

# THE ASPEN INSTITUTE

## ASPEN SECURITY FORUM

### A New Nuclear Arms Race

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Alan Estevez: Good morning, folks. My name is Alan Estevez. I'm the former Principal Deputy Under Secretary of Defense for Acquisition, Technology and Logistics. And I'm now a national security and logistics executive with Deloitte.

Like many of you, I look forward to hearing our distinguished panelists, to discuss our next topic, which is titled "A New Nuclear Arms Race." This is a critical topic in an important time for the U.S. strategic deterrent capability. The United States is in the process of executing more than a \$250 billion recapitalization of all parts of the triad ... new submarine, new bomber, new ICBM. New long-range ALCM replacement, so all those facets.

These items have not been modernized since the Cold War. So 30 years later, it's time to do that, to ensure the nuclear deterrent capability of the United States. This modernization also includes the modernization insurality of the Nuclear Command and Control System, a significant cybersecurity and organizational issue for the United States.

Moderating this session is Michael Gordon, National Security Correspondent for the Wall Street Journal. Michael has worked for more than three decades covering the Pentagon and military affairs, won multiple awards, written a number of books. I've been a fan of all those books, I need to note, Michael.

So please join me welcoming Michael, and our distinguished panelists, to the stage.

Michael Gordon: Well let me first introduce the panelists because we have four. And what I think is going to make this event particularly interesting is not merely the subject matter but their ... in terms of the views of this group ... I think there's going to be some real diversity here and different perspectives.

I'll now just start from the left and work on down. First we have Frank Klotz ... I mean these people are all in your book ... the former Administrator of the National Nuclear Security Administration, who I think I first met when I was based in Moscow as a correspondent. And we saw the rise of Putin, which coincided with the Second Chechen War.

And to his left is Bonnie Jenkins, who's a Nonresident Fellow at the Brookings Institution now, but was at the State Department as a Coordinator for Threat Reduction Programs and had ambassadorial rank.

To her left, Frank Miller, who I've known for some time, who has served in a number of really important positions in the Defense Department, on the National Security Council as Senior Director for Defense programs; and who had a role in the drafting of the Pentagon's Nuclear Posture Review, which is really the road map for where the U.S. is going in terms of its strategic modernization.

And to his left is Andy Weber, who has a lot of experience in the Defense Department and in all of these areas, and has some provocative views about where the U.S. ought to go in terms of its nuclear weapons arsenal, and how best to carry out deterrence to make the nuclear situation as stable as possible.

First, I think I'd like to break this into two parts and then we'll give you guys an ample opportunity to ask questions. I was just in Helsinki just a few days ago for that summit, which was ostensibly supposed to discuss, to some degree, arms control and nuclear weapons. And I think, according to the Russian comments, seems to have done so.

But first I'd like to start with what the U.S. is doing on the nuclear modernization side, which is a very ambitious program, which is actually \$1.2, \$1.3 trillion over the life of the program. Upgrading the entire arsenal over an extensive period of time ... land, air and sea. What's interesting about that program is, while it's come out during the Trump administration, I'd say about 90 percent of it, if not more, is really the Program of Record for the Obama administration. There's been some innovations on the Trump side but the vast majority of this expensive, costly nuclear modernization is really something that the Obama administration signed off on.

So let me pose a question [inaudible 00:04:56] suggested to me. I think it's the right question. This nuclear modernization that we're undergoing for new ICBMs, new strategic missile submarines, new air-launched cruise missile, a new sea-launched cruise missile, all sorts of things.

Why do we need it? And will this make nuclear war less likely, or more likely? And to get the party line, so to speak, I'm going to ask Frank Miller to go first since he had a role in drafting the Nuclear Posture Review.

Frank Miller:

Set up like a bowling pin.

So first, let me say that the notion of a new U.S.-Russian arms race is a fallacy. For the past ten years, the Russians have been putting new nuclear systems in the field, deploying new systems. We can go over that if you want. But two new types of ICBMs, two new types of submarine-launched ballistic missiles. They've got three new ballistic missile submarines in the water. They're modernizing their bombers. The Chinese are doing the same.

Ash Carter said, "There is a nuclear arms race, but the United States is not in it." He said that in 2016. The first U.S. system to enter the inventory ... the first new system won't come along until the mid-2020s. We haven't put a new strategic system in the field since the late 1980s, early 1990s.

These systems get old. The U.S. Strategic Forces essentially were ... the triad was built first in the 1960s. It was recapitalized in the 1980s. It's getting to a point where, as the previous Commander of Strategic Command and the current Commander say, "These systems are running out of their useful service life."

So you either stay in the game, or you don't stay in the game. You can replace these systems, or you can let them retire without replacement. And there are consequences to that. The cost factor is interesting. You raised that. The total of

cost of the modernization program is projected to be 6.4 percent of the defense budget, before the sequestration caps were lifted. 3.4 percent is modernization. 3.0 percent is carrying the force, operating it on a daily basis.

And the whole question of deterrence is: Do you have an adequate capability, and the will to use it, so that no adversary, no enemy, chooses to attack you or your allies?

Michael Gordon: So Frank, let me interject a question at this point. There is two new significant programs under the Trump administration that were added on, which includes a new sea-launched cruise missile and an idea to take current sea-launched ballistic missiles and download them so they have less yield. And the concept is that the United States does not have enough low-yield nuclear weapons, and it needs more of these low-yield nuclear weapons in order to deter the Russians.

Do we need more low-yield nuclear weapons, and why?

Frank Miller: We need a different kind. So, deterrence is not a steady concept. If you look through the history of deterrence policy from the Kennedy administration, Nixon, Jim Schlesinger's work. Deterrence changes in our view as we better understand what enemies are doing, potential enemies are doing. The Russian Federation has a military doctrine, which has evolved over the past ten years, of using low-yield nuclear weapons on the battlefield to achieve victory.

That occurred in the face our current triad and the face of our current systems in Europe, which are old. F-16s, when replaced in the '23s by F-35, may be better. What the 2018 Nuclear Posture Review says is we need a small number, a very small number, of low-yield nuclear weapons on the trident system to raise the risk to Mr. Putin of using nuclear weapons first in the theater.

And, in my view, that's a sound policy. You have to adapt to what the other side is doing and ask, "Why did they do it?" And come up with a counter. And this is a very, very modest counter.

Michael Gordon: Okay, so let me ... Frank Klotz, right here. You've, obviously, had a role overseeing our nuclear establishment that produces these weapons. Do we need more low-yield nuclear weapons? We have B-61 bomb. They're going to field the B-21. They're going to make an F-35 dual-capable system.

Do we need still more of these things? And if we make weapons that are ... The theory is the Russians have a view that they can use a low-yield weapon and we might not respond, so we're going to match them with our own low-yield weapons and therefore deter them from using it.

But does this make nuclear war more likely or less likely? And do we need them in the first place, additional weapons?

Frank Klotz: Thanks, Michael. I think it's a question of priorities and it's a question of timing. I think the introduction ... and Frank Miller very eloquently laid out the imperative, the urgent need to recapitalize the existing legs of the triad, as well as our Nuclear Command and Control System.

And what they didn't add is the Department of Energy, National Nuclear Security Administration, National Laboratory Production Facility infrastructure that supports all that, which is also desperately in need of modernization.

So first and foremost, in my view, is to complete what you referred to as the Program of Record. That's replacing all three legs of the triad as well as updating the weapons that go on top of them. That's going to be a very expensive prospect. It's also one which is going to demand almost the entire capacity of the nuclear establishment. We're in the process of doing four life-extension programs for the services.

One of those, the W76-1, is about to finish up. It will finish up next fiscal year. But then the plan is to to roll the people ... the facilities, the equipment, the production line ... that are necessary for the other life-extension programs to start into that. So I worry about anything that is going to overtax the capacity of the nuclear weapons establishment to do more requirements than the ambitious program that's already been laid out, first by the Obama administration and now by the Trump administration.

The other thing is, we already have ... as the Nuclear Posture Review that came out earlier this year says ... a number of different options for multi-yield. They happen to be bombs carried by the B-2 Bomber and the air-launched cruise missile carried by the B-52. Now truth in advertising ... before doing the Department of Energy, National Security Administration ... I was, for 39 years, in the Air Force.

And I recognize those weapon systems are Air Force weapon systems. But I happen to feel that they provide extraordinary capability ... and with the replacement of the B-2 Bomber with the B-21 Bomber; the F35 which Frank mentioned, and the Long-Range Standoff capability in the new cruise missile. I think we have the types of capabilities we need for the type of deterrent we need.

Michael Gordon: So your view is ... you basically applaud the Nuclear Posture Review, you're less convinced that we need to add these two new systems that the Trump administration has proposed, the new sea-launched cruise missile and the downloaded ballistic-

Frank Klotz: Until we get done with the Program of Record, and-

Michael Gordon: But you don't have any fundamental objection to them? You don't think they're making the nuclear balance less stable?

Frank Klotz: No. Not at all. We already have, have had in the past, low-yield nuclear weapons during the Cold War. It was a very stable relationship then. We have, as I said before, the multi-yield capability today and I think that's a very stable.

Michael Gordon: So let me turn to Andrew Weber. You agree with all this?

Andrew Weber: Well no, I don't. I want to start by saying I support a nuclear triad, a strong deterrent, safe, secure and effective ... and I'm proud of the work that ... as Director of the Nuclear Weapons Council in the Pentagon ... that I did with General Klotz to ensure that we have a sustainable nuclear triad well into the future.

Where I take issue is this excessive modernization. Which, accounting for inflation, will cost \$1.7 trillion over the next 30 years. That's \$1,700 billion. That's a lot of money, although Frank says it's only 6.4 percent of the annual defense budget. And my issue is that, earlier this year, both Presidents Trump and Putin announced new classes of nuclear weapons that blur the line between conventional and nuclear, that do make nuclear war more likely.

They're destabilizing classes of nuclear weapons, especially in Trump's case, the three new nuclear weapons that are part of his plan. A new air-launched cruise missile, a new sea-launched cruise missile, and this new Trident warhead with a low-yield.

And Putin announced, with great fanfare and fancy videos, at least four new types of nuclear weapons. Some of them are not captured by the new START treaty. And I think where we get into trouble is when we start talking about mimicking Putin's outrageous nuclear doctrine which is to use, early, a couple of small nuclear weapons.

And this idea that we need a couple of like small nuclear weapons, to show them we're serious, and then we'll use those and things will calm down and we'll all get back to our senses. It's a nice theory. But the problem is that if it breaks down, life as we know it on the planet is over. It could escalate out of control very quickly.

Michael Gordon: Bonnie, what's your take on all this?

Bonnie Jenkins: Thanks for the question. I think I lean a little bit more to Andrew's point of view. First of all, on the question of whether there's a new nuclear arms race, I would say that, based on the traditional definitions of a nuclear arms race, there may not be one. But I think there is certainly something happening. And you cannot look at what's been going on ... what Putin has said about new weapons, and what the U.S. wants to do with these new types of cruise missiles ... and say that nothing's happening, that there's no type of race happening.

So while I would not define it as a traditional arms race the way it's been in the Cold War, it's certainly something's happening where there's more interest in weapons, more interest in new types of weapons, more interest in technology that can be used to enhance these weapons. So there's something that's going on that does create concern. So while it's not traditional, there is certainly something that's going on.

The other thing that I would say is, I am very concerned about the price tag and how we're going to fund this. I'm concerned at what Frank said about how this is going to stretch our military, and whether there's real desire to have these new weapons. But also I'm concerned about the assumption that we can put these cruise missiles on these submarines, and assume that we can use those, and then our adversary will have some kind of an understanding that the weapon that's being sent is a cruise missile versus a ballistic missile.

And that somehow, you could use these smaller weapons to kind of a let a country know, "Well, we're using these now but we may get more serious later." How does the other country know that? How does the other country know, if they see a missile coming from a submarine-launched ballistic missile that has these powerful weapons ... How do they know which one it is? And how are they going to react in a different way?

They're going to react by just using all of their weapons, like they would regardless of what kind of missile it is. So we're basing this idea of these smaller weapons that don't have as much impact as a way to not have a real attack, but have like a mini-attack, that will give the sign to the other country that, "We're not that serious yet, but we're a little serious, and so you should change your behavior because we may get real serious later."

But how does the other country know that? They're only going to see a missile coming at them, and they're going to react the way you would think they would react. So there's things about the whole idea for these smaller weapons, to have more options to use nuclear weapons, which I really don't quite understand.

Michael Gordon: Let me turn to Frank Miller. So part of the theory of this is that the Russians are deemed to have a strategy and a doctrine of what one person in the Pentagon ... I think it was General Dempsey ... called "escalate to deescalate" which is that if they begin a conflict, a conventional conflict, and they're prepared to make a limited use of nuclear weapons to end that conflict on their terms or avert defeat.

But Frank, how do we know the Russians actually have this doctrine? What's the evidence for that? And to Bonnie's point, if they make a limited use of nuclear weapons and we fire off a cruise missile, how do you control escalation? How do they know what's coming off the submarine is a low-yield weapon or a high-yield weapon?

Frank Miller: Okay, so three things. First of all, the sea-launched cruise missile is not coming until the 2030s, right? This is a concept, so you don't need to worry about that now. That's mid-2030s.

The second thing, point Andy made, the Defense Department has been very clear that this is not about mimicking Russian doctrine. This is about coming up with a counter to something that the Russians have been doing which is ... to your point ... we have watched the Russians buy lots of low-yield nuclear weapons, for their ground forces.

We have watched them exercise these, and we have watched them talk about this. This is something that the U.S. government believes, that the military believes in. It's something that the British government believes in. The Secretary General of NATO has also said, "This is what the Russians are thinking." And it's something that's developed over the last 10 years in the face of our nuclear capabilities.

And so the question is ... unless you want to believe that the Russians are stupid and foolishly spending money on buying these toys ... why do they think they have them? And do we need a counter to suggest to them ... not to get into this nuclear-war-fighting one versus three ... don't use a nuclear weapon. Period. Because we now have come up with something that matches your capability and therefore, don't go there. That's the reason.

Michael Gordon: Frank?

Frank Klotz: I agree with what Frank just said. And I'd also like to add a technical point to something that Andy said. He used the term "new air-launched cruise missile." In fact, we've had a air-launched cruise missile since 1982. That is an aging system now. It is in need of replacement. The warhead that goes on it is need of life-extension. So the "new cruise missile" which is referred to as the Long-Range Standoff capability, or LRSO, is a very, very important modernization effort we need to undertake.

And oh, by the way, it was not a brain child of the Trump administration or the most recent Nuclear Posture Review, it was actually also part of the Program of Record that the Obama administration was pursuing. And, I might add, despite some voices of concern on the Hill, it has enjoyed broad bipartisan support in terms of the voting for the national-

PART 1 OF 3 ENDS [00:21:04]

Frank Klotz: Bipartisan support in terms of the loading for the National Defense Authorization Act and the Defense Appropriations Act.

Frank Miller: Just to put a fact on the table. The system that Frank talked about, the air launch cruise, was introduced in 1982 with a service life expected to be 10



years. Okay? 1992. The minute man three ICBMs were introduced in the '70s, and have gone through enough life extension programs to make all of our hair gray. You can't do that anymore. And the strategic submarines, the Ohio-class submarines, first introduced in the '80s, each will have a projected service life of 42 years when they're retired and the new boats come in. That's the longest we have ever operated a nuclear submarine, and at some point, those things become unsafe. You have to retire them, whether or not there's a replacement. We're paying the price for not doing things in the '90's to replace them.

Michael Gordon: Andrew Weber, just to sort of finish off on our segment on modernization, you know when I first started covering arms control, it was sort of the kind of received view is that, "Oh, it's the ballistic missiles that were destabilizing because short term of flight." Obviously you can't recall them, not much time to make a decision, and 30 minutes later, you've got a war. The cruise missiles were somehow deemed to be safer. You have a different view. Can you explain it to the audience, because it's not just ... You have a view that, because of the fact that some are conventional, that the cruise missile could actually be a destabilizing system.

Andrew Weber: Yeah, I believe that, along with Sir Phillip Hammond, that nuclear armed cruise missiles are the most dangerous and destabilizing class of nuclear weapons. And I'll tell you the reason why. They can be launched without warning. Ballistic missile watch we get more warning than a cruise missile launch. And what is especially troublesome-

Michael Gordon: Meaning the adversary can't detect the launch.

Andrew Weber: We can't detect the launch. We can't defend against them. But what's very disturbing is you have no way to discriminate between a cruise missile coming towards you from a nuclear power with a conventional weapon or a nuclear warhead on the tip. It's this discrimination issue that makes it high risk for escalation to nuclear war. And I think we have an opportunity through arms control, and we'll talk about this more, to do what Reagan and Gorbachev did and build on that, eliminate this very dangerous class of nuclear weapons. They got rid of the ground launch nuclear arms cruise missiles. There are some problems obviously with Russian lack of adherence to the INF treaty, but the concept was right. Let's focus on capping and eliminating these very dangerous and destabilizing classes of nuclear weapons, and then we can reduce the risk of nuclear war, including accidental nuclear war.

Michael Gordon: That's a good transition to arms control. If you sort of step back from current events, it's a good question, what is the future of arms control? For decades, it was to limit and then reduce the number of nuclear weapons. But right now at this point, and this even predates Helsinki or anything of the kind, there's no effort going on now between the United States and Russia to discuss further reductions in nuclear weapons. It wasn't happening at the end of the Obama administration either, because the Russians weren't interested in that. They're

doing their own modernization. We have now a new START treaty that expires basically in February 2021. There's no negotiation going on now to create a follow-on treaty that would make further reductions. Both sides are modernizing, and upgrading with more capable systems, and at the same time the Russians are egregiously violating a totally different treaty, the INF treaty, which bans land based Russian and American missiles of intermediate range by deploying an illegal ground launch cruise missile. They don't even really acknowledge the violation, and efforts to address it in diplomatic channels have gone nowhere.

That's the picture on arms control. Going into Helsinki wasn't very encouraging. At Helsinki, according to the Russians, they indicated they wanted to discuss and extend, basically, the new START treaty, which both sides can do for up to five years, which would make further reductions. It would keep the current number of 1550 undeployed warheads and bombs. You can do that for up to five years without going to the Congress. They indicated they want to discuss what they called INF implementation, but didn't quite call fixing their violation. And then they brought out a couple of their traditional concerns, which is missile defense, which they don't like, and space weapons, which kind of goes back their fears over Star Wars. And they laid that out as an agenda, and I took from some comments by Ambassador Huntsman, our ambassador to Moscow, that the US under certain circumstances, would be willing to discuss the extension of new START. The question is, should we extend the new START treaty for five years without having the Russians fix their violation of the INF treaty? Frank Miller?

Frank Miller:

Well, let's go to first principles. Arms control isn't an end in of itself. Arms control is supposed to produce stability. So that's the first point.

A second point is, not only are the Russians violating the INF treaty, they're violating seven other treaties. The Istanbul accords, Budapest accords, the nuclear initiatives of '91 and '92, the chemical weapons convention, I could go through the whole list if you want.

The question then becomes, if you sign an arms control pact with a government, which then it becomes a serial violator of arms control and you say, "Well, let's just extend this other one." You're showing absolutely no regard for the treaty process, and for the whole point of signing a treaty, which is adherence by both sides. So, the question for the US government, does the Russian government get a free pass for violating eight of the nine treaties that it's currently signed? That's the second question.

The third question is, what does new START do for you? The current strategic balance is stable. As Tori has said, the Russians are running out of money for many of their new systems, they can load new warheads up, in the absence of new START, but the balance is stable. What's not captured is the short range nuclear weapons that are threatening our NATO allies, of which the Russians continue a large and growing arsenal.

Again, if you're going to talk about arms control, talk about adherence, and talk about going after the threats that are dangerous and real. As opposed to just extending a treaty.

Michael Gordon: Well to play advocate before asking one of the panelists to address this. What new START does give us is verification procedures, monitoring. When you lose that, I think there are many in the US military that would like to preserve those capabilities to keep tabs on what the other side is doing. Second, it is a little weird to be entering a realm in which there's no strategic arms control. We've had imperfect strategic arms control, but to have expired treaties that introduce another element of uncertainty.

Lastly, there have been periods of history where we have negotiated new agreements while there have been violations of other treaties. When I first started covering this stuff, the Russians were violating the ABM treaty by building the Kresnas Radar, but we still engaged in negotiations over the INF Treaty. Which was a success until recently. Frank Klotz, should we extend new START without fixing INF?

Frank Klotz: No, but, I think we should extend new START, but it's a question of resolving many of the issues which Frank Miller just brought up. But there is benefit in having a strategic arms control treaty in force. You mentioned one of them, the verification and the certainty that it gives the US military and the US intelligence community about what the Russians are doing and vice versa. It also constrains adversaries abilities to build up. The but part of it is, the Russian violation of the INF treaty is egregious and has to be dealt with in some way. It's not something that we have to decide at this particular moment. I would add, it's probably necessary to begin the process of having discussions at the level of diplomats. Because of the experience that I've had with arms control negotiations, many of them along side Frank, over a number of years, these things take a long time. There are a lot of details that have to be worked through.

Now having said that, one of the things which was part of the new START ratification process was a view expressed by the administration of the time, the Obama administration is, we need to broaden the aperture of strategic arms control negotiations to include other nuclear powers, specifically China. We also need to potentially discuss expanding the range of weapons which are captured under the ceilings. Specifically non-strategic or lower yield nuclear weapons. Given the fact that we have divested ourselves of most of those during the Bush '41 administration and the Russians made a decision...

Michael Gordon: I want to clarify your views. If the INF treaty is a violation that the US is alleging is not fixed by February 2021, you're going to let new START expire?

Frank Klotz: No I wouldn't let START expire, but I'd certainly think that is one of the topics of discussion we need to have, whether it's through strategic stability talks...

Michael Gordon: You're going to extend it or you're not going to extend it?

Frank Klotz: No I said up front, I'm in favor of extending it, but not necessarily tomorrow.

Michael Gordon: Okay, so you're in favor of extending it but you won't talk about it over the next couple of years?

Frank Klotz: I think that's an accurate [crosstalk 00:31:23]

Michael Gordon: Bonnie what should be the next steps in arms control?

Bonnie Jenkins: I would favor extending the START treaty, I think it's important that we continue have some kind of agreement with the Russians on strategic arms. We've had these kinds of agreements with Russians for many, many years. It does provide us with monitoring efforts in ways which we can keep the numbers down in terms of what's been agreed to. If you don't have a treaty then you don't have any kind of way in which you can continue to keep another country bound by what they said in terms of the numbers that they're going to keep.

Understanding the point about the violations, but right now we have an opportunity to maintain a treaty that we have, that we don't have to go back to the senate for ratification. So, I think we should do that.

Secondly, we definitely want to look at the INF treaty to figure out how we can get the Russians once again abide by that treaty. We should be able to have some conversations with them about their concerns about our missile defense, our concerns about their INF issues. We should definitely have those kinds of discussions with them to move that forward.

Third, I think, agreeing with what Frank said, we need to start having much better and much more robust discussions about the future of arms control. Right now we don't really have those discussions going on. In a nuclear post review, there's absolutely no mention of START at all. In fact, we actually said we should, talking about other arms control treaties, we said, "We should not ratify this comprehensive nuclear test ban treaty." Arms control was only given two pages of the entire document.

Obviously we don't have the perception when you read the document is not one that says, "The US is really behind arms control right now." So I think we need to do more. We need to do more with taking advantage of what we do have, which is START. Working on what needs to be worked on, which is INF. And doing more to preserve this importance in the role of arms control in dealing with the issues we're dealing with today. With new types of advance in these weapons instead of really trying to figure out how we're going to control it.

Michael Gordon: So I'm going to transition to Andrew Weber, but I'm going to sort of pose this point and then have each key panelist make your point, then open up for questions.

There's another thing, element afoot, between the US and Russia in arms control. Which is, there was an idea, which I think began in the Obama administration, it was actually round of these talks in the Trump administration. Strategic stability discussions between the United States and Russia, and there was a round of these held in 2017 by the Trump administration. The Russians broke it off because the US was refusing to hold cyber discussions with them, which I think they were trying to draw the American government into some sort of joint cyber investigation, shades of what Putin put forth in Helsinki.

That is something, looking at the Russian media recently, they're talking about resuming these, so called, strategic stability talks. Which could be at least a venue, even though their confidential discussions for the two sides to talk about what their different nuclear doctrine, they're program, what makes a balance stable or unstable. Andrew Weber, did you think these talks could be useful? If you were able to determine the agenda for them, what would you recommend be discussed in this forum?

Andrew Weber: Like Dan Coats, I would like to know what was discussed in that two hour meeting in Helsinki earlier this week. But, arms control is not some pollyannish concept, it's about hard security, it's about protecting United States of America. We are in a very strong position, we have a formidable nuclear deterrent, the best in the world. I think we're in a position of strength right now. So, we have to preserve the new START treaty, extend it from 2021 to 2026. 2026 in nuclear weapons terms is really just a blink of an eye away. We need to get started now talking about what comes next so we can capture some of these new weapons systems that Putin has announced, and the ones that Trump has announced.

I agree with Vice Chairman General Selva. These new nuclear weapons systems that the United States is embarking on give us leverage in an arms control negotiation, that are essentially bargaining chips. But if we don't use them, if we don't have those talks, if we don't bargain and sit down with Russia in our mutual interests, and we did this in the depths of the Cold War. Statesmen like Ronald Reagan and Gorbachev, we need to think back to what they accomplished in the '80s and try to get back to some of those basics.

Also, of course, we need to fix the INF violation. It's egregious, I think we can do it if there's political will. But, we need to start thinking about the future of nuclear weapons, stability, and bringing other countries like China, India into the mix.

Michael Gordon: Frank Miller, if you had to talk to the Russians in strategic stability talks, what points would you make to them? And what about this point that arms control

has just been about US and the Russians? Is it even possible to bring the Chinese into this discussion, how would you do that?

Frank Miller:

The first thing I would say to you, I don't oppose extending new START in 2021, if the idea is to improve or to continue and maintain a verification capability. But we need to be clear about what we're doing and why we're doing it. And if we are prepared to ignore the Russians violations, assuming that those violations have not been corrected, that's the first thing.

Second thing, of course we ought to be talking to the Russians about strategic stability. Although, we have probably very, very different views about what strategic stability is. A point Andy made, is that some of the new weapons that Putin is flaunting are designed to escape the new START process. So, again we need to be clear about that, we need to be clear about the burgeoning threat to our NATO allies with their short range nuclear weapons. So, all of this is a mix.

I think the final point is, US Russian arms control is hard enough. The British, the French, and the Chinese are the three next nuclear powers in size. Each government has made clear, the British and the French particularly for decades, will join arms control talks when your levels are down to ours. However your ambition, US and Russians levels aren't going to be getting down to the British and French levels in the near term.

It's a lovely idea and we can have conferences on that, but I don't think that's a realistic expectation for the near term.

Michael Gordon:

Okay Bonnie and then Frank Klotz, and then open the questions.

Bonnie Jenkins:

Yes, I would like to agree with that, in terms of bringing in some of the other countries. I think it would be great if we could bring in other countries, but I really don't think that they have an interest in being part of a disarmament discussion until our levels are much lower.

I know for the case of China, for example, it feels as if it has the exact number that it feels it needs to have for its own defense. Of course it's a little concerned about some of the talk that Russia and US is having about modernizing, which they are also doing. But some of these new type of, weapons we were talking about, the cruise missiles, that has created some concern. They may want to increase their numbers by a small number. But they obviously feel that they have the number that they need, which is about 270 or something like that. So they're not going to be interested in getting into a disarmament discussion until we are much lower. Until they feel that there's a reason that they should feel that they should get rid of the ones that they have, which they feel is the minimum they need.

It's a great idea, but I think we have to do a little more. We certainly can give them the impression that we're going to be doing more. So if we want to bring

them in them into some of the discussion they can't feel like, "But you're making me feel less secure because you're starting to build more weapons."

Frank Klotz: As far as strategic stability talks are concerned, I have no objection to people talking. I wouldn't hold out a lot of hope that these talks will deliver anything substantive. The Russians clearly understand what our nuclear doctrine is, I think we have a very good understanding what their nuclear doctrine is. In the time you and I were in Moscow together, I've observed a lot of the strategic stability discussions, either the track one or the track two things. The Russians come prepared with our talking points, to a lesser extent we come prepared with our talking points.

Where we have been successful, is when we have worked on specific definable outcomes, such as the incidents at sea agreement. Where we discuss ways in which we can reduce the possibility of misperception or misunderstanding in a particular situation. To the extent that we can find those types of things to talk about, that's useful. But just to say we're going to have strategic stability talks and hope for there to be some profound change in view, or some definable outcome.

Michael Gordon: And China?

Frank Klotz: China as a country, again both at the track one and track two level, we've tried very hard to get them to talk about doctrine.

Michael Gordon: Don't you think China needs to be part of it, isn't that your view?

Frank Klotz: My view is, yeah, they should be but, they have sort of stiff armed us over the years, not willing to talk about that particular subject.

Andrew Weber: Micheal can I just add a quick point on China. In my discussions in Beijing with Chinese nuclear experts, while they don't want to talk to us about numbers, because the United States and Russian Federation are still in the thousands of nuclear weapons and they're in the low hundreds. We can have a discussion about classes of nuclear weapons. In the case of nuclear armed cruise missiles, china has not made a decision to deploy nuclear armed cruise missiles. So there is some interest in Beijing in forgoing the deployment of nuclear armed cruise missiles as part of a larger, several lateral four or five countries arms control arrangement.

Michael Gordon: Okay, lets open it up for questions. Liz?

PART 2 OF 3 ENDS [00:42:04]

Michael Gordon: Let's open it up for questions. Liz?



Liz Sherwood-R: Thank you. I'm Liz Sherwood-Randal. I had the privilege of working with each of the panelists over many administrations. Thank you for your service to our country.

I want to follow on Michael's question on arms control and focus the conversation more on China. One of the reasons the prior administration advocated for the development of the air launch cruise missile that Andy opposes is that China's aerial defense strategy creates a challenge to our deterrent going forward, and we want to be sure that we can use our capabilities without having to fly over China to deter China. So that leads to a discussion about China's development of its arsenal, which we haven't talked about at all here. China is pursuing advanced systems that in the future could threaten our deterrent.

Presently, it's not about numbers, it could be in the future, but it's more importantly about capabilities. And so I'd like to hear from each of the panelists, especially the two Franks, their views on what we need to do to think about our arsenal and our future capabilities as they relate to China. Looking at both the program of record and the proposals that have been made by the new administration, and whether there are additional things we should be doing to anticipate the Chinese threat, because as you correctly noted, it takes us decades to get a new system fielded and we first have to complete the projects that are underway, Frank. Thanks.

Frank Miller: Liz, I think you put your finger on a very important subject. The Chinese are ... two new types of ICBMs, four new SSBNs in the water armed with new missiles, on the verge of making decisions about cruise missiles, working on hypersonic systems, and something for Aspen Institute next summer, space. An enormous amount of Chinese and Russian military activity in space, which the US government has really failed to talk about, all of which could be a threat to the deterrent.

So there is a real need to have some sort of a dialogue with the Chinese. The question is, as Frank Klotz has said, is will the Chinese talk to us? They don't talk about their force structure. They don't talk about their doctrine. So we need to try to engage. My expectations for a successful engagement are our medium low. But that doesn't mean we shouldn't try, and I think particularly in the area of space and cyber and threats to command and control links, that's absolutely crucial. So yeah, I would absolutely support that.

Frank Klotz: I think all that's true. For many, many years, those of us who are watching Chinese nuclear developments have viewed it with concern but a certain amount of equanimity, because they didn't seem to be involved in an all out race to try to catch up either with the Soviet Union or Russia or the United States. My own views on that I think have changed dramatically in the last five years or so because of the fact that a number of their programs are now bearing



fruit, as far as Frank Miller pointed out, things like the sort of in your face shoot down or their own satellite to demonstrate their capabilities in space.

And more importantly, deterrence is not just about nuclear realm. It's also about the conventional realm, and the investments that the Chinese have been making a to deny potentially US and our allies access to East Asia is a very worrisome development and, quite frankly, their capabilities in that area are very sophisticated and very modern.

Michael Gordon: Let's take another question.

Bonnie Jenkins: Can I just say something very briefly? Just I just want to respond. Your question is a great one, and that's why when I started out I said, "Well, what we have now is not a traditional arms race." It's different. This is not about numbers as much as technology, and finding new ways to improve capabilities. And so I think it is very important. I think that we could consider how we can work with China since they are starting a lot of these things. Trying to find if there's a dialogue that can take place and maybe we'd need to try to find new type of arms control negotiations. Maybe the traditional ones don't work. Maybe we need to find a new way that we can engage countries on these new types of systems or stronger capabilities to exist [inaudible 00:46:37] exist, so maybe we need to think creatively as we are confronting these new types of threats.

Michael Gordon: Okay. That's good. Yes, you.

Jim Jeffery: Thank you. Michael. The shadow of the INF violations has sort of hovered over this panel. And most of you were pretty strong in condemning the Russians, without specifics. But Bonnie, you raised an interesting point. You said we need to discuss their violations and their concerns about missile defense. Now my understanding of it is their thread bare in an excuse, but do you have another view? Do you think that the Russians have either a valid point or they have at least something that deserves discussion. Thank you.

Speaker 1: Since ambassador Jim Jeffrey didn't introduce himself, I'm going to out him. Okay?

Bonnie Jenkins: Thank you. My main point really is I'm not sure ... not to say that they necessarily have a valid point, but they have a concern. And it is a concern about whether the missiles that we're putting in Europe would violate the INF treaty. So there is an opportunity there to have a discussion, of course we're not going to go in there and saying we're doing something wrong, but I think the important thing is that there may be an opportunity to have some discussions there to see if there's a way that we can resolve some of the concerns that we have and some of the concerns that they have.

Michael Gordon: I mean, the Russians have tried to lob reciprocal allegations that they've done is they've developed with US intelligence deems to be an illegal ground launch

cruise missile. And I wrote a zillion stories about first they were testing it and then they finally deployed it. But they have made reciprocal allegations that said, "Well, your Aegis ashore a missile defense system could have offensive capability." Is there anything to that?

Frank Miller: No. I mean, that is a total red herring. If the United States were to take Tomahawk cruise missiles and deploy them in those systems [crosstalk 00:48:44]-

Michael Gordon: And tell them what the Russian allegation is.

Frank Miller: The Russia's alleged that because the launcher system that's used to launch the tactical ballistic missiles that have gone to the Romania and Poland are the same ones on ships that could also launch a C launch cruise missile, the existing Tomahawk, which is non nuclear, excuse me, that therefore the capacity exists, and the notion that system would become nuclear without the whole world knowing it and that we could sneak them in covertly and practice these things being deployed in Poland, Romania is on the face ridiculous.

The other point, Jim, as you know the debate ... just the facts don't come out. There are more Russian anti-ballistic missile interceptors deployed around Moscow today than there are on the US west coast, and the Russians, like we, are looking at advanced ballistic missile concepts. So again, this is one of these false facts that's been thrown out to try to divert attention from what the Russians are doing. But again, look at the Moscow ABM system, which has been upgraded and which is larger than what we've got on the west coast.

So I think those are both the phony allegations designed to take attention away from their very real violation, which Michael was what was the first journalist to actually put out into the public domain.

Michael Gordon: A question back here.

Bill Coleman: Question on the low yield. I'm bill Coleman. Low yield nuclear weapons, both the deterrence and risk. On the risk side, back when I was in the air force in the late 60s, early 70s, the Pentagon made a decision to de-emphasize tactical nukes, we had lots of them, Little Jon, Davy Crockett, all sorts of stuff, on the hypothesis that the use of tactical nukes would inevitably lead to a full exchange. Why is that risk no longer being considered?

The second part is deterrence. About six years ago Leon Panetta made an announcement of a doctrine on cybersecurity that an attack on our infrastructure was considered an attack on our country. Why can't we use such a doctrine with use of tactical nukes to be more of a deterrent than just developing something that can raise the risk?

Frank Miller: Well, I think what you've done is just justify the low yield tactical, the lower yield weapon, which is not a tactical weapon. The first fact is that with the Bush 41 administration we virtually eliminated our arsenal of short range nuclear weapons. The Russian Federation did precisely the opposite. They kept the systems that they had pledged to get rid of and they have modernized them. Why? Because the Russian military seems to believe that there are some instances where they could use these weapons without a counter veiling NATO effect, and therefore it would be a free pass.

So the notion, and I stress this again, I can't stress enough the notion of putting a small number of low yield weapons on a Trident is to do exactly what you said. Which is to say if the Russians use tactical nuclear weapons, the United States has the capability of responding to that by going to the Russian homeland and to suggest that starting a nuclear war is going to put the Russian government in a situation where the world could answer. Don't go there. It raises the risk significantly to the Russian government. And the reason why low yield Trident and makes a difference now is because the F16s in Europe are aged and can't penetrate Russian air defenses. The air launch cruise missiles that should have been retired a long time ago can't penetrate Russian air defenses. And for deterrent to be credible, the other side has to believe that the system can actually reach its target if fired.

Michael Gordon: Just a sec. Just to put a little specificity here because we'd talk low yield. Frank, what is a low yield Trident's yield? Approximate?

Frank Miller: Single digits.

Michael Gordon: Digits of what?

Frank Miller: Well, kilotons.

Michael Gordon: Okay. So it's like a size of Hiroshima bomb.

Frank Miller: Well, I mean if you want to be pejorative, you can say that.

Michael Gordon: I'm not being pejorative. I'm just saying this is not like, again, this is not like a firecracker. Just a second. When you talk about ... I'm not making a judgment here. I'm just saying a low yield nuclear weapon in this context fired from a trident submarine is like a Hiroshima bomb. Is that correct?

Frank Miller: It would be lower than a Hiroshima bomb. And the second point is, this is what always happens when you get into the second leg of fighting a nuclear war. The whole point of deterrence is to convince the Russian political leadership not to accept the military's advice to use low yield weapons which would be about the same yield. Oh, by the way, against our allies in Europe and against US forces in Europe. So start the story at the beginning. Don't jump into the middle.

Frank Klotz: If I could just add one historical fact. Bill, I don't recall the reason why we reduced the number of short range nuclear weapons in Europe under the Bush 41 presidential nuclear initiatives because we thought they were dangerous or destabilizing. We reduced them because the Cold War was over. The Berlin Wall had come down and Germany was reunited. There was no need to have all these weapons in Europe. I think the Bush administration thought they had at least a tacit understanding or explicit understanding with Gorbachev that the Russians would follow suit.

They did to a degree, but not nearly to the extent we expected they should have a or would. So just to foot stomp the point. The whole purpose of nuclear weapons is to deter war and I think it was Ronald Reagan who once said, "A nuclear war can never be won and must never be fought." And that's why we have this deterrent. To ensure whether it's low yield or high yield or medium yield. We never use these weapons.

Frank Miller: And Michael, back to the other point, again, why have the Russians built a whole series of new tactical weapons? I mean, this is not a country that does things foolishly or because the five year plan decided to waste money that way. There was a reason behind them doing that and therefore the Russian military must be deterred in a crisis or a war from using those weapons. Back to Frank Klotz's point.

Andrew Weber: It's the same reason we did it in the seventies, because at that time the Soviet or so packed had conventional superiority over us, so we deployed all these battlefield nuclear weapons in Europe.

Frank Miller: But do you really think the Russians fear NATO's ground invasion of Russia? I don't.

Andrew Weber: I think Russia is paranoid. They're very paranoid and whether they're correct and being paranoid, we have to accept that they are paranoid, and they are worried about our conventional capabilities, our precision strike capabilities, our even our Tomahawk, now, conventional only cruise missiles.

Michael Gordon: So we're down to our last couple minutes. So what I want to do is take a question over there, a question over there, both state your questions and maybe one way back there, just all three of you. Just say your questions, be concise and, and we'll give the panelists a chance to answer. That'll wind it up.

Justin Gerard: Thank you panel for being here. My name is Justin Gerard from the University of Notre Dame. Mr Weber previously highlighted the reasons he would be against a monetization strategy, and someone else brought up cyber security, so I'm wondering if there isn't a consideration about as we add new digital technologies to not only maintain and carry out the launch of nuclear weapons, but even for the command and control of how that decision is handed down if there's a consideration of maybe an adversary finding a digital exploitation in

the command and control that would change their calculus of launching maybe a bloody nose attack.

Michael Gordon: Let's get the rest of the questions and ... There was one back there? Good.

Speaker 2: I apologize for-

Jonathan Kaplan: Thanks Jonathan Kaplan with the Open Society Foundations. I'm just curious in your imagination, under what scenario would you ever recommend A President use a nuclear weapon?

Michael Gordon: And then the last question is over here.

Speaker 2: The impact of US development of nuclear weapons on current and future proliferators and/or entities who would use a symmetric WMD bio chem.

Michael Gordon: So since we're at the end, why don't the panelists just pick one of the questions you want to respond to and respond to one of those questions?

Frank Klotz: Yeah. Let me start with Chris Miller's point, and it's not specifically about a nonproliferation, but I think one of the things that's been left out of this discussion--by design as we discussed it ahead of time because of what Helsinki is--but the other part of nuclear security is ensuring that potential nuclear terrorist and potential nuclear proliferators do not ever get access to the technology, the know how or the special nuclear materials that are necessary to fabricate an atomic or a nuclear weapon. So part of our overall strategy in addition to dealing with Russia and China and other nuclear powers is to make sure that we don't have to deal with additional nuclear threats to our security. So thank you for raising that question.

Bonnie Jenkins: I would just add to that, I was part of a lot of efforts in the last administration on a nuclear security issues. So that's a very important issue. On the cyber. I mean, that's a good point. The more weapons you have, the more you have to worry about things like safety, security, and even cyber. So it's not an issue that we talked about, but other things come with that and you have to keep that in mind. That it's not just, you know, you're modernizing weapons, you have different platforms, but there're other things that come from that decision.

And I would ... you know, when would I use? I certainly would not use nuclear weapons. I would back away from using him from chemical, biological, or at least I would try to promote that policy if I was still in government. Certainly a nuclear exchange, but Biological Chemical, I would not be one that I want to use a nuclear weapon.

Frank Miller: So two points quickly. One, the nuclear posture review makes a significant point about improving nuclear command and control. General Hyten from strategic command is reporting to Secretary Mattis today on a plan to do that. The whole

question of digital intrusion is critically right at the top of the list of things that need to be dealt with. So thank you for raising that.

And again, the point of the nuclear arsenal is to deter nuclear use in massive conventional invasion of our allies. If you look at the last eight years and look at their record carefully, you'll see a whole string of statements coming from Mr Putin and all of his senior officials about striking our NATO allies with nuclear weapons. These statements are reminiscent strangely and sadly from the Russian Soviet positions in the Khrushchev era. The whole point is to convince the Russian government not to use nuclear weapons against ourselves and our allies. And that is the purpose that the weapons serve.

Andrew Weber: I agree that that's the whole point of nuclear weapons, and I support a strong deterrent. So this idea that modernization, you're either for it or against it, isn't really correct. What I'm for is a sensible modernization that we can sustain that isn't gonna gut other capabilities in the army, the surface navy, other air force encounter cyber capabilities. We don't need the \$1.7 trillion plan. We need the new bomber, we need the new submarine, we need to update our warheads and the infrastructure at the Department of Energy laboratories that supports that, but we need to have an affordable, sustainable, smart nuclear weapons modernization program.

Michael Gordon: So when I first started covering this a little while ago, there was, what kind of nuclear weapons we should have, arms control. These are really major subjects from page news day after day and it receded from the public consciousness with the belief that the cold war is over and now that it turns out it wasn't. I think these are really important subjects and I like to thank the panel because for giving a very informed and diverse presentation of issues which are still before us, how to proceed with the Russians on arms control and what kind of nuclear weapons we can afford and in and should have.

So let's thank them. And thank you.

PART 3 OF 3 ENDS [01:01:58]