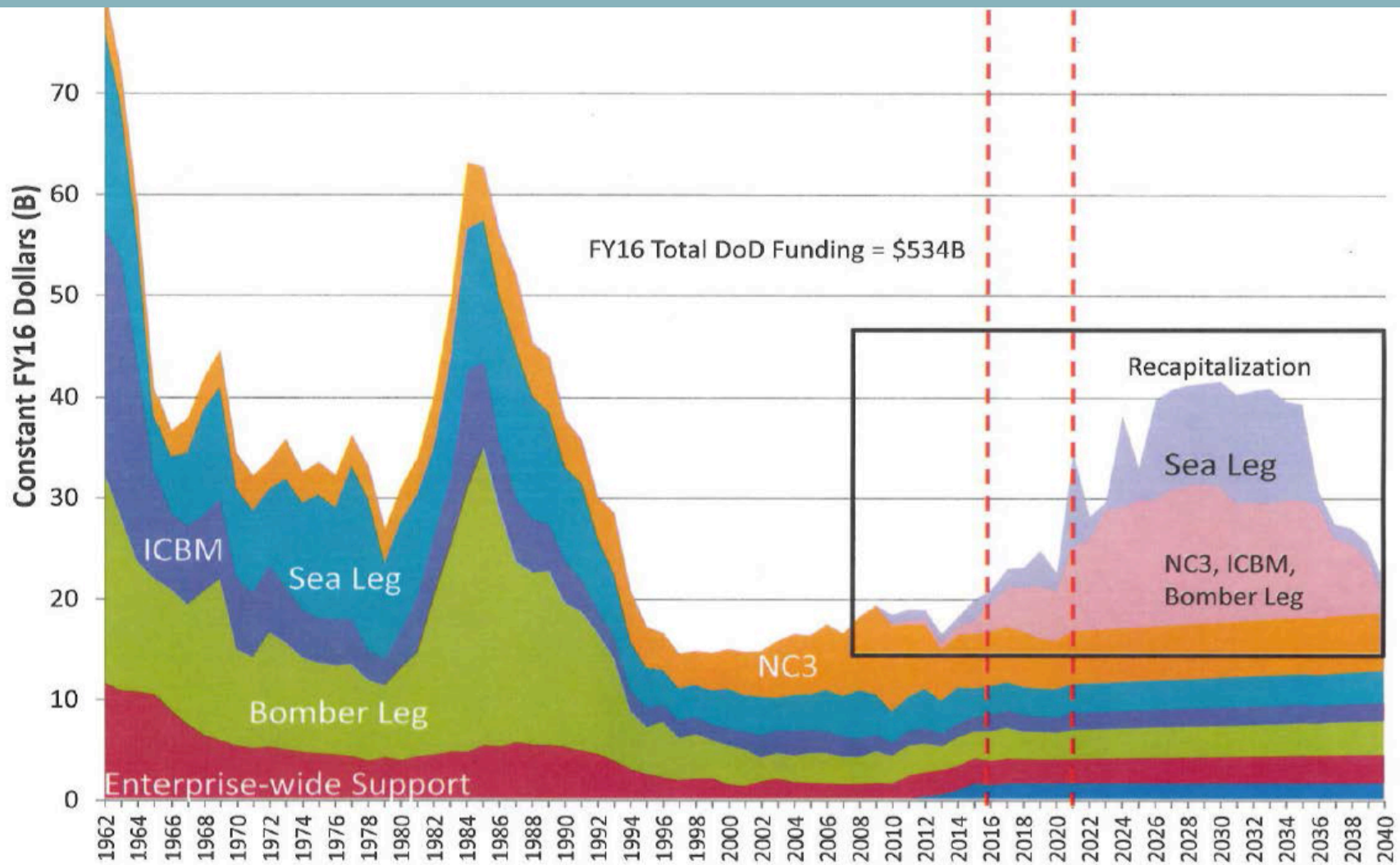


450 Minuteman III
Intercontinental Ballistic Missiles



44 B-52 Bombers
16 B-2 Bombers

Modernization Mountain



Is the US Nuclear Arsenal Worth a Trillion Dollars?

- Should the United States spend \$1 Trillion over the next 30 years (\$4 million per hour) to rebuild the nuclear arsenal?
 - No.
- How much should it spend? And on what?

Why not spend \$1 Trillion on nukes?

- Can't afford it given tradeoffs
 - “We’re looking at that big bow wave and wondering how the heck we’re going to pay for it, and probably thanking our stars we won’t be here to have to answer the question.”
 - Brian McKeon, principal deputy under secretary of defense for policy
- Don't need it for US security
 - Can keep viable deterrent for much less
- Its dangerous
 - “We are about to begin a new round in the nuclear arms race unless some brake is put on it right now.”
 - Former Secretary of Defense Bill Perry

How Much is Enough?

- New START (1,550 warheads by 2018)
 - Obama plan excessive. Could save \$300 billion over 30 years
- Need to rethink before we rebuild

Figure D: Nuclear Weapons Budget Savings Options, 2014-2023

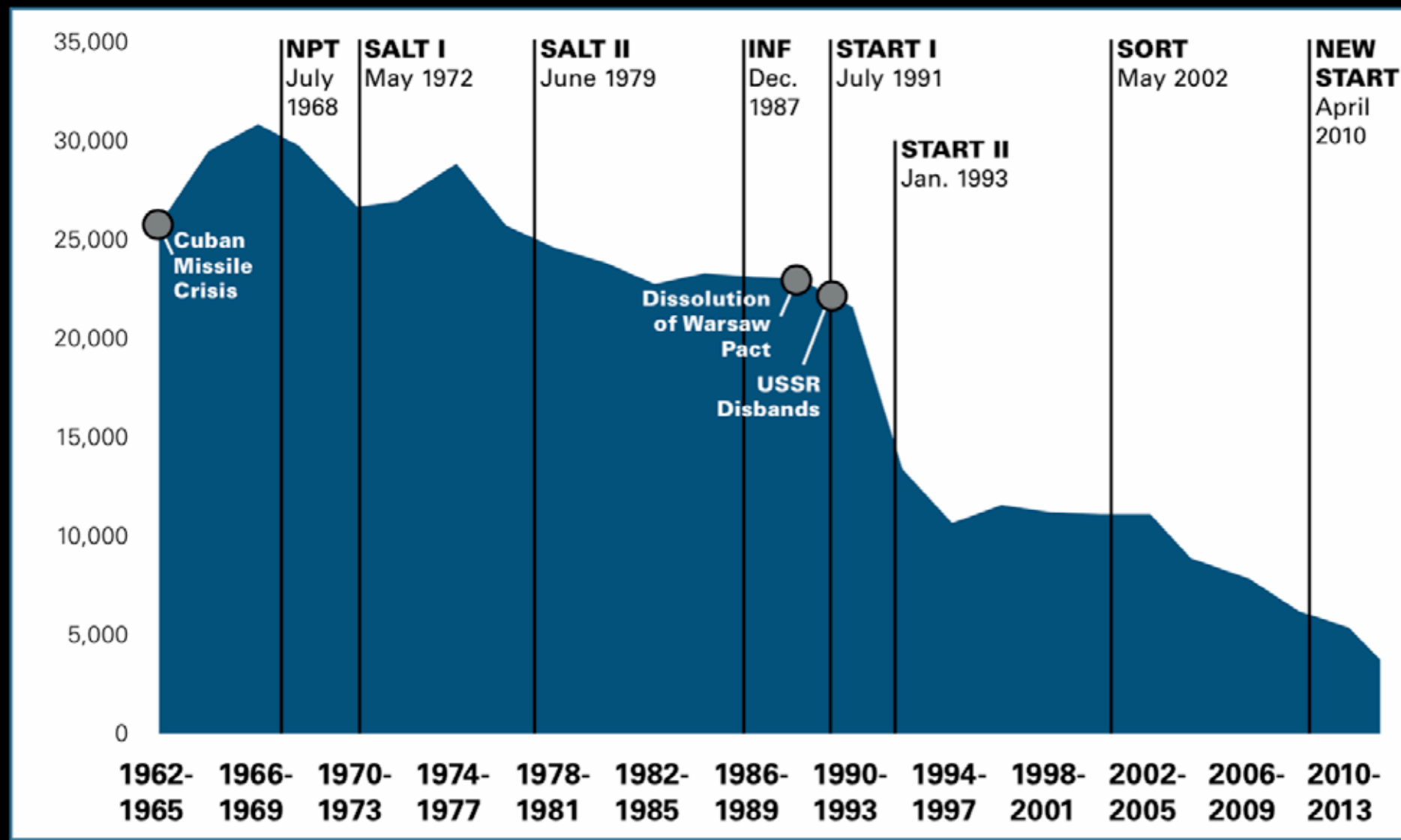
	Current New START	Cost-Effective New START	10-year Savings
	1,550 deployed strategic warheads	1,550 deployed strategic warheads	Estimate, in billions
SUBMARINES			
Current Ohio-Class Sub	12 operational, retire 2027-2040	8 operational	\$16
New Ohio-Replacement Sub, SSBN(X)	12 subs by 2042, procure first boat 2021	8 operational, first boat procured 2023	
	Total: \$100 billion		
BOMBERS			
Current B-52 and B-2	60 operational into 2040s	60	—
New Bomber	Build 80-100, begin development	Delay development to mid 2020s	\$32
	Total: \$80 billion		
WARHEADS			
B61 Bomb Life Extension	Upgrade 400 bombs	Scale back scope and number	\$4
	Total: \$10 billion		
ICBMS			
Current Minuteman III ICBM	400 deployed into 2030s	400 deployed	—
New ICBM	Begin development	Delay development to mid 2020s	\$16
	Total: \$100-200 billion		
CRUISE MISSILES			
New Air-Launched Cruise Missile (ALCM)	Under review, development delayed	Cancel	\$3
	Total: \$20 billion		
TOTAL			\$71 billion

How Much is Enough?

- New START (1,550 warheads)
 - Could save \$300 billion over 30 years
- 1,000 warheads
 - US military says all we need
 - No ICBMs, no cruise missile
 - Perry, Cartwright say we don't need them.
 - Save ~\$400 billion over 30 years
- 500 warheads? Save \$500 billion...
- Policy vs Politics

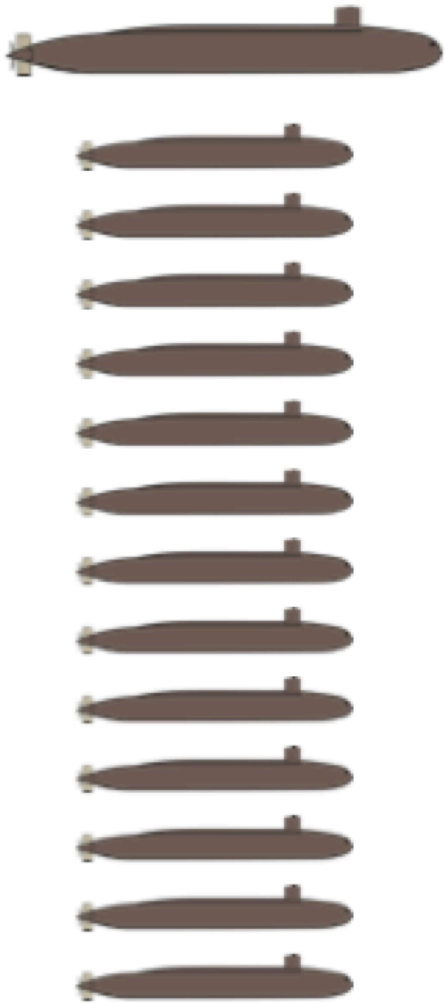
Figure H: U.S. Nuclear Weapons Stockpile, 1962-2013

Since the late-1960s, the United States and Russia have signed a series of nuclear arms treaties that have led to steep cuts in their nuclear warhead stockpiles.

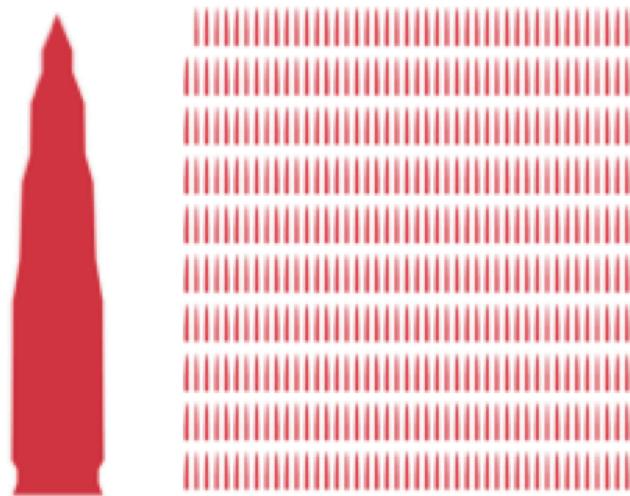


Source: U.S. Department of Defense, Arms Control Association

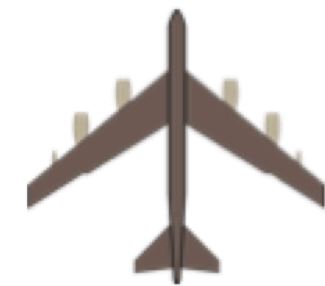
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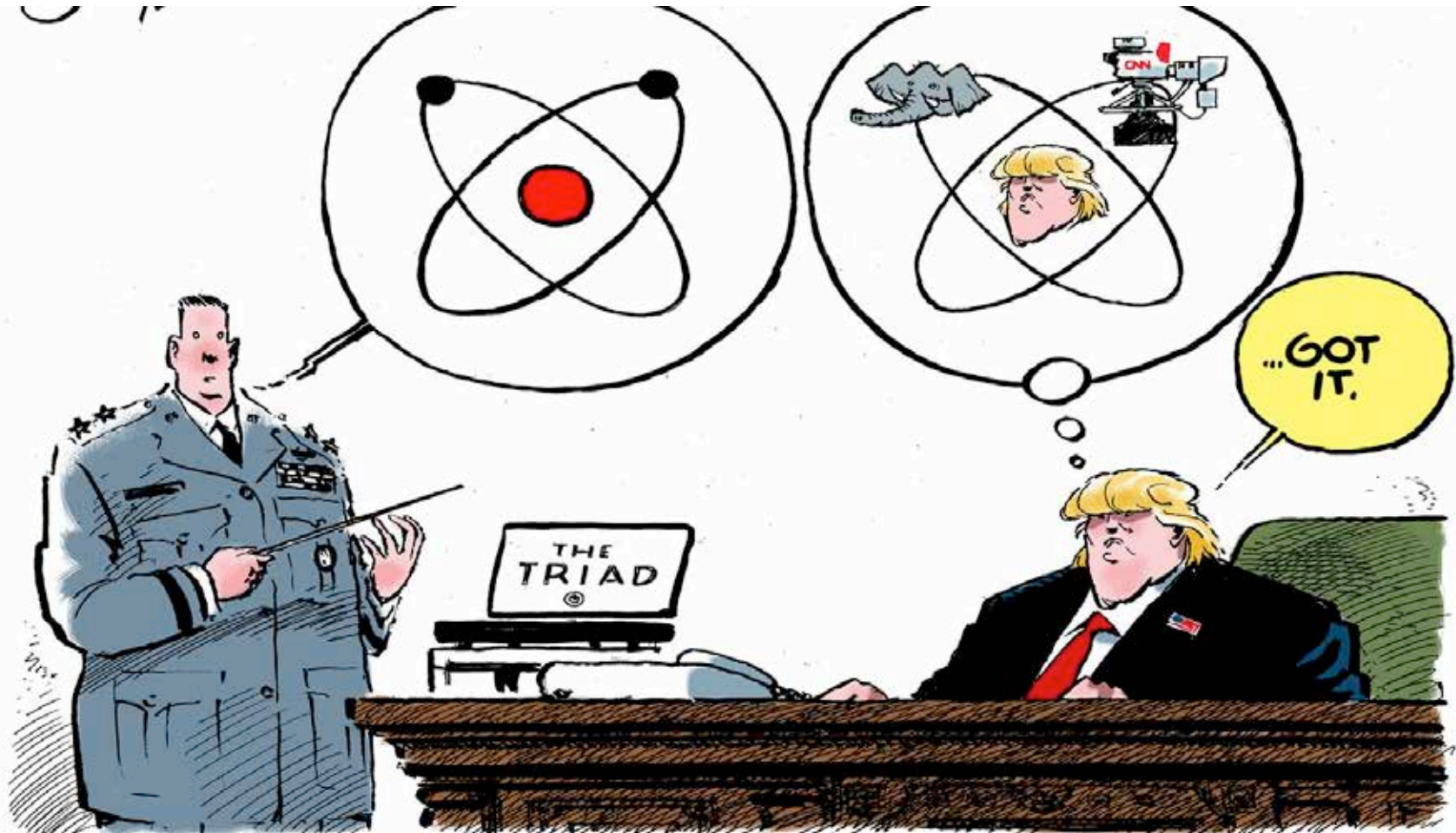
Bold Ideas for Next President

- Reduce to 1,000 w/o Russia
- Pull US nukes from NATO
- Cancel new Cruise Missile
- Retire all ICBMs
 - Saves money, makes us safer
- Still have 1,000 warheads on subs, bombers

Design your own nuclear arsenal

[https://www.americanprogress.org/
issues/security/report/2016/02/03/130431/
setting-priorities-for-nuclear-modernization/](https://www.americanprogress.org/issues/security/report/2016/02/03/130431/setting-priorities-for-nuclear-modernization/)

Thank You!

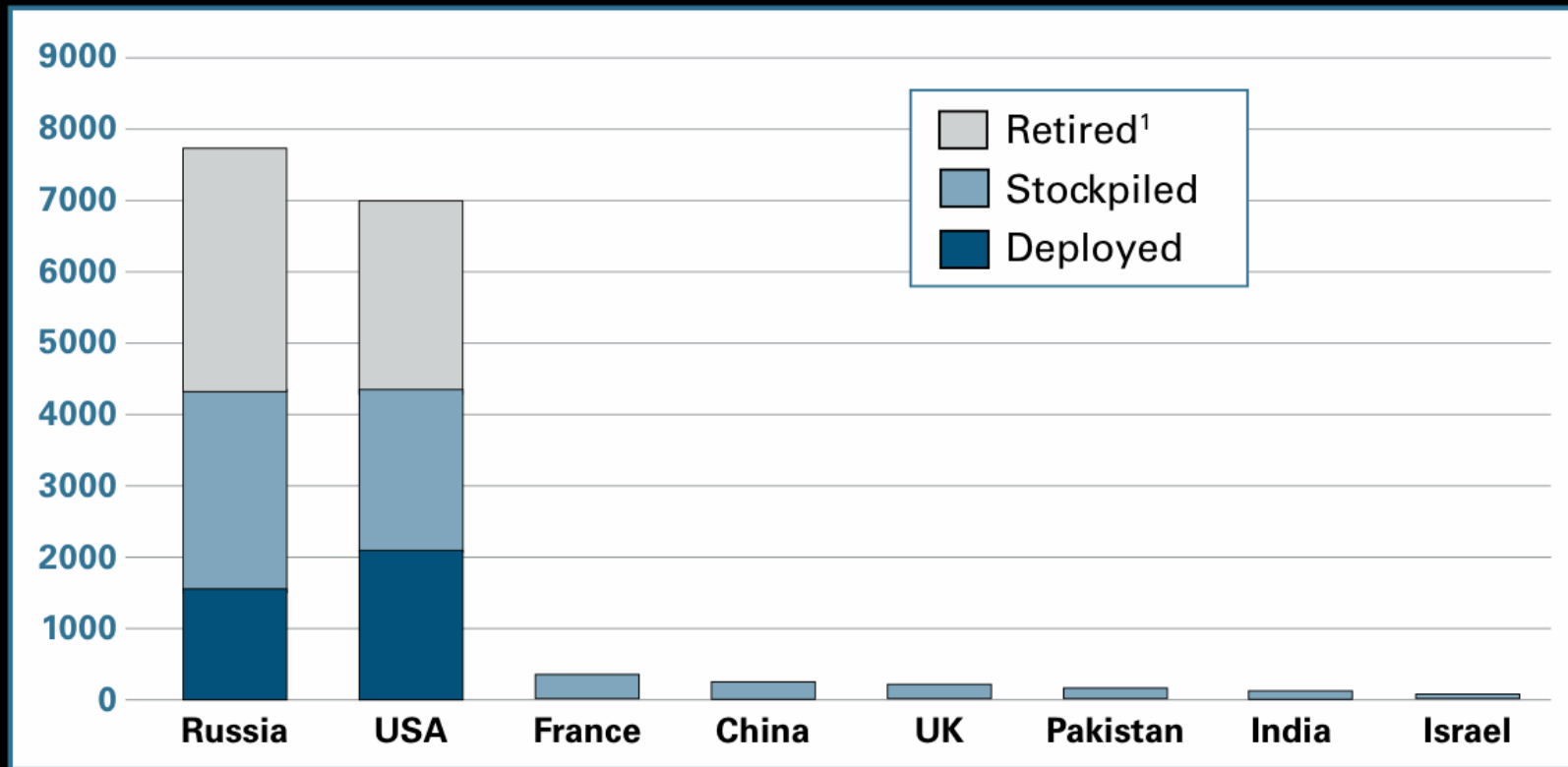


EXPLAINING NUCLEAR WEAPONS TO PRESIDENT TRUMP.

PLOUGHSHARES FUND

Figure I: Estimated Global Nuclear Warhead Inventories, 2014

The world's nuclear-armed states possess a combined total of nearly 17,000 nuclear warheads. More than 90 percent belong to Russia and the United States. Approximately 10,000 warheads are in military service, with the rest awaiting dismantlement.

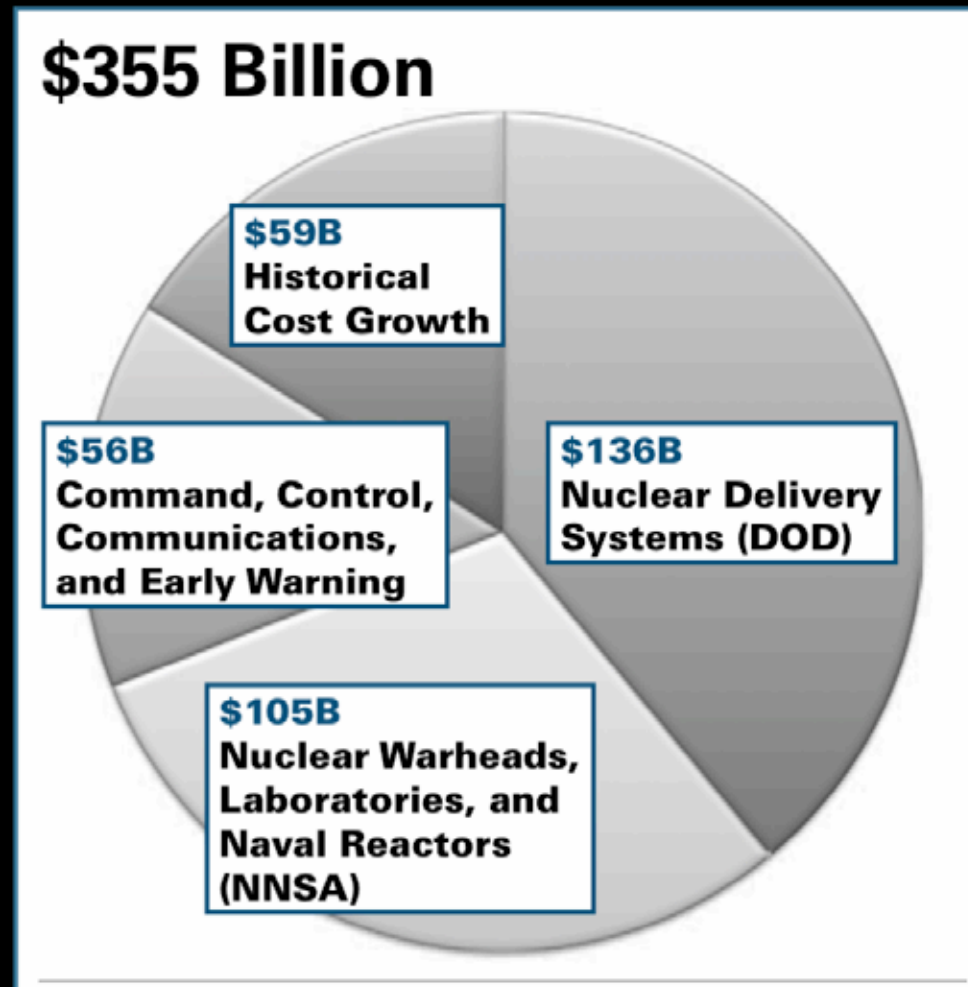


Source: Hans M. Kristensen and Robert S. Norris.

ENDNOTE

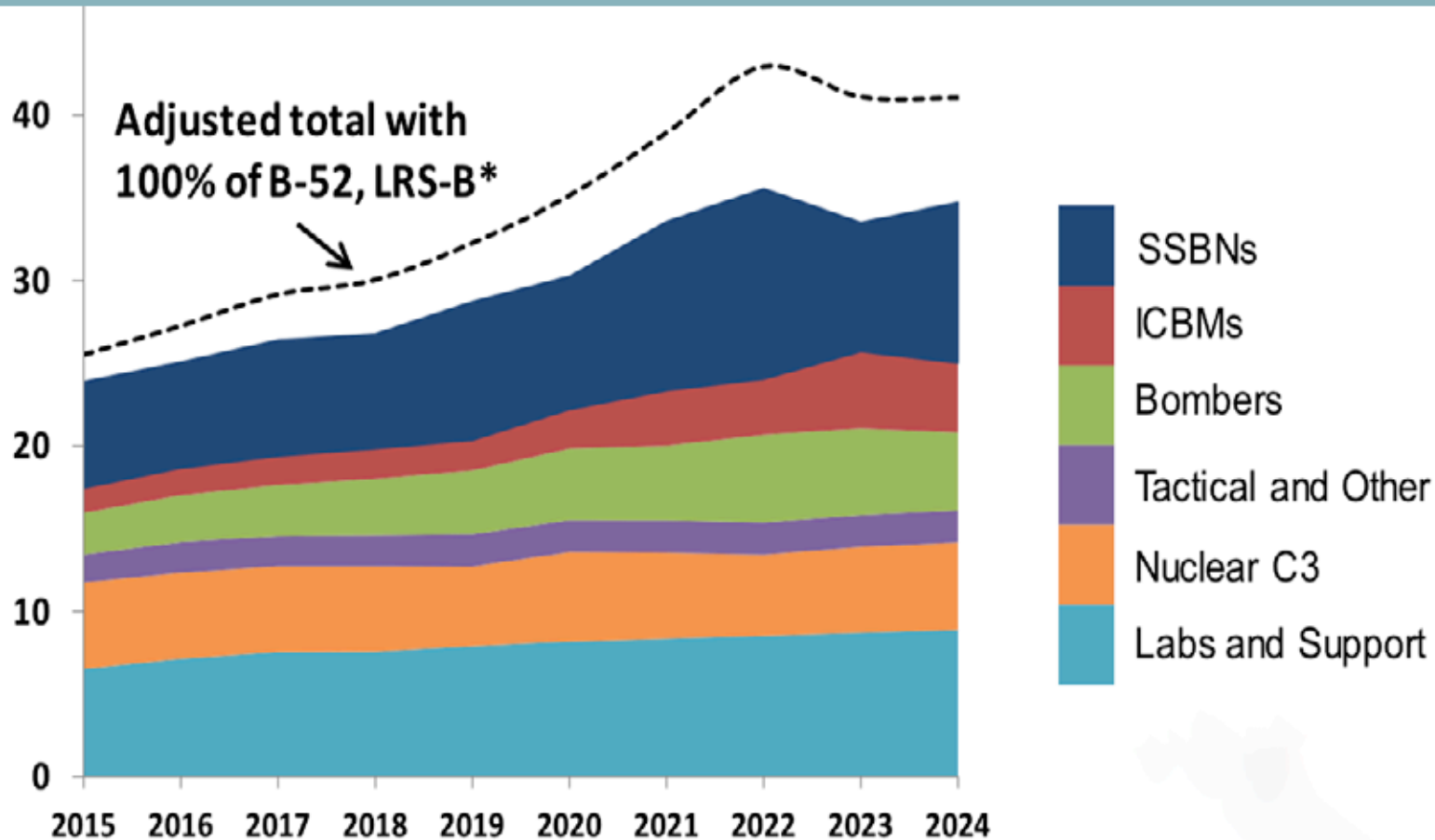
1. Retired warheads are those no longer in the stockpile but intact as they await dismantlement; stockpiled warheads are those assigned for potential use on military delivery vehicles; deployed warheads are those on ballistic missiles and at aircraft bases.

Figure C: Estimated Costs of U.S. Nuclear Forces, 2014-2023



Source: Congressional Budget Office, *Projected Costs of U.S. Nuclear Forces, 2014 to 2023*, Dec. 2013. The \$355 billion does not include environmental, arms control, nonproliferation or missile defense costs, which would add \$215 billion to the total.

Projected Costs for Nuclear Forces 2015-2024



* CBO's estimate includes 25 percent of costs for B-52 and LRS-B; dashed line shows the total if all bomber costs are included.