



USAF Center for Unconventional Weapons Studies (CUWS) Outreach Journal

Issue No. 1149, 23 January 2015

Welcome to the CUWS Outreach Journal! As part of the CUWS' mission to develop Air Force, DoD, and other USG leaders to advance the state of knowledge, policy, and practices within strategic defense issues involving nuclear, biological, and chemical weapons, we offer the government and civilian community a source of contemporary discussions on unconventional weapons. These discussions include news articles, papers, and other information sources that address issues pertinent to the U.S. national security community. It is our hope that this information resource will help enhance the overall awareness of these important national security issues and lead to the further discussion of options for dealing with the potential use of unconventional weapons. **All of our past journals are now available at http://cpc.au.af.mil/au_outreach.aspx.**

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FEATURE ITEM: *“Projected Costs of U.S. Nuclear Forces, 2015 to 2024”*. Authored and published by the Congressional Budget Office; January 22, 2015, 7 pages.

<http://www.cbo.gov/sites/default/files/cbofiles/attachments/49870-NuclearForces.pdf>

Nuclear weapons have been a cornerstone of U.S. national security since they were developed during World War II. During the Cold War, nuclear forces were central to U.S. defense policy, resulting in the buildup of a large arsenal. Since that time, they have figured less prominently than conventional forces, and the United States has not built any new nuclear weapons or delivery systems for many years.

The current strategic nuclear forces—consisting of submarines that launch ballistic missiles (SSBNs), land-based intercontinental ballistic missiles (ICBMs), long-range bombers, and the nuclear weapons they carry—are reaching the end of their service lifetimes. Over the next two decades, the Congress will need to make decisions about the extent to which essentially all of the U.S. nuclear delivery systems and weapons will be modernized or replaced with new systems.

To help the Congress make those decisions, the National Defense Authorization Act of 2013 (Public Law 112-239) required CBO to estimate the 10-year costs of the Administration's plans to operate, maintain, and modernize U.S. nuclear forces. In response, CBO published *Projected Costs of U.S. Nuclear Forces, 2014 to 2023*. The National Defense Authorization Act of 2015 (P.L. 113-291) requires CBO to periodically update its estimate of the cost of nuclear forces. This report constitutes the first such update.

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[Return to Top](#)

U.S. NUCLEAR WEAPONS

1. [Shrouded in Mystery, New Bomber Makes Waves](#)
2. [Air Force General Fires Salvos at Long-Range Strike Bomber Critics](#)
3. [Missileers Are now Highest-Paid Lieutenants Thanks to Bonuses](#)
4. [Modernization Is a Must for the Nuclear Enterprise](#)
5. [HASC Chairman Wants Review of Strategic Deterrence, Threats, Challenges](#)
6. [CBO: Nuclear Arsenal to Cost \\$348B over Decade](#)

U.S. COUNTER-WMD

1. [Russia Ends US Nuclear Security Alliance](#)
2. [Russia, US Nuclear Cooperation to Continue in 2015 – Rosatom](#)

U.S. ARMS CONTROL

Issue No.1149, 23 January 2015

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1. [Russia to Test Strategic Missile Forces in Unscheduled Drills](#)

HOMELAND SECURITY/THE AMERICAS

1. [Three Minutes to Midnight: Climate and Nuclear Threats see Doomsday Clock Wound Forward](#)

ASIA/PACIFIC

1. [PLA's DF-21 Missile Deployed to Changbai Mountains: Experts](#)
2. [DPRK Negotiator Explains Nuclear Proposal at Unofficial Meeting](#)
3. [N. Korea's Envoy in Beijing after Nuke Talks with Ex-U.S. Diplomats](#)
4. [U.S. Rejects DPRK's Call for Resumption of Six-Party Talks](#)
5. [China Urges Resumption of Korean Peninsula Denuclearization Talks](#)

EUROPE/RUSSIA

1. [Russian Armed Forces to Adopt Hypersonic Missiles on Mass Scale](#)
2. [Proposal Calling for Trident Not to Be Renewed Defeated in Commons](#)
3. [Russia to Strengthen Armed Forces to Tackle Challenges from Outside: Putin](#)
4. [Elements of New Missile Defense System Tested in Russia](#)

MIDDLE EAST

1. [Leader's Top Aide: Iran Needs No Permission for Running Nuclear Activities](#)
2. [Ex-Official: New Generation of Centrifuges A Must for Iran](#)
3. [Senior Negotiator: Differences Still Remain in Iran-Powers Talks](#)
4. [Syria Starts Razing Chemical Weapons Sites: OPCW](#)
5. [Second Unit of Iran's Bushehr NPP to Be Commissioned in 8 Years — Head of Atomic Agency](#)
6. [Russia, Iran Sign Joint Military Cooperation Agreement](#)
7. [UN: Iran Honors Pledge to Temporarily Freeze Nuke Program](#)
8. [Israeli TV Shows 'Iranian Missile' that 'Can Reach Far Beyond Europe'](#)
9. [Iranian, US Diplomats Hold Nuclear Talks in Zurich](#)

INDIA/PAKISTAN

1. [Pakistan's Fourth Nuclear Reactor at Khushab now Appears Operational](#)
2. [DRDO gears up for Maiden Canister-Based Trial of Agni-V](#)

COMMENTARY

1. [4 U.S. Weapons of War That Need to Be Retired Now](#)
2. [Old or New Weapons? Get the Facts First](#)
3. [Can Ash Carter Tame the Nuclear Weapons Budget?](#)

Defense News – Springfield, VA

Shrouded in Mystery, New Bomber Makes Waves

By Aaron Mehta
January 19, 2015

WASHINGTON — In late spring or early summer, the US Air Force will decide who will build its next-generation bomber. Yet, despite all the hype and public interest, the program remains shrouded in mystery.

The Long Range Strike-Bomber (LRS-B) program is stealthy, literally and figuratively. Few details are actually known about the bomber's capabilities or design. But the program's impact is already being widely felt throughout the Pentagon and its industry partners.



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The half a dozen analysts and experts interviewed by Defense News for this piece all agree on one thing: the LRS-B has the chance to shape American military aerospace for the next 20 years. Whichever competitor wins will reap a windfall of development money; the loser could find itself out of the military attack airframe business entirely.

And while the program appears to be on track, Congress is waiting in the wings for any sign of cost overrun or technological problems.

"This is crunch time," said Richard Aboulafia, an analyst with the Teal Group. "It's the biggest single outstanding DoD competition by a very wide margin. That makes it important in and of itself."

Known Unknowns

The program is targeting a production line of 80-100 planes. It will replace the fleet of B-52 and B-1 bombers. It will be stealthy, capable of carrying nuclear weapons, and optional manning has been discussed. A down-selection will be made this spring or early summer, with initial operating capability planned for the mid-2020s. Nuclear certification will follow two years after that.

The target price, set by former Defense Secretary Robert Gates, is \$550 million a copy. To keep the price down, the Air Force is looking to use mature technologies that are available now, rather than launching new developments. At the same time, the program will have an open architecture approach for future technologies.

Unless there is a secret competitor still unknown — highly unlikely, but like many things with the program, impossible to rule out — there are two teams are bidding for the contract. One is Northrop Grumman, which developed the B-2 stealth bomber. The other is a team of Lockheed Martin and Boeing. Together, those companies represent three of the top five defense firms in the nation.

Breaking down the rest of the program is a master class in the classic "known unknowns" phrase coined by Donald Rumsfeld. What equipment will it carry? Will it be in a flying wing shape? What is more important, stealth or speed? Will the planes, like the B-2, be so classified that they cannot be stationed abroad? If so, does that affect the range vs. payload tradeoff?

A source with knowledge of the program said the Air Force is likely looking at something smaller than a B-2, perhaps as small as half the size, with two engines similar in size to the F135 engines that power the F-35, so enhancement programs can also be applied to the bomber.

"They should go bigger [in terms of airframe], but Gates threw that \$500 million figure out there without thinking through the overall effect and requirement," the source said.

Retired Lt. Gen. David Deptula, former deputy chief of staff for ISR, agreed that the focus on the \$550 million figure may end up hurting the bomber's capabilities by driving the discussion from what the plane does to what can keep the price down.

"One of the biggest concerns is that this is going to turn into a cost shootout, and whomever can produce a 'technically acceptable' airplane at the lowest cost will be the winner, without any judgment or look at the ability for growth, the ability to connect to new technologies," he said. "That is a big concern amongst folks out there who are involved in this evolution."

And then there are the theories that the bomber is further along in its development cycle than it appears. Last year, J.J. Gertler, an analyst with the Congressional Research Service penned a memo noting that the bomber's budget profile looks more like a production than a research and development program, hinting that much of the technological development and testing has already occurred behind the scenes.

One analyst noted that some of that work could be based on technologies developed for the previous bomber recapitalization, which was canceled in 2009.

Mark Gunzinger, a retired Air Force official and senior fellow at the Center for Strategic and Budgetary Assessments, argued that the mystery around the jet isn't a bad thing.

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"We don't know performance specifics in terms of range, payload, low observability, what weapons, what missions, radar capabilities — all these specific performance details," he said. "Nor should we. Those should not be announced publicly. It is a black program and those kind of details now would do nothing but give our potential enemies more time to develop countermeasures."

Industrial Impact

One of the larger unknowns is how much weight the Air Force — or higher ups at the Pentagon — is putting on industrial base impact. The answer to that question could seriously affect on which of the Boeing/Lockheed or Northrop teams win.

Deptula said industrial base considerations "absolutely" need to be part of the calculus.

"It has been a factor in other segments of our defense architecture, and one could make the case that in the aerospace industry, it is perhaps even more important than in the shipbuilding industry," he said.

Asked about that topic on Jan. 14, William LaPlante, the civilian acquisition head for the service, indicated that while industrial base concerns are something the Pentagon is aware of in a broad sense, that is not specifically one of the criteria for the bomber program.

"There is a bigger picture of just making sure we understand when will [different programs] have a downselect, what will come out of that — it's almost like a game theory thing to understand the implications," LaPlante said. "It's at the strategic level. Occasionally you might put it into a single competition. I don't think that's the case on the LRS-B."

The stakes are high for all three companies, Aboulafia said. After this contract, the next attack airplane will be a new fighter in the 2030s, and then a follow-on bomber sometime after that.

If Northrop loses, the chances of it still having the infrastructure to compete for a jet 15 years from now, or on a bomber longer out, seem slim. Losing the contract now would essentially end that part of their business.

Boeing, too, is coming to the end of its time as an attack aircraft manufacturer, despite the company's best efforts to keep the F/A-18 Super Hornet line humming. While the KC-46A tanker remains a Boeing program, it, and many other products from the company, are commercial derivatives rather than a brand new design.

Awarding Northrop the bomber would spread out the US Air Force's three top recapitalization priorities among three companies. On the flip side, giving the contract to the Lockheed/Boeing team would mean that Lockheed Martin, the producer of the F-35, essentially has full control over Air Force combat aviation production.

Analysts are divided as to who would be favored if the industrial base is a high priority. On the one hand, an industrial base angle should benefit Northrop, as it would spread the major programs among competitors.

"If you want Northrop to stay in the game as a prime, and you don't want to see the entire combat air forces at Lockheed, you have to go with Northrop," noted the first source familiar with the program.

Aboulafia, however, questions whether there is truly enough work available to spread among the three firms.

"That presupposes the Pentagon has this illusion that there can be three military airframers, and that's living in a fantasy land," he said, adding that strengthening the two military primes in Boeing and Lockheed would be "appealing" to DoD.

Aboulafia also points out that the contract could have major implications for one long rumored transaction among aerospace analysts — the potential sale of Northrop's aerospace group to Boeing.

"If Northrop loses, it could tip things to being bought by Boeing because it would not have a new airframe to build," Aboulafia said. "If Northrop wins, it could make them a more attractive target, and do the same."

Once the primes are settled, the subcontractor battle is likely to be just as fierce, Aboulafia noted.

Spokespeople for both teams expressed confidence that they were offering the better option to the Air Force.

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Another thing to keep an eye on is the fight over the engine. If F135-maker Pratt & Whitney wins that competition, it would give it a stranglehold on the US military engine market. Whether the Pentagon be OK with that, or look to award a contract to General Electric instead, is another known unknown.

Challenges Ahead?

Right now, the program is humming along, with strong support from inside the Pentagon.

Last week, outgoing Defense Secretary Chuck Hagel threw his weight behind the new bomber in a speech at Whiteman Air Force Base, Missouri.

"I think the Long-Range Strike Bomber is absolutely essential for keeping our deterrent edge," Hagel said. "We need to do it. We need to make the investments. We'll have it in the budget. It's something I have particularly put a priority on."

That commitment was echoed by Air Force Secretary Deborah Lee James at a Jan. 14 speech.

"When we roll out the FY16 budget, the budget line will be similar to what you saw in '15 projected into '16," James said. "We're on track for our competition, it remains a top priority and it is truly the future of our bomber force."

But some foresee challenges ahead as the bomber moves from a black, hypothetical program to one actually bending metal — and one that can become a high profile target for government spending watchdogs and the nonproliferation community.

"As the F-35 gets spun up, LRS-B will become a new target, especially with the arms control people," said the source with knowledge of the program. "This a big airplane, and it will cost a lot."

Several experts agreed that the larger threat to the program comes from internal budgetary pressures, as the bomber will be competing not just with other service priorities, but with programs like the Navy's Ohio-class ballistic missile submarine replacement, something Rebecca Grant of ISIS Research says the Navy is positioning as a "national asset" on Capitol Hill.

"The black program status makes it harder in my opinion to build support for the bomber," Grant said. "With new [Senate Armed Services Committee] leadership, the program will come under additional scrutiny as the first big budget wedges appear this year and beyond. So the USAF had best have its act together on why the bomber they pick is the right bomber now, in the hands of the right manufacturer."

Congress could also interfere with the program in another way. The loser could protest the award, which could set up not only a battle at the Government Accountability Office, but a public relations fight. High profile contract protests often result in each company tapping its preferred congressmen to lobby on its behalf.

According to public data analyzed by the non-profit OpenSecrets.org, Lockheed (\$4 million), Northrop (\$3.9 million) and Boeing (\$3.1 million) were the top three contributors to congressional campaigns and affiliated political action committees from the defense sector in 2013-2014. All three companies also rank in the top 25 of US companies in terms of dollars spent on lobbying.

Drawing a direct line from dollars spent on campaigns and lobbying and results for certain programs is always a bit risky, especially given the breadth of each company's portfolio. After all, Boeing and Lockheed traditionally work against each other, while both companies work with Northrop on different programs.

But those figures illustrate how strong the ties are between industry and members of Congress, even before the key issue of industrial base in various districts comes into play. After all, representatives will always rally around whichever side will bring jobs to their constituents.

While Boeing and Lockheed each have their own local supporters, Northrop may be able to call on the California and Florida delegations following its decision to expand facilities at Melbourne International Airport, on Florida's Space Coast.

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While a company official did not confirm that Northrop plans to work on a potential LRS-B in Florida, Sen Bill Nelson, D-Fla., told media in May that the company plans on using the facility for that purpose.

Andrew Tilghman, traveling with Hagel, contributed to this report.

<http://www.defensenews.com/story/defense/air-space/strike/2015/01/18/air-force-bomber-industry/21805275/>

[Return to Top](#)

National Defense Magazine – Arlington, VA

Air Force General Fires Salvos at Long-Range Strike Bomber Critics

By Stew Magnuson

January 20, 2015

The Air Force general who oversees the service's nuclear weapon delivery systems fired shots Jan. 20 at critics who say the planned long-range strike bomber is either too expensive, not technologically feasible or not needed in the first place.

"There are publications out there that are already saying, 'You don't need this. It's too expensive. It's not going to work.' We don't even know what it is yet, per se," Maj. Gen. Garrett Harencak, assistant chief of staff for strategic deterrence and nuclear integration said at an Air Force Association breakfast in Arlington, Virginia.

"It's already starting. ... They are already out there, the usual suspects that have been against every modernization, every recapitalization out there. Don't listen to them ladies and gentlemen," he said.

Harencak answered those who have suggested that the bomber's mission could be carried out by other systems such as remotely piloted aircraft, or stand-off missiles.

Having spent 31 years as a bomber pilot, Harencak said he was biased. However, the need for a penetrating, long-range persistent strike capability has been a constant. "The ability to go anywhere in the world, anytime, and to get through enemy defenses and be able to provide a lot of ordnance on a consistent basis" has never disappeared, and never will, he added.

Stand-off weapons are equally important because the nation's nuclear forces are a system of systems, he said. Nevertheless, "We have to be able to answer all potential adversaries out there and all potential scenarios," he said.

"No one has ever been right about the next war we're going to fight. Those who say, 'Don't worry. You won't need this,' have been wrong before. ... They are wrong today. And they will be wrong in the future," he said.

"Stand-off is absolutely important, but it has never in history been enough," he added.

As for critics who say the Air Force won't be able to build a bomber capable of withstanding the air defenses of the future, Harencak pointed to similar statements said before the Vietnam War and Desert Storm. Estimates on how many aircraft would be lost proved to be way too high. "Our own models showed that. And yet, we were able to do it and accomplish the mission."

As for how the Air Force will accomplish its missions, he noted that much of the program is classified. "To our critics out there: why don't you wait until you actually know something about it before you criticize it? I know that is asking a lot," he said.

"It would be great if we could talk about this in a rational way, and talk about facts, as opposed to emotion," he added.

"If we don't make these modest and affordable investments to defend America, then we will create in the future for our children sanctuary for our enemies and our adversaries. It makes absolutely no sense to me why we would accept that outcome," he added.



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Air Force officials have repeatedly said that the program will be completed on budget with each bomber costing \$550 million per copy, and a fleet of 80 to 100 aircraft. Harencak sought to quell criticism that this too, was an unrealistic goal. Pundits have pointed out that the B-2 bomber was built more than 25 years ago at a cost of some \$737 million per aircraft. How could it be less expensive more than two decades later?

"It happens all the time. We are able to make things better and also have them cost less. ... We have done it with cell phones. We have done it with microwave ovens. We were able to leverage technology to give us something better and it actually costs less. And that's what we're going to do when it comes to the long-range strike bomber," he said. New manufacturing techniques, for example, will help drive down the price tag, he added.

The plan to procure 132 B-2s fell well short of its goal after Congress lost faith in the program and cut the fleet off at 21. Once that economy of scale is lost and development costs are factored in, the price per aircraft skyrockets, analysts have said.

"We are going to move mountains to make sure it is affordable. We still may not get everything [in terms of requirements]. I get that, but certainly give us an opportunity to try," he said.

To do otherwise, would mean relying on the aging B-52 bomber. His son is flying a B-52 and it is conceivable that his newly born grandson may someday.

"In what world do we send our grandchildren into combat in 80-year-old aircraft?" he asked.

"This is an easy decision. There are a lot of hard decisions we have to make out there. This is not one of them," he said.

<http://www.nationaldefensemagazine.org/blog/Lists/Posts/Post.aspx?ID=1717>

[Return to Top](#)

Air Force Times.com – Tysons Corner, VA

Missileers Are now Highest-Paid Lieutenants Thanks to Bonuses

By Brian Everstine, Staff Writer
January 20, 2015

Two years ago, no ROTC cadets listed nuclear and missile operations among their top three career choices. Last year, however, 65 cadets did. And 174 cadets listed the 13N career field among their top six.

Maj. Gen. Garrett Harencak, assistant chief of staff for strategic deterrence and nuclear integration, attributes the growing interest to new bonuses that make missile officers the highest-paid lieutenants in the service.

The Air Force missileer community has seen rapid change in the year since a bottom-up review revealed morale problems in the career field.

Among the changes: The Air Force announced bonuses for missileers, which have made officers in the 13N career field the highest paid for the first six years of their careers. A new second lieutenant makes \$34,862 per year, and a missileer in that rank is eligible for bonuses of up to \$300 per month, along with additional bonuses for those who complete initial skills training and targeted incentive pay for airmen operating outside their main base.

After six years, pilots are eligible for aviation pay, which then makes them the highest paid.

In addition to pay, the Air Force has provided new vehicles to officers, deep-cleaned their launch control facilities, and adjusted their schedules to improve their quality of life, Harencak said Tuesday at an Air Force. More changes are still to come as the service continues to review recommendations from Global Strike Command's force improvement program.

"This isn't something to go, 'OK, we fixed that, let's move on,' " Harencak said. "It's going to be a continuous process."

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The deep-seeded issues in the missileer ranks come from the service not focusing enough on the "people aspect" of the nuclear mission.

"We've aggressively gone after the solutions to those problems," Harencak said.

One major issue across the command has been undermanning in critical career fields. The service announced last month an effort to beef up manning in security forces by adding new teams to missile bases. The service is looking at ways to reach 100 percent manning in all critical career fields – security forces, aircraft armament systems, nuclear weapon maintenance, missile electronic maintenance, missile systems maintenance, missile facility maintenance, bomber aircraft maintenance and command post controller.

<http://www.airforcetimes.com/story/military/careers/air-force/2015/01/20/force-improvement-program-recruitment-pay/22053331/>

[Return to Top](#)

Air Force Link – Washington, D.C.

Modernization Is a Must for the Nuclear Enterprise

By Staff Sgt. Torri Ingalsbe, Secretary of the Air Force Public Affairs Command Information
January 21, 2015

WASHINGTON (AFNS) -- The Air Force's priorities for modernization and continuous improvement in the nuclear enterprise were the top of discussion during the Air Force Association's monthly breakfast Jan. 20 in Arlington, Virginia.

"This nuclear deterrent is as relevant and is as needed today as it was in January of 1965," said Maj. Gen. Garrett Harencak, the Air Force assistant chief of staff for strategic deterrence and nuclear integration. "And it will be, until that happy day comes when we rid the world of nuclear weapons. It will be just as relevant in 2025, ten years from now."

To remain relevant, Harencak explained the importance of investing in programs to modernize the two legs of the nuclear triad owned by the Air Force, including the long-range strike bomber and the ground-based strategic deterrent.

"It's not going to be inexpensive, but it's also not going to be unaffordable," he said. "It's something we have to do to protect our nation. In this world, there still is a nuclear threat and our United States Air Force is there to meet it so we can defend our great nation, and our allies."

The Air Force's goal is to develop and purchase 80 to 100 LRSB aircraft. This modernization of nuclear-capable bombers will provide safe, secure and effective forces for generations to come, he explained.

"In what world do we send our grandchildren into combat in 80-year-old airplanes?" Harencak asked. "There are a lot of hard decisions we've got to make out there, but this isn't one of them. We want them (our children and grandchildren) to win: 100 to nothing, not 51 to 49. We can afford this, and it's desperately needed so the United States Air Force continues to be what it always has been – the force that allows alternatives and options for our president to defend America."

In addition to investment in aircraft, the Air Force is continuously working on increasing morale and mission focus within the intercontinental ballistic missile community, with help and guidance from the Force Improvement Program.

"Our ICBMs have been referred to as America's 'ace in the hole,' for more than 50 years," Harencak said. "They still are. They are still the ante into this game that is so high that no one out there would ever be perversely incentivized to attempt to become a nuclear competitor with us. They make sure no one out there has any illusions that they could accomplish anything through the threat or use of nuclear weapons."

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To reinvigorate the ICBM community, the Air Force is on track to modernize the Minuteman III weapon system until the ground-based strategic deterrent is underway. Last year marked many changes in the community, and Harencak said the Air Force will continue to make improvements.

“What we’re doing is making sure this is a process of continuous improvement,” he said. “I am 100 percent positive we don’t have it 100 percent right – but that’s okay. We do have the processes and organizations in place to make sure we continually improve and never take our eye off the ball of the needs of Airmen in the nuclear enterprise.”

The bottom line is we must move forward to ensure America’s nuclear triad is still the best in the world, and the general said modernization and recapitalization is the way to go.

“The triad has been proven and tried and true for decades – because it works,” Harencak said. “We need to continue to make the modest investments necessary to make sure we have the absolute best nuclear deterrent going forward.”

<http://www.af.mil/News/ArticleDisplay/tabid/223/Article/562045/modernization-is-a-must-for-the-nuclear-enterprise.aspx>

[Return to Top](#)

Seapower Magazine.org – Arlington, VA

January 22, 2015

HASC Chairman Wants Review of Strategic Deterrence, Threats, Challenges

By OTTO KREISHER, Special Correspondent

WASHINGTON — The new House Armed Services Committee (HASC) chairman appeared open to providing a separate funding source for the expensive Ohio replacement program Jan. 22, but was opposed to the Navy’s request to put 11 of its 22 Ticonderoga-class guided-missile cruisers into a phased modernization program in order to keep some of these crucial combatants in the fleet beyond their expected service life.

However, Rep. Mac Thornberry, R-Texas, said that before deciding how to pay for the next generation of ballistic missile submarines, he wanted the full committee to delve deeply into the entire strategic deterrence issue and the role the new missile boats would play in that mission.

That review would be part of a dramatic revision Thornberry announced in the way the HASC will deal with the fiscal 2015 defense budget and the defense authorization bill that is the committee’s way of influencing defense spending.

In a breakfast session with the Defense Writer Group, Thornberry said he would postpone testimony from the defense secretary and the service leaders on the administration’s proposed budget until after about two months of full committee hearings on the national security “threats and challenges.”

That is a reversal of the traditional process of having the defense leaders describe and support the administration’s budget soon after it is released — now expected on Feb. 2 — and then go into the national security environment and the status of the services.

But the chairman said he wanted the committee to learn about the national security threats and “then have the secretary of defense come in and explain how the president’s budget will meet those threats and challenges.”

He noted that the revised schedule “fits in well” with the fact that defense secretary nominee Ashton Carter is not expected to be confirmed by the Senate until late in February.

Thornberry said he discussed his plans with Senate Armed Services Chairman John McCain, R-Ariz., but was not sure how McCain intended to deal with the budget.

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In his first major meeting with defense reporters since becoming chairman, Thornberry expressed a lot of concern over President Barack Obama's handling of most of the top national security issues, including the rapid expansion of the Islamic State, or ISIS, extremists in Iraq and Syria and Obama's attempts to close the Guantanamo, Cuba, detention center for captured extremists.

He said Obama's statement in Tuesday's State of the Union address that his strategy has stopped the spread of ISIS "simply is not true," citing the extremists' gains of territory in Syria.

Although he did not call for U.S. ground troops to directly engage ISIS forces, Thornberry indicated support for having American service members calling in U.S. air strikes to improve their effectiveness. That would require the U.S. personnel to be closer to the front lines than those currently involved in training Iraqi forces.

Thornberry also voiced concern that some of the detainees being transferred from Guantanamo would return to the fight, and said it appeared Obama "was committed to fulfilling his campaign promise regardless of the consequences."

Asked if he would act to put money into the separate Ohio replacement fund that Congress created in the 2015 defense authorization, Thornberry said the committee first "had to come to grips" with the aging strategic deterrence weapons and systems and the role those systems play.

He acknowledged the Navy's concern that paying for the new strategic submarines out of the normal shipbuilding budget would leave little money for anything else. Without committing to continue the separate fund, Thornberry said he would work with the Appropriations Committee "as we look at the bigger picture."

On the cruisers, Congress allowed the Navy to put only two of the 11 in the delayed modernization program because "taking so many ships out of service at once was a concern," he said. He said the full committee would look at the overall issue of fleet size, and the seapower and projection forces subcommittee would deal with the specific issue of the cruisers.

<http://www.seapowermagazine.org/stories/20150122-thornberry.html>

[Return to Top](#)

The Hill – Washington, D.C.

CBO: Nuclear Arsenal to Cost \$348B over Decade

By Martin Matishak

January 23, 2015

The U.S. will need to spend \$348 billion over the next decade to maintain its nuclear arsenal, according to a new report from the Congressional Budget Office (CBO) released on Thursday.

The nonpartisan agency said that, while the estimated price tag is lower than a previous estimate of \$355 billion in December 2013, the figure still amounts to 5percent-6 percent of the Obama administration's national defense plan over the next 10 years

The CBO attributes the lower tab to "budget-driven delays in several programs, including a three-year delay for the new cruise missile and its nuclear warhead."

The Defense Department would be on the hook for \$227 billion in costs, while the Energy Department would spend \$121 billion, the agency estimates.

The updated estimate comes as the administration is set to unveil its fiscal 2016 budget on Feb. 2, and with sequester cuts set to resume, the timing could not be worse for the three legs of the U.S. nuclear "triad."

<http://thehill.com/policy/defense/230520-cbo-nuclear-arsenal-to-cost-348b-next-decade>

[Return to Top](#)

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The Boston Globe – Boston, MA

Russia Ends US Nuclear Security Alliance

Accord worked to keep stockpiles secure

By Bryan Bender, Globe Staff

January 19, 2015

WASHINGTON — The private diplomatic meetings took place over two days in mid-December in a hotel overlooking Moscow's Red Square.

But unlike in previous such gatherings, the sense of camaraderie, even brotherhood, was overshadowed by an uncomfortable chill, according to participants.

In the previously undisclosed discussions, the Russians informed the Americans that they were refusing any more US help protecting their largest stockpiles of weapons-grade uranium and plutonium from being stolen or sold on the black market. The declaration effectively ended one of the most successful areas of cooperation between the former Cold War adversaries.

"I think it greatly increases the risk of catastrophic terrorism," said Sam Nunn, the former Democratic senator from Georgia and an architect of the "cooperative threat reduction" programs of the 1990s.

Official word came in a terse, three-page agreement signed on Dec. 16. A copy was obtained by the Globe, and a description of the Moscow meeting was provided by three people who attended the session or were briefed on it. They declined to be identified for security reasons.

Russia's change of heart was not unexpected.

The Globe reported in August that US officials were concerned about the future of the programs, because of increased diplomatic hostilities between the United States and Russia. The New York Times reported in November that it appeared likely many of the programs would end.

On hand for the Moscow meeting were nearly four dozen of the leading figures on both sides who have been working to safeguard the largest supplies of the world's deadliest weapons, according to the three-page agreement.

The group included officials from the US Department of Energy, its nuclear weapons labs, the Pentagon, and the State Department, and a host of Russian officials in charge of everything from dismantling nuclear submarines to arms control.

Specialists said the final meeting was a dismaying development in a joint effort that the United States has invested some \$2 billion in and had been a symbol of the thaw between East and West and of global efforts to prevent the spread of doomsday weapons. An additional \$100 million had been budgeted for the effort this year and many of the programs were envisioned to continue at least through 2018.

Since the cooperative agreement began, US experts have helped destroy hundreds of weapons and nuclear-powered submarines, pay workers' salaries, install security measures at myriad facilities containing weapons material across Russia and the former Soviet Union, and conduct training programs for their personnel.

Officials said estimates of how much bomb-grade material has either been destroyed or secured inside the former Soviet Union is classified but insist the stockpiles are enough to make many hundreds of atomic bombs.

The work has been driven by deep concern that large supplies of nuclear material could be stolen by terrorists seeking weapons of mass destruction or diverted by underpaid workers susceptible to bribes.

Russian President Vladimir Putin's decision last year to invade the Ukrainian territory of Crimea and then back an armed rebellion in eastern Ukraine prompted a series of US and EU sanctions against Russia, which stirred fears that the era of nuclear cooperation was at risk.

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Now security upgrades have been cancelled at some of Russia's seven "closed nuclear cities," which contain among the largest stockpiles of highly enriched uranium and plutonium, according to the official "record of meeting" signed by the sides in December.

The Russians also told the Americans that joint security work at 18 civilian facilities housing weapons material would cease, effective Jan. 1. Another project at two facilities to convert highly enriched uranium into a less dangerous form also has been stopped.

Lack of US funding and expertise also jeopardizes planned construction of high-tech surveillance systems at 13 buildings that store nuclear material, as well as a project to deploy radiation detectors at Russian ports, airports, and border crossings to catch potential nuclear smugglers.

Nuclear weapon facilities

Russia inherited a massive nuclear weapons production complex and large stocks of weapons-grade fissile material after the collapse of the Soviet Union in 1991. Those supplies the US tries to monitor and secure:

- Closed nuclear cities*
- Atomic weapon complexes
- Civilian research sites

*Contain among the largest stockpiles in the world of highly enriched uranium and plutonium

Estimated fission material

Military-use plutonium

128

+/- 8 METRIC TONS

Weapons grade highly enriched uranium (HEU)

695

+/- 120 METRIC TONS



SOURCES: Russian Institute for Applied Science; Nuclear Threat Initiative

JAMES ABUNDIS/GLOBE STAFF

A limited amount of cooperation will continue in other countries that have highly enriched uranium that originated in Russia. The two sides also will continue working on ways to secure industrial sources of radioactive material, which could be used to make a "dirty bomb." The Russian decision will not affect inspections that both sides regularly conduct of each other's active nuclear arsenals as part of arms control treaties.

But that is little consolation for those like Siegfried S. Hecker, one of the nation's premier experts on nuclear weapons. Hecker, a former head of the Los Alamos National Laboratory, has traveled more than 40 times to Russia since 1992 as part of the joint security efforts. While he said vast improvements have been made in Russia's atomic security since the end of the Cold War, "you're never done."

"They need continuous attention and international cooperation," he said in an interview. "You cannot afford to isolate your country, your own nuclear complex, from the rest of the world."

The Russian embassy in Washington, and the Russian State Atomic Energy Corporation in Moscow, did not respond to requests for comment. In the December document, the Russians said they are capable of securing their own nuclear facilities, out of Russia's federal budget.

But a number of former US government officials and nuclear experts expressed doubts about the Russian pledge, pointing to recent economic troubles.

"The Russians say they are going to put a lot more of their resources into this," said Nunn, who is cochairman of the Nuclear Threat Initiative, a Washington nonprofit that works to reduce the dangers of nuclear, biological, and



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chemical weapons. “That would be good news if they do, but with their economic challenges now and with the huge distrust built because of Ukraine and the deterioration of the ruble, the proof will be in the pudding.”

Another key architect of the programs, former Republican senator Richard Lugar of Indiana, who last visited some of the facilities in 2012, said he wonders if the Russians have the expertise needed to keep track of the vast amount of nuclear bomb material.

“The housekeeping by the Russians has not been comprehensive,” Lugar said in an interview. “There had been work done [with the United States] hunting down nuclear materials. This is now terminated.”

Some warn that the distrust on both sides could bleed into other areas, including arms control treaties.

“It’s important for the US and Russia to have nuclear security, but it is also important for us to believe we have nuclear security,” said Matthew Bunn, a weapons proliferation specialist at the Belfer Center for Science and International Affairs at Harvard University. “That’s hard to do just by saying so.”

US government officials, for their part, insist they are trying to make the best of it.

“We are encouraged that they stated multiple times that they intend to finish this work,” said David Huizenga, who runs the nonproliferation programs at the National Nuclear Security Administration, an arm of the Department of Energy. Huizenga led the US delegation to Moscow last month.

But he said US officials still hope that the Russians will change their mind and restart a partnership that by most accounts has significantly strengthened global security.

“[It will be] harder to resurrect if we don’t actually engage in any meaningful way,” Huizenga said.

<http://www.bostonglobe.com/news/nation/2015/01/19/after-two-decades-russia-nuclear-security-cooperation-becomes-casualty-deteriorating-relations/5nh8NbtjitUE8UqVWFflood/story.html>

[Return to Top](#)

RT (Russia Today)

Russia, US Nuclear Cooperation to Continue in 2015 – Rosatom

January 22, 2015

Russian state nuclear energy corporation Rosatom denies that Moscow has ended more than 20 years of nuclear security cooperation with the US. The two countries will continue the joint effort to secure and store nuclear materials, Rosatom has said.

“*Cooperation between Russia and the United States in this field will continue,*” reads Thursday’s statement from the conglomerate.

“*Russia and the United States of America bear a special responsibility for ensuring the safety and security of nuclear materials and their reliable physical protection, preventing them from falling into the hands of terrorist organizations,*” it added.

The statement denies claims published in US media earlier this week that Russia had initiated the discontinuation of the nuclear security program that has been in place since the 1990s. The program is aimed at keeping nuclear materials from falling into the hands of terrorists or rogue states, by securing and dismantling Russia’s large stockpile of nuclear weapons, in addition to protecting weapons-grade uranium and plutonium supply from theft.

“*[Nuclear security] cannot and should not depend on situational changes on the political scene. We will be ready to renew cooperation when the American side is ready, obviously on a strict basis of equality, mutually benefit and with mutual respect.*”

On Monday The Boston Globe published a report claiming that Russians informed the American side that they were withdrawing from the nuclear security alliance.

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The Rosatom statement refutes these claims, while also stating that in March the US State Department announced that the US was ending its participation in the program, as tensions were on the rise in light of the escalating crisis in Ukraine.

"However, in March, 2014, through the announcement on the website, the Department of State notified us about the suspension of work within this mechanism, which we find very efficient," it reads.

However in November, The New York Times reported that Rosatom head Sergey Kirienko told senior US officials that Russia is looking to cut back on joint nuclear security efforts and that no new projects in Russia are "envisioned" for 2015, according to the US officials in question.

<http://rt.com/news/225307-nuclear-security-rosatom-continue/>

[Return to Top](#)

Sputnik News – Russian Information Agency

Russia to Test Strategic Missile Forces in Unscheduled Drills

The exercises in western Siberia include more than 20 tasks and also involve the Emergencies Ministry's troops, as well as Internal Ministry and Federal Security Service forces.

20 January 2015

MOSCOW, January 20 (Sputnik) – Russia has kicked off its first unannounced drills of the year for the country's Strategic Missile Forces with over 1,200 active duty servicemen in western Siberia, Russian Defense Ministry spokesman Col. Igor Egorov said Tuesday.

"During the unannounced exercises of the missile forces, a committee will study the current condition in organizing activities by the commanders in completing drills of fighting terrorism as a command unit, missile force regiments and a number of other subdivision units," Egorov said.

The exercises will include more than 20 tasks and will also train with the Emergencies Ministry's troops, as well as with Internal Ministry and Federal Security Service forces.

"There will be no less than four of these kinds of drills during 2015," Egorov added.

The drills are being held at the Uzhursky Missile Unit in the Krasnoyarsk Territory.

Earlier in January, Egorov said that the Strategic Missile Forces plan to hold more than 100 exercises throughout the year. In late December 2014, Russian Armed Forces' Chief of Staff Valery Gerasimov said that building up Russia's nuclear forces is one of the army's key tasks for 2015.

<http://sputniknews.com/military/20150120/1017110574.html>

[Return to Top](#)

South China Morning Post – Hong Kong, China

Three Minutes to Midnight: Climate and Nuclear Threats see Doomsday Clock Wound Forward

Agence France-Presse (AFP)

Friday, 23 January, 2015

Climate change and the danger of nuclear war pose an ever-growing threat to civilisation and are bringing the world closer to its end, a group of prominent scientists and Nobel laureates said as they wound the "Doomsday Clock" forward.

"It is now three minutes to midnight," said Kennette Benedict, executive director of the Bulletin of the Atomic Scientists, as the group moved its symbolic clock ahead by two minutes.

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The Doomsday Clock was created in 1947. It has changed 18 times since then, ranging from two minutes to midnight in 1953 to 17 minutes before midnight in 1991.

The clock has been at five minutes to midnight since 2012 and the last time it was three minutes to midnight was in 1983, during the Cold War between the United States and the Soviet Union.

“Today, unchecked climate change and a nuclear arms race resulting from modernization of huge arsenals pose extraordinary and undeniable threats to the continued existence of humanity,” Benedict said.

“And world leaders have failed to act with the speed or on the scale required to protect citizens from potential catastrophe.”

The scientists called on people to demand action from their leaders to curb fossil fuel pollution and to stop developing ever more modern nuclear weapons that are endangering the planet.

“We are not saying it is too late to take action, but the window for action is closing rapidly. The world needs to be awakened from its lethargy and start making changes,” Benedict said.

Such actions should cap greenhouse gas emissions at levels sufficient to keep average global temperature from rising more than 2 degrees Celsius above preindustrial levels, the group said.

“Efforts at reducing global emissions of heat-trapping gases have so far been entirely insufficient,” said Richard Somerville, a member of the Science and Security Board, Bulletin of the Atomic Scientists, and a distinguished professor emeritus and research professor at Scripps Institution of Oceanography, University of California San Diego.

“Unless much greater emissions reductions occur very soon, the countries of the world will have emitted enough carbon dioxide and other greenhouse gases by the end of this century to profoundly transform the Earth’s climate,” he said, noting that 2014 was the hottest on record and that the tipping point of ice loss in west Antarctica has been reached, meaning the melt is now unstoppable.

The climate changes that human are driving “will harm millions of people and will threaten many key ecological systems on which civilization relies,” he said.

The scientists also called for dramatically reduced spending on nuclear weapons modernisation programs, and a renewed focus on disarmament.

Benedict said that the world has about 16,300 nuclear weapons, which she described as “far too many.”

While the United States and Russia have far fewer weapons today than they did during the Cold War, the disarmament process has “ground to a halt,” said Sharon Squassoni, member, Science and Security Board, Bulletin of Atomic Scientists, and director of the Proliferation Prevention Program at the Center for Strategic and International Studies.

Meanwhile, the United States has invested big money in modernizing its nuclear weapons systems, with some US\$355 billion planned for the next decade, and Russia is also upgrading its nuclear weapons, Squassoni said.

The United Kingdom has halved its nuclear arsenal stockpile since 2010 but continues to support its nuclear submarine program.

France is also building a next generation air-to-ground nuclear missile, while China is developing a new class of ballistic missile submarines, she said.

India has plans to expand its nuclear submarine fleet and Pakistan has started a third plutonium reactor and is developing a new short-range nuclear missile.

“Israel reportedly is also modernizing some of its undeclared nuclear forces and North Korea as we all know continues its nuclear program without any of the restraints previously applied under the Nuclear Non-Proliferation Treaty,” Squassoni told reporters.

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She said that any post-nuclear optimism that arose at the end of Cold War “has essentially evaporated.”

<http://www.scmp.com/news/world/article/1689785/three-minutes-midnight-climate-and-nuclear-threats-see-doomsday-clock>

[Return to Top](#)

Want China Times – Taipei, Taiwan

PLA's DF-21 Missile Deployed to Changbai Mountains: Experts

Staff Reporter

January 18, 2015

China's Dong-Feng 21 ballistic missile may have been deployed at the Changbai Mountains in the northeastern region of the country as a deterrent against Japan and Taiwan, reports the International Herald Leader, a newspaper under the auspices of the official news agency Xinhua.

Before the New Year, state broadcaster CCTV aired footage of a major People's Liberation Army winter drill which revealed a missile transportation vehicle of the Second Artillery Corps, the PLA's strategic missile division. Military analysts believe the vehicle was carrying the DF-21, a two-stage, solid-propellant, single-warhead medium-range ballistic missile developed by the China Changfeng Mechanics and Electronics Technology Academy.

Based on other publicly available information, analysts speculate that the DF-21's launch position is now situated in the Changbai Mountains, along China's border with North Korea.

Photos released publicly by the PLA reveal that the DF-21's current missile launch position lies in a place that recently experienced significant snowfall. This is believed to match up with cold weather warning reports in northeast China between Dec. 25 and 27. The types of trees depicted in the photos are also said to be found predominantly in the Changbai range.

More importantly, military experts say the Changbai Mountains is the only place in China from which the DF-21 can cover all key targets in Japan. In the event of a maritime conflict with Japan, Chinese experts say the DF-21 will be able to effectively seal off entry and exit points in the Sea of Japan, allowing the PLA to make up for relative weakness in naval power.

The mountain range, which extends along the northeast Chinese provinces of Heilongjiang, Jilin and Liaoning, provides an advantageous strategic position that can allow the PLA to dictate terms in the East China Sea. Launching the DF-21 from the Changbai Mountains, the PLA can control the La Perouse Strait — which divides the southern part of the Russian island of Sakhalin from the northern part of the Japanese island of Hokkaido — from the north, and the Tsushima Strait — which connects the Sea of Japan and the East China Sea — from the south.

Further, the Changbai Mountains also reportedly provides ample natural resources, advanced industrial development and convenient transport facilities, giving the region very strong military and economic potential.

The rationale behind deploying the DF-21 in the Changbai Mountains also extends to Taiwan. Taiwanese reports from last October said that the PLA has deployed the DF-21, dubbed by some as an "aircraft carrier killer," in the southeastern and northeastern parts of China as a deterrent against US intervention in the event of a conflict across the Taiwan Strait.

As far back as 2010 Canada's Kanwa Information Center estimated that the DF-21, China's first anti-ship ballistic missile, has a range of about 1,800 kilometers and has the ability to cover the majority of Japan's island military bases as well as the US naval base in Okinawa, Japan's southernmost island group.

US intelligence estimates that China may have around 50-100 missiles in the DF-21 series in its arsenal. CIA reports indicate that the DF-21 series has a range between 1,450 km and 2,150 km, though there is speculation that the missile may have a maximum range of up to 3,000 km.

<http://www.wantchinatimes.com/news-subclass-cnt.aspx?id=20150118000098&cid=1101>

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[Return to Top](#)

Xinhua News – Beijing, China

DPRK Negotiator Explains Nuclear Proposal at Unofficial Meeting

January 19, 2015

SINGAPORE, Jan. 19 (Xinhua) -- The chief nuclear negotiator of the Democratic People's Republic of Korea (DPRK) said on Monday that he has explained the intentions and purpose of the recent proposal put forward by the DPRK at an unofficial meeting with former senior officials and experts from the United States.

"We provided detailed information of the intentions and purpose of this proposal," Ri Yong Ho, the DPRK's Six Party Talks representative, told reporters after the two-day meeting in Singapore.

Ri said that the root cause aggravating the tension on the Korean Peninsula is "none other than" the large-scale joint military exercises between the United States and South Korea which has been held annually.

"To put an end to this large-scale joint military exercise...is the first step towards easing the tension on the Korean Peninsula," he said.

Asked what pre-conditions the DPRK is setting for it to return to the six-party talks, Ri said "For the first time, we had proposed the meeting without any preconditions."

The closed-door meeting in Singapore concluded on Monday. Former US special representative for DPRK policy Stephen Bosworth, one of the US participants in the meeting, said that the two sides also had extensive exchanges of views as to the atmosphere in the United States.

"We had very useful discussions of not so much what's happened but what could happen in the future," he said, reading a prepared statement.

Bosworth, who emphasized that he and his colleagues from the United States were participating in the meeting as private citizens, said that the priority for the US side is the need to get official discussions underway, resume the multilateral talks and deal with the issues of denuclearization and other elements of the joint statement from the Six-Party talks of September 2005.

He said that there is no plan for a next meeting at present.

The meeting in Singapore came after the United States rejected the proposal by the DPRK that it stands ready to suspend its nuclear tests if the United States suspends its annual joint military exercises with South Korea.

The United States has obviously downplayed the importance of the meeting, with its embassy in Singapore saying that the US government is not involved.

Leon Sigal, director of the Northeast Asia Cooperative Security Project at the US-based non-profit organization Social Science Research Council, told reporters that the meeting would cover the DPRK's nuclear missile programs. "It's two ways of taking each other's temperature," he said on Sunday.

The six-party talks had been bogged down since Pyongyang pulled out in April 2009 in response to a UN Security Council presidential statement condemning its rocket launch. Amid rounds of crippling sanctions and repeated US-South Korea joint military drills, the DPRK has so far conducted three nuclear tests.

Despite the precarious character of the sextipartite framework, the six-party talks remain the most viable platform to achieve peaceful denuclearization of the Korean Peninsula and realize lasting stability in Northeast Asia.

Launched in 2003, the six-party talks involves China, Japan, Russia, South Korea, the United States and the Democratic People's Republic of Korea (DPRK) to negotiate a solution to the Korean Peninsula nuclear issue.

On Sept. 19, 2005, the six parties wrapped up their fourth round of talks with a joint statement that is widely considered as the most important agreement ever achieved so far in the stop-and-go undertaking.

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The document affirmed the goal of verifiable denuclearization of the Korean Peninsula in a peaceful manner. The DPRK committed itself to abandoning all nuclear weapons and existing nuclear programs but insisted on its right to peaceful uses of nuclear energy.

The United States affirmed that it has no nuclear weapons on the Korean Peninsula and has no intention to attack or invade the DPRK with nuclear or conventional weapons. South Korea reaffirmed its commitment not to receive or deploy nuclear weapons on the Korean Peninsula and affirmed that there existed no nuclear weapons within its territory.

The six parties also agreed to take coordinated steps to implement the consensus in a phased manner in line with the principle of "commitment for commitment, action for action."

http://news.xinhuanet.com/english/2015-01/19/c_133930671.htm

[Return to Top](#)

Yonhap News Agency – Seoul, South Korea

N. Korea's Envoy in Beijing after Nuke Talks with Ex-U.S. Diplomats

January 21, 2015

BEIJING, Jan. 20 (Yonhap) -- North Korea's top nuclear envoy arrived in Beijing on Tuesday after two days of unofficial talks in Singapore with former U.S. diplomats on his country's nuclear and missile programs.

Ri Yong-ho, the North's chief negotiator to the long-stalled six-party talks on Pyongyang's nuclear weapons program, was tightlipped on whether he plans to meet with his Chinese counterpart Wu Dawei in Beijing.

Upon his arrival at the Beijing airport, Ri was whisked into a waiting sedan with a North Korean embassy plate.

In Singapore, Ri made no new proposal on the nuclear issue, repeating only that North Korea would temporarily suspend nuclear tests if the United States halts joint military exercises with South Korea scheduled for this year. Both Seoul and Washington had rejected the proposal.

A former U.S. special envoy for North Korea policy, Stephen Bosworth, was among Ri's dialogue partners in Singapore on Sunday and Monday. The others included former deputy U.S. nuclear negotiator Joseph DeTrani and Leon Sigal, director of the Northeast Asia Cooperative Security Project at the Social Science Research Council.

Although the U.S. government was not involved, former American officials and North Korean diplomats have occasionally held unofficial talks to help the two governments better understand each other's position.

The six-party denuclearization talks have been suspended since late 2008.

In Beijing on Tuesday, China's foreign ministry spokeswoman Hua Chunying welcomed the unofficial dialogue in Singapore between Ri and the former U.S. officials, saying China expects the relevant countries to create conditions to resume the six-nation talks.

Relations between the U.S. and the North have worsened further recently following a cyber-attack on entertainment company Sony Pictures. The U.S. has blamed the North for carrying out the attack and imposed fresh sanctions, but Pyongyang has categorically denied its involvement.

<http://english.yonhapnews.co.kr/news/2015/01/20/5/0200000000AEN20150120008500315F.html>

[Return to Top](#)

China Daily – Beijing, China

U.S. Rejects DPRK's Call for Resumption of Six-Party Talks

January 22, 2015



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WASHINGTON, Jan. 21 (Xinhua) -- The United States on Wednesday dismissed an unconditional resumption of the six-party talks suggested by the Democratic People's Republic of Korea (DPRK) over its nuclear program, reiterating a call for Pyongyang to abide by its past commitments.

State Department spokeswoman Jennifer Psaki was responding to a proposal made on Monday by DPRK's chief nuclear negotiator Ri Yong Ho following a two-day unofficial meeting with former U.S. special representative for DPRK policy Stephen Bosworth in Singapore.

"I think the important point here is that the view of the United States, as well as our six-party partners, is that North Korea would need to abide by their international obligations, including the 2005 joint statement," Psaki told reporters at a daily news briefing.

"The ball has long been in their court, but we certainly reject new proposals that don't have any backing," she added.

While in Singapore, Ri once again called on Washington to end its large-scale war games with the Republic of Korea, blaming them for the rising tension on the Korean Peninsula.

Psaki had criticized Pyongyang's past offer to suspend future nuclear tests for Washington's agreement to halt joint military exercises with the Republic of Korea this year, calling the proposal "an implicit threat."

Asked what pre-conditions the DPRK was setting for its return to the six-party talks, Ri said "For the first time, we had proposed the meeting without any preconditions."

The six-party talks, which also involve Russia, China and Japan, were initiated in Beijing in August 2003 but have been stalled since December 2008. The DPRK dropped out of the talks in April 2009.

In the 2005 joint statement, Pyongyang committed itself to abandoning all nuclear weapons and existing nuclear programs and returning at an early date to the Treaty on the Non-Proliferation of Nuclear Weapons, while Washington affirmed that it has no nuclear weapons on the Korean Peninsula and has no intention to attack or invade the DPRK with nuclear or conventional weapons.

http://usa.chinadaily.com.cn/world/2015-01/22/content_19374626.htm

[Return to Top](#)

People's Daily Online – Beijing, China

China Urges Resumption of Korean Peninsula Denuclearization Talks

(Xinhua)

January 23, 2015

BEIJING, Jan. 23 -- China on Friday responded to an upcoming meeting between senior officials of the United States, Japan and the Republic of Korea (ROK) on the denuclearization of the Korean peninsula, saying it hopes dialogue and contact can help promote an early resumption of the six-party talks.

The U.S. State Department said on Thursday that Sung Kim, U.S. special representative for the Democratic People's Republic of Korea (DPRK) policy, will have a trilateral meeting next Wednesday in Tokyo with his Japanese and ROK counterparts.

From Tokyo, Kim will head to Beijing and is scheduled to meet with senior Chinese government officials, including special representative for Korean Peninsula affairs Wu Dawei, said the department.

Foreign Ministry spokeswoman Hua Chunying said it is in the common interests and responsibilities of concerned parties to forge ahead on the denuclearization of the Korean peninsula and safeguard the peace and stability of the peninsula.

"Under the current situation, parties concerned should work together to return to the track of dialogue and consultation to create conditions for the resumption of the six-party talks," Hua told a daily press briefing.

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When asked to confirm the visit to China by Kim, Hua said China has been maintaining close contacts with relevant parties of the six-party talks.

"We will release further information in due course," she said.

The U.S. State Department on Wednesday rejected the latest DPRK proposal for an unconditional resumption of the six-party talks, which also involve Russia, reiterating a call for Pyongyang to abide by its past commitments.

Ri Yong Ho, the DPRK's six-party talks representative, met with Kim's predecessor, Stephen Bosworth, in Singapore early this week for two-day unofficial talks.

The six-party talks were initiated in Beijing in August 2003 but have been halted since December 2008.

<http://en.people.cn/n/2015/0123/c90883-8840539.html>

[Return to Top](#)

Sputnik News – Russian Information Agency

Russian Armed Forces to Adopt Hypersonic Missiles on Mass Scale

The development of hypersonic missiles in Russia and the United States currently stands at the same level, the CEO of Russia's Tactical Missiles Corporation believes.

19 January 2015

MOSCOW, January 19 (Sputnik) — The Russian Armed Forces will receive hypersonic missiles on mass scale in about 15 to 25 years, with the first prototypes to be created by 2020, CEO of Russia's Tactical Missiles Corporation Boris Obnosov said in an interview with the "Defense of Russia" magazine.

"I think that the program will unfold as early as in the next decade, and the transition to the hypersonic [missiles] is a matter of the 2030s-2040s," Obnosov said.

He explained that the main difficulty in developing missiles able to fly significantly faster than the speed of sound was needed for new construction materials, capable of enduring the temperatures caused by flying at extremely high speed.

"Flying at Mach 6 [4,567 mph] is one task, but [doing it] at Mach 8-10 is an entirely another one. We could even speak of Mach 10-12. The tasks grows more difficult exponentially," Obnosov said.

The Tactical Missiles Corporation's CEO added the task of producing hypersonic missiles was also a challenge in terms of the construction of missile engines and on-board equipment.

The development of hypersonic missiles in Russia and the United States currently stands at the same level, the CEO of Russia's Tactical Missiles Corporation believes.

Joint Stock Company Tactical Missiles Corporation was established in 2002 and includes 26 companies, producing missiles and guided bombs, as well as air-, sea- and land-based missile systems.

<http://sputniknews.com/military/20150119/1017084589.html>

[Return to Top](#)

STV.TV – Glasgow, Scotland, U.K.

Proposal Calling for Trident Not to Be Renewed Defeated in Commons

By STV

20 January 2015

A proposal calling for the UK's nuclear deterrent Trident not to be renewed has been defeated in the House of Commons.

Issue No.1149, 23 January 2015

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Just 35 MPs backed the motion, brought by the Scottish National Party and Plaid Cymru, but it was defeated by a majority of 329 after it was opposed by 364 MPs.

Backers of the Opposition Day motion were expected to include a number of Labour MPs and at least one Tory despite both main parties instructing their MPs to back replacing the ageing Vanguard-class submarines which carry the missiles.

Angus Robertson, shadow SNP spokesman for defence, argued that the case was "stronger than ever" to embrace the non-replacement of the programme.

During an Opposition Day debate in the Commons, he said the Ministry of Defence (MoD) had the "wrong priorities", investing billions on nuclear weapons which it could never use, but not properly managing the conventional armed forces.

The motion was aimed at highlighting the two parties' commitment to scrapping Trident and instead using what they claim would be £100bn saved to ease austerity measures.

Moray MP Mr Robertson went on: "The time has come to put down a marker about scrapping Trident and not replacing these weapons of mass destruction.

"I've yet to hear a supporter of Trident convincingly explain in what circumstances they are prepared to justify the killing of hundreds of thousands of innocent men, women and children and cause massive environmental damage to the world for generations to come."

But Defence Secretary Michael Fallon said the Government was committed to retaining the continuous at-sea deterrent, adding: "What we cannot gamble with is tomorrow's security.

"That is why this Government and all previous governments for the last six decades have retained an operationally independent nuclear deterrent.

"We have to plan for a major direct nuclear threat to this country or to our Nato allies that might emerge over the 50 years that the next generation of our submarines will be in service.

"In a world that is getting more dangerous there are no alternatives that offer the level of protection and security that this country needs."

He also repeatedly said that the Government only planned to replace its submarines in the late 2020s — rather than the warheads themselves — subject to the main gate decision next year.

He dismissed Mr Robertson's claim that the total cost including through-life costs would be near £100bn, but said he could not yet confirm a figure.

In his contribution, shadow defence secretary Vernon Coaker argued it would do "more harm than good" to abandon the nuclear deterrent unilaterally at this stage in the disarmament process.

The Labour frontbencher added: "In the current climate it would make Britain less secure and would send out exactly the wrong signals at a very sensitive moment in international relations."

Labour's Dame Joan Ruddock (Lewisham Deptford) said the real threats to the UK were cyber warfare, terrorism, climate change and pandemics.

She added: "We need all the resources we can muster to confront these threats and we cannot afford to squander billions of pounds on a weapon system that by general consent can never be used."

But Tory Oliver Colville (Plymouth Sutton & Devonport) said his constituency depended on submarines and backed the deterrent saying it was the cornerstone of the UK's membership of both Nato and the UN Security Council.

Liberal Democrat former defence minister Sir Nick Harvey said: "I do not believe that it makes any sense whatever for us to be sailing the high seas 24/7 waving weapons of mass destruction at the rest of the world because we

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thought it was necessary in 1980 or because we have made a £30bn investment, which we think would leave us looking embarrassed if we didn't do it."

SNP MP Angus MacNeil (Na h-Eileanan an Iar) said the logical upshot of the Government's stance was that everyone should have nuclear weapons and claimed it was the "global equivalent of the USA handgun policy".

His colleague Pete Wishart (Perth and North Perthshire) added: "Even if we had a nirvana of world peace we would still have the Tory hawks arguing for nuclear weapons, arguing they are a necessity and why the deterrent would have to be feature of our community and our country."

Responding to a claim made by Mr Fallon, Labour's John Woodcock (Barrow and Furness) rejected suggestions that his party would scrap Trident to gain SNP and Plaid Cymru support in a future coalition government.

Defence Select Committee chair Rory Stewart said the decision was far too important to be a question of economics, adding: "This is a question of Armageddon."

The Tory MP also argued that it was unwise to change the nature of Britain's deterrent when the Government is unsure of the threat posed by Russia and president Vladimir Putin's aggressive stance in the world.

Plaid Cymru MP Jonathan Edwards (Carmarthen East and Dinefwr) said it was "simply obscene" to spend £100bn on Trident when schools and hospitals are "crying out for investment". With it, he said the Government could build 650,000 new affordable homes.

Green MP Caroline Lucas (Brighton Pavilion) agreed the Trident renewal programme was "morally wrong and obscene" at a time when people were forced to use food banks and services were being slashed.

At present, according to the SNP, the UK Trident submarine remains on patrol at all times with each submarine carrying an estimated eight missiles each of which could carry up to five warheads, 40 in total.

Each warhead, Mr Robertson said, had an explosive power of up to 100 kilotons of conventional high explosive — eight times the power of the atomic bomb that was dropped on Hiroshima in 1945 which killed an estimated 240,000 people from blast and radiation.

<http://news.stv.tv/scotland/307256-proposal-calling-for-trident-not-to-be-renewed-defeated-in-commons/>

[Return to Top](#)

Xinhua News – Beijing, China

Russia to Strengthen Armed Forces to Tackle Challenges from Outside: Putin

January 21, 2015

MOSCOW, Jan. 20 (Xinhua) -- Russian President Vladimir Putin on Tuesday called for strengthening the country's armed forces to tackle challenges posed by other countries.

"We can see how other countries are openly declaring their geopolitical claims without stopping short of open interference in the internal affairs of independent states. In addition to that, they are actively building up and modernizing their military arsenals," he was quoted by TASS as saying at a meeting of the Russian Military-Industrial Commission.

The president compared Russia's defense spending with those of other world powers, stressing that "these are incommensurable quantities. They are just incommensurable. They spend many times more than we do."

"We can and should respond to this challenge but without being dragged into a costly arms race," Putin said, adding "Russia is not threatening anybody and seeks to resolve all disputable issues at the negotiating table. This is the way we are going to act in future. We are going to stick exactly to this kind of policy."

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The Russian head of state asked the country's military industry to focus on the development of high technologies to protect Russia 's sovereignty, territorial integrity and national interests.

"We are going to further strengthen our armed forces and the military organization on the whole, to take all necessary measures to make our armed forces more modern, mobile, well-equipped and capable of fulfilling the main task - that is to neutralize risks and political threats as well as potential threats to the security of our country," Putin said.

To this end, the president pledged to increase the financing of the foundation for advanced research projects in the defense industry.

"In 2015, the foundation needs to focus its efforts on the accelerated development of the breakthrough industrial know-how which must match the new, sixth technological mode," he was quoted as saying by Interfax news agency, adding that these technologies will determine the production of new-generation weapons and military hardware.

Meanwhile, Putin signed a decree on the status of the general designer of armaments.

"The general designers will spearhead the efforts to create strategically important weapon systems," said the president.

http://news.xinhuanet.com/english/europe/europe/2015-01/21/c_133933812.htm

[Return to Top](#)

TASS Russian News Agency – Moscow, Russia

Elements of New Missile Defense System Tested in Russia

Russian analogues of US's THAAD and GMD missile defense systems are expected to be developed in the next few years

January 23, 2015

ST. PETERSBURG, January 23. /TASS/. Russia is testing elements of a new missile defense system, Yan Novikov, CEO of Almaz-Antei Concern, said on Friday.

"Currently, we are carrying out field tests of elements of a new missile defense system," he said.

Meanwhile, he noted that the missile defense system that was developed in the 1990s is still being used as having no analogues in the world by a number of parameters.

In December 2014, Almaz-Antei's designer general Pavel Sozinov said that Russian analogues of US's THAAD and GMD missile defense systems would be developed in the next few years.

Russia's new military doctrine allows creation of joint missile defense systems

Russia's new military doctrine does not rule out creation of joint missile defense systems together with other countries on condition of Russia's equal participation. The doctrine's 2010 edition did not mention that possibility.

The document published in late December sets forth Russia's main tasks in deterring and preventing military conflicts. They include creation of mechanisms of mutually beneficial bilateral and multilateral cooperation in counteracting possible missile threats, including, if necessary, creation of joint missile defense systems if Russia has equal participation in these projects.

In addition to that, the document goes on to say, the Military doctrine provides for preventing attempts by separate countries (or a group of countries) to gain military superiority by stationing strategic anti-missile defense systems and strategic non-nuclear systems of precision weapons as well as deploying weapons in outer space.

<http://itar-tass.com/en/russia/773064>

[Return to Top](#)

Issue No.1149, 23 January 2015

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FARS News Agency – Tehran, Iran
Sunday, January 18, 2015

Leader's Top Aide: Iran Needs No Permission for Running Nuclear Activities

TEHRAN (FNA) - Supreme Leader's top advisor for international affairs Ali Akbar Velayati underlined that Iran would never halt its nuclear activities to receive a green light from the West.

"... Iran will not ask for anyone's permission for centrifuges, uranium enrichment, fuel sheets of nuclear reactors and making a peaceful use of this clean energy because Iran is a member of the NPT and it is entitled to these rights accordingly," Velayati told reporters on Sunday.

He noted that Iran's negotiating team has acted within the framework set by Supreme Leader Ayatollah Seyed Ali Khamenei, and stressed that the Iranian negotiators have the full back-up of the Supreme Leader, people and the ruling system as long as they move within this framework.

On Saturday, Iranian Foreign Minister Mohammad Javad Zarif said cutting a permanent deal on Iran's nuclear program is possible if the western states in the Group 5+1 (the five permanent UN Security Council members plus Germany) continue talks transparently and with a firm will.

"If western countries intend to negotiate with Iran, they should make a political decision, which might be difficult for some, and cease applying pressure," Zarif told Iran's state-run TV.

"The policies of pressure and dialog are mutually exclusive," he added.

The 10th round of negotiations between Iran and the six world powers was held in Vienna from November 18 to 24, where the seven nations decided to extend the talks until July after they failed to strike an agreement.

The fresh round of the nuclear talks between the two sides will be held at the level of deputy foreign ministers in Geneva, Switzerland, later today.

Iran's nuclear chief announced on Friday that Tehran had done its utmost efforts to bring maximum transparency to its nuclear program and remove the alleged concerns of the western states, stressing that the world powers had been left with no more excuse to avoid a final agreement with Iran.

<http://english.farsnews.com/newstext.aspx?nn=13931028001293>

[Return to Top](#)

Tasnim News Agency – Tehran, Iran

Ex-Official: New Generation of Centrifuges A Must for Iran

January 18, 2015

TEHRAN (Tasnim) - Former head of the Atomic Energy Organization of Iran (AEOI) emphasized the necessity for the employment of new generation of centrifuge machines that refine uranium with higher efficiency.

Speaking in an exclusive interview with the Tasnim News Agency, former AEOI chief Fereidoun Abbasi, who is also a renowned physicist in Iran, said he sees no reason why Iran should not enjoy the new generation of centrifuge machines.

Iran should use new machines in addition to the old generation of centrifuges since "we are now a powerful country in the field of nuclear technology, have good scientists in designing, calculations and simulation and have also obtained machines with higher separation capability," he added.



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Abbasi said more technical progress in the centrifuge technology will in turn help upgrade other engineering fields in the country, including electricity, control, mechanics, metallurgy, chemistry, machining, welding and production of special alloys.

He noted that Iran's development in the nuclear science technology will reduce the number of students that go abroad.

The former official also pointed to the West's insistence on a reduction in the number of Iran's centrifuge machines, saying they seek to bring Iran's nuclear technology to a complete halt and stop its research projects.

Abbasi further stressed that Iran should not get engaged in debates over the number of centrifuges.

"We should have the number (of centrifuges) that we deem rational. We should complete our research along with the optimization and also make progress in the technology and production of machines with high SWU (Separative Work Units)."

Back in July 2014, Supreme Leader of the Islamic Revolution Ayatollah Seyed Ali Khamenei underlined that Iran's uranium enrichment was a vital issue, adding that the country definitely needed an enrichment capacity of 190,000 SWUs.

The Leader had warned that the West's objective in the issue of uranium enrichment is to persuade the Islamic Republic of Iran to limit its enrichment capacity to 10,000 SWUs.

Iran and the Group 5+1 (Russia, China, the US, Britain, France and Germany) are now in nuclear talks with the aim of hammering out a final agreement to end more than a decade of impasse over Tehran's peaceful nuclear program.

Amid diplomatic negotiations, reports suggest that the sequence and timing of removal of anti-Iran sanctions, Tehran's uranium enrichment capacity and the number of its centrifuge machines make up the main stumbling blocks to the nuclear talks.

<http://www.tasnimnews.com/English/Home/Single/624824>

[Return to Top](#)

FARS News Agency – Tehran, Iran
Monday, January 19, 2015

Senior Negotiator: Differences Still Remain in Iran-Powers Talks

TEHRAN (FNA) - Iranian Deputy Foreign Minister and senior negotiator Seyed Abbas Araqchi announced that differences still remain between Tehran and the world powers in the nuclear talks, adding that the next round of the negotiations will be held early in February.

"The two sides enter the talks completely seriously and are determined to reach an agreement but discords and differences exist too. We studied different ways to settle the differences and decided to continue the talks," Araqchi told the state-run TV in Geneva where he held talks with his counterparts from the Group 5+1 (the US, Russia, China, Britain and France plus Germany) on Sunday.

He noted the Iranian delegation's bilateral and multilateral negotiations with the representatives of the three European members of the G5+1 as well as China, the US and Russia in Geneva in the past few days, he said, "We decided to continue the consultations at different levels and will hold talks again in early February."

Araqchi said that the exact time and venue of the talks will be announced later.

In relevant remarks on Saturday and before holding the latest round of talks with the G5+1, Araqchi said that there are still wide gaps between Tehran and the world powers in their nuclear talks, adding that a final deal needed the opposite sides' good will.

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"The atmosphere prevailing over the negotiations is completely serious and the two sides are determined to reach an agreement but there are problems, distances and different views. The distances are very wide over certain cases and in some other cases the gaps are very narrow, and we are trying to narrow down the distances between the two sides," Araqchi said.

"We are still hopeful and think that if the other side shows the necessary determination and good will, reaching an agreement will be possible," he added.

On Wednesday, Iranian Foreign Minister Mohammad Javad Zarif cautioned the G5+1 not to miss the present opportunity for cutting a final deal with Iran.

Speaking in a televised interview in Geneva, Zarif advised nuclear negotiators to use opportunity for resolution of the deadlock over Iran's nuclear program.

Upon arrival in Geneva, Zarif called on his western counterparts in the nuclear talks to show courage and avoid drawing baseless redlines to make a landmark nuclear deal possible.

"Now we have come to a stage that requires the other side to take its decision in order to enable use to move forward," Zarif said upon arrival in Geneva where he later met his US counterpart John Kerry on the latest developments in talks between Tehran and the G5+1.

"There need to be some new and comprehensive proposals, and we are ready to bring all issues to final results, but we should see the extent of the readiness of the other side," he added.

Zarif asked the western powers to take serious and brave decisions to help the negotiations move forward and produce results and avoid specifying improper redlines.

The 10th round of negotiations between Iran and the six world powers was held in Vienna from November 18 to 24, where the seven nations decided to extend the talks until July after they failed to strike an agreement.

The latest round of the nuclear talks between the two sides was held at the level of deputy foreign ministers in Geneva, Switzerland, on January 18.

<http://english.farsnews.com/newstext.aspx?nn=13931029000286>

[Return to Top](#)

Al Arabiya – Dubai, U.A.E.

Syria Starts Razing Chemical Weapons Sites: OPCW

Agence France-Presse (AFP)

Monday, 19 January 2015

The Hague -- Syria has begun destroying its remaining chemical weapons production sites, despite being hampered by bad weather and logistical problems, the world's chemical watchdog said Monday.

"Destruction operations commenced in December," Organization for the Prohibition of Chemical Weapons (OPCW) spokesman Peter Sawczak told AFP in The Hague, without elaborating.

Syria had said previously demolition of the 12 hangars and tunnels would begin in November, but work stalled when the contractor pulled out.

Two other Syrian companies were given the project but the firm tasked with destroying five tunnels had to wait for deliveries of explosives and equipment, Syria told the United Nations in November, after running months behind schedule.

The OPCW, which is overseeing the dismantling of Syria's chemical weapons programme, in July gave Damascus 60 days to finish demolishing the sites.

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"The destruction has begun. They are starting on the tunnels," confirmed a Hague-based source on Monday, asking not to be named.

"There was a bit of a delay on the pouring of cement because of the snow," the source added, saying "they aim to tackle one tunnel each month."

Syria's U.N. Ambassador Bashar Jaafari has said the destruction process will be completed by June.

Syria finished disabling the production sites by October 2013, however the structures that house them still needed to be destroyed.

A total of 1,300 metric tons of chemical weapons have been removed from Syria, with the majority being destroyed aboard the US Navy ship MV Cape Ray.

After an August 2013 sarin attack outside Damascus that much of the international community blamed on President Bashar al-Assad's government, the regime agreed to turn over its chemical arsenal.

The United States threatened military action against Damascus over the attack, but held off following the chemical disarmament agreement.

Damascus and the rebels have accused each other of using chemical weapons, including chlorine, in the nearly four-year war that has killed more than 200,000 people.

<http://english.alarabiya.net/en/News/middle-east/2015/01/19/Syria-starts-razing-chemical-weapons-sites-OPCW.html>

[Return to Top](#)

TASS Russian News Agency – Moscow, Russia

Second Unit of Iran's Bushehr NPP to Be Commissioned in 8 Years — Head of Atomic Agency

The third unit of the Bushehr nuclear plant will be built within two years after hooking up the second unit to the national power grid

January 19, 2015

TEHRAN, January 19. /TASS/. Iran plans to commission the second power unit of the Bushehr nuclear power plant within the next eight years, the head of the Atomic Energy Organization of Iran (AEOI), Ali Akbar Salehi told the Tasnim News Agency on Monday.

Apart from that, he said, the third unit of the Bushehr nuclear plant will be built within two years after hooking up the second unit to the national power grid. In his words, Iran has set a goal of generating 20,000 megawatts of electricity from the use of nuclear energy. So far, Iran's only nuclear plant in the southern port city of Bushehr is capable of generating 1,000 megawatts of electricity.

Tasnim said Iran is planning to build more nuclear plants in the Bushehr province, along the Gulf coastline. Speaking to journalists on the occasion of the Clean Air Day marked in Iran on Monday, Ali Akbar Salehi stressed that nuclear plants play an important role in preventing air pollution in the country's big cities.

Iran's first NPP

The Bushehr first unit was put into operation in 2011. This was one of the most difficult projects in the history because the construction started in 1974 and ended in 1980.

Twelve years later Russia and Iran agreed to resume the activities. It took 14 years to build the plant.

The Bushehr nuclear power has never been targeted by any international sanctions. The plant is being built under the control of the IAEA (International Atomic Energy Agency). In compliance with the supplements to the 1992 agreement, Iran was obliged to return spent nuclear fuel back to Russia.

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Iran sits astride several major fault lines and is prone to frequent earthquakes, some of which have been devastating.

On April 9, a 6.1-magnitude quake rocked the south of Iran, with an epicenter around 100 kilometers (60 miles) from Bushehr.

Western concerns also include Iranian engineers' ability to run a power plant constructed of components from three different sources — German, Russian and domestic.

<http://itar-tass.com/en/world/771967>

[Return to Top](#)

Sputnik News – Russian Information Agency

Russia, Iran Sign Joint Military Cooperation Agreement

Russian Defense Minister and his Iranian counterpart stressed the importance of developing an intergovernmental cooperation aimed at countering meddling in the affairs of the region by external forces.

20 January 2015

TEHRAN, January 20 (Sputnik) – Russia and Iran signed on Tuesday an intergovernmental agreement on military cooperation.

“A great step in consolidating these relations [between Russia and Iran] was today’s signing of an intergovernmental agreement on military cooperation. A theoretic base of cooperation in the military sphere has been created,” Russian Defense Minister Sergei Shoigu said after signing the agreement with Iranian Defense and Armed Forces Logistics Minister Hossein Dehghan in the country’s capital of Tehran.

Shoigu added that during negotiations, an agreement was reached on “bilateral cooperation in practical regards and to promote an increase in the military capabilities of the armed forces of our countries.”

Russia and Iran have agreed to confront external meddling in the affairs of the region, Iranian Defense and Armed Forces Logistics Minister Hossein Dehghan said Tuesday.

“[During negotiations,] the importance of the need to develop Russia and Iran’s cooperation in the joint struggle against meddling in the affairs of the region by external forces that are not part of it was framed,” Dehghan said after a meeting in Tehran with Russian Defense Minister Sergei Shoigu.

After the meeting with Shoigu, Dehghan said that according to both Russia and Iran, the reason for aggravation in the situation of the region was US policy that “meddles in the domestic affairs of other countries.”

Russia and Iran also agreed on increasing the number of port calls by the navies of both countries. “We agreed to expand the practice of making port calls by Russian and Iranian warships,” Shoigu said.

The Russian defense chief, who is visiting Iran for the first time in 15 years, pledged Russia’s commitment to “long-term and multilevel” cooperation with Iran, including in the military sphere. He stressed that common security challenges could be addressed more effectively by boosting such cooperation.

Russian-Iranian military technology ties soured in 2010 when Moscow took part in the UN Security Council sanctions against Tehran over its controversial nuclear program. The sanctions imposed on Iran over the past few decades include a complete embargo on arms sales.

The Center for Analysis of World Arms Trade in Moscow estimates that Russia has lost up to \$13 billion in arms contracts because of Western-backed sanctions against Iran.

<http://sputniknews.com/military/20150120/1017111548.html>

[Return to Top](#)



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San Diego Union-Tribune – San Diego, CA

UN: Iran Honors Pledge to Temporarily Freeze Nuke Program

By GEORGE JAHN, Associated Press (AP)

January 20, 2015

VIENNA (AP) — Iran is honoring its commitment not to expand atomic activities that could be used to make weapons while it negotiates with six world powers on a lasting nuclear deal, according to a confidential U.N. report released Tuesday.

Obtained by The Associated Press shortly after it was posted on the internal website of the U.N.'s International Atomic Energy Agency, the report could be used by the White House to argue that Iran is negotiating seriously.

The U.S. administration is pushing back against the threat of new sanctions on the Islamic Republic being floated by a bipartisan group of U.S. senators, with President Barack Obama warning that could scuttle the talks.

Negotiators seek a framework agreement by March, followed by a comprehensive deal in June putting long-term constraints on Iran's ability to make nuclear arms in exchange for sanctions relief.

The greatest U.S. concern is Iran's uranium enrichment program, which can generate grades of material ranging from reactor fuel to the fissile core of nuclear arms.

Iran denies it wants such weapons, but agreed late last year to stop expanding enrichment and other atomic activities while negotiating. The monthly IAEA update said it continued to observe its obligations and was:

- not enriching uranium above 5 percent, which is substantially below the 90-percent level needed for the fissile core of a nuclear weapon.

- diluting or converting most of its stockpile of 20-percent enriched uranium, which can be further enriched to weapons-grade material much more quickly than at 5 percent level.

- not advancing work at an underground uranium enrichment facility thought impervious to last-resort air attacks in an effort to stop Iran's nuclear program

- maintaining a construction freeze on nearly finished reactor that would produce substantial amounts of plutonium — like highly enriched uranium a source for fissile warhead material.

Diplomats said on Tuesday that the latest negotiating round ending on the weekend in Geneva made some progress, but differences persist over uranium enrichment and other issues.

<http://www.utsandiego.com/news/2015/jan/20/un-iran-honors-pledge-to-temporarily-freeze-nuke/>

[Return to Top](#)

The Times of Israel – Jerusalem, Israel

Israeli TV Shows 'Iranian Missile' that 'Can Reach Far Beyond Europe'

Satellite images taken outside Tehran feature first look at long-range missile newly developed by Iran, TV report says

By Times of Israel staff

January 21, 2015

Iran has built a 27-meter-long missile, capable of delivering a warhead "far beyond Europe," and placed it on a launch pad at a site close to Tehran, an Israeli television report said Wednesday, showing what it said were the first satellite images of the missile ever seen in the West.

It stressed that the missile could be used to launch spacecraft or satellites, but also to carry warheads.

The Channel 2 news report showed satellite imagery documenting what it said was Iran's "very rapid progress" on long-range missile manufacture.

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It showed one photograph of a site near Tehran, which it said the West had known about for two years, where Iran was working on engines for its long-range missiles.

It then showed a satellite photograph of a second site, nearby, which featured a launch pad, with the 27-meter missile on it — an Iranian missile “never seen before” by the West.

The missile is capable of taking a manned spacecraft or satellite into space, the TV report said.

It is also capable of carrying a conventional or non-conventional warhead “far beyond Europe,” the report added.

The TV report said the satellite images were taken by the Eros B commercial Earth observation satellite, which was designed and manufactured by Israel Aircraft Industries, launched in 2006, and is owned by the Israeli firm ImageSat International.

Israel has long charged that Iran is working toward a nuclear weapons capability, and has publicly opposed any negotiated accommodation with Iran that would leave it with a uranium enrichment capability for potential nuclear weapons use.

<http://www.timesofisrael.com/israeli-tv-shows-iranian-missile-that-can-reach-far-beyond-europe/>

[Return to Top](#)

Tasnim News Agency – Tehran, Iran

Iranian, US Diplomats Hold Nuclear Talks in Zurich

January 23, 2015

TEHRAN (Tasnim) – Deputy foreign ministers of Iran and the US kicked off a new round of talks on Tehran’s peaceful nuclear program in the Swiss city of Zurich on Friday.

Iran’s Deputy Foreign Minister Abbas Araqchi and US Undersecretary of State Wendy Sherman met in Switzerland for a 2-day round of nuclear negotiations.

The meeting follows the latest round of diplomatic discussions in Geneva last week.

Previous reports suggested that European Union Special Advisor on the Iran talks, Catherine Ashton and senior EU negotiator Helga Schmid are also scheduled to join the Zurich talks.

Iran and the Group 5+1 (Russia, China, the US, Britain, France and Germany) wrapped up the latest round of negotiations in Geneva last week, with the next round slated for early February.

Negotiations between Iran and the Group 5+1 (also known as the P5+1 or E3+3) aim to hammer out a final agreement to end more than a decade of impasse over Tehran’s peaceful nuclear program.

According to senior Iranian nuclear negotiator Abbas Araqchi, a full round of nuclear talks involving all six powers and Iran has already been fixed for early February.

<http://www.tasnimnews.com/English/Home/Single/629585>

[Return to Top](#)

The Times of India – New Delhi, India

Pakistan's Fourth Nuclear Reactor at Khushab now Appears Operational

Press Trust of India (PTI)

January 17, 2015

Issue No.1149, 23 January 2015

United States Air Force Center for Unconventional Weapons Studies | Maxwell AFB, Alabama

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WASHINGTON: Pakistan's fourth heavy water reactor at Khushab nuclear site which allows it to build a larger number of miniaturised plutonium-based nuclear weapons now appears to be operational, a US think-tank has said.

The reactor is part of Pakistan's programme to increase the production of weapons-grade plutonium.

"A recently purchased Digital Globe high resolution satellite image dated January 15, 2015 shows that Khushab's fourth reactor's external construction is complete and has become operational," David Albright and Serena Kelleher-Vergantini of the Institute for Science and International Security (ISIS) said on Friday.

"This assessment is based on the presence of a very specific signature: steam is venting from the reactor's cooling system," he said.

Pakistan's nuclear arsenal is increasing at a pace faster than any other country and now is reported to have more nuclear weapons than that of India.

Albright and his co-author said Pakistan's Khushab nuclear site, located 200 kilometres south of Islamabad, is dedicated to the production of plutonium for nuclear weapons.

"Its expansion appears to be part of an effort to increase the production of weapons-grade plutonium, allowing Pakistan to build a larger number of miniaturized plutonium-based nuclear weapons that can complement its existing highly enriched uranium nuclear weapons," they wrote.

"Originally, the site consisted of a heavy water production plant and an estimated 50 megawatt-thermal (MWth) heavy water reactor, both of which became operational in the 1990s. However, Pakistan initiated the construction of a second heavy water reactor between the year 2000 and 2002, a third one in 2006, and a fourth one in 2011," they said.

Noting that Pakistan has never provided public information regarding any of the Khushab reactors, Albright and Kelleher-Vergantini said therefore, the power output can only be estimated.

ISIS estimates the power of the original heavy water reactor to be about 50 MWth while reactors 2, 3, and 4 are believed to generate double or more the power of the first one, and are thus capable of producing more than double the amount of weapon-grade plutonium per year.

A technical consultant to ISIS with years of experience in heavy water reactors assessed for ISIS that the power of these newer heavy water reactors is likely to be larger than the first one and that over time their power could be further increased.

The increase in power can be accomplished by using more advanced fuel or adding heat removal capacity, they wrote.

<http://timesofindia.indiatimes.com/world/pakistan/Pakistans-fourth-nuclear-reactor-at-Khushab-now-appears-operational/articleshow/45919653.cms>

[Return to Top](#)

The Hindu – Chennai, India

DRDO gears up for Maiden Canister-Based Trial of Agni-V

Pre-mission activities were in full swing at Wheeler Island for the crucial test

By Y.Mallikarjun

January 20, 2015

Hyderabad -- India is all set to carry out the first canister-based trial of the 5,000 km-plus nuclear weapons capable Agni-V Intercontinental Ballistic Missile from the Wheeler Island, off the Odisha coast on January 31.



USAF Center for Unconventional Weapons Studies
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Pre-mission activities were in full swing at Wheeler Island for the crucial test when the missile would be fired in the “final induction configuration”, Defence Research and Development Organisation (DRDO) sources told The Hindu on Monday.

In view of the long range of the missile, the radars, telemetry and electro-optical tracking systems would be spread out and deployed in a way that there would be “repeatability” of data, the sources added.

High-end telemetry system

A sophisticated high-end telemetry system would be exercised for its full capacity to capture data.

After the successful trial of Agni-V for the second time in September, 2013, DRDO Director General and Scientific Advisor to Defence Minister Avinash Chander had then announced that the next launch would be canister-based.

First stage

As a prelude to the actual launch, DRDO missile technologists had in the past conducted ‘Missile Ejection Test’ from a canister in simulated conditions on two occasions when various parameters that would have to be met during the actual trial were validated.

The first stage of the three-stage solid fuelled Agni-V would be ignited at a height of 25-30 metres during the actual launch after a gas generator at the bottom of the canister provides force equivalent to 300-370 tonnes to push the missile to that height.

DRDO sources said the major advantage of canister was that it would provide operational flexibility to the user to launch the missile from anywhere as also easy and safer transportation.

The missile would be inducted after one or two more trials to test the robustness of the system.

A few tests would be enough for a large system, the sources added.

India joined an elite club of nations which possess ICBMs after the maiden launch of Agni-V ended in a roaring success on April 19, 2012.

<http://www.thehindu.com/news/cities/Hyderabad/drdo-gears-up-for-maiden-canisterbased-trial-of-agniv/article6803552.ece?ref=tpnews>

[Return to Top](#)

The National Interest.org – Washington, D.C.

OPINION/Feature

4 U.S. Weapons of War That Need to Be Retired Now

America's military sports some of the finest weapons imaginable. However, there are a few exceptions...

By Dave Majumdar

January 17, 2015

The United States boasts some of the most modern weapons on Earth, but there are also many systems in the American arsenal that are well past their prime.

While some older weapons are worth their weight in gold—the long-serving Boeing B-52 and Fairchild Republic A-10 Warthog come to mind—and continue to prove their worth time and again, there are other systems that have proven to be less than stellar. Other systems have proven to be valuable in the past, but may no longer be needed or affordable in an era when money is tight.

Listed here are four weapons systems that America should consign to the scrap heap.

LGM-30G Minuteman III

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The long-serving 1960s-era LGM-30G Minuteman III forms the land-based component of America's strategic nuclear deterrence. The Minuteman III is the last American land-based intercontinental ballistic missile to remain in service—the newer, and much more capable LGM-118 Peacekeeper having long since been retired. Even after the 1991 demise of the Soviet Union and the end of the Cold War, these long-range Minuteman III ICBMs missiles have kept up a silent vigil for the event of a third world war.

Though the missiles have been upgraded many times, the weapons are old and increasingly costly to maintain. Nor has the U.S. Air Force, which is charged with maintaining the doomsday arsenal, been a particularly good steward of these systems. Bad behavior has been rampant—many officers have been caught cheating on exams and abusing subordinates. Morale has all but collapsed.

Meanwhile, the weapons will need to be replaced at some point—and that will cost billions. But does America really need a nuclear triad? Is the small chance of a nuclear war worth spending untold billions to maintain a land-based ICBM force? That is a question policy makers must answer before making such a huge investment of taxpayer dollars. It is almost universally accepted that the U.S. Navy's submarine-launched ballistic missiles are infinitely more survivable—and one might argue that adopting a strictly sea-based deterrent might be a far better deal for the American taxpayer.

Boeing F/A-18A/B/C/D Hornet

The original Boeing F/A-18 Hornet was an excellent fighter and attack aircraft to replace the U.S. Navy's LTV A-7 Corsair II and McDonnell Douglas F-4 Phantom II and to complement the Grumman F-14 Tomcat. While the so-called "legacy" Hornet remains an excellent fighter that continues to serve the Navy well, the aircraft are old. In fact, the Navy has been forced to repeatedly extend the service life of the Hornet from the originally envisioned 6000 hours to more than 10,000 hours in some cases.

Extending the service life of the Hornet is proving to be costly and difficult. Much more difficult than the Navy or Boeing ever imagined. Add to that the fact that there is a shortage of technicians who can perform the work, which means there is a massive backlog of Hornets that are in need of repair.

Moreover, those life-extended aircraft—which are ancient by fighter jet standards—are increasingly difficult and costly to maintain. It could be argued it's just not worth the time or money.

Instead, the Navy—and moreover, Congress—should consider funding the purchase of additional F/A-18E/F Super Hornet fighters, which are the larger and much more capable versions of the venerable carrier-based jet, to replace the old legacy Hornet fleet.

Raytheon AIM-120 AMRAAM

The Raytheon AIM-120 AMRAAM was the world's most advanced air-to-air missile when it was originally introduced in the early 1990s at the end of the Cold War. Compared to its AIM-7 Sparrow predecessor, the AIM-120 was a massive improvement with its combination of inertial guidance and active radar homing. However, as time has gone by, potential enemies have learned how to defeat the AMRAAM.

The missile is very vulnerable to digital radio frequency memory (DRFM) jammers—which are found on the most advanced Russian and Chinese fighters like the Sukhoi Su-35S Flanker-E. American pilots say they expect they will have to fire several missiles to hit a single target. "Even with my six AIM-120's in the F-22, sometimes it is not enough," one senior Air Force pilot told the *National Interest*. "The Pk [probability of kill] of those missiles is low against a DRFM jamming fourth gen+ threat."

The AMRAAM must be replaced sooner rather than later—it's great to have the world's best fighters, but it's a huge problem if their weapons can't hit the broadside of a barn.

M-16/M-4

The U.S. Army has known that the long-serving M-16 and its M-4 progeny are terrible weapons since the Vietnam era. However, the Army continues to insist on keeping the M-16 and its derivatives in service.

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The fundamental problem with the M-16 series is its direct gas impingement design—that design is prone to fouling, because the firing mechanisms are exposed to the exhaust from the cartridge when the weapon is fired. That means the weapon must be kept meticulously clean at all times—something that is not always possible in combat.

There is no solution to the problem short of replacing the M-16 series with a new weapon—ideally with a gas-piston design—like the Heckler & Koch HK416. The M-16 series has let the troops down repeatedly over its long career, but the Army will not replace it because of the cost. Not only are weapons like HK416 more expensive individually, the logistical train would have to be completely revamped. That costs money—money the Army would rather spend on other priorities.

Dave Majumdar has been covering defense since 2004. He currently writes for the U.S. Naval Institute, Aviation Week and The Daily Beast, among others. Majumdar previously covered national security issues at Flight International, Defense News and C4ISR Journal. Majumdar studied Strategic Studies at the University of Calgary and is a student of naval history.

<http://nationalinterest.org/feature/4-us-weapons-war-need-be-retired-now-12055>

[Return to Top](#)

Albuquerque Journal – Albuquerque, NM
OPINION/Guest Columns

Old or New Weapons? Get the Facts First

By Harish C. Sharma, Retired Engineer
Sunday, January 18, 2015

Since the Russian-induced crises in Ukraine and with China increasing its area of military control, questions arise whether we need to create a new and/or refurbished arsenal of nuclear weapons.

Should we start “underground testing” so that both the existing arsenal and also any newly designed weapon could be certified?

With the Republicans now controlling both the House and the Senate, experts predict concrete steps in this direction are inevitable. However, the real reasons for the need to expand the numbers or build an entirely new type of nuclear weapon must be established.

On an average, our nuclear arsenal is about three decades old. We have been refurbishing some of the oldest designed and built weapons with new gadgets, shining the covers and replacing a few old parts with new ones. Fortunately, the Defense Department wants these old weapons.

Since 1992, we have not tested any nuclear weapons. Every year, national laboratories have been certifying their reliability based on their computer programming and other test criteria.

But then, one of those national laboratories had assured us the use of “cat litter” was safe when shipping its radioactive waste to the Waste Isolation Pilot Plant. The result was the closure of WIPP for about two years, which may cost about a billion dollars. It has been over 10 months, but the laboratory has not been able to duplicate why there was fire and release of radioactive material at WIPP.

We have more than one type of weapon in our arsenal. So testing each type of weapon means we need to do many tests to confirm their reliability.

Technical skeptics say continued certification of the existing weapons to be operable may not be valid because so many items/materials have been changed in them, thus making original test data invalid.

This has prompted another argument that, if we have to begin testing, then why not design a completely new system?

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With the Defense Department's dependence on the triad system for national defense, the need for more than one type of weapon is evident. Refurbishing existing weapons alone is running into hundreds of billions of dollars. The projected cost of designing and making just one new weapons system could run into a trillion dollars.

Many experts suggest that we have a sufficient amount of nuclear material to make new ones. Soon after the end of the Cold War, President Bill Clinton declared a portion of radioactive material as excess. President George W. Bush twice declared additional amounts into the excess category.

Because Bush had added stringent requirements, we have still to identify the second declared excess amount of material. If other required uses of nuclear material are added to material already declared not available for new weapons, as per calculations, we do not have material for new weapons.

Before the formation of the National Nuclear Security Administration, Washington, D.C., restricted itself to giving broad guidelines and sending money to the sites. The sites did extremely well planning and doing all the work for the weapons system. But, realizing the power of money, political appointees at NNSA headquarters reorganized and now direct work at all the weapons complex sites.

The result has been delays and huge cost overruns for all the projects.

NNSA has been slowly dismantling the technical capabilities at its facilities. Senior officials of NNSA do not know which materials or what divisions at the weapons complex have been shut down. The critical factors in the manufacture of a new weapon system are unknown to NNSA management.

Consequently, the decision-makers do not know the real issues when discussing whether to add a new system or refurbish existing ones, or a combination of both.

Decision-makers should ascertain the facts before considering any solution to the spiraling problem of a weapons system that provides the foundation on which the security of free world is based.

Harish Sharma is an Albuquerque resident.

<http://www.abqjournal.com/527763/opinion/old-or-new-weapons-get-the-facts-first.html>

[Return to Top](#)

Defense One.com – Washington, D.C.

OPINION/Commentary

Can Ash Carter Tame the Nuclear Weapons Budget?

By Tom Z. Collina

January 22, 2015

If Ashton Carter is confirmed next month as defense secretary, as appears likely, he will face a dilemma: the Pentagon's trillion-dollar plans to modernize the U.S. nuclear arsenal are excessive and unaffordable. As the Air Force and Navy admit, their nuclear shopping lists outstrip their budgets. This gives Carter an historic opportunity to bring the nuclear weapons budget in line with U.S. security needs.

There are real advantages to scaling back the nuclear enterprise. Carter will presumably want to start new projects and expand others, such as cybersecurity (think Sony hack and North Korea) and anti-terrorism (Paris terror attacks), and he will have to find the money from within his own budget.

The good news is that the nuclear piggy bank is over-stuffed and ripe for a withdrawal.

At first look, Carter may seem an unlikely candidate to tackle this challenge. He served as the Pentagon's top weapons buyer and second-in-command from 2009 to 2013, meaning he had a hand in this drama. And, in 2013, Carter said nuclear weapons "don't actually cost that much."

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But Carter was talking mainly about the cost of the current arsenal, not the looming modernization. More recently, senior Pentagon officials have begun to appreciate how expensive this will be. As Undersecretary of Defense Frank Kendall said, “We’ve got a big affordability problem out there with those programs.”

Others are more blunt. A recent commission co-chaired by former Defense Secretary William Perry, Carter’s former boss, and retired Gen. John Abizaid called current plans for the arsenal “unaffordable” and a threat to “needed improvements in conventional forces.” They estimated that the nuclear arsenal could cost up to \$1 trillion over 30 years.

How did the nuclear budget get so plump? Primarily through neglect. Instead of leading a thoughtful review to determine how much of the aging U.S. nuclear arsenal needs to be rebuilt for the post-post-Cold War era (some but not all), the Obama administration let the military services decide what they would like (everything).

So we now have an out-of-control nuclear shopping list that includes a dozen nuclear-armed submarines, up to 100 long-range bombers, hundreds of land-based ballistic missiles, air-launched cruise missiles and rebuilt nuclear warheads to go with them.

This is excessive—and dangerous. The Cold War ended 25 years ago. Russia may be rattling its sabre in neighboring Ukraine, but this does not call for a nuclear buildup. Instead, the United States needs to support its NATO allies with conventional forces, such as fighter jets and surface ships, which are also competing for scarce defense dollars. Overinvesting in nuclear weapons just starves the programs we really need.

Next month, the Pentagon is expected to request about \$534 billion for fiscal year 2016, roughly \$34 billion more than Congress can provide under spending caps. Outgoing Defense Secretary Chuck Hagel had been hoping that the budget caps would be overturned, but, as he acknowledged, “hope is not a strategy.”

The next defense secretary can turn the budget crisis to his advantage by shifting funds from nuclear programs to higher priority defense needs. Carter has a well-deserved reputation for his smarts and knows that there is fat to cut out of current modernization plans. The United States can save tens of billions, even if it stays at currently planned New START warhead levels, by taking these simple steps:

1. Keep nuclear submarines closer to U.S. shores. The Navy is proposing to pay for its \$100 billion submarine program by taking funds from other military programs, rather than making trade-offs within its own budget. Here is a better plan. The Navy wants 12 new subs so at any given time it can “forward deploy” about five of them close to targets in Russia and China for “prompt launch.” But the Navy no longer needs to deploy subs in launch position. The subs are invulnerable, deep beneath the sea, and thus even after an unthinkable nuclear attack they could move into launch position over a few days. Under this scenario, the Navy would only need eight subs to carry 1,000 warheads, as planned. This would save \$21 billion over ten years, according to the nonpartisan Congressional Budget Office (CBO).

2. Buy new systems only when you need them. The Air Force plans to begin developing its new long-range bomber in 2016 for production around 2025. But the Air Force also plans to modernize and operate its current fleet of 159 bombers, including B-2s and B-52s, into the 2050s. Thus the military can defer this program until 2025 at the earliest, saving \$34 billion over ten years, according to CBO.

3. Don’t replace things just because we had them before. Before replacing an old system, we must ask, do we still need it? The Air Force wants a new nuclear-armed cruise missile even though it no longer makes sense. The first air-launched cruise missile was motivated by the fact that the Air Force at that time did not have a bomber that could penetrate enemy air defenses. Now it does (the B-2), and the new bomber would be a “penetrator” as well. It is redundant and wasteful to build a penetrating missile for a penetrating bomber, and the new cruise missile should be cancelled, saving \$3 billion. The Air Force is already overhauling its gravity bombs for \$10 billion, and that is enough.

In addition, the Air Force wants a new generation of Intercontinental Ballistic Missiles (ICBMs), possibly on mobile launchers, even though the life of the current fleet can be extended indefinitely, and even though an Air Force-

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sponsored RAND study found that a new missile was unnecessary and could cost up to \$200 billion. The new ICBM should be cancelled, saving \$16 billion.

These common sense steps would save up to roughly \$75 billion over 10 years. That money could buy a lot of troops and conventional weapons, all much more central to addressing high priority threats to the United States.

If President Barack Obama is feeling bold, he could reduce the overall number of nuclear weapons below New START and save billions more. In 2013, U.S. military leaders said the United States could reduce its nuclear forces by one-third while maintaining its security.

Carter, if confirmed, and Obama have a choice to make. Do they want to leave office with a shiny trillion-dollar nuclear arsenal named after them? Or do they want to use the time left to bring the United States closer to the president's vision of "a world without nuclear weapons"?

They can't do both.

Tom Z. Collina is the Policy Director for Ploughshares Fund.

<http://www.defenseone.com/ideas/2015/01/can-ash-carter-tame-nuclear-weapons-budget/103479/?oref=d-river>

[Return to Top](#)

ABOUT THE USAF CUWS

The USAF Counterproliferation Center was established in 1998 at the direction of the Chief of Staff of the Air Force. Located at Maxwell AFB, this Center capitalizes on the resident expertise of Air University, while extending its reach far beyond - and influences a wide audience of leaders and policy makers. A memorandum of agreement between the Air Staff Director for Nuclear and Counterproliferation (then AF/XON), now AF/A5XP) and Air War College Commandant established the initial manpower and responsibilities of the Center. This included integrating counterproliferation awareness into the curriculum and ongoing research at the Air University; establishing an information repository to promote research on counterproliferation and nonproliferation issues; and directing research on the various topics associated with counterproliferation and nonproliferation .

The Secretary of Defense's Task Force on Nuclear Weapons Management released a report in 2008 that recommended "Air Force personnel connected to the nuclear mission be required to take a professional military education (PME) course on national, defense, and Air Force concepts for deterrence and defense." As a result, the Air Force Nuclear Weapons Center, in coordination with the AF/A10 and Air Force Global Strike Command, established a series of courses at Kirtland AFB to provide continuing education through the careers of those Air Force personnel working in or supporting the nuclear enterprise. This mission was transferred to the Counterproliferation Center in 2012, broadening its mandate to providing education and research to not just countering WMD but also nuclear deterrence.

In February 2014, the Center's name was changed to the Center for Unconventional Weapons Studies to reflect its broad coverage of unconventional weapons issues, both offensive and defensive, across the six joint operating concepts (deterrence operations, cooperative security, major combat operations, irregular warfare, stability operations, and homeland security). The term "unconventional weapons," currently defined as nuclear, biological, and chemical weapons, also includes the improvised use of chemical, biological, and radiological hazards.

The CUWS's military insignia displays the symbols of nuclear, biological, and chemical hazards. The arrows above the hazards represent the four aspects of counterproliferation - counterforce, active defense, passive defense, and consequence management.

[Return to Top](#)

Issue No.1149, 23 January 2015

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