

ICON Weekly Report from The ICBM Ear and Peter Huessy, President of Geo-Strategic Analysis, Potomac, Maryland October 16,2020

Quote of the Week: “The JCPOA simply does not stop Iran from building nuclear weapons.” David Albright, President of ISIS, in remarks to the Mitchell Institute and Huessy Breakfast Seminar, October 2020.

TABLE OF CONTENTS

- ✓ 1. Upcoming Seminars
- ✓ 2. Hill Developments
- ✓ 3. Huessy Radio Interview with Frank Gaffney and Secure Freedom Radio, October 16, 2020
- ✓ 4. Nuclear News from the Mayhem Brothers (Russia, China, North Korea and Iran)
 - ✓ 5. #2 Weekly Nuclear Blog from Peter Huessy on the Maven Warrior Website
 - ✓ 6. Previous Congressional Breakfast Seminars
 - ✓ 7. What is the US Upload Hedge Capability re MM III?
- ✓ 8. Agenda and letter for the December 10, 2020 TRIAD Conference in Cooperation with the Cyber Innovation Center, Louisiana Tech Research Institute, Bossier City, Louisiana and the Global Strike Command, featuring live presentations General Ray and General Cotton and Congressman Johnson.
 - ✓ 9. Pry and Huessy Iran Essay
- ✓ 10. Presentation by Peter Huessy to the DSGA Conference on Directed Energy Systems, October 21 (live and Q&A-slides available on request)

1. Upcoming Seminars-Mark Your Calendars

- ✓ Upcoming Seminars with USAF COS Brown, General Saltzman, General Frank Klotz, & Henry Sokolski (For Links for all these events please email me at phuessy@afa.org)

✓ General Brown: Date Time: Oct 21, 2020
✓ Henry Sokolski, Date Time: October 22, 2020
✓ Frank Klotz, November TBD

2. Hill Developments

The CR extends to December 11 and according to some SAC sources there may be only an extension of the CR through the end of the Fiscal year rather than a full-up appropriations bill for the FY2021. This would markedly impact the GBSB and B-21/LSR) programs, and would impact as well the Columbia class submarine program unless the provision in the current CR fully funding the top Navy priority was also included in a possible future year long CR.

3. Radio Interview

Peter Huessy discussed the growing nuclear threats from Russia, China, NK and Iran, as well as the age of US nuclear systems and why they need to be replaced and upgraded, referencing Admiral Charles Richard explaining that without the planned modernization the US would be out of the nuclear business. Huessy concluded the interview by explaining the nature of some of the proposed unilateral cuts being pushed by various disarmament groups including eliminating the GBSB, cutting submarines to 6 boats, reducing the B-21 bomber by 25% including eliminating the LRSO or cruise missile. Link provided when broadcast produced.

4. The Four Brother's Mayhem Nuclear News

The North Korean government paraded its new military developments at a massive display in Pyongyang this past week, including a very large ICBM aboard a TEL road mobile missile carrier larger than anything previously displayed. The large missile appeared to have the capability to carry multiple warheads which was reflected in the media coverage of the missile disclosure. Missing from the news however was that the missile was a liquid fueled missile, meaning that it would have to be fueled prior to launch, and that such a process would be easily visible with national technical means. Another worrisome development was the North Korean parade of a sea-launched ballistic missile which when partnered with the

newly developed submarine capability of the DPRK would potentially give North Korea and second, albeit limited, second leg of a nuclear force.

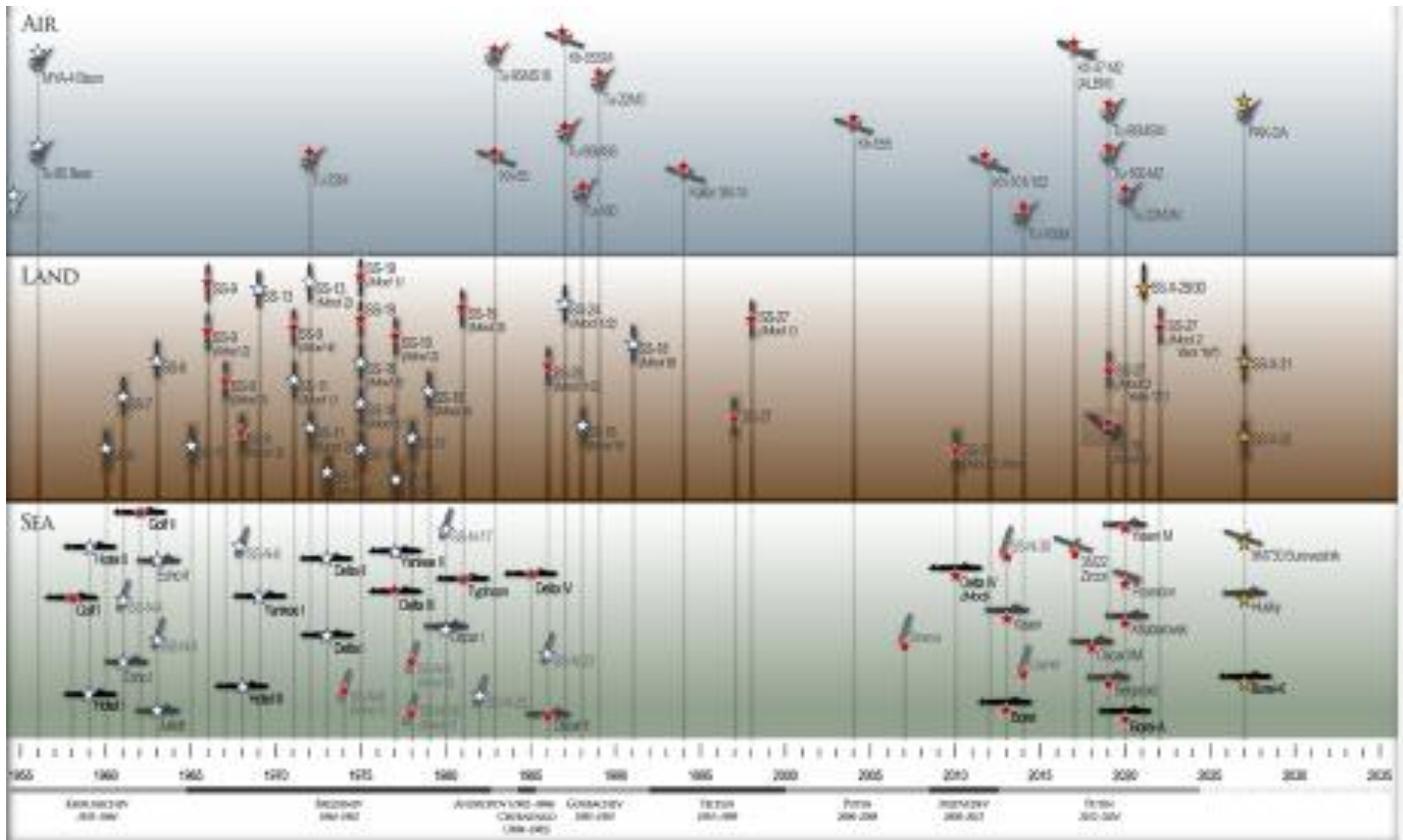
As for China, in a new book length report not yet published it is revealed the Chinese nuclear strategy is evolving to reflect that of Russia, especially the potential first use of or threatened use of nuclear weapons, in a Chinese version of “escalate to win” strategy adopted by Russian President Putin.

[See Top Source: China plans to surpass U.S. military power [by 2049](#) as part of an ambitious effort to massively expand Beijing’s global reach, economic and political influence and international military superiority, according to the Pentagon’s [2020 China Military Power](#) report.]

As for Russia, in a new draft study done by the ICBM Ear, Russia is building and deploying 27 new types of strategic ballistic missiles both and sea based, additional cruise missiles, as well as strategic submarines and bombers, on top of exotic systems such as nuclear armed torpedoes, all in the period between the date of the New Start treaty (2010) and 2027 when the last IOC of the new Russian systems begins deployment.

This is in contrast to the US deployments of zero new systems during this period, although the D-5 LEP is being undertaken during this period, as well as certain continued sustainment of the MMIII and B52 nuclear strategic systems.

A graphic chart of the Russian deployments is below, listing the IOC of each system, current and projected, as well as a data list of the current Russian deployed systems by missile, number of warheads deployed, and other important data. Enlarge the graphic for better view.



Russian SNF 2020 Force Structure Options

System	SNDV	BAS Standard WH		BAS WH Down-loaded		Maximum WH	
		WH/SND V	WH Total	WH/SND V	WH Total	WH/SND V	WH Total
ICBM: SS-18 M6	46	10	460	6	276	10	460
SS-25	36	1	36	1	36	1	36
SS-27 M1 Mobile	18	1	18	1	18	6	108
SS-27 M1 silo	60	1	60	1	60	6	360
SS-27 M2 mobile	126	4	504	3	378	6	756
(Yars)							
SS-27 M2 silo (Yars)	14	4	56	3	42	6	84
Sub-total	300		1134		810		1804

Russian SNF 2020 Force Structure Options (cont)

System	SNDV	BAS Standard WH		BAS WH Down-loaded		Maximum WH	
		WH/SND V	WH Total	WH/SND V	WH Total	WH/SND V	WH Total
SLBM							
SS-N-23 M1 (Delta IV)	6/96	4	384	4	384	10	960
SS-N-32 (Borei/Bulava)	5/80	6	480	4	320	10	800
Sub-total	11/176		864		704		1760
Bombers							
Bear-H	30	6-16	196	6-16	196	16	480
Bear-H Mod	20	14	252	14	252	14	252
Blackjack	13	12	132	12	132	12	132
Sub-total	63		580		580		864
NOTE: The Grand Total for the BAS WH Downloaded would only be 1074 when bombers are counted and also there would be 1-2 SSBN in maintenance and not counted.							
Grand total	539		2578		2094		4428

With respect to Iran, Uzi Rubin of Israel and the BESA center points out that the Iranian space launch developments, while not yet providing Iran an ICBM force, is part of an ambitious but real Iranian effort to secure a real, national ICBM and global missile strike capability.

5. Weekly Nuclear Blog #2: Peace is Our Profession

THE GATHERING STRATEGIC STORM?

By Peter R. Huessy - Senior Warrior Maven Columnist

The United States and Russia are currently negotiating whether to extend for upwards of five years the nuclear arms agreement called “New Start”.

At the top of US concerns is how into the future promote greater strategic stability and incentives never to use nuclear weapons.

Signed in 2015, the nuclear New Start arms deal limits each side to 700 deployed nuclear platforms called strategic nuclear delivery vehicles. The number includes bombers, submarine launched ballistic missiles and land based intercontinental

ballistic missiles. The United States has roughly 690 such systems, while the Russians claim just under 600.

The 2015 New Start also “officially” limits warheads to 1550. Except there is a special rule that allows 60 strategic or heavy bombers to be deployed but count toward the 1550 ceiling as only one warhead no matter how many gravity bombs or cruise missiles are carried by each plane.

Given these parameters, there are issues with the agreement that make a simple extension problematical. As former arms negotiator Rose Gotemoeller explained in a October 14, 2020 Carnegie Endowment seminar on the prospect of future arms control agreements, the Russians are less than enthusiastic about “intrusive” verification measures, even though better verification measures are needed for any future nuclear deal with Russia, including a New Start extension.

And as Alexei Arbatov, a resident at the Carnegie Moscow Center confirmed, any future arms control deal with Russia is not about trust but “verification”, a strong confirmation of former President Reagan’s warning that the United States should “Trust but verify.”

Verification is indeed weaker in the New Start agreement compared to the 1991 Start I agreement. For example, there is no portal monitoring of Russian missile factory production. Telemetry rules are such the Russians can hide or manipulate their missile flight test data. And surprisingly, there are no requirements that deployed ballistic missiles individually carry a certain limited number of warheads, as there was in START I.

Now the United States can inspect Russian missile sites up to ten times a year. And the Russians must furnish the US inspectors with a list of missiles and their warhead loadings at a particular site when our inspectors visit. When we inspect the missile, there is a shroud over the warheads—whether one or ten warheads. We have to guess that the number indicated by the provided Russian information is correct. But given there is no required maximum number of warheads that can be deployed on a missile type, the Russian missiles could be deployed with more than the allowed 1490 missile warheads, (1550 “officially allowed” minus 60 bomber “warheads”).

Now to be fair, every strategic nuclear reductions treaty we have signed with Russia including START I, START II, the Moscow Treaty and New START, included a preserved ability to upload or increase deployments should either party renege on their obligations.

This “hedge” strategy was simply considered a prudent insurance policy that any cautious party to the treaties would adopt. For the United States, for example, we can upload the MM III ICBMs by 800 total warheads, that under normal conditions could be added at a rate of three missiles per each of three missile wings each month, implying that we could complete the effort somewhat short of four years.

As for our SLBMs, or sea-based deterrent, each of our 20 D-5 missiles now carry an average of 4.5 warheads. Each missile could be uploaded to 8 warheads, implying over time the US could increase its warheads on its Ohio-class Navy ballistic missile fleet by 20 missiles x 3.5 warheads x 12 submarines or 840 warheads. Taken together for ICBMs and SLBMs that is a 1640 warhead increase or a doubling of the currently deployed ballistic missile warheads.

What about the Russians?

The raw numbers are impressive. The Russians could quite quickly increase their submarine warhead numbers to 1760 and their ICBM warheads to 1804, or by more than 2000 warheads. As for their bombers, the Russians could also expand their currently estimated weapon deployments by an additional three hundred for a grand total of roughly 2300 additional warheads.

But there are three additional factors that must also be assessed.

First, the US will replace its Ohio-class submarines with the new Columbia-class submarines starting in 2032. The breakout potential for the new Columbia modern sea-based systems is 480 warheads as the Columbia will carry 16 not 20 D-5 missiles.

Second, the Russians are building and deploying a number of new strategic, long-range nuclear systems not now included under the New Start limits, and estimates are that by mid-2025, the Russians could deploy 400 warheads on these new missiles.

And third, at what pace can the US and Russia expand their force deployments where it might result in certain grave strategic instabilities existing where the balance of power between the two nations is significantly uneven?

Now one can argue that the new Russians total of nearly 5000 long-range nuclear warheads deployed after a breakout –say after a projected New Start extension agreement expires in 2026 ---will still be adequately deterred by the US total of

roughly 3000 deployed warheads if the US also can if needed and in a timely fashion expand its deployed nuclear forces.

To be clear, deterrence requires only for the US to credibly hold at risk the key Russian nuclear assets so these military capabilities do not remain in a sanctuary from which to strike at the US. The US deterrent now holds as STRATCOM chief Admiral Charles Richard has confirmed.

In addition, overall warhead levels might not be as important as ensuring that first strike or pre-emptive strategies—at whatever level of warheads—are not enhanced by arms deals.

Now that is especially true re the relatively new Russian “escalate to win” strategy. Here only a limited number of nuclear forces are being brandished, a number far lower than any contemplated future ceiling of a new arms control deal with Russia.

Having said all this, even the limited use of nuclear arms in a conflict may nonetheless be connected to the Russian overall strategic force structure that in the view of Moscow, gives them a useable and stronger “correlation of forces.”

The US might assess that such an strategic warhead imbalance is not important, echoing the comment once made by Dr. Henry Kissinger that even if you have strategic nuclear superiority, (more weapons deployed than the other guy), “what do you do with it?”

Past history however may be instructive on this matter.

Under the original arms deals with the then Soviet Union—SALT I and II—the growth of both the US and Soviet nuclear forces was baked into the deals. The Soviets increased their strategic long-range deployed nuclear warheads from 2500 to 11,500 between 1972 and 1981. The United States deployed slightly more than that number when all US bomber weapons were included.

Despite such large numbers for the United States, the Soviets breakout potential—a window of vulnerability President Reagan called it-- was very worrisome, particularly its large ICBM missiles with very large throw weight or warhead carrying threats.

In the Soviets view, in the 1970’s, the “balance of power” or the “correlation of power” had shifted markedly in Moscow’s direction, not the least of which was due to their robust nuclear modernization, where the Soviets deployed at least 21

new types of nuclear armed long-range ballistic missiles, bombers, submarines and cruise missiles—at the height of “détente and peaceful co-existence”.

By the end of the decade of the 1970’s, the Soviet “empire” had also grown considerably, with some 18 new nations either coming under the Soviet orbit or moving away from the United States.

In addition, Iran’s government was seized by Islamic jihadis determined to expel the US from the Middle East, the Soviets invaded Afghanistan and toppled governments in Central America and the Caribbean, and their ally Saddam Hussein seized power in Iraq and subsequently went to war with what he assumed was a weak Iran.

It is obvious that each of these geostrategic factors are central to the conflicts the US has been wrestling with for the past four decades. In short, the correlation of forces matters, and weakness has consequences.

Thus, as President Reagan remarked at his very first press conference as President, the SALT agreements could hardly be considered “arms control” given the huge growth in deployed warheads contemplated, to say nothing of the tens of thousands of additional theater or what were considered “battlefield” nuclear systems left completely untouched by the SALT deals.

In seeking reductions, which at the time most conventional wisdom concluded was simply not possible, the Reagan administration wanted to turn the strategic balance between the US and the then Soviet Union markedly toward better stability and with less incentives to strike first.

That was to be achieved through a four-part process.

First, the US would maintain a credible, highly capable force of survivable nuclear forces, with an emphasis on forces at sea and flexible bomber forces on land, as well as a de-mirved (but very accurate) land-based missile deployment. .

Second, arms control would seek major reductions, a reverse of the SALT process that managed a huge growth in deployed systems.

Third, the US would seek deployments of missile defenses, not to weaken the deterrent forces of our adversaries but to undermine the ability of these same nations to threaten to strike first by blunting and significantly complicating any first strike plans.

And fourth, the US would also seek conventional arms limits, especially after a hoped-for collapse of the Soviet empire.

The US did credibly modernize its nuclear forces, and achieved in quick succession the INF, START I and START II nuclear treaties that combined eliminated some 10,000 Soviet warheads. Missile defense research and development took place, which by 2004 gave the US some critically important deployed defenses against nuclear armed rogue regimes and limited nuclear strikes.

And huge cuts in conventional forces and the collapse of the Soviet empire occurred, objectives originally mostly dismissed as fanciful by Reagan's critics.

And thus, we come back to where we were at the beginning of this essay. In extending New Start, we would be cementing in the Russian breakout advantage and the admittedly weak certification measures—particularly the lack of warhead transparency. And not deal with the most insidious development which is Mr. Putin's new strategy of escalate to win or a theory of victory over the US.

This “imbalance” leads to the obvious. It is important, even critical, that while the US goes forward to credibly modernize our nuclear forces, the US also seeks geostrategic incentives for the Russians to limit breakout capabilities, insure better verification, and move away from the unstable idea that nuclear weapons can credibly be used to coerce, blackmail and indeed “escalate to win.”

Fully accounting for strategic warheads should be part of such a package, but even more important will be to sharply lessen pre-emptive or first strike capabilities of our adversaries—by expanding if necessary our deployed platforms, enhancing missile and air defenses and ensuring we strengthen both nuclear and conventional deterrence by credibly holding at risk those military assets our enemies value most.

Peter R. Huessy – *Mr. Huessy is the President of Geostrategic Analysis, a Potomac, Maryland-based defense and national security consulting business, and Director of Strategic Deterrent Studies at the Mitchell Institute, a Senior Fellow at ICAS, a senior consultant with Ravenna Associates, and previously for 22 years Senior Defense Consultant with the National Defense University Foundation at Fort McNair in Washington, D.C.*

He is and has been a Guest Lecturer at the School of Advanced International Affairs at Johns Hopkins University, at the Institute of World Politics, at the University of Maryland, at the Joint Military Intelligence School, at the Naval Academy and at the National War College.

6. Virtual Breakfast Seminars Completed

Nuclear Deterrence Forum: Dr. Brad Roberts - [Video](#)

- **Event Date: September 21, 2020**
- *Speaker: Dr. Brad Roberts, director of the Center for Global Security Research at Lawrence Livermore National Laboratory*

Nuclear and Missile Defense Forum: Mr. Moshe Patel

- **Event Date: September 9, 2020**
- *Speaker: Mr. Moshe Patel, Director of Israel Missile Defense Organization*

Nuclear Deterrence Forum: Dr. Rob Soofer

- **Event Date: September 2, 2020**
- *Speaker: Dr. Rob Soofer, Deputy Assistant Secretary of Defense for Nuclear and Missile Defense Policy*

Mitchell/ANWA DC NNSA Series: Nuclear Deterrence Forum with Dr. Brent Park - [Video](#)

- **Event Date: August 27, 2020**
- *Speaker: Speaker: Dr. Brent K. Park, National Nuclear Security Administration Deputy Administrator for Defense Nuclear Nonproliferation*

Nuclear Deterrence Forum: Lt Gen Richard Clark - [Video](#)

- **Event Date: August 19, 2020**
- *Speaker: Lt Gen Richard M. Clark, Deputy Chief of Staff for Strategic Deterrence and Nuclear Integration*

Nuclear Deterrence Forum: Ilan Berman - [Video](#)

- **Event Date: August 6, 2020**
- *Speaker: Ilan Berman, Senior Vice President of the American Foreign Policy Council*

Nuclear Deterrence Forum: ADM Charles Richard - [Video](#)

- **Event Date: July 30, 2020**
- *Speaker: ADM Charles "Chas" Richard, Commander, U.S. Strategic Command*

Mitchell/ANWA DC NNSA Series: Nuclear Deterrence Forum with

Dr. Charles Verdon - [Video](#)

- **Event Date: July 29, 2020**

- *Dr. Charles Verdon, NNSA's Deputy Administrator for Defense Programs*

Nuclear Deterrence Forum with Mr. Uzi Rubin

- [Video](#) | [Report](#) | [Article](#)

- *Event Date: 14 July 2020*
- *Speaker: Mr. Uzi Rubin, Former Director of the Israel Missile Defense Organization*

Nuclear Deterrence Forum with Mr. Gordon Chang and Mr. Rick Fisher - [Video](#)

Event Date: 11 June 2020

- *Speakers: Mr. Gordon Chang, renowned author and China expert, and Mr. Rick Fisher, Senior Fellow on Asian Military Affairs at the International Assessment and Strategy Center*

NNSA Nuclear Deterrence Forum with Mr. Drew Walter

- [Video](#)

Event Date: 26 May 2020

- *Speaker: Drew Walter, Performing the Duties of Deputy Assistant Secretary of Defense for Nuclear Matters at U.S. Department of Defense*

Nuclear Deterrence Forum with Dr. Schneider & Dr. Blank

- [Video](#)

Event Date: 22 May 2020

- *Speakers: Dr. Mark Schneider, Senior Analyst with the National Institute for Public Policy, and Dr. Stephen Blank, Senior Fellow at the Foreign Policy Research Institute*

Nuclear Deterrence Forum with General Ray - [Video](#)

Event Date: 29 April 2020

- *Speaker: Gen Ray, Commander, Air Force Global Strike Command*

Nuclear Deterrence Forum with Frank Miller - [Video](#)

- *Event Date: 17 April 2020*
- *Speaker: Frank Miller, Principal, The Scowcroft Group*

7. Hedge Capability of the United States ICBM Force

This from a former high-ranking USAF General Officer re the ability of the US to upload Minuteman III and whether according to a previous 20th USAF Commander with whom the Ear spoke some years ago, the upload process would still take some 3.5 years to do so:

“ I agree with the 20th Air Force commander. The work involved is not technically complex, but it is labor intensive and time consuming. Each base has only so many nuclear qualified and certified maintenance and security force teams, and only so many special purpose vehicles and so much handling gear for this task.

Under ideal circumstances, they could probably do one silo per week per wing. But, you also have to factor in weather (thunderstorms in the summer, blizzards and ice covered roads in the winter) and the fact that the vehicles and handling gear are getting long in the tooth and availability rates are lower than in the past. So, three silos per month, per wing, on average, is a very good estimate.

Can it be done faster? No. You can't create maintenance and security teams overnight, nor can you quickly replace the vehicles and handling gear.

This question has been many asked many before, usually during election years. What may seem like a good idea to those of us who dwell inside the Beltway, does not pass the reality test in the field.”

8. Triad Conference and Symposium December 10th, 2020

19th Annual Nuclear Triad and Deterrence Symposium

December 10th Bossier City Community College

Hosted by LTRI, CIC and the Mitchell Institute in association with United States
Air Force Global Strike Command

Live: Introductory Remarks: Executive Director, CIC and LTRI

Live: Keynote Remarks: General Tim Ray, Commander, USAF Global Strike
Command and General Tony Cotton, Deputy Commander, Global Strike
Command

Live: Panel with GSC's Colonel Mike Morgan, and SSP's Captain Doug Williams:
“GBSD and Columbia: Key Deterrent Factors, An Update”

Live from DC: Congressman Mike Johnson, (R-LA) HASC: “The Look from the
Hill: America's Nuclear Deterrent Enterprise”

Recorded Presentations:

Drew Walter, Deputy Assistant Secretary of Defense for Nuclear Matters

Mark Gunzinger, Fellow, Mitchell Institute, “Hypersonic Technology, Strategic Bombers and Nuclear Weapons: Resetting Deterrence”

Henry Sokolski, NPEC: The Coming Nuclear Proliferation Challenge

General (Ret) Frank Klotz, Rand Corporation: The New Start and Arms Control Environment

Ambassador Ron Lehman, LLNL and Peter Huessy, Mitchell Institute: “Getting in the Way of Consensus: Nuclear Mythologies and Misconceptions”

General Garret Harencak, (Ret) Jacobs Engineering: “The Consequences of National Nuclear Holidays”

Brad Thayer, University of Texas at San Antonio: “China’s Nuclear Strategy and Great Power Competition”

Dr. Craig Spohn, Executive Director, CIC Closing Remarks

Dear Nuclear Colleagues:

Because of the COVID-19 situation, the 20th Nuclear Triad Symposium, planned for December 9-10, 2020 in Bossier City, Louisiana is going virtual. Please plan to join us on-line on December 10.

This virtual symposium is being hosted by the Mitchell Institute for Aerospace Studies (MI), the Cyber Innovation Center (CIC) and the Louisiana Tech Research Institute (LTRI). It will address the challenges the United States faces in pursuing the currently adopted nuclear modernization roadmap, with a review of the Ground Based Strategic Defense (GBSD), the Columbia class submarine, the future planned bomber strategy, and the connected arms control and proliferation issues. We will also address related hypersonic technology as well as showcase the work of our sponsors MI, CIC, and LTRI, in these areas.

A major focus of the symposium will be on the present and future strategic capabilities of Air Force Global Strike Command (AFGSC). General Timothy Ray, Commander of AFGSC, and Lt General Anthony Cotton, Deputy Commander of AFGSC will speak to our audience and do questions and answers

via a live webcast. Michael Morgan and Doug Williams will highlight the value and requirements for the GBSD and Columbia class submarine and also take questions from the participants. We will also hear live from Washington, D.C. from Representative Mike Johnson of the Louisiana Congressional delegation and prospective new member of the HASC.

In addition, we plan pre-recorded presentations from a great line-up of speakers, including: Retired Lt. Gen. Frank Klotz will explain New Start issues; retired Maj. Gen. Garrett Harencak will review the consequences of the post-Cold War procurement holiday; Henry Sokolski will discuss nuclear proliferation dangers; Drew Walter will speak about overall nuclear deterrent policy; Brad Thayer will highlight the challenge from China; Mark Gunzinger will speak on the U.S. bomber requirements and related hypersonic issues; Mark Schneider will review Russian strategic nuclear challenges; and Ambassador Ron Lehman and Peter Huessy will analyze the assumptions of the disarmament community.

If you have any questions or would like to be a sponsor, please contact Peter Huessy at the Mitchell Institute (703-247-5839). We'll be sending out registration information later. In the meantime, please put us on your calendar for December 10, 2020.

All the best,

Craig C. Spohn

Executive Director & President
Studies
Cyber Innovation Center
Studies

Sumeet Dua, PhD
President
Louisiana Tech Applied Research Corporation

Peter Huessy

Director of Strategic Deterrent
Mitchell Institute for Aerospace

9.Iran's Other Threat to Civilization

by Peter Vincent Pry and Peter Huessy

October 1, 2020 at 4:00 am

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- The US and its allies need to do everything possible never again to be caught in a state of unpreparedness.
 - The Congressional EMP Commission estimates that, given U.S. current unpreparedness, within one year of an EMP attack that causes a nationwide blackout... up to 90 percent of the U.S. population could perish from starvation, disease and societal collapse. An EMP attack, therefore, would confer upon Iran an "assured destruction" capability against the United States.
 - The Congressionally created EMP Commission assesses that North Korea already has super-EMP nuclear weapons and the capability to deliver them.... Iran may also already -- or soon -- have the capability to deliver an EMP attack.
 - "By sending a military satellite into space, Iran now has shown that it can target all American territory; the Iranian Parliament had previously warned [the U.S.] that an electromagnetic nuclear attack on the United States would likely kill 90 percent of Americans." — Iran's state-controlled Afkar News.
 - The formal end of the UN arms embargo -- at the end of September 2020 -- could provide Iran with even more missile and nuclear technology possibly from Russia or China.
 - "Iran should be regarded by national security decision makers as a nuclear missile state capable of posing an existential threat to the United States and its allies... The fact of Iran's ICBM capability and their proximity to nuclear weapons necessitates that Iran be regarded as a nuclear missile state — right now." — William R. Graham, Henry F. Cooper, Fritz Ermarth and Peter Vincent Pry, Newsmax, February 1, 2015.
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The Islamic Republic of Iran may soon have the capability, if it does not already, of carrying out electromagnetic pulse (EMP) attacks against its enemies. Such an attack involves exploding a nuclear warhead some 30-400 miles above the United States, for instance, and unleashing a downward electronic pulse that can destroy the (currently unprotected) infrastructure. That would include such as critical electronic systems in virtually all civilian systems: food manufacturing and

supply chains, automobiles, airplanes, trains, elevators, communications and the US electric grid -- actually, just about everything on which a modern country relies.

An EMP **attack could** black out not only the US national electric grid but also virtually all life-sustaining equipment that relies on electrical power and computer systems. An EMP attack could thus pose an existential threat to modern civilization. This would totally alter the risk-benefit calculations for the United States and its allies for being able to defend the post-1945 world order.

Recently, the Iranian state-controlled Afkar News **claimed** that Iran is now able to carry out just such an EMP attack over the United States:

"By sending a military satellite into space, Iran now has shown that it can target all American territory; the Iranian Parliament had previously warned [the U.S.] that an electromagnetic nuclear attack on the United States would likely kill 90 percent of Americans."

Does Iran Already Have Nuclear Weapons?

Washington's **conventional consensus** is that Iran does not yet have nuclear weapons or missiles capable of threatening the United States with a nuclear attack. The Obama Administration **assessed** that Iran could develop an atomic weapon in six months to two years, prior to the Joint Comprehensive Plan of Action (JCPOA), which pretended to stop an Iranian A-bomb. Iran ostensibly agreed to the JCPOA five years ago, on July 14, 2015. Iran **never signed** the agreement, and started violating its terms almost **immediately**.

A 2020 assessment by Israel confirmed that Iran continues to cheat on its JCPOA obligations and will be able develop atomic weapons in six months to two years.

Some senior Israeli analysts and U.S. experts **disagree** with the "consensus view" and **assess** that Iran already has nuclear weapons. According to a **report** in Newsmax, titled "Experts: Iran Now a Nuclear-Ready State, Missiles Capable of Hitting US":

"Regardless of intelligence uncertainties and unknowns about Iran's nuclear weapons and missile programs, we know enough now to make a prudent judgment that Iran should be regarded by national security decision makers as a nuclear missile state capable of posing an existential threat to the United States and its allies...The fact of Iran's ICBM capability and their proximity to nuclear weapons necessitates that Iran be regarded as a nuclear missile state—right now."

The North Korea Connection

The Congressionally created EMP Commission **estimates** that North Korea already has super-EMP nuclear weapons and the capability to deliver them. North Korea and Iran are collaborating and have signed an **agreement** to cooperate in "science and technology."

Iran may already -- or soon -- **have the capability** to deliver an EMP attack. It has successfully launched several civilian satellites -- in 2008, 2009, 2010, and 2015 - - including on southern polar trajectories, **assisted** by North Korean missile technology and North Korean technicians. On April 22, 2020, Iran orbited a military satellite over the United States, launched by Iran's Islamic Revolutionary Guard Corps (IRGC) -- the world's deadliest terrorist organization. The IRGC's Noor-1 satellite is tiny, weighing only about 30 pounds, but the Space Launch Vehicle's third stage also went into orbit, demonstrating a capability to circle over the U.S. a net payload weighing several hundred pounds -- **enough** for a nuclear weapon.

North Korea sold the mullahs much of the technology for Iran's most sophisticated ballistic missile, the Shahab-III, which is an improved version of North Korea's Nodong missile. Iran's Shahab-III is capable of delivering a high-altitude EMP attack over America's heartland if the missile is launched, say, from a freighter in the Gulf of Mexico. Iran has apparently already practiced launching and fusing Shahab-III missiles that could carry out a high-altitude EMP attack. Iran has also demonstrated that it is **capable** of launching a ballistic missile from a vessel at sea. Worse, the formal end of the UN arms embargo -- at the end of September 2020 -- could provide Iran with even more missile and nuclear technology possibly from Russia or China.

The Terrorist Connection

Iran, as the "**world's worst state sponsor of terrorism**," could become a conduit for giving nuclear EMP attack capabilities to terrorists. The EMP Commission **warns**:

"Terrorists or state actors that possess relatively unsophisticated missiles armed with nuclear weapons may well calculate that, instead of destroying a city or military base, they may obtain the greatest political-military utility from one or a few such weapons by using them — or threatening their use — in an EMP attack."

Congressional testimony in 2004 by US President Ronald Reagan's Science Adviser and one of the EMP Commissioners **warns** of the prospects of an anonymous EMP attack launched from a freighter by Iran hired terrorists:

"DR. GRAHAM: Iran, the world's leading sponsor of international terrorism, has practiced launching a mobile ballistic missile from a vessel in the Caspian Sea.

Iran has also tested high-altitude explosions of the Shahab-III, a test mode consistent with EMP attack, and described the tests as successful. Iranian military writings explicitly discuss a nuclear EMP attack that would gravely harm the United States."

Iranian Military Doctrine Endorses EMP Attack

An official Iranian **military textbook** from 2010, but not released until 2017, endorses a nuclear EMP attack against the United States, as well as deception measures to conceal nuclear weapons -- in violation of international agreements. The textbook is used to train officers at Iran's prestigious military academy and think tank, the Martyr Lt. General Sayad Shirazi Center for Education and Research.

Strangely for a book titled *Passive Defense*, its overarching focus is **offensive** -- how to black out electric grids -- including by nuclear EMP attack.

Calculations in the book that America could be vanquished by a nuclear EMP attack appear to be correct.

Strategic Implications

The Congressional EMP Commission **estimates** that, given U.S. current unpreparedness, within one year of an EMP attack that causes a nationwide blackout, two-thirds or more, up to 90 percent, of the U.S. population could perish from starvation, disease and societal collapse.

An EMP attack, therefore, would confer upon Iran an "assured destruction" capability against the United States. The geopolitical consequences of this development are so grave that U.S. and global security would, in effect, go into free-fall. Where the U.S. would land, into what kind of future, is of course unknown.

If Iran and North Korea both decided to use threats to America or its allies with an EMP-generated genocide, it could destroy the foundations of the existing world order. If the US can no longer be the superpower that since 1945 has halted the cycle of world wars and sustained the global advancement of freedom, the consequences would be existential and catastrophic.

An EMP assured destruction capability changes the strategic calculus of risk for the United States in being able to uphold its role as a superpower and would necessarily erode the confidence of U.S. allies -- perhaps to the point where they would feel the need to develop their own nuclear weapons.

Most alarmingly, the U.S. is fast moving to a place where, for the first time, smaller failed states such as Iran and North Korea would have the power to blackmail or destroy the largest and most successful societies on Earth. These rogue states have long perceived themselves to be at war with the United States, and have already demonstrated that they are desperate, highly dangerous characters.

The US and its allies need to do everything possible never again to be caught in a state of unpreparedness. We know how to protect our electric grid and the President of the United States has **ordered** the government bureaucracy to take the necessary steps to do so. Progress, however, regrettably **remains slow**. The emerging threats from Iran and North Korean outlined here should compel the United States to take faster action -- now.

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At the Speed of Relevance: Missile Defense Technology, Operations, Public Diplomacy and the Deterrent Promise of Directed Energy

○ “Leveraging DE as a Potential Missile Defense & Deterrence Technology”

Presented by

- Peter Huessy, President of Geo-Strategic Analysis, Potomac, Maryland & Director of Strategic Deterrent Studies, the Mitchell Institute of the Air Force Association
- October 21, 2020 Presentation to the IGDA Conference on Directed Energy Systems
- This presentation will hopefully assist DE supporters to better understand the way in which such technologies are viewed by the US Congress and those actors affecting decision making in the US government.