

NEW ENERGY GEOPOLITICS: THE ROLE AND INTERESTS OF UZBEKISTAN

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Abstract: *This article offers an in-depth, policy-oriented academic analysis of the transformation of Central Asia’s energy geopolitics in 2016–2030, focusing on Uzbekistan as the region’s largest domestic market and a pivotal node of cross-border grids. The study argues that regional energy geopolitics is shifting from a resource- and transit-competition logic to a resilience-competition logic, in which institutional robustness, grid sovereignty, seasonal balancing capacity, and energy diplomacy become decisive. By comparing energy mixes, investment patterns, and governance reforms, the paper shows how President Shavkat Mirziyoyev’s reforms reshape Uzbekistan’s energy security and expand its foreign-policy maneuvering space. The paper further analyzes key risks (climate, infrastructure, market, and political) and highlights the role of evidence-based policy support, including the Energy Diplomacy and Geopolitics Center at the Institute for Advanced International Studies (UWED).*

Keywords: *Central Asia; energy geopolitics; Uzbekistan; energy security; reforms; President of the Republic of Uzbekistan Shavkat Mirziyoyev; electric power sector; natural gas; renewable energy sources; grid sovereignty; energy diplomacy.*

Introduction

The energy factor in Central Asia has traditionally served as a foundational element of regional international relations. In the Soviet period, regional energy systems were designed as a single integrated complex with a common logic of seasonal complementarity: the hydro-rich republics generated more electricity in summer, whereas the hydrocarbon-rich republics did so in winter. After 1991, the unified system fragmented, and coordination mechanisms weakened, resulting in higher transaction costs, the politicization of energy decisions, and recurring winter deficits.



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In the 2010s, a set of new drivers emerged atop this legacy landscape: rapid demographic growth, urbanization, climate change (e.g., more frequent droughts and greater interannual and seasonal variability of river flow), the global energy transition, and rising demands for environmental sustainability and product competitiveness. As a result, the region's energy sector became less a domain of resource extraction and transit than of power system management and infrastructure resilience. This is where a paradigm shift occurs: from "resource geopolitics" to a "geopolitics of resilience," where cross-border interconnections, generation flexibility, energy storage, management efficiency, and the ability to rapidly mobilize investment become critical.

The Republic of Uzbekistan occupies a central place in this transformation for three reasons. First, the country has the largest domestic market in the region, and its economic growth is highly energy-intensive, making the resilience of its energy supply a matter of social stability. Second, Uzbekistan's geography positions it at the intersection of interstate power grids and potential transit corridors. Third, since 2016, Uzbekistan has pursued consistent sectoral reforms (in the electric power industry, natural gas market, investment climate, and renewable energy development) that are changing the "rules of the game" and establishing a new institutional framework.

A key political milestone in the reform trajectory was President Shavkat Mirziyoyev's speech at the forum "*Powering the Future – Sustainable Energy for New Uzbekistan*" on December 5, 2025. This address set out several quantitative targets and outcomes: the attraction of US\$35 billion in foreign investment into the energy sector and the commissioning of 9,000 MW of new capacity; an increase in annual electricity generation from 60 billion kWh in 2017 to 85 billion kWh in 2025; the commissioning of nearly 5,000 MW of solar and wind capacity and 400 MW of hydropower; a target of adding more than 17,000 MW of additional "green" capacity by 2030 and raising the share of "green" generation to 54%; and the launch of energy storage systems with a cumulative capacity of 1,245 MW. These metrics are important not only as development indicators but also as the foundation of Uzbekistan's foreign-policy agency: the resilience of the energy system reduces the state's vulnerability to external shocks and expands the space for regional cooperation.

Methodology

The research relies on an interdisciplinary approach that combines tools from international relations theory (examining energy as a factor of power and vulnerability), political economy (institutions, incentives, and investment regimes), and energy analysis (energy balance, flexibility, and grid constraints). The study applies several methods:

1. **Comparative analysis** of Central Asian countries' energy models (generation mix, fuel and climate vulnerabilities, and flexibility parameters);
2. **Institutional analysis** of Uzbekistan's energy-sector reforms (review of legal acts, changes in organizational structure, and the logic of tariff and market transformations);
3. **Risk analysis** (identification of key risks and their translation into geopolitical vulnerabilities).

The empirical base includes data from international organizations (International Energy Agency – IEA, International Renewable Energy Agency – IRENA, World Bank), official documents (presidential decrees on Lex.uz), and materials from the official website of the President of Uzbekistan. Cross-validation of these sources ensures that conclusions are verifiable and helps avoid drawing unsupported findings.

Results

1. Differences in the structure of the energy balance and their influence on geopolitical processes. Central Asia's energy systems exhibit a persistent asymmetry. According to IEA data, the largest source of electricity generation in Uzbekistan in 2023 was natural gas (about 76% of total generation), which provides dispatchability but creates dependence on gas supply and the state of gas infrastructure. In comparison, in Tajikistan, hydropower accounted for about 94% of generation in 2023, which improves carbon cleanliness but heightens climate and seasonal risks. Such asymmetry means that intraregional electricity trade could theoretically mitigate risks through the complementarity of the countries' energy resources, but in practice, it faces a lack of institutionalized rules and physical network constraints.

2. **Uzbekistan as a “node of resilience” and the demand for grid sovereignty.** Uzbekistan’s energy model, with a high share of natural gas, offers an advantage in controllable capacity; however, under growing demand, it makes the system vulnerable to fluctuations in gas production and imports, price changes, and the need for large-scale modernization of thermal generation. Therefore, the reforms of 2016–2025 should be viewed as an institutional pivot from “administratively allocating scarcity” to a strategy of “sustainably expanding supply” through investment, diversification, and loss reduction.

3. **Institutional architecture of reforms and its effect.** The key vectors of reform have been: (a) restructuring the electric power industry and unbundling the functions of generation, transmission, and distribution, enshrined in strategic decisions (including Presidential Decree No. PP-4249 of March 27, 2019); (b) modernization of grids and reduction of losses as an “invisible resource” of resilience; (c) development of renewable energy sources and storage as tools for managing peak loads; (d) reforming the gas market (including Presidential Resolution No. RP-280 of June 15, 2022, which stipulated institutional changes in the gas market, such as the creation of UzGasTrade). The significance of these transformations lies not only in technological renewal but also in changing incentives: attracting private capital, public–private partnership (PPP) mechanisms, and greater transparency and predictability in the sector.

4. **Investment and technological shift with a “green” component.** According to IRENA statistics (Uzbekistan’s renewable energy profile), the growth of solar and wind power capacity has accelerated in recent years. In the President’s December 5, 2025, speech, it was noted that almost 5,000 MW of solar and wind capacity had already been commissioned, and that the share of “green” energy in total installed capacity is to reach 30% in 2025, with a target of increasing the “green” generation share to 54% by 2030. Geopolitically, this signifies reduced sensitivity to import price shocks and strengthened negotiating positions in regional energy cooperation.

5. **Regional framework: institutionalization of trade and new projects.** Regional energy geopolitics is increasingly shifting toward market institutionalization and cross-border interconnections. In January 2026, the World Bank announced the Central Asia Regional Electricity Market Interconnection and Trade (REMIT) program, aimed at creating the first regional electricity

market in Central Asia and leveraging the complementarity of assets (hydropower in the Kyrgyz Republic and Tajikistan, thermal generation in Kazakhstan, Turkmenistan, and Uzbekistan, and growing solar and wind potential across all countries). For Uzbekistan, participation in such initiatives serves both as a tool to enhance energy resilience and as a diplomatic asset in shaping the rules of regional electricity trade.

Discussion

1. **From “resource” to “infrastructure” geopolitics.** In classic energy geopolitics, the key factors were resource endowments and transport routes. In Central Asia’s 2020s context, the central resource is becoming infrastructural manageability: the ability to maintain grid frequency and voltage, balance peak demand, integrate variable generation, reduce losses, and quickly commission new capacity. This gives rise to the phenomenon of “grid sovereignty”: a state that controls infrastructural resilience and the rules of power flows gains a strategic advantage.

2. **Uzbekistan and energy diplomacy as a tool of foreign policy maneuver.** A resilient energy system reduces the need for “crisis diplomacy” (seeking emergency supplies or politically sensitive short-term agreements) and creates space for long-term project-based coalitions. In this context, energy-sector reforms become part of foreign policy. Notably, in President Mirziyoyev’s forum address *“Powering the Future – Sustainable Energy for New Uzbekistan,”* special emphasis was placed on deepening partnerships with neighboring countries to form an integrated electricity market, as well as on co-financing the major Kambarata-1 hydropower project together with Kyrgyzstan and Kazakhstan.

3. **External actors and the competitive landscape: China, EU, USA.** Competition to participate in Central Asia’s energy transformation is intensifying. Under the Belt and Road Initiative (BRI), China is adapting its strategy toward “green” assets, including Chinese companies’ involvement in solar and wind projects in Uzbekistan and Kazakhstan (as noted in industry analyses). The European Union is promoting its Global Gateway strategy and connectivity framework, in which energy security and the green transition play an important role (including joint decisions and declarations in the EU–Central Asia format). The

United States is advancing the C5+1 format (the five Central Asian countries plus the U.S.), where climate, energy resilience, and critical minerals have become elements of the agenda [12]. For Uzbekistan, the challenge is to maintain balance: to leverage competition among external actors to mobilize investments and technology without becoming dependent on any single source of capital, while simultaneously strengthening regional institutions for electricity trade.

4. **Role of analysis and institutional support.** The complexity of energy policymaking (investment cycles, technical grid constraints, tariff policy, negotiation formats) requires sustained expert support. In this context, the role of the Energy Diplomacy and Geopolitics Center at the Institute for Advanced International Studies (UWED) is to provide scientific and analytical information, scenario assessments, comparative reviews, and recommendations to government agencies and partners. Institutionalizing expert analysis helps reduce the risk of “reactive policy” and improves the quality of diplomatic and investment decisions.

Role of President Shavkat Mirziyoyev’s Reforms in Reducing Energy Risks. The reduction of energy risks in Uzbekistan can be seen as the result of an institutional and investment “reset” of the sector. First, the reforms have changed the organizational architecture of electricity-sector governance, making it more transparent and better suited to attracting capital (including through PPPs), as codified in the 2019 strategic decisions to reform the industry. Second, modernization of the power grids (including the renewal of tens of thousands of kilometers of transmission lines and thousands of transformers, as noted in the official assessment on 05.12.2025) is reducing hidden losses and improving resilience to accidents. Third, the accelerated deployment of renewables and energy storage is moving the power system from a state of “rigid fuel dependence” to one of diversified resilience: storage systems allow peak demand to be met, and renewable sources reduce pressure on the gas balance. Fourth, reforming the natural gas market, including the creation of specialized institutional operators, has improved the manageability of gas procurement and supply, thereby reducing the risk of shortages.

From a political and diplomatic perspective, these measures have a direct significance: greater energy resilience decreases the likelihood of forced, short-term, and politically sensitive import deals; it strengthens investor confidence; and it enhances Uzbekistan's ability to participate in regional projects as an equal actor rather than as a "vulnerable consumer."

Conclusion

Central Asia's energy geopolitics in the period 2016–2030 is entering a phase of qualitative transformation, in which the key object of competition is shifting to the resilience of energy systems and the institutional capacity to manage risks. By implementing consistent reforms under the leadership of President Shavkat Mirziyoyev, the Republic of Uzbekistan is creating the conditions for a transition to a model of "grid sovereignty" and expanding its foreign-policy space through investment diversification, growth of renewables, and participation in regional cooperation. The most productive trajectory for the region is an integration scenario that leverages the complementarity of Central Asian energy assets to build a sustainable regional electricity market. In this logic, evidence-based analytical support (including the activities of the Energy Diplomacy and Geopolitics Center at the Institute for Advanced International Studies, UWED) becomes an important resource for improving decision quality and reducing geopolitical vulnerabilities.

A practical conclusion for Uzbekistan is the need to synchronize three tracks: (1) accelerating the modernization of power grids and reduction of losses; (2) scaling up renewable energy and storage as balancing tools; and (3) institutionalizing regional electricity trade through robust rules, mutual emergency assistance mechanisms, and joint investment platforms.

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