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United States' nuclear weapons policy
New priorities, new challenges

SUMMARY

The United States is the world's second largest nuclear power, coming close behind Russia. Together the two states account for 93 % of the world's nuclear weapons. Since the end of the Cold War, the US has followed a policy of reducing its nuclear arsenal, while maintaining a nuclear triad. Under President Obama, it embarked on an intense nuclear modernisation programme, while making commitments towards nuclear non-proliferation and – as a long-term goal – nuclear disarmament.

President Donald Trump took office in January 2017 with the promise to discontinue the previous administration's policy priorities. This is reflected in the current realignment of the US nuclear weapons policy. The new administration aims to expand US nuclear capabilities, is sceptical of international arms-control agreements, and has a more determinant stance on non-proliferation. President Trump has criticised the Joint Comprehensive Plan of Action (JCPOA), and consequently decertified the multilateral Iran nuclear deal in October 2017. The President has also characterised the bilateral New START Treaty, limiting the number of deployed strategic nuclear weapons between the US and Russia, as 'a one-sided deal'. The 1987 Intermediate-Range Nuclear Forces Treaty (INF Treaty), a landmark nuclear arms control treaty between the US and the former USSR, seems to be in limbo, and nuclear proliferation efforts in North Korea have sparked a war of words between Trump and the North Korean leader, Kim Jong-Un.

The ongoing Nuclear Posture Review, together with the coming passage of the annual defence policy bill in Congress, the National Defence Authorization Act (NDAA) for 2018, have the potential to provoke shifts in US nuclear policy.

In this briefing:

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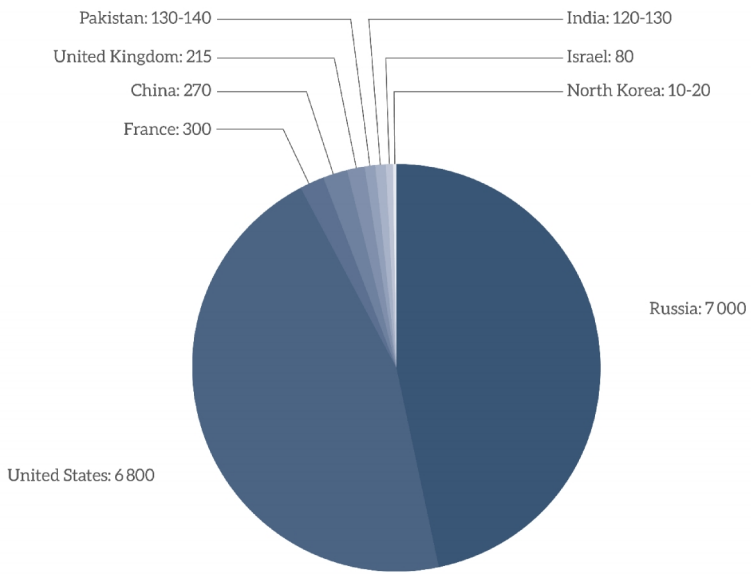
Introduction: US nuclear forces

The United States is one of the world's two major nuclear powers. With 6 800 and 7 000 warheads respectively, the US and Russia together account for nearly 93 % of nuclear weapons in the world (2017). As a consequence of three arms-limitation treaties established gradually since 1991, the two powers have significantly decreased their nuclear arsenals in the past decades.

The US maintains a triad of nuclear forces, consisting of nuclear submarines (SSBNs), land-based intercontinental ballistic missiles (ICBMs) and long-range bombers with nuclear weapons. In total, it currently holds 4 000 nuclear warheads in its active stockpile, a reduction of approximately 500 from 2016, as a result of a policy implemented by President Barack Obama. These include 180 tactical warheads in Europe (the US being the only Nuclear Weapons State (NWS) deploying nuclear weapons abroad). It also maintains approximately 2 800 retired warheads awaiting dismantlement.

Figure 1 – Global Share of Nuclear Forces, January 2017



Data source: SIPRI, 2017 year.

As a state party to the 1968 Treaty on the Non-Proliferation of Nuclear Weapons (NPT), the US has committed to contribute to preventing the spread of nuclear weapons and weapons technology, to promote cooperation in the peaceful uses of nuclear energy and to further the goal of achieving nuclear disarmament and general and complete disarmament.

The US has also pledged to refrain from using nuclear weapons against most non-nuclear-weapon states, but has neither ruled out their first use in all cases, nor specified the circumstances under which it would use them. The debate on whether the US should adopt a 'no first use pledge' has been controversial in recent years. Since his inauguration on 20 January 2017, President Donald Trump has included a review of the US nuclear posture in his priorities on rebuilding the US armed forces. Issues such as North Korea's proliferation efforts and the implementation of the Iran nuclear agreement (JCPOA) have brought nuclear weapons into the spotlight under the Trump administration.

Background: US nuclear weapons policy beyond the Cold War

From 1947, the United States began to rely heavily on nuclear weapons in order to project power to the USSR, which constituted a rising threat to western Europe. The ensuing nuclear antagonism with the Soviets led to the conversion of American (and NATO) ground and tactical air forces in the 1950s and 1960s to nuclear capability. By the end of the Cold War, the US had deployed thousands of non-strategic nuclear weapons on land in Europe, Japan and South Korea and on ships, as part of the process of extending nuclear deterrence to their allies. The reduction of these forces began in the late 1970s, alongside

heavy modernisation programmes. The logic of a 'triad' of strategic nuclear delivery vehicles was maintained throughout and beyond the Cold War.

Following the end of the Cold War and the termination of the arms race between the two major nuclear powers, both parties agreed to gradually reduce their nuclear arsenals. As early as 1987, the two parties signed the Treaty on Elimination of Intermediate-Range and Shorter-Range Missiles between the US and USSR (INF Treaty), and in 1991 the Strategic Arms Reduction Treaty (START), which entered into force in December 1994. In his Address to the Nation on Reducing United States and Soviet Nuclear Weapons in 1991, President George H. W. Bush (1989-1993) reflected on his new strategy for US defence in the face of a changing global security environment. While this strategy entailed maintaining a credible nuclear deterrent, President Bush also referred to 'an unparalleled opportunity to change the nuclear posture of both the United States and the Soviet Union' towards the reduction of the global nuclear arsenal and discouraging the spread of nuclear weapons.

Under President Bill Clinton (1993-2001), the US reaffirmed its commitment to START. Clinton sought strong cooperation with Russia in order to reduce the nuclear threat, including through the Nunn-Lugar Cooperative Threat Reduction Program. In 1996, he signed the Comprehensive Test Ban Treaty (CTBT) with Russia, the United Kingdom (UK), and 90 non-nuclear-weapon states, pledging to end all nuclear weapons testing. The Senate failed to ratify the treaty in 1999; to this date, the US has not ratified the CTBT. In addition to the agreement with the Russians, in 1994 Clinton and North Korean leader Kim Il Sung signed an Agreed Framework, freezing the North's nuclear facilities to eventually replace them with light-water-reactor facilities. The effort towards denuclearisation of the Korean peninsula would fall through some years later, however. In 2002 President George W. Bush accused North Korea of forming an 'axis of evil' with Iraq and Iran and of implementing a secret uranium-enrichment programme. North Korea withdrew from the NPT soon after, in 2003.

As early as in his first year in office, George W. Bush (2001-2009) sought to adjust the US nuclear posture to the transforming international security environment, where security threats began to emerge from state and non-state actors alike. He proclaimed that Russia was no longer an enemy for the US. Following the 2001 Nuclear Posture Review (NPR), the administration introduced new elements. Most notable among them was the idea that nuclear weapons – along with missile defence and other elements of US military weapons – not only fulfilled the function of deterring enemies, but also that of assuring allies of US commitments, dissuading enemies from acquiring weapons of mass destruction (WMDs) and defeating adversaries if deterrence fails. Thus, nuclear weapons were linked to multiple defence policy goals. This shift came alongside a reconsideration of the role of deterrence. Following the 9/11 attacks, the 'Bush Doctrine' maintained that deterrence was not sufficient in an environment of new types of actors armed with WMDs (such as rogue states and terrorist organisations) and that pre-emption would also be necessary occasionally. The emphasis on pre-emption went hand in hand with a stronger emphasis on conventional weapons, while the goal of reducing the nuclear arsenal remained. In 2002, the administration signed the US-Russia Strategic Offensive Reduction Treaty (SORT), which mandated that the US and Russia would reduce their strategic nuclear weapons to between 1 700 and 2 200 warheads by 31 December 2012.

US nuclear weapons policy under the Obama administration

US nuclear weapons policy under the two Obama administrations (2009-2016) aimed at working towards reducing nuclear weapons worldwide and strengthening the global non-proliferation regime. American nuclear strategy was formulated under three main goals: ensuring that nuclear weapons are not used against the US or its allies; convincing other states not to acquire nuclear weapons; and securing nuclear weapons and dangerous nuclear materials against theft or diversion to terrorist groups. In a landmark speech in Prague in 2009, President Obama called for the US to lead international efforts towards a world free of nuclear weapons. Although Obama clarified that complete nuclear disarmament was a long-term objective, he insisted the goal was still worth pursuing. The US would thus, among other things, reduce the role of nuclear weapons in its national security strategy; negotiate a new Strategic Arms Reduction Treaty (START) with Russia, seeking inclusion of other NWS in this effort afterwards; and strengthen the Nuclear Non-Proliferation Treaty (NPT) as a basis for nuclear cooperation.

In 2010, the US signed the Treaty on measures for the Further Reduction and Limitation of Strategic Offensive Arms (New START Agreement), which committed the US and Russia to further reductions in their nuclear arsenals. In the same year, the US hosted the first Nuclear Security Summit, an annual leaders' meeting which works towards preventing nuclear terrorism, countering nuclear smuggling and ensuring nuclear security.

The 2010 Nuclear Posture Review and the 2013 Nuclear Employment Strategy confirmed the US commitment to sustaining a credible strategic deterrent, which could be maintained with one third fewer deployed warheads than the New START limits. The two documents stated the need to reduce the role of nuclear weapons in the US security strategy and in deterring non-nuclear attacks. They also recommended increasing the role of conventional and non-nuclear strike capabilities and ballistic missile defences. Assessing that the danger of 'a global nuclear war has become remote, but the risk of nuclear attack has increased', the US goals were redefined to include: preventing nuclear terrorism and nuclear proliferation; reducing the role of nuclear weapons in US defence strategy; reducing force levels while maintaining strategic deterrence and stability; strengthening regional deterrence while reassuring US allies and partners; and maintaining a safe, secure and effective nuclear arsenal. In addition, the US would seek to 'maintain strategic stability with Russia and China, strengthen regional deterrence, and reassure US allies and partners' while cooperating with Russia on reducing strategic and non-strategic nuclear stockpiles and implementing the NPT. The review assessed that Russia was no longer an adversary and that the potential for conflict was low. While committing to carry out a reduction in the US nuclear arsenal, the Obama administration also set out to execute an ambitious nuclear modernisation programme.

Conservative voices, such as the Heritage Foundation, criticised President Obama's policy as misguided, and welcomed a divergent approach under President Trump.

President Trump and the 2017 Nuclear Posture Review

On 27 January 2017, President Trump issued a Presidential Memorandum on Rebuilding the US Armed Forces that instructs the Secretary of Defense, inter alia, to initiate a new Nuclear Posture Review (NPR), an assessment of all aspects of the country's nuclear capabilities, 'to ensure that the United States nuclear deterrent is modern, robust, flexible, resilient, ready, and appropriately tailored to deter 21st-century threats and reassure our allies'. The new NPR, which is expected to be completed by early 2018, will

replace the NPR of April 2010, commissioned by former President Obama, which pledged to prohibit the creation of 'new nuclear weapons and capabilities'.

In this context, a report published by the Department of Defense Science Board (DSB) in December 2016 recommends 'a more flexible nuclear enterprise that could produce, if needed, a rapid, tailored nuclear option for limited use should existing non-nuclear or nuclear options prove insufficient'. The DSB also recommends that efforts should address features such as 'lower-yield, primary-only options', a synonym for tactical nuclear warheads.

The United States nuclear arsenal does encompass a number of tactical nuclear weapons. These include B-61 gravity tactical nuclear weapons deployed in western Europe, as well as W-80 warheads on air-launched cruise missiles (ALCM). Both warheads underwent modernisation under the Obama administration nuclear modernisation plan.

Modernisation of the nuclear triad

Developed during the Cold War, the United States' nuclear triad remains the backbone for nuclear deterrence and the provision of the country's nuclear umbrella. The triad consists of three arms: inter-continental ballistic missiles (ICBMS), submarine-launched ballistic missiles (SLBMs), and strategic bombers.

Initiated under the Obama administration, the United States has engaged in a nuclear modernisation programme following the NPR of 2010. The programme aims at renovating the country's nuclear stockpile through life-extension programmes undertaken by the Department of Energy, as well as the modernisation of all three legs of the nuclear triad.

According to the 'projected costs of US nuclear forces, 2017 to 2026' report, published in February 2017 by the Congressional Budget Office (CBO), current US nuclear forces are reaching the end of their service life. 'Over the next two decades, essentially all of those nuclear delivery systems and weapons would have to be refurbished or replaced with new systems to continue operating. Consequently, the Congress will need to make decisions about what nuclear forces the United States should field in the future and thus about the extent to which the nation will pursue nuclear modernisation plans.'

Command and control of nuclear forces

Only the President of the United States can authorise the use of US nuclear weapons. The Nuclear Command and Control System (NCCS) comprises the people, procedures, facilities, equipment, and communications capabilities to enable the authorised use of nuclear weapons, while also preventing their unauthorised, accidental, or inadvertent use.

Since Trump's inauguration, the question of whether Congress can limit the President's power to launch nuclear weapons has received increased attention. Democratic members of the House and the Senate have introduced legislative proposals to restrict the President's unilateral nuclear capabilities by making nuclear deployment conditional on Congressional authorisation. In November 2017, the Senate held a hearing on the authority to order the use of nuclear weapons and a No First Use (NFU) Nuclear Policy bill has been introduced. A NFU policy would commit the United States only to launch a nuclear strike against an adversary in circumstances where the US has been attacked first.

To date, any legislation introduced attempting to restrict the President's authority to deploy nuclear weapons has failed to progress in Congress.

In its updated analysis of 'approaches for managing the costs of US nuclear forces, 2017 to 2046', the Congressional Budget Office (CBO) projects that the most recent detailed plans for nuclear forces, which were incorporated in the Obama administration's 2017 budget request, would cost a total of US$1.2 trillion from 2017 to 2046. The CBO report

states that 'any changes that the Trump administration or the Congress makes to modernisation plans or the size of nuclear forces could affect those costs'.

Challenges for US nuclear policy

A number of nuclear security issues, such as North Korean and Iranian nuclear ambitions, underline the importance that the Trump administration's nuclear posture may play.

North Korean crisis

Since January 2017, North Korea has conducted 15 tests of ballistic missiles with various ranges and also tested a nuclear weapon. The North Korean crisis has, in recent months, developed the potential to escalate into a large-scale conflict affecting a huge variety of actors across the globe, depending on the possible scenarios as to how the North Korean crisis might play out. Recent advances in North Korea's nuclear and missile programmes have led to discussions about the possible redeployment of US nuclear weapons on the Korean Peninsula.

The United States deployed nuclear weapons on the Korean Peninsula between 1958 and 1991, but removed these weapons as a part of a broader change in the US nuclear force posture at the end of the Cold War. However, the US remains committed to the defence of South Korea under the 1953 Mutual Defence Treaty, which may include the use of nuclear weapons, if necessary.

Trump's decertification of the Iran Deal (JCPOA)

Another issue of concern is the deteriorating relations between the United States and the Islamic Republic of Iran. The Joint Comprehensive Plan of Action (JCPOA), orchestrated between the five permanent members of the UN Security Council, plus Germany and the European Union, with Iran, is an international agreement designed to ensure that Iran's nuclear programme remains exclusively peaceful, and that Iran will never develop or acquire a nuclear weapon. Signed in July 2015 and effective since January 2016, Iran has since reduced its total number of centrifuges from over 19 000 to 6 104, deactivated its heavy water plant at Arak, removed 97 % of Iran's enriched uranium, and (with two exceptions) maintained its amount of heavy water to the agreed limit of 130 tonnes.

The JCPOA is not an international treaty, never having been ratified by the US Senate. Nor is the deal an executive action under the powers of the Presidency. Instead, the JCPOA is a collection of non-binding political commitments by the above-mentioned parties. No party is legally obliged to abide by the JCPOA under international, or even domestic law. Consequently, the US has several options to cease implementing the agreement. According to the Iranian Nuclear Agreement Review Act (INARA), a domestic US law passed by the US Congress in May 2015, the US administration is required to certify Iranian compliance with the JCPOA every 90 days. No other party to the JCPOA has put a similar domestic review process in place.

On multiple occasions, President Trump has labelled the JCPOA, 'one of the worst and most one-sided transactions the United States has ever entered into'. On 13 October 2017, Trump announced that he would not certify Iran's compliance with the JCPOA, citing that the JCPOA was not in the national interest of the United States, that the deal did not measure up to US expectations on verification inspections, and that flaws in the JCPOA had to be addressed. Trump's announcement triggered a 60-day window, expiring in mid-December, for Congress to decide whether or not to re-impose the sanctions on Iran that were suspended by the 2015 deal.

Intermediate-Range Nuclear Forces Treaty: Concerns and options

The 1987 Intermediate-Range Nuclear Forces Treaty (INF Treaty) is a bilateral landmark nuclear-arms-control treaty between the United States and the former Union of Soviet Socialist Republics (USSR), eliminating and prohibiting land-based intermediate ballistic and cruise missiles with ranges between 500 and 5 500 km. It marked the first elimination of an entire category of nuclear weapons, and led to the removal of some 2 700 missiles by 1991. Russia assumed the obligations of the INF Treaty following the break-up of the USSR. The INF Treaty is of unlimited duration, but contains a withdrawal clause stating that each party shall 'have the right to withdraw from this Treaty if it decides that extraordinary events related to the subject matter of this Treaty have jeopardised its supreme interests'.

The Russian government has been critical of the INF Treaty in its present form, claiming that the treaty weakens Russia, since other nuclear powers with intermediate nuclear forces are not bound by the treaty.

Since 2014, the US State Department has issued treaty compliance reports that 'determined that the Russian Federation is in violation of its obligations under the INF Treaty'. While the United States did not publicly identify Russia's actual INF-violating ground-launched cruise missile, the allegation itself has resulted in a debate in security and defence circles as to whether the United States should respond by developing and deploying additional nuclear capabilities and refusing to negotiate any further arms control agreements until Russia complies with the INF Treaty.

National Defense Authorization Act

In its National Defense Authorization Act (NDAA) for Fiscal Year 2018, Congress states that 'Russia's ongoing aggressive actions, including its invasions of Georgia in 2008 and Ukraine in 2014, threats to North Atlantic Treaty Organization (NATO) allies, rapid military modernisation, advanced anti-access and area-denial capabilities, increasing military activity in the Arctic region and Mediterranean Sea, evolving nuclear doctrine and capabilities, and violations of the Intermediate-Range Nuclear Forces Treaty between the United States of America and the Union of Soviet Socialist Republics and the Treaty on Open Skies, constitute a major challenge to the security interests of the United States and its allies and partners in Europe'.

Consequently, both chambers of the US Congress have included policy provisions that aim at 'deterring Russian aggression' and bringing Russia back into compliance with the INF Treaty through the development of countervailing forces. For example, the NDAA will authorise 'US$58 million for measures in response to the Russian violation of the INF Treaty, including a research and development programme on a ground-launched intermediate-range missile, which would not place the United States in violation of the treaty', as stated in the Senate Armed Services Committee summary of the conference report. This provision does not heed the Trump administration's previously expressed objection to 'a programme of record to develop a road-mobile, ground-launched cruise missile system', stating that this 'unhelpfully ties the administration to a specific type of missile system and funding requirements'. The administration's preferences were for a 'broad authorisation of research and development on missile systems, including those prohibited by the treaty, to determine candidate systems that could become programmes of record'.

Other NDAA 2018 provisions authorise 'US$4.6 billion for the European Deterrence Initiative (EDI) to reassure NATO allies' and 'US$350 million to provide security assistance to Ukraine, including defensive lethal assistance'.

New START: an uncertain future

Russia's violation of the INF Treaty, and any US response, have potentially far-reaching implications for other arms-control agreements, including New START. The Treaty between the United States of America and the Russian Federation on Measures for the Further Reduction and Limitation of Strategic Offensive Arms, or New START, restricts the deployment to 1 550 nuclear warheads on 700 nuclear inter-continental ballistic missiles (ICBMs), submarine-launched ballistic missiles (SLBMs), or heavy bombers, per party. The Treaty entered into force on 5 February 2011, and both parties must meet the Treaty's central limits on strategic arms by 5 February 2018. The Treaty is set to terminate in 2021, unless both parties agree to extend the agreement by five years. According to media reports, 'high-level Russian officials have complained that they would like to discuss extension of New START with US officials, but there is no one empowered in the State Department to do so'.

The 2017 State Department arms control compliance report found Russia to be in compliance with the terms of the treaty. While some administration and military officials support continuation of the New START Treaty, others point to Russia's violation of the INF Treaty and question whether to extend the treaty. President Trump for example has dismissed the New START Treaty as being another 'bad', 'one-sided deal'.

Further reading

50 Facts About U.S. Nuclear Weapons Today, Brookings, April 2014.

E. D'Ambrogio, North Korea: Possible scenarios, EPRS, European Parliament, September 2017.

V. Reillon, Understanding nuclear weapons and ballistic missiles, EPRS, European Parliament, September 2017.

A. Woolf, U.S. Strategic Nuclear Forces: Background, Developments, and Issues, Congressional Research Service, 8 August 2017.

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