

Moscow and Washington deadlocked over nuclear arms control

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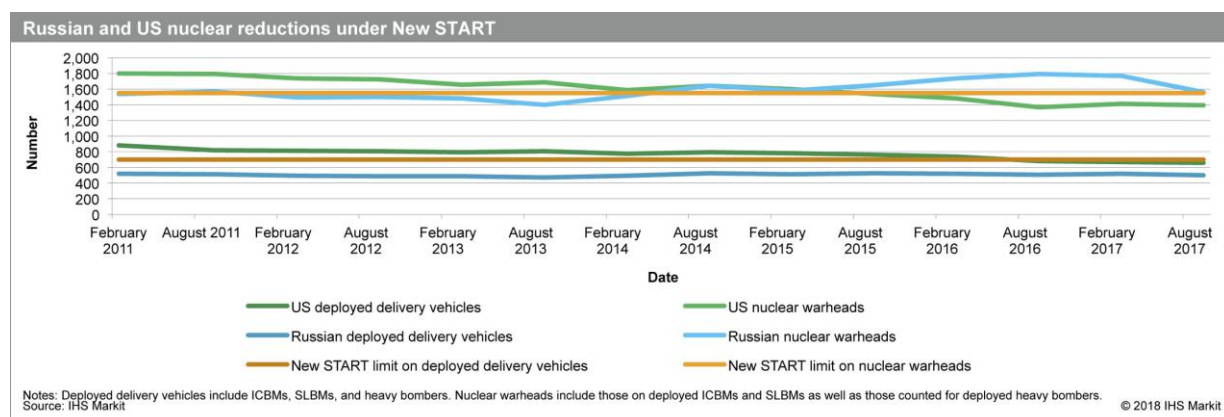
As Russia and the United States meet the limits agreed by the New START treaty, the shared approach to arms control adopted during the past 50 years is unravelling. *Richard Weitz* examines the differing attitudes towards the composition of strategic arsenals and the prospect for further arms reductions

On 5 February 2018, Russia and the United States are likely to meet the limits on their strategic nuclear delivery vehicles (SNDVs) as established by the New Strategic Arms Reduction Treaty (START) signed on 8 April 2010. This bilateral agreement mandates reductions in Russian and US nuclear arms that will remain in force until 2021.

Under the current accounting rules of New START, Russia and the US must reduce their nuclear arsenals to 800 SNDVs – of which 700 could be actively deployed at any given time – and 1,550 nuclear warheads on these systems by 5 February 2018. Although New START counts the number of warheads on each strategic missile, weapons deployed on strategic bombers only count as a single warhead. Unlike some previous agreements, New START lacks sub-limits, giving each party freedom to embrace its preferred mix of intercontinental ballistic missiles (ICBMs), submarine-launched ballistic missiles (SLBMs), and bombers.

As of January 2018, Russia and the US were continuing to implement New START as required. The parties convene biannual meetings of the treaty's Bilateral Consultative Commission; by February 2017, Russia and the US had exchanged 12,578 notifications, and by August 2017 245 on-site inspections had been conducted by both parties.

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Russian and US nuclear reductions under New START. (IHS Markit)

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Benefits and challenges

Russia (as the legal successor to the Soviet Union) and the US have had strategic arms control agreements in place since former US president Richard Nixon and former Soviet general secretary

Leonid Brezhnev signed the Anti-Ballistic Missile Treaty and interim Strategic Arms Limitations Talks agreement on 26 May 1972. Since then, successive arms control agreements have entered into force, the latest being New START on 5 February 2011.

Mutually acceptable and verifiably enforced limits on Russian and US warheads and SNDVs, as well as rules for counting them, can benefit both parties by promoting parity between their nuclear forces. The three main types of SNDVs that can deliver nuclear strikes at distances greater than 5,500 km – representing the ‘nuclear triad’ – are land-based ICBMs, SLBMs, and long-range heavy bombers carrying nuclear gravity bombs or long-range air-launched cruise missiles (ALCMs).

Arms control agreements can also include verification and compliance provisions, and mechanisms for resolving disputes. Their benefits can go beyond limiting a competitor’s nuclear arsenal. By constraining numbers, they can cut costs and help foster predictability and transparency across parties. Moreover, under the auspices of such agreements, bi-laterally enforced cuts have been used to demonstrate progress towards meeting international disarmament obligations.

Although both countries are on track to meet their New START obligations, Russian-US disarmament dialogue has stalemated since 2010, in turn raising questions about the likelihood of future agreements. The emerging impasse largely stems from diverging perspectives on the relationship between strategic offensive and defensive capabilities, although disagreements also stem from issues relating to force enhancements such as multiple independently targetable re-entry vehicles (MIRVs) and hypersonic weapons, tactical nuclear weapons (TNWs), and wider military capabilities. Furthermore, these differences are emerging against the backdrop of deteriorating Russian-US relations, which have been in decline since at least 2008.



Russia's road-mobile Topol-M (SS-27 'Sickle B') ICBM on display during the 9 May 2011 Victory Day Parade in Moscow. Russia is modernising its strategic strike capabilities with the multiple-warhead variant of the Topol-M ICBM, known as the RS-24 Yars. (Dmitry Kostyukovia/AFP/Getty Images)

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Although the Russian government has advocated exercising the treaty's provision for a five-year extension beyond 2021, the US has shown a somewhat ambivalent approach. For example, Reuters reported that US President Donald Trump informed Russian President Vladimir Putin during a 28 January 2017 telephone conversation that he did not want to renew New START, claiming that it was one of the treaties negotiated by his predecessor that had disadvantaged the US.

Trump reportedly made this statement despite suggesting earlier that month that the US was prepared to offer an end to its sanctions on Russia in order to facilitate agreement on additional nuclear arms reductions. According to a 22 September 2017 Reuters report, senior US officials suggested that the Trump administration still considered New START worthwhile, despite Washington's concerns about Moscow's track record on arms control and other issues, and that "the door remains open" to an extension.

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Balancing act

New START constrains offensive nuclear forces but does not limit strategic defences such as BMD systems. The relationship between offensive and defensive capabilities is recognised in the preamble to the treaty but is not addressed by the treaty text.

Putin and other Russian officials characterise strategic defences such as BMD as destabilising because they can inhibit a retaliatory strike. In particular, they are concerned that US policymakers may believe that they could destroy many Russian offensive missiles in a nuclear first strike and rely on missile defences to negate a Russian response.



An interceptor is fired from a US Terminal High Altitude Area Defense (THAAD) launcher during a test in Alaska on 30 July 2017. Diverging views on ballistic missile defence systems such as THAAD remain a hurdle to the formation of additional Russia-US arms control agreements. (Missile Defense Agency)

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In addition to incentivising a first strike, the Russian Ministry of Foreign Affairs has claimed that US BMD may enhance Washington's unpredictability, stating in a 29 April 2017 article to the TASS news agency that "an anti-missile umbrella may give rise to a calamitous illusion of invincibility and impunity and hence tempt hotheads in Washington into new dangerous unilateral steps on global and regional problems".

BMD enjoys bipartisan political support within Washington, and US analysts generally view Russian concerns as unjustified given the small number of existing or planned US missile interceptors – particularly as they claim US BMD is designed to counter Iran and North Korea, rather than Russia.

However, Moscow is developing its own systems to defend against NATO and US air and missile strikes. These include the A-235 anti-ballistic missile system deployed around Moscow and the S-500 'Prometheus' surface-to-air missile system, which is expected to enter service in 2018. Although the George W Bush and Barack Obama administrations offered various confidence-building and transparency measures to address Russian concerns about European-based BMD, it has been clear that the US Congress would not accept Russian demands for a legally binding agreement limiting BMD.

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MIRVs and mobility

One method of overcoming US BMD may be the use of SNDVs carrying MIRVs, whereby each nuclear-armed re-entry vehicle can be aimed at a different target. These weapons enable the delivery of several warheads in one launch, and give rise to the potential for missile defences to be overwhelmed.

As of late 2017, Russia has deployed numerous 'MIRVed' ICBMs (many mobile) to replace obsolete Soviet-era systems. In contrast, the US has 'downloaded' (or removed) warheads from its Minuteman III ICBMs and converted all Minuteman ICBMs to carry only a single strategic warhead. However, Russia and the US both arm their SLBMs with MIRVed warheads.

In arms control theory, MIRVs are often considered to be destabilising to a strategic balance, as they could enable one party to conduct a disarming first strike by employing only a portion of its MIRVed missiles to destroy an opponent's strategic weapons before they could be launched or dispersed. The START II treaty, signed on 3 January 1993, would have banned all MIRVed missiles; however, the Russian legislature – conscious of US calls for BMD – imposed ratification conditions limiting US missile defences that the US considered unacceptable. As such, the treaty never formally entered into force.

Russia's widespread use of MIRV warheads on its ICBMs enabled Moscow to maintain parity with the US in terms of warhead numbers while maintaining fewer SNDVs. However, Russian officials will have considered the possibility that the US could exploit the unused carrying capacity of some ICBMs or SLBMs to return (or 'upload') reserve warheads that had previously been downloaded from these SNDVs. This would theoretically enable the US to rapidly 'break out' of treaty limits. The US has retained hundreds more SNDVs than Russia, and both countries have several thousand warheads in storage that are capable, given sufficient time, of being returned to their launchers.

To prevent a US break-out, Russian representatives have therefore called for the greater elimination of SNDVs and warheads, rather than permitting their downloading and storage. However, the George W Bush administration wanted to hedge against problems with the US nuclear stockpile –

which at that stage was no longer tested in actual detonations – by retaining a larger number of reserve warheads. These reserve warheads, having been removed from SNDVs, can be returned to the operational arsenal in a matter of weeks or months depending on their condition – unlike ‘inactive’ warheads, which lack tritium to boost the explosive power of hydrogen bombs.

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Hypersonics

Hypersonic technology may also provide a way of defeating BMD. For example, since 2010, under Project 4202, Russia has stepped up its programme to develop a hypersonic glide vehicle (HGV) that is generally credited in open sources with speeds of Mach 5 or above.

Russian efforts to develop modern HGVs centre on the Yu-71 and the Yu-74 test vehicles. The US hypersonic research and development programme has focused on the X-51 WaveRider, which the Pentagon tested in May 2013. China has also been testing its own HGV, known as the DF-ZF.

Proponents of the technology argue that it offers advantages over ballistic missiles, such as an ability to deliver heavier payloads (either conventional or nuclear) with greater accuracy. Such weapons would present a serious challenge to missile defence systems due to their trajectory profile, manoeuvrability, and high speed. However, many experts, such as James Acton, a senior fellow at the Carnegie Endowment for International Peace who was interviewed for a 5 June 2017 *Washington Examiner* article on hypersonics, believe that it will take at least a decade before HGV technology is perfected.

Conventional weapons delivery remains an area of divergent perspectives. Some US officials have sought to exempt long-range ballistic missiles – traditionally used for nuclear missions – from treaty limits if they are armed with non-nuclear munitions, even though they retain the capacity to deliver nuclear warheads. In contrast, Russian officials have sought an outright ban on deploying conventional warheads on long-range ballistic missiles.

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Tactical nuclear weapons

Future arms control negotiations would not only need to address the emergence of HGVs and long-range conventional arms, but also short-range (under 500 km) nuclear launchers, formally known as ‘non-strategic’ nuclear weapons and informally as TNWs.

Russia and the US possess TNWs. The US has fewer than 1,000 non-strategic nuclear weapons, whereas Western estimates of the Russian TNW arsenal range between 1,000–6,000 warheads. Despite US pressure, Moscow has rejected legally binding limits on TNWs. Not only would a limit disproportionately affect Russia’s holdings of these weapons, but Russian planners consider these weapons to be important tools for negating US conventional superiority and deny any equivalency between those TNWs deployed on Russian territory and US TNWs deployed in NATO countries.

During the New START negotiations, Russian diplomats argued that the inclusion of TNWs would demand coverage of other non-strategic systems, such as precision-strike munitions, armed unmanned aerial vehicles, and missile defences – capabilities that were considered non-negotiable by the US Senate at that time.

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Multilateralism

The Russian government has increasingly insisted that any future strategic arms control treaties should encompass additional countries besides Russia and the US. No other country has yet participated in the disarmament talks held between the two states. The US view, shared by other countries such as China, is that Moscow and Washington – whose nuclear arsenals are still much larger than those of the other official nuclear-armed countries (namely China, France, and the United Kingdom) – need to cut their nuclear forces much further before it becomes necessary to negotiate limits on other nuclear powers.

According to independent estimates – such as those produced by the *Bulletin of the Atomic Scientists' Nuclear Notebook*, the International Institute for Strategic Studies, and Jane's CBRN Assessments – Russia and the US have thousands of nuclear warheads, but France, India, Israel, Pakistan, and the UK each possess no more than several hundred warheads. In the past, US negotiators made other concessions to induce Moscow to abandon its initial negotiating demands to include the British and French nuclear forces as part of the US ceilings, but US strategists now share Russian anxieties about China's growing nuclear capacity.

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Modernisation plans

Moscow and Washington are in the midst of major nuclear modernisation programmes encompassing all three legs of their nuclear triad. In the case of the US, this includes the procurement of the new Ground Based Strategic Deterrent to replace Minuteman III ICBMs, a new Columbia-class submarine to replace Ohio-class SSBNs, and a new dual-capable, long-range penetrating B-21 Raider strategic bomber to replace the B-52 and B-1 bombers. The US National Security Strategy released on 18 December 2017 states, "The United States must maintain the credible deterrence and assurance capabilities provided by our nuclear Triad and by US theater nuclear capabilities deployed abroad. Significant investment is needed to maintain a U.S. nuclear arsenal and infrastructure that is able to meet national security threats over the coming decades." Additional information on the Trump administration's nuclear weapons principles, policies, and programmes will become available with the release of its first Nuclear Posture Review in early 2018. In December 2016, Putin called for the development of strategic nuclear missile technology "capable of unfailingly overcoming existing and future missile defence systems". Russia plans to completely overhaul its Strategic Nuclear Forces and replace all Soviet-era nuclear systems by 2021.

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Arms control evolution

In negotiating New START, the Obama administration sought to return to the traditional approach regarding Russian-US strategic arms control. In his Prague speech of 5 April 2009, Obama presented a path for “a world without nuclear weapons” whereby Washington “will negotiate a new Strategic Arms Reduction Treaty with the Russians this year... And this will set the stage for further cuts, and we will seek to include all nuclear weapons states in this endeavour”. Moscow and Washington proved unable to finalise the New START agreement until April 2010. During the negotiations, the Obama administration initially favoured limiting warheads alone to facilitate reaching an accord in 2009, but Moscow successfully demanded limiting SNDVs as well. Following months of talks, Russian and US negotiators agreed to limit warheads to between 1,500 and 1,675, a slight decrease from the Strategic Offensive Reductions Treaty (SORT) level of 1,700–2,200. For SNDVs, Washington proposed 1,100, a level below the 1,600 total allowed by START but close to the actual number of US systems; Moscow sought to limit the SNDV figure to 500, which was then about the number of modern strategic missiles in the Russian arsenal. The final text mandated reductions in Russian and US nuclear forces, bringing the figures below the SORT ceilings – which were in force from June 2003 until February 2011 – but not so low as to mandate radical restructuring of either side’s nuclear forces. The totals gave Moscow and Washington ample time to gradually reduce while modernising their arsenals. New START shares some features with the earlier START agreement, some with SORT, and some that are unique. Like SORT, New START only counted the actual number of warheads on each strategic missile, as declared by both parties but verified through periodic random inspection, rather than the number of their launchers multiplied by number of warheads attributed to each launcher. This reduced some distortions that previously arose from attributing a uniform number of warheads to each type of missile – even to those that did not carry their full complement of nuclear warheads, were undergoing maintenance and not available for deployment, or had been removed from service but have not been eliminated according to the strict rules of the START Treaty (such as the 400 warheads attributed to the deactivated US LGM-118 Peacekeeper ICBM, of which the launching silos had not been destroyed).

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On the web

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