Dueling Missile and Drone Attacks on Capital Regions in the Ukraine War

MDAA Spotlight Series on Drone and Missile Warfare

In our mission to illuminate, elevate, and educate, we are honored to announce a new MDAA series.

5 Key Points

- Over the past month, Russia and Ukraine have exchanged large-scale missile and drone attacks on military, defense critical infrastructure, and civilian infrastructure in their national capital regions.
- These exchanges indicate we are in an era were high-end and low-end unmanned aerial systems in the hands of major or regional powers enable the employment of non-nuclear strategic strikes against military or dual-use targets in capital regions.
- These targets relate to military objectives, but each side's intent is a mix of revenge, retaliation, and coercion.
- The exchanges provide three basic planning scenarios for testing the performance of national capital region defenses:
    - The combined large-scale use of multiple missile types (ballistic, cruise, or hypersonic) and attack drones targeting sites within the boundaries of a capital region.
    - Large-scale drone attacks against similar targets within the same boundaries; while less destructive, these attacks can still stress defenses, especially if continued technology advances in attack drones outpace fielding of effective countermeasures and mitigations.
    - A predominately electronic-warfare based defense against missile and drone attacks.
- These attacks remind us of the critical importance of construction national capital region defense architectures that are truly integrated—to include integration of active and passive military defenses, interagency coordination, civil-military collaboration, liaison with law enforcement, and ultimately civil defense and emergency management organizations.

National Capital Region Exchanges

Russia's recent advice to the United States and all foreign nationals to evacuate U.S. citizens and diplomats from Kyiv, signals Moscow's plans to continue heavy strikes on the Ukrainian capital. These plans are rooted in a series of recent strategic exchanges between Russia and Ukraine since their temporary ceasefire expired in mid-May. Russian Foreign Minister Sergei Lavrov told U.S. Secretary of State Marco Rubio that he called him at the request of President Vladimir Putin to tell him Russia is launching systematic and consistent strikes against facilities in Kyiv as well as "relevant decision-making centers" according to an official Russian public statement.[1]

Large-scale kinetic exchanges of missile and drone attacks are nothing new in this protracted war. However, the location and types of targets selected by each side represent near-term escalation of the war to include sustained attacks on each side's defense critical infrastructure, civilian infrastructure, and national capital regions. This report decomposes what has transpired the last two weeks to better understand its implications for this war and Allied and U.S. homeland defenses.

[1] Bloomberg News, "*Russia Tells US to Evaluate its Diplomats and Citizens from Kyiv*," 26 May 2026.

Moscow's Opening Salvo

On the evening of Wednesday, 17 May, Russia launched 1,560 drones and 56 missiles at the Ukrainian capital of Kyiv. This attack was the largest aerial attack on Ukraine in a two-day period, and "the enemy's largest-scale attack on the capital"—according to the Mayor of Kyiv. At least 25 people were killed, 50 wounded, and 400 people required psychological support, according to Ukrainian authorities. One elderly resident remarked to the media: "I never imagined the damage would be this bad; when I went out in the yard, I couldn't believe my eyes. We don't have a proper bomb shelter here. There's only one in a nearby building not in ours, so we don't go down (underground) anywhere."

In additional to a nine-story residential building (see photo), civilian infrastructure facilities in Kyiv were struck, including a power substation and a high-voltage power line—according to a statement by the Ukrainian energy company DTEK. Ukrainian President Volodymyr Zelenskyy said the barrage came after Russia "stockpiled drones and missiles over a period of time and deliberately time the strike to ensure its scale was significant and the challenges for our air defense were as great as possible." The residential building struck was reportedly attacked by one of Russia's recently manufactured Kh-101 missiles-an advanced, low-observable air-launched strategic land-attack cruise missiles (LACMs).[2]

Aerial video shows the aftermath of a Russian attack on an apartment building in Kyiv on May 17. Source: State Emergency Service of Ukraine.

Ukraine's Retaliation

Within 24 hours, Ukraine retaliated by launching a large-scale attack of almost 600 drones against 14 regions across Russia, including the Moscow region and the capital city itself as well as Russian assets in the annexed Crimean Peninsula.[3] Specific unmanned aerial systems (UAS) employed to attack targets in the Moscow Region included the RS-1 "Bars" jet-powered UAS, the Firepoint FP-1 winged drone, and a newer droned dubbed the Bars-SM

[2] Peter Beaumont, "*Ukraine attacks Russia with drones after suffering three days of massive strikes*," The Guardian, 15 May 2026.
[3] France 24, "*Ukraine launches around 600 drones at Russia, Zelensky claims 'justified' attack*", 17 May 2026.

Gladiator—according to the General Staff of Ukraine's armed forces.[4] The Ukrainian Defense Ministry said Moscow and the region "have experienced the largest-scale attack since the full-scale invasion began" in February 2022.[5] In contrast, the Russian news agency TASS declared the attack "the largest on Moscow in over a year."[6]

Ukrainian President Volodymrr Zelenskyy declared the attacks were in response to Russia's ongoing drone and missile launches aimed at cities around Ukraine: "this time, Ukrainian long-range sanctions reached the Moscow region, and we are clearly telling the Russians: their state must end its war. Ukrainian drone and missile manufactures continue their work." Zelenskyy also said "Ukraine will not allow any of the aggressor's strikes that take the lives of our people to go unpunished. We are entirely justified in our responses against Russia's oil industry, military production, and those directly responsible for committing war crimes against Ukraine and Ukrainians."[7] As the attack unfolded, Ukraine's Commander of the Unmanned System Forces posted a message on his official Telegram account, addressed to the residents of Patriarchy, one of Moscow's elite residential districts: "The one-way ticket to a peaceful life in Patriarchy and the surrounding areas has been cancelled."[8]

For the first time, this attack clearly targeted facilities in the Moscow region. One could define these facilities as defense critical infrastructure or civilian infrastructure targets. However, the attack generated debris at civilian infrastructure sites (mostly airports), and civilians were killed or injured with residential homes or construction sites also damaged.

A priority target for the attack were critical facilities associated with Russia's oil industry. According to Ukrainian President Zelenskyy, "overall, our long-range plan for May is being carried out largely in full. The key targets are Russia's oil refineries, storage facilities, and other infrastructure tied to oil revenues."[9] Specifically, the Moscow oil refinery, the Solnechnogorsk oil depot, and two oil pumping stations, according to Ukraine's Security Service.[10]

---

[4] Warren Murray, "Ukraine war briefing: The drones that bombarded Moscow region," The Guardian, 17 May 2026.

[5] France 24, "*Ukraine launches around 600 drones at Russia, Zelensky claims 'justified' attack*", 17 May 2026.

[6] Kosta Gak, "*Ukraine attack 'largest in over a year' on Moscow, Russian state media reports*," **SOURCE** 17 March 2026.

[7] Susie Blann and Barry Hatton, "*Ukraine says its drones hit another refinery deep inside Russia as long-range strikes escalate,*" The Canadian Press, 21 May 2026.

[8] Kosta Gak, "*Ukraine attack 'largest in over a year' on Moscow, Russian state media reports*," **SOURCE** 17 March 2026.

[9] Kevin Shalvey, and others, "Ukraine launches hundreds of drones in deadly attack targeting Russia, Moscow says," ABC News, 17 May 2026.

[10] Kosta Gak, "*Ukraine attack 'largest in over a year' on Moscow, Russian state media reports*," **SOURCE** 17 March 2026.

- The Ukrainian SBU has indicated the Solnechnogorskaya pumping station was hit, and it is a critical part of the "ring pipeline" around Moscow used for pumping, storing and shipping large volumes of gasoline and diesel fuel, in particular for the Russian army. A fire was reported on the premises."[11]

- One of the strikes wounded construction workers at a job site near Moscow's oil and gas refinery, according to the Mayor of Moscow.

- He also stated the drone attack on the Moscow refinery did not derail production; however, a drone hit an oil tank at a storage facility, causing a blaze that blanketed the area in black smoke.

For the first time, Ukraine also attacked a critical microelectronics production firm in the Moscow region. Ukraine's SBU security service highlighted a strike on the Angstrom plant in Zelenograd, Moscow region, Russia, which "specializes in the production of hi-tech products and microcircuits for high-precision weapons. A fire was recorded on the territory of the facility. The enterprise is an important component of the Russian military-industrial complex and is involved in the production of microelectronics, radio electronics, optical systems, and robotics for the enemy's military needs."

These targets can be characterized as defense critical infrastructure or civilian infrastructure the Russia military and military industry depend on for support. However, dual-use civilian infrastructure and residential areas were damaged and civilians were killed our injured.

- Russia's largest airport—Moscow's Sheremetyevo-indicated drone debris had fallen on its grounds without causing damage or affecting flights. However, several Moscow airports reportedly suspended operations, with dozens of flights delayed or diverted.[12]

- Multiple apartment buildings were damaged and several houses were destroyed. Various villages or towns in the surrounding areas north, northwest, northeast, and southwest of Moscow city incurred damage or destruction.

- At least four individuals were reportedly killed and a dozen or more where injured—mostly Russian citizens but 1 Indian was killed and three were injured.

This photo released by Moscow Region Governor Andrei Vorobyev's official telegram channel shows a house on fire after a Ukrainian attack in Khimki, just outside Moscow, Russia, on Sunday, May 17, 2026. [Andrei Vorobyev/Moscow Region Governor Andrei Vo/AP]

[11] Warren Murray, "Ukraine war briefing: The drones that bombarded Moscow region," The Guardian, 17 May 2026.
[12] Kosta Gak, "*Ukraine attack 'largest in over a year' on Moscow, Russian state media reports*," **SOURCE** 17 March 2026.

Moscow's Drone and Missile Response

On 23 May, Russia responded with a combined drone and missile attack against the Ukrainian capital of Kyiv and its immediate metropolitan area—one of the heaviest bombardments of the city since the start of the war.[13] According to the Ukrainian armed forces, Russia launched 90 missiles and 600 drones against targets within this area. Specific missiles launched included Russia's new land-based, intermediate-range nuclear-capable Oreshnik hypersonic ballistic missile; road-mobile, short-range nuclear-capable Iskander M/S-400 ballistic missiles; Zircon scramjet powered, nuclear-capable ground-launched hypersonic cruise missiles; low-observable air-launched strategic LACMs; and, nuclear-capable, air-launched Kinzhal ballistic missiles.[14] The type of drones launched is unknown—probably some combination of cheap Shahed-136/Geran-2, jet powered UAS, and decoy drones. Prior to this attack, Russia reportedly had fired only 83 missiles since the beginning of the year.[15] This employment is the third time Russia has launched Oreshniks in the conflict. The first was in Dnipro, Ukraine in November 2025, and it was used again earlier this year in the Lviv region of Ukraine.[16]

At first glance, Russia's drone and missile attack against Kyiv is a response to Ukraine's large-scale drone attack on Moscow's capital region. As previously mentioned, Russia has indicated it has begun "systematic strikes" against military facilities in Kyiv. Russia's Defense Ministry has said these strikes targeted Ukrainian "military command facilities, including sites used by land forces and military intelligence, air bases, and military-industrial sites." However, Russian President Vladimir Putin and other officials have also cited a motive of retaliation in response to a specific Ukrainian strike in Starbolisk, a Russian controlled city in the Luhansk region of eastern Ukraine. President Putin and other Russian officials have declared this Ukrainian strike a "terrorist attack" against "civilian facilities on Russian territory." They claim the attack was against a "student dormitory" which resulted in 21 deaths and 42 injuries. Ukraine denies this assertion, and states this strike was against an elite Rubicon Center for Advanced Unmanned Technologies—which has pioneered Russian drone technology and targeting since it was formed in 2024.

All 10 districts in the Kyiv capital incurred attacks, and 50 locations across these districts suffered damage. The Russia Defense Ministry has said "the strikes targeted Ukrainian military command facilities, including sites used by land forces and military intelligence, air bases, and military industrial sites." The attack devastated Lukyaniva, a district north of Kyiv's city center where a missile plant is located. Various government administrative facilities, museums, and other government or military locations in the center of Kyiv were damaged—consistent with the Russian Foreign Minister's warning to Kyiv resides to avoid approaching military and administrative facilities of the Ukrainian government.

---

[13] "Russia Hits Ukraine With Oreshnik Missile in One of War's Biggest Attacks on Kyiv," Reuters, 23 May 2026.

[14] Antonio Langford, "Putin burns through his best missiles in a desperate Ukraine fightback," SOURCE, 26 May 2026.

[15] Antonio Langford, "Putin burns through his best missiles in a desperate Ukraine fightback," SOURCE, 26 May 2026.

[16] Rebecca Schneid, "Zelensky Calls for Consequences After Russia Hits Kyiv With One of the Heaviest Bombardments Since the War Began," Google, 24 May 2026.

A resident sits at a site of a Russian missile and drone strike, amid Russia's attack on Ukraine, in Kyiv, Ukraine ***May 24, 2026****. REUTERS/Stringer*

Russia employed its intermediate-range Oreshnik hypersonic ballistic missile against a Ukrainian aircraft repair plant in Bila Tservka, a city of 200,000 people that lies about 40 miles (64 km) from the outskirts of Kyiv. The Oreshnik's warhead appears to be composed of 36 submunitions, according to a review of Reuters footage of the strike by an investigator at the Center for Information Resilience. The Ukrainian Foreign Ministry stated the missile carried a "dummy warhead." Most of these submunitions landed among closely parked garages suggest a degree of precision.

The payload employed on this nuclear capable missile is insightful because it suggests the Russian's are using this sophisticated $40 million dollar weapon to generate very basic kinetic effects. The abovementioned submunitions packet has been referred to as "shooting iron blocks that at best can penetrate several meters of soil."[17] This approach is similar to the Oreshnik strike Moscow launched against targets in Lviv in January 2026 and earlier at Dnipro. Russia refers to this payload configuration as "kinetic," and western analysis of this approach suggest the kinetic impact lacks both high explosive effect and fragmentation—unlike a conventional high-explosive fragmentation warhead.[18]

According to Ukrainian Zelensky, three Russian missiles of unknown type were launched towards a water supply facility in the Kyiv region, claiming Moscow wanted to damage them before the summer increased demand. The Russians deny targeting civilians; however, ~ 4 individuals were killed and 100 wounded. Ukrainian government sources report 30 buildings were damaged or destroyed, including several residential buildings and schools as well as a shopping center and market.

Ukraine's missile and air defense against this attack primarily electronic spoofing of inbound drones or missiles. The Ukrainian Air Force reported that Russia fired 600 drones and 90 missiles at Ukraine, and its Air Force "shot down" 604 of the weapons. Ukraine apparently intercepted 44 of 54 Kh-101 LACMs and 11 of 30 M/S-400s. However, the rest of the missiles and a handful of drones penetrated defenses. Ukraine's air defense layers include interceptor drones, electronic warfare systems, helicopters, surface-to-air missiles and heavy guns. Ukraine currently has a shortage of U.S. made Patriot and THAAD missile defense systems. It apparently is compensating for this by relying on home grown solutions like its LIMA electronic warfare system. Press reports indicate Ukraine jammed 549 drones and 55 missiles, while around 19 missiles failed to reach targets. These references to jamming

[17] Eric Malinowski, "Russia Likely Targeted Aircraft Repair Plant in Bila Tservka with Oreshnik,"
[18] Team 14, "Oreshnik IRBM in 'Kinetic Version': How Effective is it and what is its power?", Defense Express, 9 January 2026.

are probably cases of Ukraine using electronic warfare systems to send inbound missiles off course by "spoofing" their use of satellite navigation.

People taking shelter inside a metro station during the 2 June Russian airstrike on Kyiv. Source: Alina Smutko, REUTERS.

Moscow Sustains its Attacks on Ukraine's Capital City

Russia initiated a follow-on attack on at least 38 cities across multiple cities in Ukraine on June 2, including Kyiv. According to Ukraine's Air Force, at least 656 drones and 73 missiles were fired, and Kyiv was the main target. The Russian Defense Ministry claims the strikes targeted Ukrainian defense production and transport infrastructure, and stated the attack is in retaliation for the earlier mentioned Ukraine attack on an alleged dormitory in Luhkansk—describing this attack as a "terrorist attack by the Kyiv regime." The Mayor of Kyiv has stated at least 6 people were killed and 65 injured across Kyiv, and that several multistory residential buildings in the capital either caught fire or were damaged. More than 41,00 people flooded into the Kyiv subway system, seeking shelter—the highest number during a nighttime raid in recent years. The attack on Kyiv also cut electricity to 140,00 residents, according to the power company DTEK. Details regarding the attacks composition of missile and drone types is unclear, with one reporting claiming an undefined "hypersonic missile" was employed by Russia.

Photo shows an explosion during drone and missile attacks on Kyiv on June 2, 2026. / Credit: Eugene KOTENKO/AFP/Getty

Implications

The primary strategic implication of these exchanges for modern warfare is they indicate we are in an era were high-end and low-end long-range unmanned aerial systems in the hands of major or regional powers enable the employment of non-nuclear strategic strikes against military or dual use targets in national capital regions. Non-nuclear strategic strike has previously been the domain of various offensive missile capabilities. What is new is the existence of inexpensive, long-range unmanned aerial systems (drones) as a weapon of choice for non-nuclear strategic strike. These attacks using drones or missiles are strategic in nature due to the location and type of target chosen. The targets selected are co-located in major urban industrial areas where government centers, military command, industrial and major civilian residential districts.

- Attack targets over the last few weeks have included oil refineries and storage depots; military command and intelligence centers; power substations; air bases; missile production plants, aircraft repair faciliites; microelectronics production sites, and possibly even water supply facilities.

- These targets are a mix of military, defense critical infrastructure, and dual use (civilian/military) facilities co-located within the administrative districts of national capital regions.

- These targets have some relationship to each nation's armed forces and war effort; however, the fact they are located in capital regions and the normal uncertainties involved in performing attack operations with precision has resulted in significant damage and destruction of purely civilian facilities as well as numerous deaths and casualties.

While these targets bear some relationship to military objectives in each nation's war effort, public statements by senior political and military leaders suggest each side's intent is a mix of revenge, retaliation, and, to some extent, coercion. The actual strikes are causing significant death and destruction, and the attacks are large-scale in nature. These operations are raising the stakes for each side's leaders in the conflict. Their effects are significant, but they appear to lack the decisiveness necessary to compel the other side to abandon or reduce their war aims.

Operationally, these exchanges provide two basic planning scenarios to consider in planning defense postures for their own national capital regions and one lesser-included case type of scenario. These scenarios provide a basic starting point to test the performance of these defense postures, identify gaps, perform follow-on operational tests and evaluations, and ultimately develop and field new military capabilities.

- **High End-Threat**: The first scenario exhibited in these exchanges is one in which an adversary combines various missile (ballistic, cruise, and hypersonic) attacks in coordinated with large-scale attack drones in targeting sites within the boundaries of a national capital region's districts.

- **Lower-End Threat**: The second scenario involves large-scale drone attacks against similar targets within the same boundaries. While this type of scenario is likely to produce less death and destruction, the extent to which it stresses a national capital region's defense would be a function of the extent to which these defenses include effective counter-drone capabilities—a relatively dynamic mission area given the pace at which attack drones are evolving new capabilities.

- **Lesser-Included Threat**: These recent exchanges have revealed an real-world case in which a nation is seeking to counter drone and missile attacks using a predominately electronic defense capabilities (spoofing of satellite based navigation by Ukraine). This real-world case suggests, mounting such a defense is inherently problematic and less likely to yield success compare to the use of layered defenses comprised of kinetic and non-kinetic capabilities. Nonetheless, there may be value in utilizing this case to test how effective such a defense could be positing various levels of robust or less robust electronic defense capabilities. A key question to examine would be identifying how robust such a defense posture would need to be to achieve credibility?

Finally, these exchanges are reminder of the critical importance of constructing national capital region defense architectures that are truly integrated in nature—to include integration of active and passive military defenses, interagency coordination, collaboration between civilian and military organizations at the national and local level, liaison with law enforcement entities, and ultimately civil defense and emergency management organizations. Non-nuclear strategic strikes will almost certainly continue to involve collateral damage in the civilian sector of a national capital region. Civilian residents will continue to need some form of protection—from bomb shelters in the basements of buildings to underground subway systems as Kyiv metro stations were used on the night of 2 June 2026.