

117TH CONGRESS
1ST SESSION

S. _____

To extend the life of the Minuteman III and redirect savings from the development of the new ground-based strategic deterrent program toward the development of a universal coronavirus vaccine, and for other purposes.

IN THE SENATE OF THE UNITED STATES

Mr. MARKEY (for himself, Mr. VAN HOLLEN, Mr. SANDERS, and Mr. MERKLEY) introduced the following bill; which was read twice and referred to the Committee on _____

A BILL

To extend the life of the Minuteman III and redirect savings from the development of the new ground-based strategic deterrent program toward the development of a universal coronavirus vaccine, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Investing in Cures Be-
5 fore Missiles Act of 2021” or the “ICBM Act”.

6 **SEC. 2. FINDINGS.**

7 Congress finds the following:

1 (1) According to the Congressional Budget Of-
2 fice, the projected cost to sustain and modernize the
3 United States nuclear arsenal, as of 2017, “is \$1.2
4 trillion in 2017 dollars over the 2017–2046 period:
5 more than \$800 billion to operate and sustain (that
6 is, incrementally upgrade) nuclear forces and about
7 \$400 billion to modernize them”. With inflation, the
8 cost rises to \$1,700,000,000,000 and does not in-
9 clude the cost of the additional nuclear capabilities
10 proposed in the 2018 Nuclear Posture Review.

11 (2) The Government Accountability Office
12 found in July 2020 that the Department of Defense
13 and the National Nuclear Security Administration
14 have still not taken meaningful steps to address af-
15 fordability concerns or heeded the Government Ac-
16 countability Office’s recommendation to consider
17 “deferring the start of or cancelling specific mod-
18 ernization programs”, including the W87–1 warhead
19 modification program, to address increases in the
20 weapons activities budget requests of the National
21 Nuclear Security Administration.

22 (3) The ground-based strategic deterrent pro-
23 gram is expected to cost between \$93,100,000,000
24 and \$95,800,000, which does not include the cost of
25 the W87–1 warhead modification program or the

1 cost to produce new plutonium pits for the warhead.
2 The total estimated life cycle cost of the ground-
3 based strategic deterrent program is
4 \$264,000,000,000, and the program is intended to
5 replace 400 deployed Minuteman III missiles with
6 more than 600 new missiles, to allow for test flights
7 and spares.

8 (4) The Air Force awarded a sole-source con-
9 tract to Northrop Grumman for the engineering and
10 manufacturing component of the ground-based stra-
11 tegic deterrent program in September 2020, raising
12 concerns that the absence of competition for the
13 award may result in higher than projected costs to
14 United States taxpayers.

15 (5) The National Nuclear Security Administra-
16 tion is also in the early stages of developing a re-
17 placement intercontinental ballistic missile warhead,
18 the W87-1, and expanding plutonium pit production
19 to build new warhead cores, costing at least
20 \$12,000,000,000 and \$9,000,000,000, respectively,
21 to meet the modernization needs of the ground-based
22 strategic deterrent program.

23 (6) Maintaining and updating the current Min-
24 uteman III missiles is possible for multiple decades
25 and, according to the Congressional Budget Office,

1 through 2036, this would cost \$37,000,000,000 less
2 in 2017 dollars than developing and deploying the
3 ground-based strategic deterrent program.

4 (7) A public opinion poll conducted from Octo-
5 ber 12 to 28, 2020, by ReThink Media and the Fed-
6 eration of American Scientists found that only 26
7 percent of registered voters in the United States pre-
8 ferred replacing the Minuteman III intercontinental
9 ballistic missile with the ground-based strategic de-
10 terrent, as compared to 60 percent of registered vot-
11 ers who opposed replacing the Minuteman III mis-
12 sile.

13 (8) On April 3, 2019, Lieutenant General Rich-
14 ard M. Clark, then-Air Force Deputy Chief of Staff
15 for Strategic Deterrence and Nuclear Integration,
16 noted in testimony before the Committee on Armed
17 Services of the House of Representatives that we
18 have “one more opportunity” to conduct life exten-
19 sion on the Minuteman III intercontinental ballistic
20 missile, indicating the technical feasibility of extend-
21 ing the Minuteman III missile despite his stated
22 preference for the ground-based strategic deterrent.

23 (9) Even in the absence of an intercontinental
24 ballistic missile leg of the triad, the 2018 Nuclear
25 Posture Review signaled that the United States

1 would have an assured retaliatory capability in the
2 form of several ballistic missile submarines, which
3 are, “at present, virtually undetectable, and there
4 are no known, near-term credible threats to the sur-
5 vivability of the [ballistic missile submarine] force”,
6 a benefit that will be enhanced as the Department
7 of Defense moves to replace the Ohio class ballistic
8 submarine fleet with the new Columbia class ballistic
9 missile fleet.

10 (10) While intercontinental ballistic missiles
11 had historically been the most responsive leg of the
12 United States nuclear triad, advances in ballistic
13 missile submarine communications to allow for the
14 dissemination of emergency action messages in war-
15 time have negated that advantage.

16 (11) Intercontinental ballistic missiles cannot be
17 recalled, leaving decision-makers with mere minutes
18 to decide whether to launch the missiles before they
19 are destroyed, known as a posture of “launch on
20 warning” or “launch under attack” in the face of a
21 perceived nuclear attack, greatly increasing the risk
22 of a national leader initiating a nuclear war by mis-
23 take.

24 (12) In 1983, Stanislav Petrov, a former lieu-
25 tenant colonel of the Soviet Air Defense Forces cor-

1 rectly identified a false warning in an early warning
2 system that showed several United States incoming
3 nuclear missiles, preventing Soviet leaders from
4 launching a retaliatory response, earning Colonel
5 Petrov the nickname “the man who saved the
6 world”.

7 (13) Former Secretary of Defense William
8 Perry, who once briefed President Bill Clinton on a
9 suspected Russian first nuclear strike, wrote that
10 the ground-based leg of the nuclear triad is “desta-
11 bilizing because it invites an attack” and interconti-
12 nental ballistic missiles are “some of the most dan-
13 gerous weapons in the world” and “could even trig-
14 ger an accidental nuclear war”.

15 (14) General James Cartwright, former vice
16 chair of the Joint Chiefs of Staff and former Com-
17 mander of the United States Strategic Command,
18 wrote, with Secretary Perry, “[T]he greatest danger
19 is not a Russian bolt but a US blunder—that we
20 might accidentally stumble into nuclear war. As we
21 make decisions about which weapons to buy, we
22 should use this simple rule: If a nuclear weapon in-
23 creases the risk of accidental war and is not needed
24 to deter an intentional attack, we should not build
25 it. . . . Certain nuclear weapons, such as...the [inter-

1 continental ballistic missile], carry higher risks of
2 accidental war that, fortunately, we no longer need
3 to bear. We are safer without these expensive weap-
4 ons, and it would be foolish to replace them.”.

5 (15) General George Lee Butler, the former
6 Commander-in-Chief of the Strategic Air Command
7 and subsequently Commander-in-Chief of the United
8 States Strategic Command, said, “I would have re-
9 moved land-based missiles from our arsenal a long
10 time ago. I’d be happy to put that mission on the
11 submarines. So, with a significant fraction of bomb-
12 ers having a nuclear weapons capability that can be
13 restored to alert very quickly, and with even a small
14 component of Trident submarines—with all those
15 missiles and all those warheads on patrol—it’s hard
16 to imagine we couldn’t get by.”.

17 (16) While a sudden “bolt from the blue” first
18 strike from a near-peer nuclear adversary is a highly
19 unlikely scenario, extending the Minuteman III
20 would maintain the purported role of the interconti-
21 nental ballistic missile leg of the triad to absorb such
22 an attack.

1 **SEC. 3. STATEMENT OF POLICY ON EXTENSION OF LIFE-**
2 **SPAN OF MINUTEMAN III AND DEVELOPING A**
3 **VACCINE OF MASS PREVENTION.**

4 It is the policy of the United States that—

5 (1) the operational life of the Minuteman III
6 missiles can be safely extended until at least 2050;
7 and

8 (2) investments in developing a universal
9 coronavirus vaccine and efforts to save lives from
10 other types of infectious diseases are a better use of
11 United States taxpayer resources than building a
12 new and unnecessary intercontinental ballistic mis-
13 sile.

14 **SEC. 4. AVAILABILITY OF FUNDS FOR VACCINES INSTEAD**
15 **OF MISSILES.**

16 (a) TRANSFER FROM DEPARTMENT OF DEFENSE.—
17 Of the unobligated balances of appropriations made avail-
18 able for the Department of Defense for the research, de-
19 velopment, test, and evaluation of the ground-based stra-
20 tegic deterrent program, the Secretary of Defense shall
21 transfer \$1,000,000,000 to the National Institute of Al-
22 lergy and Infectious Diseases to conduct or support com-
23 prehensive research for the development of a universal
24 coronavirus vaccine.

25 (b) TRANSFER FROM NATIONAL NUCLEAR SECURITY
26 ADMINISTRATION.—The Secretary of Energy shall trans-

1 fer all unobligated balances of appropriations made avail-
2 able for the National Nuclear Security Administration for
3 the W87–1 warhead modification program to the Centers
4 for Disease Control and Prevention to research and com-
5 bat emerging and zoonotic infectious diseases.

6 **SEC. 5. PROHIBITION ON USE OF FUNDS FOR GROUND-**
7 **BASED STRATEGIC DETERRENT PROGRAM**
8 **AND W87-1 WARHEAD MODIFICATION PRO-**
9 **GRAM.**

10 None of the funds authorized to be appropriated or
11 otherwise made available for fiscal year 2022 may be obli-
12 gated or expended for the ground-based strategic deter-
13 rent program or the W87–1 warhead modification pro-
14 gram.

15 **SEC. 6. INDEPENDENT STUDY ON EXTENSION OF MINUTE-**
16 **MAN III INTERCONTINENTAL BALLISTIC MIS-**
17 **SILES.**

18 (a) INDEPENDENT STUDY.—Not later than 30 days
19 after the date of the enactment of this Act, the Secretary
20 of Defense shall seek to enter into a contract with the Na-
21 tional Academy of Sciences to conduct a study on extend-
22 ing the life of Minuteman III intercontinental ballistic
23 missiles to 2050.

24 (b) MATTERS INCLUDED.—The study under sub-
25 section (a) shall include the following:

1 (1) A comparison of the costs through 2050
2 of—

3 (A) extending the life of Minuteman III
4 intercontinental ballistic missiles; and

5 (B) deploying the ground-based strategic
6 deterrent program.

7 (2) An analysis of opportunities to incorporate
8 technologies into the Minuteman III intercontinental
9 ballistic missile program as part of a service life ex-
10 tension program that could also be incorporated in
11 the future ground-based strategic deterrent pro-
12 gram, including, at a minimum, opportunities to in-
13 crease the resilience against adversary missile de-
14 fenses.

15 (3) An analysis of the benefits and risks of in-
16 corporating sensors and nondestructive testing meth-
17 ods and technologies to reduce destructive testing re-
18 quirements and increase the service life and number
19 of Minuteman III missiles through 2050.

20 (4) An analysis and validation of the methods
21 used to estimate the operational service life of Min-
22 uteman II and Minuteman III motors, taking into
23 account the test and launch experience of motors re-
24 tired after the operational service life of such motors
25 in the rocket systems launch program.

1 (5) An analysis of the risks and benefits of al-
2 ternative methods of estimating the operational serv-
3 ice life of Minuteman III motors, such as those
4 methods based on fundamental physical and chem-
5 ical processes and nondestructive measurements of
6 individual motor properties.

7 (6) An analysis of risks, benefits, and costs of
8 configuring a Trident II D5 submarine launched
9 ballistic missile for deployment in a Minuteman III
10 silo.

11 (7) An analysis of the impacts of the estimated
12 service life of the Minuteman III force associated
13 with decreasing the deployed intercontinental bal-
14 listic missiles delivery vehicle force from 400 to 300.

15 (8) An assessment on the degree to which the
16 Columbia class ballistic missile submarines will pos-
17 sess features that will enhance the current invulner-
18 ability of ballistic missile submarines of the United
19 States to future antisubmarine warfare threats.

20 (9) An analysis of the degree to which an exten-
21 sion of the Minuteman III would impact the decision
22 of Russian Federation to target intercontinental bal-
23 listic missiles of the United States in a crisis, as
24 compared to proceeding with the ground-based stra-
25 tegic deterrent.

1 (10) A best case estimate of what percentage of
2 the strategic forces of the United States would sur-
3 vive a counterforce strike from the Russian Federa-
4 tion, broken down by intercontinental ballistic mis-
5 siles, ballistic missile submarines, and heavy bomber
6 aircraft.

7 (11) The benefits, risks, and costs of relying on
8 the W-78 warhead for either the Minuteman III or
9 a new ground-based strategic deterrent missile as
10 compared to proceeding with the W-87 life exten-
11 sion.

12 (12) The benefits, risks, and costs of adding
13 additional launchers or uploading submarine-
14 launched ballistic missiles with additional warheads
15 to compensate for a reduced deployment of inter-
16 continental ballistic missiles of the United States.

17 (c) SUBMISSION TO DEPARTMENT OF DEFENSE.—
18 Not later than 180 days after the date of the enactment
19 of this Act, the National Academy of Sciences shall submit
20 to the Secretary a report containing the study conducted
21 under subsection (a).

22 (d) SUBMISSION TO CONGRESS.—Not later than 210
23 days after the date of the enactment of this Act, the Sec-
24 retary shall transmit to the appropriate congressional

1 committees report required by subsection (c), without
2 change.

3 (e) FORM.—The report required by subsection (c)
4 shall be submitted in unclassified form, but may include
5 a classified annex.

6 **SEC. 7. APPROPRIATE CONGRESSIONAL COMMITTEES DE-**
7 **FINED.**

8 In this Act, the term “appropriate congressional com-
9 mittees” means—

10 (1) the Committee on Armed Services, the
11 Committee on Foreign Relations, and the Committee
12 on Appropriations of the Senate; and

13 (2) the Committee on Armed Services, the
14 Committee on Foreign Affairs, and the Committee
15 on Appropriations of the House of Representatives.