With the rise in frequency of hybrid warfare, combatants in various conflicts are increasingly targeting domestic energy infrastructure and energy supply flows. In conventional warfare, militaries traditionally have sought to meet their operational energy needs, gain access to energy supplies, and deny energy supplies to their adversaries. However, new energy-related elements of warfare have emerged. During the 2020 Armenia-Azerbaijan War, energy played several key roles. First, threats to energy infrastructure served as the trigger that ignited this round of hostilities: the war broke out on the eve of the commencement of operations of the Southern Gas Corridor, which would bring Europe its first new natural gas supply in decades. Second, energy infrastructure was also “weaponized” during the fighting, as has happened in warfare throughout history. Finally, Armenia targeted Azerbaijan’s energy export infrastructure during the war. This article will first analyze the energy factor in the 2020 Armenia-Azerbaijan War, and will then discuss the implications for future warfare.

Background: The Armenia-Azerbaijan Conflict

The wars between Armenia and Azerbaijan over control of the Nagorno-Karabakh region, especially the first war, from 1992 to 1994, have been among the most lethal conflicts between former Soviet states. During the Soviet period, Moscow had categorized Nagorno-Karabakh as an autonomous region in Soviet Azerbaijan, carving out its borders so that it created a region with an ethnic Armenian majority within Azerbaijan. This was a policy Moscow used to create division in many places in the USSR. When the Soviet Union collapsed in late 1991, all the new states recognized their existing Soviet-era borders as their new international borders, with the exception of Russia and Armenia. In this initial post-Soviet period, Russia occupied two regions of Georgia (Abkhazia and South Ossetia) and a region of Moldova (Transnistria). Armenia invaded Azerbaijan and captured the Nagorno-Karabakh region and seven additional regions of Azerbaijan, all of which had been recognized by the international community (including the United States) as part of Azerbaijan’s legal territory. Yerevan expelled all the non-Armenian population from the occupied territories, creating close to 800,000 new Azerbaijani refugees. The conflict left the region economically shattered for years.
Russia stoked the conflicts, especially the first war, because the state of belligerence rendered the two combatants more vulnerable to coercion by Moscow. While Moscow did not formally recognize Yerevan’s control of Nagorno-Karabakh and the surrounding seven districts, it used the conflict to reinforce its power in the region by maintaining two military bases in Armenia and controlling Armenian airspace and air defenses. Moreover, Armenia is a member of the Collective Security Treaty Organization, the Russian-led mutual defense pact.

Yerevan referred to the areas it occupied as the “Nagorno-Karabakh Republic,” even though Armenian military forces occupied the regions. Armenia copied Moscow’s playbook in the regions it occupied, trying to convince the international system that these regions were under the sovereignty of independent entities instead of under occupation. Thus, Yerevan referred to the areas it occupied as the “Nagorno-Karabakh Republic,” even though Armenian military forces occupied the regions, Yerevan provided the budget for the regions, all the local officials were citizens of Armenia, and many had served as senior Armenian officials. During the Armenian occupation, Yerevan established settlements in Nagorno-Karabakh and provided financial and other incentives to ethnic Armenians, especially those from Lebanon and Syria, to move to the occupied territories. Officials in Armenia, local authorities in Nagorno-Karabakh, and diaspora organizations flaunted their efforts to bring settlers to the occupied territories.

In the period following the first war, the line of contact between the forces of Armenia and Azerbaijan remained tense, with an average of over a dozen soldiers killed each year. From time to time, the conflict flared up into full battles, including one in April 2016 that became known as the “Four-Day War” and led to over 200 deaths.

Energy Exports

Azerbaijan is a major source of energy resources, most of which are exported to Europe. Over the last fifteen years, it has produced between 750,000 and one million barrels of oil a day. In 2006, Azerbaijan also began to export natural gas to Georgia and Turkey. In late 2020, following the second Armenia-Azerbaijan War, Azerbaijan opened the Southern Gas Corridor (SGC), which brings natural gas from the Caspian Sea region to Europe; this project was the first new source of pipeline natural gas for Europe in several decades. While the SGC supplies less than 10 percent of Europe’s gas imports, it has enabled specific states—Italy, Greece, and soon, Bulgaria—to diversify their gas supplies and thus greatly reduce their dependence on Russia. The SGC is anticipated to carry additional gas volumes from fields in Azerbaijan and also potentially from other producers in Central Asia and the Eastern Mediterranean in the future. It is intended to turn Azerbaijan into a major supplier of energy to Europe and provide Baku with a new revenue stream that would improve Azerbaijan’s strategic position.

Energy: The Catalyst for Reigniting War

In 2020, full-scale war reignited between Armenia and Azerbaijan, when Armenia launched a surprise attack several weeks before Azerbaijan was due to begin commercial operation of the SGC. The first phase of the 2020 Armenia-Azerbaijan War began on July 12 in the Azerbaijani region of Tovuz, along the northern section of the international border between Armenia and Azerbaijan. This region is located 300 kilometers north of what had been the line of contact between Armenia’s and Azerbaijan’s forces in the occupied territories. In the initial attacks, Armenian troops attempted to gain control of Azerbaijan’s Qaraqaya Heights, which are perched above the energy and transit corridor that runs from the Caspian Sea to Europe and includes the SGC. Since Armenian control of the Heights would have allowed Yerevan to threaten the energy and transit corridor, the attacks posed a strategic threat to Azerbaijan.

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A member of the Armenian Special Forces who was captured in Azerbaijan stated during his trial that his unit had been ordered to attack the Azerbaijani section of the Baku-Tbilisi-Ceyhan oil pipeline during the July 2020 fighting:

During the Tovuz battles, there was such a combat mission. The Central Command ordered us to explore the protected areas in that area. In connection with the order to blow up the oil pipeline, I marked the positions of the Azerbaijani Army on the map and calculated the protected areas. I made notes on maps and documents and handed them over to the relevant authorities.\textsuperscript{10}

Following the July 2020 attacks in Tovuz, senior Armenian officials stated that Armenia's goal was to make it clear to the EU that “Armenia is the guarantor” of Europe's energy security.\textsuperscript{11} In August 2020, Armenian representatives stated that, in light of the fighting, Armenia planned to coordinate with the EU’s Directorate General for Energy on the security of the supplies to Europe, and that Yerevan planned to claim that the security of the corridor was now in Armenia's hands. In this way, Armenia sought not only to increase its importance in Brussels by emphasizing its ability to disrupt gas supplies to Europe, but also to threaten Azerbaijan’s extensive investment in the SGC.

Amid such threats to the energy corridor's security, new investments in its expansion were unlikely. Thus, the July 2020 Armenian attacks risked devaluing the corridor and undermining Azerbaijan's ability to receive strategic benefits as a gas supplier to Europe.

Armenia chose the timing and location of the attacks deliberately to create the impression that it has the capacity to disrupt this strategic energy and transit corridor at will. As Elshad Nasirov, Vice President for Marketing and Investments of SOCOR, the State Oil Company of the Azerbaijan Republic, pointed out at the time, “it is not by chance that Armenia launched a military operation against Azerbaijan three months before the start of Azerbaijani gas supplies to Europe.”\textsuperscript{12}

Hikmet Hajiyev, foreign policy advisor to Azerbaijan’s President Ilham Aliyev, also referred to the link between the location of the attacks and the planned commencement of the major gas exports to Europe:

It was not coincidental why Tovuz was chosen as a venue to carry out a military provocation against Azerbaijan in July 12–16, 2020. Tovuz is situated on [sic] international border between Armenia and Azerbaijan, not along the Line of Contact, and hosts energy and infrastructure projects nearby. The Baku–Tbilisi–Supsa and BTC oil pipelines, and the

Map of the Southern Gas Corridor, consisting of Southern Caucasus pipeline (SCP), Trans-Anatolian gas pipeline (TANAP), Trans-Adriatic pipeline (TAP).
Southern Caucasus pipeline, an important chain in the multimillion dollar megaproject the Southern Gas Corridor (SGC), pass close by the Tovuz area. The intention of Armenia to engage third parties in the war against Azerbaijan and demolish the latter’s critical energy infrastructure was also present in July.13

In parallel with the attacks at Tovuz, Armenian troops shelled Nakhchivan, an Azerbaijani exclave. This attempt to open new fronts was in line with Armenia’s then-Defense Minister Davit Tonoyan’s doctrine of “New Wars for New Territories.”14 According to Tonoyan’s doctrine, Armenia sought to expand the arenas of fighting between Armenia and Azerbaijan in order to deter Azerbaijan from retaking control of occupied Nagorno-Karabakh and surrounding territories.

Armenia’s attempt to gain control of the hills above the Southern Gas Corridor is in line with its strategy, which views Azerbaijan’s energy production and export infrastructure as key military targets. Over three decades of conflict, Armenian leaders had openly threatened to attack Azerbaijan’s oil and gas production and export pipelines, and Armenian military exercises frequently simulated such attacks.15

The energy aspects of the Armenia-Azerbaijan conflict are exceptional because belligerents traditionally target energy supplies in order to deny an adversary access to energy. In this conflict, however, Armenia targeted Azerbaijan’s energy export infrastructure in order to deny it the strategic benefits of serving as an export state to Europe. In addition, as an ally of Russia, Armenia may also have been operating to prevent new energy resources from arriving in Europe that could challenge Moscow’s energy dominance.

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The new strategic reality that emerged in July 2020, with the opening of two additional fronts with Armenia and a threat overhanging the strategically important energy and transport corridor to the West, was unsustainable. Through the attacks in Tovuz, Yerevan had created a casus belli. By opening a new front and attempting to neutralize Azerbaijan’s emerging role as an energy provider to Europe, and thus deny new revenues to Baku, Armenia set the stage for the eruption of full-scale war in late September 2020.

Attacks on International Pipelines during the War

In retrospect, the July 2020 Tovuz attacks were the first phase of the Second Armenia-Azerbaijan War. In the second phase of the war, beginning 27 September 2020, Armenia continued to threaten Azerbaijan’s energy pipelines. In October 2020, Armenia fired missiles that landed within 10 meters of the Baku-Tbilisi-Ceyhan (BTC) oil pipeline, near the Azerbaijani city of Yevlax.16 However, these missile attacks did not disrupt the operations of the BTC or other nearby pipelines.

The 2020 Armenia-Azerbaijan War was not the first time that Armenia threatened or attempted to attack Azerbaijan’s energy production and export infrastructure. Similar threats were made, for instance, during clashes between the two countries in April 2016.17 Serzh Sargsyan, who was the president of Armenia at the time, later criticized Prime Minister Nikol Pashinyan for not using the sophisticated Russian-built Iskander ballistic missiles in Armenia’s arsenal to attack the pipelines, saying, “in the end, why did we buy these missiles? Not to use at the right time? The Iskadners are ours, and we are the only ones to whom [Russia] gave such weapons. And we didn’t use them.”18 While the Iskander missiles were not used to attack the pipeline corridor, Armenia did fire them at Azerbaijani troops in Shusha toward the end of the autumn 2020 war.19

Weaponization of Energy Infrastructure

The Second Armenia-Azerbaijan War featured several elements of hybrid warfare, including the intentional targeting of civilian populations (such as the Armenian missile attacks on the Azerbaijani cities of Barda and Ganja), and extensive media and disinformation campaigns. As part of this hybrid warfare, Armenia and Azerbaijan both threatened to “weaponize” energy infrastructure in each other’s state and unleash mass civilian casualties. The goal in weaponizing energy infrastructure is not just to disrupt energy supplies, but also to create significant damage and potential loss of life through attacks on pipelines, power plants, grids, and other energy infrastructure elements. As part of this policy, Armenia threatened to attack the Mingachevir hydropower station, which would have led to massive flooding, in addition to crippling Azerbaijan’s electricity supplies. Baku, in turn, threatened to respond to such an attack by attacking Armenia’s Metsamor nuclear power plant, although a senior Azerbaijani official later walked back this threat.
Armenia’s Threats to the Mingachevir Hydropower Station

Historically, many armies have used intentional flooding as a military tactic. Chinese forces intentionally flooded the Yellow River in their war with Japan in 1938, leading to hundreds of thousands of deaths and the displacement of millions more. In the Iran-Iraq War of the 1980s, Iraq used intentional flooding to deny access to the battle zones. Most recently, Ukrainians apparently flooded fields north of the capital, Kyiv, to slow the advance of Russian invading forces in March 2022. Concerns continue that ISIS and other terrorist groups could attack the Mosul Dam to flood areas in Iraq. For decades, Armenia has threatened to attack the Mingachevir hydropower station in Azerbaijan. A successful attack on the facility that caused the release of high volumes of water would result in significant casualties and turn large areas of Azerbaijan into uninhabitable and uncultivable land. It would also hinder operation of the east-west energy and transportation corridor that runs close to the Mingachevir region.

Following clashes between Armenia and Azerbaijan in 2014, Armenian Defense Minister Seyran Oganyan threatened an attack on the Mingachevir Dam. These threats were renewed in July 2020, when a representative of Armenia’s Ministry of Defense threatened to use SU-30 fighter jets and Iskander ballistic missiles to attack the dam. During the second stage of the 2020 war, Armenia made good on its threat and fired four Tochka U short-range missiles at the city of Mingachevir, which sits at the base of the Mingachevir Dam. The missiles were intercepted by Azerbaijan’s air defenses before they reached their target, but the incident made clear that Armenia was willing to attack the dam and potentially cause massive flooding in Azerbaijan. Accordingly, during the war, the Azerbaijani government lowered the water level in the Mingachevir reservoir and at several other hydropower plants in Azerbaijan.
Azerbaijan’s Threat to the Metsamor Nuclear Power Plant

In July 2020, Azerbaijani Colonel Vagif Dargahli, a spokesman for the Defense Ministry, said this in response to the Armenian threat to attack the Mingachevir Dam:

This attack [on the Mingachevir Dam] is impossible due to the relief of the territory where which [sic] this strategic facility is located, the fortifications, as well as the Azerbaijani Air Forces’ modern air defense systems. . . . Armenia must not forget that the latest missile systems in the arsenal of the Azerbaijani army can target and launch an attack on its Metsamor nuclear power plant, which may lead to a major disaster for Armenia.26

Armenia’s nuclear power plant is located only 35 kilometers from Yerevan, and 16 kilometers from the Turkish city of Iğdır. An attack on Metsamor would endanger not only the people of Armenia, but also those who live in the wider region, including Turkey, Georgia, and Azerbaijan itself.27 Thus, this was not a credible threat. Presidential advisor Hikmet Hajiyev later walked it back, stating that the Defense Ministry spokesman had made an unauthorized statement, and that Azerbaijan had no intention of attacking the Metsamor nuclear power plant or any other civilian infrastructure in Armenia: “During the latest provocations different misinformation was spread. . . . Azerbaijan does not have the policy to target any critical strategic facilities.”28 However, it is clear that during the 2020 Armenia-Azerbaijan War, energy infrastructure was viewed not only as a potential target but also effectively as a potential weapon that could be leveraged to deter the adversary. Azerbaijan drew lessons and Baku has undertaken steps to strengthen defense of the country’s energy infrastructure, including the Mingachevir Dam.

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Energy Trade Post-War

Azerbaijan’s decisive victory in the war strengthened the security of the international export pipelines and created opportunities for new energy flows in the region. Armenia’s defeat removed the threat to Azerbaijan’s oil and natural gas pipelines, and full operation of the SGC commenced on schedule in December 2020. In addition, most of the major players are striving for a post-war regional architecture that will enable new regional cooperation, including common roads and rail transit, the opening of borders, and, potentially, new energy flows.29

New post-war road and rail transport links connecting Armenia to Azerbaijan and Turkey would improve Armenia’s energy security by allowing it to import more diverse energy supplies, such as coal and oil, via Turkey. Coal and oil are easy to stockpile and could be used to back up Armenia’s gas network. Having access to new energy sources could allow Armenia to close the Metsamor nuclear power plant. A Soviet-era nuclear power plant, Metsamor is one of only five reactors still in operation that lack a containment vessel; moreover, it is located in a major seismic zone. Any accident at Metsamor would pose a serious threat to Armenia, its neighbors, and southern Europe.30 Thus, shutting down the plant would be in the best interests of all parties concerned.

Conclusions

The 2020 Armenia-Azerbaijan War was the first full-scale interstate war in the twenty-first century. Western (Turkish/NATO and Israeli) weapons systems squared off against Russian systems, and the Western systems unquestionably prevailed. Many strategists and military planners are studying this war, which featured new uses of weapons such as UAVs. The conflict also witnessed the extensive use of hybrid warfare, including Armenia’s intentional targeting of civilian populations outside the war zone, and active media campaigns on both sides.

As discussed in this article, the hybrid warfare also included several elements connected to energy, some of which were novel. These include Armenia’s attempts to threaten Azerbaijan’s oil and natural gas export pipelines. Both sides also threatened to turn parts of their opponent’s power generation systems against them. While targeting power generation and causing intentional flooding are not new to warfare, threats and attacks on major energy infrastructure pieces—such as dams and nuclear power plants—indicate that the weaponization of energy infrastructure is likely to play a major role in contemporary hybrid warfare and should be studied further.
Moreover, the threats and attacks on the Mingachevir Dam are a reminder to military planners and strategists that intentional flooding is still a threat. Thus, they need to develop both doctrine and mechanisms, such as air defenses, to neutralise these sorts of threats against critical energy infrastructure. In the future, Azerbaijan seems likely to acquire advanced air defense systems like Iron Dome to protect elements of its energy infrastructure, a practice that is likely to become more prevalent in combat zones around the globe.

In future warfare, attacks on domestic energy infrastructure will not only take place physically, as witnessed in the Second Armenia-Azerbaijan War, they will also likely take the form of cyber attacks, since all modern energy infrastructure is managed by cyber systems. The hybrid aspects of the Second Armenia-Azerbaijan War, and especially the attacks on Azerbaijan’s domestic energy infrastructure, are reminders that the borders between the battlefield and the domestic arena, including both citizens and energy infrastructure, have become blurred. War planners will need to continue to plan for protection of the domestic arena during time of war.

NOTES


3. In 2014, Russia also captured Crimea from Ukraine, formally annexed it, and occupied Ukraine’s Donbas region.


5. For more on Russia’s and Armenia’s use of proxies to attempt to evade responsibility for occupying other countries, see Svante E. Cornell and Brenda Shaffer, “The United States Needs to Declare War on Proxies,” Foreign Policy, 27 February 2020. https://foreignpolicy.com/2020/02/27/russia-iran-suleimani-the-united-states-needs-to-declare-war-on-proxies/


10. “Armenian Citizen Accused of Terrorism: ‘We were Instructed to Explode Baku-Thilisi-Jeyhan Pipeline,’” APA, 10 January 2022: https://apa.az/en/incident/armenian-citizen-accused-of-terrorism-we-were-instructed-to-explode-baku-thilisi-jeyhan-pipeline-365617


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24. Hajiyev, "Attacks by Armenia against Azerbaijani Civilians and Critical Infrastructure.”

25. Ibid.


30. Shaffer, “Armenia’s Nuclear Power Plant is Dangerous.”