



THE STRATEGIC ENERGY LANDSCAPE OF CENTRAL ASIA: RUSSIA'S GEOPOLITICAL OPPORTUNITIES AND CHALLENGES

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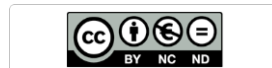
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Abstract: The Central Asian Republics (CARs), strategically situated at the crossroads of Europe and Asia, hold significant geopolitical importance due to their abundant reserves of oil, natural gas, and minerals. Their resource wealth and geographic location have made the region a focal point of rivalry among major powers, namely Russia, China, and the United States. Russia

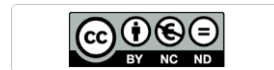
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seeks to preserve its historical dominance and influence in the area, while the United States

endeavors to advance energy infrastructure projects that align with its broader strategic and geopolitical goals. Following the 2022 war in Ukraine, Russia was forced to reassess its policies to address the economic repercussions of international sanctions. One of its key responses was to redirect its energy trades and initiatives away from Europe, focusing instead on other regions like Central Asia. However, these actions have created ripple effects, particularly by hindering the progress of China's Belt and Road Initiative within the CARs. The competition for influence over Central Asia's energy resources and policies poses a significant challenge for Russia in its attempts to maintain regional hegemony. This situation is exacerbated by the challenging management of the intricate dynamics of its relationship with China, while concurrently addressing the geopolitical countermeasures implemented by Western powers. Thus, this paper critically analyzes the geopolitical ramifications of CARs' energy security policies in relation to Russia. Specifically, it seeks to examine whether Russia can sustain its influence in the region while navigating its strategic relationship with China, or if the evolving geopolitical landscape provides an opportunity for Western powers (U.S. and European Union) to challenge Russia's dominance in Central Asia. This research uses public information, data from reputable sources, and expert interviews to sustain its arguments.

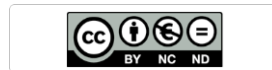
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Introduction

Central Asia constitutes a strategically significant region in the global energy landscape, characterized by a combination of abundant hydrocarbon resources, mineral wealth, and considerable renewable energy potential. The five republics – Kazakhstan, Uzbekistan, Turkmenistan, Kyrgyzstan, and Tajikistan – possess substantial reserves of oil, natural gas, and other critical minerals, while also offering opportunities for hydropower, solar, and wind energy development. This duality of resource abundance and geographic centrality positions Central Asia as a key arena for the exercise of regional and international influence, where the interests of Russia, China, and Western states converge and occasionally compete. The energy policies pursued by individual states, alongside existing infrastructural frameworks, determine both the degree of autonomy achievable by local actors and the leverage external powers can exercise in shaping regional energy flows.

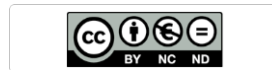
Russia's enduring relevance in the Central Asian energy sector is rooted in historical and institutional legacies. Soviet-era integration of energy infrastructure, including pipelines, electricity grids, and hydropower systems, established Moscow as a central actor in shaping energy production, distribution, and technical standards. These structural ties have sustained Russian influence in several republics, particularly those with limited domestic energy resources or constrained diversification capacities. Beyond infrastructure, Moscow's leverage has been reinforced by established institutional and political relationships, which continue to underpin both economic and energy cooperation. However, Russia's position is increasingly challenged by contemporary



geopolitical and economic pressures. The imposition of international sanctions, exacerbated by the 2022 war in Ukraine, has constrained the financial and operational capacity of Russian energy actors, complicating the maintenance of traditional influence across the region.

At the same time, the rise of alternative external actors has reshaped Central Asia's energy dynamics. China's Belt and Road Initiative has catalyzed significant investments in energy infrastructure, including pipelines, electricity transmission networks, and hydropower projects, creating alternative routes and partnerships for regional states seeking to reduce dependence on Russia. Western actors, particularly the United States and the European Union, have promoted energy diversification and renewable energy initiatives, focusing on decarbonization strategies, policy advisory, and infrastructure modernization. These interventions introduce a multipolar dimension to the energy landscape, challenging the exclusivity of Russian leverage and creating a context in which Moscow must compete strategically to retain relevance.

Within this evolving environment, the Central Asian republics exhibit divergent capacities to resist or accommodate Russian influence. Therefore, this study situates Russia's role in Central Asia within these intersecting dynamics, examining the opportunities and constraints inherent in the region's evolving energy landscape. By integrating analysis of both renewable and non-renewable energy sectors and considering the influence of competing global actors, the study provides an analytical perspective on how Russia's historical advantages are maintained, challenged, and reshaped in a context of multipolar competition. The findings

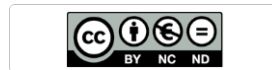


contribute to an understanding of the influence of external powers in the regional energy security and the prospects for Russia to secure its leverage in an increasingly complex geopolitical environment.

Background Overview: The Energy Landscape of Central Asian Republics

The geopolitical and energy landscape of Central Asia has undergone substantial transformation since the dissolution of the Soviet Union, yet the region remains a pivotal component of Eurasia's strategic architecture. The Central Asian Republics (CARs) – comprising Kazakhstan, Uzbekistan, Turkmenistan, Kyrgyzstan, and Tajikistan – constitute a geographically contiguous but politically heterogeneous assemblage of states whose distinct energy endowments and foreign policy orientations exert considerable influence over the region's evolving balance of power.

Particularly, their significance is underpinned by Kazakhstan's extensive oil reserves (see Staff Report, 2025; Times of Central Asia, 2024a; U.S. Energy Information Administration, 2025) and world-leading uranium production (see Dolbaia & Southfield, 2025; Samruk-Kazyna JSC, 2024; Siddi & Silvan, 2023); Turkmenistan's status as one of the holders of the largest natural gas deposits globally (see Bochkarev, 2024; Cutler, 2025b); Uzbekistan's considerable gas reserves (see Energy Charter Secretariat, 2018; The Caspian Post, 2025; Time of Central Asia, 2023) and expanding renewable energy potential (see International Renewable Energy Agency, 2025; Orzikul, 2020); and the vast, largely underutilized hydropower capacities of Kyrgyzstan and Tajikistan (see Central Asia Climate



Information Portal, 2025; Kosowska & Kosowski, 2022; Kwan, 2025). Their substantial endowments of natural resources, combined with their location at the crossroads of major continental trade routes, have attracted sustained attention from Russia, China, Western states, and regional stakeholders. Within this environment, Russia has historically played a central role, but the evolving geopolitical context – especially the sanctions imposed on Russia after the 2022 invasion of Ukraine – has begun to reshape the contours of its engagement.

The foundations of Russia’s enduring influence in Central Asia are rooted in the organizational logic of the Soviet system (Mikhalev & Rakhimov, 2023). Under Soviet rule, the region was incorporated into a centrally planned economic framework that integrated resource extraction, energy production, and transport infrastructure with Moscow’s strategic imperatives (Batsaikhan & Dabrowski, 2017). Oil and gas produced in Kazakhstan, Uzbekistan, and Turkmenistan were transported predominantly via pipelines configured to supply Soviet industrial centers or export terminals within Russian territory (see Aminjonov, 2018; Kanapiyanova, 2019; OSCE, 2022). Similarly, hydropower capacity in Kyrgyzstan and Tajikistan was embedded within a regionally coordinated “water-energy nexus” designed to balance upstream electricity generation with downstream irrigation requirements (see Guo et al., 2016; Khamzayeva et al., 2009). These technical networks functioned not merely as infrastructure but as instruments of political authority, ensuring the republics’ continued dependence on Moscow for market access, resource allocation, and the maintenance of critical energy and transport systems.



The independence of Central Asian states in 1991 did not dismantle the structural dependencies established under the Soviet system. Instead, the newly sovereign republics inherited energy infrastructures that had been designed without regard for emerging national borders. Russia assumed control over the principal oil and gas transit corridors and retained significant stakes in upstream and downstream assets (Eurasian Research Institute, 2016; Laruelle, 2009). Given the limited financial and institutional capacity of the Central Asian states during their early state-building phase, Russian firms remained essential partners (see Paramonov & Stokov, 2007; Paramonov & Stokov, 2008; Saprykin, 2004). Moscow's leverage was further reinforced through long-term supply agreements, preferential pricing arrangements, and the involvement of Russian labor migrants in regional economies (see Madiyev, 2021; Marat, 2009; Westphal, 2009). As a result, the post-Soviet energy order continued to position Russia as the principal intermediary between Central Asia and global energy markets.

However, over time, the geopolitical context of Central Asia became more complex. Since the beginning of the 2000s, China emerged as a major economic partner and investor, promoting overland connectivity and energy cooperation as part of its broader regional engagement (Peyrouse, 2009). By constructing new pipelines, financing large-scale infrastructure, and expanding commercial ties, China offered Central Asian Republics alternative avenues for development and market access (Melnikovová, 2020; Olmos, 2023; Xie, 2021). This started gradually reducing the structural advantages Russia once derived from transit monopolies, introducing a new lawyer of strategic competition. On



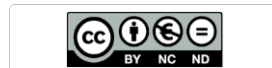
the other hand, Western states were more peripheral actors. The European Union and the United States engaged primarily through technical assistance, governance programs, and limited energy or mineral-related initiatives. While the EU highlighted energy diversification and critical mineral partnerships, actual involvement remained small-scale, often mediated through multilateral frameworks (see European Parliament, 2007; Kramer, 2007; UK Parliament, 2009). Similarly, U.S. engagement consisted of ad hoc support for regional integration, market reforms, and selective energy initiatives, without establishing a coherent long-term strategy (see Brookings Institution, 2002; Hill, 2001; Weitz, 2020). Consequently, Western actors provided alternative partners and multilateral opportunities, but their influence was constrained by geographic distance, political risk, and limited investment.

These evolving strategies intersected with Russia's enduring historical influence, but they were significantly reshaped by the geopolitical consequences of the 2022 war in Ukraine. The imposition of unprecedented sanctions on Russia altered the strategic calculus for all actors involved. Russia's access to Western energy markets was severely restricted, its financial channels faced considerable disruption, and its long-term technological and industrial capacities came under strain (see Borrell, 2023; European Commission, 2024; European Commission, 2025). In response, Moscow intensified efforts to consolidate its relationships in regions traditionally within its sphere of influence, and Central Asia became a focal point of this redirection (Gusseinov & Allayarov, 2025; Heckenthaler, 2024). Sanctions produced both incentives and constraints for



Russia's engagement with Central Asia. On one hand, the loss of European markets increased the urgency of maintaining stable energy relations with neighboring states and identifying new export or transit arrangements. Russia sought to strengthen cooperation in areas such as natural gas, electricity, and nuclear energy, presenting these partnerships as mutually beneficial and as a means of reinforcing regional stability (Pritchins, 2025; Tafuro Ambrosetti & Massoletti, 2025). On the other hand, Russia's weakened economic position and reputation reduced its ability to project influence through investment, subsidies, or technological support (Fenton & Kolyandr, 2025; Wiśniewska & Kalwasiński, 2024). Central Asian states, cautious about exposure to secondary sanctions or excessive dependence, were prompted to re-evaluate the nature and extent of their energy cooperation with Russia (Bohr, 2025; Szekely, 2024).

China's growing presence further complicated this picture. By providing financial resources, infrastructure development, and access to its vast domestic market, China offered Central Asian governments alternatives at a moment when Russia's economic resilience appeared increasingly uncertain (Lombardozzi, 2025; Öncü, 2024). Western states, though less deeply embedded in regional economic structures, also adapted their policies by promoting diversification of energy sources, supporting environmental transitions, and reinforcing diplomatic engagement (Cornell & Shaffer, 2024; Popławski, 2024a). The result has been a progressively more multipolar environment in which Russia, while still influential, is no longer the single dominant power shaping the region's energy pathways. The cumulative effect of these developments is a regional landscape



marked by competing pressures, shifting alliances, and evolving national strategies. Central Asian governments have sought to preserve autonomy by balancing relationships among external actors, minimizing overdependence on any single partner, and pursuing projects aligned with their own developmental objectives (Hosaka & Hanso, 2025; Nasibov, 2025). This has created both opportunities and uncertainties for Russia. While historical ties, shared language, labor migration flows, and existing infrastructure continue to provide Moscow with important advantages, these foundations are increasingly insufficient on their own to secure long-term dominance.



Figure 1: Central Asian Republics (Gutbezahl, 2024)

Therefore, understanding the contemporary dynamics of Russia's engagement in Central Asia therefore requires situating Moscow's energy policies within this broader constellation of geopolitical shifts, sanctions pressures, and evolving national strategies. The region remains central to Russia's vision of its strategic periphery, yet the extent to which it can sustain dominance in the face



of structural constraints and intensified competition is increasingly uncertain. It is within this context that an assessment of Russia's leverage – and the limitations it now confronts – becomes essential for interpreting the trajectory of Eurasia's energy future.

Research Question and Methodology

Thus, this study adopts a qualitative and analytically driven research design to answer the following question: “To what extent can Russia secure its position in Central Asia's energy sector under evolving geopolitical pressures?”.

Central to this study is the application of a SWOT analytical framework, which evaluates Strengths, Weaknesses, Opportunities, and Threats. While traditionally employed in strategic management and policy planning, SWOT is increasingly recognized in international relations scholarship as a useful tool for examining state capabilities, external pressures, and the strategic environment surrounding regional actors (see Chatzinikolaou et al., 2023; Ghazinoory et al., 2011). In this research, the framework is adapted to systematically examine each CAR in direct relation to Russia's role within their respective energy sectors. The aim is not to evaluate the countries in isolation, but rather to assess how their domestic energy structures, policy orientations, and diversification strategies shape the leverage and limitations available to Russia.

The SWOT framework is operationalized through four domains of inquiry:

- Strengths (S): they refer to domestic factors – such as resource endowments, policy autonomy,



institutional capacity, or diversified export structures – that equip a state with leverage in its energy relations with Russia;

- Weaknesses (S): they encompass structural dependencies, infrastructural bottlenecks, financial vulnerabilities, or governance constraints that heighten exposure to Russian influence;
- Opportunities (O): they denote areas in which Russia might expand, consolidate, or recalibrate its role, including new energy projects, nuclear cooperation, or regional integration mechanisms;
- Threats (T): they comprise external pressures that challenge Russia’s ability to maintain dominance, including sanctions, Western investment initiatives, China’s intensifying regional presence, and domestic diversification strategies pursued by the CARs.

Data collection was conducted through comprehensive desk-based research, incorporating peer-reviewed academic literature, policy analyses, regional energy reports, and official documents issued by national governments and international organizations up until October 5, 2025. Given the rapidly evolving geopolitical environment, particular emphasis was placed on materials published after 2022 to ensure analytical relevance to the post-sanctions landscape. The study also considered expert interviews and specialized commentary where available, acknowledging the value of practitioner insights in domains characterized by limited transparency.



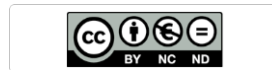
The research design further employed a comparative case study approach, applying uniform evaluative criteria across the five CARs while allowing for country-specific contextualization. This structured comparison facilitates the identification of patterns, divergences, and recurring mechanisms through which Russia’s influence is maintained or contested. Moreover, to enhance analytical reliability, the study utilized source triangulation, cross-checking official statements against independent reports and expert assessments. This is particularly important in a region where political sensitivity, strategic ambiguity, and limited access to data can introduce distortions.

In the next sections, the result from the SWOT analysis will be presented, followed by a conclusion to summarize the main arguments and address the limitations and avenues for further research.

Results and Discussions

Turkmenistan

Turkmenistan stands out within Central Asia as the state least subject to Russian leverage in the energy sector, representing a distinctive case in the regional landscape. Unlike other CARs – each of which maintains varying degrees of infrastructural or policy-based interdependence with Russia – Turkmenistan – the “Hermit Kingdom” (Eurasianet, 2025a) – has pursued an assertive strategy of energy autonomy. This orientation is rooted in both structural factors, such as vast natural gas reserves, and political choices centered on “neutrality and multi-vector cooperation” (News Central Asia, 2024; TurkmenPortal News, 2024). The results illustrate that Turkmenistan’s energy policy not only



minimizes Russian influence but also reconfigures regional energy flows in ways that challenge Moscow’s traditional dominance.

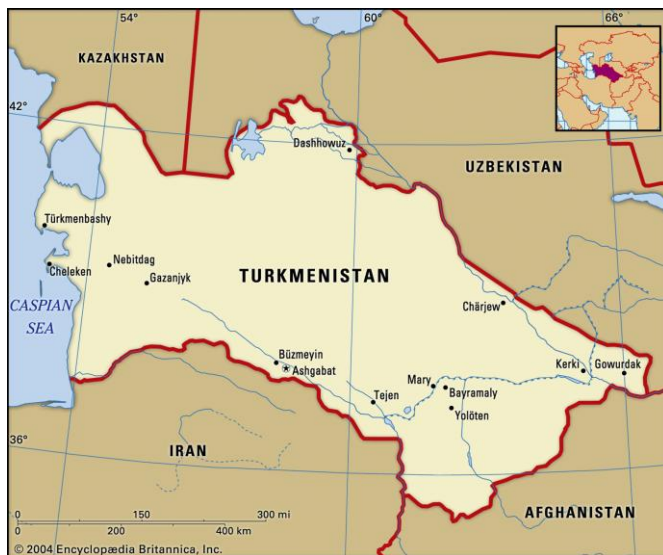


Figure 2: Turkmenistan (Britannica, 2024a)

The foundation of Turkmenistan’s autonomy lies in its vast natural gas endowment. The country possesses the fourth-largest proven gas reserves globally, concentrated in major fields such as Galkynysh, one of the largest gas deposits in the world (Atayev, 2025; Kanapiyanova, 2022; News Central Asia, 2025). This resource base affords Turkmenistan a level of strategic independence not found in the smaller and less affluent Central Asian states, which rely heavily on Russian imports, financing, or transit infrastructure. Even though oil production is comparatively modest and hydropower potential is limited, gas alone provides Turkmenistan with sufficient geopolitical weight to negotiate externally from a position of relative strength (Aenert, 2025; Indeo, 2025a; UNIDO, 2023). In contrast to energy-importing states such as Kyrgyzstan or Tajikistan, Turkmenistan’s



energy security challenge is not supply vulnerability but rather the identification of sustainable export markets and viable transit routes (Karibayeva Meyer, 2025; Komakhia, 2025).

Historically, Russia controlled these export routes. During the early post-Soviet decades, Turkmen gas flowed almost exclusively through Russian pipelines operated by Gazprom (Korteweg, 2018). This arrangement granted Moscow considerable leverage, enabling it to set purchase prices, restrict volumes, and act as a gatekeeper for Turkmenistan's access to international markets. Russia used this position not only to secure cheap gas for domestic and regional consumption but also to maintain geopolitical influence over Turkmenistan by limiting its interaction with alternative buyers (McArdle & Rowley, 2009; Raimondi, 2019). This structural dependency shaped Turkmenistan's vulnerability during periods of political tension, including the 2009 pipeline explosion dispute with Russia, which sharply curtailed gas flows and revealed the risks of reliance on a single export route (Fossum, 2010; UPI, 2009).

However, the results of this study indicate that Turkmenistan has successfully mitigated these vulnerabilities through a deliberate diversification strategy more centered around China. The construction and expansion of the Central Asia-China gas pipeline, inaugurated in 2009, fundamentally transformed Turkmenistan's export geography (International Monetary Fund, 2011; Putz, 2015). This pipeline restructured the region's energy map, redirecting Turkmenistan's exports eastward and elevating China as the country's dominant economic partner. Currently,



most Turkmen gas – estimated at around 80% – is exported to China, where it plays a key role in Beijing’s broader energy security strategy (China Briefing Team, 2023). China’s willingness to provide large-scale infrastructure investments, long-term purchase contracts, and financial support has further reinforced Turkmenistan’s pivot. While this creates a new asymmetry, with China emerging as the principal buyer, the nature of the dependency differs markedly from the earlier Russian dominated structure, in which Turkmenistan was regarded largely as a transit supplier through Gazprom controlled pipelines (Anceschi, 2019).

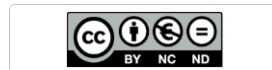
From Russia’s standpoint, Turkmenistan’s eastward realignment represents a significant strategic loss. Russia no longer controls Turkmenistan’s export infrastructure, cannot influence pricing or volumes, and lacks meaningful leverage to reinsert itself into Turkmenistan’s core energy markets. Moscow’s diminished influence is further compounded by Turkmenistan’s foreign policy doctrine of “permanent neutrality”, which limits security cooperation and restricts Russia’s ability to build political influence through military or institutional channels (Moraru, 2025). Indeed, Ashgabat’s political distance effectively reduces the array of tools Russia can deploy to influence domestic policy. Moreover, the results also highlight the relevance of other natural resources – primarily petrochemical and sulfur production – that contribute to Turkmenistan’s export diversification, though to a lesser extent than natural gas. The country has invested in petrochemical complexes aimed at producing value-added products such as polyethylene and polypropylene, partly in response to fluctuating gas revenues (TimesCA, 2025; TurkmenPortal, 2025). While these industries do



not fundamentally alter the geopolitical balance, they reinforce Turkmenistan's broader strategy of reducing reliance on a single export domain and increasing economic resilience – indirectly limiting Russia's capacity to exert influence by exploiting moments of economic vulnerability.

Another important dimension identified in the analysis concerns Western engagement. European states have sought to identify alternatives to Russian gas in the aftermath of repeated energy disputes with Moscow and the 2022 rupture in Russia-EU energy relations. Turkmenistan has featured prominently in these discussions, especially through proposals for the Trans-Caspian Gas Pipeline (TCGP), a long-envisioned project that would transport Turkmen gas across the Caspian Sea to Azerbaijan and onward to European markets (Cutler, 2023; Onyango, 2025). Although the TCGP remains unrealized due to geopolitical rivalries, legal complexities over Caspian Sea demarcation, environmental concerns, and outspoken opposition from Russia and Iran, its potential persists as a symbolic and diplomatic asset for Turkmenistan (Gupta, 2020; Rezaei Rad, 2025). For Russia, however, the very possibility of Turkmen gas reaching Europe constitutes a strategic threat, as it would not only diversify EU imports but reduce Moscow's ability to monopolize east-west energy routes.

On the other hand, the United States has pursued a parallel diplomatic track aimed at supporting Turkmenistan's westward connectivity. Washington has consistently endorsed diversification initiatives that reduce regional dependence on Russian energy routes, offering political backing for the Trans-Caspian project



and facilitating technical consultations on Caspian energy integration (Bokhari & Chausovsky, 2023; Bryza et al., 2020). U.S. policy emphasizes the development of alternative export corridors and the enhancement of regional energy security, aligning with broader American objectives of limiting Russian influence in Eurasia (Rudenshiold, 2025; U.S. Government Publishing Office, 2018). Although cooperation is constrained by Turkmenistan's isolationist governance structure and reluctance to commit to long-term Western-backed infrastructure, U.S. engagement nonetheless expands Turkmenistan's diplomatic options and reinforces its ability to resist Russian pressure. This additional layer of Western involvement ensures that Ashgabat is not exclusively tied to either Beijing or Moscow, further complicating Russia's ability to reassert dominance.

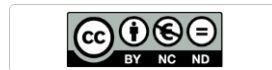
Turkmenistan's approach illustrates the outer limits of Russia's influence in Central Asia. By combining abundant resources, diversified export routes, emerging industrial capacity, and political neutrality, Turkmenistan has constructed a model of energy sovereignty that substantially diminishes Moscow's capacity to shape its domestic or foreign energy policies. While challenges remain, including economic dependence on China and limited penetration of renewables, the overall strategic balance demonstrates that Turkmenistan is an effective example of a Central Asian state that resists Russian dominance. Opportunities for Russia to reassert influence are structurally constrained, and the country serves as a case study of the limits of Russian regional hegemony in the context of contemporary geopolitical pressures, sanctions, and emerging multipolar energy alignments.



Uzbekistan

Uzbekistan occupies a distinctive middle position in Central Asia's energy landscape, representing a state where Russia retains meaningful – but not decisive – leverage. Unlike Turkmenistan, which has achieved substantial independence from Russian energy structures, or Kyrgyzstan and Tajikistan, which remain structurally dependent on Russian financing and infrastructure, Uzbekistan demonstrates an intermediate pattern: it engages with Russia where cooperation is advantageous, particularly in nuclear energy and technological fields, yet actively pursues diversification to avoid overreliance on any single external actor. This calibrated balancing strategy reflects broader transformations in Uzbekistan's domestic energy policy since the late 2010s, shaped by modernization efforts, renewed economic openness, and expanding ties with China, the West, and regional partners (Cutler, 2025a; Embassy of the Republic of Uzbekistan in the Kingdom of Belgium, 2025; Lombardozzi, 2024; OECD, 2023).

Uzbekistan's energy portfolio is dominated by natural gas, making it one of the few Central Asian states with both significant domestic reserves and a large internal consumption base (Energy Charter Secretariat, 2022; UNECE, 2025b). Historically, Uzbekistan exported part of its gas output to Russia and Kazakhstan; however, in recent years, declining surplus production and growing domestic demand have reduced export volume (International Energy Agency, 2022b; Popławski & Rudnik, 2023). Therefore, Russia's leverage does not derive primarily from commercial gas imports, as in the case of Central Asian energy exporters. Instead, Moscow's influence resides in technological



cooperation, electricity grid interconnections, and emerging nuclear collaboration (Kun.uz, 2025; Russia Islamic World Strategic Vision Group, 2025; Tashkent Times, 2024; TASS, 2024). The proposed construction of Uzbekistan’s first nuclear power plant, in partnership with Russia’s state-owned Rosatom, represents the most significant manifestation of this relationship (News Agencies, 2024). Nuclear cooperation provides Moscow with long-term, path-dependent influence, as such projects entail multi-decade commitments involving fuel supply, training, technical standards, and regulatory integration. For Uzbekistan, the nuclear project promises diversification of energy sources and greater capacity to meet rising electricity demand, but it also embeds a structural linkage to Russian technological and regulatory ecosystems.



Figure 3: Uzbekistan (Britannica, 2024b)

However, Uzbekistan’s engagement with Russia is counterbalanced by deliberate diversification efforts that aim to reposition the country as a more autonomous regional actor. One major dimension of this strategy



involves developing alternative transit and export corridors that reduce dependence on Russian-controlled infrastructure (see Indeo, 2025b; Umarova, 2025b; Yakhshilikov et al., 2024). Uzbekistan has supported initiatives to expand east-west connectivity through the South Caucasus, including participation in discussions surrounding the Middle Corridor linking Central Asia with Turkey and Europe via the Caspian Sea (see Abdul, 2024; Tskhvediani, 2025; Umarova, 2025a). These projects align with broader regional efforts to create new trade and energy routes that bypass Russia, particularly in the context of the post-2022 sanctions environment. The country's interest in these corridors is motivated by broader economic integration and the desire to facilitate future electricity and gas trade independent of Russian oversight.

China plays a central role in Uzbekistan's energy diversification. Through the Belt and Road Initiative (BRI), China has become a leading source of investment in infrastructure, renewable energy, and industrial development (Khidirov, 2025). Chinese companies have financed and constructed multiple solar and wind power projects in Uzbekistan, aiming to support the country's target of significantly increasing the share of renewables in its electricity mix (see Tux sinov, 2025a; Tux sinov, 2025b, UzDaily, 2024). This expansion of renewables reduces Uzbekistan's reliance on gas-fired power generation and opens space for more balanced foreign partnerships. Chinese financing also supports the modernization of pipeline infrastructure and the upgrading of industrial facilities, further embedding Beijing's presence in the economy (Meena, 2025). While this creates a new form of dependence, it also dilutes Russian influence by providing Uzbekistan with



alternative investment sources and technological partners.

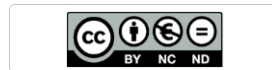
Western engagement, although more limited in volume compared to Chinese investment, contributes to Uzbekistan's strategic diversification. The European Union and the United States view Uzbekistan as a promising partner for renewable energy development and regional connectivity initiatives. Western companies have signed agreements to build large-scale green energy facilities, including solar parks and wind farms, often in cooperation with international financial institutions (see European Investment Bank, 2023; Jowett, 2024b; Usov, 2023; Westphal et al., 2022). The U.S. and Europe promote regional electricity market integration and support efforts to reduce Central Asia's reliance on Soviet-era energy networks, which remain partly influenced by Russia. Although Uzbekistan's governance structures and limited transparency pose challenges for Western actors, these partnerships nonetheless offer additional pathways for diversification beyond Russia and China.

Uzbekistan's resource base extends beyond natural gas, including modest oil production, significant uranium reserves, and growing renewable potential. While oil production remains limited and declining, uranium represents an important strategic resource. Uzbekistan is among the world's largest uranium producers and supplies multiple global markets, including Russia (NEA & IAEA, 2023). This creates a sector in which bilateral cooperation persists but is not exclusive, as Uzbekistan has engaged with Western and Asian partners in uranium mining and processing (see Navoiyuran State Enterprise, 2025; Orano, 2025). The



diversification of uranium sales reduces Russia's potential leverage and reinforces Uzbekistan's multi-vector foreign policy. Moreover, electricity remains a critical sector in assessing Russia's influence. Uzbekistan is part of the Central Asian Power System (CAPS), a Soviet-era electricity grid that once integrated all five Central Asian states. Although CAPS was partially fragmented in the early 2000s, Uzbekistan has taken steps to reintegrate into the regional grid to support cross-border electricity exchanges with Tajikistan and Kyrgyzstan (see Tojik, 2024; UNECE, 2024). Russia does not control CAPS, but Moscow's broader political influence can indirectly shape regional integration dynamics. Nevertheless, Uzbekistan's re-engagement with the grid aligns more closely with regional cooperation than with renewed Russian influence, representing a shift toward intra-Central Asian energy partnerships.

Domestically, Uzbekistan's energy policy reforms since 2016 have emphasized modernization, efficiency improvements, and the gradual liberalization of the energy sector. These reforms create openings for foreign investment while reducing inefficiencies inherited from the Soviet system. As Uzbekistan modernizes its energy infrastructure, dependence on Russian technology and equipment may decline, further limiting Moscow's long-term leverage. However, Russia still retains certain strategic advantages. The proposed Rosatom nuclear project, if fully implemented, would represent a long-term anchor of influence lasting several decades. Russia also benefits from historical linkages, linguistic ties, and ongoing cooperation in security and migration, all of which create channels for political alignment that can indirectly influence energy decisions. Moreover, given



Uzbekistan's need for foreign investment and technology, Russian companies maintain opportunities to participate in modernization projects, particularly in gas processing, petrochemicals, and power generation. Yet these opportunities coexist with significant threats to Russia's influence. The rapid expansion of Chinese investment, the growing involvement of Western actors, and Uzbekistan's commitment to diversifying energy sources all contribute to a gradual erosion of Moscow's relative position. Most importantly, Uzbekistan's strategic autonomy is strengthened by its capacity to pursue a multi-vector policy without facing extreme structural dependencies.

Thus, Uzbekistan exemplifies an intermediate case in which Russia's leverage remains meaningful but not predominant. Cooperation in nuclear energy and technological domains provides Moscow with enduring influence, yet Uzbekistan's diversification strategies – through regional connectivity, renewable energy, Chinese financing, and Western partnerships – signal an ongoing rebalancing. The resulting strategic landscape is one in which Russia cannot fully secure dominance, but neither is its influence negligible; instead, Uzbekistan represents a competitive space in which multiple external actors shape the country's evolving energy policy.



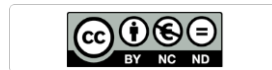
Kazakhstan

Kazakhstan represents the most strategically consequential state in Central Asia’s energy landscape – a country that is simultaneously a major oil and uranium producer, a significant natural gas actor, and a critical transit hub linking the region to global markets (International Energy Agency, 2020). As such, Kazakhstan constitutes an important arena in which Russia seeks to preserve its influence, yet it is also the state where Moscow faces some of its most significant limitations. The complexity of Kazakhstan’s position reflects both its abundant natural resource base and its pronounced multi-vector foreign policy, which has intensified since the onset of Western sanctions on Russia in 2014 and deepened further after 2022.



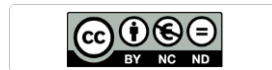
Figure 4: Kazakhstan (Britannica, 2024c)

Historically, Kazakhstan’s energy exports were heavily dependent on Russian-controlled infrastructure. The Caspian Pipeline Consortium (CPC), which carries the



bulk of Kazakhstan's oil to global markets via the Russian Black Sea port of Novorossiysk, which has long served as Moscow's principal lever of influence. Russia's capacity to restrict or disrupt the CPC system – whether through regulatory interventions, technical claims, or political signaling – has periodically reminded Kazakhstan of the vulnerabilities associated with reliance on Russian transit. These episodes, combined with the shifting geopolitical environment following Russia's invasion of Ukraine, accelerated Astana's drive to diversify export routes. Kazakhstan has since intensified cooperation with European partners to expand shipments through the Trans-Caspian route, using tankers across the Caspian Sea and rail corridors through Azerbaijan and Georgia (see KazTAG, 2025; Putz, 2025; Times of Central Asia, 2024b). While these alternative routes are more costly and limited in scale compared to the CPC, they symbolize Kazakhstan's strategic intent to mitigate dependence on Russia.

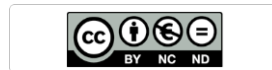
China also plays an indispensable role in Kazakhstan's diversification strategy. Beijing has invested extensively in Kazakh oil and gas fields, pipeline infrastructure, and downstream industries through the Belt and Road Initiative. The Kazakhstan-China oil pipeline, completed in stages during the 2000s, provided Astana with its first major export corridor that bypassed Russian territory (Cutler, 2014). Chinese companies now hold substantial stakes in major Kazakh oilfields and are deeply embedded in the country's energy sector (see Haidar, 2025; Lobacheva & Sedova, 2025). This influx of Chinese investment provides Kazakhstan with an alternative source of capital, technology, and political support, thereby diluting Russia's traditional dominance. At the same time, Kazakhstan has



maintained a careful balance, ensuring that neither China nor Russia becomes overwhelmingly dominant, and actively encouraging Western companies to retain significant roles in the country's most productive oilfields (see Muxtar Agbabali, 2024; Tazhutov, 2023).

In the nuclear sector, however, Russia retains a more resilient foothold. Indeed, while Kazakhstan exports uranium to a range of markets, cooperation with Russia in uranium processing, fuel cycle services, and nuclear technology remains significant. Rosatom's involvement in joint ventures, including enrichment and fabrication activities, provides Russia with a degree of strategic influence extending beyond hydrocarbons (see Holbrook, 2025; Rosatom Newsletter, 2022). Kazakhstan has also selected Rosatom for the construction of its first nuclear power plant (Kraev, 2025). Beyond hydrocarbons and uranium, Kazakhstan's energy diversification increasingly includes renewable energy development. The government has set ambitious targets to expand solar, wind, and hydropower capacity, supported largely by Western and Gulf state investments rather than Russian financing (see Ansari et al., 2025; Lim, 2025). European institutions have become more active in supporting Kazakhstan's renewable transition, viewing it as a complementary avenue for strengthening economic ties while reducing Moscow's leverage (Khassenkhanova, 2025).

The growing penetration of renewables reduces Kazakhstan's future dependence on gas-fired electricity and creates new spaces for external engagement in which Russia possesses limited comparative advantage. This shift does not immediately undermine Russia's



position, given the dominance of oil and gas in Kazakhstan's export structure, but it signals a long-term strategic trajectory that may further dilute Russian influence over time.

Transit remains a central dimension of Kazakhstan's geopolitical importance, and it is here that Russia faces both the greatest challenges and the most enduring residual leverage. While Kazakhstan has increased its use of the Trans-Caspian route, the CPC system remains indispensable for the foreseeable future due to its scale, efficiency, and integration into global markets (see Baidussenov & Korsunov, 2024). Therefore, Russia retains the capacity to influence Kazakhstan's energy flows, even if Astana continues to distance itself politically. However, Russia's broader geopolitical isolation has weakened its long-term position: Kazakhstan has become far more assertive in expanding cooperation with the EU, Türkiye, China, and the South Caucasus states, thereby reducing Moscow's ability to shape regional transit dynamics as it once did. Kazakhstan's domestic politics also shape the extent of Russian influence.

Indeed, Astana has emphasized sovereignty, economic diversification, and a more balanced foreign policy. While Kazakhstan remains a member of Russian-led institutions such as the Eurasian Economic Union and the Collective Security Treaty Organization, its leadership has increasingly articulated positions that diverge from Moscow's preferences, especially regarding sanction compliance and relations with Western governments. This political realignment spills over into the energy domain, where Kazakhstan seeks to maintain stable cooperation with Russia while avoiding



any appearance of alignment with Russian geopolitical ambitions.

Despite these diversification efforts, Russia continues to hold certain structural advantages. The sheer physical geography of pipelines and export infrastructure ensures that Russia cannot be easily circumvented. Many sectors of the Kazakh energy economy – from refineries to electricity grids – retain elements of legacy integration dating back to the Soviet period. Russian companies remain active as investors and operators in several upstream and midstream projects (see ICE, 2025; Reuters, 2025). Additionally, Russia’s influence extends through soft power channels, including language, labor migration, and cultural ties, which indirectly affect the broader policy environment in which energy decisions are made (Gubaidullina & Paizova, 2025; Yessirkep et al., 2025).

Even so, the balance of power is shifting. Western sanctions have reduced Russia’s ability to serve as a reliable partner or to provide investment at pre-2014 levels. Kazakhstan increasingly views diversification not as an aspirational goal but as a strategic necessity. With expanding relations with the EU, growing Chinese investment, and interest from U.S. and Gulf partners, Kazakhstan now operates in a far more multipolar energy landscape. For Russia, Kazakhstan thus represents both an opportunity and a challenge: an opportunity because existing infrastructure and nuclear cooperation provide channels for continued influence, but a challenge because Astana’s diversification efforts are systematic, well-resourced, and aligned with broader international dynamics.



Taken together, Kazakhstan illustrates the evolving limitations of Russia's capacity to secure a dominant position in Central Asia's energy sector. Moscow remains influential, especially through transit and nuclear cooperation, yet it increasingly competes with alternative actors who offer Kazakhstan more flexible, politically acceptable, and economically competitive partnerships. Kazakhstan's multi-vector strategy has therefore transformed the country into a contested geopolitical space rather than a reliably Russian-oriented partner in the energy domain.

Kyrgyzstan

Kyrgyzstan represents one of the most structurally energy-dependent countries in Central Asia, a position that grants Russia significant and enduring leverage over its energy sector. The country's limited reserves of oil, gas, and coal, combined with its modest industrial base and chronic fiscal constraints, make it reliant on external suppliers to satisfy most of its energy demand (UNECE, 2025a). This dependence has shaped the geopolitical contours of Kyrgyzstan's foreign policy, reinforcing Russia's centrality in areas ranging from fuel imports to power infrastructure. Although Kyrgyzstan possesses substantial hydropower potential and growing interest in renewables, these assets have not yet been developed to a scale capable of offsetting reliance on Russian energy flows. In the domain of non-renewable energy, Kyrgyzstan's vulnerability is especially pronounced. The country imports nearly all its oil products and a considerable portion of its natural gas, with Russia serving as the primary supplier for both. Russian oil companies provide Kyrgyzstan with diesel and gasoline under preferential arrangements facilitated through the



Eurasian Economic Union, allowing for reduced taxation and stabilized pricing (see Eurasian Economic Commission, 2017; TASS, 2025).



Figure 5: Kyrgyzstan (Britannica, 2024e)

While these concessions appear economically beneficial, they also institutionalize dependence, granting Russia the ability to shape domestic energy prices and influence Kyrgyzstan’s economic stability. Fuel shortages or export restrictions – whether induced by technical, commercial, or political factors – have historically had immediate domestic impacts, underscoring the extent to which Kyrgyzstan’s energy security is tied to Russian decisions. Kazakhstan also provides supplementary oil and gas supplies, but these flows are secondary and operate within a broader regional system in which Russia maintains decisive influence (Tilekeyev, 2025). Kyrgyzstan has periodically explored alternative sources of fuel imports, but logistical constraints and the absence of large-scale



refining capacity limit these efforts (United Nations, 2024). As a result, the country's non-renewable energy sector remains deeply embedded in Russian supply chains, giving Moscow durable and practical tools for exerting pressure.

At the same time, Kyrgyzstan possesses significant renewable energy potential, which could transform its energy landscape. Hydropower stands at the center of this potential, as the country's mountainous terrain and abundant rivers offer opportunities not only for domestic electricity production but also for regional electricity export. Hydropower already accounts for a substantial share of Kyrgyzstan's electricity generation, but the sector faces seasonal fluctuations, infrastructural decay, and underinvestment (International Monetary Fund, 2019). The largest hydropower projects envisioned in the country, including the Kambarata-1 complex and the Naryn river cascade, have long been seen as possible pathways to greater energy sovereignty (Vedeneva, 2024).

Russia has historically attempted to anchor its influence in Kyrgyzstan by investing in the hydropower sector. Moscow committed to finance and construct major dams, aiming to create long-term dependencies through technological integration, funding arrangements, and operational coordination (see Dzyubenko, 2012; Rivers.Help!, 2025). However, Russian-backed projects repeatedly faced delays due to financial constraints, shifting political priorities in Moscow, and local governance challenges in Kyrgyzstan itself (see Blagov, 2016; CEE Bankwatch Network, 2025; The Jamestown Foundation, 2016). The suspension or cancellation of



several Russian initiatives created space for other actors, most notably China, to step into the hydropower domain.

China's role in Kyrgyzstan's energy sector has grown steadily, though it remains more pronounced in transmission infrastructure, electricity distribution, and grid modernization than in hydropower construction itself. Through the Belt and Road Initiative, China has financed power lines, substations, and modernization efforts essential for reducing losses and improving energy reliability (see Gokmen 2025a; Mogilevskii, 2019; OSCE Academy, 2020). While China does not replace Russia as a fuel supplier, its involvement in modernizing Kyrgyzstan's electricity system offers an alternative form of partnership – one less tied to historical dependency and more oriented toward future development. This diversification of partners moderately reduces Russian influence, although it does not fundamentally rewrite the structural imbalance of the non-renewable sector.

Kyrgyzstan has also begun to explore solar and wind energy, encouraged by Western development agencies, multilateral institutions, and regional initiatives (see Jowett, 2024a; World Bank, 2023). The country's high-altitude terrain offers promising solar irradiation levels, while certain valleys present viable wind corridors (Mehta et al. 2022). However, such projects remain at a pilot stage, constrained by limited foreign investment, regulatory uncertainty, and domestic political instability. Western actors have expressed interest in supporting Kyrgyzstan's renewable transition, yet their involvement remains small-scale due to concerns about governance, financial viability, and the country's complex political environment (SpecialEurasia OSINT



Team, 2024). As a result, renewables – while promising in the long term – have not yet reshaped the current geopolitical balance.

Despite these diversification attempts, Russian leverage remains deeply entrenched. Beyond fuel supplies, Russia's influence extends into electricity trade, hydropower planning, and the broader economic and political context of the bilateral relationship. Russian companies continue to participate in electricity distribution, and bilateral agreements structure the functioning of key energy assets. Remittances from Kyrgyz migrants working in Russia form a large share of the country's GDP, further amplifying Moscow's capacity to influence domestic politics and energy decisions (Chipegin, 2025). Yet Kyrgyzstan's growing interest in renewable energy introduces a long-term dynamic that could gradually reduce dependence. Hydropower expansion, if successfully implemented, would decrease reliance on imported natural gas and diesel for electricity generation. Solar and wind, though nascent, offer supplementary options to ease seasonal electricity shortages. However, these transitions require sustained investment, technical expertise, and political stability – all of which remain elusive.

Thus, Kyrgyzstan remains one of the CARs where Russia's position appears most secure. The structural foundations of dependency – limited non-renewable resources, reliance on Russian imports, and Russian engagement in hydropower – provide Moscow with durable influence even as China and Western actors increase their presence. Kyrgyzstan's slow diversification and ongoing infrastructural challenges reinforce this dynamic. Nevertheless, the gradual



emergence of Chinese financing and the budding interest in renewables signal that Russia’s dominance, while strong, is no longer exclusive and might face more competition over time.

Tajikistan

Tajikistan represents another example of structural energy dependence in Central Asia, where Russia maintains significant leverage across both renewable and non-renewable domains. The country’s energy sector is shaped by the absence of meaningful oil and gas reserves, its heavy reliance on imported fossil fuels, and its ambitious but financially constrained effort to build a hydropower-based model of energy self-sufficiency (Asia-Plus, 2023; International Energy Agency, 2022a). These characteristics create a dual dynamic in which Tajikistan seeks autonomy through renewable energy development while remaining tethered to Russian supply chains for its non-renewable needs.



Figure 6: Tajikistan (Britannica, 2024f)



In terms of non-renewable energy, Tajikistan is highly constrained. It relies on imports for most of its oil products and refined fuels, with Russia serving as its primary and most reliable supplier (see e.g., CentralasianLIGHT.org, 2024; Gokmen, 2025b). Russian fuel deliveries play a decisive role in meeting domestic energy demand, particularly for transportation, heating, and industry. These supply patterns are reinforced by preferential arrangements under the Eurasian Economic Union framework, even though Tajikistan is not a member; the country benefits from bilateral agreements that offer reduced export duties and stabilized prices (see Asia-Plus, 2025; CentralasianLIGHT.org, 2023).

As a result, Russia maintains substantial influence over Tajikistan's economic stability and energy affordability. Seasonal shortages and price fluctuations further highlight Tajikistan's vulnerability, exposing the political and economic risks associated with disruptions in Russian supply (Bland, 2025; RFE/RL staff, 2025). On the other hand, natural gas occupies a smaller but symbolically important role. Tajikistan previously received imported gas via Uzbekistan, but chronic political tensions between the two countries in the 2000s and early 2010s led to repeated supply interruptions (Eurasianet, 2025b; Watkins, 2010). Although relations have improved in recent years, Tajikistan has not restored substantial gas imports. The unresolved nature of this supply problem reinforces Tajikistan's dependency on alternative fuels – primarily Russian-sourced oil products – further strengthening Moscow's position.



In contrast to its minimal non-renewable resources, Tajikistan possesses vast renewable potential, especially in hydropower. The country's mountainous terrain and abundant river systems make it one of the most hydro-rich states in the world relative to its size (Sultonov et al., 2024). Hydropower already accounts for most of the domestic electricity generation (World Bank, 2025). However, Tajikistan's hydropower supply is highly seasonal: summer months produce large surpluses, whereas winter shortages frequently cause electricity deficits. These seasonality constraints create a structural paradox in the country's energy system – substantial long-term potential coexists with short-term instability.

Tajikistan's central hydropower ambition is the completion of the Rogun Dam, one of the largest hydropower projects globally (Habibzoda, 2025). If completed as designed, Rogun would significantly expand Tajikistan's generation capacity and transform the country into a net exporter of electricity to South Asia. Yet Rogun remains constrained by financial difficulties, technical complexities, and geopolitical sensitivities. Russia was once a major supporter of Tajik hydropower projects, including both Rogun and Sangtuda-1 (Blagov, 2007). Moscow saw these engagements as instruments to strengthen its influence and secure long-term technical dependencies. However, Russia's financial difficulties limited its ability to sustain such commitments (Rytövuori Apunen, 2016). As a result, Tajikistan increasingly turned to alternative partners (see Asian Infrastructure Investment Bank, 2025; Reuters, 2024).

China's role in Tajikistan's renewable energy development has grown significantly over the past



decade. Chinese financing has enabled the modernization of transmission lines, construction of substations, and reinforcement of cross-border connectivity (see Aminjonov et al., 2019; Bland, 2024; China Daily, 2025). These projects, essential for both domestic electrification and future electricity exports, reflect Beijing's interest in enhancing regional infrastructure under the Belt and Road Initiative. While China does not directly replace Russia in hydropower construction, it fills critical gaps in grid modernization and provides a counterweight to Russian influence. Chinese companies have also shown interest in developing solar and small-scale hydro projects, offering Tajikistan supplemental renewable capacity beyond large dams (see Kaukenova , 2025; TaiyangNews, 2024).

Tajikistan has begun exploring solar and wind energy as well, supported by Western development institutions and international financial organizations (see Usov, 2024; Press and Information Team of the Delegation to Tajikistan, 2025). The country's high-altitude regions offer promising solar potential, while certain valleys exhibit viable wind patterns. Yet these sectors remain nascent due to financial barriers, limited technical expertise, and regulatory obstacles. Western engagement, although present, remains constrained by Tajikistan's challenging governance environment, limited market size, and geopolitical alignment with Russia. Western actors focus predominantly on small-scale renewable projects, energy efficiency improvements, and policy advisory efforts rather than large-scale infrastructural investments (see European Bank for Reconstruction and Development, 2025; United States Energy Association, 2022).



This interplay between renewables and non-renewables illustrates Tajikistan's structural dilemma. On one hand, hydropower offers the most viable path toward long-term autonomy; on the other, fossil fuel dependency – largely supplied by Russia – remains an unavoidable reality in the short and medium term.

Russia's influence extends beyond energy supplies into migration, military cooperation, and broader political relations, further embedding Moscow within Tajikistan's domestic decision-making environment (see Blackwood, 2025; Popławski, 2024b; Stauder, 2025). Despite this, diversification trends are emerging. China's growing presence, the slow expansion of solar and wind initiatives, and Tajikistan's commitment to completing Rogun all signal efforts to gradually reshape the country's energy foundations. Yet these shifts remain incomplete and vulnerable. Hydropower expansion requires sustained investment, political stability, and multi-decade planning horizons. Non-renewable imports, by contrast, operate within predictable short-term cycles that give Russia continued leverage. Tajikistan's reliance on Russian fuel supplies – and its limited capacity to diversify them – ensures that Moscow retains a critical role in the country's energy system even as other actors become more involved.

Therefore, Tajikistan remains one of the Central Asian states where Russia's ability to secure long-term influence appears most stable, though not uncontested. The absence of fossil fuel resources consolidates Tajikistan's dependence on Russian imports; the underdevelopment of hydropower and renewables limits its ability to escape this structural imbalance; and the political and economic ties between Moscow and



Dushanbe reinforce an environment conducive to Russian leverage. Yet the rise of Chinese engagement and Tajikistan's long-term hydropower ambitions signal that Russia's dominance, while resilient, operates within an increasingly multipolar context. Tajikistan's energy future thus reflects a slow but tangible reconfiguration of external partnerships, albeit one that will unfold over decades rather than years.

Conclusions

The analysis of Central Asia's energy landscape demonstrates that Russia's ability to maintain influence in the region is increasingly differentiated, contingent on the structural vulnerabilities and strategic ambitions of each state. Broadly, the Central Asian republics can be divided into three categories that shape the nature and durability of Russian leverage: energy-dependent states (Tajikistan and Kyrgyzstan), where Russia retains strong but not uncontested influence; energy diversifiers (Kazakhstan and Uzbekistan), where Russian power is increasingly limited by diversification strategies; and the energy-independent state (Turkmenistan), which has largely reoriented its export architecture toward China, reducing Russia's traditional dominance. This categorization reveals that Russia's capacity to remain a central energy actor is neither uniform nor guaranteed, but rather highly conditional on domestic developments within each country and the broader geopolitical realignments reshaping Eurasia.

In the energy-dependent states, Russia continues to hold the most secure position. Tajikistan and Kyrgyzstan rely on Russian fossil fuel supplies, technical assistance, and institutional arrangements that bind them to Moscow's



energy system. These dependencies give Russia immediate leverage over pricing, investment decisions, and the broader contours of national energy policy. Migrant remittances, military ties, and political alliances further deepen Moscow's influence. Yet even here, Russia faces emerging threats: China's growing role in hydropower and grid infrastructure, domestic aspirations for renewable energy, and the gradual modernization of regional electricity networks all erode Russia's long-term exclusivity. Although Moscow maintains a dominant role in the non-renewable sector, its influence over the renewable transition is weaker, leaving room for competing actors and new forms of partnership.

In the energy diversifier category, Russia's position is more contested and increasingly transactional. Kazakhstan and Uzbekistan maintain pragmatic relationships with Moscow, especially in areas where Russian expertise and infrastructure remain relevant, such as nuclear cooperation, electricity grids, or historically embedded oil and gas transit routes. However, both states are simultaneously pursuing external partnerships that lessen dependency on Russia. Kazakhstan has expanded energy relations with the European Union, strengthened cooperation with China, and invested in alternative export routes across the Caspian Sea. Uzbekistan seeks to develop new transit and export corridors, deepen ties with Western and Asian investors, and diversify its electricity mix through renewable energy projects. For Russia, these trends represent both a threat and an opportunity: while its share of influence diminishes, cooperative engagement – particularly through Rosatom, regional electricity coordination, and selective fossil fuel partnerships – still



allows Moscow to retain relevance if it adapts to a more competitive environment.

Turkmenistan, representing the energy-independent category, poses the greatest challenge to Russian influence. The country's vast natural gas reserves and its successful redirection of exports toward China have sharply reduced Moscow's leverage. Russia's historical dominance over Turkmen gas transit has largely evaporated, replaced by Beijing's financial, infrastructural, and long-term purchasing commitments. Although opportunities remain for Russia to reenter Turkmenistan's energy sector – particularly through diplomatic engagement, joint ventures, or multilateral formats – the structural reality is that Turkmenistan's energy independence constrains Russia's ability to shape outcomes in ways it once did.

Across all categories, Russia faces a series of structural threats that limit its ambition to maintain region-wide dominance. China has become the primary investor in Central Asian energy infrastructure; Western actors – though more selective – are increasingly present in renewable development, green financing, and broader decarbonization planning; and regional governments themselves are actively seeking to diversify both energy routes and energy mixes. Moreover, domestic political changes, shifting economic priorities, and the growing importance of renewables weaken the legacy advantages that once underpinned Russia's strategic centrality.

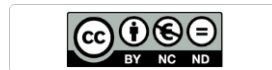
Yet despite these challenges, Russia still possesses significant opportunities. Legacy infrastructure continues to tie the region to Russian technical standards and operational practices. Rosatom remains a globally



competitive player in nuclear technology, offering Moscow a pathway to long-term engagement in countries like Uzbekistan and Kazakhstan. Moreover, geographic proximity, labor migration flows, and deep political linkages ensure that Russia retains a privileged position, even if it is no longer dominant.

The overall findings suggest that Russia can still secure a meaningful role in Central Asia's energy future, but only partially and selectively. Its influence will be strongest where energy systems are weakest; more contested where diversification is advanced; and most limited where states possess independent export capacity. Under conditions of geopolitical tension and global energy transition, Russia's challenge is not only to preserve influence but to adapt its energy diplomacy to a multipolar regional environment. This requires shifting from a dominance-based model to one grounded in cooperation, modernization, and long-term technological partnerships. Central Asia's energy future will be shared, not monopolized, and Russia's relevance will depend on its willingness and capacity to operate within this new reality.

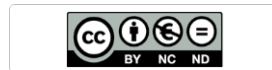
Finally, this research acknowledges clear methodological limitations. The reliance on open-source and secondary data, combined with language barriers and the opacity of certain national energy sectors, limits the full comprehensiveness of the analysis. Future research would benefit from fieldwork, expert interviews, and access to technical datasets that remain unavailable through public sources. Nonetheless, the findings presented offer a robust conceptual framework for understanding Russia's evolving opportunities and



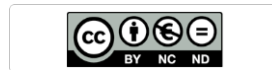
threats in Central Asia's rapidly transforming energy landscape.

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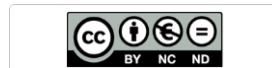
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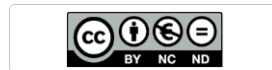
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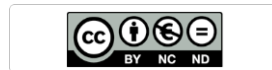
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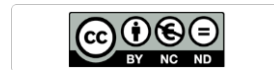
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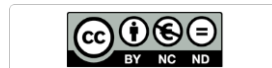
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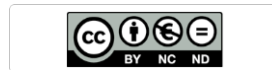
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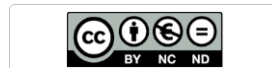
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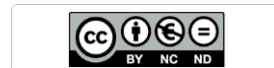
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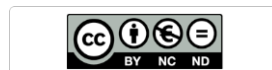
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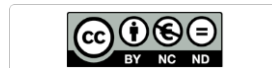
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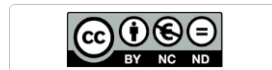
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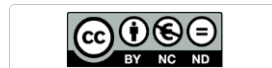


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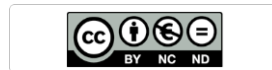


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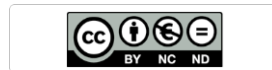
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