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Russia's Nuclear Weapons

Russia presents an “acute threat” to the United States and its allies, according to the 2022 National Defense Strategy. The 2022 Nuclear Posture Review, a Biden Administration review of U.S. nuclear policy, states,

Russia remains the U.S. rival with the most capable and diverse nuclear forces. Today it is unique in the combination of strategic and non-strategic nuclear forces it fields that enables nuclear employment ranging from large-scale attacks on the [U.S.] homeland to limited strikes in support of a regional military campaign [in the Euro-Atlantic region].

Since Russia's February 2022 invasion of Ukraine, Russian President Vladimir Putin has threatened to use nuclear weapons, stated that Russia has deployed nonstrategic nuclear weapons to its ally Belarus, and declared the suspension of certain Russian obligations under the 2010 New START Treaty that limits U.S. and Russian strategic nuclear forces. Congress may choose to examine U.S. deterrence and risk reduction policy toward Russia.

Force Structure

According to a recent nongovernmental estimate, Russia has around 1,710 deployed nuclear warheads based on a triad of strategic delivery vehicles roughly consisting of 326 intercontinental ballistic missiles (ICBMs), 12 ballistic-missile submarines (SSBNs) with 192 submarine-launched ballistic missiles (SLBMs), and 58 strategic bombers. Russia has not exchanged official data with the United States about the structure of its strategic nuclear forces since 2023. Russian officials have stated, however, that Russia continues to abide by New START limits, thus maintaining rough parity with U.S. strategic nuclear forces. According to one nongovernmental estimate, the United States has around 1,770 deployed nuclear warheads.

Russia is concluding a modernization of its strategic nuclear forces that focuses in particular on the development of the SS-X-29 (Sarmat) heavy ICBM, the SS-27 Mod 2 (Yars) ICBM, and the Dolgoruki (Borei) class SSBN, according to a 2024 Defense Intelligence Agency (DIA) assessment. Russia deploys the majority of its strategic nuclear warheads on ICBMs. A separate Russian military service, the Strategic Rocket Forces, commands these silo-based and mobile ICBMs. Russia can field most of its ICBMs and all of its SLBMs with multiple warheads on each missile, according to a nongovernmental source.

Russia also has a variety of dual-capable systems (which are able to use conventional or nuclear warheads), including precision strike missiles, of various ranges and modes of launch, that are not limited by any arms control agreements. The Russian military could deploy these systems with nuclear warheads, enabling their use as nonstrategic nuclear weapons. Russia has rejected U.S. efforts to negotiate limits

on Russian nonstrategic nuclear weapons, describing these weapons as an offset to U.S. and NATO conventional superiority. The State Department estimated in 2024 that the Russian military has between 1,000 to 2,000 nuclear warheads for nonstrategic weapons; nongovernmental organizations attribute 1,558 warheads to these systems.

Russian officials have expressed concerns about the survivability of Russian strategic nuclear forces, given advances in U.S. long-range conventional strike and missile defenses. In 2018, President Putin announced that Russia was developing new delivery vehicles, including an ICBM-mounted hypersonic glide vehicle, a nuclear-powered cruise missile, and a nuclear-capable autonomous underwater system. According to 2024 testimony of NORTHCOM Commander General Gregory Guillot, “Russia intends for these systems to challenge U.S. defenses and guarantee Russia's ability to retaliate after a first strike.”

Doctrine and Employment Plans

According to a November 2024 revision of Russia's nuclear declaratory policy document, Russian nuclear deterrence policy seeks to maintain nuclear forces at a “sufficient” level, “guarantees protection of national sovereignty and territorial integrity,” deters aggression, and enables escalation management, as well as the “termination” of adversary “military actions” on conditions “acceptable” to Russia. The document adds that the Russian President could authorize nuclear weapons employment in the following scenarios: (1) “the receipt of reliable data” about a ballistic missile attack against Russian or allied territory, (2) the use by an adversary of “nuclear and other weapons of mass destruction” against Russia or an ally, (3) “adversary actions” on “government or military” targets that could affect Russia's ability to retaliate with nuclear weapons, (4) a conventional “aggression against” Russia and (or) Belarus that “poses a critical threat to their sovereignty and (or) territorial integrity,” and (5) “the receipt of reliable data” about a “mass start of aerospace attack means” and “their crossing of [Russia's] state border.” The document also states that Russia considers “an aggression” by “any nonnuclear state, but with participation or with support from a nuclear state,” a “joint attack” against Russia.

Russian political and military leaders have articulated a “strategic deterrence” concept that combines nonmilitary means, nonnuclear capabilities, and nuclear weapons into a spectrum of continuous actions aimed at deterrence, escalation management, and warfighting. According to the U.S. intelligence community's 2024 Annual Threat Assessment (ATA), “Russia is expanding and modernizing” its dual-capable systems “because Moscow believes [they] offer options to deter adversaries, control the escalation of potential hostilities, and counter U.S. and Allied conventional forces.” Western studies of authoritative

Russian military writings depict several different variants of “ladders” involving steps with dual-capable systems the Russian military could take to deter or manage escalation.

The Russian military plans for the use of military force through a system of “strategic operations.” According to nongovernmental sources, some of these operations may foresee large-scale as well as limited use of nuclear weapons. Other strategic operations may provide Russia with flexible coercive options below the nuclear threshold. According to General Guillot’s 2024 testimony, Russia could employ nonnuclear precision missiles and cyber capabilities “to strike Western economic and military infrastructure in an attempt to degrade our political will and compel negotiations to terminate an escalating conflict.”

Russian Coercive Signaling Since 2022

Since February 2022, President Putin has invoked Russia’s nuclear weapons in an apparent attempt to deter Western military intervention against Russia in Ukraine. Russian nuclear signaling also has included announcements of increased nuclear readiness, exercises, and missile tests. Some experts in Russia have called for limited nuclear strikes and changes to doctrine, arguing that Russian threats have not deterred Western military aid to Ukraine. Western analysts have debated the credibility of Putin’s nuclear threats and signaling. According to the 2024 ATA, “Russia almost certainly does not want a direct military conflict with U.S. and NATO forces.”

Belarusian President Alexander Lukashenko stated in April 2024 that Russia deployed “several dozen” nuclear weapons to Belarus. Media reports suggest that Russia stationed nuclear-capable SS-26 (Iskander) short-range ballistic missiles in Belarus and trained Belarusian pilots on aircraft certified for carrying nuclear weapons. The DIA assessed in 2024 that Russia has “expanded its nonstrategic nuclear weapons posture” in Belarus, but that “the new location does not extend the range of Russia’s ability to deploy nonstrategic nuclear weapons.”

Russia may continue its nuclear signaling to the West as the war in Ukraine progresses. In May 2024, Russian officials announced exercises involving nonstrategic nuclear weapons, highlighting separate statements by French and U.K. leaders about, respectively, the possibility of Western troops in Ukraine and the use of Western systems in Ukrainian strikes on targets in Russia. In September 2024, Putin stated that he was considering changes to Russia’s nuclear declaratory policy, which he then formalized in November 2024. Also in November, in what Putin said was a response to strikes by Ukraine with U.S. and U.K. weapons on targets inside Russia, Russia demonstrated what the Department of Defense described as an “experimental intermediate-range ballistic missile” by striking a defense plant in Ukraine. (See CRS Insight IN12464, *Russia’s Nuclear and Coercive Signaling During the War in Ukraine*.)

Russia also may choose to signal to the West through threats or demonstrations of nuclear testing. President Putin noted the possibility of nuclear tests in February 2023, and Russia withdrew its ratification of the Comprehensive Test

Ban Treaty (CTBT) in November 2023. Russia maintains a nuclear testing capability at a test site in the Arctic.

President Biden has raised concerns that President Putin may use nuclear weapons. In addition, the 2024 ATA states, “Russia’s inability to achieve quick and decisive battlefield wins, coupled with Ukrainian strikes within Russia, continues to drive concerns that Putin might use nuclear weapons.” The 2024 DIA assessment also posits that Russian doctrine cites “an existential threat to the Russian state” “as justification for nuclear use, and the West cannot completely discount the possibility of Russia using nuclear weapons in Ukraine.”

The war in Ukraine may have implications for Russia’s thinking about the role of nuclear weapons. The attrition of Russia’s ground forces during the war in Ukraine raises the prospect that “Moscow will be more reliant on nuclear and counterspace capabilities for its strategic deterrence,” according to the 2024 ATA. In 2024, U.S. officials also expressed concern about Russia’s plans to launch a nuclear-armed satellite into space.

Arms Control and Strategic Stability

In February 2023, President Putin announced that Russia would suspend its participation in the New START Treaty, an agreement that limits U.S. and Russian strategic nuclear delivery vehicles to 800 and warheads actively deployed on these delivery vehicles to 1,550 each. Russian officials have said Russia would maintain treaty limits but discontinue on-site inspections and data exchanges. In a January 2025 report to Congress, the State Department stated that “Russia may have exceeded the [treaty’s] deployed warhead limit by a small number,” but “assesses with high confidence” that Russia did not carry out “any large-scale activity above the Treaty limits in 2024.” The report further stated that while the United States “cannot certify” that Russia is compliant with New START, the department “does not determine” at present that “Russia’s noncompliance” threatens U.S. “national security interests.”

As a result of Russia’s war in Ukraine, the United States and Russia have not met in a Strategic Stability Dialogue aimed at discussing future arms control since January 2022. Biden Administration officials have said since 2023 that the United States is willing to return to talks with Russia “without preconditions.” However, President Putin has stated that Russia would not discuss arms control while the United States seeks to inflict “strategic defeat” on Russia by providing military aid to Ukraine. An August 2022 National Intelligence Council assessment stated that Russia “probably still sees value in strategic nuclear arms control as a means to constrain the United States.” It is unknown if President Putin may choose to build up Russian strategic nuclear forces after New START expires in February 2026.

The Congressional Commission on the U.S. Strategic Posture proposed in its 2023 report that the United States prepare for the emerging “two-nuclear-peer” threat from Russia and China. Congress may consider some of the commission’s recommendations for U.S. conventional and nuclear deterrence capabilities, cooperation with allies, and risk reduction with adversaries.

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