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Before the

COMMITTEE ON  
ARMED SERVICES

## **UNITED STATES SENATE**

HEARING TO RECEIVE TESTIMONY ON  
NUCLEAR POLICY AND POSTURE

Thursday, February 28, 2019

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NUCLEAR POLICY AND POSTURE

Thursday, February 28, 2019

U.S. Senate  
Committee on Armed Services  
Washington, D.C.

The committee met, pursuant to notice, at 9:29 a.m. in Room SD-G50, Dirksen Senate Office Building, Hon. James M. Inhofe, chairman of the committee, presiding.

Members Present: Senators Inhofe [presiding], Wicker, Fischer, Rounds, Ernst, Tillis, Sullivan, Cramer, Scott, Hawley, Reed, Shaheen, Gillibrand, Blumenthal, Hirono, Kaine, King, Warren, Peters, Manchin, Duckworth, and Jones.

1           OPENING STATEMENT OF HON. JAMES M. INHOFE, U.S.

2           SENATOR FROM OKLAHOMA

3           Chairman Inhofe:   Okay, our meeting will come to order,  
4           and I would ask our witnesses to be seated.

5           I had a chance to visit with them, and they -- and  
6           we've had experiences in the past.   And I could -- I always  
7           remember, Ms. Creedon, during the years that she was with  
8           Carl Levin, was one of real heroes of this committee, and I  
9           always enjoyed the time that we had spent together.

10          The committee meets today to receive the testimony from  
11          the experts outside of government that -- this is outside of  
12          government.   We've had the same -- kind of the -- a lot of  
13          the same questions, a lot of the same issues of -- just last  
14          Tuesday, for example, with General Hyten and Scaparotti and  
15          -- no, who was the other one that was --

16          Senator Reed:   That was General O'Shaughnessy.

17          Chairman Inhofe:   -- O'Shaughnessy, yeah.   And so, now  
18          we have people that are outside of the military, and we'll  
19          see what their thoughts are on some of the same issues that  
20          we -- were there.

21          We have -- the committee focused on implementing the  
22          National Defense Strategy.   That's this thing that we are --  
23          we've been talking about.   We've had two hearings on it.  
24          It's one of the few things we're all -- Democrats,  
25          Republicans, everyone agrees what our mission should be,

1 what the Commission should be. And that's what we're  
2 talking about.

3 So, we -- now we need to modernize all three legs of  
4 the nuclear triad, as well as the warheads and  
5 infrastructure in the Department of Energy. There have been  
6 bipartisan support for the programs in the past. And I'm --  
7 hopefully, that we're going to be able to continue that  
8 bipartisan spirit as we try to continue defending America.

9 Yet, we've heard proposals recently for dramatic  
10 changes in our nuclear policy and our force posture. Some  
11 believe that we could scale back modernization programs and  
12 still deter our adversaries. Others propose that we  
13 intentionally make our ICBMs slower to respond or inquire --  
14 or require Congress to intervene before the Commander in  
15 Chief could use a nuclear weapon, even in the most extreme  
16 situations.

17 So, you know, we are going to have to make some  
18 decisions. We're going to be doing our defense  
19 authorization bill. We're going to try to get everything on  
20 schedule, as we did last year. But, we're going to have to  
21 resolve these things. And we want to get the best experts  
22 around. And that's why we're doing it with the uniforms and  
23 with those outside.

24 Some have even suggested that cutting the entire leg of  
25 our nuclear triad, or two. Today, I hope that you'll be

1 able to help us understand the importance of tying the  
2 nuclear modernization and sensible policy to the overall  
3 national security of the United States.

4 So, I think this is something that we recognize. We  
5 really failed to keep up with our nuclear modernization over  
6 the years. And consequently, we had Russia -- our peer  
7 competitors, Russia and China, they were doing things. And  
8 so, the question is, Have they passed us in some areas? I  
9 think the answer of that is yes.

10 So, we are also faced with several current issues  
11 related to arms control. While our colleagues on the  
12 Foreign Relations Committee will no doubt discuss these  
13 issues at length, the implementation of the withdrawal from  
14 INF Treaty are a great interest to this committee. So, it  
15 is the decision on whether or not we extend our New START.  
16 And I'm interested in your opinions on these questions.

17 So, we'll combine the -- the three of you have broad  
18 expertise on nuclear operations and DOD and DOE, nuclear  
19 programs and arms control. This is a very well-informed  
20 panel, and I look forward to your testimony.

21 Senator Reed.

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1           STATEMENT OF HON. JACK REED, U.S. SENATOR FROM RHODE  
2 ISLAND

3           Senator Reed: Well, thank you very much, Mr. Chairman,  
4 and let me join you in welcoming our witnesses today.

5           Ms. Creedon, you have a long history serving this  
6 committee, including as the lead professional staff member  
7 of the Strategic Forces Subcommittee when I had the  
8 privilege of chairing the committee. Thank you for your  
9 help. And you've also served the Nation as a senior  
10 official in the executive branch pertaining to nuclear  
11 policy.

12          Mr. Miller, you've served 31 years in the Federal  
13 Government as an expert on matters of nuclear policy and the  
14 strategy under both Republican and Democratic  
15 administrations. You worked extensively on the Strategic  
16 Arms Reduction Treaties at the end of the Cold War and on  
17 the Strategic Offensive Arms Reduction Treaty in 2003.  
18 Thank you.

19          General Kehler, you commanded U.S. Strategic Command  
20 from 2011, when the New START Treaty took effect, until your  
21 retirement in 2013. You are a trusted voice on all matters  
22 of nuclear strategy.

23          I want to thank all of you for the service to the  
24 country. Thank you.

25          I'd like to hear from our witnesses on a number of

1 issues that have evolved since the release of the 2018  
2 Nuclear Posture Review. First and foremost is the  
3 administration's notification of withdrawal from the  
4 Intermediate-Range Nuclear Forces Treaty, or INF Treaty,  
5 with nothing to replace it. While I understand that Russia  
6 was in noncompliance and that China also poses a threat, I  
7 am concerned that the U.S. did not redouble efforts to  
8 pressure Russia back into compliance or seek modifications  
9 to the treaty, if necessary. Treaties are a major component  
10 of our security strategy. We build and modernize nuclear  
11 weapons, but we also have treaties, which prescribe numbers  
12 and use. By withdrawing from the treaty without a strategy  
13 for what comes next, the administration now has freed Russia  
14 to produce as many noncompliant SSC-8 missiles and their  
15 cruise missiles and their launches as they wish. These are  
16 small, highly mobile systems capable of hiding within  
17 Russia's large interior landmass while holding at risk  
18 targets across western Europe. The issue for the United  
19 States and allies is how to respond to these Russian  
20 deployments and whether we are entering a new destabilizing  
21 arms race.

22 A second issue I'd like to -- panel to address is the  
23 decision in the 2018 Nuclear Posture Review, or NPR, to  
24 pursue two new capabilities. One capability is to develop a  
25 low-yield warhead for the submarine ballistic missile to

1 counter the Russian "escalate to de-escalate" strategy,  
2 which calls for Russia to use a low-yield weapon first in a  
3 conflict. In addition, the 2018 NPR called for a study on  
4 bringing back the submarine-launch cruise missile we retired  
5 in the 2010 NPR to also counter the Russian "escalate to de-  
6 escalate" strategy. While the threats may be changing,  
7 creating or renewing nuclear capabilities is not without  
8 controversy. I'm interested in hearing your views on  
9 whether these capabilities are necessary to protect our  
10 national security, if there are alternative responses to the  
11 threats, and what are the consequences to developing these  
12 new capabilities.

13 A third issue for our panel is the question of whether  
14 or not to adopt a policy of "no first use" of nuclear  
15 weapons. The United States has never adopted such a policy,  
16 has preferred a stance of strategic ambiguity. I understand  
17 that this issue was debated at length during the Obama  
18 administration, and the decision was ultimately made not to  
19 adopt such a policy, for strategic security reasons and to  
20 support our allies. However, I believe that a robust debate  
21 on this issue is always good, and I would like to know each  
22 of your views on a "no first use" policy.

23 Finally, I'm concerned that we are on the verge of  
24 breaking the longstanding linkage between arms control and  
25 nuclear modernization. In December 2010, when the Senate



1 approved the New START Treaty for ratification, part of the  
2 context surrounding that ratification was a bipartisan  
3 consensus that the nuclear triad would be modernized.  
4 President Obama affirmed this commitment to modernization in  
5 February of 2011. I'm worried that we are now breaking that  
6 linkage. We are moving forward on modernization, but have  
7 withdrawn from the INF Treaty, and there appears to be a  
8 growing reluctance to extend the New START Treaty for 5  
9 years past its expiration date of 2021. Arms control and  
10 nuclear modernization work should proceed hand in hand to  
11 increase our overall security posture. I would like to hear  
12 from our witnesses about whether they support extending the  
13 New START Treaty and what other arms-control measures we  
14 might take with respect to nuclear weapons not covered by  
15 the START Treaty.

16       Former Secretary of Defense Carter often stated that  
17 our nuclear deterrent is the bedrock of every national  
18 security action we take. It serves as the backstop to  
19 containing further conflict among nuclear-armed states.  
20 But, with that responsibility comes a commitment to engage,  
21 if possible, on reducing the level of risk these weapons  
22 might pose to the world at large. Every President since the  
23 dawn on the Nuclear Age has accepted this moral  
24 responsibility. I am deeply concerned today that the  
25 administration is not pursuing the U.S. commitment as a

1 responsible nuclear power to reduce the risk of nuclear  
2 confrontation. I look to this panel for recommendations on  
3 how best to engage on this commitment.

4 I think it's well to recall what President Reagan  
5 stated, "A nuclear war cannot be won and must never be  
6 fought. The only value in our two nations possessing  
7 nuclear weapons is to make sure they will never be used."  
8 As much as President Reagan valued a strong nuclear  
9 deterrence, he also valued the importance of arms control as  
10 an essential part of the security architecture to lessen the  
11 risk of these weapons being used. These two are linked and  
12 must not -- and we must not forget that linkage.

13 Again, let me thank our witnesses for being here today.

14 Thank you, Mr. Chairman.

15 Chairman Inhofe: Thank you, Senator Reed.

16 So, we'll start with opening statements, and try to  
17 keep them around 5 minutes. And your entire statement will  
18 be made a part of the record.

19 Ms. Creedon, we'll start with you.

20 Senator Reed: Mr. Chairman, excuse me, may I ask  
21 unanimous consent to submit a letter from former Secretary  
22 of Defense Ash Carter with respect to these issues of  
23 nuclear posture?

24 Chairman Inhofe: Yeah. Without objection, so ordered.

25 Senator Reed: Thank you.

1 [The information referred to follows:]

2 [COMMITTEE INSERT]

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1 Chairman Inhofe: Ms. Creedon, we'll start with you.

2 And welcome back.

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1           STATEMENT OF HON. MADELYN R. CREEDON, FORMER PRINCIPAL  
2 DEPUTY ADMINISTRATOR, NATIONAL NUCLEAR SECURITY  
3 ADMINISTRATION

4           Ms. Creedon: Thank you. Good morning, Chairman Inhofe  
5 and Senator Reed. It is truly a pleasure to be back before  
6 SASC. And thank you for the opportunity to discuss nuclear  
7 modernization and policy.

8           It's also a particular honor to be here today with  
9 General Kehler and Frank Miller, both of whom bring years of  
10 experience and wisdom to the table.

11          To start off the discussion, I would like to make five  
12 points:

13          First, one of the most important things that this  
14 administration could do is extend the New START Treaty from  
15 its current 2021 expiration date to 2026. The treaty allows  
16 a 5-year extension by mutual agreement. It is a simple  
17 matter of saying yes. The Senate, because it provided its  
18 consent to the treaty, has no further role in the actual  
19 extension, but it would be very helpful if the Senate, on a  
20 bipartisan basis, could indicate not only broad support for  
21 the treaty, but actually urge the 5-year extension.

22          Extension of the New START Treaty is in the best  
23 interests of the United States, as it provides strategic  
24 stability, certainty, and transparency. Moreover, a 5-year  
25 extension would allow an opportunity for discussions of what

1 comes next in the U.S.-Russia relationship and in arms  
2 control. This could include nonstrategic nuclear weapons or  
3 some of the more novel systems that Russia has recently  
4 unveiled.

5 Point two is, support the triad. The current multi-  
6 decade program to replace the triad of U.S. delivery systems  
7 -- a new ballistic missile submarine, a new ICBM, known as  
8 the ground-based strategic deterrent, a new bomber, the B-21  
9 -- are all important to the U.S. national security and that  
10 of our allies and partners. Similarly, the warhead life  
11 extension programs undertaken by the NNSA will allow the  
12 smaller active stockpile to be maintained safely, securely,  
13 and reliably into the future.

14 President Obama, in seeking a world without nuclear  
15 weapons, said clearly in his 2009 Prague speech that, quote,  
16 "As long as these weapons exist, we will maintain a safe,  
17 secure, and effective arsenal to deter any adversary and  
18 guarantee that defense to our allies."

19 As a Nation, we dropped the ball on replacing these  
20 systems. The U.S. fought the long war in the Middle East  
21 and elsewhere, and nuclear deterrence was not a priority.  
22 As a result, President Obama laid out a program of delivery  
23 system and platform modernization along with warhead life  
24 extensions in the 2010 Nuclear Posture Review. For the most  
25 part, this effort was continued in President Trump's 2018

1 Nuclear Posture Review.

2 My third point is, focus on replacing the  
3 infrastructure at the Department of Energy's National  
4 Nuclear Security Administration, and supporting the science  
5 that underpins these life extension programs. Over the last  
6 25 years, NNSA has made a significant investment in the  
7 science of nuclear weapons, allowing the weapons to be  
8 maintained and now life-extended without the need for  
9 testing. The scientific achievements are remarkable and  
10 were thought not to be achievable when the program started.  
11 The naysayers that were certain a return to underground  
12 nuclear weapons testing would be needed have been proven  
13 wrong.

14 While the science has excelled and still needs to be  
15 supported, the manufacturing side of the NNSA complex,  
16 however, was largely ignored. Many of the manufacturing  
17 buildings date back to the era of the Manhattan Project.  
18 And, even with the inclusion of the new science facilities,  
19 54 percent of the facilities are either inadequate or  
20 substandard. The NNSA complex is roughly the size of  
21 Delaware, has over 2,000 miles of roads, and has about six  
22 Pentagon equivalents of active space under roof. Replacing  
23 and upgrading the NNSA complex will be difficult and  
24 expensive, but, in the end, it will be the smaller, more  
25 modern, safer, and more secure complex that the Nation

1 needs.

2 Fourth is people. DOD, the services, and NNSA don't  
3 have enough people. And getting the right people is very  
4 difficult, as there's a lot of competition. Developing and  
5 adopting more creative ways to attract, train, hire, and  
6 retain employees is critical. This could include  
7 scholarships, on-the-job training, and retention pay, for  
8 example, but, whatever is the answer, hiring has to be  
9 easier and faster. And, of course, the backlog in getting  
10 new security clearances, updated security clearances, and  
11 even getting security clearances transferred from one agency  
12 to another has an enormous detrimental impact on the nuclear  
13 and national security enterprise, as well as the morale of  
14 the workforce.

15 Finally, I would like to highlight the need for a  
16 national discussion on deterrence, including nuclear  
17 deterrence. U.S. nuclear capabilities are the ultimate  
18 deterrent for the U.S., but also many of our allies and  
19 partners. Their belief that the U.S. maintains a credible  
20 deterrent is critical to sustaining the alliances and  
21 avoiding the proliferation of nuclear weapons. Finding the  
22 right balance between reductions and modernization, and  
23 building the consensus to support both, was a major  
24 achievement of the Obama administration. Sustaining that  
25 consensus will be difficult. Nuclear deterrence is not a



1 popular topic of discussion, and one that is not well  
2 understood. President Obama tried to lead the way down the  
3 road that would head to a world without nuclear weapons.  
4 Sadly, the world didn't pick that path, and the threat of  
5 nuclear use is increasing.

6       Ensuring a safe, secure, and reliable nuclear deterrent  
7 for the U.S. and our allies can help to prevent nuclear use  
8 until the time when there is an opportunity to reduce the  
9 threat and resume work to set the conditions that will  
10 ultimately eliminate nuclear weapons. In the meantime,  
11 while the nuclear deterrent programs will vary and evolve  
12 over time, consistency in support and funding is necessary  
13 to ensure a safe, secure, and reliable deterrent for the  
14 U.S., our allies, and our partners.

15       I look forward to any questions. Thank you.

16       [The prepared statement of Ms. Creedon follows:]

17       [COMMITTEE INSERT]

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1 Chairman Inhofe: Thank you, Ms. Creedon.

2 Mr. Miller.

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1           STATEMENT OF HON. FRANKLIN C. MILLER, FORMER SPECIAL  
2 ASSISTANT TO THE PRESIDENT OF THE UNITED STATES, AND FORMER  
3 SENIOR DIRECTOR FOR DEFENSE POLICY AND ARMS CONTROL,  
4 NATIONAL SECURITY COUNCIL STAFF

5           Mr. Miller: Chairman Inhofe, Senator Reed, members of  
6 the committee, thank you for inviting me to appear before  
7 you this morning.

8           We live today in an increasingly dangerous time. As  
9 the National Defense Strategy and the 2018 Nuclear Posture  
10 Review make clear, the United States faces a revanchist  
11 Russia and an expansionist China, and both authoritarian  
12 governments are aggressively challenging U.S. and allied  
13 interests around the world, both are modernizing their  
14 conventional armed forces and expanding their nuclear  
15 capabilities. Given these threats, the peace and security  
16 of the U.S. and our allies depends on a posture which makes  
17 clear that we will deter any attack from Russia or China.

18           The bedrock of our deterrent capability rests on our  
19 nuclear forces, and the nuclear deterrence policy posture  
20 set forth in the 2018 NPR is squarely in the mainstream of  
21 U.S. deterrence policy as it has existed in Democratic and  
22 Republican administrations for almost 60 years. It is not,  
23 as alleged by some, a warfighting policy. It is a  
24 deterrence policy. That policy is based, as Chairman Reed  
25 -- I mean, as Senator Reed said, that policy is based on the

1 very firm belief that a nuclear war cannot be won and must  
2 not be fought. But, our recognizing this is not sufficient.  
3 It's essential that potential enemy leaders recognize and  
4 understand this, as well. And the greatest risk of nuclear  
5 war and to deterrence stability lies in a potential enemy  
6 miscalculating and believing it can carry out a successful  
7 attack.

8 As the committee is aware, the United States has  
9 accomplished this goal since the early 1960s, principally by  
10 maintaining the nuclear triad undergirded by a command-and-  
11 control infrastructure and by a nuclear weapons complex.  
12 General Hyten spoke to all of you, 2 days ago, about why we  
13 need a triad, so I don't need to go there, except to say, as  
14 Ms. Creedon said, due to past neglect, the modernization of  
15 our nuclear forces and their associated command-and-control  
16 and warning systems is now of critical national importance.

17 With respect to modernization, there are two points I  
18 would like to make:

19 First, the program is not creating a nuclear arms race.  
20 Russia and China began modernizing and expanding their  
21 nuclear forces in the 2008-to-2010 timeframe, and, since  
22 then, have been placing large numbers of new strategic  
23 nuclear systems in the field. The United States has not  
24 deployed a new nuclear delivery system in this century, and  
25 the first products of our nuclear modernization program will

1 not be deployed until the mid-to-late 2020s. Any notion  
2 that our program has spurred a nuclear arms race is  
3 counterfactual.

4       Second, modernization of the triad is affordable.  
5 Critics like to throw around a 30-year lifecycle cost to  
6 produce a sticker shock, but, as the committee knows, 30-  
7 year lifecycle costs are always expensive. The cost of the  
8 modernization program, even when it's in full swing by the  
9 2020s, is not expected to exceed 3 to 4 percent of the  
10 defense budget. If you couple that with the 3 percent of  
11 the defense budget that goes to operating the nuclear  
12 forces, the total cost of protecting the United States and  
13 our allies from nuclear attack is between 6 to 7 percent of  
14 the defense budget. That's 6 to 7 cents on the defense  
15 dollar. Not too much to pay for an -- preventing an  
16 existential threat.

17       Perhaps the most controversial and misunderstood  
18 element of the modernization program is the decision to  
19 deploy a very small number of low-yield warheads on Trident  
20 II missiles. As the -- Senator Reed said, this relates  
21 directly to Russia's deployment of a military doctrine which  
22 envisages the threat or actual use of low-yield nuclear  
23 weapons to win a conventional war. Building and deploying a  
24 limited number of modified Trident II warheads counters that  
25 Russian strategy and dispels miscalculation and

1 misperceptions in Moscow about our will and capability. And  
2 the pernicious and contrived criticism that the low-yield  
3 warhead is designed to lower the nuclear threshold, thereby  
4 making nuclear warfighting possible, flies in the face of  
5 strategic logic and official policy, which is clearly and  
6 unambiguously stated in NPR 2018.

7       In closing, let me address the "no first use" issue.  
8 It is a superficially appealing policy, but, in practice, it  
9 is destabilizing. First, should the United States adopt  
10 such an approach, it will be read by our allies as removing  
11 our longstanding pledge to deter massive conventional attack  
12 against them. Withdrawing that promise would shake the NATO  
13 alliance, particularly now, given growing transatlantic  
14 tensions and Russia's violation of the INF Treaty. It could  
15 also cause some allies who don't build nuclear weapons today  
16 to consider building their own.

17       Furthermore, if "no first use" became U.S. policy, the  
18 Department of Defense would ensure that it was enforced in  
19 the planning process. But, potential enemies have a  
20 different view. Russia's policy today is "first use."  
21 China has a "no first use" policy, but it's highly nuanced  
22 and may suggest that China would feel entitled to attack  
23 preemptively if its leaders felt threatened. And that  
24 Chinese policy could change in an instant.

25       And finally, if the United States were to adopt such a

1 policy, it's highly likely that the leaderships in Moscow  
2 and Beijing would not believe it, thereby vitiating any  
3 change in crisis behavior such a policy might hope to  
4 employ.

5 I don't have time in my opening remarks to address the  
6 arms-control issues, but I have views on INF and on New  
7 START which I would be happy to share.

8 Thank you, sir.

9 [The prepared statement of Mr. Miller follows:]

10 [COMMITTEE INSERT]

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1 Chairman Inhofe: Thank you, Mr. Miller. I can assure  
2 you, with the members up here, that you will have an  
3 opportunity to be heard.

4 General Kehler, I'm -- you know, you retired in 2013.  
5 You've rested long enough. Get to work.

6 [Laughter.]

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1           STATEMENT OF GENERAL C. ROBERT KEHLER, USAF (RET.),  
2 FORMER COMMANDER, UNITED STATES STRATEGIC COMMAND

3           General Kehler: Yes, sir. Yes, sir. Thank you. Good  
4 morning, Mr. Chairman, Senator Reed, distinguished members  
5 of the committee. It's a real privilege to be here with you  
6 this morning, as well as to be here with my longtime  
7 colleagues to the right.

8           I want to emphasize that you're going to hear my  
9 personal views this morning. I'm not representing the  
10 Department or STRATCOM or the Air Force. In the interest of  
11 time, let me just offer a few points for you to consider.

12           First, as you are considering investment priorities, I  
13 would remind you that deterring the actual or coercive use  
14 of nuclear weapons against the U.S. and our allies remains  
15 the highest national security priority. There is no higher  
16 priority. While we don't have to rely on nuclear weapons to  
17 deter some of the same threats that we did during the Cold  
18 War, nuclear weapons continue to perform a critical  
19 foundational role in our defense strategy and the strategies  
20 of our allies. No other weapons carry the same risks and  
21 consequences, and no other weapons have the same deterrent  
22 effect.

23           Second, in my view, current U.S. nuclear policy is  
24 sound. Our nuclear policy has remained remarkably  
25 consistent over the decades and, when necessary, has changed

1 in an evolutionary, not a revolutionary, way. The latest  
2 Nuclear Posture Review retains this consistency, but it  
3 evolves to address a resurgent great-power threat, and it  
4 raises the priority of deterrence and force modernization as  
5 a result. This NPR highlighted the need for tailored  
6 deterrence. That's a recognition that the United States  
7 must shape its deterrence strategies to individual actors  
8 that are all very different, and that we must apply all the  
9 strategic tools, not just nuclear weapons, to today's  
10 complex global deterrence problems.

11 As you heard, the Nuclear Posture Review also called  
12 for a small number of low-yield weapons to credibly deter  
13 Russia's new doctrine and their deployment decisions that  
14 back that doctrine up. Regarding declaratory policy, the  
15 last two Nuclear Posture Reviews have agreed that the  
16 potential conditions for the U.S. to consider nuclear use  
17 are extreme circumstances, where vital national interests  
18 are involved. And I think that context remains valid.

19 My third point, the triad of ICBMs and ballistic  
20 missile submarines and long-range bombers and their  
21 supporting command-control-communications has served us well  
22 for over 50 years, and it remains the most effective and the  
23 most cost-effective means to deter attack and prevent  
24 coercion. The triad provides the mixture of systems and  
25 weapons necessary to hold an adversary's most valuable

1 targets at risk with the credibility of an assured response  
2 if it's ever needed. And those attributes are the essence  
3 of deterrence. But, the triad also allows political leaders  
4 to signal intent and enhanced stability in a crisis or a  
5 conflict, it forces an adversary to invest in defenses, and  
6 it provides a hedge against unforeseen geopolitical or  
7 technical changes.

8         Some have recommended eliminating the ICBM leg of the  
9 triad. I believe that would be a serious mistake. We use  
10 the triad differently today than we did during the Cold War.  
11 Since President Bush removed bombers and tankers from their  
12 daily nuclear commitment in 1992, we have relied on a  
13 relatively small diad of ICBMs and ballistic missile  
14 submarines to meet our daily deterrence requirements. The  
15 constant readiness of our ICBMs has allowed us to adjust the  
16 number of submarines routinely at sea. And, together, ICBMs  
17 and SSBNs have freed bombers for use by commanders in a  
18 conventional role, with great effect. Eliminating the ICBM  
19 leg would effectively leave us with a monad of ballistic  
20 missile submarines for daily deterrence.

21         Now, you might ask, "So, what?" Well, as a practical  
22 matter, relying only on ballistic missile submarines for  
23 daily deterrence means that an unforeseen advance in enemy  
24 capability or a technical failure would force a President to  
25 choose between having no readily available nuclear

1 deterrence forces or rapidly returning bombers to nuclear  
2 alert. And that's a step that carries its own risks and  
3 costs. Eliminating ICBMs also greatly simplifies an enemy's  
4 attack problem, with implications for both stability and  
5 deterrence.

6 My fourth point. As you've heard from my colleagues,  
7 the time has come to modernize our nuclear delivery  
8 platforms, the weapons, and the C3, and the infrastructure.  
9 The last concentrated investment came during the 1980s.  
10 Now, we continue to rely on the -- that era's ballistic  
11 missile submarines, the missiles that are on them, and the  
12 B-2 bombers, as well as B-52s and Minuteman ICBMs and air-  
13 launch cruise missiles, and command-and-control systems that  
14 were designed and fielded much earlier than the 1980s.  
15 While all have been maintained and periodically updated,  
16 these systems have either passed or are reaching the end of  
17 their service lives. That is not the case with Russia and  
18 China, who have invested heavily and deployed modern nuclear  
19 systems as part of strategies intended to diminish our power  
20 and prestige.

21 So, as I close, I want to emphasize that clarity and  
22 consistency are as important now as they were during the  
23 Cold War. Since the end of the Cold War, policymakers  
24 across administrations have sent conflicting signals  
25 regarding the continued value of the U.S. nuclear deterrent

1 and the necessity and cost of its modernization. While I  
2 was still in uniform, a basic consensus had emerged  
3 regarding the need to modernize and the plan to do it. Mr.  
4 Chairman, I would argue we are out of time. Committing to  
5 the plan and moving forward to execute it will do much to  
6 demonstrate our resolve, and deterrence credibility demands  
7 it.

8 Thanks again for inviting me, and I look forward to  
9 your questions.

10 [The prepared statement of General Kehler follows:]

11 [COMMITTEE INSERT]

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1 Chairman Inhofe: Well, thank you. Excellent  
2 statement. All three statements were excellent.

3 The only thing I would disagree with a little bit, Mr.  
4 Miller, was when you made the comment that we don't need to  
5 go there, because General Hyten already responded to this.  
6 The whole purpose, or major purpose, of this meeting is to  
7 get your perspectives, in addition to the other  
8 perspectives. And, from your opening statements, I think a  
9 lot of those are the same, but they need to be repeated.

10 And so, what I want to do is take a couple of the  
11 comments that have been made outside and ask for your --  
12 just to set the stage, your response to those things that  
13 were said.

14 Some of the -- and this would be for all of the  
15 witnesses -- some have proposed a variety of cuts in the  
16 nuclear modernization program. They argue that two or three  
17 of the triad are too expensive, unnecessary, and redundant.  
18 They also suggest that we might save money by life-extending  
19 current systems for several more decades. This is what  
20 we've been doing in the past. The Band-Aid approach. And  
21 so, I would ask you, each one of you, to say, Do you agree  
22 with these suggestions I've just articulated? Starting with  
23 you, Ms. Creedon.

24 Ms. Creedon: Thank you, Senator Inhofe.

25 Almost all of our delivery systems are extraordinarily

1 old and have been extended pretty much to the end of their  
2 viable life. The one exception is probably the B-52. And I  
3 don't mean to be flip, but that will probably be with us  
4 forever.

5 [Laughter.]

6 Chairman Inhofe: Well, it already has been, yeah.

7 Ms. Creedon: Oh. But, with respect, certainly, to the  
8 ground-based strategic deterrent, the new system that will  
9 replace the Minuteman-3 ICBMs and the Columbia-class 4, the  
10 Ohio class, and the B-21, all of those are absolutely  
11 necessary and have to be replaced.

12 Chairman Inhofe: Good.

13 Mr. Miller.

14 Mr. Miller: Sir, the triad, we all acknowledge, came  
15 about because of interservice rivalry in the 1950s. But,  
16 ever since it has been in force, it has been recognized by  
17 every successive administration since President  
18 Eisenhower's, Democratic and Republican administrations  
19 alike, as serving a unique feature. The various different  
20 vulnerabilities and various different offensive capabilities  
21 that the triad brings totally confound an enemy planner who  
22 would try to create a viable strategic surprise attack on  
23 the United States. As my colleagues have said, those  
24 forces, which were built in the '60s, were modernized by  
25 President Reagan. They should have been modernized in the

1 George W. Bush administration, but have not been. And we've  
2 had two successive Strategic Command commanders, Admiral  
3 Haney, now retired, and General Hyten, who have said those  
4 forces are going to have to be retired soon, in the next  
5 decade, with or without replacement. We've got to modernize  
6 the triad and its command-and-control and, as Ms. Creedon  
7 said, the nuclear weapons infrastructure.

8 Chairman Inhofe: Sure.

9 General Kehler.

10 General Kehler: I agree with my colleagues. Each leg  
11 of the triad contributes something important, and together  
12 they provide us with a deterrent effect that you're not  
13 going to duplicate with a missing leg. I would only  
14 highlight one other thing, because it doesn't get enough  
15 attention, and I'm sure General Hyten mentioned this in his  
16 testimony the other day. At least I hope he did. That's  
17 the necessity of modernizing our nuclear command-control-  
18 communications that support the triad. That has equal  
19 importance. We've often called it sort of a hidden leg of  
20 deterrence. I think it's true. It doesn't get enough  
21 attention. And I would just urge you to make sure that the  
22 investment in nuclear C3 is commensurate with the investment  
23 in the forces. We can't overlook it any longer.

24 If you want to look at, maybe, some of the oldest  
25 pieces of the nuclear deterrence system, I think you would



1 probably find that, in the C3 system, we have some of the  
2 oldest elements. So, please don't ignore the C3 piece.

3 Chairman Inhofe: Excellent.

4 Yeah, I'm going to have to hurry to get to the other  
5 question that I'm asking all of you. And some of the  
6 suggestions that have been proposed are cutting the new  
7 cruise missile, the long-range standoff weapon, the L- --  
8 which is the LRSO, because of -- it's destabilizing. If we  
9 were to cancel the LSRO program, do you believe that the air  
10 leg of the triad would still be an effective deterrent, a  
11 decade from now?

12 Let's start with you, Ms. Creedon.

13 Ms. Creedon: Thank you, Senator.

14 The LRSO was a decision that was made during the Obama  
15 administration to replace the existing air-launch cruise  
16 missile, which, again, like the other systems, had far  
17 outlived its usefulness. It was extraordinarily hard to  
18 maintain. So, in this instance, it's a one-for-one  
19 replacement. It continues a capability that has been with  
20 us for a long time. And because of the increase in IADs,  
21 the air defenses, having a new stealthy cruise missile to go  
22 along with the new air capabilities is essential.

23 Chairman Inhofe: Mr. Miller?

24 Mr. Miller: I agree with everything that Ms. Creedon  
25 has said, and I do want to address your comment that some

1 people in this town believe that it's destabilizing. That's  
2 an interesting concept, because, throughout the 1980s and  
3 beyond, the United States deployed nuclear-armed and  
4 conventional-armed cruise missiles. They were not seen to  
5 be destabilizing. And if they're destabilizing, then the  
6 question has to be asked, "In whose eyes?" Russia is busily  
7 deploying both nuclear- and conventionally-armed cruise  
8 missiles today, as are the Chinese. So, while I understand  
9 that some people in Washington think it's destabilizing, the  
10 fact is that the potential adversaries do not and are  
11 putting these systems in the field.

12 Chairman Inhofe: Excellent comment.

13 Anything?

14 General Kehler: I would only add that whether or not  
15 something is a new weapon, I think is in the eye of the  
16 beholder. I don't view any of the capabilities we've talked  
17 about here as new weapons, in that they are not new  
18 capabilities. And the one thing that hasn't been said, an  
19 air-launch cruise missile -- a nuclear-capable air-launch  
20 cruise missile makes our long-range standoff bombers viable  
21 well into the end of their service lives, in another 20 or  
22 30 or 40, or maybe longer, years, and it makes a penetrator  
23 like the B-2 or the B-21, which is what it will be intended  
24 to arm, as well -- makes it more lethal, because it extends  
25 its range. So, I think that continuing to have a long-range

1 nuclear-capable missile that our bombers can deliver is  
2 essential for deterrence in the future.

3 Chairman Inhofe: Well, thank you very much.

4 We're going to try to stay on course here. And so,  
5 what I'm going to do is, the other two questions I was going  
6 to ask all three, I'm going to ask for the record unless  
7 they are addressed by my colleagues.

8 Thank you very much.

9 [The information referred to follows:]

10 [COMMITTEE INSERT]

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1 Chairman Inhofe: Senator Reed.

2 Senator Reed: Thank you very much, Mr. Chairman.

3 Again, thank you all for your excellent testimony.

4 And let me ask everyone to comment on the INF  
5 withdrawal. And let me suggest a couple of potential issues  
6 that are involved in this.

7 First is the potential for proliferation of the Russian  
8 SSC-8 missile, since now, you know, there's no even formal  
9 document to constrain them, you know, even though they broke  
10 the document. Second, it's the proliferation of, perhaps,  
11 of medium-range missiles in other parts of the country,  
12 places like Ukraine, who might see this as an advantage.  
13 There's no longer a rule -- an international rule governing  
14 that. Third, the potentially serious and detrimental  
15 effects to New START. And I -- in that context, it -- there  
16 doesn't appear to me to be, at this point, any significant  
17 diplomatic activity to engage in a New START discussion.  
18 And time is running out.

19 So, let me start with Ms. Creedon, who was actually in  
20 here in 2014, when the Russians were called out.

21 Ms. Creedon: So, Senator Reed, first, obviously the  
22 Russians were in violation of the INF Treaty. That said, I  
23 think the way that this administration pulled out of the  
24 treaty was a mistake. I think there were opportunities not  
25 exercised for discussions. There's a lot of argument that

1 this is a treaty that has outlived its usefulness, but  
2 whether that's true or not, that is the sort of thing that  
3 should have been discussed. I think the unilateral decision  
4 to pull out of this treaty was a mistake. It's not clear  
5 that there is a strategy as to what comes next. I think, it  
6 -- in some respects, it was a bit of a surprise to some of  
7 our allies. And there's a huge amount of work to be done to  
8 understand what is the next move for the U.S., with no  
9 limitations now on anybody.

10 Senator Reed: Thank you.

11 Mr. Miller, please.

12 Mr. Miller: Senator, first, let me say, I do believe  
13 that effectively enforced arms-control treaties strengthen  
14 our national security.

15 The second thing I would say is that, sadly, Russia is  
16 on record as a serial violator of arms-control treaties.  
17 There are nine separate arms-control treaties or agreements  
18 that the Russians currently are in violation of.

19 Third, as with Ms. Creedon, I think the way the  
20 administration rolled out its decision was a huge mistake.  
21 But, that said, I also believe that the treaty was dead,  
22 that the treaty had been killed by a cynical decision made  
23 by the Kremlin sometime in the 2011-2012 timeframe to  
24 proceed with a program that they wanted to do but that the  
25 treaty prevented them from doing. U.S. diplomacy on this

1 issue started with the Russians in 2013; and, in the period  
2 from 2013 to 2018, while we talked, this cruise missile went  
3 through its final research, development, and testing phases,  
4 and all that that diplomacy has bought us now is 100 of  
5 these things in the field. So, I don't think the Russians  
6 felt constrained. It's a black program. They have hidden  
7 it. And I think that if we negotiated for another 5 years,  
8 there would only be more of these systems in the field.

9 Senator Reed: May I -- just to follow up, how does  
10 that position us, in terms of New START, which, if we lose  
11 New START, then we would effectively have, for the first  
12 time since the -- really, the '50s, no nuclear treaties even  
13 pretending to control the growth of nuclear weapons in the  
14 world.

15 Mr. Miller: I believe that we ought to be approaching  
16 the Russians with a new treaty concept that would cover all  
17 U.S. and Russian nuclear weapons. I understand that General  
18 Hyten had that same idea.

19 Senator Reed: But, you can repeat it.

20 Mr. Miller: But, it is, I think, very important,  
21 because right now New START caps conventional strategic  
22 systems.

23 Senator Reed: Right.

24 Mr. Miller: But, Mr. Putin has all of these exotic  
25 systems on the side that aren't covered, and he's got a --

1 several thousand nonstrategic nuclear weapons, including the  
2 treaty-buster. I think we ought to finally get our hands  
3 around all of these. My personal view would be to cut a  
4 deal where we extend New START, on the condition that we  
5 begin serious negotiations on getting our arms around all  
6 U.S. and Russian nuclear weapons.

7 Senator Reed: Thank you.

8 General Kehler, your comments, please.

9 General Kehler: Sir, I would just add that the purpose  
10 of arms control is to make us more secure. And I think that  
11 we can point to examples where that has been exactly the  
12 output of arms control, both the process and some of the  
13 treaties themselves. And I would offer that the United  
14 States may find itself in a position from time to time where  
15 it has to withdraw from a treaty, but we should not withdraw  
16 from the process, because I believe that we have gained a  
17 great deal of insight over the years with our potential  
18 adversary over how they operate, what they think is  
19 important, and lots of other attendant issues. I would not  
20 withdraw from the arms-control process. I do agree that, as  
21 we consider what should happen next, there are other issues  
22 that should be on the table that are considered as part of  
23 what we do next.

24 Senator Reed: I just -- a final comment, because my  
25 time is running out -- it's just -- I concur, it just seems

1 that there's no really strong, visible commitment to the  
2 process from the administration. I don't -- if you told me  
3 who was the chief negotiator, that they have a team, they've  
4 scheduled meetings with the Russians, et cetera, I haven't  
5 seen that. Have -- if anyone -- if you see that, let us  
6 know, please, because I think that's the -- a step where  
7 we're missing, at the moment.

8 Thank you, Mr. Chairman.

9 Chairman Inhofe: Thank you, Senator Reed.

10 Senator Wicker.

11 Senator Wicker: General Kehler, explain what you mean  
12 by withdrawing from the treaty and not withdrawing from the  
13 process.

14 General Kehler: Senator, what I mean is, I think -- to  
15 date, anyway, my knowledge of New START is that both parties  
16 have been complying with it, and I think that it has helped  
17 us to reduce the -- a number of operationally deployed  
18 weapons that could be aimed at us. I think that's a  
19 positive outcome. I also think that the engagement, to  
20 include the verification regime, gets us on the ground, face  
21 to face, with the Russians, and vice versa. And I think  
22 that's positive. In the INF Treaty, I think it's clearly  
23 violated, and we should not be in arms-control treaties that  
24 are being violated.

25 So, I think that there's a balance, here. There is a



1 -- an overarching arms-control process, though, an intent to  
2 want to have arms control, that I believe is valuable. And  
3 I think that, because of all the things that I just  
4 mentioned, to include the benefits we get from face-to-face  
5 contact, I would continue to make sure that we have a  
6 process where we are engaging with the Russians. I think  
7 it's time for us to think about others with nuclear arms,  
8 and how they should play, as well. But, I would not turn my  
9 back on arms control, writ large.

10 Senator Wicker: A number of us just got back from the  
11 Munich Security Conference, and I just got back, also, from  
12 the OSCE Parliamentary Assembly. It is correct that not all  
13 of our allies are alarmed about our withdrawal from the INF.  
14 And, as a matter of fact, some of them are prepared to  
15 support that publicly. Are you aware of that?

16 General Kehler: No, sir, I'm really not. I'm not  
17 current, in terms of where the allies are on these things.  
18 I do believe that this is an alliance issue, though.

19 Senator Wicker: Mr. Miller?

20 Mr. Miller: Sir, the NATO alliance has formally  
21 endorsed the fact that Russia is in violation, and supported  
22 the fact that, if they are not back in compliance with the  
23 treaty in 6 months, which is a almost impossible task, that  
24 they support the fact that the United States believes that  
25 the treaty is null and void, because it only can -- controls

1 us, but not the Russians.

2 Senator Wicker: What was the inartful thing that we  
3 did, in terms of the way we got out?

4 Mr. Miller: We should have said, from the beginning --  
5 and I think this was the plan -- that Russia was in  
6 violation, that we have been talking to them for 5 years,  
7 that there is evidence that the system is out there, in the  
8 several-tens -- I think it was probably about 70 or 80  
9 missiles at the time -- and that we needed to take action to  
10 either bring them back or to withdraw. Instead, the way it  
11 rolled out was, "We are getting out of the treaty." The  
12 burden shifted from the Russians, who were cheating, to the  
13 United States, publicly. And so, a lot of diplomacy had to  
14 be exercised to correct that impression. And it's still not  
15 completely corrected.

16 Senator Wicker: Now, General Kehler says that the  
17 Russians are complying with New START. Mr. Miller and Ms.  
18 Creedon, do you both agree with that?

19 Mr. Miller: I -- we -- I have not seen anything that  
20 suggests that they are not now complying.

21 Ms. Creedon: Yes. Everything I've seen says they are  
22 complying. And I think there was testimony earlier, by  
23 General Hyten, that they are also in compliance. So,  
24 everything I've seen, that they are.

25 Senator Wicker: Okay. With regard to "no first use,"

1 Mr. Miller has expressed his opinion, so I'm going to ask  
2 that question to Ms. Creedon and General Kehler.

3 Ms. Creedon: Senator, I think the "no first use" is a  
4 very difficult topic, and a serious topic, and it really  
5 needs discussion. It is an idea that we will not be the  
6 first ones to use nuclear weapons. The history of the U.S.  
7 has been that our policy has been that of ambiguity, that we  
8 will maintain ambiguity so that our potential adversaries  
9 will not know how we will respond.

10 Senator Wicker: That we don't rule out options.

11 Ms. Creedon: And we don't rule out options. And I  
12 think that has served us very well.

13 Now, that said, there was a substantial discussion, as  
14 you all know, at the end of the Obama administration, and I  
15 think it's a discussion that needs to be continued. But --

16 Senator Wicker: Okay, so you're not entirely on the  
17 same page with Mr. Miller. You're a little more open to the  
18 idea.

19 Ms. Creedon: So, I don't think it's a good idea right  
20 this minute. I do not --

21 Senator Wicker: Okay.

22 Ms. Creedon: -- think "no first use" is --

23 Senator Wicker: Good, then. Well, let me just turn --

24 Ms. Creedon: -- but it's one that --

25 Senator Wicker: -- then, to General --

1 Ms. Creedon: -- you should talk about from an ambition  
2 perspective.

3 Senator Wicker: General Kehler.

4 General Kehler: I would not establish a "no first use"  
5 policy. I think one of the things we forget sometimes is  
6 that the United States nuclear deterrent is unique among all  
7 the nuclear powers, in that we extend a deterrent umbrella  
8 to our allies. And we do so publicly. We've done so since  
9 almost the dawn of the Nuclear Age. And I think that we  
10 need to be very careful that establishing such a policy  
11 doesn't harm the credibility of the extended deterrent, as  
12 well.

13 Senator Wicker: Thank you.

14 Chairman Inhofe: Thank you, Senator Wicker.

15 Senator Peters.

16 Senator Peters: Thank you, Mr. Chairman.

17 Thank you, to our witnesses here today.

18 Ms. Creedon, I want to ask you this question. Earlier  
19 this week, General Hyten raised some concerns about some of  
20 the other strategic weapons that Russia is developing. I  
21 think you alluded it -- alluded to that in your opening  
22 comments, things such as the nuclear-armed hypersonic glide  
23 vehicles, globe-circling nuclear-powered cruise missiles,  
24 long-range nuclear torpedoes that can be used against U.S.  
25 coastal cities. How concerned should we be by these

1 weapons? And do you believe that that strengthens the case  
2 to extend the New START Treaty?

3 Ms. Creedon: Yes, I think we should be very worried  
4 about these systems. And I do think it absolutely is one of  
5 the reasons why we should extend New START Treaty for the 5  
6 years, and then take those 5 years -- because I do agree  
7 with the plan, with the idea, that we need to have  
8 discussions with Russia to understand how those systems can  
9 be limited, how they can be made more transparent. And the  
10 5-year extension of New START would allow us that  
11 opportunity to have those discussions. Resuming discussions  
12 with Russia is incredibly important, and it's just something  
13 that has not been able to be done right now. But, we've got  
14 to make progress on these issues.

15 Senator Peters: Thank you.

16 To our other witnesses, do you share those concerns?

17 Mr. Miller: Senator, those systems which you mentioned  
18 are not covered by the New START Treaty. And that's one of  
19 the reasons why I believe a new approach to arms control  
20 with Russia that encompasses those systems, as well as the  
21 ones that are taken up by New START, is terribly important.  
22 All of those systems are outside the treaty, as are the  
23 short-range ones. And therefore, if arms control is  
24 supposed to provide security, we're only doing it at  
25 halfway, which is not a sufficient way to do arms control.

1           Senator Peters:  Although it's not in the treaty now,  
2  does the treaty give us a hook to bring those in, or does it  
3  not?

4           Mr. Miller:  No, sir.  It would have to be a new  
5  negotiation.

6           Senator Peters:  General?

7           General Kehler:  I agree.  From a military standpoint,  
8  at least, I am always concerned by new capabilities that are  
9  being introduced that are not covered.  And so, I would be  
10  very careful about how we view the extension of New START  
11  and how we manage the conversation about new capabilities.  
12  And the Russians are -- we have to remember that our  
13  deterrent is both to prevent the actual use of the weapons  
14  and the coercive use of the weapons, as well.  And I think  
15  that's something that sometimes we overlook.

16          Senator Peters:  Right.

17          The other issue that I'm concerned about are the  
18  development of new low-yield nuclear weapons that are going  
19  to be deployed.  And I know, you know, nuclear theory has a  
20  lot of terms that they use to discuss how a war may be  
21  fought using nuclear weapons:  escalation dominance,  
22  tailored deterrence, counter-force targeting.  I think  
23  there's a long list of those.  But, we also understand the  
24  fog of war is a real factor in conventional warfare, and  
25  likely would be even more so if there's any kind of nuclear

1 conflict.

2         So, my question to you is that, if Russia were to use a  
3 low-yield nuclear weapon, the U.S., under the theory, could  
4 respond using another nuclear low-yield weapon. But,  
5 certainly folks would argue that that may lead to a certain  
6 escalation. And some have argued that maybe just having  
7 very large-yield weapons is more of a deterrence than trying  
8 to match low-yield to low-yield. Certainly would like to  
9 kind of get your thoughts unpacking those thoughts.

10         And we can start with Ms. Creedon.

11         Ms. Creedon: So, if Russia -- if, under your question,  
12 Russia were to use a low-yield nuclear weapon, the U.S.  
13 would have available the full complement of its response;  
14 and, whatever the circumstances were as a result of that  
15 use, the U.S. should take a response that is appropriate  
16 under those circumstances. So, whether that's a lower-yield  
17 nuclear weapon, whether that's a conventional response,  
18 whether that's a higher-yield nuclear weapon, I think is  
19 very situationally dependent. And I guess I'll just leave  
20 it at that. I think we have, in our arsenal right now, the  
21 full range of systems to be able to respond to whatever  
22 Russia does.

23         Senator Peters: Without developing a new low-yield  
24 weapon.

25         Ms. Creedon: Without developing a new low-yield.

1           Senator Peters: Mr. Miller?

2           Mr. Miller: So, Senator, I think the first point is,  
3 the risk of escalation is, in fact, what stops leaders short  
4 from using nuclear weapons in the first place. My concern  
5 is that the Russian development of this "escalate to win"  
6 strategy and the weapon systems that they have put in the  
7 field, the new ones, to sustain that strategy, was done in  
8 full recognition of our current capabilities, which leads me  
9 to believe, and others in the intelligence community, that  
10 the Russians don't believe that our current arsenal provides  
11 a sufficient response. The small number of low-yield  
12 Trident II weapons provides a response to that, thereby  
13 preventing the Russians from thinking they could use a low-  
14 yield nuclear weapon in the first place. The Russians have  
15 a full set of tactical nuclear weapons. The United States  
16 is not seeking to mirror that posture. We're talking about  
17 a small number of Trident II weapons that would do the job.

18          Senator Peters: Briefly, General?

19          General Kehler: Senator, I think you're right, there's  
20 a theology that goes with all of this. Unfortunately, it's  
21 never been tested. And so, it's hard to say, "Well, this  
22 would happen, and that would happen, and this would happen."  
23 I think the objective, though, is to remember that  
24 deterrence is based on two things: one, an -- it's in the  
25 mind of the adversary -- and, one, the adversary believes



1 that they can't achieve their objectives; or, two, they're  
2 going to suffer unacceptable consequences if they try. So,  
3 that's the foundation, here, that we're trying to continue  
4 to pursue. The paradox of the Nuclear Age is that, in order  
5 to prevent their use, you have to be prepared to use them.  
6 And that's been a paradox forever. And all the theologians  
7 talk about the big paradox.

8 I think the important point to remember here is, you  
9 want to be able to provide the future policymakers options.  
10 In that kind of a scenario, you want options that are below  
11 the nuclear threshold, you want to be able to use  
12 conventional, precision-strike weapons when you can, et  
13 cetera, et cetera, et cetera, but you don't want to have to  
14 go from there to offer the next option to be a high-yield  
15 nuclear weapon. Something in between is required, we  
16 believed, for deterrence credibility. And that's the  
17 objective, here. It's not about nuclear warfighting, as Mr.  
18 Miller said earlier on, but the paradox is, in order to  
19 prevent it, you have to be ready to confront it.

20 Senator Peters: Thank you.

21 Chairman Inhofe: Thank you, Senator Peters.

22 Senator Fischer.

23 Senator Fischer: Thank you, Mr. Chairman.

24 I'd like to begin by looking at unilateral reductions.  
25 Sometimes that's been a proposal that's put out there. And

1 I would just ask for a yes-or-no from the panel, to begin  
2 with. Do any of you support unilateral reductions by the  
3 United States? Everyone's indicating no.

4 We heard from General Hyten, a couple of days ago, that  
5 doing so would be inconsistent with the current security  
6 environment. And he stated, quote, "The only way to change  
7 our strategic deterrent is to convince our adversaries to  
8 reduce the threat. And this is not occurring." Would you  
9 agree with that assessment?

10 General Kehler, why don't we begin with you?

11 General Kehler: Yes, I would.

12 Senator Fischer: Mr. Miller?

13 Mr. Miller: Yes, ma'am, I would.

14 Ms. Creedon: Yes.

15 Senator Fischer: Okay.

16 I was also pleased -- and I thank you for the  
17 information that you provided to us about the triad. I  
18 think the triad is extremely important to our national  
19 security. There has been some talk out there that the  
20 United States should possibly begin to mimic the Chinese in  
21 their smaller approach to nuclear weapons. They are  
22 rebuilding their force, is information I have. They're  
23 expanding from a diad to a triad. They are in a different  
24 position than the United States. You touched on that we  
25 have a nuclear deterrent that is -- has an umbrella effect,

1 because we do protect allies, et al. Would you continue to  
2 support the posture that the United States has with regard  
3 to the umbrella effect we have with our allies?

4 Mr. Miller: I think that that posture is extremely  
5 important, not only for providing stability in Europe and in  
6 northeast Asia, but it also serves as a -- as an  
7 antiproliferant, if you will. Some of our allies could  
8 build nuclear weapons. They don't, because we provide the  
9 umbrella over them. If we withdraw that umbrella, then the  
10 situation changes for them dramatically. So, as I said in  
11 my remarks, the policy we have has served the country well  
12 for over 60 years, and I support that policy.

13 Senator Fischer: Okay.

14 Ms. Creedon?

15 Ms. Creedon: Yes, Senator, I also feel that our  
16 responsibility to our allies to provide that umbrella is  
17 absolutely essential. It does have a nonproliferation  
18 benefit, and it's one of the reasons why we have to make  
19 sure that our own deterrent, because it's their deterrent as  
20 well, is credible and well maintained.

21 The longer-term question is, How do we introduce a  
22 discussion in China? How do we introduce a discussion about  
23 arms control in that region that has no history and no  
24 incentive and apparently no interest in it? So, that --  
25 that's the longer-term question that we have to think about.

1           Senator Fischer: Do you think the possibility for  
2 opening up discussion with the Chinese could occur now,  
3 since we are pulling back from INF Treaty, and the Russians  
4 are? Do you think that we can bring other members of the  
5 nuclear club into that discussion now?

6           Ms. Creedon: It would be a good thing to see if we can  
7 start having some very preliminary discussions, bring our  
8 allies in the region to the table; understand what their  
9 views are first, make sure that we are closely aligned with  
10 all of our allies and partners in the region, and to see if  
11 we can develop some sort of a dialogue that could be  
12 presented to the Chinese to begin some sort of a --  
13 stability talks. I think it would be useful. I'm not  
14 terribly hopeful, but I think it would be useful to at least  
15 start.

16           Senator Fischer: But, you don't believe there is any  
17 indication, so far, from the Chinese that they would be  
18 interested in being involved in the process.

19           Ms. Creedon: We haven't seen it, but I'm also not sure  
20 if there have been any real overtures in that effect. But,  
21 I think we should still start working on it and start  
22 planning for the possibility that it might be an option.

23           Senator Fischer: Do you believe that pulling out of  
24 the INF Treaty gives the United States more latitude in  
25 addressing some of the weapons that the Chinese are

1 developing?

2 Ms. Creedon: Certainly, it does. And one of the  
3 discussions really is conventional systems in Asia Pacific,  
4 in the Indo-Pacific region, and whether or not those are  
5 going to be needed.

6 Senator Fischer: Okay.

7 And, General Kehler, did you have comments?

8 General Kehler: No, I would just agree with my  
9 colleagues. I would add one other thing to your comment. I  
10 -- the Russians and the Chinese will deploy the nuclear  
11 forces that they think are necessary for their own security.  
12 Significantly, though, I think it's important to remember  
13 that neither one of them deploys nuclear systems with the  
14 idea that they have allies to provide an umbrella for. The  
15 Warsaw Pact is extinct.

16 Senator Fischer: You know, there is a group that seems  
17 to be promoting the idea that the United States is the  
18 destabilizing force when it comes to arms race. And we hear  
19 about destabilizing in arms racing. What are your thoughts  
20 on that narrative? Is the United States provoking that arms  
21 race? Are we undercutting the nonproliferation regime  
22 that's out there?

23 Mr. Miller?

24 Mr. Miller: Senator, as I said earlier, the -- since  
25 2008-2010, Russia and China have been placing new systems in

1 the field -- new ICBMs, new strategic submarines, new  
2 submarine-launch ballistic missiles, new bombers, new air-,  
3 sea-, and ground-launch cruise missiles. The modernization  
4 program before this committee, before the Congress, will not  
5 produce a new system until the mid-2020s and beyond. Ash  
6 Carter, I believe -- former Secretary of Defense Carter,  
7 said, "There is a nuclear arms race, but the United States  
8 is not in it." We in no way are spurring Russia and Chinese  
9 developments. They're marching to their own drum, as  
10 General Kehler said, and they started doing that 10 years  
11 ago.

12 Senator Fischer: Thank you, sir.

13 Thank you, Mr. Chair.

14 Chairman Inhofe: Thank you, Senator Fischer.

15 Senator Warren.

16 Senator Warren: Thank you, Mr. Chairman.

17 And thank you, to our witnesses, for being here today.

18 The nuclear deal between the United States, five other  
19 countries, and Iran placed Iran's nuclear program under  
20 limits and inspections so that it cannot develop a nuclear  
21 weapon. And, so far, this deal has worked. But, President  
22 Trump put it at risk when he unilaterally withdrew the  
23 United States and reimposed all the sanctions on Iran that  
24 were meant to be waived as a condition of Iran's compliance  
25 with the agreement.

1           While the U.S. has violated the nuclear agreement, Iran  
2 has kept its part of the deal. Last month, the CIA Director  
3 said, in reference to Iran, and I'll quote here, "At the  
4 moment, technically they are in compliance."

5           Ms. Creedon, do you agree with the CIA Director that  
6 Iran is complying with the nuclear agreement?

7           Ms. Creedon: Senator, obviously I don't have access to  
8 all the intelligence --

9           Senator Warren: Based on what you know --

10          Ms. Creedon: -- but -- of course, and I've -- and just  
11 recently, the International Atomic Energy Agency confirmed  
12 that they were in compliance.

13          Senator Warren: Okay. So, staying with the nuclear  
14 deal, also called the JCPOA, last month the Director of  
15 National Intelligence released a Worldwide Threat  
16 Assessment, and it says, quote, "Iran's continued  
17 implementation of the JCPOA has extended the amount of time  
18 Iran would need to produce enough fissile material for a  
19 nuclear weapon from a few months to more than 1 year," end  
20 quote.

21          Ms. Creedon, based on your understanding from publicly  
22 available information, is that correct?

23          Ms. Creedon: My understanding, Senator Warner, is,  
24 that is correct, and there have been other articles to that  
25 effect, as well, that have been in the public.

1           Senator Warren: Okay. And this month, Vice President  
2 Pence urged our European allies to abandon the Iran nuclear  
3 deal. If this agreement collapses, would that complicate  
4 efforts to prevent Iran from developing a nuclear weapon?

5           Ms. Creedon: Senator, the whole purpose of the Iran  
6 deal was to ensure that Iran wasn't able to produce the  
7 fissile materials necessary to get a nuclear weapon. It was  
8 the most challenging thing and why the Obama administration  
9 focused on that one aspect. And so, if that deal were to  
10 unravel and Iran was not constrained under the JCPOA, then  
11 the only thing you can conclude is, they would go back to  
12 what they were doing before, which is making fissile  
13 materials.

14          Senator Warren: So, just to summarize it here, our  
15 intelligence community says that Iran is complying with the  
16 only agreement that prevents Iran from getting a nuclear  
17 weapon. This agreement has made it harder for Iran to get a  
18 nuclear weapon. And then President Trump walks away from  
19 the deal, with no backup plan. This just doesn't make any  
20 sense.

21          The nuclear deal is still working, so I think enforcing  
22 the current deal to prevent Iran from getting a nuclear  
23 weapon is a whole lot better than no deal at all.

24          Thank you.

25          I have one other question, in my time remaining, that



1 I'd like to follow up on, and that is -- follows up on  
2 Senator Peters' question. The New START Treaty with Russia  
3 currently imposes limits on our two countries' strategic  
4 nuclear arsenals, and it provides us with valuable  
5 information on Russia's strategic forces. This treaty can  
6 be extended for another 5 years, until 2026, if both of our  
7 governments agree to it. In a hearing on worldwide threats  
8 last month, the Director of Defense Intelligence Agency said  
9 that Russia is complying with the New START Treaty. The  
10 State Department has reached the same conclusion.

11 Ms. Creedon, based on publicly available information,  
12 do you agree with the Defense Intelligent Agency Director  
13 and the State Department?

14 Ms. Creedon: Yes, Senator. Everything that I have  
15 heard indicates that Russia is still in compliance with the  
16 New START Treaty, as is the U.S.

17 Senator Warren: And you once served as a high-ranking  
18 official at the National Nuclear Security Administration.  
19 Can you briefly describe how the New START Treaty enhances  
20 our national security?

21 Ms. Creedon: So, the New START Treaty covers strategic  
22 warheads and delivery systems, and it counts operationally  
23 deployed strategic systems. It provides that limitation  
24 both to the U.S. and to Russia, so it provides stability.  
25 It provides transparency through the various mechanisms of

1 inspections. And it also provides additional transparency  
2 and the ability to discuss issues associated with  
3 implementation through the Bilateral Consultative  
4 Commission. So, this Commission, provided under the treaty,  
5 meets on a regular basis, and this is where the  
6 relationship, the discussion, the inspections, and the  
7 transparency all get discussed, as well as exercised in the  
8 field. It provides immense intelligence. I think, either  
9 -- even General Hyten, last week, said, "Although our own  
10 national intelligence means are quite good, the on-the-  
11 ground, seeing-with-your-own-eyes is never a substitute for  
12 national technical means."

13       Senator Warren: Well, I appreciate that, and that's  
14 very helpful, and it helps explain why it's in our national  
15 interest.

16       New START -- I don't trust Putin, but New START is a  
17 verifiable arms-control agreement, and it expires in just 2  
18 years. President Trump has already ripped up another  
19 nuclear arms treaty with Russia, the INF Treaty, and appears  
20 to be running out the clock on New START, without any plans  
21 for a follow-on agreement. We have a strategic and a moral  
22 responsibility to do everything in our power to prevent  
23 another nuclear arms race. And this means commonsense arms  
24 control, which helps make America safer.

25       Thank you.

1 Chairman Inhofe: Thank you, Senator Warren.

2 Senator Scott.

3 Senator Scott: With regard to Russia, Iran, and China,  
4 do they have any internal pressure to reduce their nuclear  
5 research or any existing capability? Do they have any  
6 internal pressure, like we do? We have to worry about how  
7 we spend our dollars and things like that. Do they feel --  
8 do you feel like they have any internal pressure? Any of  
9 you?

10 General Kehler: We've debated, for a long time,  
11 Senator, when I was still wearing a uniform, about how --  
12 internally, what the dynamics are in those three places.  
13 What I do think -- and so, I can't really say whether  
14 there's internal pressure that we just never get to see on  
15 these matters. The intelligence community, I think, would  
16 have a better sense of all of that.

17 What I do know is that, from outward appearances,  
18 anyway, in Russia and China, they have prioritized their  
19 nuclear forces at the top of their list, and they've done so  
20 as part of strategies that are intended to diminish our  
21 power and prestige, to separate us from our allies, and to  
22 make it too hard for us to interfere in what they believe  
23 are their affairs in their regions. And so, I think, by  
24 their actions, it would indicate to me, looking at it from  
25 the outside, that, if there are voices inside that are

1 objecting, they're not being influential. And so, I think  
2 you have to look -- a mentor of mine has always said, "When  
3 we're talking about deterrence, you have to look at an  
4 adversary's intent" --

5 Senator Scott: Right.

6 General Kehler: -- "and capability." And if you --  
7 you can change intent in the next 10 minutes. What you  
8 can't change is capability over a short period of time. And  
9 so, I used to look at their capability, and their capability  
10 is formidable, it's modernized, and it's getting better.

11 Senator Scott: Mr. Miller?

12 Mr. Miller: I'd agree with General Kehler.

13 Senator Scott: Okay.

14 Ms. Creedon?

15 Ms. Creedon: Yeah, I would agree. The other aspect  
16 is, we are a very open and transparent society, and the same  
17 cannot be said of either Russia or China. So, it's very  
18 hard to understand what the population would know and  
19 whether or not they even have the ability to raise issues  
20 internally.

21 Senator Scott: Right.

22 So, they have no internal pressure to stop. Do you  
23 trust either -- any of those three countries? Do you trust  
24 the leadership of any of those countries?

25 Mr. Miller: I trust the leadership of Russia and China

1 to be pushing us around the world. I think that the  
2 statements coming out of Mr. Putin and his cronies about  
3 nuclear attacks on ourselves and our allies are outrageous  
4 and haven't been heard since the Khrushchev era. I think  
5 that the building up of new islands in the South China Sea,  
6 a claim to try to block commerce using the South China Sea  
7 as an internal lake, the close-aboard incidents of Chinese  
8 and Russian aircraft to our ships and our own aircraft  
9 indicate a dangerous sense of adventurism. So, no, I would  
10 not trust either of those leaderships one bit.

11 Senator Scott: Anybody else?

12 General Kehler: I always like --

13 Senator Scott: No way, right?

14 General Kehler: I always liked the trust-but-verify  
15 line.

16 Senator Scott: Right.

17 General Kehler: So, I think that's --

18 Senator Scott: Yeah. I agree with you.

19 General Kehler: -- that's still a good one.

20 Senator Scott: So, step one, we don't -- they don't  
21 have internal pressure. Step two, we don't trust them.  
22 Okay? Then the next thing is, Can you really do a treaty  
23 that -- when we watched the INF, they didn't comply with the  
24 INF Treaty -- can you actually do something when you -- when  
25 you have somebody on the other side of the table from you,

1 can you actually do something with them that you feel any  
2 comfort that they're going to comply with it?

3 Mr. Miller: So, yes, I think you can, if you have  
4 intrusive verification measures. The INF Treaty, for its  
5 first several decades, had very intrusive verification  
6 measures, and we were confident that the Russians were not  
7 cheating. The same thing was true of the original START  
8 Treaty. The START -- the New START Treaty provides somewhat  
9 less verification capabilities, but we are confident of that  
10 one treaty, alone. But, as I said in my other remarks, the  
11 Russians are currently in violation of nine other treaties  
12 where we do not have adequate verification capabilities, but  
13 the results are plainly seen.

14 Senator Scott: Anybody else?

15 Ms. Creedon: Yes, Senator. The New START Treaty is  
16 extraordinarily important because of the inspection regime  
17 that goes with it. And that's what allows us to have the  
18 confidence that Russia is, in fact, in compliance with the  
19 New START Treaty. It's also why the treaty should be  
20 extended, because, without it, we lose those intrusive  
21 inspections, we lose that knowledge. And the other reason  
22 for extending that treaty is to provide us the opportunity  
23 to tackle those things which are not covered by the treaty,  
24 the nonstrategic weapons, some of these novel systems, and  
25 trying to devise a treaty that would cover those and also

1 have those same intrusive-type inspections, which would  
2 provide the confidence.

3 Senator Scott: So, did the Iran treaty have the same  
4 opportunity to guarantee that they were -- the Iranians were  
5 complying? Any of you.

6 Ms. Creedon: So, the -- under the JCPOA, the  
7 International Atomic Energy Agency was assigned that  
8 responsibility. They continue to provide those inspections  
9 and, just recently, issued a report, that's not yet public,  
10 but the press covered it, that they continued to find that  
11 Iran was in compliance.

12 General Kehler: Senator, I would only add that I think  
13 you have to think about verification in terms of layers,  
14 that you -- we have always said that verification is layers  
15 that range from national technical means that might be  
16 flying in space down to intrusive onsite inspections. And I  
17 think the more elements of that you have, the more  
18 confidence you have in verification. The fewer elements you  
19 have, the less confidence you should have in verification.

20 Senator Scott: Thank you.

21 Chairman Inhofe: Thank you, Senator Scott.

22 Senator King.

23 Senator King: Thank you, Mr. Chairman.

24 To follow up on this line of questioning, my  
25 understanding is that the layers that you talked about with

1 regard to Iran were the most vigorous in -- of any treaty  
2 that we've ever negotiated. Is that accurate, Ms. Creedon?

3 Ms. Creedon: The authorities that the IAEA have -- the  
4 International Atomic Energy Agency has -- were  
5 extraordinarily intensive and extraordinarily invasive, more  
6 so than IAEA's relationship with any other country.

7 Senator King: Thank you.

8 I want to follow up on Senator Fischer's good  
9 questions. We're talking most -- almost all -- 90 percent  
10 of this hearing has been about Russia and the U.S., a little  
11 bit about Iran. But, we're talking about major new nuclear  
12 powers; China, for example. Shouldn't we be very actively  
13 thinking about how to bring them into these discussions? We  
14 could have a great treaty with Russia, but it doesn't  
15 necessarily protect us if China is just moving apace.

16 Mr. Miller?

17 Mr. Miller: As Ms. Creedon said, I think it's  
18 important to try to have outreach to China. China has shown  
19 no interest in any sort of arms-reduction talks with us at  
20 all. So, while it's important to keep trying, I think the  
21 record, so far, suggests that it's been pretty fruitless.  
22 Doesn't mean we should stop, but it -- but there's no joy  
23 there.

24 Senator King: An implicit assumption that's been going  
25 around on -- in this hearing is that the administration is



1 not actively pursuing the necessary pre- -- preliminary  
2 steps to renewing New START. Is there -- is that true? Is  
3 there any evidence of that? Is the -- is there implicit  
4 hostility among -- in the administration to the extension of  
5 New START? Is there evidence of that?

6 Mr. Miller: I believe that the administration, in its  
7 internal deliberations among the key players -- State,  
8 Defense, NSC, Energy -- is looking -- I think the  
9 administration is looking at means of dealing with the kinds  
10 of questions that we've been talking about.

11 Senator King: I'm sorry, reinterpreted that for me. Are  
12 they looking at the steps necessary to extend New START?

13 Mr. Miller: I believe they are looking at the steps to  
14 extend New START, in the context of trying to get a handle  
15 on all Russian and U.S. nuclear weapons.

16 Senator King: And you said the Chinese were  
17 uninterested. Are we interested? Have we reached out to  
18 them, in terms of opening a discussion on this issue?

19 Mr. Miller: I'm not aware of any official openings. I  
20 know a lot of -- a great deal of unofficial openings that  
21 have been pretty fruitless.

22 Senator King: I think it was, early on, mentioned:  
23 command and control. That's one of the most serious parts  
24 of this issue, and I don't think it gets significant  
25 attention. Mr. Miller, give me your thoughts on that as a

1 -- it's triad-plus, I think I would call it.

2 Mr. Miller: I will defer to General Kehler. But, the  
3 command-and-control system is antiquated, and it's got to be  
4 replaced. It's the absolute backbone of our deterrent. If  
5 a potential enemy believes that they can cripple the  
6 command-and-control system, they --

7 Senator King: Then the rest of the triad is --

8 Mr. Miller: Yes, sir, that's correct.

9 Senator King: -- it's not useful.

10 General?

11 General Kehler: I completely agree.

12 Senator King: Any response to Putin's recent  
13 statements about targeting and -- of our placing of missiles  
14 in Europe? Let -- could we discuss that?

15 Start with you, Mr. Miller.

16 Mr. Miller: First, Putin is showing a degree of  
17 hypocrisy which is astonishing even for him. He breaks the  
18 INF Treaty, he puts missiles in Europe, in the European part  
19 of Russia, and then says --

20 Senator King: That places Europe at risk.

21 Mr. Miller: -- places Europe at risk -- and then says,  
22 "By the way, if NATO responds, we're really going to target  
23 you." That's absurd.

24 The second thing is, the kind of rhetoric that's been  
25 emerging from the Putin administration since the early

1 2010s-2013 period, where they talk about holding western  
2 European cities at risk, holding the United States at risk,  
3 has no place in the current international environment. This  
4 kind of nuclear intimidation, trying to cow us and allied  
5 leaders, I think is utterly out of place. And it goes back  
6 to the point that General Kehler said, you've got to have a  
7 strong deterrent.

8       Senator King: Well, and this whole articulation of the  
9 so-called "escalate to de-escalate," which I think you  
10 better characterized as "escalate-to-win" -- that's really  
11 what it is -- is a very aggressive policy.

12       Mr. Miller: And the more important thing about that,  
13 Senator King, is that, not only is there a doctrine to do  
14 that, they've fielded new weapon systems to do that, and  
15 they've exercised those weapon systems. So, one can talk  
16 about Putin's rhetoric, on the one hand, but this is a very  
17 real Russian military capability that they practice.

18       Senator King: Which gets to the General's comment  
19 about capability plus will.

20       Mr. Miller: Yes, sir.

21       Senator King: And they're in the position of having  
22 both.

23       Mr. Miller: Yes, sir.

24       Senator King: Which, again, brings me back to where we  
25 started. There's emergency to -- I like what you're

1 suggesting of talking about extending New START, but  
2 broadening it and trying to recapture some of the general  
3 arms-control momentum.

4 Thank you all very much.

5 Mr. Chairman, thank you for this hearing. This has  
6 been very illuminating and important.

7 Chairman Inhofe: Well, thank you, Senator King.

8 Senator Cramer.

9 Senator Cramer: Thank you, Mr. Chairman.

10 And thanks, to all of the witnesses, for helping us  
11 continue this very stimulating and important to me and my  
12 home State of North Dakota, as well as to the security of  
13 the country. This has been fascinating.

14 You know, one of the things we haven't talked about,  
15 and I hear a lot about, particularly in my terms in the  
16 House, that some in the arms-control community have talked  
17 about de-alerting or, you know, lengthening the time that a  
18 ICBM -- you know, before an ICBM would be fired. And they  
19 argue that this would have this -- back to this term  
20 "stabilizing effect," that somehow if we de-alerted our  
21 missile system, that that would have a stabilizing effect.  
22 And, by the way, I was just in Minot last week, was in a  
23 launch facility. I even accused the wing commander of  
24 hiring actors. They were so good. I was so impressed, when  
25 I left there, with the airmen and the officers. And I

1 couldn't feel more confident than I do today, having met  
2 those professionals. I mean, General, do you think that we  
3 have -- do we -- do you think that we have a destabilizing,  
4 you know, control in those bunkers, or do you think this is  
5 all silly?

6 General Kehler: Well, Senator, I don't think that the  
7 debate is silly. I think that it's good for us to have this  
8 conversation from time to time. First of all, I agree with  
9 you completely. I think the men and women that are in our  
10 nuclear forces are extraordinary. And sometimes we overlook  
11 talking about them and their professionalism and the  
12 discipline that's required to be in that force. And it's  
13 significant.

14 I believe -- again, it gets back to capability and  
15 intent. I do not think that the Russians intend to launch a  
16 no-notice, massive nuclear strike on the United States.  
17 But, they have the capability to do it. And, as long as  
18 they do, my view is, we have got to be able to respond to  
19 that kind of an attack quickly, if that's the decision that  
20 we need to make. And so, I think de-alerting ICBMs -- and,  
21 as you point out, the ICBMs are the force that happens to be  
22 the most responsive. There are layers of safeguard, here.  
23 People talk about hair triggers. Our forces are not on any  
24 kind of a hair trigger. That's, I think, a very unfortunate  
25 characterization that we hear a lot. It's not true. There

1 are layers of safeguards, and there are certainly processes  
2 in place that ensure that those forces that are in a ready-  
3 to-use kind of a configuration would need to get unlock  
4 codes before they could be used. And so, it isn't the same  
5 thing at all as thinking about an -- a Wild West hair  
6 trigger on -- you know, a pistol somebody would pull from a  
7 holster. It's not the way it works.

8 Senator Cramer: Yeah.

9 General Kehler: So, I never lost any sleep, as the  
10 Commander of STRATCOM, worrying about whether or not our  
11 forces were on a hair trigger, or whether or not that  
12 contributed to instability or some likelihood of an  
13 unauthorized or inadvertent launch. I think, again, the  
14 safeguards are in place. They reassure me. And I think  
15 that our deterrent would not be as effective if the Russians  
16 or anyone else believed that they could launch some kind of  
17 an attack that would enhance their ability to think that  
18 they could achieve their objectives.

19 So, I just -- I would leave our force posture alone.  
20 It is far less aggressive than it was during the Cold War.  
21 The Cold War has been over for almost 30 years. We should  
22 stop looking back over our shoulder. This is a new era. We  
23 have the triad configured in a certain way that I think  
24 matches this era. We've changed the mixture of the weapons,  
25 so we're not in a use-or-lose kind of an environment. And I

1 think that we need to recognize that we, essentially, have a  
2 diad today. So, I would not change our force posture.

3 Senator Cramer: Well, that was a -- that was both a  
4 intelligent and passionate response to the question. I'm --  
5 it was great to hear, because I actually do -- I wish you  
6 could bring every American into -- you know, down into a  
7 control center in a launch facility so they could see what  
8 you're describing, could see that -- the safeguards that are  
9 in place, as well as the professionalism of the folks in  
10 charge. It's really -- it gives me a great sense of  
11 confidence.

12 Mr. Miller: Senator Cramer?

13 Senator Cramer: Yes.

14 Mr. Miller: May I add --

15 Senator Cramer: Please. Mr. Miller, yes.

16 Mr. Miller: -- add one other point?

17 This is another one of these superficially attractive  
18 ideas, like "no first use," which is truly dangerous. We've  
19 studied this issue in the Department of Defense for decades.  
20 There is no way of verifying that missiles are off alert.  
21 There is just no way of doing it. But, if you pass a magic  
22 wand and assume that you can put missiles verifiably off of  
23 alert, and a crisis develops, now you're in a race to re-  
24 alert, and that becomes a hugely destabilizing situation.  
25 So, again, it's a great bumper sticker, but it's a terrible,

1 terrible policy.

2 Senator Cramer: And obviously, as the counter --  
3 conclusion, it --

4 Ms. Creedon, I know you want to say something about it,  
5 and then I'll yield and --

6 Ms. Creedon: Sorry, Senator, but one of the things I  
7 want to -- I completely agree with my colleagues, but I want  
8 to add one additional concept to this. And this is the idea  
9 of providing the President adequate decision time. And this  
10 is one of the reasons why the nuclear command and control,  
11 as well as our early warning systems, are absolutely  
12 essential. And I know we've talked a lot today about the  
13 need to modernize our nuclear delivery systems and our  
14 nuclear command and control, but the other piece of this is  
15 our early warning systems, where they're mostly overhead,  
16 there's some ground, but they, too, are looking at the need  
17 for additional money-funding support. And those are the  
18 systems that actually provide the President and the national  
19 command authority with the additional time needed to make an  
20 informed decision in a time of crisis.

21 Senator Cramer: Thank you very much.

22 Thank you, Mr. Chairman.

23 Chairman Inhofe: Thank you, Senator Cramer. I agree  
24 with you, everyone should have that experience. They'd feel  
25 differently about it, perhaps.



1           Senator Kaine.

2           Senator Kaine: Thank you, Mr. Chair.

3           And thank you, to the witnesses.

4           I want to just open by just making a comment about the  
5 news from Vietnam today, since we're having a discussion  
6 about our nuclear posture. I, for one, am happy that, if  
7 the President did not feel like there was a deal to be had  
8 that was in the -- America's interest, that he walked away  
9 from the table. No deal is better than a bad deal. And I  
10 think the way they ended it -- apparently, each talking  
11 about the possibility of continuation of discussions, that's  
12 very positive. So, I just want to put on the record that,  
13 when I read the news and I read the circumstances, I was  
14 relieved that we walked away. It was pretty clear we  
15 weren't going to get the first thing that we need to get to  
16 determine whether North Korea is serious at all, which is a  
17 disclosure of their arsenal and assets. If they disclosed,  
18 they might be serious. Until they do that, we have no way  
19 of knowing whether they're serious.

20           So, I will say, while I support an administration --  
21 this administration walking away from a bad deal or a  
22 scenario where no deal is possible, I really, really object  
23 to the characterization about the death of the Virginia  
24 student, Otto Warmbier, as something that Kim Jong Un didn't  
25 know about. It reminds me of what the administration said

1 about the assassination of the Virginia journalist --  
2 resident journalist, Jamal Khashoggi, that MBS didn't know  
3 about it, or what the administration has said about Russian  
4 election interference, that Putin didn't know about it. I  
5 have no idea -- I have no idea why this President continues  
6 to be the defense lawyer for dictators who do horrible  
7 things, contrary to the advice and the intel of our own  
8 intelligence community. Our intel community is telling us  
9 what Putin knew about the election, what MBS knew about the  
10 murder of Jamal Khashoggi, and what Kim Jong Un knew about  
11 the brutalization and murder of Otto Warmbier. And I don't  
12 know why the President would want to come to the aid of  
13 people who have done these horrible things.

14 I want to ask about command and control, because I want  
15 to dig into this. General Hyten -- I think we're nervous  
16 about the various point that you all make, the antiquated  
17 nature of the command-and-control system. And General Hyten  
18 gave us good testimony about that. He did say, "You don't  
19 need to worry, I've never had gaps in command and control  
20 and communications." So, he gave us an assurance. Before I  
21 ask you, "What should we be looking for, what kind of  
22 investment should we be making, is our acquisition system  
23 such that we can do the right thing?" -- is there any virtue  
24 at all to an antiquated system, that it might be harder to  
25 cyberhack into? I mean, if we could keep the antiquated

1 system going, is it a little more invulnerable to the kinds  
2 of digital hacking that's going on now, or is that sort of a  
3 pipedream?

4 General Kehler: Senator, I'll take a stab at that.  
5 So, with, sort of, tongue in cheek, those of us that have  
6 looked at this say, "Well, there's sort of a good-news/bad-  
7 news story here." But, I think that the bad news outweighs  
8 the good news in that case, because I think "antiquated" is  
9 the operative word here. And yes, while antiquated things  
10 may provide some additional cybersecurity at a system level,  
11 I think it's almost a wash.

12 Senator Kaine: Yeah.

13 General Kehler: So, I believe that this is another  
14 area where we have to get on with both investment in things  
15 that are necessary now while we look at the future and apply  
16 sort of all of the lessons that are being learned, in the  
17 commercial world and elsewhere, about how you really provide  
18 resilient systems against cyberattack or other kinds of  
19 attacks, that will be unique -- in addition to cyberattack,  
20 unique to the nuclear command-and-control part of our  
21 enterprise.

22 So, I think it's -- yes, I take the point. Yes, some  
23 of those older systems don't have the same open portals into  
24 them, because they're antique. But, I think they are  
25 antique, at the end of the day, here, and they will not last

1 forever. In some cases, I think they're on a thin edge now.

2 Senator Kaine: If the two of you agree with that  
3 point, that the antiquated is worse than the -- some  
4 invulnerabilities that it may present, what should we be  
5 looking for, as a committee, as we're working on the NDAA,  
6 in terms of the command-and-control investment,  
7 recapitalization?

8 Mr. Miller: When I entered the Pentagon in '79, and we  
9 started to modernize the strategic systems under Harold  
10 Brown, and later under the Reagan administration, we had new  
11 systems, and we had robust and redundant systems. Now we  
12 don't have as much redundancy or resilience. And I think  
13 what you should be looking for is, Are the sensors  
14 survivable? Are the communications lanes survivable? The  
15 aircraft platforms that we have, the TACAMO aircraft and the  
16 doomsday plans are quite old. Their communications circuits  
17 have been upgraded, but the planes are old. The  
18 communications circuits are vulnerable, and the resiliency  
19 isn't there. So, I would focus on those elements and on the  
20 warning systems.

21 Senator Kaine: Ms. Creedon?

22 Ms. Creedon: And I would add on the redundancy and  
23 really focus on how to make sure that these new systems not  
24 only are resilient, but we also have multiple redundant  
25 paths so that, if a path fails or is compromised, that we

1 have other opportunities to maintain that connectivity  
2 between our forces. And, in some instances, this  
3 connectivity is going to have to be a provider of both  
4 nuclear forces and will also be involved in a conventional  
5 force. I don't think this is something we should be afraid  
6 of, frankly, but I think we need to really fully explore all  
7 of the different opportunities for the redundancy as well as  
8 the resiliency. Because --

9 Senator Kaine: Great. Thank --

10 Ms. Creedon: -- sometimes I think we lose that.

11 Senator Kaine: Thank you so much.

12 Thanks, Mr. Chair.

13 Chairman Inhofe: Thank you, Senator Kaine.

14 Senator Hawley.

15 Senator Hawley: Thank you, Mr. Chairman.

16 And thank you, to all of you, for being here today.

17 And forgive me if one or more of my questions is slightly  
18 redundant, having not been here for the earlier part of the  
19 hearing.

20 I want to ask you about some of the recommendations of  
21 the Nuclear Posture Review and low-yield tactical nuclear  
22 weapons, such an important part of our modernization  
23 efforts, particularly in light of what we heard from in this  
24 committee earlier this week, in light of what Russia and  
25 China are doing, and our need to modernize our nuclear triad

1 in order to maintain our competitiveness with our near-peer  
2 competitors.

3 So, the Nuclear Posture Review, of course, called for  
4 the U.S. to deploy a low-yield nuclear warhead. Shortly  
5 thereafter, then-Secretary of Defense James Mattis told our  
6 counterpart in the House, the House Armed Services  
7 Committee, that there's really no such thing as a tactical  
8 nuclear weapon, and went on to say that any nuclear weapon  
9 used anytime is a strategic game-changer.

10 Let me just ask you, General Kehler and Mr. Miller.  
11 Can you help us understand how deploying low-yield weapons,  
12 as recommended by the NPR, will actually help reduce the  
13 risk of escalation, not increase it?

14 Go ahead, General.

15 General Kehler: Senator, I think you have to  
16 understand that the objective, here, is to make sure an  
17 adversary understands that there's nowhere they can go to  
18 gain an advantage, so there's no part of the military  
19 spectrum, here, particularly around the nuclear threshold,  
20 that they can go that won't be met by a credible response.  
21 And so, the concern was that, if the Russians intend to go  
22 to some place around the nuclear threshold, or cross the  
23 nuclear threshold with low-yield weapons, because they  
24 believe that the only way the United States can respond is  
25 with a high-yield weapon, and somehow we would be deterred,

1 that there is a hole there, a gap that we need to make sure  
2 that we are addressing. And that was what led to the notion  
3 that, not only would we be able to offer a President a range  
4 of conventional ways to respond to such a low-yield use, but  
5 we could also respond with a low-yield weapon of our own.

6 Mr. Miller: If I could follow up on that. I think  
7 it's critically important, as we've been talking about an  
8 adversary's view of nuclear weapons, that we noticed that  
9 the Russian buildup of low-yield tactical nuclear weapons  
10 began about 10 years ago, maybe 15 years ago, along with the  
11 doctrine and the exercises that implement that. This was  
12 done in full recognition of our then-and-now current nuclear  
13 capability. So, somehow the Russian general staff seems to  
14 perceive we lack an adequate response. And they must have  
15 sold that to the political leadership, because they've  
16 invested a lot of money in that.

17 The low-yield Trident weapon is a counter to their  
18 thought that they could use tactical nuclear weapons on the  
19 battlefield. Secretary Mattis was right that the Russians  
20 seem to think they can use them in a tactical sense. And  
21 what a Trident says is, "We have an escalatory response  
22 that's not high-yield, that is credible, and, Mr. Putin, are  
23 you prepared to bet Mother Russia and the possibility of  
24 endless escalation against the use of a tactical weapon to  
25 achieve a land grab in NATO Europe?" I think that's the

1 essence of this issue.

2       Senator Hawley: Thank you very much for that. Can I  
3 just pick up on that last point? The National Defense  
4 Strategy talks a lot, and worries a lot, about the  
5 possibility of a fait accompli, aggression that changes  
6 facts on the grounds that then is very hard for us to  
7 reverse, given the time it may take to move sufficient  
8 forces in theater, et cetera. Can you just say a word about  
9 how having these weapons and these options in our arsenal,  
10 these low-yield tactical weapons, might help deter and  
11 prevent a fait accompli happening so that we don't get into  
12 that position?

13       General, maybe I'll start with you.

14       General Kehler: Senator, there have been some things  
15 written over the last several years, some books, as a matter  
16 of fact, about what's red's theory of victory, here? What  
17 is it that -- what's their strategy? What are they aiming  
18 toward? And you've identified the pieces that you can find  
19 in open literature about what it is that the Russians and  
20 the Chinese, in their own way, are trying to achieve. And  
21 that's, present us with a fait accompli in their own  
22 neighborhood, make the costs and risk of intervention too  
23 high, from deploy strategic threats, not only nuclear  
24 threats, but threats against the homeland, for example,  
25 through cyberspace, and let us know that the risk would be



1 very great to intervene. And I think one of the major  
2 changes is being able to threaten the homeland below the  
3 nuclear threshold, through cyberspace. And so, that's a  
4 part of their strategy. Nuclear weapons are foundational to  
5 their strategy.

6 So, I think -- as we think about what does it take to  
7 deter such a strategy and make it ineffective, we need to  
8 make sure that there isn't some place on this spectrum that  
9 they can go, where they believe we do not have a credible  
10 way to respond. And from that has led to some of these  
11 conversations that includes our own deployment of low-yield  
12 nuclear weapons, which, by the way, is not new for us.  
13 We've had low-yield nuclear weapons in the past. The  
14 question is the small numbers and the way we'll deploy  
15 those. And I think, in every case, it's done strategically  
16 to enhance our deterrent.

17 Mr. Miller: If I could just carry that one step  
18 further. I think, putting it simplistically, deterrence  
19 involves going to a potential enemy and taking options out  
20 of their basket. This is one way of taking their "escalate  
21 to win" strategy out of their basket. As General Kehler  
22 says, deterrence now is highly complex. It involves a mix  
23 of space and cyber and conventional and nuclear  
24 capabilities. But, we have to take the options out of the  
25 Russian basket, one at a time. This is a way of doing that

1 without trying to field our own tactical nuclear forces that  
2 we used to have and don't have the need to do anymore.

3 Senator Hawley: Thank you very much.

4 Thank you, Mr. Chairman.

5 Chairman Inhofe: Thank you, Senator.

6 Senator Jones.

7 Senator Jones: Thank you, Mr. Chairman.

8 Thank you all for being here today. Interesting --  
9 very interesting panel.

10 Ms. Creedon and Mr. Miller, you have both said that you  
11 think that the United States should be trying to get other  
12 nuclear nations -- nuclear-armed nations to the table to  
13 discuss arms control. How do we do that? What kind of  
14 levers do we have? What kind of leverage does the United  
15 States have to bring in some of these nations to the table  
16 and let's have a discussion about what we're doing and where  
17 the future is headed? How do we do that?

18 Ms. Creedon: So, Senator, I'll start with the Indo-  
19 Pacific, because that's the most challenging region. And I  
20 think we start that by having serious conversations with our  
21 allies in the region. They know this region, they live in  
22 this region. Have conversations with Australia, with Japan,  
23 with Korea about how to be effective with not only using  
24 them in these discussions, but how to understand -- to go  
25 forward with China on these talks. It's going to take a

1 while, but it's got to have the participation of our allies  
2 in this.

3         The other thing is, China still has far fewer warheads  
4 and delivery systems than does Russia. So, while we have  
5 the ongoing effort to try and figure out how to approach the  
6 Indo-Pacific region -- and, frankly, it could be a very new  
7 methodology for arms control. It may not be limitations, it  
8 may just be even things like transparency. I mean, that  
9 would be a substantial leap forward in that region, because  
10 we know very little about the Chinese systems. So, there  
11 are ways to do that.

12         But, in the meantime, because the U.S. and Russia still  
13 continue to have the bulk of the nuclear weapons, we can't  
14 lose sight of continuing to have discussions, having new  
15 discussions with Russia on the nonstrategic and the New  
16 START.

17         Senator Jones: Great.

18         Mr. Miller?

19         Mr. Miller: Senator, I think that we have tried,  
20 through unofficial and -- unofficial means, for well over a  
21 decade, to engage the Chinese, and the Chinese are not  
22 interested. The Chinese know we would like them to be more  
23 transparent, and they have maintained an opacity about their  
24 force. They have built up a very -- they have the most  
25 dynamic ballistic missile development and deployment program

1 in the world. They have created barriers to open  
2 discussions with what they are building in the created  
3 islands in the South China Sea. If, at some point, the  
4 Chinese leadership decides it's in their interest to begin a  
5 discussion with us, I think they will. But, we sometimes  
6 labor under the illusion that because we think it's a good  
7 idea, another government will agree to that. And I'm afraid  
8 that we are not there right now with Xi Jinping and his  
9 leadership.

10 Senator Jones: Is there anything that we can do to try  
11 to convince them, though? Is there something out there that  
12 you might have in mind, other than talking to our allies?  
13 Is there something that we can show, demonstrate, or do?  
14 I've -- I agree, I share the frustration. I understand the  
15 frustration that you can always, you know, take that horse  
16 to water, but you can't make him drink. But, anything that  
17 we've got, any leverage at all?

18 Ms. Creedon: One of the levers that I think we could  
19 use, and could use effectively -- actually, maybe there are  
20 two things. One is how to get other things in the context  
21 of this. So, not just arms control, but maybe economics,  
22 maybe technology-sharing, maybe other avenues of cooperation  
23 to kind of break the ice, to get into this arms control.  
24 So, not take it on frontally, but go at it in some other  
25 ways. Maybe there were ways to do space cooperation, in

1 terms of human spaceflight. We foreclosed a lot of our  
2 opportunities with China, and I think we just need to be way  
3 more creative, in terms of how to open that door.

4 Senator Jones: Great.

5 Mr. Miller: Senator, I would -- I will be the  
6 pessimist in this one. We have been restrained in our  
7 nuclear modernization program for two decades. The Chinese  
8 have been running ahead. We have been restrained in what we  
9 do in outer space, and there are two new publications out  
10 from the Department of Defense in the last 2 months that  
11 show how China has moved ahead with offensive and defensive  
12 space. What we need is a change of attitude in the Chinese  
13 leadership that it is not looking to expand and become a  
14 more regional power, but a power that will work with us.  
15 And I can't predict when that might happen, sir.

16 Senator Jones: All right. Real quick. My time is  
17 running out. But, we've got new tensions between India and  
18 Pakistan. And there is obviously a lot of concern whenever  
19 that happens. India has a "no first use" policy. Pakistan  
20 does not. What's that situation like now? What do you  
21 perceive? And are we -- should be concerned? And what  
22 should the United States be doing about it?

23 Mr. Miller: I think that's the most dangerous  
24 situation in the world. I think that the way that the two  
25 countries interact has the potential to create a nuclear

1 war. There have been various kinds of outreach for two  
2 decades, to both governments, to talk about nuclear  
3 strategy, nuclear policy. But, I think we've made more  
4 headway with the Indians than the Pakistanis. But, I would  
5 say that both countries remain a source of significant worry  
6 for me, personally.

7 Senator Jones: Right.

8 Ms. Creedon: I agree with that. And both of them are  
9 increasing their nuclear arsenals, not only in terms of  
10 numbers, but also in terms of their overall capabilities.  
11 It's a very dangerous part of the world. So, what -- so,  
12 whatever the U.S. can do to be an honest broker, or find  
13 others to be honest brokers, is really essential. This is a  
14 very dangerous situation.

15 Senator Jones: Right.

16 Well, thank you all.

17 Thank you, Mr. Chairman.

18 Chairman Inhofe: Thank you, Senator Jones.

19 Senator Tillis.

20 Senator Tillis: Thank you, Mr. Chairman.

21 Thank you all for being here.

22 General, I'd -- and I apologize to all of y'all for not  
23 being here in person. I think some of you know the drill  
24 here. We have three committees going on simultaneously.  
25 One was a markup. So, I also apologize, Mr. Chair, for not

1 being here for the whole hearing.

2 I have -- one question I have that -- and it's a --  
3 probably off-subject or hasn't been asked to this point.  
4 And then I want to come back to a few comments in the  
5 opening statements. And as we -- when we get into the  
6 discussion about our current arsenal, we talk about some of  
7 it being -- aging, unlikely to be deployed. And yet, some  
8 view it as -- decommissioning it as a sort of unilateral  
9 disarmament. Where are you all on that? I think we have  
10 certain assets that would be better -- I personally believe,  
11 better positioned for future investment into the same  
12 enterprise. So, just down the line, where are you all on  
13 that issue?

14 Ms. Creedon, we can start with you.

15 Ms. Creedon: Senator, right now our deterrent is, in  
16 fact, safe, secure, and reliable, but it's old. And I mean  
17 that from the warheads, from the delivery systems, from the  
18 platforms. So, they all need to be upgraded. There's a  
19 good start. The start has happened, some 10 years ago. The  
20 life-extension programs on the warheads are going along.  
21 The second one was just finished, another one has started  
22 up. There's also another one that's in the works. There's  
23 plans for more. So, those things are what need to be  
24 supported. The science that underpins that needs to be  
25 supported, as well as the actual funding for the delivery

1 systems. As these things age out, they will be retired, but  
2 it's a very close line between when they age out and when  
3 the new ones come in. And there's --

4 Senator Tillis: Right.

5 Ms. Creedon: -- no room for delay.

6 Senator Tillis: Thank you.

7 Mr. Miller?

8 Mr. Miller: Senator, the various parts of the triad  
9 are aging. The ALCM-B was deployed in about 1980, with an  
10 expected lifespan of 10 years. It's still there. It must  
11 be replaced soon, or retire without replacement. If you  
12 don't replace it, the B-52 part of the triad and the  
13 standoff system is gone.

14 The SSBNs, the Ohio-class magnificent submarines, as  
15 they retire in series, in the late 2020s and beyond, they  
16 will have served longer than any U.S. ballistic missile  
17 submarine ever. And the problem there is, the reactor gets  
18 brittle, the piping gets brittle, the submarines become  
19 unseaworthy. The Minuteman system has been around since the  
20 1970s. And then there's the command-and-control system,  
21 which we spoke about, sir, when you weren't here.

22 So, these -- we should have modernized this in the  
23 Bush-43 administration, and we did not, for a variety of  
24 different reasons. But, the fact is, the systems are aging  
25 out and will retire, with or without replacement.



1           Senator Tillis: And, General, as you answer that  
2 question, in your opening comments you talked about stepping  
3 away, basically taking one of the legs of the stool out,  
4 making it a two-legged stool with ICBMs not being a part of  
5 our strategy. Isn't some of our modernization also  
6 undermining that component of the triad?

7           General Kehler: It is, unless we decide to invest in  
8 ICBMs again. And there's a proposal, of course, as part of  
9 the modernization effort, to invest in the ICBM force. And  
10 I would strongly encourage you to approve that.

11           I think -- I would take the same kind of an approach.  
12 I agree with Madelyn that the current force is safe, secure,  
13 and effective. I had to certify to that. It's already been  
14 5 years ago since I took my uniform off. But, I believe  
15 that's the case. Now I believe that General Hyten testifies  
16 to that, as well. But, I think that there's an important  
17 point here. I -- we need to remind ourselves that these  
18 systems are really at the end of their service lives. And  
19 one of the things that we talk about, particularly in the  
20 nuclear business, is our systems were built in such a way  
21 that they always have margin at the end of that life. My  
22 view is, we're about out of margin here.

23           Senator Tillis: Outside of the margin.

24           General Kehler: And so, I think we're out of time. A  
25 friend of mine describes this -- if we don't act, he

1 describes this -- he's been whispering this in my ear for  
2 many years, that we are "rusting to zero" if we're not  
3 careful, here.

4 Senator Tillis: Thank you.

5 In my final minute, I'm kind of curious -- I've -- Ms.  
6 Creedon, I heard your comments about the START Treaty. I  
7 tend to agree with it. But, we've got this odd relationship  
8 with Russia, where, on the one hand, it makes sense to do  
9 that; on the other hand, they're virtually violating every  
10 other agreement we have. How do we reconcile the two?

11 Ms. Creedon: Well, it is true, and it is a hard thing  
12 to reconcile. But, this is a treaty that is extraordinarily  
13 important to both the U.S. and to Russia, and both sides are  
14 in compliance, and it really should be extended. It's a  
15 simple act to extend it. Both sides just simply have to  
16 agree to extend it. And, when that extension happens, then  
17 there is a time to have the discussions, which we must have,  
18 about the nonstrategic systems.

19 Senator Tillis: Thank you.

20 Do the two of you agree?

21 Mr. Miller: I think it's necessary, but not  
22 sufficient. I do think it's time to bring the other systems  
23 in, and I would like to see some sort of a deal whereby we  
24 agree to extend it, on the condition that real negotiations  
25 take place to bring in the exotic systems and the shorter-

1 range systems.

2 Senator Tillis: That's where I am.

3 General?

4 General Kehler: I would agree that it's effective  
5 today. I believe that it should remain as long as it's  
6 effective. I would like to see it extended, but I also  
7 believe that, as part of that process, we need to wrap some  
8 of these other concerns into it.

9 Senator Tillis: Thank you.

10 Thank you, Mr. Chair.

11 Chairman Inhofe: Thank you, Senator Tillis.

12 Senator Duckworth.

13 Senator Duckworth: Thank you, Mr. Chairman.

14 I'd like to begin by thanking the witnesses for your  
15 testimony today. The perspective and experience you bring  
16 to this topic will greatly assist the members here in our  
17 task of ensuring long-term security and prosperity for our  
18 country.

19 On Tuesday, this committee held an open hearing with  
20 commanding general of U.S. Strategic Command. In that  
21 hearing, I asked General Hyten about his views of -- on non-  
22 nuclear strategic systems. And I want to ask the same thing  
23 of our witnesses here today. I do agree, we need to  
24 modernize our nuclear arsenal, but I want to talk about the  
25 non-nuclear strategic arsenal.

1           Could you -- each of you briefly discuss your views on  
2 the potential effectiveness of non-nuclear strategic  
3 weapons? Would increased investment on our end in  
4 hypersonics, cyber, conventional, prompt global strike, or  
5 electronic warfare weapons create a credible deterrent  
6 against Chinese or Russian nuclear threats? And would they  
7 deter other nuclear threats, such as Iran or North Korea?

8           Ms. Creedon: The answer is yes. I mean, to have an  
9 effective deterrent, we have to be able to deter and defend  
10 in all regimes and in all domains. And so, investment in  
11 all of those assures that we have the technological prowess  
12 to be ahead of the game in the future.

13          Senator Duckworth: Thank you.

14          Mr. Miller: Let me agree with Ms. Creedon and say that  
15 I am a strong believer in BLU squad vehicles and hyperglossy  
16 glide vehicles. The committee has talked, for many, many  
17 years, about the problem of area denial. I think these are  
18 the classic weapons to break down the door in an area denial  
19 situation, where you destroy an enemy's antiship systems and  
20 anti-air systems and allow us to move back in. So, I firmly  
21 support those initiatives.

22          Senator Duckworth: Thank you.

23          General?

24          General Kehler: Senator, combat experience has shown  
25 that we can now use conventional weapons in places and in

1 circumstances where perhaps, once, nuclear weapons were the  
2 only thing that would have been possible. And so, I fully  
3 support, and strongly support, the addition of conventional  
4 alternatives for a range of options we would offer to  
5 decisionmakers if we were considering sort of extreme  
6 circumstances.

7 But, what they cannot do, what conventional systems  
8 cannot do, is serve as a large-scale replacement for nuclear  
9 weapons. And that's for a couple of reasons. One is, they  
10 do not have the same deterrent value in large scale. And,  
11 second, when you look at the potential target bases out  
12 there that are involved in some of our strategic concerns,  
13 we don't have sufficient conventional weapons in the entire  
14 inventory to cover those kinds of target bases.

15 So, they can't be a large-scale replacement for nuclear  
16 weapons, but, on a case-by-case basis, we have found that  
17 conventional weapons can be far more effective, far more  
18 useful, and offer far more options for decisionmakers.

19 Senator Duckworth: Thank you.

20 Shifting gears with just a -- just a bit, I wanted to  
21 discuss the current state of arms limitation agreements.  
22 Obviously, the trend in recent years has not gone in the  
23 right direction, and there's much discussion on trying to  
24 revitalize established bilateral arms limitation agreements  
25 with our global competitors, but -- on that idea of

1 multilateral arms reduction. We've discussed this a little  
2 bit already here today. I want to hear from each of you  
3 your opinions on this topic. Should we be looking to simply  
4 keep our legacy arms limitation agreements on life support,  
5 given historically high levels of mutual distrust, or would  
6 a multilateral framework among, say, the U.S., Russia, China  
7 -- and Chinese potentially breathe new life into arms  
8 control nonproliferation? And you sort of touched on this  
9 already. But, is this something where we need to sort of do  
10 more than just maintain what we've got and perhaps be a  
11 little bit more bold?

12         And then, I'd like to hear also about the current sort  
13 of policy debate surrounding nuclear weapons, in terms of  
14 the links between nuclear policy and posture and space and  
15 ballistic missile defense, as potential examples. And I  
16 want to make sure that we're discussing, in the media and in  
17 general conversation, the linkages between the different  
18 systems in an intelligent way.

19         So, let's start with the bilateral/multilateral  
20 agreements.

21         Mr. Miller: Well, I think that the nonproliferation  
22 treaty, which is a multilateral -- 190 nations, is truly  
23 important. It's in the security interests of all of those  
24 nations, and it's something we ought to continue to  
25 preserve.

1 I think that if we can come up with regional stability  
2 talks, that would be a good thing to do; rather than having  
3 Chinese aircraft come within 2 or 3 feet of our own, that we  
4 -- we have an agreement in place. They need to respect that  
5 agreement.

6 So, I think that, as far as nuclear talks, right now it  
7 really is between the United States and Russia. And where  
8 Russia is violating treaties, there are places we absolutely  
9 should maintain where we are. They're -- they may be using  
10 chemical weapons in the U.K. and in Syria. We should not be  
11 breaking the chemical weapons treaty. We should be  
12 maintaining the Vienna document, where we are transparent on  
13 our exercises.

14 And I'll yield to colleagues.

15 Ms. Creedon: So, the -- I'll just go back to New  
16 START. That is the treaty that is still -- it's alive, it's  
17 well, it's being enforced, it's working on both sides. But,  
18 the rest of the multi- -- or the bilateral, they're at risk.  
19 They're -- there's not good cooperation on both sides. But,  
20 we have to figure out ways to go forward. And the next  
21 avenue really is on multilaterals and how you think about  
22 multilaterals. So, while I would probably admit that, in  
23 some respects, arms control is in a period of hibernation,  
24 we have to figure out how to wake it up over time.

25 Senator Duckworth: Thank you.

1           Ms. Creedon: Oh, and on your last thing, just looking  
2 across the board on deterrence is absolutely essential. All  
3 of the instruments in the toolkit.

4           Senator Duckworth: Thank you.

5           Chairman Inhofe: All right. Well, thank you, Senator  
6 Duckworth.

7           And thank you for -- all three of you, for being here,  
8 and the straightforward way that you're answering the  
9 questions. It's been really good. In fact, so much --  
10 there's a lot of the same conclusions we come -- with our  
11 uniformed people. And so, it's been a very helpful  
12 committee hearing.

13           Thank you very much.

14           We are adjourned.

15           [Whereupon, at 11:21 a.m., the hearing was adjourned.]

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