

Stenographic Transcript  
Before the

Subcommittee on Strategic Forces

COMMITTEE ON  
ARMED SERVICES

**UNITED STATES SENATE**

HEARING TO RECEIVE TESTIMONY ON  
THE NUCLEAR WEAPONS COUNCIL

Wednesday, May 4, 2022

Washington, D.C.

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U.S. Senate

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Subcommittee on Strategic

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Forces

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Committee on Armed Services

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Washington, D.C.

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11 The committee met, pursuant to notice, at 4:37 p.m. in  
12 Room SD-G50, Dirksen Senate Office Building, Hon. Angus  
13 King, chairman of the subcommittee, presiding.

14 Committee Members Present: King, Reed, Warren, Rosen,  
15 Kelly, Fischer, Cotton, Rounds, and Tuberville.

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1           OPENING STATEMENT OF HON. ANGUS KING, U.S. SENATOR  
2 FROM MAINE

3           Senator King: The subcommittee will come to order. We  
4 are involved in a series of votes today so there will be a  
5 lot of back and forth. They are supposedly 10-minute votes  
6 but I would advise the witnesses, if St. Peter ever says to  
7 you you have 10 minutes to live, you should respond, "I  
8 would like it to be during a 10-minute Senate vote," because  
9 that will give you a lot more time.

10          Let me thank the witnesses for agreeing to appear today  
11 before our Strategic Forces Subcommittee. Thank you all for  
12 your service.

13          The purpose of today's hearing is to examine the  
14 processes and procedures of how the Nuclear Weapons Council  
15 coordinates Department of Defense requirements for nuclear  
16 weapons with the Department of Energy's National Nuclear  
17 Security Administration and their budgets. We have as  
18 witnesses the principals of the Nuclear Weapons Council,  
19 except for the Under Secretary of Defense for Policy.

20          This hearing is a historic one, tracing its roots to  
21 actions that occurred 76 years ago and reflective of  
22 tensions that exist between the manufacture and utilization  
23 of nuclear weapons. The Nuclear Weapons Council once was  
24 called the Military Liaison Committee and it was established  
25 in the 1946 Atomic Energy Act, after the Manhattan Project

1 was just established.

2 The committee was the result of an amendment to the  
3 1946 act by Senator Vandenberg of Michigan, who, after a  
4 much-heated debate on the civilian versus military control  
5 of nuclear weapons -- at the time consisted of nine such  
6 weapons, by the way, in our entire stockpile -- Senator  
7 Vandenberg referred to this debate as a tempest in a teapot.  
8 I would note that Senator Vandenberg worked with President  
9 Truman to form NATO and the Marshall Plan, and is quoted as  
10 stating that "partisan politics should stop at the water's  
11 edge. Senator Vandenberg's portrait hangs in the reception  
12 room to our Senate chamber.

13 Section 2C of the 1946 act authorized the Military  
14 Liaison Committee to be staffed with representatives of the  
15 War Department and the Navy. It directed the civilian  
16 commissioners of the Atomic Energy Commission to advise and  
17 consult with the committee on all atomic energy matters  
18 which the committee deems to relate to the military  
19 applications and the manufacture or utilization of atomic  
20 weapons.

21 The provision then goes on to state that if the  
22 committee, at any time, concludes that any action, proposed  
23 action, or failure to act of the commission on such matters  
24 is adverse to the responsibility of the Departments of War  
25 or Navy, the committee may refer such action or proposed

1 action to the Secretaries of the War or Navy. If the  
2 Secretary concurs, they may refer such action to the  
3 President, whose decision shall be final. Amazingly, that  
4 debate which Senator Vandenberg referred to as a tempest in  
5 a teapot, still occurs today.

6 The Military Liaison Committee was renamed the Nuclear  
7 Weapons Council after the 1986 Blue Ribbon Task Force on  
8 Nuclear Weapons Management found that the Department of  
9 Defense and the Department of Energy should be coordinating  
10 more tightly on nuclear weapons programs and budgets. I am  
11 hopeful that today we can examine the relationship between  
12 the Department of Defense and the NNSA and how requirements  
13 and budgets are coordinated. And we keep in mind that the  
14 debate that occurred in 1946 really revolves around the  
15 civil-military control of nuclear weapons. It is an  
16 important and healthy tension but one we must respect as  
17 fundamental to our laws and Constitution.

18 We have just finished another nuclear posture review.  
19 Russia is making reckless statements about nuclear use, and  
20 the NNSA is executing its highest workload since the 1980s,  
21 as we rebuild our aging triad. Now more than ever we need  
22 the Department of Defense and the NNSA to closely  
23 coordinate, in a unified way, their requirements and budgets  
24 so that our nuclear deterrent continues to be, as Secretary  
25 Ash Carter described it, "the backbone of every national

1 security action we undertake today."

2 Again, let me thank today's witnesses for you all  
3 agreeing to appear, and after brief opening statements we  
4 will have rounds of 5-minute questions to the witnesses.

5 Senator Fischer?

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1           STATEMENT OF HON. DEB FISCHER, U.S. SENATOR FROM  
2 NEBRASKA

3           Senator Fischer: Thank you, Mr. Chairman. I will keep  
4 my statement short so that we can save time for more  
5 questions.

6           First of all, welcome to all of our witnesses. We  
7 appreciate the effort it took to align your schedules and  
8 appear before us today. I am sorry that Secretary Kahl  
9 could not be with us, but Dr. Plumb, we are glad to have you  
10 here. Thank you.

11           I also want to thank the staff, John Epstein, in  
12 particular, for their effort to bring this hearing together.

13           We have before us today the most senior panel that I  
14 can recall ever appearing before this subcommittee, and we  
15 look forward to your testimony and about the Nuclear Weapons  
16 Council's work to ensure our deterrent remains safe, secure,  
17 effective, and credible, as the geopolitical landscape  
18 becomes less stable and nuclear threats increase. I remain  
19 concerned that we are not doing enough and that we continue  
20 to accept greater risk in our policies, plans, and programs.

21           Russia's increasingly overt nuclear threats should  
22 remind all of us of the importance of nuclear deterrence and  
23 the risk of deterrence failure. This is the Department of  
24 Defense's most important mission, and we must ensure it has  
25 the capabilities and resources necessary to succeed.

1 Thank you, Mr. Chairman.

2 Senator King: Ms. Hruby, if you would begin?

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1 STATEMENT OF THE HONORABLE JILL M. HRUBY, UNDER  
2 SECRETARY OF ENERGY FOR NUCLEAR SECURITY ADMINISTRATOR,  
3 NATIONAL NUCLEAR SECURITY ADMINISTRATION

4 Ms. Hruby: Chairman Reed, Chairman King, Ranking  
5 Member Fischer, and members of the subcommittee, it is my  
6 pleasure to be here today with my colleagues from the  
7 Nuclear Weapons Council.

8 The Nuclear Weapons Council serves an indispensable  
9 coordination role between NNSA and DoD for the design,  
10 development, testing, and production of U.S. nuclear weapons  
11 and delivery systems. It also serves a critical role for  
12 anticipating future needs and managing priorities and risks.

13 The biggest challenge NNSA faces today is conducting  
14 five stockpile modernization programs while simultaneously  
15 revitalizing our infrastructure. NNSA is fully committed to  
16 executing programs as efficiently and quickly as possible  
17 while managing risks. However, the risk will persist until  
18 we complete the enterprise recapitalization efforts.

19 Steady progress is being made. The W88 Alt 370 and the  
20 B61-12 are on track to meet DoD operational schedule. NNSA  
21 is also developing the modernized W80-4, W87-1, and W93, in  
22 partnership with DoD. I am proud of how well NNSA is  
23 working with the Navy, Air Force, USSTRATCOM, and the  
24 Nuclear Weapons Council during this demanding time.

25 The 2022 Nuclear Posture Review laid out some clear

1 initiatives that impact the NNSA. We are committed to  
2 implementing production-based resilience and warhead science  
3 and technology innovation. We are also diligently working  
4 to recruit, develop, and retain our workforce.

5 Lastly, I would be remiss if I did not mention NNSA's  
6 equally strong commitment to our responsibilities to promote  
7 nonproliferation, reduce nuclear risk, and enhance  
8 counterterrorism and counter-proliferation efforts. We  
9 appreciate your sustained, bipartisan support.

10 Thank you, and I look forward to your questions.

11 [The prepared statement of Ms. Hruby, Ms. Shyu, Mr.  
12 LaPlante, Mr. Plumb Admiral Richard, and Admiral Grady,  
13 follows:]

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Senator King: Admiral Richard?

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1 STATEMENT OF ADMIRAL CHARLES RICHARD, COMMANDER,  
2 UNITED STATES STRATEGIC COMMAND

3 Admiral Richard: Chairman Reed, Chairman King, Ranking  
4 Member Fischer, distinguished committee members, it is a  
5 pleasure to be here again as the operational commander  
6 responsible for our nation's nuclear forces, and being able  
7 to testify beside my Nuclear Weapons Council colleagues.

8 Given Russia's ongoing war against Ukraine, I will have  
9 to limit my responses in this unclassified forum.

10 Let me begin with this observation. We are facing  
11 crisis deterrence dynamics right now that we have only seen  
12 a few times in our nation's history. When I testified to  
13 this committee in March I expressed concern regarding three  
14 party deterrence dynamics that we face today. The nation  
15 and our allies have not faced a crisis like Russia's  
16 invasion of Ukraine in over 30 years. President Putin  
17 simultaneously invaded a sovereign nation while using thinly  
18 veiled nuclear threats to deter U.S. and NATO intervention.

19 The PRC is watching the war in Ukraine closely and will  
20 likely use nuclear coercion to their advantage in the  
21 future. Their intent is to achieve the military capability  
22 to reunify Taiwan by 2027, if not sooner.

23 STRATCOM has been preparing for this class of threat  
24 for years, developing theoretical deterrence concepts and  
25 putting them into action. Yet my ability to maintain

1 strategic deterrence is limited. As stated in my fiscal  
2 year 2023 unfunded priorities memo, the war in Ukraine and  
3 China's nuclear trajectory, their strategic breakout,  
4 demonstrates that we have a deterrence and assurance gap  
5 against the threat of limited nuclear employment. To help  
6 close this gap, pursuing a low-yield, non-ballistic  
7 capability that does not require visible generation, should  
8 be re-examined, in my opinion, in the near future, along  
9 with other measures to address this.

10 Weapons program delays have driven us past the point  
11 where it is possible to fully mitigate operational risks.  
12 In some cases we are simply left to assess the damage to our  
13 deterrent. Further programmatic delays, budget shortfalls,  
14 or policy decisions to lower operational requirements to  
15 meet infrastructure capacity will result in operational  
16 consequences. However, the Nuclear Weapons Council, I  
17 believe, is well-positioned to assess and meet these  
18 challenges.

19 I applaud my Secretary, Secretary Austin's Integrated  
20 Deterrence Initiative, to confront the three-party  
21 deterrence dynamic. However, I ask us not to forget that  
22 the foundation of the nation's integrated deterrent is a  
23 safe, secure, and effective nuclear enterprise. Without  
24 this foundation, integrated deterrence simply does not work.

25 I look forward to your questions.

1           Senator King: Thank you. Mr. LaPlante?

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1           STATEMENT OF THE HONORABLE WILLIAM LaPLANTE, UNDER  
2 SECRETARY OF DEFENSE FOR ACQUISITION AND SUSTAINMENT

3           Mr. LaPlante: Thank you, Chairman King and also  
4 Ranking Member Fischer, and thanks to my colleagues here  
5 from the Nuclear Weapons Council for this really important  
6 subject. It was very daunting to hear the history and the  
7 provenance of this very committee. Thank you, Senator.

8           Nuclear deterrence, as has been said, is the top  
9 priority and is the backbone of everything we have. It is  
10 the backbone of every operational plan the Department of  
11 Defense has, as was pointed out by others. And for over 60  
12 years the bedrock of that, of course, has been the triad,  
13 and we need it to be with us for many decades to come.

14           And as the admiral just said, we have pushed the  
15 modernization of those platforms and those capabilities as  
16 long as we can. So in addition to having the five programs  
17 that the administrator just talked about, the five programs  
18 of the stockpile that are being modernized, we are  
19 recapitalizing three legs of the triad at the same time --  
20 as you all know, Columbia-class, SSBN, the B-21 bomber, the  
21 GBSB ICBM replacement. So we are doing a lot right now  
22 because we have to, in many ways because we have waited to  
23 do this, as a country.

24           So if there ever was a need for a Nuclear Weapons  
25 Council I would think it would be today and with these

1 colleagues here. As you know, they play a critical and  
2 unique role in the deterrence mission and had all the  
3 purpose that the chairman mentioned in this opening remarks.

4 It is a joint DoD/NNSA forum, and it is designed to  
5 facilitate priorities to make sure we are going across these  
6 seams and understanding the interdependencies, which are  
7 many, between all these different pieces. This is the time,  
8 as much as anything else, for this to happen, and I welcome  
9 the transparency and the strong commitment that colleagues  
10 at the Department of Energy as well as Administrator Hruby  
11 have given us.

12 We had our first, at least for me, my first session I  
13 chaired yesterday, and I can tell you we are all on the same  
14 page. We are all on the same page. So as was mentioned,  
15 the NONPROLIFERATION is out. We now know what our guidance  
16 is to do. We have to get on and execute. So that is our  
17 challenge, and a lot of this also, the backdrop is  
18 reconstituting capabilities and a workforce that has  
19 atrophied. These systems that are being modernized or  
20 recapitalized, the workforce we are using to do it is  
21 largely a workforce that was not there when their  
22 predecessor systems, that we have today, were built. So  
23 this is really a big challenge for us, and I look forward to  
24 engaging with this committee and with the Nuclear Weapons  
25 Council. So thank you.



1           Senator King: Thank you for your chairmanship of the  
2 Council.

3           I just want to state for the record that this hearing  
4 was planned in January, before the invasion of Ukraine, and  
5 I do not want anyone to interpret this hearing as somehow  
6 nuclear saber-rattling on behalf of the United States. This  
7 is a hearing that this subcommittee felt was important, but  
8 it is not related to the events in Ukraine in any specific  
9 way. I think it is important to make that point.

10          Ms. Shyu, please.

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1 STATEMENT OF THE HONORABLE HEIDI SHYU, UNDER SECRETARY  
2 OF DEFENSE FOR RESEARCH AND ENGINEERING

3 Ms. Shyu: Chairman King, Ranking Member Fischer, and  
4 subcommittee members, thank you for inviting us to provide  
5 testimony for the Senate Armed Services Committee hearing on  
6 the Nuclear Weapons Council's activities to sustain and  
7 modernize the U.S. nuclear deterrent. I am honored and  
8 proud to be seated beside my other distinguished council  
9 members and to represent all of the incredible military,  
10 civilian, laboratory, and contractor personnel that carry  
11 out the work of ensuring our nation sustains a safe, secure,  
12 reliable, and effective nuclear deterrent.

13 The Office of Under Secretary of Defense for Research  
14 and Engineering is responsible for the Department of  
15 Defense's National Defense Science and Technology strategy,  
16 including the Department's nuclear weapon modernization  
17 activities. We share the responsibility of ensuring an  
18 enduring scientific and technological advantage for the  
19 nation's nuclear enterprise, with the National Nuclear  
20 Security Administration. Together we are tasked with  
21 creating innovative ways to ensure that the modernization of  
22 the nuclear triad achieves strategic deterrence during a  
23 period of rapidly evolving threats.

24 A month ago I testified before the Senator Armed  
25 Services Committee Subcommittee on Emerging Threats and

1 Capabilities on how I am working to accelerate innovation  
2 for the warfighter. This mission has never been more  
3 important than it is today, and applies as much to a nuclear  
4 force as it does to our conventional forces.

5 Strategic competitors to the United States are rapidly  
6 developing their nuclear arsenal in new and novel ways, with  
7 a clear intent of increasing their reliance on these weapons  
8 in their security strategies. The United States must not  
9 allow ourselves to be taken by technological surprise, and  
10 we must have the technological resilience to anticipate and  
11 rapidly respond to emerging threats.

12 We have a solemn responsibility to ensure that we place  
13 our nuclear delivery systems and platforms in both a timely  
14 and cost-effective manner. My job is to make sure that we  
15 bring the best technological innovation that the nation has  
16 to offer. This includes leveraging emerging technologies  
17 and advanced manufacturing methods, making wise investments  
18 in the defense industrial base, ensuring the integrity of  
19 our supply chains, and increasing focus on exquisite  
20 modeling and simulation, rapid prototyping, and  
21 demonstration capabilities.

22 I have also set for the Department 14 critical  
23 technology areas vital to maintaining our military  
24 technological advantage, some of which specifically applies  
25 to the nuclear enterprise, such as areas surround

1 microelectronics, advanced materials, quantum science,  
2 advanced computing and software, and integrated network  
3 systems assistance.

4 The Department of Defense is also committed to  
5 investing in retaining a highly skilled nuclear science and  
6 technology workforce. This is the enduring means by which  
7 we ensure the long-term viability of our nation's nuclear  
8 deterrent.

9 These are the current ways my office is contributing to  
10 the Nuclear Weapons Council activities and will work towards  
11 implanting nuclear policy objectives, including supporting  
12 the modernization of the nuclear triad.

13 Thank you for the invitation to testify before this  
14 committee. I look forward to your questions.

15 Senator King: Thank you.

16 John Plumb, Assistant Secretary of Defense for Space  
17 Policy.

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1 STATEMENT OF THE HONORABLE JOHN PLUMB, ASSISTANT  
2 SECRETARY OF DEFENSE FOR SPACE POLICY

3 Mr. Plumb: Thank you, Senator King. Chairman Reed,  
4 Chairman King, Ranking Member Fischer, and members of the  
5 subcommittee, I am also honored to testify here today with  
6 my colleagues on the Nuclear Weapons Council, where I am  
7 proud to represent policy for most meetings.

8 In my role as Assistant Secretary of Defense I am  
9 responsible for nuclear weapons policy, and so I thought  
10 today it would be appropriate to use my brief time to  
11 discuss the 2022 Nuclear Posture Review.

12 The Department completed its review of nuclear posture  
13 earlier this year, in close consultation with the  
14 interagency, outside experts, allies, and partners. The NPR  
15 represents a comprehensive, balance approach to U.S. nuclear  
16 strategy, policy, posture, and forces, and as Admiral  
17 Richard said, maintaining a safe, secure, and effective  
18 nuclear deterrent as well as a strong, incredible, extended  
19 deterrence commitment remains the top priority for the  
20 Department. This top priority is further reinforced by  
21 Russia's invasion of and nuclear rhetoric regarding Ukraine  
22 and by China's rapid nuclear modernization and expansion.

23 Committed to that priority, the President's fiscal year  
24 2023 budget request includes \$34.4 billion for the nuclear  
25 enterprise. This includes fully supporting the

1 modernization of the triad, modernizing our nuclear security  
2 infrastructure, and investments in our NC3, nuclear command,  
3 control, and communications architecture.

4 That \$34.4 billion is nearly \$7 billion more than the  
5 fiscal year 2022 request. It includes funding for the B-21  
6 bomber and the LRSO for the air leg, GBSD for the ground  
7 leg, and the Columbia SSBN and the Trident II life extension  
8 for the sea leg. At the same time and after considering all  
9 viewpoints, the NPR concluded that the SLCM should be  
10 cancelled and the B-83-1 should be retired.

11 The NPR underscores the U.S. commitment to reducing the  
12 role of nuclear weapons and reestablishing our leadership in  
13 arms control. We will continue to emphasize strategic  
14 stability, seek to avoid costly arms races, and facilitate  
15 risk reduction and arms control arrangements, where  
16 possible.

17 Our nuclear forces remain the bedrock of our deterrence  
18 architecture. They are foundational to every defense  
19 priority established in the National Defense Strategy, and  
20 they remain indispensable to our national security. It is  
21 my honor to work with the Nuclear Weapons Council and the  
22 Congress and the committee on these issues.

23 Thank you, and I look forward to your questions.

24 Senator King: Thank you, sir.

25 The final witness, Admiral Christopher Grady, Vice

1 Chairman of the Joint Chiefs of Staff. Admiral Grady.

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1           STATEMENT OF ADMIRAL CHRISTOPHER GRADY, VICE CHAIRMAN  
2           OF THE JOINT CHIEFS OF STAFF

3           Admiral Grady: Chairman Reed, Chairman King, Ranking  
4           Member Fischer, and distinguished members of the  
5           subcommittee, thank you for the opportunity to testify today  
6           with my colleagues.

7           For 78 years, since the end of World War II, democratic  
8           institutions and the rules-based order have prevented great-  
9           power war. Since the advent of the nuclear age, our nuclear  
10          deterrent has served a vital purpose in a U.S. national  
11          security strategy and continues to be an essential part of  
12          our strategy to preserve peace and stability by deterring  
13          aggression against the United States, our allies, and our  
14          partners.

15          However, today we face a complex global threat  
16          environment characterized by increasingly sophisticated and  
17          militarily capable strategic competitors who intend to  
18          fundamentally change the rules-based order, and this, of  
19          course, as recently evidenced by an unprovoked and  
20          unnecessary war of aggression by Russia.

21          Since the Manhattan Project, a partnership between the  
22          National Laboratories, production facilities, and our  
23          respective departments has provided us with the cornerstone  
24          of our security, the nuclear deterrent, and these  
25          relationships are evolving and growing stronger as we



1 transition from maintaining legacy systems to producing  
2 modern capabilities. This is why the 2022 National Defense  
3 Strategy and Nuclear Posture Review reinforces our  
4 commitment to modernize the triad.

5 As the subcommittee conducts its crucial oversight on  
6 this important topic there are three areas that I recommend  
7 require focused leadership. First, everything we do should  
8 start with the threat, and the threat is moving fast, and  
9 the Joint Force requires capabilities that give us the  
10 ability to deter and respond at the time and place of our  
11 choosing.

12 Next, we must accelerate how we buy, develop,  
13 experiment, and field modern capabilities, particularly how  
14 we manage the Phase X process. Moving at the speed of  
15 relevance is not a "nice to have." It is a "must have," but  
16 many of our processes and our products are products of the  
17 industrial age.

18 We also require timely and predictable funding to  
19 achieve modernization, and our activities are highly  
20 interdependent and funding gaps disrupt our ability to  
21 deliver, and I appreciate the support of the committee to  
22 that end.

23 In closing, a thank the subcommittee for its leadership  
24 and commitment to the nuclear deterrence mission and all of  
25 our servicemembers, and I look forward to your questions.

1 thank you.

2 Senator King: Thank you, Admiral. Thanks to all of  
3 our witnesses. We will do 5-minute rounds, as per the  
4 committee's custom.

5 Let me begin. Mr. LaPlante, you are the chair. The  
6 most general question is, how is it working? We have had  
7 problems in the past. There have been, as you know, some  
8 controversy over the last several years. Do you feel that  
9 the budget process this year between NNSA and the Department  
10 of Defense worked as it should? Was it vigorous but smooth?

11 Mr. LaPlante: Yeah, thanks for the question, Mr.  
12 Chairman. Yes, it is my understanding, and I have done a  
13 lot of talking in my last couple of weeks and listening to a  
14 lot of my colleagues, including on this group, that it was  
15 quite thorough and robust, the work of NWC, in reviewing the  
16 budget. In fact, it was chaired by my colleague who is  
17 actually here behind me, Honorable Rosenblum. And it was  
18 very thorough and complete, and went through, I do not know,  
19 several months of it, and seemed to end up at a place where  
20 I think people felt pretty comfortable that we had looked at  
21 things with a good degree of fidelity, and of course  
22 concluded the adequacy of what we were trying to do, but  
23 also agreed with the NNSA conclusion about getting to 80  
24 pits per year by 2030 is not being, at least as of today,  
25 appears to be possible.

1           So it appears -- and again, as I mentioned in my  
2 opening remarks, I chaired my first meeting yesterday, and I  
3 could just say from that meeting, who knows. We all are on  
4 the same page. I mean, we are also struck by the enormity  
5 of what we have to do. I mean, again, we do not have time  
6 to bicker and we do not have time to go into silos now. We  
7 just do not have the time. And everything is so  
8 independent.

9           Senator King: It is really a triad of modernization.  
10 It is the triad, the delivery. We are modernizing all three  
11 legs, we are modernizing the weapon system, but we are also  
12 modernizing the facilities themselves at NNSA. I have been  
13 to Los Alamos and there are some -- I think there are some  
14 facilities that date back to the Manhattan Project. So it  
15 is massive undertaking.

16          Admiral Richard, you touched on this, I think, in your  
17 testimony, and we were talking about deterrence. The budget  
18 defunds the sea-launch cruise missile, and my question is,  
19 do we have a deterrent capability below the level of a  
20 massive response, and if not, is that not a gap in our  
21 deterrent capacity?

22          Admiral Richard: We do have a deterrent capability,  
23 and you are talking about a class of deterrence challenge  
24 that STRATCOM has been working on since 2015. How do you  
25 deter limited employment?

1 Nuclear Posture Review, very thorough review. I think  
2 as you all have seen this is an excellent strategy that has  
3 resulted. But I think it is incumbent upon us to learn  
4 lessons as we go along, as the threat changes, both China's  
5 strategic breakout and what we are learning in real time in  
6 the crisis inside Ukraine.

7 And so not all of your triad is available all of the  
8 time. Day-to-day we have a dyad. And so the question  
9 becomes, as we go forward, what changes, capacity, capacity,  
10 and posture do we need to have to better deter the threats  
11 we face? And I do submit that is a question we need to be  
12 looking at, and based on what we are learning from the  
13 Ukraine crisis, the deterrence and assurance gap -- it is  
14 important not to leave that out -- a non-ballistic, low-  
15 yield, non-treaty accountable system that is available  
16 without visible generation, would be very valuable.

17 Senator King: And we do not have that today. Is that  
18 correct?

19 Admiral Richard: That is correct.

20 Senator King: A different question on deterrence. One  
21 of the things that keeps me up at night is nonstate actors  
22 getting ahold of nuclear weapons. Ms. Hruby, I know that  
23 part of your list of things to do is nonproliferation. The  
24 problem with terrorists having a nuclear weapon is that  
25 deterrence does not work with them. They do not care too

1 much about dying and they do not have a capital city to be  
2 worried about. And I just commend to all of you, and  
3 perhaps I can submit this question for the record,  
4 particularly you, Admiral Richard, I would like to something  
5 about how we deter, how do we deal with the risk of a  
6 proliferation of nuclear weapons to a terrorist, to nonstate  
7 actors, for whom the normal, the theory of deterrence does  
8 not really apply?

9 Final quick question, Ms. Hruby, and you may want to  
10 talk about this later. Savannah River, 80 pits a year. It  
11 does not look like we are going to make it. Is there a plan  
12 to accelerate that process and get a better handle on costs?

13 Ms. Hruby: The Savannah River pit production facility  
14 would make 50 pits per year to allow us, as a country,  
15 combined with the Los Alamos 30 pits per year, to make 80.

16 We are moving as fast as we can on the Savannah River  
17 pit production facility design. That is the phase that we  
18 are in. That design is occurring at about 75 percent of the  
19 time that a non-nuclear design of that same magnitude would  
20 take place, so I feel like that is accelerated. When the  
21 design is complete we will begin construction. When the  
22 construction is complete we will begin trying to make pits  
23 at rate. So we have multiple steps. We will try to  
24 accelerate each of those steps, and, in fact, we are hoping  
25 to begin to do some prebuys of long-lead items to prepare

1 for the construction phase now.

2 Senator King: Thank you. Senator Fischer.

3 Senator Fischer: Thank you, Mr. Chairman.

4 Admiral Richard, I would like to ask my first question  
5 of you, and it is a repeat of what Chairman King asked. You  
6 reported to us last year, in your prepared statement, you  
7 said, speaking of SLCM, "Without this capability adversaries  
8 may perceive an advantage at lower levels of conflict that  
9 may encourage limited nuclear use." Is that still your  
10 view?

11 Admiral Richard: Senator, it is.

12 Senator Fischer: And you believe that we have a  
13 deterrence and an assurance gap without SLCM. Is that  
14 correct?

15 Admiral Richard: Senator, I do. And what I would add  
16 is that one of the takeaways, I think, from Ukraine is there  
17 are certain scenarios that were judged to be highly  
18 improbable that have now materialized in front of us in real  
19 life, and I think that requires us to go back and reassess  
20 some of the decisions we have made in the past.

21 Senator Fischer: Do you believe that the NPR that just  
22 came out recently from the Administration, does that provide  
23 the Department to have conversations on not just the threats  
24 that are out there but also on the needs that this country  
25 must have to defend the homeland?

1           Admiral Richard:  Senator, I think it does.  The NPR  
2 has produced, in my opinion, a very good strategy.  I think  
3 as we implement the NPR what we have to do is take that  
4 strategy, and then as threats change, right -- and I would  
5 refer to China's strategic -- we do not know where China is  
6 going to wind up in capability and capacity.  We are  
7 learning probabilities are different, based on what we are  
8 seeing in Ukraine, and the NPR calls for that.  The next  
9 step is to actually implement that process and ask ourselves  
10 what posture, what capability, what capacity do we need to  
11 execute that good strategy.

12           Senator Fischer:  And do you feel confident that you  
13 and other members of the Department and the military will be  
14 able to express those views in a very thoughtful manner and  
15 the confidence in the Administration and the possibilities  
16 of looking at change?

17           Admiral Richard:  Senator, I am certainly asking for  
18 that.

19           Senator Fischer:  Thank you very much.

20           Admiral Grady, your predecessor, General Hyten,  
21 testified in support of SLCM many times.  He was quoted in  
22 one of his appearances before this subcommittee.  He said,  
23 "My job as a military officer is to look at the threat,  
24 understand the threat, and propose capabilities to this body  
25 to deliver to the military so that we can respond to any

1 threat that exists. It is all about the threat."

2 Have the threats changed, sir?

3 Admiral Grady: Yes, ma'am. First of all --

4 Senator Fischer: Would it be your best military advice  
5 to at least continue research and development on the  
6 capability that we have with SLCM?

7 Admiral Grady: I am aligned with the chairman on this,  
8 and I think consistent with my testimony and with his in  
9 that it is all about providing the President options against  
10 a broad series of contingencies, and in this respect, then,  
11 I am in favor of continuing to assess and evaluate the SLCM  
12 end going forward.

13 Senator Fischer: Thank you, Sir.

14 Dr. Plumb, welcome. In Section 1641 of the fiscal year  
15 2022 Defense Authorization Bill there was a requirement that  
16 the Department submit the analysis of alternatives conducted  
17 for the sea-launched cruise missile. When will that be  
18 submitted?

19 Mr. LaPlante: Thank you for the question. My  
20 understanding is it is within a matter of days. I think  
21 they are putting together the cover letter and the rest, to  
22 send that AOA over here.

23 Senator Fischer: The Nuclear Posture Review, it  
24 estimates the total cost for the SLCM program. Can you  
25 provide us with a written breakdown of that cost estimate in



1 the future, please?

2 Mr. LaPlante: Thank you. To the extent that it is  
3 available. Again, I have not been briefed on the AOA. To  
4 the extent that it is available, absolutely.

5 Senator Fischer: Okay. Thank you.

6 Dr. Plumb, maybe this is for you. Over the next 8  
7 years China is expected to quadruple its stockpile, and  
8 Russia's arsenal, which already exceeds our own, is also  
9 expected to grow further. While this NPR recommends  
10 continuing the replacement of our aging delivery systems,  
11 this essentially recapitalizes a force that is sized and  
12 configured along the lines of the 2010 New START Treaty  
13 force structure.

14 Is this Administration's view that all the developments  
15 we have seen, for example, China's crash nuclear buildup,  
16 Russia's violation of INF Treaty, that they do not have any  
17 real impact on U.S. nuclear posture, and the modernization  
18 plan initially conceived of in 2010, is sufficient?

19 Mr. Plumb: Thanks, Senator. China's breakout, if you  
20 will, but certainly their advanced modernization of their  
21 ICBMs and their nuclear posture overall is clearly  
22 concerning. As you well know, Russia's intent to include  
23 nuclear weapons throughout its forces, almost at every  
24 level, is also of concern.

25 I would just point out two things. One, the three-body

1 problem we are about to face here, or are facing even now,  
2 is new, and it is going to require serious consideration,  
3 and I do not think there is a single person in the  
4 Administration on any side of these issues that does not  
5 realize that and think that this is a problem that is going  
6 to require continued introspection and review.

7 And the second thing, not everyone values nuclear  
8 weapons at the same level. Each country has its own  
9 approach. I think we have seen Russia's conventional forces  
10 is weaker than certainly they imagine, and than we imagined,  
11 and that explains further their over-reliance on nuclear  
12 weapons. I do not think we need to match them one-for-one  
13 or yield-for yield to be able to deter each adversary.

14 Senator Fischer: The 2010 plan, though, that did not  
15 really consider China. You know, China's buildup was after  
16 that. How would you respond to that?

17 Mr. Plumb: Again, I would say you are correct.  
18 China's acceleration here was maybe thought of but certainly  
19 not as direct of a threat to us right now. I think we are  
20 postured to deter both, but all of these things require  
21 continued reevaluation of the threat and reevaluation of  
22 posture.

23 The one thing to note, of course, and this council is  
24 the place to address this, is we have a huge bow wave of  
25 modernization coming just for these things in the triad that

1 we need. \$34.4 billion is not the largest number. There  
2 are larger numbers coming. We have capacity issues with  
3 NNSA as well, and so we have to take all of these realities  
4 into account as we look at this problem.

5 Senator Fischer: And the reality of the -- one last  
6 point -- the reality of the Defense Department's budget is  
7 there is a very small percentage that goes to our nuclear  
8 weapons. Is that not true?

9 Mr. Plumb: I believe it is 4.5 percent for the nuclear  
10 piece overall. The weapons piece obviously is smaller,  
11 Senator.

12 Senator Fischer: Thank you.

13 Senator King: Thank you, Senator Fischer. Senator  
14 Reed.

15 Senator Reed: Thank you very much, Mr. Chairman. I  
16 had the opportunity to speak with Administrator Hruby  
17 yesterday, and I am trying to understand two messages. One,  
18 Administrator Hruby wrote to the committee on April 12th,  
19 indicating the unfunded priority of \$250 million to \$500  
20 million for pit production at the Savannah River site. Then  
21 on April 22nd, the Nuclear Weapons Council wrote to the  
22 committee that additional funding would not be required.  
23 Indeed, the words were "funding alone will not enable it to  
24 meet pit production requirements."

25 So at least in my mind there appears to be a

1 discrepancy between what NNSA is saying and what the Nuclear  
2 Weapons Council is saying, so let me begin with Secretary  
3 LaPlante and then ask Administrator Hruby to comment.

4 Mr. LaPlante: Thank you, Senator, for the question. I  
5 understand the question.

6 The Nuclear Weapons Council stands by the assessment  
7 that I signed on April 22nd, of the adequacy of the budget  
8 as well as that no additional money will get the pits to 80  
9 per year. And I would say this. The Nuclear Weapons  
10 Council has been tracking, since the fall, this potential  
11 idea and concepts of additional, let's say, early, long-  
12 leads items possibilities that might help bring the pit  
13 production to 80 per year by 2030, but just will be  
14 assistance in leaning forward. We have been aware of this  
15 for some time. It was not really at a high degree of  
16 fidelity when we reviewed it so we did not consider it at  
17 the time.

18 I think since then, particularly for the part -- and I  
19 would also defer to my colleague in a moment -- that  
20 involved the \$250 million, the three items, the glove boxes  
21 and the building facility as well as the training, it  
22 appears that we have enough fidelity that it looks like it  
23 might be sensible to do. However, we need to review it, and  
24 the plan right now is the Nuclear Weapons Council, in the  
25 next few weeks, we are going to take a look at this proposal

1 and we will make our comments on it and make it available  
2 both to you and to this committee.

3 I would just say this. We really want to applaud  
4 leaning forward, so our bias is going to be leaning forward.  
5 If there are good ideas that will continue to up, out of our  
6 colleagues at NNSA, we need to make sure we look at them,  
7 and if they are solid we need to implement them. And this  
8 is going to be a continuous process.

9 Subject to questions, that is my answer.

10 Senator Reed: Thank you. Administrator, your letter  
11 preceded the commission's letter. You are a member of the  
12 commission. Do you concur with that or do you offer  
13 additional advice?

14 Ms. Hruby: I concur, but, Senator, if you would let me  
15 try to clarify. So the Nuclear Weapons Council letter made  
16 a comment that no additional amount of money will get 80  
17 pits per year in 2030. That is a statement that I  
18 completely agree with. The request for additional money,  
19 the letter I signed out, was associated with trying to buy  
20 down risks and accelerate processes to get construction  
21 completed faster and to get to pit production faster, not to  
22 get to 2030. So this would still be post-2030, but it would  
23 allow us to have more confidence that we would not have to  
24 stop or stall because we did not have equipment when we were  
25 doing the construction project and to make sure that the

1 people are ready to make pits when they can get in the  
2 building.

3 Senator Reed: Well, I would appreciate further advice  
4 and comment as you study this issue going forward. And one  
5 other issue, which might not be appropriate for an open  
6 session, is that we both agree that 2030 target is not  
7 achievable. As it goes back we have to think about what  
8 effect it has on our nuclear deterrence, on our ability to  
9 actually arm nuclear weapons. I am sure you are doing that,  
10 and in a classified session we can pursue that question.  
11 Thank you.

12 I have a brief bit of time, but for the vice chairman,  
13 admiral. The proposal for the submarine-launched cruise  
14 missile would actually involve the attack submarines. Is  
15 that correct?

16 Admiral Grady: That is correct, sir.

17 Senator Reed: And was part of the analysis the effect  
18 on the operational requirements of attack submarines, vis-à-  
19 vis strategic ballistic missile submarines, and did that  
20 factor into the recommendation by the Nuclear Posture  
21 Review?

22 Admiral Grady: Sir, since my time as the vice chairman  
23 I have not studied that issue nor have I seen that study.  
24 That is not to say it did not happen. So I would like to go  
25 back and determine whether that did happen.

1           Now the SLCM-N was validated CONOP and how it might  
2 affect the --

3           Senator Reed: Admiral Richard, because I am over, but  
4 do you have a quick comment?

5           Admiral Richard: Admiral Grady's assessment was very  
6 accurate, and I will offer that there are a wide range of  
7 CONOPS that are available to the Navy for the employment of  
8 SLCM-N on a nuclear-powered submarine, not necessarily the  
9 CONOP that we used for the old TLAM-N.

10          Senator Reed: [Presiding.] Thank you very much.

11          Let me recognize Senator Cotton, please, on behalf of  
12 Senator King.

13          Senator Cotton: Thank you all for your appearance here  
14 today. It is good to see the entire Nuclear Weapons Council  
15 here, with one exception, the Under Secretary of Defense for  
16 Policy, Colin Kahl. Mr. Plumb, you are filling in for Mr.  
17 Kahl today. Do you know why he could not be here?

18          Mr. Plumb: Senator, I do not have a specific but I  
19 will say that on his behalf I attend the Nuclear Weapons  
20 Council meetings. That is my responsibility as ASD Space  
21 Policy, the nuclear weapons policy. And so we have got a  
22 close working relationship, but I think from a panel  
23 standpoint, at least in my mind, sir --

24          Senator Cotton: I am glad you do that, and I am sure  
25 you do. Was he in the Pentagon today, working? Does

1 anybody know? Admiral Grady, do you know if he was in the  
2 Pentagon working today?

3 Admiral Grady: I do not know, sir.

4 Senator Cotton: Is he in the Washington National  
5 Capital region? Do you know that, Mr. Plumb?

6 Mr. Plumb: Sir, I do not.

7 Senator Cotton: Mr. LaPlante, you are the chair of the  
8 council. Do you know where one of your councilmembers is?

9 Mr. LaPlante: I do not. Not right now. Not today.  
10 Thank you.

11 Senator Cotton: I just want to point out this seems to  
12 be part of a continued pattern on behalf of the chairman of  
13 the committee and apparently now the subcommittee of  
14 protecting Colin Kahl at all costs from appearing in public  
15 before this committee. And I think it is a pattern that  
16 should stop.

17 Admiral Richard, I know you have already touched  
18 briefly on this. I was gone. I just want to make sure I  
19 understand your testimony. You said on your unfunded  
20 priorities list that you need, quote, "a low-yield, non-  
21 ballistic capability to deter and respond without visible  
22 generation." Let's put that in plain English. "Low-yield,  
23 non-ballistic capability." That sounds a lot like a cruise  
24 missile. "Without visible generation." That sounds like  
25 something that is not on an airplane. So to me that sounds



1 like a sea-launched cruise missile with nuclear  
2 capabilities. Is that right?

3 Admiral Richard: Senator, a sea-launched cruise  
4 missile would fit those requirements.

5 Senator Cotton: Okay. So is it your best military  
6 advice that we continue developing this nuclear-capable sea-  
7 launched cruise missile?

8 Admiral Richard: Senator, yes.

9 Senator Cotton: So you agree in that regard with  
10 Chairman Milley and General Wolters' testimony?

11 Admiral Richard: Yes, sir.

12 Senator Cotton: Okay.

13 Admiral Grady, you just heard Admiral Richard's  
14 testimony. Is it your best military advice that we continue  
15 with the sea-launched cruise missile with nuclear  
16 capabilities as well?

17 Admiral Grady: Senator, it is.

18 Senator Cotton: Okay.

19 Admiral Richard, given that Russia's arsenal already  
20 exceeds ours and that China's arsenal is rapidly growing, if  
21 we keep our plans exactly the same as they are today will  
22 the STRATCOM commander who comes after you in 8 years, 2030,  
23 have a force that is capable of deterring both Russia and  
24 China?

25 Admiral Richard: That is the number one question that

1 we need to ask ourselves as this moves forward.

2 Senator Cotton: That is why I asked you.

3 Admiral Richard: What we have is the absolute minimum.  
4 It depends on the trajectory of where this goes, and we will  
5 not be able to do it with the same level of risk that we are  
6 carrying today if we do not ask that question.

7 Senator Cotton: Churchill said, in his Iron Curtain  
8 speech, that you should not engage in temptations in a trial  
9 of strength by merely exceeding your adversary by a small  
10 amount in military power. Do you agree with Churchill's  
11 recommendation that you do not encourage trials of strength?

12 Admiral Richard: I do, but I would also point out,  
13 look, it is not necessary to match your opponent weapon-to-  
14 weapon. We have a good strategy. You have to have  
15 sufficient capability to execute that strategy as the threat  
16 changes, and that is the question. The triad is the  
17 minimum. We are going to have to ask that question going  
18 into the future to execute the strategy.

19 Senator Cotton: How many road-mobile and rail-mobile  
20 missiles does Russia have?

21 Admiral Richard: Senator, I need to give you that  
22 answer in a classified forum.

23 Senator Cotton: Let me ask you this. Do they have  
24 road-mobile and rail-mobile missiles?

25 Admiral Richard: They have road-mobile missiles, yes.

1 Senator Cotton: Okay. What about China?

2 Admiral Richard: China has a significant number of  
3 road-mobile missiles.

4 Senator Cotton: Okay. How many road-mobile and rail-  
5 mobile missiles does the United States have?

6 Admiral Richard: We do not have any.

7 Senator Cotton: Oh, we do not have any at all?

8 Admiral Richard: No, sir.

9 Senator Cotton: So that is yet another capacity that  
10 we have refrained from developing over the years, for  
11 justifiable reasons, I understand. My point is that we  
12 cannot simply decide to disarm unilaterally on all these  
13 different domains, like a sea-launched cruise missile or  
14 other non-strategic or tactical or battlefield weapons,  
15 however you want to phrase them.

16 Admiral Richard, one final question. So I am pleased  
17 to see that once again the force is in favor of modernizing  
18 our triad, which, as you say, is the absolute minimum, have  
19 succeeded against the efforts of the Far Left to defund  
20 them. I do worry about some potential single points of  
21 failure on these modernization programs, though, and the  
22 operational impacts that could occur from any delays. Could  
23 you share your thoughts on this risk and how to avoid it?

24 Admiral Richard: First, Senator, what I want to offer  
25 is three STRATCOM commanders in a row have come here and

1 said we have no margin. We do not have any operational  
2 margin left. We used that operational margin to delay the  
3 recapitalization as long as we have. What is left inside  
4 your triad is its inherent ability to hedge between legs,  
5 inter-leg hedging. That capability is there for  
6 operational, technical, and geopolitical risk. It was not  
7 placed in our triad for programmatic convenience.

8 I recommend that we maintain that hedge for the purpose  
9 it was designed for, and we start asking the question, what  
10 is it going to take to get this recapitalization done on  
11 time, because I have very little ability operationally to  
12 mitigate delays.

13 Senator Cotton: All right. Thank you all for your  
14 very important work on the Nuclear Weapons Council.

15 Senator Reed: Thank you, Senator Cotton.

16 Senator Rosen, you are recognized, and if Senator King  
17 does not appear at the conclusion of your comments could you  
18 recognize Senator Rounds, on behalf of the chair? Thank  
19 you.

20 Senator Rosen: Thank you, Chairman. Thank you all for  
21 being here today and for all your work and your service to  
22 our country. I really appreciate it.

23 I am going to talk a little bit about the Nevada Test  
24 Site. I am going to keep calling it the Nevada Test Site.  
25 It is a lot easier than the Nevada National Security Site,

1 NNSS. It is a little easier to say that.

2       You know, it was ground zero for the majority of our  
3 country's explosive nuclear testing between 1945 and 1992  
4 with 100 atmospheric tests and 828 underground tests being  
5 conducted at the site. As someone who lived in Nevada when  
6 our nation conducted the last explosive testing that shook  
7 the ground -- the whole ground would shake, all around Las  
8 Vegas on those first Saturdays of the month when they would  
9 do them -- I am strongly, more than strongly opposed to the  
10 resumption of explosive nuclear testing in our state.

11       So today the site oversees the Stockpile Stewardship  
12 Program, principally, as we know it, the Ula facility and  
13 underground laboratory where scientists conduct subcritical  
14 experiments to verify the reliability and effectiveness of  
15 our nuclear stockpile.

16       Administrator Hruby, I know we have spoken about this,  
17 just for the record. In your professional opinion do you  
18 agree that there is not a current or foreseeable need for  
19 the United States to resume explosive nuclear testing that  
20 produces nuclear yields?

21       Ms. Hruby: Yes, Senator Rosen, I do. And I would just  
22 go further to say our entire Stockpile Stewardship Program  
23 is designed around the principal that we will make sure we  
24 understand weapons enough so that we do not have to test.

25       Senator Rosen: Thank you. And I want to build a

1 little bit again on our discussion last week about Ula  
2 advancements, and how will the Ula upgrades, the upgrades to  
3 the complex, improve the Stockpile Stewardship Program so  
4 that, honestly, we will never have to return to those days  
5 of explosive nuclear weapons testing?

6 Ms. Hruby: Yeah, thank you, Senator, for the question.

7 The Ula complex at the Nevada Test Site -- I will follow  
8 your lead -- is the tunnel complex where we do subcritical  
9 tests to study the science, and we are investing  
10 significantly in upgrading the infrastructure in that tunnel  
11 complex as well as new experimental capabilities in the  
12 Enhanced Capabilities for Subcritical Experiments project.  
13 And with that, when we are able to do those experiments, we  
14 will be able to use weapon-relevant geometries and materials  
15 to study the implosion of a pit that will allow us to have  
16 even better models and assess the stockpile so that we do  
17 not have to test.

18 Senator Rosen: Thank you. I am going to ask one more  
19 question on this to you, Administrator Hruby. The Nuclear  
20 Weapons Council is required to report regularly to the  
21 President regarding the safety and reliability of the U.S.  
22 stockpile and to provide an annual recommendation on the  
23 need to resume underground nuclear explosive testing, like  
24 we are talking about, to preserve the credibility of the  
25 U.S. nuclear deterrent.

1           And so I am going to ask you, Administrator Hruby and  
2 Secretary LaPlante, what is the position of the council on  
3 renewed explosive testing, for the record?

4           Ms. Hruby: As you rightly state, the three NNSA lab  
5 directors are required by law to assess the safety and  
6 reliability and performance of our stockpile, and to  
7 specifically address whether or not we need testing at this  
8 time. And to date the statements have been clear that  
9 testing is not needed.

10          Senator Rosen: Thank you. Mr. LaPlante?

11          Mr. LaPlante: And I would just add, my understanding,  
12 again, the Nuclear Weapons Council agreed with that  
13 assessment and that testing at this time is not needed.

14          Senator Rosen: Thank you. I appreciate that.

15          I am just going to ask quickly, the fiscal year 2021  
16 NDAA included a provision to ensure that the Nuclear Weapons  
17 Council has an opportunity to review the test site budget  
18 early enough so it can determine whether the budget  
19 adequately supports DoD requirements. It requires the  
20 Secretary of Energy to submit the proposed budget to the  
21 council prior to submitting it to OMB.

22          And so, Administrator Hruby, last question. I am  
23 sorry, if you can answer quickly. Has this new review  
24 process had any impacts on the budgets to modernize and  
25 recapitalize the test site infrastructure?

1 Ms. Hruby: I do not believe so. I have only done the  
2 process once, and in this process the Nuclear Weapons  
3 Council assessed that the DOE budget for the test site was  
4 adequate.

5 Senator Rosen: All right. Well maybe we can talk  
6 offline a little bit more about that. Thank you very much,  
7 and let's see, Senator Kaine. Oh no, Senator Rounds, I  
8 believe.

9 Senator King: [Presiding.] Senator Rounds is next.

10 Senator Rosen: Senator Rounds.

11 Senator Rounds: Thank you, Mr. Chairman.

12 Admiral Richard, well, first of all let me just say  
13 thank you to all of you for your service to our country, and  
14 I think it is very special that the entire council be here  
15 today. This is a very special opportunity for us.

16 Admiral Richard, in August of 2021, at the Space and  
17 Missile Defense Symposium, you described China's explosive  
18 growth and modernization of its nuclear and conventional  
19 forces as breathtaking. You went on to caution, "Make no  
20 mistake. China's strategic breakout is cause for action,"  
21 and that we need to understand what we are up against. And  
22 I would like to just have you share with us, or to describe  
23 in plain and as simple English as we can get to, as I call  
24 it, third-grade level here, as the USSTRATCOM commander,  
25 what it is that we are up against so that the American



1 people clearly understand how grave this threat truly is,  
2 and to assure that we continue to pace this growing threat  
3 with our own capabilities for ourselves and our allies.  
4 Could you also speak to how imperative it is that we do the  
5 threat-to-capability need reviews on a more continuing  
6 basis?

7 Admiral Richard: Senator, let me start by trying to  
8 characterize the speed this way. When I first testified 2  
9 years ago the great debate was whether China was going to  
10 double its stockpile by the end of the decade. That has  
11 already happened while I have been the commander of U.S.  
12 Strategic Command. Details that you would like to have, the  
13 biggest and most visible one is the expansion from 0 to at  
14 least 360 solid-field intercontinental ballistic missile  
15 silos. Significant growth, and this has occurred over the  
16 course of just a few years. Double number of road-mobile  
17 missiles.

18 China now has a true air leg, nuclear capable with  
19 their H-6N bombers and an air-launched ballistic missile.  
20 They are not capable of continuous at-sea deterrent patrols  
21 with their Jin-class submarines from protected bastion in  
22 the South China Sea, and more are coming. They have a true  
23 nuclear command and control system. They are building a  
24 warning system. They aspire to launch under warning launch,  
25 under attack capability. They have raised the readiness of

1 their forces. They have a substantial number of theater-  
2 range systems, many of which are nuclear, which have no role  
3 in a true minimum-deterrent, no-first-use policy.

4 They are changing their command and control, and this  
5 is before we even get into the novel weapon systems. The  
6 most public one of those was the Fractional Orbital  
7 Bombardment System that has an unlimited range, can attack  
8 from any azimuth and comes down in a hypersonic glide  
9 vehicle with great performance. No nation in history has  
10 ever demonstrated that capability.

11 And, Senator, the rest of the details are actually in  
12 my written posture statement, but that is why I describe  
13 this as -- this is easily the biggest expansion in China's  
14 history and rivals the biggest expansion of any nation in  
15 history, including us and the Soviet Union back in the early  
16 '60s.

17 Senator Rounds: And just for the record, they are  
18 continuing to produce nuclear weapons to fill these expected  
19 weapon systems at an ongoing and very rapid rate. I do not  
20 know if we can talk about how quick it is, but it is at a  
21 very significant rate. Correct?

22 Admiral Richard: Senator, yes. The bottom line, what  
23 I have directed my staff at STRATCOM to do -- and you are  
24 right, the details are classified -- whatever the  
25 intelligence community tells you about what China is going

1 to do, divide it by 2 in time and you will probably be  
2 closer to what happens.

3 Senator Rounds: Thank you, Admiral.

4 Administrator Hruby, this is the lead-in to the  
5 question that I would have for you regarding our ability  
6 just to produce plutonium pits. Earlier you mentioned that  
7 we are not going to make the 80 pits per year goal by 2030,  
8 which is what the statutory requirement is. If we are not  
9 going to, and recognizing, not even what all of our near-  
10 peer competitors are doing but just what China alone is  
11 doing, it would seem to me if we are not even going to make  
12 this number, what is our Plan B?

13 Ms. Hruby: Thank you, Senator, for that question, and  
14 we are actively working this in the Nuclear Weapons Council  
15 right now, is what can we do to have a safe, secure,  
16 reliable, and effective stockpile in light of what we think  
17 we can practically do in terms of making pits? We will look  
18 at that carefully. There may be options, but we are in the  
19 middle of that study.

20 I just want to remind you that we are making new pits  
21 because we are concerned about pit aging. We do not want to  
22 put old pits in new weapons if we think, in the 30 years  
23 those weapons will be in the stockpile they may have aging  
24 problems. But we do not know for sure that they will have  
25 aging problems because that is a science problem that is

1 very difficult and that we are studying at NNSA.

2 Senator Rounds: If I could, what you have suggested  
3 then -- and I am out of time, but I would just say, one of  
4 the options for Plan B is that we either rejuvenate or we  
5 continue to use existing pits that already have in  
6 inventory.

7 Ms. Hruby: Right. We reuse pits.

8 Senator Rounds: Thank you. Mr. Chairman, I am out of  
9 time. Thank you.

10 Senator King: Thank you, Senator Rounds. Senator  
11 Warren.

12 Senator Warren: Thank you, Mr. Chairman.

13 So it is no secret that I think our nuclear  
14 modernization program is unsustainable and dangerous. I  
15 wanted to see significantly less emphasis on nuclear weapons  
16 in the National Defense Strategy but the Biden  
17 administration made the right call in cancelling the sea-  
18 launched cruise missile, known as the SLCM, or "slick-em."  
19 A low-yield nuclear weapon launch from ships duplicates  
20 capabilities we already have and undermines the Navy's  
21 conventional mission.

22 Even after eliminating this missile, however, our  
23 nuclear modernization program is still incredibly expensive.  
24 The Congressional Budget Office estimated that it would cost  
25 \$1.7 trillion, and I suspect we are going to find out that

1 that estimate, once again, is far too low. But we have been  
2 hearing a tremendous amount today from my Republican  
3 colleagues who somehow think we are still spending too  
4 little on nuclear weapons and the process of producing them.

5 So let's just see if we can clear something up.  
6 Admiral Richard, we have discussed this before, but to  
7 confirm again, was Strategic Command fully consulted and  
8 able to fully participate in the Nuclear Posture Review  
9 process?

10 Admiral Richard: Senator, as far as the process inside  
11 the Department of Defense, yes. And I will also point out  
12 Ukraine and the crisis that we are in happened after the  
13 Nuclear Posture Review.

14 Senator Warren: All right. But you were part of this  
15 while review, right?

16 Admiral Richard: I was, Senator.

17 Senator Warren: And I know that we have to make tough  
18 calls, especially to make sure that nuclear weapon spending  
19 does not cannibalize our conventional capabilities. The  
20 Navy said that pursuing SLCM would be, quote/unquote, "cost  
21 prohibitive." That is the description from the Navy. Our  
22 nuclear weapons modernization plans include constructing new  
23 plutonium pits, which produce the radioactive raw material  
24 we need for nuclear weapons. I remain concerned about the  
25 costs and the risks in the pit production program, which is

1 already far behind schedule and far over budget.

2 So Administrator Hruby, both Admiral Richard and your  
3 deputy have told this committee that throwing more money at  
4 this problem is not going to get us to our original goal of  
5 80 pits per year by 2030. The Nuclear Weapons Council has  
6 also concluded that additional funding simply will not get  
7 us there.

8 So, Administrator Hruby, despite the fact that more  
9 money will not solve the fundamental flaws in this program,  
10 your unfunded priorities list, the wish list that you submit  
11 to Congress on top of your \$21.4 billion budget request,  
12 includes an additional \$500 million more dollars for pit  
13 production. Is that correct?

14 Ms. Hruby: It is.

15 Senator Warren: So, Administrator Hruby, when you were  
16 before this committee last week you could not even tell us  
17 how much the pit production program would cost. So why  
18 should taxpayers be throwing an extra \$500 million on top of  
19 a program that you do not even have a cost estimate for?

20 Ms. Hruby: Yes, Senator Warren. We are in the process  
21 of doing the design so that we can have a credible cost and  
22 schedule estimate. That design will be complete in early  
23 2024. We do know, however, based on other construction  
24 projects that we are currently doing that some items that  
25 will be needed in the pit production facility, like nuclear-

1 qualified piping and glove boxes, are taking a very long  
2 time to buy. So the request for additional monies has to do  
3 with procuring some of the long-lead items that we will need  
4 so that when our design is complete we can do construction  
5 at the fastest possible pace.

6 Senator Warren: You know, I just have to say it was  
7 your opening line there, when you said, yourself, just now  
8 that you do not have a credible estimate, and you are hoping  
9 to have a credible estimate at some point in the future. I  
10 have got to say, I am really unhappy to have to tell  
11 taxpayers that you get a half a billion dollars on something  
12 for which you do not have a credible estimate yet on what  
13 you are going to need, because the credible estimate  
14 actually may guide whether or not we decide to do this  
15 program and how we do this program. So saying, well, go  
16 ahead and throw and extra half billion in right now just in  
17 case is troubling.

18 Now look, I realize I am out of time. Dr. LaPlante, I  
19 am going to submit some questions for the record for you on  
20 where you see the most programmatic risk for the Department  
21 in this. We can just go back and forth over that when we  
22 are not on the clock.

23 You know, we are talking about spending trillions of  
24 dollars, and the American people truly, they want to spend  
25 what it takes to keep us safe. But when you cannot answer

1 basic questions about these programs it does not inspire  
2 much confidence that this is the number that we should be  
3 supporting.

4 So thank you, Mr. Chairman.

5 Senator King: Thank you, Senator. We are going to  
6 have a short second round for those of us who are wishing to  
7 follow up.

8 Secretary LaPlante, give me an assessment of where the  
9 GBSD program is. Are we on budget, on schedule? This is a  
10 big, new project, and we do not want surprises. So how do  
11 you feel about where that project stands right now?

12 Mr. LaPlante: Senator, I will start with a caveat that  
13 I am doing a deep dive in the program probably in the next 1  
14 to 2 weeks. The last time I did any bit of a deep dive, I  
15 would say as a citizen, whatever I was, was about 2 years,  
16 when I asked to look at it. So every impression I am going  
17 to give you is what I sent --

18 Senator King: But when you finish that process I hope  
19 you will inform the committee.

20 Mr. LaPlante: I will. I will. And what I will just  
21 say, as you know, they are somewhat early, 1 to 2 years,  
22 into engineering, manufacturing, and development, try to get  
23 to a first flight. I would say of the three legs and where  
24 they are in their EMD, they are the earliest along, so that  
25 means there still is significant risks. What are the risk



1 areas? The risk areas are rad-hard electronics. The risk  
2 areas are the infrastructure and all the rest of it. And I  
3 intend to look into it, and I will give you that assessment  
4 of where that is. I am going to do a deep dive on all three  
5 of the legs, but I am starting with GBSD.

6 Senator King: I would appreciate having that as soon  
7 as you have it available.

8 Mr. LaPlante: Yes. Thank you.

9 Senator King: As part of this hearing I would like to  
10 submit for the record a chart that has been prepared by  
11 staff that tracks the financial history of the nuclear  
12 enterprise.

13 [The information follows:]

14 [COMMITTEE INSERT]

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1           Senator King: In 1962, the total triad expense was 17  
2 percent of the defense budget. In 1984, it was 10 percent.  
3 Before the modernization program that started a few years  
4 ago it was about 2.7 percent of the defense budget, and when  
5 you add the recapitalization of the triad and of the nuclear  
6 facilities, and that includes the Columbia-class submarines,  
7 the B-21, and the GBSB, you get to about 6.4 percent of the  
8 defense budget.

9           So I think it is important to keep these figures in  
10 perspective in terms of this is the bedrock basis of our  
11 strategy to defend this country we are still way below what  
12 it was 50 years ago, way below what it was 40 years, and a  
13 relatively modest percentage of the overall defense budget,  
14 that does not mean it is still not a lot of money, and I  
15 understand Senator Warren's questions. Taxpayers are being  
16 asked to pay this money and it is our responsibility to be  
17 sure that it is used well and effectively.

18           But I think the recapitalization is sort of skewing  
19 this discussion. I refer to it as the pig in the budget  
20 python. It is a very large expenditure that we are going to  
21 have to cover over a few years, frankly in part because we  
22 have put off that expenditure for a number of years and we  
23 are having to do all three legs of the triad at once. So I  
24 think that is an important perspective to have on the record  
25 of this hearing.

1           A final question, and Administrator Hruby, I think this  
2 may be to you, although if others have an answer. It is a  
3 little puzzling to me. Apparently China is expressing no  
4 interest whatsoever in any arms control, nonproliferation,  
5 even discussing it. They are just racing toward a very  
6 significant, and I suspect for them an expensive nuclear  
7 enterprise. Why is that? Why can we not engage them in  
8 some mutual discussions that would assist both countries?  
9 And, of course, once we get through what is going on now,  
10 re-engage with Russia on these issues, nonproliferation is  
11 in everyone's interest, it seems to me, and cutting the  
12 expense of these programs is what led to the agreements 20  
13 years ago.

14           Ms. Hruby: Senator King, your inclination on this is  
15 the same as mine. First, let me just say it is the primary  
16 responsibility of the State Department to engage in those  
17 dialogues. The NNSA brings to those discussions a potential  
18 for technical collaboration, which worked in the past with  
19 Russian scientists and potentially could work with the  
20 Chinese, and certainly offer that we would be willing to  
21 engage in good technical dialogue and discussion to the  
22 extent that it could help strategic stability.

23           Senator King: Thank you. For the record, could you  
24 give me your thoughts to the question that I asked Senator  
25 Richard about deterrence of a non-state actor, because that

1 is really a proliferation question? It may be that if  
2 deterrence does not work we have to fall back on keeping  
3 this material out of their hands in the first place, and I  
4 would like your thoughts on that, for the record, for  
5 Administrator Hruby.

6 Ms. Hruby: I would be happy to.

7 Senator King: Thank you. Senator Fischer.

8 Senator Fischer: Thank you, Mr. Chairman, and I just  
9 want to thank all of you once again for being here today for  
10 this extremely important hearing that we are having.

11 Administrator Hruby, last year the Nuclear Weapons  
12 Council noted significant concern about the long-term  
13 funding profile of NNSA's budget in a letter to this  
14 committee. And while this budget projects continued growth  
15 for next year, after that it would level off and then it  
16 would decline, which is exactly what the Nuclear Weapons  
17 Council warns against.

18 Do you believe this level of funding is sufficient or  
19 will increases beyond what is projected in this budget be  
20 necessary in order to meet our modernization requirements?

21 Ms. Hruby: Senator Fischer, thank you for that  
22 question. We will be looking at the FYNSP again in light of  
23 what we know now, what our requirements are as well as what  
24 our infrastructure needs are, and, in fact, we are just  
25 starting the fiscal year 2024 budget bill so will be doing

1 that in great detail.

2 Senator Fischer: Thank you.

3 Dr. LaPlante, does the Nuclear Weapons Council remain  
4 concerned about the out-year budget for NNSA and continue to  
5 believe that low or no growth, quote, "will not provide a  
6 sound foundation for the planned capabilities and capacities  
7 needed to meet current and future requirements," end quote?

8 Mr. LaPlante: Senator, thanks for the question. The  
9 Nuclear Weapons Council, my understanding, again, did the  
10 deep-dive review of the 2023 budget, and that is the letter  
11 that I sent over on the 22nd. I believe, you know, as the  
12 2024 budget starts to be built we are going to be brought in  
13 and do the same thing again, and we will comment on whether  
14 we have concerns, just as we showed, as the law provides.  
15 Thank you.

16 Senator Fischer: Thank you very much. I understand  
17 that Senator Reed discussed the plutonium pit production and  
18 NNSA's request for additional funding, but Administrator  
19 Hruby, your unfunded priorities, which have been referenced  
20 here, the letter indicates the request concerns \$500 million  
21 shortfall in funding for pit production. I appreciate you  
22 making the committee aware of this and your clear testimony  
23 that these additional resources would help minimize any  
24 delay in achieving the target of 80 pits per year.

25 I would like to ask the rest of the panel their views

1 on this. Do the members of the Nuclear Weapons Council  
2 agree these funds are necessary and believe it is critical  
3 to achieve full production as close to 2030 as possible?  
4 Secretary LaPlante, let us start with you.

5 Mr. LaPlante: Yeah, thank you. First is just as a  
6 formality that as the chair of the Nuclear Weapons Council  
7 we have not formally reviewed that, and we will, and we  
8 intend to do it in the next couple of weeks and we will  
9 provide to you our assessment, as a council.

10 Personal view, from the little that I have seen and  
11 discussed with the administrator, it appears, at least, for  
12 the three items that she has identified, and she talked  
13 about this earlier in this hearing, of long-lead items, they  
14 seem very sensible. And as we find, as the NNSA finds other  
15 things that are sensible to do I think we need to  
16 investigate them and not make it a static process. We  
17 should be asking for these ideas all the time.

18 I defer to my colleagues for the rest of their reviews.

19 Senator Fischer: Madam Secretary, did you have a  
20 comment on this?

21 Ms. Shyu: We first heard about this at yesterday's  
22 Nuclear Weapons Council meeting.

23 Senator Fischer: A little closer to the mic.

24 Ms. Shyu: Sorry. How about this?

25 Senator Fischer: Very good.

1 Ms. Shyu: So we first heard about this detail  
2 yesterday at the Nuclear Weapons Council, and certainly what  
3 Administrator Hruby talked about made a lot of sense. There  
4 are long-lead items you need to buy when you do construction  
5 so you do not stop the construction, wait for the long-lead  
6 item. So we are eager to take a look at the details of this  
7 in the coming weeks, just as Dr. LaPlante mentioned.

8 Senator Fischer: Great. Thank you. Secretary Plumb?

9 Mr. Plumb: Yes, Senator. I just echo the same  
10 comments Secretary LaPlante and Secretary Shyu have made,  
11 which is we are eager to lean forward. We would all like to  
12 kind of look at it, I think, now that NSA has got some good  
13 fidelity, on what that approach should be, I think we are  
14 all inclined to. Yes, but we would like to get back to you.

15 Senator Fischer: Do you agree with the goal of what  
16 was presented, or do you agree that you have to minimize the  
17 delay?

18 Mr. Plumb: The goal -- I think we are on the same page  
19 with the goal -- is to get to 80 pits per year as close to  
20 2030 as possible, so if we can find a way to do it. And I  
21 think the argument that I understand it is some of these  
22 procurement items, it is kind of that keeping a line going.  
23 So we want to keep the line going so we do not have to  
24 restart it.

25 Senator Fischer: Keep moving forward.

1 Mr. Plumb: Yes, ma'am.

2 Senator Fischer: So keep moving forward and do not  
3 shorten a big delay.

4 Mr. Plumb: And do not add additional delay by not  
5 procuring, I think is a specific concern to the acquisition  
6 community.

7 Senator Fischer: Good. Admiral Grady?

8 Admiral Grady: Yes, ma'am. The military requirement  
9 is clear, 80 pits per year as soon as possible. If not by  
10 2030, then as soon as possible after that. I am looking  
11 forward to reviewing the director's proposals and helping  
12 the Nuclear Weapons Council decide whether this is the right  
13 way forward. But the military requirement is absolutely  
14 clear.

15 Senator Fischer: Thank you. Admiral Richard, anything  
16 to add?

17 Admiral Richard: I would add, STRATCOM supports this  
18 or any other measure that NNSA can execute that minimizes  
19 the delay and ultimately reduce the operational risk that I  
20 am going to have to carry because we cannot meet the  
21 requirement.

22 Senator Fischer: And I would assume the operational  
23 risks need to be discussed in classified?

24 Admiral Richard: They will. And, in fact, they will  
25 be discussed as part of the Nuclear Weapons Council



1 deliberations.

2 Senator Fischer: Thank you. Thank you, Mr. Chairman.

3 Senator King: Senator Rounds.

4 Senator Rounds: Thank you, Mr. Chairman. I think my  
5 colleague, Senator Warren, has asked a question but I am not  
6 sure we have had the opportunity for a good response. I  
7 would like to go into this a little bit, and Admiral  
8 Richard, I would begin with you, sir.

9 Since you have been in the services, I do not believe  
10 that you have ever served at time in which we did not have a  
11 very strong and well-defined nuclear deterrent. Can you  
12 imagine a world today where the United States did not have a  
13 clearly recognized nuclear deterrent capability that helps  
14 to keep peace in the rest of the world?

15 Admiral Richard: Senator, I cannot, and I think it is  
16 worth a second to explain why I say that.

17 Senator Rounds: I think so.

18 Admiral Richard: Nuclear deterrence is foundational to  
19 integrated deterrence because no other capability to date or  
20 combination of capabilities gets anywhere close to the  
21 destructive potential of nuclear. So if you do not set the  
22 foundation of your integrated deterrent when you are in a  
23 competition with another nuclear-capable opponent, if you  
24 cannot deter their vertical escalation everything else is  
25 useless to you.

1           The reverse is also true. If you set that strong  
2 foundation then using every military and other instrument of  
3 national power is actually very much to your benefit because  
4 it enables you to resolve conflict at the lowest possible  
5 level of violence. But there is a theoretical reason why we  
6 have to have a strong nuclear deterrent.

7           Senator Rounds: See, I think sometimes because we live  
8 with it and we have always assumed that we are free because  
9 we are simply strong and economically power, and the rest of  
10 the world simply does not have the desire to dominate us,  
11 that somehow that means that we do not need the nuclear  
12 deterrent that we carry today. And because we have not had  
13 a threat to the homeland since, really, 9/11, and that was  
14 not a nuclear threat, I think there is a misunderstanding  
15 that somehow there is no need for this nuclear deterrent  
16 anymore.

17           And I think the message that you are sharing, one that  
18 says the reason that we have been able to maintain our  
19 freedom is because we have had a clearly recognized nuclear  
20 deterrent, but that also means that generation after  
21 generation we have to improve it and we have to keep up with  
22 our competition.

23           If we had -- and once again, I would defer, Admiral  
24 Richard, to you, but Admiral Grady, you are most certainly  
25 welcome to respond to this as well. Our adversaries have

1 become better and better at, first of all, trying to defeat  
2 some of our nuclear capabilities and to defend basically not  
3 only against the nuclear but some of our conventional  
4 capabilities as well.

5         Would it be fair to say that if you simply said one  
6 nuclear bomb or one nuclear missile or one nuclear long-  
7 range weapon dropped from a B-52 bomber, since we could that  
8 our enemies would fear us? Clearly it would not be the  
9 case, and clearly we have to have enough weapons and  
10 modernized enough to where we can get around, or at least  
11 make them think we have the capabilities of getting around  
12 them in order to maintain that deterrent, and that  
13 capability that they have is changing on a daily basis. Is  
14 that fair?

15         Admiral Richard: Senator, yes it is.

16         Admiral Grady: Senator, I would just comment that the  
17 number is interesting but it is the effect that that number  
18 generates, and that is that it gives the President many,  
19 many options across a broad range of contingencies, and that  
20 is what drives the number. There is strong analysis in math  
21 behind that number, and that is what we need to have that  
22 credible nuclear deterrent that you and Admiral Richard have  
23 been talking about.

24         Senator Rounds: Admiral Grady, I think you need to lay  
25 that out in a little bit more explainable terms to the

1 American public and to this committee. What do you mean by  
2 that when you say that when you have the deterrent, the  
3 Trident, that you have multiple options available for the  
4 President of the United States in order to keep peace? What  
5 do you mean by that?

6 Admiral Grady: Chaz, I think I will defer to you on  
7 that one.

8 Admiral Richard: What you want to be able to do is  
9 offer the President any number of ways at which he might be  
10 able to create an effect that will change the opponent's  
11 decision calculus and get them to refrain or otherwise seek  
12 negotiation vice continued hostility. So ballistic versus  
13 non-ballistic. Do you want it visible? Do you want it not  
14 visible? Do you want it prompt? Do you want it to come in  
15 a long period of time? Each of those is very situational  
16 specific.

17 My recommendation on the SLCM-N, for example, is not an  
18 effort to relitigate the Nuclear Posture Review. It is  
19 based on the conditions we find ourselves in today, when I  
20 look at what I am able to offer to the President, and ask  
21 myself what would do a better job, lower the risk, give us  
22 more confidence in our deterrent capability. that is where  
23 that recommendation comes from. It is a specific example of  
24 the broader. That is why you want a lot of options,  
25 Senator.

1           Senator Rounds: And one last question. Admiral Grady,  
2 do you think Russia would have invaded Ukraine today if  
3 Ukraine was a nuclear capability, if they had a nuclear  
4 capability?

5           Admiral Grady: I think they would have had many, many  
6 second thoughts about that as an option for them if they  
7 were facing a nuclear-armed adversary.

8           Senator Rounds: Thank you. Thank you, Mr. Chairman.

9           Senator King: Thank you, Senator Rounds.

10          I want to thank each and every one of you for your  
11 dedication to the country, for your sober-minded approach to  
12 these very difficult issues, for the work that you put in on  
13 behalf of the public, often in quiet and unsung ways. And I  
14 want you to know that we recognize what are contributing to  
15 the defense of this country.

16          The irony of nuclear weapons is that the reason we have  
17 them is that we never want to use them, and the best way to  
18 ensure that we never use them is to have them, and to have  
19 those who would commit aggression understand that this is  
20 something that has to be, as the admiral said, part of their  
21 decision-making calculus. Evil exists in the world, and we  
22 have to be prepared to defend ourselves and our allies. The  
23 work that you are doing is contributing mightily to that  
24 end.

25          So I want to thank you again for your testimony today,

1 thank you for appearing before the committee.

2 Senator Fischer, did you have a closing statement you  
3 would like to make? No.

4 Again, thank you, and this hearing is adjourned.

5 [Whereupon, at 6:00 p.m., the hearing was adjourned.]

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