

By General Larry Welch

To take an uncharacteristic approach for dealing with somber nuclear issues, let me begin with some good news.

First, there has been no use of a nuclear weapon since the end of World War II, even though there are thousands of such weapons in the world in the hands of multiple nations that have collectively faced tensions and conflicts of every kind short of world war. This historical fact attests to the value of the US nuclear deterrent.

The second piece of good news is that there are some 30 nations around the world, in fact more than 30, that have decided it is in their national interest to rely on the U.S. extended deterrent, rather than developing their own nuclear capability —although they would be capable of doing so. That historical fact says something about the critical contribution of the U.S. nuclear deterrent to nonproliferation.

The third item of good news is that, with strong support from the Departments of Energy and Defense and the Congress for 18 years, we now have the knowledge, the technologies, and the tools, to sustain an adequate deterrent indefinitely, without a return to nuclear explosive testing. If we suspect a problem with some aspect of a particular nuclear weapon, we design away from it. Nothing new about this — that is what we largely did during the Cold War when we were actively testing through nuclear explosive demonstrations. Today we would do it with even higher confidence. Of course it is possible that someday we will encounter something so unexpected that we can only resolve it with a series of nuclear tests. And even if we ratified the Comprehensive Test Ban Treaty, Safeguard F, which states that we can withdraw if our national interest requires it, covers that contingency.

The fourth piece of good news is that our stockpile stewardship program has made it possible to conduct essential life extension programs (LEP) for our nuclear weapons in a way that provides a safer, more secure, more reliable, and far smaller nuclear stockpile than otherwise would be possible — while still retaining a deterrent in which we can have high confidence.

The fifth piece of good news is that Departments of Energy and Defense have created a vision that will give us a smaller, safer, more secure, more reliable and more relevant stockpile of weapons for the long-term.

But there is also bad news. The bad news is that there is some danger that we may well forego all these opportunities, for a number of reasons. In particular, I see two major obstacles, possibly temporary, but which are of our own making.

The first obstacle is in our heads —or at least the heads of some people. It is this vision that somehow, if we dismantle our strategic nuclear deterrent, other nations would follow our lead and the world would then be a safer place. In this vein, a May 2012 report by the Global Zero calls for (1) eliminating nearly 80% of our current nuclear force; (2) “de-alerting” the remaining deployed U.S.

nuclear deterrent, and (3) entirely eliminating the ICBM leg of the triad, the most stabilizing part of the current nuclear deterrent Triad.

The only basis for the idea that drastically reducing the number of nukes we have would magically make us safer and help eliminate other nuclear dangers is hope. But hope is not a plan, and hope is not a basis for security. Hope does not defend us. I would ask who would be willing to rely on hope for the safety and security of their family? No one would do that. The answer is nobody. Then why would anyone then rely on hope for the safety and security of this country and of more than 30 countries that depend on our extended deterrent? Leading the world to zero nuclear weapons is, at best, a fairy tale.

The second obstacle is a set of decisions to implement the vision. While we have a broad understanding and broad agreement on where we need to go with the nuclear stockpile and how to get there, we have not yet made the decisions that will allow us to proceed down that path. The needed set of decisions is to proceed with what I *call smart life extension (LEP)*.

We do not have a choice as to whether or not to proceed with a set of life extension programs. Many of our nuclear weapons are more than 25 years old. As the weapons age, it becomes more difficult to verify that each weapon can operate reliably and that a weapon can safely remain in the stockpile. The life extension programs are the key to sustaining confidence in reliable and safe nuclear weapons. The issue is now whether we do this but rather, *how* — how do we do it smart?

Doing it smart means choosing a life extension program that at the end of the process leaves us with a nuclear stockpile that is safer, more secure, and more reliable. Smart means doing it in a way that ensures we have an alternative somewhere in the stockpile for a possible technical failure of any single weapon.

Smart life extension means having enough stockpiled weapons of the right kind to ensure that we have a geopolitical hedge to sustain an adequate deterrent in the face of an effort by any nation to suddenly embark on a rapid buildup of nuclear weapons .

And smart LEP means moving on with it and getting started now. Because if we do not, if we delay in making the decisions to do smart life extension, then we are in danger of adopting a piecemeal, band-aid approach that will in the end be more expensive, more difficult to maintain, and not able to deliver the end product we want. The product we want is the smallest, most reliable, safe, and secure stockpile that can support our national interests and those allies who rely on our nuclear umbrella.

With smart LEP we can have an effective deterrent with a smaller stockpile than the one we have now. Today we have a technical and geopolitical hedge that is much larger than the deployed stockpile, yet it is not complete and we are not happy with it.

But we know how to fix all that. We have laid out a vision. There is wide agreement with the vision. And, there is a feasible roadmap. We know what it will take.

So why don't we get on with it?

In addition to the two major obstacles already described, there are four side issues that continue to confuse the main requirement.

The first issue is the need for a triad for an effective strategic nuclear deterrent – a triad of Submarine Launched Ballistic Missiles, Intercontinental Ballistic Missiles (ICBMs), and strategic bombers.

Another issue is whether we have to sustain or extend the life of some of our warheads. There are those who say, “I don’t need to do an LEP on an ICBM warhead because we no longer need ICBMs.” Others say, “We don’t need to do the B61-12 LEP because we don’t need any bombers.”

A third issue is whether to maintain any of our weapons on alert.

And a fourth issue is whether nuclear weapons are even necessary.

My judgment on each of these matters rests on the proposition that the strategic nuclear Triad – submarines, ICBMs, and bombers – is more important today than it was at the height of the Cold War.

There are four underlying strength characteristics needed in an effective strategic nuclear deterrent.

The first characteristic is timely, adequate assured response when the president authorizes the use of these weapons. The second is the capacity for an assured second strike, providing a guarantee that, no matter what an adversary does, they can never feel confident that they can pull off a successful first strike. The third characteristic is resilience to technological breakthroughs or operational innovation. And the fourth is the ability to provide a visible, controlled demonstration of our will when needed to manage a crisis.

During the Cold War, assured, timely and adequate response was a requirement for all three legs of the triad. We had one-third of the bombers on alert. We had a large force of submarines at sea. And we had 1,000 ICBMs on alert.

Each of the three legs of the triad helped provide for an assured second strike. Again, we had submarines at sea, bombers on alert, and two mobile ICBM programs.

All three legs of the triad contributed to the need for resilience against technological breakthrough or operational innovation. We had a large force of submarine-launched ballistic missiles (SLBMs). We had multiple kinds of bombers. One thousand ICBMs were on constant alert including Minuteman III's and Peacekeeper missiles.

The fourth characteristic – a visible, controlled, demonstration of resolve and intent – was and is a job for the bomber.

In contrast to the Cold War force structure, today two legs of the triad, our SLBMs and ICBMs provide for adequate, timely, rapid response, although the recent report from the Global Zero proposes doing away with all ICBMs.

A single leg of the triad, the Trident Submarine force, provides assured second strike with reduced numbers of warheads. Still, I am more concerned about the number of submarines than the number of warheads on them. I would not go below the current number of subs, to protect our capacity for assured survivable response.

As to resilience in the face of technological surprise or operational innovation, only the ICBM force provides continuing assurance. An effective attack against the ICBM force would require a massive, quickly attributable, attack with accurate, high yield warheads. With years of focus on the subject, I have heard no conceivable alternative approach with a technological breakthrough or an operational innovation that could put several hundred single warhead ICBMs at risk. That makes the ICBM the most stabilizing leg of the triad today. Again, however, Global Zero would do away with that capability by retiring all the ICBMs. In my view, that could, over time, invite action against the other two legs of the triad.

It might seem credible to argue that ICBMs are no longer needed because the present state of affairs between major nuclear powers makes an action against our strategic nuclear forces, with or without ICBMs increasingly unlikely. The problem with that argument is that if we were to give up the ICBM leg of the triad, it would take well over a decade to reverse the decision even if treated as a national emergency. The highly optimistic perception of the state of affairs among major nuclear powers is based on intent. Who is willing to bet the nation's security on accurately forecasting intent over a decade or decades? National security is assured by our capability relative to potential adversaries' capability, not by our perception of current intent.

And finally, reliance on the nuclear-armed bomber is still the best approach to the flexibility and for a controlled, visible demonstration of resolve. Again, there are those voices that would do away with that in the Global Zero proposals.

I have stated the case for my belief that adequate strength in each leg of the triad is even more important today than it was at the height of the Cold War. Doing away with one of these legs does violence to one or more of essential four characteristics of an adequate deterrent force. To do so would increase risk. I am unable to discover what problem weakening the deterrent fore solves, although I can describe in detail what problems it creates.

As to the ICBM alert issue, of all the legs of the triad, the most secure, tried, proven, validated, continually tested command and control system is the one that controls the ICBMs. We test it daily. We red-team challenge it frequently. We validate it over and over again. There is simply no way to launch an ICBM without the approval of the president of the United States. If we cannot trust the president with that decision, then our problem is considerably bigger than ICBMs on alert.

Regarding the role of nuclear weapons in the 21st century, we have heard comments to the effect that these are old Cold War weapons that have not been used, will never be used, and therefore serve no purpose. The primary role of U.S. nuclear weapons for well over half a century has been to prevent their use. To that end, we have used them every second of every day since the first deterrent systems were deployed. They have worked perfectly. The nuclear deterrent is the only weapons system

I know of that has worked perfectly without fail, exactly as intended, for their entire life span. And because they have been so successful, then there may be some who have forgotten why we need them.

I could easily agree with those who say the only role of U.S. nuclear weapons is to prevent the use of nuclear weapons. I am not a nuclear war fighter. I do not believe that nuclear weapons are useful for the U.S. in fighting a war. The motto of the Strategic Air Command, which I was pleased to command, was "Peace is Our Profession." That is not an empty slogan. That is the dedication and the focus of every man and woman in the Strategic Air Command and now U. S. Strategic Command.

That is the focus and the purpose of every man and woman today in the ICBM, SLBM, and bomber force — to ensure that no one could ever calculate that the gain would exceed the loss from attacking this country or a country under our nuclear umbrella with a nuclear weapon. And that works. It is as Paul Nitze, the great American statesman once said, when the Soviets looked at the strategic equation in consideration of using nuclear weapons, "I want them to always conclude: Not today Comrade". An adequate, credible strategic nuclear deterrent is the only assurance that whoever asks that question will get the same answer – "Not today."