Weekly ICBM EAR Report to the ICON
Week of August 28, 2020
Report from Peter Huessy, President of Geo-Strategic Analysis

This weeks report highlights:

- **The upcoming September 22 Triad symposium**
- **Upcoming Seminar remarks by OSD's Dr. Rob Soofer**
- **Upcoming Seminar Remarks by Moshe Patel of the IMDO.**
- **A great essay by Rebeccah Heinrichs on NFU**
- **Two updates on Russia and North Korea military developments.**
- **Heritage Foundation comments about the NDAA conference**
- **The complete edited transcript of Admiral Charles Richard's July30th speech**
- **ICBM/GBSD Briefing given to a Global Strike Command workshop August 26th, 2020 by Peter Huessy.**

Agenda for the Minot Task Force 21 Triad Symposium: "Seeking and Securing National Consensus on Nuclear Deterrence and Modernization" **

****Please contact geostrategicanalysis@verizon.net for an invitation to the conference.**

Tuesday, September 22, 2020

Time	Event
Live 09:05-09:15	Introduction by Peter Huessy and Mark Jantzer
LIVE - 09:15-09:45 EDT	*Senator Kevin Cramer, (R-ND), Member of the SASC)*: **The Congressional Consensus on Strategic Nuclear Modernization, GBSD, Columbia, B-21 and NC3**
Live - TBD	*General John Hyten, Vice Chairman of the Joint Chiefs of Staff:* **The Importance of Nuclear Modernization**
LIVE 11:00-11:30 EDT	*Senator John Hoeven, (R-ND), Member of the Appropriations Committee:* ***A View from Appropriations***
Live (invited)	*The Honorable Barbara M. Barrett, Secretary of the Air Force* (invited)
(following final live speaker)	Closing Remarks - by Peter Huessy and John MacMartin
On Demand	**The Strategic Environment: The Current Russian Challenge: New Start, and the Russia and China Nuclear Threat** *- Tim Morrison, Senior National Security Fellow, Hudson Institute* *(Moderated by Peter Huessy)*
On Demand	**Russian Nuclear Forces: Is There a Strategy of Escalate to Win?** *- Dr. Stephen J. Blank, Senior Fellow at Foreign Policy Research Institute's Eurasia Program* *- Dr. Mark Schneider is a Senior Analyst with the National Institute for Public Policy* *(Moderated by Peter Huessy)*

Time	Event
On Demand	**Are Nuclear Weapons a Hegemonic Tool in Chinese Security Policy?** *- Joseph Bosco, Fellow at the Institute for Corea-America Studies (ICAS) and the Institute for Taiwan-America Studies (ITAS)* *- Rick Fisher* *(Moderated by Peter Huessy)*
On Demand	**Getting Nuclear Deterrence and Modernization Right** *- Drew Walter, PTDO Deputy Assistant Secretary of Defense for Nuclear Matters* *(Moderated by Mark Jantzer)*
On Demand	**Escalate to Win and theaories of Victory: Red and Blue** *- Dr. Brad Roberts, Director, Center for Global Security Research* *(Moderated by Peter Huessy)*
On Demand	**The Cost of Nuclear Modernization in Perspective** *- Dr. Michaela Dodge, Research Scholar at the National Institute for Public Policy* *(Moderated by John MacMartin)*
On Demand	**The Nature of Nuclear Deterrence** *- Honorable Frank Miller, Principal, The Scowcroft Group* *(Moderated by Mark Jantzer)*
On Demand	**Nuclear Deterrent Strategy, NC3 and Major Power Competition** *- Maj Gen Bill Chambers, USAF, retired, Institute for Defense Analysis* *(Moderated by John MacMartin)*

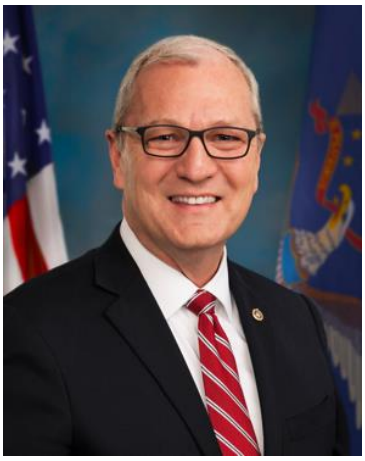
Speaker Bios

	**Dr. Stephen J. Blank** is Senior Fellow at Foreign Policy Research Institute's (FPRI's) Eurasia Program. He has published over 900 articles and monographs on Soviet/Russian, U.S., Asian, and European military and foreign policies, testified frequently before Congress on Russia, China, and Central Asia, consulted for the Central Intelligence Agency, major think tanks and foundations, chaired major international conferences in the U.S. and in Florence; Prague; and London, and has been a commentator on foreign affairs in the media in the U.S. and abroad. He has also advised major corporations on investing in Russia. He has published or edited 15 books.
	**Joseph Bosco** served as China Country Desk Officer in the Office of the Secretary of Defense (2005-2006) and Director of Asia-Pacific Disaster Relief and Humanitarian Affairs (2008-2010). He is presently a Fellow at the Institute for Corea-America Studies (ICAS) and the Institute for Taiwan-America Studies (ITAS). He was formerly a nonresident Senior Associate at the Center for Strategic and International Studies and a nonresident Senior Fellow in the Asia-Pacific program at the Atlantic Council and part of its international observer delegation during Taiwan's historic 2000 presidential election. He earned his A.B. cum laude at Harvard College and his L.L.B. at Harvard Law School, where his third-year paper on U.S. policy in Vietnam was selected as an honors paper. He obtained his L.L.M. in International and National Security Law at Georgetown Law Center, where his honors paper focused on the international law implications of the 1995-1996 missile crises across the Taiwan Strait.

Major General William A. Chambers, USAF (retired) served in uniform for 35 years, culminating in duty as the Assistant Chief of Staff for Strategic Deterrence and Nuclear Integration, Headquarters U. S. Air Force, Washington D.C. In that role, he directed the policy, planning, advocacy, and assessment for Air Force nuclear weapon systems.

Since retirement from active duty in 2013, he has been employed by the Institute for Defense Analyses (IDA), a Federally-funded Research and Development Center, which provides studies for the Department of Defense on a full range of national security issues. At IDA, he leads research teams focused on nuclear weapons policy and strategy as well as strategic force structure modernization and Nuclear Enterprise infrastructure; his team recently provided analysis that fulfilled a statutory requirement to examine the issue of presidential decision-making regarding nuclear weapons. He also led analysis efforts that informed the 2018 Nuclear Posture Review and its ongoing implementation.

General Chambers was a master navigator and weapon systems officer; his operational experience included tours in Strategic Air Command flying the KC-135A and FB-111A. He served as a nuclear policy planner on the Joint Staff and as deputy executive assistant to the Chairman of the Joint Chiefs of Staff. He commanded the 11th Wing at Bolling Air Force Base, Washington, DC. He has also served in a variety of leadership roles in the Pentagon and in overseas commands. General Chambers served as Deputy Commanding General, Combined Forces Command-Afghanistan in Kabul during 2006-2007. From 2008-2010 he served as Director of Air and Space Operations and then as Vice Commander, U.S. Air Forces in Europe.

	**Senator Kevin Cramer** was elected to the United States Senate on November 6, 2018 after serving three terms as North Dakota's At-Large Member of the United States House of Representatives. He is the first Republican to hold this Senate seat in his lifetime. He serves on the Armed Services, Environment and Public Works, Veterans Affairs, Banking, Housing and Urban Affairs and Budget Committees. Cramer has had a distinguished career in public service. In 2003, then-Governor John Hoeven appointed Cramer to the Public Service Commission, and in 2004 he was elected to the position. As a North Dakota Public Service Commissioner, Cramer helped oversee the most dynamic economy in the nation. He worked to ensure North Dakotans enjoy some of the lowest utility rates in the United States, enhancing their competitive position in the global marketplace. An energy policy expert, Cramer understands America's energy security is integral to national and economic security. Cramer has a Bachelor of Arts degree from Concordia College in Moorhead, Minnesota, a Master's degree in Management from the University of Mary in Bismarck, North Dakota, and was conferred the degree of Doctor of Leadership, honoris causa, by the University of Mary on May 4, 2013.

	**Dr. Michaela Dodge** is a Research Scholar at the National Institute for Public Policy. Prior to joining the National Institute, Dr. Dodge worked at The Heritage Foundation from 2010-2019. She left Heritage to serve as Senator Jon Kyl's Senior Defense Policy Advisor between October to December 2018. Her last position at Heritage was a Research Fellow for Missile Defense and Nuclear Deterrence. Dr. Dodge's work focuses on U.S. nuclear weapons and missile defense policy, nuclear forces modernization, deterrence and assurance, and arms control. Additionally, she was a Publius Fellow at the Claremont Institute in 2011 and participated in the Center for Strategic and International Studies PONI Nuclear Scholars Initiative Program. Dr. Dodge received a Ph.D. from George Mason University in 2019. She earned her Master of Science in Defense and Strategic Studies degree from Missouri State University in 2011. At Missouri State, Dr. Dodge was awarded the Ulrike Schumacher Memorial Scholarship for two years. She received a bachelor's degree in international relations and defense and strategic studies from Masaryk University, Czech Republic.
	**Mr. Richard D. Fisher, Jr.** is a Senior Fellow with the International Assessment and Strategy Center. In 2016 he joined the Advisory Board of the Global Taiwan Institute. He has previously worked with the Center for Security Policy, Jamestown Foundation China Brief, U.S. House of Representatives Republican Policy Committee, and The Heritage Foundation. He is the author of China's Military Modernization, Building for Regional and Global Reach (Praeger, 2008, Stanford University Press, 2010, Taiwan Ministry of National Defense translation 2012) Since 1996 he has covered scores of international arms exhibits and his articles have been published in the Jane's Intelligence Review, Jane's Defence Weekly, Aviation Week and Space Technology, Armed Forces Journal, Far Eastern Economic Review, Asian Wall Street Journal, Defense News, The Epoch Times and the The Washington Times. He has studied at Georgetown University and received a B.A. (Honors) in 1981 from Eisenhower College.

	**Senator John Hoeven** was sworn in as North Dakota's 22nd U.S. Senator in 2011, following ten years of service as the state's governor. He is a member of the United States Senate Committee on Appropriations which is tasked with writing the legislation that allocates federal funds to the numerous government agencies, departments, and organizations on an annual basis. In the national security area his appropriations subcommittee assignments include
	**Peter Huessy** is Director of Strategic Deterrent Studies at the Mitchell Institute for Aerospace Studies and President and CEO of Geo-Strategic Analysis. Mr. Huessy teaches nuclear deterrent and missile defense policy at the U.S. Naval Academy as part of his work on a wide range of national security and defense issues, including nuclear deterrence, missile defense, terrorism and counterterrorism, proliferation, energy and immigration. He created a nuclear deterrent and missile defense seminar series in 1983 and since then has hosted 1,500 of these seminars on key defense and national security issues for the Mitchell Institute, and previously for the National Defense Industrial Association and the National Defense University Foundation. He created the Triad series of conferences in 2011.

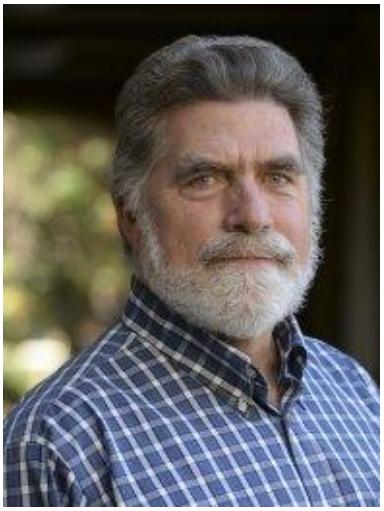
	**Gen. John E. Hyten, USAF,** serves as the 11th Vice Chairman of the Joint Chiefs of Staff. In this capacity, he is the nation's second highest-ranking military officer and a member of the Joint Chiefs of Staff. Gen. Hyten attended Harvard University on an Air Force Reserve Officer Training Corps scholarship, graduated in 1981 with a bachelor's degree in engineering and applied sciences, and was commissioned a second lieutenant. The general's career began in engineering and acquisition before transitioning to space operations. He has commanded at the squadron, group, wing and major command levels. In 2006, he deployed to Southwest Asia as Director of Space Forces for operations Enduring Freedom and Iraqi Freedom. He commanded Air Force Space Command, and prior to his current assignment, was the Commander of U.S. Strategic Command, one of 11 Combatant Commands under the Department of Defense.
	**Mark J. Jantzer** is a resident of Minot, North Dakota, and the long-time Chair of Task Force 21, Minot's base retention and future military missions organization. As a Chief of Staff of the Air Force and Air Force Global Strike Command Civic Leader, Jantzer advises the commanders, and advocates and educates on issues affecting airmen. Appointed by the Governor to Task Force Military Issues North Dakota, Jantzer works to make North Dakota a desirable location for the military. Jantzer is a founding board member of the Strategic Deterrent Coalition, a nonprofit organizations that seeks to insure a robust strategic deterrent. Elected to the Minot City Council in 2008, Jantzer has served continuously and is currently Council President. In business for over 40 years, Jantzer is General Manager of The Computer Store, Inc., in Minot.

	**L. John MacMartin** has been the President of the Minot Area Chamber of Commerce since August, 1990, and the interim President/CEO of the Minot Area Development Corporation since November, 2019. Prior to Minot he served as the Vice President of the Billings Area Chamber of Commerce, Billings, Montana. He has completed a six year course of study known as the Institute for Organizational Management conducted by the US Chamber of Commerce. He completed the Leadership Development Program and the Center for Creative Leadership program through the American Chamber of Commerce Executives (ACCE). He also participated in a program focused on Transformational Leadership in Chambers offered jointly by ACCE and the Aspen Institute. He is a past board member of the American Chamber of Commerce Executives, served on the American Chamber of Commerce Certification Commission as a member and past chair, is a past-president of the Mid America Chamber of Commerce Executives and is a member of the ND Chamber of Commerce Executives and a past-president of that group. John received an Associate of Arts degree in Liberal Arts from Bismarck Junior College in 1972, then earned his Bachelor of Science degree in Public Administration from the University of North Dakota in 1874. In 2000, he received a Professional Accreditation as a Certified Chamber Executive (CCE). He obtained a Master of Science degree in Management from Minot State University in 2002. John has had the opportunity to attend the National Security Forum, a part of Air War College, at Maxwell Air Force Base. In addition, he was a member of the 70th Joint Civilian Orientation Conference (JCOC) which visited European Command locations in the fall of 2005.
	**The Honorable Franklin C. Miller** is Principal,The Scowcroft Group. He is an internationally recognized expert on nonproliferation, defense, nuclear energy and policy issues, and export control. He served for thirty-one years in the U.S. government, including twenty-two years in the Department of Defense—serving under seven Secretaries in a series of progressively senior positions—and four years as a Special Assistant to President George W. Bush and as Senior Director for Defense Policy and Arms Control on the National Security Council staff.

Tim Morrison is a senior fellow at Hudson Institute, specializing in Asia-Pacific security, missile defense, nuclear deterrent modernization, and arms control. Most recently, Mr. Morrison was deputy assistant to the president for national security in the Trump administration. He served as senior director on the National Security Council for European affairs, where he was responsible for coordinating U.S. government policy for 52 countries and three multilateral organizations. Prior to that post, he was senior director for counterproliferation and biodefense, where he coordinated policy on arms control, North Korean and Iranian weapons of mass destruction programs, export controls and technology transfers, and implementation of the Trump administration's Conventional Arms Transfer policy.

For 17 years, Mr. Morrison worked in a variety of roles on Capitol Hill. From 2011 through July 2018, he served on the House Armed Services Committee staff, initially as staff director of the Subcommittee on Strategic Forces and ultimately as policy director of the Committee. From 2007 until 2011, Mr. Morrison was the national security advisor to U.S. Senator Jon Kyl (AZ), the Senate Republican Whip.

Mr. Morrison has a B.A. in political science and history from the University of Minnesota. He
also has a J.D. from the George Washington University Law School. He is an intelligence officer in the United States Navy Reserve, serving since 2011.



Dr. Brad Roberts is director of Lawrence Livermore National Laboratory's Center for Global Security Research. Previously he served as Deputy Assistant Secretary of Defense for Nuclear and Missile Defense Policy (2009-2013). In this role, he served as Policy Director of the Obama administration's Nuclear Posture Review and Ballistic Missile Defense Review and had lead responsibility for their implementation. From 1995 to 2009, Dr. Roberts was a member of the research staff at the Institute for Defense Analyses in Alexandria, Virginia and an Adjunct Professor at George Washington University. His book, The Case for U.S. Nuclear Weapons in the 21st Century (Stanford University Press) was recently recognized by the American Library Association as one of the outstanding academic titles of 2016. A member of the Council on Foreign Relations, Roberts has a bachelor's degree in international relations from Stanford University, a MA. from the London School of Economics and Political Science, and a PhD in international relations from Erasmus University.

	**Dr. Mark Schneider** is a Senior Analyst with the National Institute for Public Policy. He specializes in missile defense policy, nuclear weapons, deterrence, strategic forces, arms control, and arms control verification and compliance issues. Dr. Schneider served in a number of senior positions within the Office of Secretary of Defense for Policy including Principal Director for Forces Policy, Principal Director for Strategic Defense, Space and Verification Policy, Director for Strategic Arms Control Policy and Representative of the Secretary of Defense to the Nuclear Arms Control Implementation Commissions. He also served in the senior Foreign Service as a Member of the State Department Policy Planning Staff, the Professional Staff of the Senate Select Committee on Intelligence, the Department of Energy, the Energy Research and Development Administration and the Atomic Energy Commission. Dr. Schneider served as a member of the DoD Compliance Review Group. He chaired several working groups of the START and INF Treaty Implementation Commissions (JCIC and SVC) in Geneva, negotiating many implementation agreements with the successor states of the former Soviet Union. He most recently served as Acting Chairman of the U.S.-Russia Working Group on Missile Defense.

	**Mr. Drew Walter** is currently performing the duties of (PTDO) Deputy Assistant Secretary of Defense for Nuclear Matters. Nuclear Matters is the Department of Defense (DoD) focal point for a wide range of issues related to the U.S. nuclear weapons stockpile, nuclear counterterrorism, and nuclear counterproliferation. Before being assigned as PTDO DASD(NM), Mr. Walter served as Senior Advisor to the Deputy Under Secretary of Defense for Acquisition and Sustainment. In this role, Mr. Walter supported the Deputy Under Secretary's efforts to integrate efforts across the Department related to nuclear deterrent modernization and sustainment Prior to joining DoD, Mr. Walter served as a professional staff member with the Committee on Armed Services in the U.S. House of Representatives. Mr. Walter began his career at Sandia National Laboratories, where he was a Senior Member of the Technical Staff. His responsibilities at Sandia included conducting physical security assessments for U.S. nuclear weapons, developing and analyzing new security technologies and novel security assessment methodologies, and conducting special studies for laboratory executives. Mr. Walter holds Bachelor's and Master's of Science degrees in Mechanical Engineering, both from the Rochester Institute of Technology.

OSD's Rob Soofer Speaking September 2, 2020

The Mitchell Institute invites you to join a live webcast of our **Nuclear Deterrence Forum** with **Dr. Robert Soofer, Deputy Assistant Secretary of Defense for Nuclear and Missile Defense Policy**, on **Wednesday, September 2, 10:00 am EST**. Top U.S. officials have repeatedly stressed that nuclear modernization is the Pentagon's highest priority in order to maintain an effective deterrent against both nuclear and non-nuclear aggression. As DASD for Nuclear and Missile Defense Policy, Dr. Soofer joins us for timely discussion of U.S. nuclear strategy, modernization, and arms control. Dr. Soofer will also provide his perspective on some of the Department's missile defense initiatives. Questions? Contact phuessy@afa.org

Advance registration is required.

Registration Link: https://us02web.zoom.us/webinar/register/WN_1UXYYbKlTRip4h-EZIDmhg

After registering, you will receive a confirmation email containing information about joining the webinar.

After the event, watch the video on Mitchell Institute's website:
https://www.mitchellaerospacepower.org/aerospace-nation

Moshe Patel, Israeli MDO

You are invited to a Zoom webinar.
When: Sep 9, 2020 10:00 AM Eastern Time (US and Canada)
Topic: Nuclear and Missile Defense Forum: Moshe Patel, Director of Israel Missile Defense Organization

Register in advance for this webinar:
https://us02web.zoom.us/webinar/register/WN_dZnZ30uCS9i2ZHm7aef5kw

After registering, you will receive a confirmation email containing information about joining the webinar.

Heritage Foundation Reviews Possible Conference Outcomes

The Heritage Foundation is out with a new blueprint for House and Senate negotiators as they prepare to marry their differing versions of the fiscal 2021 National Defense Authorization Act. And it's chock full of recommendations.

It sides with the House's decision to fund a second Virginia-class attack submarine and an additional expeditionary fast transport ship. But in some high profile areas, it calls on conferees to throw out the language in both bills altogether.

'Markedly less capability': For example, it chides both chambers for backing the Air Force's new request to buy an upgraded version of Boeing's mainstay F-15 fighter jet, the F-15EX.

"Terminate the acquisition of fourth-generation F-15EX fighters and accelerate the acquisition of fifth-generation F-35A fighters," the report says. "The Air Force's current plan to acquire 140 F-15EX fighters will deliver markedly less capability, reduce the Air Force's deployable combat capability, and cost the government more to operate than buying 183 F-35As using the same level of funding."

Nuclear testing: The report backs the Senate on the issue of nuclear weapons testing — including Sen. Tom Cotton's provision to set aside $10 million to prepare for a possible resumption of explosive tests as the law requires.

Cotton explained: “The House’s misguided prohibition would impinge on the nation’s ability to respond to an emergency requiring a nuclear test to ensure the functionality of the aging nuclear arsenal,” it says.

Heritage also advocates against a House provision that would elevate the role of the secretary of energy in managing the nuclear weapons portfolio. “The House change would put the Secretary of Energy in a position to veto decisions that relate exclusively to DOD capabilities,” the report says. **Nuclear Enterprise.** In order to improve the nuclear sections of the NDAA, the conference should:

- **Maintain strong support for nuclear modernization.** Both the Senate and House versions of the NDAA fully fund the President’s budget request for nuclear modernization programs within the DOD and the National Nuclear Security Administration (NNSA). **The DOD’s strategic delivery platforms like the Minuteman III intercontinental-range ballistic missile and AGM-86B air-launched cruise missile are years past their intended lifetimes, leaving the acquisition of their replacement programs with little room for delay.18**

  Patty-Jane Geller, “Nuclear Modernization Is Essential Business. Don’t Let Coronavirus Shut It Down,” The National Interest, April 28, 2020, https://nationalinterest.org/blog/buzz/nuclear-modernization-essential-business-don’t-let-coronavirus-shut-it-down-148191 (accessed July 31, 2020).

Similarly, the NNSA requires a funding increase this year as it continues to move forward with a number of programs that would rebuild the tottering nuclear enterprise, such as plutonium pit production, as well as key warhead replacement programs.19

Michaela Dodge, “Aged U.S. Nuclear Stockpile and Infrastructure Must Evolve to Address 21st-Century Threats,” Heritage Foundation Backgrounder No. 3311, May 9, 2018, https://www.heritage.org/sites/default/files/2018-05/BG3311.pdf.

 Fortunately, there is current broad agreement on nuclear modernization funding.

 Not prohibit nuclear testing. The House passed an amendment that prohibits the use of funds to conduct, or prepare to conduct, a nuclear test. While the United States operates under a testing moratorium, it maintains nuclear-test readiness should the need arise to conduct a nuclear test. The House’s misguided prohibition would impinge on the nation’s ability to respond to an emergency requiring a nuclear test to ensure the functionality of the aging nuclear arsenal. The final conference agreement should instead include a Senate provision that adds $10 million for test readiness activities.20

Patty-Jane Geller, “America’s New Quest for Adequate Nuclear Deterrence,” The National Interest, July 22, 2020, https://nationalinterest.org/feature/america%E2%80%99s-new-quest-adequate-nuclear-deterrence-165323 (accessed July 31, 2020).

Today, U.S. test readiness is weak; the NNSA has reported the unlikelihood of its ability to even meet the 24-to-36-month test readiness requirement.21

U.S. Department of Energy, National Nuclear Security Administration, Fiscal Year 2020 Stockpile Stewardship and Management Plan: Report to Congress, July 2019, chapter 3, p. 26, https://www.energy.gov/sites/prod/files/2019/08/f65/FY2020__SSMP.pdf (accessed July 31, 2020).

 The United States should be improving its nuclear testing capabilities, not further inhibiting them.
 Not elevate the chairmanship of the Nuclear Weapons Council to the Secretary level. A House amendment would establish the Secretaries of Defense and Energy as co-chairs of the Nuclear Weapons Council, which is currently chaired by the Undersecretary of Defense for Acquisition of Sustainment and the NNSA Administrator. The Nuclear Weapons Council plays the critical role of endorsing military requirements for NNSA warhead activities, and currently functions effectively.22

"Nuclear Weapons Council," in U.S. Department of Defense, Office of the Deputy Assistant Secretary of Defense for Nuclear Matters, The Nuclear Matters Handbook 2020, chapter 6, pp. 85–105, https://www.acq.osd.mil/ncbdp/nm/nmhb/docs/NMHB2020_Ch6_NWC.pdf (accessed July 31, 2020).

- Governance of the nuclear enterprise has challenges, but leadership of the Nuclear Weapons Council is not one of them. The House change would put the Secretary of Energy in a position to veto decisions that relate exclusively to DOD capabilities. As the customer of the NNSA, the DOD should maintain its sole leadership of the council. Advocates of this provision argue that moving this decision-making authority to the Secretary level will elevate the importance of nuclear weapons, an idea that in reality runs contrary to the time-proven principle of divesting authority down the chain of command—in this case to the Undersecretary of Defense for Acquisition of Sustainment, who has the expertise and time to give nuclear weapons the attention they deserve.

Weapons of Mass Destruction (WMDs). In order to improve the NDAA's sections on WMDs, the conference should:

- **Support the reporting requirements on a myriad of challenges with WMDs.** Both the House and the Senate Armed Services Committees appropriately took notice in the NDAA and its report language of the current challenges presented by WMDs. The committees have wisely requested briefings, plans, and reports from the DOD on existing and emerging WMD threats, the DOD's current WMD-related defense programs, and its preparedness for addressing WMD contingencies. In light of Syria's use of chemical weapons, concerns about Russia's compliance with the Chemical Weapons Convention; China's, Iran's, and North Korea's nuclear programs; and the coronavirus pandemic, among other issues, these congressional oversight efforts are justified and should be supported in the NDAA conference.

Missile Defense. In order to improve the missile defense sections of the NDAA, the conference should:

- **Support the development of a tracking layer for the missile defense architecture.** Both the House and Senate agree on the importance of accelerating the Hypersonic and Ballistic Tracking Space Sensor (HBTSS), a program that will enable birth-to-death tracking of all missiles from a proliferated constellation of satellites in low-Earth orbit.23

  Patty-Jane Geller, "Developing a Clear Path for Homeland Missile Defense," Heritage Foundation Backgrounder No. 3515, August 7, 2020, https://www.heritage.org/defense/report/developing-clear-path-homeland-missile-defense.

The Administration has failed to request adequate funding for this program, placing it on the Missile Defense Agency's (MDA) Unfunded Priorities list in FY 2019 and FY 2020, and requesting only $99.6 million for the program in FY 2021, a decrease from last year's appropriation.24

U.S. Department of Defense, Defense Budget Overview: Irreversible Implementation of the National Defense Strategy, Office of the Undersecretary of Defense (Comptroller)/Chief Financial Officer, February 2020, pp. 4–11, https://comptroller.defense.gov/Portals/45/Documents/defbudget/fy2021/fy2021_Budget_Request_Overview_Book.pdf (accessed April 24, 2020).

The Senate and House bills correct this budget issue with provisions that express the need to accelerate this program and the addition of $120 million to the MDA to continue developing the HBTSS.25

S. 4049 section 1662, and H.R. 6395 section 1654.

Maintain close oversight over the development of the homeland missile defense architecture. The House and Senate bills also include critical oversight of the Administration's plan for future homeland missile defense. After the cancellation of the Redesigned Kill Vehicle in 2019 that would have replaced aging kill vehicles on the ground-based interceptors (GBIs) that defend the homeland, the DOD initiated the Next Generation Interceptor (NGI) program to be fielded not before the late 2020s. Recognizing that the advancing North Korean missile threat will begin to converge with increasing GBI obsolescence issues before then, House sections 1657 and 1658 require reports, assessments, and certifications on both improving the performance of the existing GBIs and ensuring success of the NGI program. The Senate and House bills also both require the DOD to answer critical questions on its plan to use regional systems to develop a layered homeland missile defense.26

S. 4049 section 1664, and H.R. 6395 section 1656.

An underlay to the current missile defense infrastructure is a worthwhile pursuit, but could be a costly and time-consuming endeavor that Congress is correct to oversee closely.27

The Nuclear Threats: Some News Excerpts

Unexpected Mystery Submarine In North Korea
Forbes by H I Sutton, August 26, 2020

There are very few countries that can build an entirely new class of submarine without the rest of the world knowing. Submarine technologies and specifications are often secret, but the mere existence of the submarine isn't. Except in North Korea, where the first we know of a new submarine may be when it shows up in satellite images. This is exactly what has happened.

Russia's latest nuclear-powered subs to carry cruise missiles with range of over 4,000 km

MEDIA: TASS (Russia)

DATE: August 28, 2020

KUBINKA /Moscow Region -- The Project 885M multi-purpose nuclear-powered submarines Voronezh and Vladivostok laid down at the Sevmash Shipyard on July 20 will carry upgraded Kalibr-M cruise missiles with a range of over 4,000 km, a source in the defense industry told TASS on the sidelines of the Army-2020 forum on Friday.

"The new multi-purpose submarines will carry principally new Kalibr-M missiles with a firing range of over 4,000 km," the source said.

The new Kalibr-M cruise missiles will be capable of delivering either conventional high-explosive fragmentation or nuclear warheads to the target, he said.

As the source stressed, "the new submarines will be better prepared for the mission of non-nuclear strategic deterrence compared to their predecessors."

The nuclear-powered submarines Vladivostok and Voronezh are expected to be put afloat in 2024 and 2025 and delivered to the Navy under the existing state armament program, i.e. by the

end of 2027.

A contract for building Project 885M (Yasen-M) multi-purpose nuclear-powered submarines was signed at the Army-2019 international arms show in the summer of 2019.

The baseline Project 885 lead nuclear-powered underwater cruiser Severodvinsk entered service with Russia's Northern Fleet in 2014. The upgraded Project 885M lead sub Kazan is set to be delivered to the Navy by the end of 2020.

Five Project 885M submarines are at various stages of their construction at the Sevmash Shipyard (part of the United Shipbuilding Corporation).

Project 885/885M submarines are armed with Kalibr-PL and (or) Oniks cruise missiles and will eventually carry Tsirkon hypersonic missiles as their basic weapons.

Opinion

Reject 'No First Use' Nuclear Policy | Opinion

Rebeccah Heinrichs , Senior fellow, Hudson Institute
On 8/24/20 at 11:15 AM EDT

https://www.newsweek.com/reject-no-first-use-nuclear-policy-opinion-1527037

There is an activist effort among nuclear idealists to mobilize public opinion and urge elected officials to pledge to support a policy of "no first use" (NFU). Put simply, an American president who would adopt a policy of NFU would be declaring that the United States will never be the first country to use a nuclear weapon in a war.

No doubt these activists were thrilled to see Democratic presidential nominee Joe Biden offer an enthusiastic recent embrace of NFU. But his position is not new; at a campaign event last year, Biden confirmed that he has supported NFU for more than 20 years.

Reasonable observers may therefore ask: Why hasn't his desire been realized?

The reality is that every single American president, Democrat and Republican alike, has rejected an NFU declaration because to do so would invite unacceptable risk that could yield catastrophic war—and for no tangible benefit at all.

This is true for four reasons.

First, adopting an NFU policy invites a strategic non-nuclear attack against the American people, our allies and our interests. An NFU declaration broadcasts to America's enemies that they can proceed with a chemical weapons attack on U.S. forces and their families, can proceed with a biological attack on an American city and can proceed with an overwhelming conventional attack against critical U.S. assets, all without fear of nuclear retaliation. Any would-be enemy

could carry out an infinite number of attacks short of a nuclear attack, while the NFU-endorsing U.S. president assures their safety from our nuclear weapon arsenal.

An NFU policy is especially unwise now, while the United States contends with not one, but two major power threats. Both Russia and China are expanding their military capabilities and have acted in ways that demonstrate their willingness to attack sovereign nations and redraw borders.

Of the two, China poses the single greatest threat to America's national security and way of life. General Secretary Xi Jinping and his Chinese Communist Party (CCP) are now in the midst of a rapid modernization of their military. China has the most diverse missile force on the planet, and has launched more ballistic missiles for testing and training than the rest of the world combined. Nor has Beijing neglected its nuclear capabilities—although their efforts are furtive, we know the CCP is investing in a large force, with delivery systems capable of launching nuclear weapons. Director of the Defense Intelligence Agency Lt. General Robert P. Ashley, Jr. said in 2019 that the intelligence community believes China is likely to "at least double the size of its nuclear stockpile in the course of implementing the most rapid expansion and diversification of its nuclear arsenal in China's history." The number commonly cited for China's stockpile is around 300. But it is plausible that there are actually many more than 300, as one highly credible former government official confided to me.

What's more, China likely has an advanced chemical warfare program. Like its nuclear program, China does not reveal to the United States what, exactly, it does have. But the more we learn about the CCP's gross abuse of religious minorities, including of the Uyghurs imprisoned in Xinjiang concentration camps, the more our hackles should be raised. Western democracies view any use of chemical weapons as unconscionable, but the evidence shows our enemies do not share this view.

Although the scope of Russia's economy and the ambitiousness of its national objectives pale in comparison to China's, Russia still seeks to undermine the United States and our allies wherever it can. Like China, it is investing heavily in its nuclear forces and has repeatedly violated U.S. arms control agreements. To take one particularly abhorrent and brazen example, on August 6, 2018, the Russian government used chemical weapons on British soil in an attempt to assassinate a former Russian spy, eliciting sanctions by the United States.

That brings us to the second reason NFU is a terrible idea. The United States should be working to create more *complex* calculations for China and Russia—not making their calculations *simpler*. Every policy decision related to arms control, the make-up and quality of America's own weapons and our public declarations should be made with one goal in mind: to deter acts of aggression against the United States. The United States must keep our options open, maintain some ambiguity about what we may do and force our enemies to make complex calculations and always doubt whether an act of aggression against the United States would be worth the punitive cost.

Third, our adversaries would hardly restrict themselves if America were to adopt a true NFU policy. In fact, we have reason to believe that many *are willing* to use nuclear weapons first in a conflict.


Aerial view of the Pentagon in 1966 Smith Collection/Gado/Getty Images

Start with Russia. Russian officials have implied their comfort with the use of nuclear weapons in a conventional conflict, have at times threatened nuclear use against purely defensive systems and, in at least one instance, an official stated that the conditions for a Russian nuclear use could as small as a regional, or even a local, conflict. In June 2015, the Obama administration's deputy secretary of defense, Robert Work, and then-Vice Chairman of the Joint Chiefs of Staff Admiral James Winnefeld informed Congress that "Russian military doctrine includes what some have called an 'escalate to de-escalate' strategy—a strategy that purportedly seeks to de-escalate a conventional conflict through coercive threats, including limited nuclear use." Then-Trump administration Secretary of Defense James Mattis testified to the same concern in 2018.

As for China, the Chinese have purported to embrace NFU. Way back on October 16, 1964, China declared that it "willnever, at any time or under any circumstances, be the first to use nuclear weapons." For decades, that was blindly accepted by those who wished to believe it—including NFU proponents in the U.S. But current Commander of U.S. Strategic Command Admiral Richard, when speaking about the Chinese NFU policy, told senators in February 2020, "I could drive a truck through that no first use policy." He went on to explain that the Chinese

nuclear program lacks transparency and fosters distrust. Worse, the CCP's dubious claims to disputed Chinese territory raises concerns about how, and where, Beijing may employ nuclear weapons. Moreover, the CCP is engaged in a robust disinformation campaign across all areas of its government and society: America should not presume anything but deceit from our number one geopolitical threat.

Finally, adopting an NFU policy would cause allied nations, who have rightly forsworn nuclear weapons and who rely on the American nuclear umbrella, to doubt our assurances. And if allies and partners can no longer rely on our nuclear umbrella, they will develop their own. The result of the nuclear idealists' efforts, zealous as their mission is to take the world down to zero nuclear weapons, could ironically result in precipitous nuclear proliferation.

President Obama, recipient of the Nobel Peace Prize for, in part, his denuclearization aspirations, eschewed an NFU declaration. Though he was ideologically motivated to pursue the idealist nuclear disarmament agenda, reality and the weight of responsibility to protect the American people won the day. It is inexplicable that his vice president, who has decades of experience grappling with the global threats and has had a front-row seat to these executive decisions, would still hold to the notion that NFU is good policy.

We must see the world as it is. We might wish that other nations will follow our lead and do as we do, but other nations do not hold to our same moral judgments. We should not assume that our adversaries will make the same strategic and operational decisions that we make. The historical evidence shows that they are not inspired by our efforts to de-emphasize nuclear weapons, either by unilaterally moving toward lower numbers or by placing restrictions on testing.

Every American president should keep our options open, maintain strategic ambiguity and reject NFU.

Rebeccah Heinrichs is a senior fellow at Hudson Institute.

July 30, 2020 Remarks of Admiral Charles Richard, Commander, US Strategic Command, Mitchell Institute

073020 Air Force Association Mitchell Institute for Aerospace Studies Nuclear Deterrence Forum with Admiral Charles A. Richard, Commander of United States Strategic Command, on U.S. Strategic Nuclear Forces Modernization

GEN. DAVID DEPTULA: Good morning, ladies and gentlemen. I'm Dave Deptula, AFA's Dean of the Mitchell Institute for Aerospace Studies. Welcome to the next event in our Nuclear Deterrence Forum series.

We are extremely fortunate and pleased to have joining us today, Admiral Charles "Chas" Richard, Commander of the U.S. Strategic Command. Before taking the helm at

STRATCOM in November of 2019, Admiral Richard held a number of key leadership roles. He was the commander of Submarine Forces in Norfolk, Virginia; deputy commander of U.S. Strategic Command; director of undersea warfare at the Pentagon; and deputy commander of the Joint Functional Component Command for Global Strike at U.S. Strategic Command.

He has also worked in the Office of the Undersecretary of the Navy and the Undersecretary of Defense for Policy. I think, as most of you recognize, at STRATCOM Admiral Richard is responsible for overseeing the global command and control of all U.S. strategic forces to meet our national security objectives by providing a broad range of capabilities and options for the president and the secretary of Defense.

So, welcome, admiral. It's really a pleasure to have you with us today. I'd like to start our session by giving you the opportunity to make some opening remarks on the current priorities and issues that are confronting you at U.S. Strategic Command. So with that, over to you, admiral.

ADM. CHARLES RICHARD: General, thank you, sir. Good morning to you and everyone else on the net, and thanks to the Mitchell Institute for providing me an opportunity to have what I think is a very important conversation here.

I want to start off with an assertion. You all keep a clock on me, I may run a little bit long on the timing on this.

GEN. DEPTULA: You take all the time you want.

ADM. RICHARD: I assert that the United States' and the Department of Defense have not had to consider the full implications of competition through possible crisis and possible armed conflict with a nuclear-capable peer adversary in close to 30 years. When you think about that, the implications to every single thing we do in the department are profound. We have a good strategy to go address that situation. We have fabulous leadership from the Secretary of Defense, Secretary Esper, and chairman Milley. They have made it quite clear to us in the department how they want us to go attack that, and we are moving out at flank speed to go do that.

But it is important to recognize things have changed and part of that is a couple of defining characteristics, right? You can write I am in a great power competition six times on your War College paper and you're probably going to get a "B," right? But you have to do the work in terms of, what does that mean?

One thing it means is, it all starts with the threat, right? We used to know how to operate in a threat-based world. It was the Cold War and we did business very differently back then.

We're not in that again, but we're coming out of a capabilities-based world. So we have to get back to the idea that all domains are going to be challenged, that strategic deterrence, which has always been fundamental, foundational to the rest of the defense strategy and what the department does, is going to get tested in ways that it hasn't been tested before. We need to be ready to answer that bell.

Look, I'll run through this pretty quickly. I think we'll get into it some more in the Q&A, but the threat is significant. I'm only going to highlight the strategic forces piece of this, but remember strategic deterrence is more than just nuclear deterrence, particularly now today it is non-kinetic, space, cyber, it is your conventional piece of this. All of this has to be integrated together. It's not just a STRATCOM job, it is all combatant commands, and we have to be able to re-think the way we do business.

Real quick, Russia. The bottom line is it's easier for me to tell you what they're not modernizing than to tell you what they are. It's basically everything. They've been at it now for well over 15 years and they are 70-something percent complete.

It's every element of their forces, but it's more than that. It is their command and control, it is their warning, it is their doctrine, it is their exercises, it is their readiness. It is an across-the-board step change in their capabilities and what they can threaten us with.

Let me talk about China maybe a little bit more than I have in the past. With China, it is very important, I think, to look at what they do, not what they say. I think Secretary Pompeo just said that recently. I think he's spot on target. We have come to the same conclusion.

Again, I'm going to talk strategic, but it starts with actually their breathtaking expansion in all other military capabilities. It has been near stunning. They always go faster than we do.

One of my favorite recent examples is they didn't have a coast guard until like 2013 or something. They're not exactly like us, but they decided in 2013 we need a coast guard. Today they have 255 coast guard ships. It is just stunning what they did. By the way, that is a perfect instrument when you're engaged in a competition below the threshold of armed conflict, sometimes known as the grey zone.

But now, nuclear and strategic is just the next thing on China's to-do list. They are about to finish building out for the first time an actual triad by adding a strategic capability to their air leg. They too have new road mobile, new silo-based, much better capabilities. I can't go into a lot of details.

They have new command and control. They have new warning. They have better readiness. And while they espouse a minimum deterrent strategy, they have a number of capabilities that seem inconsistent with that. Regardless of what they say, they certainly have the capability to execute any number of strategic employment strategies, not just a minimum deterrence (strategy).

So in the fact of that, we're going to have to change the way we think about deterrence, right? The basic equation in deterrence has not changed. Go back, read your Kahn, read your Schelling. Can I credibly deny benefit or impose a cost which is greater than what the competitor seeks to gain?

It is how you apply that has changed. It is the dynamics associated with the use or potential use of force. Those are changing and we are working very hard to understand that.

A good example is, China is on a trajectory to be a strategic peer to us by the end of the decade. For the first time ever, the U.S. is going to face two peer capable nuclear competitors who are different, who you have to deter differently. We have never faced that situation before.

We are working very hard at STRATCOM, along with the broader joint force, to understand that. This all couples – I guess would be my biggest point – what you're doing strategically is (informed ?) by what you're doing conventionally and it walks all the way down into the grey zone, the level below the threshold of armed conflict. It is not linear. The idea that there is a ladder here, I think, is flawed.

It is non-linear. There are discontinuities. And there are points where a competitors' decision calculus may flip very rapidly on you based on events, particularly inside a crisis. We're working to understand that and be able to have a shared vision of it inside the joint force.

Just a couple of more points, sir and the rest of the audience, and then we can get into some of the questions. What do you do about that? Well, we've got to have a triad.

We have to have a triad, the modest supplemental capabilities that were requested to give me the capability and the flexibility to address the situation that I just described. They can be proud of us that throughout COVID-19 and all the impacts of a worldwide pandemic, STRATCOM did not miss a beat. We remain fully mission capable throughout, a real credit to General Ray, Admiral Grady, General Caldwell and others who saw the threat, executed and updated plans that we had to be able to operate straight through.

I'll also make one more point and then move into some questions. We have a triad and the capabilities that we have in part because of the flexibility it provides. The ability to hedge inside of it so that for an issue in one piece we are able to compensate with the others, is part of the original brilliance in the design. But what it also enables you to do is address the threat or the risk you didn't see coming.

We have to be very humble when we look over the long term in terms of what we think we're going to need to defend ourselves, that we can accurately predict every single situation or contingency that we're going to be faced with. We always built margin into our strategic forces to make sure that we could account for the unknown risks that may be out there, alongside the risk that we could reasonable see coming. I think COVID-19 is a great example of where things can manifest that you don't see coming, and with this mission set because of the consequences, it is important to have a margin ready to handle that.

My predecessors gave me that margin that enabled me to work through COVID-19. I think we as a nation should learn from that wise lesson in terms of our decisions going forward.

Dave, I've got a lot more stuff to talk about, but I'll just stop there in the interest of time and we can start getting into some questions.

GEN. DEPTULA: Thanks very much, admiral, a great overview of where STRATCOM is today and some of your concerns. Let's jump right into these issues in a bit more detail. You laid out very nicely, very succinctly, with both Russia and China's efforts – not efforts but

accomplishments – in modernizing, diversifying and expanding both their conventional and nuclear forces. Amongst those, could you share with us a bit what aspects of their modernization programs that you find most concerning?

ADM. RICHARD: What I would offer for both of them is not any one aspect of it, it's the comprehensive nature of what they're doing. It is the totality of what they're doing. When you add it all up, and then couple it with their actions, we see aggressive action around the world by both of them that concerns me that we are not converging on a path that I think is beneficial to the world.

So, it is the combination. I would go back to – we have to broaden our thinking between a simple weapons count. It is much more complicated in that in terms of what someone can do. I think another key piece here is with strategic, with the weapons systems that we're talking about, it is merely the threat of their use that will accomplish a political aim.

It is a characteristic of this really not matched by conventional forces, at least not to the same magnitude. I don't think we really respect what could be done simply by merely threatening the use of these weapons systems, and are we fluent in our ability to deter and respond to that?

GEN. DEPTULA: Very good. One of the other points that you made that I think probably got a lot of people's attention is not the changing nature of deterrence, because it continues to serve as a bedrock of our national security architecture. However, in many respects, nuclear deterrence in the 21st century is a bit different than it was in the previous century. You highlighted one of the principle challenges, that the Chinese are going to come up to speed here real quickly and by 2030 we're going to be facing two peer competitors in the nuclear realm. Are there some other key differences out there that concern you, and what should the United States do to adapt to these changing circumstances?

ADM. RICHARD: You hit on a big one, which is even in my own explanation sometimes it is tempting to simplify this to a two-party problem, and it is not. It is a three, and actually broader than that, piece.

Another one that I'm under-emphasizing here a little bit is, I'm very proud of this nation's extended deterrence and assurance commitments that we have made. How we will handle honoring those against this type of future that we're in, I think is something that we need to continue to work. Understanding in great detail the relationships and how do you bring in space, how do you bring in cyber, what would constitute a strategic attack in space or cyber, thinking through all of the dimensions of this, how does this all couple back down into the gray zone? I've given you a bunch of the theoretical pieces of this, that's the foundation piece, and then we move on from there.

GEN. DEPTULA: Thank you. Getting down into a little bit of detail about some program specifics, both the House and the Senate Armed Services Committee markups of the '21 NDAA fully funded the Ground Based Strategic Deterrent program, which is intended to replace the Minuteman III ICBMs. Why is this program critical and what are the potential implications

of any further delays or even a cancellation as some have advocated for, both in terms of cost and our overall nuclear deterrent posture?

ADM. RICHARD: Well sir, one, I almost wish we didn't describe the triad by the weapons systems that it is made of, that we describe it in terms of the attributes. So, if you take away the IC leg – in fact, if you take away any leg I could give you a different version of this – you just took away a stack of attributes that we have found useful in the past and see being useful in the future. Can I compensate in some respects by coming across and using other elements of the triad? Yes, but not with those same attributes, which means you've just narrowed the range of situations that we're able to effectively deter. You just took away a future hedging capability.

On top of that, you were talking about the IC specifically, one of the best things I think you could do if you wanted to accelerate China becoming a peer with us strategically is to take away the IC leg, because you just made their problem a lot easier. So, I could go piece by piece down the triad and show you that if you take a piece of it away, that's a stack of capabilities and attributes that I don't have, that's going to make it that much harder for me to execute the policy of this nation, as documented in the Nuclear Posture Review. And if you go far enough, I'm going to have to ask for a new policy.

GEN. DEPTULA: Okay, very good. It is a complex subject on one hand. On the other hand, it's pretty simple. The triad has stood us in good stead since it came into existence.

When I had the opportunity to speak to General Ray on this series a couple of weeks ago, he mentioned that the Long Range Stand-Off weapon, or LRSO for short, is critical to maintain tailored deterrence to reach any target around the globe; and that there's a point in time when legacy weapons simply won't be survivable against modern air defenses. What's your perspective on the implications of any delays or truncations of the LRSO program, and are there any benefits from accelerating the program?

ADM. RICHARD: General Ray is spot on target in terms of the implications of not having that weapons system. Fundamentally, it will start to call into question and limit the flexibility and viability of the air leg, which is a key component inside the triad. I think if you go back – and we have repeatedly shown in history – when you're in a great power competition what you want are bombers.

You want the range. You want the payload. They're incredibly flexible for you. Today's world is no different.

You have to honor the threat. That's why you get into the need for the LRSO, that specific piece of technology. If I don't have an LRSO, then the B-52s are just not very useful at that point and we're counting on them for a while.

As to the acceleration of LRSO, I'd take it on tomorrow if we could get it to me. And I say that not really being flippant. Remember, I am responsible to the people of this nation for their defense. I take that, and my command takes that, very seriously. The better capability I have to do that the better job I can do that.

But I would phrase that question in terms of, at what cost? If there was a tradeoff that had to be made, I would want to make sure I understood what I was giving up for that. So, LRSO, just keep it on time. If we just keep it on time, that will work.

GEN. DEPTULA: Very good. Moving on to the other leg, the nuclear-capable submarine leg, SSBNs are often perceived as invulnerable. However, both China and Russia have invested significant resources in improving their submarine hunting capabilities. Some would say that the submarine force remains relatively brittle, meaning that since there's such a large percentage of available weapons housed in a single platform, that tends to provide a small number of nodes that can be effected to great effect. So, how do these factors play you're your thinking about the requirements for our SSBN force?

ADM. RICHARD: Well, I'll start with – and this is true of any stealth platform, although the submarines are probably the best example – when we say the submarine leg is survivable, that's not based on just individual platform survivability. Submarines are very difficult to find. There's always a classic hider-finder competition going on. It's no different than in any other domain.

I'm trying to be very serious, but they don't have Romulan cloaking devices on them. They're not impossible to find. They have to be operated correctly, just like any stealth platform.

But you derive that by force survivability. It is the combination of the number and location and the way you're operating the force, is what gives you that very high confidence that that leg is going to survive. So, I am very confident that the Navy has taken the right steps to ensure that we're able to maintain force survivability.

General, you are quite correct. I think it's important that when we set the requirements, particularly the numbers for the platforms that we're talking about, that was based on a specific threat. If you change the threat on me, then we have to come back and then rethink what the right number is. That's going up.

I think it's also important to understand submarines are just the easiest example. This is true on all the rest of the legs. Going down, you start to – it's not just what the threat looks like, but it's what it takes to maintain that attribute of the leg.

There's a minimum number of submarines you can get to. But it doesn't matter what their number of weapons or missiles on them, it's the number of platforms I have to have to make (my stand ?) and remain true on force survivability. But that is why the Navy, and Admiral Caldwell say, at least 12. We need to see what the threat looks like.

GEN. DEPTULA: Well, let's turn to the final leg of the triad, although you've already mentioned it, and that's the air breathing segment. Until the first B-21s become operationally available, the current airborne leg is dependent on fewer than 100 B-52s -- by the way, the youngest being 58 years old – and the B-2 aircraft, of which we only have 20 that are capable of penetrating modern air defenses. I think I know the answer to this question, but how important is it to keep this leg operationally viable?

ADM. RICHARD: Well, it is absolutely important. And because of the signaling flexibility that you see in the air leg, you get an almost daily demonstration of what the air leg can do for you. I would point back to the way we're executing – and talk to General Ray about this, because he's responsible for it – the way we're executing the bomber task force missions is probably the iconic example of what dynamic force employment looks like.

So, I am proud and thankful for the effort the Air Force is going through the same on this leg. I've had sorties now on B-52s, B-2s, and I just flew a KC-10 to hit the first AR for a BTF mission. The professionalism, the commitment of the service, they are doing the right things to make sure that those platforms make it to their recapitalization points, and I need that.

GEN. DEPTULA: Very good. I was going to ask you if they gave you the opportunity when you were flying the B-52 to attempt to refuel it? I've had the good fortune of flying the B-1, the B-2 and the B-52 and refueling each of them, and that's a bear, trying to refuel behind that tanker in a B-52.

ADM. RICHARD: Sir, later I'll tell you. I just tried to do a heading change. That's a –

(Laughter).

It did turn me over in the B-2 SIM -- on the boom in the SIM. Six seconds, that's all I lasted.

GEN. DEPTULA: It's tough.

ADM. RICHARD: Much respect to the airmen that know how to do that.

GEN. DEPTULA: Admiral, you referred to STRATCOM as the parent of SPACECOM, which it is. How has that process of transitioning responsibilities and personnel over to SPACECOM gone? What has worked well and what remains to be done and how do you envision the two unified commands working together in the future?

ADM. RICHARD: Sir, it just couldn't be going any better. General Raymond was here just yesterday. In fact, we were having the first STRATCOM/SPACECOM warfighter talks. I probably shouldn't characterize it any more as the proud parent, it's more we just went to visit the family business that you had turned over to one of your kids, right? So, they are up and fully operational.

We have a peer relationship now. I think that's a key piece. We're still supporting them in a couple of areas. The bureaucracy has a long tail in some cases.

But, we see the world the same way. I would really compliment General Raymond in Space Command for some very good work in terms of thinking about architectures, strategies. We had a good back-and-forth on a number of things that they're doing in space architecture that I think has very direct applicability to the future NC3 architecture that I'm responsible for in my nuclear enterprise, my NC3 Enterprise Center hat, and so it was a very good meeting.

That idea that we are so closely coupled is something that we share with all of the other combatant commands. I can go through and give you a similar story with every other one of

them. And that's a key thing that we have to do in the future in terms of global integration, the ability for us as 11 combatant commands under the leadership of the chairman and the secretary to have a shared understanding about what the nation expects us to do, and then globally integrating fires, ops, messaging, integrated strategic deterrence planning, so that we all function as one. That's going to be a key advantage that we need to seize moving into the future.

GEN. DEPTULA: Outstanding. Let's turn to the subject of arms race dynamics. Just as you summarized, Russia and China are currently modernizing their nuclear forces. The United States is in the initial stages of a long deferred nuclear modernization program. Beyond the price tag, critics of the nuclear modernization effort claim that the U.S. is spurring a renewed nuclear arms race. How would you respond to those criticisms?

ADM. RICHARD: Sir, I'll tell you we have been working to reignite a debate and better understanding -- this meeting is a great example of that – about strategic deterrence. Part of that is a social media campaign where we're addressing the kind of pervasive myths that are out there. We love the conversations. We look very hard at every comment that we get back asking ourselves, did we miss something? Is there something in here that we need to seize on and take advantage of?

But I just confess, I don't understand the criticism that we're starting an arms race. I just went through that 15 years ago the Russians unilaterally started to modernize their entire arsenal. Seventy percent complete.

China is not too far behind. Our response to that at the time was to do nothing. We don't do anything. No one has lowered the role of nuclear weapons in their strategy more than the United States. A man on my staff checked on this.

I think we are the only nation every to do unilateral nuclear reductions. I think you can go back in our history and see where we did that. Ask yourself what we got in return for that.

We have extended these systems. The B-52s you're talking about, 100 years, right? We're going to take Ohio's, designed for 30 years, and we're going to get them to 42. A whole class going longer than we've every had any individual submarine go.

Minuteman was a 10-year lifetime missile we're going to take to 60. And then at the last possible moment, to avoid the beginnings of unilateral disarmament in the face of the greatest threat we've faced in 30 years, I'm accused of starting an arms race. I just don't understand that.

GEN. DEPTULA: Well said, admiral, well said. With respect to allies on nonproliferation, I've heard you say that the United States' policy of extended deterrence and assurance has played a pivotal role in promoting nonproliferation. Could you elaborate a bit on that point, and how does our nuclear modernization factor into that equation?

ADM. RICHARD: Well, the bottom line is, I am very proud of this nation and the decisionmakers that established that policy. I think that has done more for nonproliferation than any other single act in history. I think it has been good for a free and open world.

But to do that you have to have capabilities such that you give your allies confidence that you're able to follow through on the commitment. Again, we're going to get tested in ways that we haven't been tested before. And so, absent these capabilities, it is going to be harder to give the allies the confidence in us that we have the capability to follow through on the valuable (commitments ?) that we've made.

GEN. DEPTULA: One of the options that is sometimes discussed is this issue of a no first use policy. I presume that you're not in favor of the no first use policy, but could you explain to our audience what impacts such a policy would have on our commitments to our allies?

ADM. RICHARD: My best military advise remains strongly that we should not have a no first use policy. There's many reasons for that, but the assurance to allies and others that we have extended that commitment to is at the top of the list, right?

The second thing is, I just don't think it has much credibility. The Soviet Union had a no first use policy and I don't think that General LeMay thought they were good. If I could, the problem with having me is I am a Navy guy. I love telling sea stories.

If you go back far enough into our history, this nation used to have a policy that said we would not execute unrestricted submarine warfare. If you go back in the early part of this century, unrestricted submarine warfare was held – it's not the same, but at the time it was considered barbaric that a civilized nation would consider doing that. There were these very long debates between nations that we should or shouldn't, etcetera. Our policy for decades was that we would not execute unrestricted submarine warfare, until that policy changed on the afternoon of December 7, 1941.

In fact, there's some historical debate that the subordinate commander didn't do it on his own before the president told him to do it. It's a question of date and time. So, I think we have to be very humble in terms of the credibility of policies like that, particularly when – just be humble.

GEN. DEPTULA: Speaking of limited use and different varying applications, Russia maintains that it has a significant arsenal of small nuclear weapons. I know some people refer to them as tactical nuclear weapons. There's nothing tactical about a nuclear weapon.

But be that as it may, it has been postulated that Russia might pursue early and limited first use of nuclear weapons in a conflict in Europe to end it on terms favorable to Russia. This is an approach that has been described as "escalate to de-escalate" or what your predecessor, General Hyten, referred to as "escalate to win." Is that an accurate portrayal of how Russia envisions the role of small nuclear weapons in its nuclear strategy and doctrine? And what kind of impact does this have on our requirements for deterrence?

ADM. RICHARD: Well sir, one they certainly are capable of doing precisely the strategy that you just described. That is a type of discontinuity or nonlinearity in terms of deterrence theory. I agree with you, by the way, there is no such thing as a non-strategic use of a nuclear weapon.

In fact, I think this distinction that we have between these are strategic and these are not, is actually very artificial. It is, at best, dated and may have always been wrong. And so, I caution us from trying to put them into these two buckets.

I can't imagine that you would look up and go, wow, that's a non-strategic nuke, it's okay. So, we've got to be very humble about that. My job is to make sure given what they can do in any postulated use of this – the example we're talking about here being a very good one – how do I ensure, in crisis probably, that the equation still holds that when they think about that I can either deny the benefit or impose a cost credibly such that I deter the use?

I think the Nuclear Posture Review was wise in the supplemental capabilities that were added to the ones we already have. I think it's important the ones we have are very capable, but they certainly didn't deter Russia from developing the very capability that you're talking about. Hence the need for a more comprehensive approach.

And I want to add on just one other point, the fact that they have several thousand non-treaty accountable weapons actually concerns me in terms of, why do you have those? I'm somewhat surprised sometimes that in our conversations there's not more about, why do you have those things? That wasn't free.

My deputy commander – I'm glad we're having the new START discussions. This is the place where we can get into that type of conversation. I applaud both the United States and Russia for at least being able to sit down at the table and let's discuss what we have to do to improve confidence, safety, security, and head to a mutually beneficial world. I sure wish China would sit down with us. A responsible power has those conversations.

But that's so important to me that I have dedicated my deputy commander as a part of that team so that I have General Boustea as a part of those conversations to go after and really bring that piece into the conversation of, what is the purpose of those and how can we account for that?

GEN. DEPTULA: That's very insightful, thank you. As a bit of a follow up, is the W76-2 a low yield Trident submarine warhead, sufficient to counter the perception of an exploitable gap in U.S. regional deterrence capabilities, and are there other options out there that you're considering?

ADM. RICHARD: Well, sir, it is a very welcome addition. It is doing exactly what it was designed to do. But it is important to remember it was added into an already existing stack of capabilities that is designed to also address that, including low yield ALCMS and the dual-capable aircraft capabilities that we have. I need those to complement. The W76-2 is just a part of that stack of capabilities.

And then, the NPR also wisely talked about the need for a sea-launched cruise missile. Again, that has utility in that area that I'm responsible for, as well as a very good beginning to offset the numbers of non-treaty accountable weapons that has great benefit in the assurance of our allies.

GEN. DEPTULA: Okay, one more sort of broad question before we open it up to our audience, in your view what are the most serious misunderstandings among nuclear critics out there, especially members of Congress?

ADM. RICHARD: General, I'm going to answer that question, but if I could get two more minutes I want to talk about NC3 for a second as well. I have a bit of good news in that area. The biggest misconception, I think, and I won't call it a misconception, it's almost an absence, is we never seem to acknowledge that there's a threat out there. Most of these conversations are almost on this (fictional ?) plane and we're only talking about us.

In fact, everything that this nation does is in an effort to defend itself. It's in an effort to address threats that we have out there. I'll tell you, I think a sign of that is – look, I'm a Cold War guy. When I was younger I actually had done duck and cover drills. I suspect you have a piece of your audience that actually knows what I'm talking about, and then there's a ton of them that have no idea what I just said.

I was in elementary school, by the way, not (high school ?). But the point being here is we culpably could feel the threat back then. We knew it was something we had to defend ourselves against. This is what I think is the great accomplishment of the United States. Not only did it not happen, by way of 70 years of nuclear non-use, we don't even worry about it anymore.

The threat is still there, right? My kids have not spent one moment worried about the fact that there could be a nuclear use. That's victory. That is victory in strategic deterrence that not only prevented it or deterred it, but takes it out of the American psyche.

So, I worry that we forgot how we got here. That wasn't free. That required wise investments in the capabilities needed. That is hundreds of thousands of men and women who dedicated their professional lives in this mission. You're never going to know their names, right? But they took the fear out.

And realize, this was not free. The future is going to require these capabilities. We're going to have to have men and women who are also willing to go do that such that we don't have to live inside that world. That's my biggest fear.

The second thing I wanted to mention on NC3, because I am proud to say, of course, that the great leadership by the department, Congress – you know, the recapitalizations are fully funded, including NC3, and this is the first time you may have heard us start talking about it. Yes, there's some cats and dogs inside the normal Pentagon budget process that we have to get through, but the NC3 Enterprise Center I think has had great leadership by then-Secretary Mattis, and his successors have followed it. We now have a responsible commander, me, and an organization. We understand this in a way we haven't in a long time.

It has always been good. I would not want to imply that we've ever had any issue on confidence in NC3. But I can put it all down on a piece of paper. I can show you how it all inter-relates.

I can show you how its funding status is. I can show you the operational implications of that. That's in the future. I can do the same thing day-to-day. I'll stop, because it's a much longer conversation, but we have come a long way in just one year in terms of understanding and strengthening our nuclear command and control capabilities.

GEN. DEPTULA: Well, admiral, thanks very much for those really insightful comments. On the subject of NC3, one of the concerns at the Mitchell Institute for a while has been the fact that, as you mentioned early on, people tend to focus on the weapons systems themselves and they don't think about the glue that puts that all together. About a year ago we put out a study on modernizing U.S. nuclear command and control and communications. I'll send your staff a copy afterwards.

Just to highlight the point that you made, obviously it's a difficult topic to follow because it's so highly classified. But that's one of the reasons that we did it was to try to make people aware of the significance. It's not just the weapons themselves that need to be modernized, but it's the command and control process too.

There's a lot of people out there that don't even know that there's such a thing as an 8-inch floppy disc. I think – I don't know whether all of those are gone yet or not, but it's something that needs to be paid attention to. So again, on behalf of the Mitchell Institute, we really wish you the very best on these ever increasing challenges.

As a reminder to our listeners, our next event is going to be with members of the Air Force Warfighting Integration Capability Group next Wednesday, August 5th, as we take a deeper look at their recent Global Futures Report.

Now we're going to open up the session to our audience. Those of you who have been on, please use the raised hand feature. When I call on you, please identify who you are and your organization. Let's start with Theresa Hitchens.

MS. THERESA HITCHINS: Hi, sir, this is Theresa Hitchens from Breaking Defense. Thank you for doing this. My question is with regard to how STRATCOM is integrating with the efforts to create a joint all domain command and control system given that the networks that are used for NC3, for example, but also for providing commanders (with intelligence ?), etcetera, tend to be in closed, highly classified networks.

That makes it difficult to integrate that information with networks that provide tactical, for example, information to soldiers on the ground. And yet, that's the goal of JADC2. So, I was wondering if you could talk a little bit about how STRATCOM sees itself and those networks being integrated with JADC2. Thank you.

ADM. RICHARD: Yes, ma'am. One, the bottom line is a high degree of integration between JADC2 and NC3 NIX (ph), not 100 percent. The consequence of failure in the NC3 mission is so high that it warrants its own dedicated stack of capabilities to guard (them ?). The example I like using is most ships in the Navy are multi-mission, multi-role. But strategic deterrence is so important you dedicate 14 solely to that function.

You're going to see a similar degree of overlap. Strategic platforms are still platforms. They are part of the joint force and I need them integrated into the broader department's command and control system. You will see us doing conventional-nuclear integration in a way that we have never done before. It's just what is required for us to do complementary effects inside the battlespace.

There are new ways to get after the classification differences and handling differences, as opposed to building out completely separate circuits. So, there's an operational imperative to go do this. And the second thing is it just makes sense from a wise use of resources standpoint, to have a high degree of overlap between the two, just not 100 percent.

GEN. DEPTULA: Okay, thank you. How about Michael Gordon?

MR. MICHAEL GORDON: Admiral, it's Michael Gordon from the Wall Street Journal. Sir, you spoke about the Russian nuclear forces and their extensive modernization efforts. The question I have is, right now we have verification means to onsite inspection and other provisions under New START to keep tabs on what the Russians are doing. But there is a prospect New START may expire in February and not be extended and that there may be no other agreement to take its place at that juncture.

My question is not about the politics of New START, but how important are these verification and monitoring provisions for your efforts to keep tabs on what the Russians are doing, and also to maintain stability in the U.S.-Russian nuclear relationship?

ADM. RICHARD: In the end, any treaty between two nations is fundamentally a political agreement. So in the end, this is a Department of State led effort. I certainly support any agreement that enhances the security of this nation, and there looks like ample opportunity to enhance the security of both the U.S., Russia and China by this mechanism.

The verification mechanisms that you talked about, yes they are very important. They are a prized attribute, I would say, from my standpoint in terms of what's in New START. I'd be cautious. We're only actually verifying less than half of the total number of nuclear weapons that they have. We do not have a verification mechanism on the non-treaty accountable weapons, and we have to be cautious not to just dismiss that.

So, it's not like we are operating in a world where we have a thorough or everything that they can threaten us with verification mechanism. But I do prize that. I would like to see us go have that more broadly, and that is a part of my advice that I provide to my department's leadership.

MR. GORDON: Thank you.

GEN. DEPTULA: Amy McCullough.

MS. AMY MCCULLOUGH: Thank you, sir, Amy McCullough with Air Force Magazine. You mentioned China's growing capability. The Air Force just recently put out an Arctic strategy. Other than icebreaker missions in that region, I'm wondering if you've seen any

other type of flights, like bomber flights or anything like that where they're trying to exert influence there?

ADM. RICHARD: You know, from memory, I can't. I'm not sure – there wasn't anything that completely got my attention. That question is better directed to Indo-PACOM, and it's not like we don't talk to them.

But you are right. China has made it clear that they intend to be an Arctic nation. Whether I have seen it or not, I am certainly watching for their developments in that direction to make sure that I properly factor them into our strategic deterrence efforts.

MS. MCCULLOUGH: Thank you, sir.

GEN. DEPTULA: Bowen Ballard (ph). Bowen, I don't see you coming off your mic. You need to activate your mic, please. Okay, we'll come back to Bowen.

How about Pat Tucker? Pat Tucker, are you up? It sounds like there's some issues with mics. Let me go to the chatroom.

Here's a Pat Tucker question for you. Are you in discussion with DOD leadership on delaying nuclear modernization efforts due to the potential budget constraints of responding to the COVID-19 situation?

ADM. RICHARD: The answer is no. In fact, I think it's an important point for us to consider that just because one threat manifested itself didn't mean that any of the others went away. Russia did not give up a single nuclear weapon because of COVID-19. China did not do any, in fact their actions have been exactly the opposite.

So, I have a responsibility to defend us regardless of whether or not we have a worldwide pandemic or not. And, I would offer that I don't think there's a choice. It's a false choice to say I can't afford modernization because I have to do COVID.

This nation has many resources. We know our priorities. We can afford survival.

The department is focused on assisting the nation in this great challenge. We do have to think our way through it. There will be implications, but we still have to defend ourselves because the threat is still there.

GEN. DEPTULA: Admiral, if I may, I like to remind people that I know folks argue about the balance between guns versus butter. But if you go to the preamble of the Constitution, and I dare say there aren't too many people that will argue with that, although there are some out there, it states that the fundamental reason, or one of the fundamental reasons, we stood up this nation was to "provide for the common defense, promote the general welfare," not the other way around.

Anyway, let's go back and see –

ADM. RICHARD: One more point on that. We have a debate sometimes over COVID-19 versus modernization. There's a cousin to that inside the department, right? I go back to the strategic deterrent is foundational and we can't take that for granted.

And so, if the foundation doesn't have what it needs, then the viability of every other capability of the department gets called into question; something as simple as the other capabilities have to escalate to succeed. And so it's not only relative to COVID, but we have really thought through hard as a nation to put the minimum amount of resources against our most important mission. It has optimized any other thing that we do too that carries consequences in terms of assumptions that we make across the rest of the department and nation.

GEN. DEPTULA: Very good. Here's one from Paul Bernstein from National Defense University. Could you please discuss the work the command is doing with regional combatant commands to help them prepare for the possibility of limited nuclear attacks in their areas of operation?

ADM. RICHARD: There's a number of things that we're doing, but the one that I'll probably start with here is that we have initiated in the last six months a new type of analysis called "risk of strategic deterrence failure." And so, we are taking pieces of what has been inside STRATCM and the joint force more broadly, that's where these other combatant commands come in, so that on a daily basis we are coming up with a formal estimate of the risk that deterrence is going to fail. So, I acknowledge this as an analytic process getting after something that is fundamentally subjective, but the assertion is this risk carries so much consequence that I need to be able to describe to the secretary and the chairman at all times, under all conditions, what risk we're taking with regard to deterrence failing, and in side that nuclear deterrence failing.

That's a key way that we're working with not only the regionals. A big chunk of that analysis requires you to understand what's happening in space, what's happening in cyberspace, and some other areas. We have some great formal mechanisms with all the combatant commands to pull in what they see and what they're doing, put it into my best possible emulation of the other guy's decision calculus, and then be able to provide the department: here's where we sit, here's the risk, here's the margin.

It is currently low, as you would expect. But we're ready to go do that in crisis. We're looking at it long-term. We're really focusing ourselves given the consequential nature of what we're talking about.

GEN. DEPTULA: Here's that question from Bowen Ballard. Would you please give a current update on the status of HF availability in the event of satellite denial?

ADM. RICHARD: One is, that is an early conclusion that we have come to when we think about what NC3-next is going to look like. It's probably worth a moment here, the difference between NC3, beyond what you just talked about sir in terms of it's very hard to visualize. There's 204 systems that all have to operate together to go accomplish this.

When we talk about the recapitalization of the triad, that's actually a pretty straightforward thing to visualize. You have boomers, bombers, cruise missiles and intercontinental ballistic missiles, and when you're done you have boomers, bombers, ICs, and some supplemental capabilities, and you will have them for a long time. They get modernized.

NC3 is not like that. You will see it iterate, going into the future. As we improve it incrementally, that's the way that technology works, that's the way that threat evolves. But we know now that HF will be a component to that. My HF availability is good right now. I have just placed renewed emphasis on basically everybody comes up on every circuit all the time, if your tactical situation permits, to make sure that we're taking advantage of that. I see a great role, for relatively small cost, to buy us a relatively less dependent on infrastructure path that complements the other work we're doing in NC3 quite well.

GEN. DEPTULA: Very good. Let's go see if the mics are working again. How about Sara Sirota.

MS. SARA SIROTA: Hi, thank you for doing this. I have a question about the LRSO program. If the urgency for this weapon is so strong, I'm curious if you think that NNSA is taking too risky of a schedule for the program for delivering the production units, and if you have concerns that that could lead to delays for other warhead modernization programs that they're overseeing. And also, if you think that the Air Force's decision to end the competition early could lead to risks in terms of the design for the final LRSO weapon?

ADM. RICHARD: A couple of points, right? Yes, there is urgency in LRSO, just like there is urgency in every other piece of the triad. I wouldn't want to single out LRSO as being special. I need them all moving with urgency, like with what we're going to have to have with LRSO to pace the threat.

Look, we have a very good working relationship with NNSA via the Nuclear Weapons Council. That has been very productive for both departments in terms of staying synchronized. While the fundamental responsibility for assessing the risks that you just talked about really belongs on the service and acquisition side of the house. We watch it very closely.

No, I don't have any concerns on that. In fact, to your broader question of the acquisition strategy, I have full confidence that the Air Force has a good acquisition strategy, that they understand the risk and that they're going to be able to deliver that program on time.

GEN. DEPTULA: Here's one from Frank Gallegos. Keeping to the theme of the expansion of the threat from our near peers, what can we in industry do to help you the most? Where would you have us mass our intellectual resources to help improve our strategic deterrent?

ADM. RICHARD: Go faster. Whatever we have to do to sit down together to go faster. I think General Hyten has said this very eloquently in a number of cases.

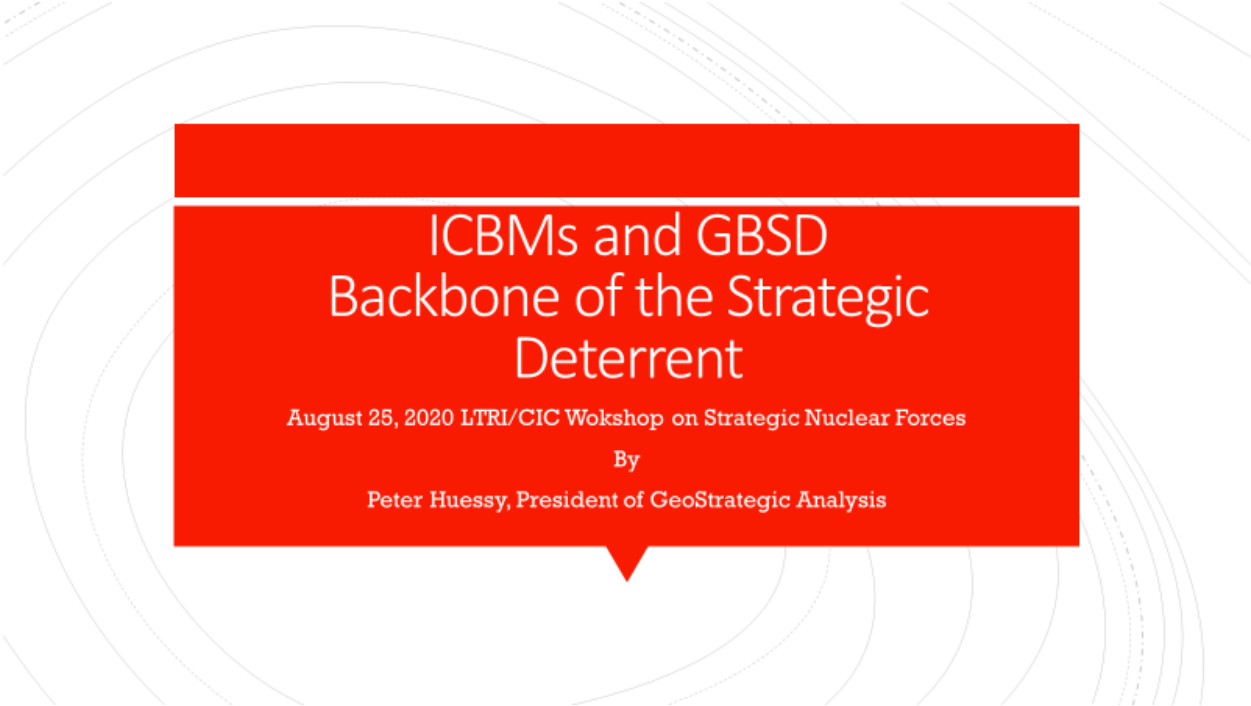
This is when operational risk gets back on problematic and technical risk, right? You change the way that you run your processes. I love the story about how we go from Thule,

Greenland being a shack with a dirt runway, and we go in something like three months to a 10,000 foot reinforced concrete runway capable of handling strategically loaded B-52s, with two hangars and accommodations for 4,000 airmen, when the nation had never built big runways on tundra before.

The operational risk of not having that base outweighed the risk that we were going to take sort of programmatically and technically. So, whatever the barrier is, let's talk about that and figure out what we're going to have to go do. I'll point you going back to NC3.

We're establishing a research center That is a building, but more-so it is an idea. To move faster in NC3 I have to break down some of the barriers in terms of having communication with private industry with the government. Something as simple, as I'm putting it outside the fence line just so you don't have to go through how you get on the access list to get on the base, kind of stuff. So, knocking down these barriers while respecting security and government obligations, that's where we need to go.

GEN. DEPTULA: Well, we've come to the end of our time. Thank you again, admiral, for your insightful and candid remarks. Thanks, everyone, for joining us today. I wish you all a wonderful and prosperous aero-space power kind of day.



ICBM Key Attributes/History

- Least expensive leg of the triad
- RDT&E/Acquisition Cost per year on average over next decade Is $3.5 billion to acquire GBSD and sustain MMIII.
- Operational costs are now $1.2B but will probably decline significantly due to modular nature of the GBSD.....
- Any attack against USA other than an all-out attack on 400 MMIII missiles and 45 LCCs--leaves MMIII missiles intact.
- Highly responsive dealing with threats that require timely action...
- For 58 years been on alert 30.5 million minutes never been ordered to be launched....

- The threat of an all-out attack—an Armageddon option—is the least likely scenario today……
- An attack deemed likely/Cold War--Soviet's heavy mirved missiles destroy USA most responsive and accurate assets
- Today, high # of accurate warheads on alert submarines closed window of vulnerability

Closing the Window of Vulnerability

- Window of vulnerability was considered deadly serious which is why Reagan administration worked out a bipartisan solution in four parts to resolve it:
- A. Modernize all nuke systems—1981-1991
- B. Resolve vulnerability in two parts —-PK and SICBM
- C. Major reductions in strategic nuclear force levels including banning mirved land-based missiles; push strategic forces to sea and preserve conventional bomber capability....START I and II…
- D. Begin process of deploying robust missile defenses to blunt coercive use of nuclear armed missiles.....1983-2003

Post Cold War: Implementing the 4-part Nuclear Strategy

- For first 20 years after Cold War:
- A. USA went on procurement holiday...a Nuclear Nap; no IOCs from 1996-2029, a period of 33 years……
- B. Did sustain variation of B (single RV in silos);
- C. Did cut deployed strategic nukes by nearly 90%; and
- D. Ended ABM treaty and moved toward missile defense

- But Russia didn't get message
- A. Modernized big time with 29 nuclear platforms and missiles from 1991-2032.
- B. Rejected mirv land-based missiles in 2000 Duma action….
- C. Did reduce deployed strategic nukes by 90% from 11500 to 2100-2500……
- D. Deployed 5th generation BMD around Moscow plus "Air Defense --- S3000-4000-5000 systems with big missile defense capability……

GBSD Operational and Strategic Attributes

1. Modular major cost reduction in sustainment of missile —might cut 30%.
2. Highly responsive
3. Highly survivable in all but one scenario
4. Status allows day to day ICBMS remaining on high alert to deter
5. Cost per on alert warhead 1/3rd of other legs...
6. Sponge idea is ludicrous —should USA build 400 bombers or submarines to soak up Russian warheads? Of course not we would go broke!!
7. All legs of triad are Insurance policy for all other legs of the triad.
8. Scowcroft Commission laid out synergy

1. No danger of accidental launch as we spent hundreds of billions to build Triad precisely to avoid POTUS only having limited response options or having to respond with very limited range of options including prompt launch.
2. But need counter force capability—does not leave Russian or Chinese nuclear forces in sanctuary.
3. Cannot launch an ICBM without POTUS authority! No accidental launch scare…
4. But if ICBMs eliminated USA hedge virtually disappears
5. Up-load Hedge: 800 warheads could be added to MM III over 4 years….
6. If we take the 400 MMIII ICBM warheads now deployed and substitute additional D-5 warheads (assuming warheads are available), and add them to the D-5? Columbia class D-5 adds 2+ warheads per each of 16 missiles=32 warheads added for each of 12 submarines=384-warheads. But we lose 800 upload capability.
7. What's the remaining room for upload on the D-5? Very limited. Only maximum of 46 warheads could be added if needed as hedge above 1490 vs Russian breakout capability in the thousands....maximum warheads per D-5 missile on the Columbia submarine will be 8 warheads….

The Current Threat and Mismatch Arms Control Strategy

1. Russia ran arms race finished 82% of current modernization in 2020-but ongoing....
2. Huge Russian breakout not hedge capability upwards of 6500 warheads vs USA at 3750 warheads (if we have necessary tritium)....
3. Chinese buildup to at least 600-800 warheads within the decade
4. R and C in league with nuclear armed/mischief & mayhem making accomplices/armed allies such as Iran Syria NKorea
5. Russian strategy of escalate to win —the coercive use of nuclear weapons—biggest new threat....will integrate conventional and nuclear capability
6. Arms control New Start not adequate....telemetry, portal monitoring, and real warhead limits needed.....

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Attributes of GBSD: Summary

STRATEGIC STABILITY

- Killing ICBMs also virtually kills any USA hedge capability. And reduces all USA nuclear assets to 10—three bomber bases, two submarine bases and an assumed five-six submarines at sea. Making a disarming pre-emptive strike possible….

OPERATIONALLY ROBUST

- GBSD provides better accuracy, better penetration capability, more responsiveness. All of which improves deterrence. .